



July 20th, 2020

CAL FIRE
Resource Management
135 Ridgway Avenue
Santa Rosa, CA 95401
santarosareviewteam@fire.ca.gov

RE: (Resub) 1st Review Responses to 1-20-00084 SON "Silver Estates"

Below are responses to 1st Review questions on 1-20-00084 SON. The RPF responses are highlighted in **Bold text**.

CAL FIRE 1st Review Questions:

1. Page 133.1 discusses the findings of the Caspar Creek Watershed study. Please provide citations for this study and link the citations from the area in which it is discussed.

Please see revised pages 133.1 and 208.

2. Page 5 item 7(b) states that the majority of the THP area has been given Special Treatment Area status. Please revise Item #14(a) to disclose that a Special Treatment Area Prescription is proposed, include the acreage, and clarify under Item #14 if there are any discrepancies in acreage between Item #14 and Item #7 if appropriate.

The majority of the THP does fall within the Special Treatment Area for the Highway 116 Scenic Corridor. However, as stated on page 5 and 11 of the THP, the silvicultures proposed within the plan area are un-evenaged methods and will result in minor effects to the aesthetics of the stands that are visible from the Highway 116. Crown canopy and stocking will be reduced through the proposed harvest methods, however these changes will be difficult to discern post-harvest considering basal area retentions required for Selection, Group Selection and Transition silvicultures. According to the 1988 "Final Report of the Sonoma 116 Scenic Highway Corridor Study" the "Special Features" described in report that are contributing to the scenic quality of the scenic corridor include the tall trees along the Russian River. Since the Core Zone of the Russian River is a No Harvest (NH) area, and the remainder of the Watercourse Lake and Protection Zone adjacent to the river that is proposed for harvest is comprised of 50-80% canopy retention and single- tree selection, it is not expected that these "Special Features" will change or impact the scenic corridor post-harvest. Because the elements of the Scenic Corridor will be retained through the proposed silvicultures, there is no "Special Treatment Area Prescription" proposed.

3. Page 5 Item 7(a) states that 40% of the plan cannot be seen from Highway 116, however Page 191, Visual Assessment Area states that a majority of the plan lies within a County and State Designated Scenic Corridor for Highway 116 and the plan area is readily seen from the highway. Please revise to consistently represent any potential visual impacts of this THP throughout the plan.

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Please see revised page 191.

4. Page 192: Traffic Assessment Area. Technical Rule Addendum 2: Cumulative Impacts Assessment Guidelines ask to consider existing traffic or maintenance problems on public roads to be used in this plan. Please revise to address any existing traffic or maintenance problems on the roads which will be accessed for this THP.

Please see revised page 192, and additional pages 192.1 and 192.2.

5. Page 192: Traffic Assessment Area states that the public roads that timber will be hauled on have been used historically for log transport, however according to CAL FIRE records there have been no recent plans in that area. Please revise to explain whether the impacts to these roads might be different from that of the last time they were used for log hauling when considering road maintenance and traffic.

Please see revised page 192, and additional pages 192.1 and 192.2.

6. Page 199-200, Fire Prevention and Protection discusses the use of herbicide and the effects of herbicide on smoke toxicity and fuel buildup, however page 13 Item 14 (f) states there is no proposed management of Group B species and 14(f)(1) indicates there will be no follow up herbicide treatments for Group A Species. Please revise for clarity whether herbicide use will occur within this THP.

No herbicide use is proposed within this THP. Please see revised pages 199, 200, 201, and 211.

7. Page 199-200, Fire Prevention and Protection. Please indicate the fire hazard severity zoning, existing and probable future fuel conditions, location of known fuel breaks, and road access for fire suppression resources as required by Technical Rule Addendum 2: Cumulative Impacts Assessment Guidelines; H. Wildfire Risk and Hazard (1-4).

Please see revised pages 199, 200, 201, and 211.

8. Page 93.1 Appurtenant road map does not designate which roads are appurtenant within the plan boundary. Please revise [ref. 14 CCR 895.1 def. for Appurtenant Roads].

Please see revised page 93.1.

CDFW 1st Review Questions:

9. Section II, Item 14(g), page 14. The THP was revised to include LTO instructions to fell trees away from class II and class III watercourses and wet areas, per CDFW recommendation #4 from the First Review dated 5/28/20. However, no specific LTO instructions were provided should a tree inadvertently be felled into a watercourse or wet area. Please consider including LTO instructions that specify the appropriate measures

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should a tree be inadvertently felled into a watercourse or wet area.

Please see revised page 14.

10. Section II, Item 15(a), page 17. The THP is located within the Coastal Pitch Canker Zone of Infestation. However, no description of Pitch Canker or language including the proposed measures to mitigate adverse infestation or infection impacts was included. Have symptoms of Pitch Canker been observed in the plan area? Please include a description of Pitch Canker and language describing the measures to mitigate adverse infestation or infection impacts.

Please see revised pages 17, 18, and 19.

11. Section II, Item 32(a), page 79. Northern Goshawk. The THP does not include language defining the dates of the critical period during which no timber operations are permitted, with few exceptions. Please include language defining the dates of the critical period for Northern Goshawk. The THP also shows an apparent discrepancy with the buffer distance around active nest sites. In two places under the 'Protection Measures' section of Item 32(a), the timber operations buffer distance is described as '...a minimum of five acres in size' and '...within 333 feet of the suspected nesting site...'. Please address this discrepancy.

Please see revised page 79.3.

12. Section II, Item 32(a), Northern Spotted Owl, page 77. The THP states, "Pursuant to 14CCR 939.9(e), this THP is using Scenario 4." In the FPR, 14CCR 939.9(e) says, "If the submitter proposes to proceed pursuant to the outcome of a discussion with the U.S. Fish and Wildlife Service, the submitter shall submit a letter prepared by the RPF that the described or proposed management prescription is acceptable to the USFWS." The NSO take avoidance scenarios are located in the February 1, 2008 USFWS Technical Assistance Analysis document. Please address this discrepancy.

Please see revised page 77.

13. Section II, Item 32(a), Northern Spotted Owl, pages 77-78. The THP states, "Also habitat retention, standard protection measures, operational limitations, and surveys shall be conducted in compliance with February 27, 2008 Attachment A for the Coast Forest District." The following habitat definitions and retention levels appear to be from Attachment B. Please address this discrepancy.

Please see revised pages 77, 78, and 79. As well as additional pages 79.1, 79.2, and 79.3.

14. Section II, Item 32 (a), page 81. The THP states that it will incorporate recommended USFWS guidelines to avoid take of California red-legged frogs. There is no mention of what will happen if a California red-legged frog is found in the THP. Please consider adding additional language to include creating a buffer and contacting CDFW should a California red-legged frog be found.

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Please see revised page 81.

15. Section II, Item 32 (c), page 82. In the Non-Listed Species Table for Townsend's Big eared Bat and Pallid Bat the THP states that, "There are mitigations in Item 38 to protect special habitat elements that would be beneficial." for Townsend's big-eared bat and Pallid Bat. Did you perhaps mean the mitigations in Item 14 (g) instead of Item 38?

Please see revised page 82.

16. Section II, Item 32 (c), page 82. In the Non-Listed Species Table there is no mention of adding a buffer and contacting CDFW if any of these species are found in the THP. Please consider adding language to include creating a buffer and contacting CDFW should any of these species be found.

Please see revised page 82.

17. Section V, Northern Spotted Owl Information, page 343. Under the Northern Spotted Owls Within 0.7 Miles heading, the THP states, "A daytime stand search was conducted within the property and off the property in the vicinity of the SON0076 AC looking for evidence of NSOs on 25APR18, 22APR19 and 09MAR20, and no NSO's were found." Were these stand searches conducted to protocol standards, specifically a thorough survey of the entire THP area searching for NSO whitewash, pellets, and feathers while broadcasting vocalizations, listening for responses, and watching for owls silently flying in? Please provide a map of the search routes along with data forms that include start and end times and description of the habitat.

Please see additional page 357.1, 357.2, 357.3, 357.4, 357.5, and 357.6.

18. Section V, Northern Spotted Owl Information, page 346. The NSO Surveys According to 2011 Protocol section describes a deviation, "Surveys between sunset and sunrise: This area has a higher than usual amount of transient activity in the area and it is not safe to conduct surveys after sunset. This area has historically been surveyed during the day before sunset." This deviation is significant and would warrant a pre-consultation with CDFW prior to initiating surveys. Please include information regarding the recent CDFW NSO consultation for the substantial deviations to survey protocols.

The THP was surveyed during the daytime due to an increased safety risk for NSO Surveyors. There is an unusually high number of transient trespassers on the property, and the Sonoma County Sheriff has been contacted to receive a Trespass Action Request for the property. Page 385.1-385.4 of the THP contains an email between CDFW and the Wildlife Biologist asking for permission to conduct daytime surveys for the property. Page 385.5 contains the Trespass Action Request. Upon review CDFW has requested 3 additional surveys conducted as close as possible to the crepuscular hours. The data from those additional surveys will be amended into the THP once completed.

19. Section V, Northern Spotted Owl Information, page 346. Under the Surveys Between Sunset and Sunrise heading, the THP states, "This area has historically been surveyed during the day before sunset." There appears to be two previous THPs that cover roughly the same area as Silver Estates, 1-01-012 SON and 1-02-179 SON. Due to the length of time since these THPs, CDFW does not have the NSO minor amendments for these plans on file. These previous surveys could potentially have NSO detections that were never entered into CNDDDB and may be informative

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regarding past survey effort and adherence to best survey practices. If possible, please provide these past NSO minor amendments to aid in the review and evaluation of NSO survey effort. Additionally, if NSO survey data is available from neighboring landowners please provide this data to aid in review and evaluation.

After review of the old THPs on file, the RPF was unable to locate any NSO minor amendments associated with either 1-01-012 SON or 1-02-179 SON. Being as these THPs were submitted over 15 years ago, the NSO amendments may be difficult to locate.

NSO Calling Data from the adjacent landowner, the Bohemian Grove, has been added to the THP. Please see additional pages 373.1-373.101.

20. Section V, Northern Spotted Owl Information, pages 337-385. What type of owl calls were used during surveys? Was a speaker used for calling? Please provide information on the type of survey effort. The survey data sheets for 15 survey visits, pages 358-373, show survey times occurring between 07:30 at the earliest and 14:05 at the latest, with the average start times occurring 2.5 to 3 hours after sunrise. Why were survey visits conducted during a time of day with the lowest likelihood of NSO detection? Why weren't surveys conducted during crepuscular hours or during a time frame as close to the nighttime as possible, and if necessary, extended each survey pass over the course of multiple days in order to get the surveys as close to sunset and sunrise as possible? On page 359, the survey data sheet for the one follow-up survey on 4/12/18 shows the survey time starting at 0500. Why weren't the surveys, if not able to be conducted close to sunset, then conducted at this early morning sunrise time period? Please provide a discussion of these alternative survey methods and information about future survey effort that will adhere to crepuscular hours.

NSO Calls were used during the surveys using the NSO call mp3 from the USFWS on their website. A Bluetooth speaker was used during survey efforts. Each Station was surveyed for 10 minutes. At arrival of a station, the speaker would be played for 2 to 3 minutes, then the recording would be paused, and the surveyor would listen for 2 to 3 minutes and repeat this until 10 minutes was completed. Daytime surveys were conducted for safety reasons. There are many transients on the property especially at night. Julie Coombs at CDFW was contacted in March of 2018 and said that it was a reasonable concern and daytime surveys would be acceptable if the landowner has it thoroughly documented (Please see pages 385.1-385.5 of the THP).

21. Section V, Northern Spotted Owl Information, page 357. The NSO Survey Stations map shows stations located along ridgelines that are far from the illegal trespass areas located along Neely Road and Mays Canyon and at least one station appears to be within or near the Russian River Water Treatment Center, a locked facility with gates and fencing. Why were these call stations that occur outside of the zones of trespass and in areas that provide secure access not surveyed between sunset and sunrise? Were other safety measures and alternatives, such as surveying with multiple people, surveying along roads and/or while next to a vehicle, utilizing the landowners existing personnel that patrol the property for added security, and/or the deployment of ARUs in conjunction with in-person surveys considered? Please provide a discussion of the consideration into these alternative survey methods. Please consider providing a map depicting the locations and scope of trespass areas to assist in evaluating each survey station location.

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- The call stations located at areas away from the trespass zones were not surveyed between sunset and sunrise due to access. Access to the THP area is ATV accessible only due to a large slide near the beginning of the access road from Mays Canyon. The area where the NSO surveyors would need to park and load/unload ATVs is one of the most active trespass areas on the property. This leaves the NSO surveyor alone, at night, loading/unloading their ATV in an unsafe area. Therefore, the entirety of the THP was surveyed during daylight.
 - Other alternatives to surveying were not explored due to the Wildlife Biologist reaching out to CDFW asking for permission to survey during the daytime (please see page 385.1-385.4 of the THP).
 - Please see additional page 385.6 for a map depicting trespass location areas.
22. Section V, Northern Spotted Owl Information, NSO Survey Stations Map, page 357. Survey station #8 appears to be directly adjacent to the Russian River which sees high flows during the winter and spring months. Some of the survey dates occur in March and April when high flows could create noise interference. Was Station 8 evaluated for noise and listening ability during those months to determine if the stations were spaced too far apart to adequately provide survey coverage for that portion of the THP area?

Survey Station #8 is located on Neely Road at the property gate and was evaluated for noise. Surveys were conducted during calm days and the river flows were moderate. The river did not create a noise interference and listening ability was good.

23. Section V, Northern Spotted Owl Information, pages 358-359. The first survey conducted on 4/11/18, page 358, states one hoot response was heard 500 feet across the river in a clump of redwoods at Station 8 between 1046 and 1056 am. What type of hoot was observed? Was the response an unknown Strix or other owl species? The follow-up survey conducted on 4/12/2018, page 359, states the surveyor hooted at Station 8 from 0500 to 0530 with no response. This follow-up effort appears to be only 30 minutes in duration and entirely conducted from one location, distant from the nocturnal survey location. The protocol prescribes an on-foot search of the best habitat within a 0.5-mile radius of the nocturnal detection location, broadcasting, listening, and actively searching for whitewash, pellets, feathers, and owls silently flying in. Was it possible for the surveyor to get closer to the detection location during the follow-up visit? Could the surveyor have searched at least part of the 0.5-mile radius area on-foot as well as calling from a distance? Could the surveyor have called for longer than 30 minutes and moved around even if only on their own property?

The "hoot" was from an unknown species and was just one note. The surveyor said it was too difficult to determine with just one note and no other responses. The next day, a follow up survey was conducted at station #8 by walking along the road; however, the surveyor could not access any other area, due to all surrounding area being private residential property except where the THP is located.

24. Section V, Northern Spotted Owl Information, Survey Data Sheet, page 358. The survey conducted on 4/11/18 states at Station 3 from 12:17 to 12:27 two ravens and two Steller's jays

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were heard. Mobbing jays and other corvid activity may indicate the presence of an NSO or other Strix species. Was the raven and Steller jay activity investigated?

According to the NSO Surveyor, the ravens and stellar jays were not exhibiting mobbing behavior. They responded to the NSO calls one time and then left the area.

25. Section V, Northern Spotted Owl Information, pages 337-385. The "Additional Surveys" section on page 347 states, "This NSO consultation is effective until 01FEB2021. Re-consultation will be completed...", this language is in a survey report not a formal agency consultation, please address this discrepancy. This section states, "Timber harvests require NSO surveys according to USFWS and CAL-FIRE protocols." what is the CALFIRE NSO protocol? Additionally, this section states, "If a northern spotted owl is detected during operations, all harvest activities shall be halted, and CAL-FIRE will be consulted to determine adequate protection measures." Please revise this statement to include consultation with CDFW should NSO be detected.

Please see revised page 347.

CGS 1st Review Questions:

26. Please have the project geologist address/clarify the following: • Are there any restrictions on ground-based operations on the historically active unstable area G3? The geologic report does not clearly address this. • The recommendations for STZ-G5 discuss an STZ that extends 50-foot from the cutbank of Neely Road (similar to STZ-G4). The debris slide slopes and the mapped STZ (both in the THP and the geology report) appear to extend much farther upslope from Neely Road. Please clarify. If the definition of STZ-G5 changes, page 12 of the THP should be updated.

- **Site G3**

Tractor operations on slide G3 were already addressed on Page 11 of the Engineering Geologic Report where we state: "Tractor operations on slopes generally less than 50% are also unlikely to have any measurable impact on slide stability since the mass balance and hydrology of the slide will not be substantially altered."

To further clarify our opinion on tractor operations we have revised our description of G3. Please see revised page 248.

- **Site G5**

At G5, the debris slide slope above Neely Road (STZ-G5) was inadvertently referenced as a cut slope in the text of the report. We have revised our description and recommendations for G5. Please see revised page 249.

27. There are numerous STZ's proposed in the THP. Are these STZ's flagged or identified in the field? If not, please flag them prior to the PHI to facilitate review.

Due to extent and meticulous mapping of the STZ's they have not been flagged in the field. The proposed STZ's do not have tractor/operational limitations, only retention tree standards, and therefor flag lines are not needed for LTO reference and may cause confusion. The STZ's have been marked prior to PHI to help facilitate review. The RPF will

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provide a Geo-Referenced PDF map with the Mapped STZ's to the review team to help facilitate field review.

28. The extent of the STZ at G14 is difficult to discern on the THP Operations maps. Please consider using a different symbology or border to differentiate the STZ boundaries.

Please see revised page 91.1.

29. California Forestry Report No. 1 (Cafferata et al., 2017; page 34) states that "a minimum diameter of 24 inches is recommended for watercourse crossings to reduce plugging potential in channels that receive flood flows (i.e., not crossings receiving discharge solely from small seeps or springs)." It appears that this would apply to Map Points 3, 8, and 10. Should a 24-inch diameter culvert be utilized at these locations? Available at:
http://timbertraining.resources.ca.gov/pluginfile.php/957/mod_resource/content/1/100%20yr%20revised%208-08-17%20%28final-a%29.pdf

Because MP 3, 8, and 10 have Q100s of 4.6 cfs, the site would need a Q100 of 6 cfs before it sized to a 24" diameter culvert, the RPF believes that an 18" diameter culvert for these crossings is sufficient to pass 100 year flood flows and have a low plugging potential. The drainage acreage is ~3 acres and the channel length above the crossings between 150-200'. It is not expected that this watercourse will ever reach flows of 6 cfs, the minimum flow for a 24" culvert at these sites.

30. The THP uses the rock sizing methodology from California Forestry Report No. 1, as shown on page 96 of the THP. Based on our review of the proposed 100-year flood flows and rock sizes, it appears that an outfall gradient of 2:1 is proposed at these locations. Please clarify the proposed outfall gradient at locations where rock armoring is proposed in order to provide clear and enforceable design details.

Please see revised pages 40, 41, 42, 276, 277, and 278.

31. Item 14 states there are 0.025 acres of No Harvest. THP Silviculture Maps on page 91 and 91.1 do not show the No Harvest area. Please revise the THP silviculture maps to show the 0.025 acres of No Harvest so that Item 14 and the THP Silviculture maps match one another.

Please see revised page 91.1.

RPF Edit:

The RPF noticed that for Item 19(j) the box is checked "yes" that new tractor roads are proposed on slopes between 50-65% with moderate HER. This is incorrect. The tractor roads on slopes between 50-65% are existing tractor roads that do not require construction or reconstruction.

Please see revised pages 28 and 109.

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If you have any questions, comments, or concerns please feel free to contact me.

Sincerely,

Jamie B. Pusich
Forester, RPF #3043
North Coast Resource Management, INC
Phone: (707) 489-5219

ERATTA SHEET

Original Page #	Replace with Page #
14	14
17	17
18	18
19	19
28	28
40	40
41	41
42	42
77	77
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82	82
91.1	91.1
93.1	93.1
109	109
133.1	133.1
191	191
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Additional Pages: 79.1, 79.2, 79.3, 79.4, 191.1, 191.2, 357.1 - 357.6, 373.1 - 373.103, and 385.6.

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TIMOTHY C. BEST, CEG
ENGINEERING GEOLOGY AND HYDROLOGY

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July 14, 2020

Redwood Empire
c/o Jamie Pusich
NCRM, Inc.
2501 North State St.
Ukiah, CA 95482

Job: NCRM-SILVER-857

**SUBJECT: ADDENDUM LETTER #1: CLARIFICATION OF RECOMMENDATIONS AT G4 and G5
SILVER ESTATES THP (1-20-00084 SON)**

Dear Mr. Pusich:

This addendum letter provides additional information requested by CGS in their first review comments.

26. Please have the project geologist address/clarify the following:

- Are there any restrictions on ground-based operations on the historically active unstable area G3? The geologic report does not clearly address this.*
- The recommendations for STZ-G5 discuss an STZ that extends 50-foot from the cutbank of Neely Road (similar to STZ-G4). The debris slide slopes and the mapped STZ (both in the THP and the geology report) appear to extend much farther upslope from Neely Road. Please clarify. If the definition of STZ-G5 changes, page 12 of the THP should be updated.*

RESPONSE

Site G3

Tractor operations on slide G3 was already addressed on Page 11 of our Engineering Geologic Report where we state: "Tractor operations on slopes generally less than 50% are also unlikely to have any measurable impact on slide stability since the mass balance and hydrology of the slide will not be substantially altered."

To further clarify our opinion on tractor operations we have revised our description of **G3** (page 19 of our report) to include the following:

*The THP proposes limited tractor operations on slide **G3** which based on our field observations appear appropriate since the mass balance and hydrology of the slide will not be altered. No further restrictions on tractor operations are required.*

Site G5

At G5, the debris slide slope above Neely Road (STZ-G5) was inadvertently referenced as a cut slope in the text of the report. We have revised our description and recommendations for G5 (page 20 of our report) as follows:

Based on our field observations, harvesting on these slopes could increase the potential of slope instability on these steep slopes, primarily through reduce root reinforcement. To mitigate the risk of harvest related instability we recommend that harvesting be excluded from the steep debris slide slopes above Neeley Road and that a 50 foot wide buffer be established upslope of the mapped debris slide slopes where harvesting shall be restricted to individual tree selection. Group selection is appropriate upslope of the STZ.

RECOMMENDATIONS

- A Special Treatment Zone (STZ-G5) shall be established at this site extending 50 feet upslope of the top of the steep debris slide slopes above Neeley Road as mapped on Figure 1.
- Exclude harvesting on the steep 65% to 80% gradient debris slide slopes of Neeley Road. The current harvest boundaries conform to this recommendation.
- Within the STZ the harvest shall be restricted to individual tree selection. No group openings shall occur within STZ-G5. The current harvest boundaries appear to conform to this recommendation.

Please give me a call if you have any further questions.

Sincerely,

Timothy C. Best, CEG 1682

Attachment:



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TIMOTHY C. BEST, CEG

ATTACHMENT 1

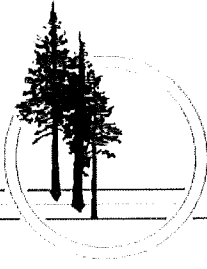
Revised pages 19 and 20 of our engineering geologic report showing the revisions to the text for sites **G3** and **G5**.

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TIMOTHY C. BEST, CEG



JACOBSZOOM & ASSOCIATES, INC.

natural resource planning & management

July 14, 2020

Re: THP# 1-20-00084 SON First Review Responses

1. NSO calls were used during the surveys using the NSO call mp3 from the USFWS on their website. A speaker was used. Each Station was surveyed for 10 minutes. At arrival of a station, the speaker would be played for 2 to 3 minutes, then the recording would be paused and the surveyor would listen for 2 to 3 minutes and repeat this until 10 minutes was completed. Daytime surveys were conducted for safety reasons. There are many vagrants on the property especially at night. Julie Coombs at CDFW was contacted in March of 2018 and she said that it was a reasonable concern and daytime surveys would be acceptable as long as we have it documented.

2. Survey Station #8 is located on Neely Road at the property gate. The river did not create a noise interference and listening ability was good.

3. The "hoot" was from an unknown species and was just one note. Hard to determine with just one note and no other response. The next day follow up was conducted at station #8 with walking along the road; however, could not access any other area, due to all surrounding area being private property except where the THP is located.

4. The ravens and stellar jays were not exhibiting mobbing behavior. They responded to the NSO calls once and then left the area.

5. Please see attached page which include changes requested.
If you have any questions, please do not hesitate to contact me.

Sincerely,

Alicia Ives Ringstad
Senior Wildlife Biologist
Jacobszoon & Associates, Inc.

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117 Clara Ave. Ukiah, California 95482

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g.	<p align="center">LTO FELLING INSTRUCTIONS PLAN AREA</p>
	<p>Fallers will attempt to fall trees towards skid trails, fall trees away from the residual stand and keep tractor roads away from the residual stand, when and where feasible. Fallers shall also fall trees away from Class I, Class II(s), Class III, Class IV Watercourses, and wet areas. If a tree is inadvertently felled into a watercourse or wet area, the LTO shall remove any accidental depositions from wet areas, Class I, Class II, Class III, or Class IV watercourses, including any material that may need to be cleared by hand. The removal of material shall occur on the same day as the deposit occurs.</p> <p>Portions of the project occur within the Russian River Sanitation District spray areas. To ensure that the sprinkler standpipes and the irrigation system within the active spray areas are protected from damage, trees will be felled, when and where feasible, away from the standpipes. The LTO will be responsible for identifying the location of all the sprinkler standpipes and will work in conjunction with the personnel from the Russian River Sanitation District to locate and protect the standpipes from damage as much as possible.</p> <p>The LTO shall instruct fallers to be aware of retention trees and sub merchantable stocking intended to be left in a good thrifty condition, and avoid unnecessary damage to snags and if any, and to trees designated for wildlife retention. Retention Trees include trees that were not marked for harvest which exhibit the following characteristics which can be favorable for wildlife habitat:</p> <ol style="list-style-type: none"> 1. <u>Large lateral branches: A branch equal to or greater than 6-in in diameter located just outside of the branch collar.</u> 2. <u>Cavities: Trees with cavities greater than 3-in and 10-ft or more above the ground.</u> 3. <u>Hollow: trees with "goose pen" boles (basal cavities) extending 3-ft or more above ground level and extend at least 6-in vertically inside the cavity from the topmost point of the entrance hole.</u> 4. <u>Evidence of Decay: Extensive decayed wood as evidenced by large and/or extensive fungal fruiting bodies (conk), cavity entrances, and sloughing wood and/or bark.</u> 5. <u>Trees with multiple tops, broken tops, or snag tops, all minimum 12-in dbh, with a minimum 6-in dbh at the break or separation into multiple leaders.</u> 6. <u>Old growth redwood trees and stand-alone Douglas-fir trees with "wolfy" branching structure, including large, spreading limbs and/or a large crown.</u> 7. <u>Redwoods with boles having at least 75% defect, trees with vegetative deformities, high presence of lichens or moss, deeply fissured, cracked bark or loose slabs of flaking bark.</u> 8. <u>Trees with known raptor nests.</u> 9. <u>Stand-alone granary trees having at least 100 small holes on the tree that are either filled with acorns or capable of containing acorns.</u> <p>The LTO shall also instruct fallers to search for active bird/wildlife nests prior to timber falling operations. If an active bird/wildlife nest is discovered, the LTO shall flag the tree to aid in avoidance. The LTO shall contact the Plan Submitter to determine if additional mitigations will be required.</p>

h.	<p align="center">REGENERATION</p>
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<p>Will artificial regeneration be required to meet stocking standards?</p> <p>Describe:</p> <p><u>The Transition units shall meet stocking standards of 14 CCR 912.7 (b)(2) immediately upon completion of operations.</u></p> <p><u>The Group Selection and Single Tree Selection units shall meet stocking standards of 14 CCR 913.2 (a)(2)(A)(2) and 14 CRR 913.2 (a)(2)(B) immediately upon completion of operations.</u></p>

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i.	<p align="center">SITE PREPARATION</p>
	<p>Definition of site preparation per 14 CCR § 895.1: Site preparation means "any activity" involving mechanical disturbance of soils or burning of vegetation which is performed during or after completion of timber harvesting and is associated with preparation of any portion of a logging area for artificial or natural regeneration.</p>
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<p>Will site preparation be used within the logging area?</p>

CalTREES THP ITEMS #15-17 – PEST / HARVEST PRACTICES / EROSION HAZARD RATING

ITEM #15 – PESTS

PESTS / FOREST DISEASES																													
Timber operations shall be conducted so as to minimize the build-up of destructive insect populations or the spread of forest Diseases. 14 CCR 917.9 [937.9, 957.9](a) – (c) (All Districts)																													
a. <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<p>Is this THP within an area that the Board of Forestry and Fire Protection has declared a Zone of:</p> <ol style="list-style-type: none"> <input checked="" type="checkbox"/> Infestation Zone of Infestation for Pitch Canker and Sudden Oak Death <input type="checkbox"/> Infection <p>pursuant to PRC §§ 4712 - 4718?</p> <p>If YES, identify feasible measures being taken to mitigate adverse infestation or infection impacts from the timber operation. 917.9 (937.9, 957.9)(a)</p> <p>Reference Board of Forestry Technical Rule Addendum Number 3 for RPF considerations.</p>																												
<p>Proposed measures:</p> <p>Pine Pitch Canker The THP area is within an area declared a 'Zone of Infestation or Infection' by the Board of Forestry with regard to Pine Pitch Canker. The following measures are required to address to potential presence of Pine Pitch Canker and to address the requirements of 14 CCR 937.9-Technical Rule Addendum No. 3, Brood Material. While the section dealing with brood material is specifically addressed towards beetle outbreaks & infestations in heavy pine areas, it also applies here because beetles may aid in the dispersal of Pine Pitch Canker. There are ponderosa pine trees within this THP. These trees may be harvested. However, should incidental pine trees end up being felled or knocked over they shall be treated as follows concurrently with falling or yarding operations, whichever caused the tree to be felled or knocked down:</p> <p>Pine Slash shall be lopped and scattered. Timing and specifications for lopping are taken from 14 CCR 937.9 & Technical Rule Addendum #3 (B)(2): The following treatment is acceptable, provided it is completed as soon after brood material creation as is practical, but not later than one week.</p> <ul style="list-style-type: none"> ○ Lop all branches from the tops and sides of main stems which are more than 3" in diameter. ○ Lopped stems may also be cut into short segments to reduce drying time and further reduce hazard. ○ Branches shall be scattered so that stems have maximum exposure to solar radiation. ○ Do not pile brood material. <p>Sudden Oak Death The THP area is within the Sudden Oak Death (SOD) Zone of Infestation. SOD is known to exist within and surrounding the plan area. For compliance with CDFA regulations, and for the THP to act as a compliance agreement, THPs located in the SOD Zone of Infestation (ZOI) need to address mitigation measures to avoid movement of host material (ref. also 14CCR 917.9 and 917.10).</p> <p>Recommended Mitigation measures:</p> <ol style="list-style-type: none"> List of regulated counties: Alameda, Contra Costa, Humboldt, Lake, Marin, Mendocino, Monterey, Napa, San Mateo, Santa Clara, Santa Cruz, Solano, Sonoma, San Francisco, and Trinity. There are both "Regulated Host Species" and Associated Species". <table border="0"> <thead> <tr> <th>Regulated Hosts Scientific Name</th> <th>Common Name</th> </tr> </thead> <tbody> <tr> <td>1. <i>Acer macrophyllum</i></td> <td>Bigleaf maple</td> </tr> <tr> <td>2. <i>Acer pseudoplatanus</i></td> <td>Planetree maple</td> </tr> <tr> <td>3. <i>Adiantum aleuticum</i></td> <td>Western maidenhair fern</td> </tr> <tr> <td>4. <i>Adiantum jordanii</i></td> <td>California maidenhair fern</td> </tr> <tr> <td>5. <i>Aesculus californica</i></td> <td>California buckeye</td> </tr> <tr> <td>6. <i>Aesculus hippocastanum</i></td> <td>Horse chestnut</td> </tr> <tr> <td>7. <i>Arbutus menziesii</i></td> <td>Madrone</td> </tr> <tr> <td>8. <i>Arctostaphylos manzanita</i></td> <td>Manzanita</td> </tr> <tr> <td>9. <i>Calluna vulgaris</i></td> <td>Scotch heather</td> </tr> <tr> <td>10. <i>Camellia spp.</i></td> <td>Camellia –all species, hybrids, and cultivars</td> </tr> <tr> <td>11. <i>Castanea sativa</i></td> <td>Sweet chestnut (3)</td> </tr> <tr> <td>12. <i>Fagus sylvatica</i></td> <td>European Beech</td> </tr> <tr> <td>13. <i>Fraxinus excelsior</i></td> <td>European ash</td> </tr> </tbody> </table>		Regulated Hosts Scientific Name	Common Name	1. <i>Acer macrophyllum</i>	Bigleaf maple	2. <i>Acer pseudoplatanus</i>	Planetree maple	3. <i>Adiantum aleuticum</i>	Western maidenhair fern	4. <i>Adiantum jordanii</i>	California maidenhair fern	5. <i>Aesculus californica</i>	California buckeye	6. <i>Aesculus hippocastanum</i>	Horse chestnut	7. <i>Arbutus menziesii</i>	Madrone	8. <i>Arctostaphylos manzanita</i>	Manzanita	9. <i>Calluna vulgaris</i>	Scotch heather	10. <i>Camellia spp.</i>	Camellia –all species, hybrids, and cultivars	11. <i>Castanea sativa</i>	Sweet chestnut (3)	12. <i>Fagus sylvatica</i>	European Beech	13. <i>Fraxinus excelsior</i>	European ash
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14. <i>Griselinia littoralis</i>	Griselinia
15. <i>Hamamelis virginiana</i>	Witch hazel
16. <i>Heteromeles arbutifolia</i>	Toyon
17. <i>Kalmia latifolia</i>	Mountain Laurel - all species, hybrids and cultivars
18. <i>Laurus nobilis</i>	Bay laurel
19. <i>Lithocarpus densiflorus</i>	Tanoak
20. <i>Lonicera hispidula</i>	California honeysuckle
21. <i>Maianthemum racemosum</i>	False Solomon's seal
22. <i>Michelia doltsopa</i>	Michelia
23. <i>Parrotia persica</i>	Persian Parrotia, iron tree
24. <i>Photinia fraseri</i>	Red tip or Fraser's Photinia
25. <i>Pieris formosa</i>	Himalaya pieris
26. <i>Pieris formosa x japonica</i>	Pieris 'Forest Flame'
27. <i>Pieris floribunda x japonica</i>	Pieris 'Brouwer's Beauty'
28. <i>Pieris japonica</i>	Japanese pieris
29. <i>Pseudotsuga menziesii v. menziesii</i>	Douglas-fir
30. <i>Quercus agrifolia</i>	Coast live oak
31. <i>Quercus cervis</i>	European turkey oak
32. <i>Quercus chrysolepis</i>	Canyon live oak
33. <i>Quercus falcata</i>	Southern red oak (3)
34. <i>Quercus illex</i>	Holm oak (3)
35. <i>Quercus kelloggii</i>	California black oak
36. <i>Quercus parvula v. shrevei</i>	Shreve oak
37. <i>Rhamnus californica</i>	California coffeeberry
38. <i>Rhamnus purshiana</i>	Cascara
39. <i>Rhododendron spp</i>	Rhododendron (including azaleas) – all species, hybrids, and cultivars
40. <i>Rosa gymnocarpa</i>	Wood rose
41. <i>Salix caprea</i>	Goat willow
42. <i>Sequoia sempervirens</i>	Coast redwood
43. <i>Syringa vulgaris</i>	Lilac (3)
44. <i>Taxus baccata</i>	European yew (3)
45. <i>Trientalis latifolia</i>	Western starflower
46. <i>Umbellularia californica</i>	California bay laurel/Oregon myrtle/pepperwood
47. <i>Vaccinium ovatum</i>	Evergreen huckleberry
48. <i>Viburnum x bodnantense</i>	Bodnant Viburnum (arrowwood)
49. <i>Viburnum plicatum</i>	Doublefile Viburnum
50. <i>Viburnum tinus</i>	Laurustinus

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c) Host material permitted for removal:

- Firewood may be harvested from the THP area, so long as such wood is not smaller than four inches in diameter and does not leave the existing Zone of Infestation.
- The only *host material* that may be harvested for commercial purposes are Douglas fir and coast redwood logs, tanoak/madrone logs, and redwood basal burls. They may be harvested and shipped to destinations within the existing Zone of Infestation, subject to the requirements of the Compliance Agreement. If debarked, they may be harvested and shipped to any destination without restriction.

d) Host material shall not be moved outside of the existing Zone of Infestation.

e) This THP shall serve as the Compliance Agreement for removal of commercial host material from the THP area, within the Zone of Infestation. This Compliance Agreement is only valid for 1 year.

f) Should such activities continue during subsequent years, and the host list, zone of infestation/infection, or recommended mitigation measures change, the plan shall be amended with current information and mitigations to meet compliance.

g) Information regarding Compliance:

- (1) The destinations of the host material may include the following locations in northern CA: fuel wood will potentially be transported to local residences in Mendocino or Sonoma Counties, sawlogs may be transported to Scotia, Eureka, Samoa, Arcata, Fortuna, Ukiah, Calpella, Philo, Cloverdale, Weaverville, and Willits. Although the most likely destinations for shipments are listed above, other destinations may be amended into the THP.
- (2) Basal trunk/burl sprouts, small branches (less than 1 inch in diameter), and needles of Douglas-fir/coast redwood are considered host materials. These host materials shall not be removed from the THP area except as provided for above in c.
- (3) Chips or other host material, less than 4 inches in diameter, shall not be removed from the THP area.
- (4) Movement of host material greater than 4 inches in diameter (as described in (c), above) does not require a closed

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- container.
- (5) Host debris (not actual logs - just leaves, twigs, and branches of host species, listed in item (b), above) shall be inspected for, and substantially removed from, equipment/vehicles prior to departure from the plan area. The usual inspection shall consist of walking around each vehicle/piece of heavy equipment, including any load, and visually scanning for the presence of host debris, prior to movement from the THP area. The LTO shall advise all truck drivers that vehicles should be washed at a commercial wash station, or pressure washed with soap at their own facility, prior to working on another property. This is the responsibility of the LTO responsible for hauling operations. The LTO shall inspect and sanitize light duty equipment such as saws, hand tools, and boots before and after leaving the plan area. The LTO shall post informational signs regarding SOD mitigation measures (provided by RPF) at the entrance(s) to the plan area.

h) The RPF responsible for providing professional advice to the licensed timber operator pursuant to 14 CCR 1035.1(e), shall inform the LTO regarding regulations pertaining to SOD, current SOD hosts, extent of the regulated area, and operational requirements pertaining to the Compliance Agreement (this THP), prior to start-up of initial timber operations and throughout active timber operations as necessary regarding plan amendments to such.

b. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<p>Are there any other significant insect or forest disease problems within the THP area if outside a declared zone?</p> <p>1. <input type="checkbox"/> Insect(s)</p> <p>2. <input type="checkbox"/> Disease(s)</p> <p>3. <input type="checkbox"/> Pest problems</p> <p>4. <input type="checkbox"/> Other (provide description of the forest problem)</p> <p>If YES, describe proposed measures to improve the health, vigor, and productivity of the stand(s).</p>
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ITEM #16 – HARVESTING PRACTICES

YARDING SYSTEM AND EQUIPMENT TO BE USED					
	GROUND BASED (Tractor, skidder, Forwarder)		CABLE		OTHER (Special)
<input checked="" type="checkbox"/>	Tractor, including end/long lining	<input type="checkbox"/>	Cable, ground lead	<input type="checkbox"/>	Helicopter
<input checked="" type="checkbox"/>	Rubber tire skidder, forwarder	<input checked="" type="checkbox"/>	Cable, High lead	<input type="checkbox"/>	Animal
<input checked="" type="checkbox"/>	Feller buncher	<input checked="" type="checkbox"/>	Cable, skyline	<input type="checkbox"/>	Other (describe below)
<input checked="" type="checkbox"/>	Shovel yarding				

** All Tractor operations restrictions apply to ground based equipment Reference 14 CCR 914.2 [934.2, 954.2] (All Districts)

ITEM #17 – EROSION HAZARD RATING

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EROSION HAZARD RATING (EHR)					
Per 14 CCR 914.6 [934.6, 954.6](c) Waterbreaks					
Road and/or Trail Gradients Waterbreak Spacing by trail/road gradient					
		10 or less	11-25	26-50	>50
<input type="checkbox"/>	LOW	300	200	150	100
<input checked="" type="checkbox"/>	MODERATE	200	150	100	75
<input checked="" type="checkbox"/>	HIGH	150	100	75	50
<input type="checkbox"/>	EXTREME	100	75	50	50

NOTE:

- If more than one rating is checked, areas must be identified on a THP map down to 20 acres in size.
- COASTAL DISTRICT with a High or extreme EHR(s) must be mapped to 10 acres.
- If ratings checked do not match the EHR Worksheet clarify the discrepancy:

EHR rating discrepancy:

CalTREES THP ITEMS #19-21 – GROUND BASED EQUIPMENT

<p>h. <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p>	<p>Slopes steeper than 65% if YES, provide site specific instructions to the LTO in SECTION II and provide the required explanation and justification in SECTION III.</p> <p>Item 21(h): There are areas within the THP in which tractor operations are proposed on skid trails where slopes are over 65%. The EHR in these areas is Moderate. The skid trails in these areas are identified as "Tractor Exception Trails" on the "Yarding Methods" maps at the end of Section II. Skid trails proposed for use are flagged with yellow "skid trail" flagging, are existing trails, and are in stable condition. No new skid trails may be constructed in these areas. Skid trails blocked off with skid trail flagging shall not be used by the timber operator. Cable yarding operations are not feasible in these areas due to poor deflection, blind leads, and lack of access points for safe operation of cable yarding machines. The trails that exist in these areas are not extensive and provide the only access to certain areas of the THP that would otherwise be inaccessible. Refer to Section III for further explanation and justification.</p>
<p>i. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>	<p>Slopes steeper than 50% where the erosion hazard rating (EHR) is HIGH or EXTREME. if YES, provide site specific instructions to the LTO in SECTION II and provide the required explanation and justification in SECTION III.</p>
<p>j. <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> <p><input checked="" type="checkbox"/> Existing tractor roads that do not require reconstruction. <input type="checkbox"/> [NORTHERN and SOUTHERN only] New tractor roads that have been flagged by an RPF or supervised designee prior to use. <input type="checkbox"/> [COASTAL only] New tractor roads at a location that has been shown on the THP map, flagged by an RPF or supervised designee prior to the pre-harvest inspection, or prior to the start of timber operations if a PHI was not required.</p>	<p>Slopes between 50% and 65% with a MODERATE EHR at: (percentage based on average slope on sample areas of 20 acres) if YES, provide site specific instructions to the LTO in SECTION II.</p> <p>Item 21(j): There are areas within the THP in which tractor operations are proposed on skid trails where slopes are between 50% - 65%. The EHR in these areas is Moderate. Skid trails proposed for use are flagged with yellow "skid trail" flagging, are existing trails, and are in stable condition. Cable yarding operations are not feasible in these areas due to poor deflection, blind leads, and lack of access points for safe operation of cable yarding machines. The trails that exist in these areas are not extensive and provide the only access to certain areas of the THP that would otherwise be inaccessible. Refer to Section III for further explanation and justification.</p>
<p>k. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>	<p>Slopes over 50% which lead without flattening to sufficiently dissipate water flow and trap sediment before it reaches a watercourse or lake? if YES, provide site specific instructions to the LTO in SECTION II and provide the required explanation and justification in SECTION III.</p>
<p>NOTE:</p> <ul style="list-style-type: none"> - Per 14 CCR 1034(x)(15) all exceptions must be located on a map. - If any question above is answered YES then tractor road locations must be flagged on the ground prior to the PHI or the start of timber operations if a PHI is not required. 	

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Map & Point #	Site, Description, Watercourse Class,	Potential Sediment Discharge (cy), Priority* Hydro Calc	1600	Description and Recommendations
			Geo Report	

				<ul style="list-style-type: none"> Inform County Public Works about the observed condition of the culvert and the temporary measures that are being implemented to partially stabilize the portion of the culvert on the subject property. Water bar upslope of crossing shall be maintained once operations are complete. Follow the requirements of the 1600 Agreement. Exposed soils shall be stabilized as per Item #18 Soil Stabilization Measures.
2	CSDS, Class III Crossing	2, Low	Yes	<p>A Class III watercourse crosses an existing permanent road via Rocked Ford. The dip of the rocked ford is shallow, and water appears to overtop the ford during periods of high flow. ($Q_{100}=9.2$ cfs)</p> <ul style="list-style-type: none"> Enhance the dip in the Rocked Ford to ensure water does not over top the Ford during rain events. Add additional minimum 16" D₅₀ rock to the Rocked Ford outlet at a 2:1 gradient to dissipate energy and prevent erosion. Exposed soils shall be stabilized as per Item #18 Soil Stabilization Measures.
		Yes	No	
3	CSDS, Class III Crossing	4, Low	Yes	<p>A Class III watercourse crosses an existing permanent road via Rocked Ford. The watercourse drains to the road surfaces and flows down the road for approximately 50' before draining off the road. ($Q_{100}= 4.6$ cfs)</p> <ul style="list-style-type: none"> An 18" Culvert shall be installed to re-establish the watercourse in the natural channel flagged with three glo-orange flags in the field. Exposed soils shall be stabilized as per Item #18 Soil Stabilization Measures.
		Yes	No	
4	CSDS, Class III Crossing	3, Low	Yes	<p>A Class III watercourse crosses an existing permanent road via rocked ford. The road surface is showing signs of rill erosion through the ford. ($Q_{100}=15.4$ cfs)</p> <ul style="list-style-type: none"> Enhance the dip in the Rocked Ford. Add additional road rock if necessary to create a smooth operating surface. Exposed soils shall be stabilized as per Item #18 Soil Stabilization Measures.
		Yes	No	
5	CSDS, Class III Crossing	3, Low	Yes	<p>A Class III watercourse crosses an existing permanent road via rocked ford. The outlet of the rocked ford is showing signs of erosion. ($Q_{100}=9.2$ cfs)</p> <ul style="list-style-type: none"> Add additional minimum 16" D₅₀ rock to the Rocked Ford outlet at a 2:1 gradient to dissipate energy and prevent erosion. Exposed soils shall be stabilized as per Item #18 Soil Stabilization Measures.
		Yes	No	
6	CSDS, Class III Crossing	6, Low	Yes	<p>A Class III watercourse crosses an existing permanent road with no drainage facility in place. There is a bank seep with an inside ditch upslope of the crossing for approximately 50</p>
		Yes	No	

Map & Point #	Site, Description, Watercourse Class,	Potential Sediment Discharge (cy), Priority*	1600	Description and Recommendations
		Hydro Calc	Geo Report	

				feet. ($Q_{100}=10.8$ cfs) <ul style="list-style-type: none"> Install Rocked Ford with 17" D₅₀ rock with an outfall gradient of 2:1. Install Rocked Ford as per Diagram 4. Re-establish inside ditch upslope of crossing for approximately 50 feet per diagram C6. Exposed soils shall be stabilized as per Item #18 Soil Stabilization Measures.
7	CSDS, Head of Class III	1, Low	Yes	An existing permanent road crosses above the head of a Class III watercourse. There is a small amount of erosion visible in the road surface for approximately 40 feet upslope of the crossing. ($Q_{100}=6.2$ cfs) <ul style="list-style-type: none"> Install rock armored rolling dip with rock armored outfall with 14" D₅₀ rock with an outfall gradient of 2:1. Exposed soils shall be stabilized as per Item #18 Soil Stabilization Measures.
		No	No	
8	CSDS, Class III Crossing	5, Low	Yes	A Class III watercourse crosses an existing permanent road via rocked ford. The rocked ford appears to overtop during high flows allowing water to run down the road surface to the water bar below the crossing. This is causing erosion on the road surface and at the water bar outlet. ($Q_{100}=4.6$ cfs) <ul style="list-style-type: none"> Install an 18" Culvert to watercourse grade. Exposed soils shall be stabilized as per Item #18 Soil Stabilization Measures.
		Yes	No	
9	Ditch Relief Culvert	N/A, N/A	No	18" Ditch relief culvert with downspout on existing permanent road. Culvert is functional but the downspout is full of sediment. <ul style="list-style-type: none"> Leave culvert in place and remove sediment from the downspout.
		No	No	
10	CSDS, Class III Watercourse	3, Low	Yes	A Class III watercourse crosses an existing permanent road with no drainage facility in place. ($Q_{100}=4.6$ cfs) <ul style="list-style-type: none"> Install an 18" culvert to watercourse grade. Install critical dip with rock armored outfall using 14" D₅₀ rock approximately 30 feet downgrade of crossing with an outfall gradient of 2:1. Exposed soils shall be stabilized as per Item #18 Soil Stabilization Measures.
		Yes	No	
11	Ditch Relief Culvert	N/A, N/A	No	An 18" Ditch Relief Culvert on existing permanent road. Culvert outlet is 1/2 way blocked by sediment. <ul style="list-style-type: none"> Keep culvert in place and remove sediment from outlet improving the culvert flow capacity.
		No	No	
12	Ditch Relief	N/A, N/A	No	Existing stretch of permanent road with an inside ditch that

Map & Point #	Site, Description, Watercourse Class,	Potential Sediment Discharge (cy), Priority*	1600	Description and Recommendations
		Hydro Calc	Geo Report	

	Culvert	No	No	drains into a Class III watercourse. <ul style="list-style-type: none"> Install an 18" ditch relief culvert.
13	CSDS, Class III Watercourse	9, Moderate	Yes	A Class III watercourse crosses an existing permanent road via an 18" CMP. The culvert draining the Class III watercourse is completely buried and non-functional. There is also an 18" CMP installed above the non-functional culvert draining both the inside ditch and the watercourse. This culvert is functional; however, it is not installed to watercourse grade, and is hydrologically connected to the road. ($Q_{100}=4.6$ cfs) <ul style="list-style-type: none"> Remove both the 18" and the 24" culvert. Install a 24" culvert to watercourse grade. Re-establish the channel upstream of the newly installed culvert to ensure all flows stay within the channel. The re-established channel shall be 3' wide and 2' deep. This will re-establish the channel to the outlet of culvert at crossing #10. Install a critical dip with rock armored outfall using 14" D_{50} rock approximately 30 feet downgrade of the crossing with an outfall gradient of 2:1. Exposed soils shall be stabilized as per Item #18 Soil Stabilization Measures.
		Yes	No	
15	Ditch Relief Culvert	N/A, N/A	No	12" Ditch relief culvert on existing permanent road. The ditch relief culvert is rusted through on the inlet and outlet and is undersized. <ul style="list-style-type: none"> Remove the 12" culvert. Install an 18" Ditch Relief Culvert.
		No	No	
16	Ditch Relief Culvert	N/A, N/A	No	An 18" Ditch Relief Culvert on existing permanent road. The culvert is functional, but the inlet is partially buried with sediment. <ul style="list-style-type: none"> Leave culvert in place and remove sediment from the culvert inlet.
		No	No	
17	Ditch Relief Culvert	N/A, N/A	No	A 12" Ditch Relief Culvert on existing permanent road. The culvert outlet is shot-gunned out approximately 3.5 feet. The culvert is undersized and appears to be crushed or blocked in the middle of the road and is non-functional. <ul style="list-style-type: none"> Remove the 12" culvert. Install an 18" Ditch Relief Culvert.
		No	No	
19	Bank Seep and Head of Class III Watercourse	N/A, N/A	No	A bank seep and the head of a Class III Watercourse on an existing permanent road. The bank seep is being drained via a rocked rolling dip. The dip is functional and working properly. <ul style="list-style-type: none"> Maintain Rocked Rolling Dip.
		No	No	

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ITEM # 32 – BIOLOGICAL RESOURCES

ITEM #32	LISTED PLANT or ANIMAL SPECIES INCLUDING HABITAT
a. <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Are there any <u>ANIMAL SPECIES</u> , including their habitat(s), which are listed as rare, threatened or endangered under Federal or state law, or a sensitive species by the Board of Forestry associated with the THP area? If YES, identify the animal species and the provisions to be taken for the protection of the species.

*The Clarr Tree (location is depicted on the WLPZ Operations Map located at the end of Section II of this THP), is a Historical Old Growth Redwood Tree located in the Alluvial Flat of the Floodplain adjacent to the Russian River. The Clarr tree is NOT proposed for harvest. There shall be a permanent 75-foot "No Harvest" Buffer placed around the Clarr tree. The LTO shall instruct timber fallers to fall trees away from the Clarr Tree.

Listed and Sensitive Animal Species Table					
Animal Species	Species type Mammal / bird / reptile / amphibia / fish / Invertebrate	FEDERAL Threatened / endangered /	STATE Threatened / endangered / candidate	BOF Sensitive	Protection measures
Northern Spotted Owl	Bird	Threatened			<p><u>Northern Spotted Owl</u></p> <p>Note to LTO: 1. No operations shall occur until all required surveys have been provided to CAL-FIRE, evaluated for consistency with the plan and protocols, and amended into the plan. Pursuant to 14 CCR 939.9(e), this THP is using Scenario 4. The person submitting the original plan or the successor in interest will submit subsequent consultations to the Department as enforceable amendments to the plan prior to operations being conducted pursuant to that consultation. Surveys shall be conducted pursuant to the most current, approved survey protocol.</p> <p>Also habitat retention, standard protection measures, operational limitations, and surveys shall be conducted in compliance with February 1, 2008 Attachment B for the Coast Forest District. NSO surveys for 2018-2020 have been included in the THP and are located in Section V.</p> <p>According to the Northern Spotted Owl database dated 14MAR18, 22JAN19 and 02MAR20, there is one known NSO territory within 0.7 miles of the Silver Estates THP (SON0076). Discussion with other local biologists did not know of any other known NSOs. A daytime stand search was conducted within the property and off the property in the vicinity of the SON0076 AC looking for evidence of NSOs on 25APR18, 22APR19 and 09MAR20, and no NSO's were found.</p> <p>Activity Center Protections For all known NSO activity centers, timber operations should adhere to the following recommendations outlined in Attachment A:</p> <p>1. Within the 100-acre core area of an NSO AC: a. Outside the breeding season, limited timber operations (i.e. road use and maintenance, map point work, tail-hold placements, use of existing roads, and loading may be conducted, provided no trees > 11 inches DBH are cut or removed by the operations, and no logs are yarded through the core area. b. During the NSO breeding season, timber operations (including the use of roads prior to July 9) are not allowed within the 100-acre core area, except as noted as in subsections 4 & 5 below.</p>

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				<p>Exceptions to Attachment A: see exceptions to breeding season restrictions on road use (proposed below under "Road Use" and addressed in Section V of the THP).</p> <p>2. Timber operations outside the 100-acre core area, but within 0.25 mile of an AC:</p> <p>a. Outside the breeding season, timber operations may be conducted.</p> <p>b. During the breeding season, no timber operations should proceed unless protocol surveys do not detect nesting NSOs.</p> <p>Exceptions to Attachment A: None</p> <p>3. For all NSO ACs, prior to May 15 (until the required surveys are conducted on May 15 or later):</p> <p>a. Timber operations (except helicopter yarding or staging) may be conducted only on those THP areas > 0.25 mile from the AC.</p> <p>b. Helicopter yarding and staging may occur only on those THP areas > 0.5 mile from the NSO AC.</p> <p>Exceptions to Attachment A: see exceptions to breeding season restrictions on road use (proposed below under "Road Use" and addressed in Section V of the THP).</p> <p>4. For all NSO ACs where reproductive status has been determined to be non-nesting or nesting failed:</p> <p>a. Limited timber operations (road use and maintenance, map point work, use of existing skid roads, tail-hold placements and loading) may be conducted within the 100-acre core area of the AC provided no trees > 11 inches DBH are cut or removed by the operations, and no logs are yarded through the core area.</p> <p>b. Full timber operations, including helicopter yarding and staging, may be conducted within 0.25 mile but not within the 100-acre core area of the AC. Helicopter fly-overs shall not occur within 1000 feet of the NSO AC.</p> <p>Exceptions to Attachment A: None.</p> <p>5. For NSO ACs where reproductive status has been determined to be nesting:</p> <p>a. For ACs where fledging status has been determined, timber operations may be conducted only on those THP areas that are > 0.25 mile from the AC until the end of the breeding season.</p> <p>b. Helicopter yarding and staging may occur only on those THP areas > 0.5 mile from the NSO AC.</p> <p>Exceptions to Attachment A: None.</p> <p>6. For NSO ACs where fledgling status has been determined (either nest failure or fledglings have left the core area):</p> <p>a. Full timber operations, including helicopter yarding and staging, may be conducted within 0.25 mile but not within the 100-acre core area of the AC. Helicopter fly-overs shall not occur within 1000 feet of the NSO AC.</p> <p>b. Limited timber operations (road use and maintenance, map point work, use of existing skid roads, tail-hold placements and loading) may be conducted within the 100-acre core area of the AC provided no trees > 11 inches DBH are cut or removed by the operations, and no logs are yarded through the core area.</p> <p>Exceptions to Attachment A: None.</p>
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				<p>7. For any NSO AC regardless of AC status:</p> <p>a. If NSOs move to a new location (> 1000 feet from the historical AC) and reproductive behavior is confirmed at the new site, request technical assistance to evaluate the status of the historical AC.</p> <p>Measures in addition to Attachment A: Owl activity centers may move over time or new territories may become established within the THP or within the biological assessment area of the THP prior to operations, but following THP approval. To ensure adequate take avoidance MRC shall also:</p> <ul style="list-style-type: none"> • Conduct landscape habitat analysis (at 0.7) on all newly established territories or designated activity centers that were not previously addressed in the THP. • Apply any applicable protection measures listed above (core area, habitat, and disturbance measures) to designated core areas, occupied owl site centers, and newly established territories not previously addressed in the THP. <p>Core Area Habitat Protections</p> <p>1. Once an AC has been accurately mapped, a 100-acre core area must be identified that contains the highest quality habitat (typically nesting/roosting) located contiguous with AC.</p> <p>2. When an AC is surrounded by sufficient nesting/roosting habitat, the core area is typically mapped starting with a 1000-foot radius circle (72 acres) centered on the AC, and is connected on one side to the WLPZ and expanded until the core area includes 100 acres. Limited timber operations are allowed within the core area.</p> <p>3. When an AC is closer than 500 feet to the outer edge of the nesting/roosting habitat, the acres of non-nesting/roosting habitat within 500 feet of the AC are included, but should be augmented with additional nesting/roosting habitat elsewhere in the core area to make a total of 100 acres of the highest quality habitat.</p> <p>4. When the AC is closer than 1000 feet to, but not within 500 feet of, the outside edge of the nesting/roosting polygon, the protected core area should extend to the most distant edge of the nesting/roosting habitat but shall not be less than a 500-foot radius.</p> <p>5. Operations conducted outside the core area but within 1000 feet of an AC should retain the functionality of any NSO habitat present pre-harvest within this area (i.e. maintain the pre-harvest habitat type post-harvest).</p> <p>6. Nesting/roosting habitat contiguous with the AC, which are larger than 100 acres provide the most operational flexibility. If the nesting/roosting is 200 acres or greater, and operations in the polygon outside the core area retained functional nesting/roosting habitat (i.e. no more than 33% of the basal area is harvested retaining a minimum of 100 sq. ft. of basal area per acre of trees greater than 11 inches DBH), then the 100-acre core area can be redrawn in subsequent entries. However, the 500-foot radius should remain unchanged, and the redrawn core area should not include any acres harvested within the previous 5 years.</p> <p>Exceptions to Attachment A: None.</p> <p>Habitat Retention within 0.7 miles of Activity Centers Within the 0.7 mile radius (985 acres) of each AC:</p> <p>1. Retain habitat to maximize attributes desirable for NSO.</p>
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				<p>2. Retain at least 500 acres of suitable (nesting/roosting/foraging) NSO habitat, post-harvest, as follow:</p> <p>a. Retain 200 acres nesting/roosting habitat within a 0.7 mile radius of the AC consisting of:</p> <p>i. 100 acres of the 200 acres of nesting/roosting habitat retained should be contiguous, or contiguous as possible with the AC.</p> <p>ii. An additional 100 acres of nesting/roosting within the 0.7 mile radius:</p> <p>1. If the second 100 acres of nesting/roosting habitat is also contiguous with the AC, or within the same drainage, operations should retain a minimum of 66% of the pre-harvest basal area per acre of trees at least 11 inches DBH.</p> <p>2. If the remaining 100 acres of nesting/roosting habitat is not contiguous with the AC, retain at least 100 acres of nesting/roosting habitat.</p> <p>b. Retain at least 300 acres of suitable NSO habitat, post-harvest, of at least foraging quality.</p> <p>3. Remove no more than 1/3 of the remaining suitable habitat in excess of 500 acres within 0.7 mile of an AC during the life of the timber operations.</p> <p>Exceptions to Attachment A: None.</p> <p>Road Use</p> <p>To avoid take of NSO from noise disturbance (see U.S. Fish and Wildlife Service 2006) road use within 0.25 mile (1320 ft, 402 m) of an NSO activity center is prohibited until July 10, unless:</p> <p>1. Following an activity center search (2012 NSO Protocol) on or after May 15, the NSO is determined to be absent, non-nesting, or nest failed, or;</p> <p>2. The activity center is within 165 feet of, and closer to a major highway that typically has continuous traffic year round (Hwy 1, 36, 101, 128, 299, etc.) and the appurtenant road is not within 165 feet of the AC.</p> <p>3. After July 9 until the end of the breeding season road use within the 100-acre core is restricted to existing road use, maintenance and map point work.</p> <p>Exceptions to Attachment A: We propose additional exceptions to the above road use restrictions include (see Section V for rationale and justification):</p> <p>During the breeding season the following road uses are permitted:</p> <ul style="list-style-type: none"> •Use of pickups and ATVs on existing roads. •Use and maintenance of mainline haul roads as designated by maps in the THP. •Use of public roads. •Use and maintenance of existing non-mainline haul roads that (1) are located at least the same distance from the current spotted owl activity center as a public road or mainline haul road; or (2) are existing seasonal roads ≥ 500 feet from the activity center and in use throughout the time the spotted owl territory has been active. • Allow a logging vehicle to stop only for safety reasons when within 0.25 mile of a nest site known to be currently active, unless the vehicle is on a mainline road.
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				<p>During the non-breeding season the following road uses are permitted:</p> <ul style="list-style-type: none"> • Operations, including use and maintenance of all existing roads and rock pits. If this species is found within the plan area, cease operations and contact plan submitter who shall contact CDFW to develop protection measures. <p>1. Definitions USFWS NSO Take Avoidance Analysis- Attachment A Northern Spotted Owl Coast District Range</p> <p>a. Nesting/Roosting</p> <p>i. High Quality Nesting/Roosting Habitat</p> <ol style="list-style-type: none"> 1. Basal area= 210+ sq. ft., and 2. $\geq 15"$ quadratic mean diameter (QMD), and 3. ≥ 8 trees per acre (TPA) of trees $\sim 26"$ in diameter at breast height (DBH), and 4. $\geq 60\%$ canopy closure <p>ii. Nesting/Roosting Habitat</p> <ol style="list-style-type: none"> 1. A mix of basal areas ranging from 150-180+ sq. ft., and 2. $\geq 15"$ QMD, and 3. ≥ 8 TPA of trees $\sim 26"$ DBH, and 4. $\geq 60\%$ canopy closure <p>b. Foraging</p> <p>i. Foraging Habitat</p> <ol style="list-style-type: none"> 1. A mix of basal areas ranging from 120-180+ sq. ft., and 2. $\sim 13"$ QMD, and 3. ~ 5 TPA of trees $\sim 26"$ DBH, and 4. A mix of $\sim 40\%$-100% canopy closure <p>ii. Low Quality Foraging Habitat</p> <ol style="list-style-type: none"> 1. A mix of basal areas ranging from 80-120+ sq. ft., and 2. $\sim 11"$ QMD, and 3. $\sim 40\%$ canopy closure <p>2. Quantities</p> <p>a. Within 1000 feet of an activity center</p> <p>i. Outside breeding season (September 1- January 31): no timber operations other than use of existing roads</p> <p>ii. During breeding season (February 1-August 31): no timber operations other than the use of existing, permanent, year-round roads. If NSOs are nesting, utilize seasonal restriction for all timber operations within 0.25 mile of nest.</p> <p>b. Within 0.5 mile radius (502 acres) centered on an activity center</p> <p>i. Retention of habitat should follow Section III.4 of this document</p> <p>ii. At least 250 acres nesting/roosting habitat present, as follows:</p> <ol style="list-style-type: none"> 1. 100 acres High Quality Nesting/Roosting Habitat, and 2. 150 acres Nesting/Roosting Habitat <p>-AND III. At least 150 acres foraging habitat must be present, as follows:</p> <ol style="list-style-type: none"> 1. 100 acres Foraging Habitat, and 2. 50 acres Low Quality Foraging Habitat <p>iv. No more than 1/3 of the remaining suitable habitat may be harvested during the lifetime of the THP</p> <p>c. Between the 0.5 mile radius and the 1.3 mile radius circles centered on an activity center</p> <p>i. Retention of habitat should follow Section III.4 of this document</p> <p>ii. ~ 935 acres of suitable habitat must be present, as follows:</p>
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					<p>1. At least 655 acres of Foraging Habitat, and</p> <p>2. At least 280 acres of Low Quality Foraging, and</p> <p>3. No more than 113 of the remaining suitable habitat may be harvest during the life of the THP</p> <p>If a Northern Spotted Owl is found to be nesting within the THP area, halt all operations, other than standard logging road use for egress, within 500 feet of the suspected nesting site and notify the Plan Submitter. Do not recommence operations until appropriate measures have been taken by the Plan Submitter and accepted and approved by CDFW.</p>
Marbled Murrelet	Bird	Threatened	Endangered	Yes	No known occurrences within THP area. If a Marbled Murrelet is found to be nesting within the THP area, halt all operations, other than standard logging road use for egress, within 300 feet of the suspected nesting site and notify the Plan Submitter. Do not recommence operations until appropriate measures have been taken by the Plan Submitter and accepted and approved by CDFW.
Bald Eagle	Bird	Fed Delisted	Endangered Fully Protected	Yes	No known occurrences within the THP area. Buffer zone around active nest site/trees ranges from 10-40 acres in consultation with CDFW. The following year around restrictions shall apply within the buffer zone. No clear cutting is allowed within the buffer zone. Selection, commercial thinning, sanitation-salvage, and the shelterwood regeneration method, except for the removal step, are permitted if all trees are marked prior to preharvest inspection. All nest trees containing active nests, and all designated perch trees, screening trees and replacement trees, shall be left standing and unharmed.
Great Blue Heron and Great Egret	Bird			Yes	No known occurrences within the THP area. For the Great Blue Heron and Great Egret, the buffer zone around nest sites shall consist of the area within a 300-foot radius of a tree or trees containing a group of five or more active nests in close proximity as determined by the CDFW. For the Great Blue Heron and Great Egret, the critical period is February 15 until July 1 for coastal counties south of and including Marin County. For all other areas, the period is from March 15 through July 15. During this critical period, timber operations within the buffer zone shall be staged with a gradual approach to the nest.
Northern Goshawk	Bird			Yes	No known occurrences within the THP area. For the Northern Goshawk, the buffer zone around active nest sites shall be a minimum of five acres in size. When explained and Justified in writing, the Director may increase the size of the buffer zone to a maximum of 20 acres when necessary to protect nesting birds. For the Northern goshawk, designated nest trees, screening trees, perch trees, and replacement trees shall be left standing and unharmed. Only the commercial thinning, sanitation-salvage, and selection regeneration methods are permitted in the buffer zone. For the Northern Goshawk, the critical period is March 15 until August 15. During this critical period, no timber operations are permitted. If a Northern Goshawk is found to be nesting within the THP area, halt all operations, other than standard logging road use for egress, within 263 feet of the suspected nesting site and notify the Plan Submitter. Do not recommence operations until appropriate measures have been taken by the Plan Submitter and accepted and approved by CDFW.
Osprey	Bird	<p>RECEIVED</p> <p>JUL 22 2020</p> <p>COAST AREA RESOURCE MANAGEMENT</p>		Yes	For the Osprey, the buffer zone around active nest sites shall be up to five acres in size. When explained and Justified in writing, the Director may increase the size of the buffer zone to a maximum of 18 acres when necessary to protect nesting birds. For the Osprey, all designated nest trees, perch trees, screening trees, and replacement trees shall be left standing and unharmed. If the RPF believes that retention is not feasible, he/she may propose construction of an artificial nest structure as an alternative. If an Osprey is found to be nesting within the THP area during the period of March 1 to August 1, halt all operations within 150 feet

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					of the suspected nesting site and notify the Plan Submitter. Do not recommence operations until appropriate measures have been taken by the Plan Submitter and accepted and approved by CDFW.
Peregrine Falcon	Bird		Fully Protected	Yes	No known occurrences within the THP area. For the Peregrine Falcon, the buffer zone around active nest sites shall be a minimum of ten acres in size. The Director may increase the buffer zone beyond 40 acres in size so that timber operations will not result in a "take" of either species. The Director shall develop the buffer zone in consultation with the CDFW and the RPF. For the Peregrine Falcon, where timber provides part of the immediate nesting habitat, special cutting prescriptions may be required by the Director on an area up to ten acres in size immediately surrounding the nest. The cutting prescriptions shall protect the nesting habitat.
Bank Swallow	Bird		Threatened		No known occurrences within THP area. If a Bank Swallow is sited contact Plan Submitter whom shall contact CDFW to develop protection measures.
Tri-colored Blackbird	Bird		Threatened		No known occurrences within THP area. If a Tri-colored Blackbird is sited contact Plan Submitter whom shall contact CDFW to develop protection measures.
Western Snowy Plover	Bird	Threatened			No known occurrences within THP area. If a Western Snowy Plover is sited contact Plan Submitter whom shall contact CDFW to develop protection measures.
Western Yellow-billed Cuckoo	Bird	Threatened	Endangered		No known occurrences within THP area. If a Western Yellow-billed Cuckoo is sited contact Plan Submitter whom shall contact CDFW to develop protection measures.

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				<p>protection measures included in Item #26, and other provisions of the THP.</p> <p>The USFWS developed four take avoidance measures for THP's as being the most effective manner in avoiding take. This THP shall incorporate Scenarios III and IV from the California Red-legged Frog Take Avoidance Scenarios March 2, 2008 (Replaces 2/1/08 version) which are recommended tools to avoid take. The following definitions of wet and dry season definitions vary slightly from weather periods defined by the Forest Practice Rules.</p> <p><u>Scenario III:</u> Suitable habitat within 2 miles of the harvest units or in units where harvest activities are planned within 300 feet of suitable habitat during wet season. No take is estimated under the following conditions: *The wet season is defined as the first frontal rain system depositing a minimum of 0.25 inches of rain after October 15th and ends on April 15th. 1. For Class III Watercourses, when dry, maintain a minimum 30 foot "No Harvest" buffer, and fell trees away from watercourses. 2. For Class II Watercourses and intermittent ponds/wetlands that meet the definition of suitable habitat, where water is present, 300 foot "No Harvest" buffer, where dry, 30-foot "No Harvest" buffer and no equipment within 75-feet of annual high water mark. Trees shall be felled away from any suitable habitat. 3. Class I Watercourses and permanent ponds or wetlands, that meet the definition of suitable habitat, a 300-foot "No Harvest" Equipment Exclusion Zone shall be established around the suitable habitat.</p> <p><u>Scenario IV:</u> Suitable habitat within 2 miles of the harvest units or in units where harvest activities are planned within 300 feet of suitable habitat during dry season. No take is estimated under the following conditions: * The dry season is defined as April 16th and ends with the first frontal rain system which deposits a minimum of 0.25 inches of rain after October 15th. 1. All suitable habitat must maintain a 30-foot "No Harvest" and Equipment Exclusion Zone buffer.</p> <p>Under all above scenarios, the following operational conditions must also be included:</p> <ul style="list-style-type: none"> a. Pile burning must be outside the 300 foot "No Harvest" buffer. b. No herbicide use allowed within 300 feet of suitable habitat except for direct application to stumps. c. Roads and Landings, if constructed, must be at least 300 feet from suitable habitat, and construction must occur during the dry season. <p>*If a California Red-legged frog is found during operations, halt all operations within 200 feet and contact CDFW for a consultation regarding protection measures.</p>
Myrtle's Silverspot Butterfly	Insect	Endangered		No known occurrences within THP area. If a Myrtle's Silverspot Butterfly is sited contact Plan Submitter whom shall contact CDFW to develop protection measures.
Western Bumblebee	Insect		Endangered	No known occurrences within THP area. If a Western Bumblebee is sited contact Plan Submitter whom shall contact CDFW to develop protection measures.

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b. <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Are there any <u>PLANTS</u> , including their habitat(s), which are listed as rare threatened or endangered under Federal or state law, or a sensitive species by the Board of Forestry associated with the THP area?
	If YES, identify the animal species and the provisions to be taken for the protection of the species.

Plant Species Table				
Plant Species	FEDERAL Threatened / endangered	STATE Rare / Threatened / Endangered	CRPR (1A, 1B, 2A, 2B, 3, 4)	Protection measures
<i>Juglans hindsii</i> (Northern California Black Walnut)			1B.1	This species is present in one location within the THP. It is located in the Core Zone (No Harvest) of the Russian River. The specimen shall not be cut or damaged by the falling of nearby trees.

Post-approval Plant Discovery: In the event that a rare or sensitive plant is found after plan approval, default mitigation measures of avoidance will be implemented by placing a 50-foot buffer around the sensitive plant beginning at the outer most occurrence of the subject plant, until species specific mitigation measures can be developed. No timber harvesting or road construction shall occur within 50-feet of any location supporting a listed/sensitive plant unless alternative mitigation measures, developed through consultation with CDFW, are applied. The CDFW and RPF will work together to develop species specific measures to reduce impacts to sensitive plant taxa to less than significant. If agreed upon, protection measures alter the operations of the plan, those measures will be made part of the plan though a minor amendment submitted to CAL FIRE.

Invasive Species: Within the THP area there are populations of French Broom (*Genista monspessulana*) and pampas grass (*Cortaderia jubata*). These invasive species are mostly concentrated in open areas such as roads, skid trails, and landings. These species should be removed when ever feasible.

NON-LISTED SPECIES IMPACTS	
c. <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Are there any NON-LISTED species which will be significantly impacted by the operation?
If yes, identify the species and the provisions to be taken for the protection of the species.	

Non-Listed Species Table		
Species	Species type Mammal / bird / reptile / amphibia / fish / Invertebrate	Protection measures
Red Tree Vole	Mammal	Sonoma (Red) Tree Vole (RTV) nests were not discovered during plan preparation but may be associated with the plan area. The CNDDB has no reports of RTV. If RTV nests are discovered, the Plan Submitter shall be notified, and nest trees shall be retained along with screen trees (those with crowns touching the nest tree).
Foothill Yellow-Legged Frog	Amphibian	FYLF were not discovered during plan layout but may be associated with the plan area. Avoidance measures to protect habitat for FYLF will be met through the standard WLPZ protection measures as well as through BMP's for watercourse crossing work. If FYLF are discovered during operations halt all operations within 200 feet and contact CDFW to develop a site-specific mitigation measures to amend into the THP.
Western Pond Turtle	Amphibian	Western Pond Turtles were not discovered during plan layout but may be associated with the plan area. Avoidance measures to protect habitat for Western Pond Turtles will be met through the standard WLPZ protection measures as well as through BMP's for WLPZ operations and watercourse crossing work. If Western Pond Turtle is discovered during operations halt all operations within 100 feet and contact CDFW to develop a site-specific mitigation measures to amend into the THP.
California Giant Salamander	Amphibian	California Giant Salamanders were not discovered during plan layout but may be associated with the plan area. Avoidance measures to protect habitat for California Giant Salamander will be met through the standard WLPZ protection measures as well as through BMP's for WLPZ operations and watercourse crossing work. If Giant Salamanders are discovered during operations halt all operations within 100 feet and contact CDFW to develop a site-specific mitigation measures to amend into the THP.
Townsend's Big-eared Bat	Mammal	Townsend's Big-eared Bats were not discovered during plan layout but may be associated with the plan area. Habitat for this species exists within the BAA and within the plan area. Habitat within the plan area is probably in the form of basal hollows in large redwood trees. The plan does have mitigations in Item 14(g) to protect special habitat elements that would be beneficial for Townsend's big-eared bat. If Townsend's Big-eared bats are discovered during operations halt all operations within 200 feet and contact CDFW to develop a site specific mitigation measures to amend into the THP.
Pallid Bat	Mammal	Pallid Bats were not discovered during plan layout but may be associated with the plan area. Habitat for this species exists within the BAA and within the plan area. Habitat within the plan area is probably in the form of basal hollows in large redwood trees. The plan does have mitigations in Item 14(g) to protect special habitat elements that would be beneficial for Pallid Bats. If Pallid Bats are discovered during operations halt all operations within 200 feet and contact CDFW to develop a site specific mitigation measures to amend into the THP.

In the course of preparing this plan, plant and animal species that are not rare, threatened, endangered, or sensitive species were given consideration and review. Special habitat elements shall be maintained across the landscape to maintain forest ecosystems by providing complexity, which supports wildlife diversity. All feasible steps are being taken to retain special habitat features. For example all snags, except as required in 14 CCR 939.1(b), shall be retained. In addition, to provide habitat structure, all existing downed large woody debris and cull logs shall remain on site. Also, conifer and hardwoods with

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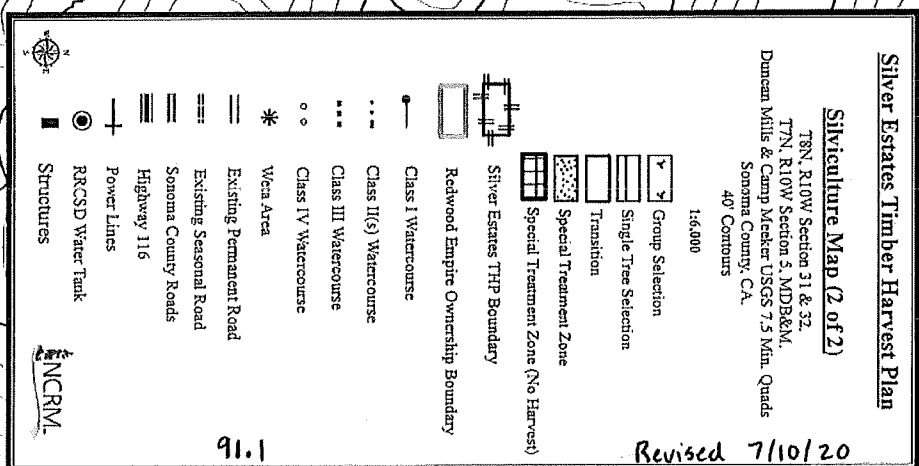
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Silver Estates Timber Harvest Plan

Silviculture Map (2 of 2)

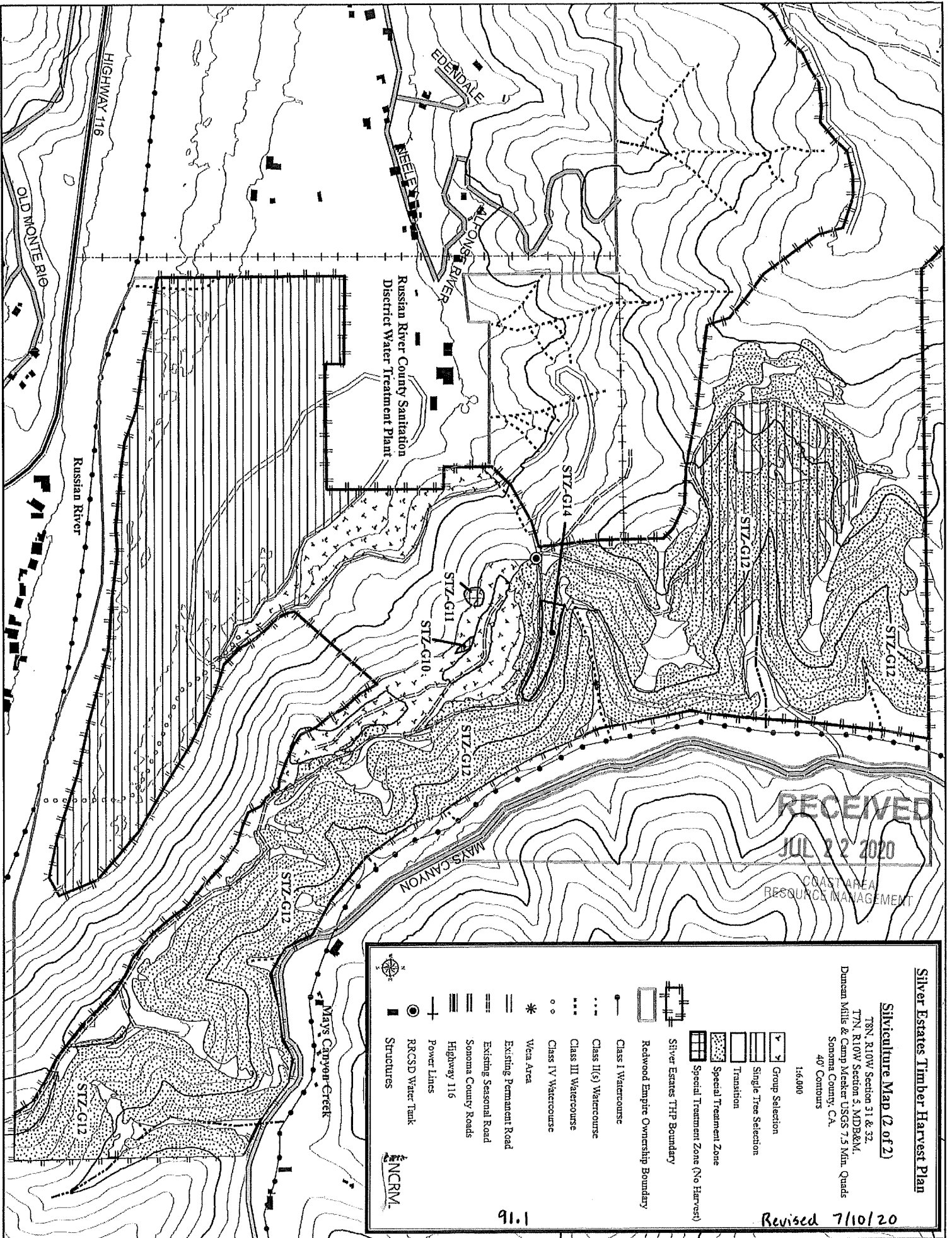
T8N, R10W, Section 31 & 32,
T7N, R10W, Section 5, NDB&M,
Duncan Mills & Camp Meeker USGS 7.5 Min. Quads
Sonoma County, CA
40' Contours
1:6,000

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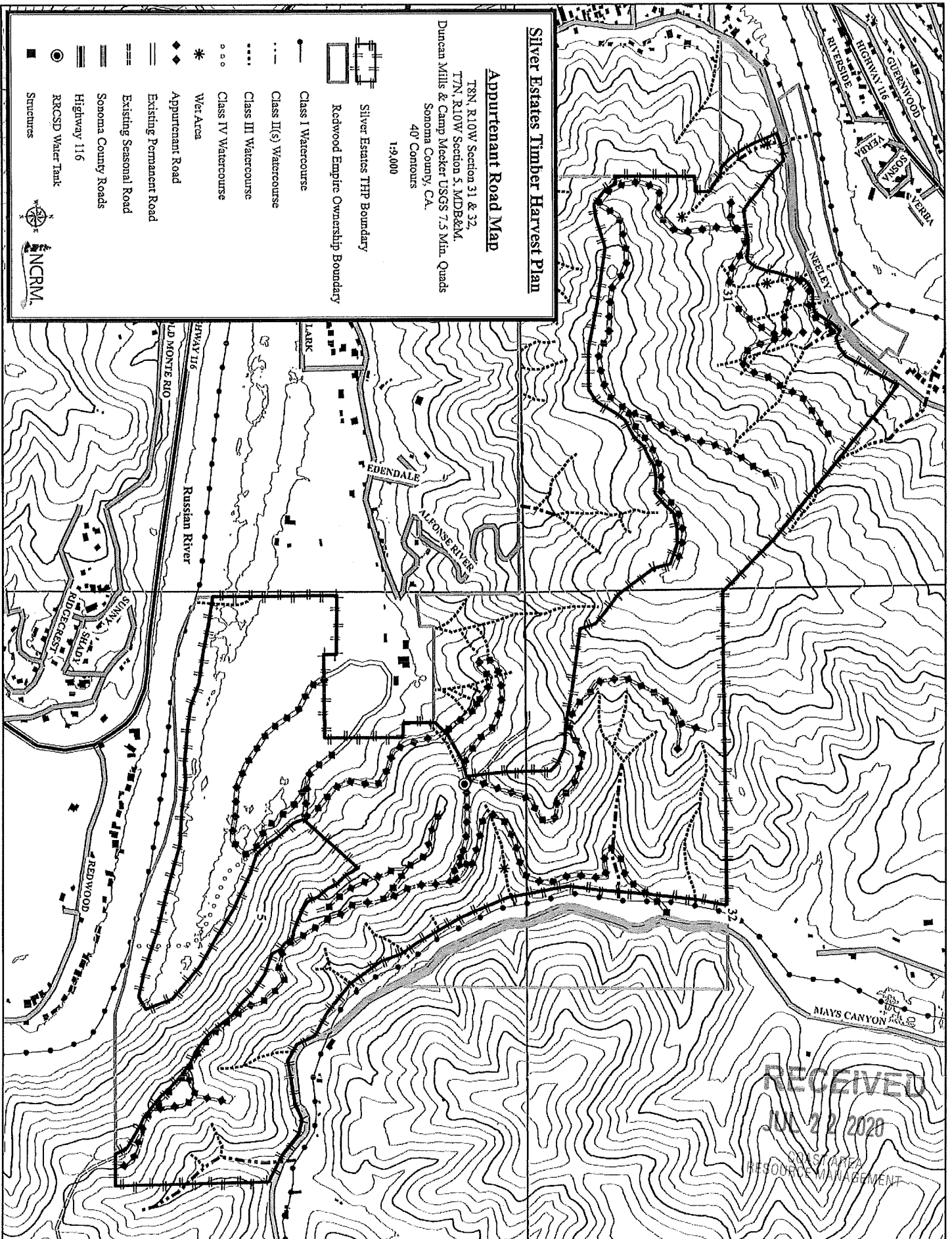


Silver Estates Timber Harvest Plan

Appurtenant Road Map

T8N, R10W Section 31 & 32,
T7N, R10W Section 5, MDB&M,
Duncan Mills & Camp Meeker USGS 7.5 Min. Quads
Sonoma County, CA.
40' Contours
1:9,000

- Silver Estates THP Boundary
- Redwood Empire Ownership Boundary
- Class I Watercourse
- Class II(s) Watercourse
- Class III Watercourse
- Class IV Watercourse
- Wet Area
- Appurtenant Road
- Existing Permanent Road
- Existing Seasonal Road
- Sonoma County Roads
- Highway 116
- RRCSO Water Tank
- Structures



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- (i) Slopes steeper than 65%
- (ii) Slopes steeper than 50% where the erosion hazard rating is high or extreme.
- (iii) Slopes over 50% which lead without flattening to sufficiently dissipate water flow and trap sediment before it reaches a watercourse or lake.

Explanation: There are areas within the THP in which tractor operations are proposed on skid trails where slopes are over 65%. All of the exception skid trails that are to be used have been flagged and mapped for PHI. The areas were assessed for possible cable yarding and were determined to be unsuitable for cable yarding due to inadequate deflection and or blind leads. The existing skid trail network has been used in the past with no significant adverse effects. The tractor roads proposed for use with this harvest can be used in their current condition or with minor surface blading. Impacts will be minimized by using existing stable tractor roads with an emphasis on skidding away from watercourses and minimizing overall tractor road density. Water break spacing along these trail segments will be no greater than 50 feet. The skid trails in this area are identified as "Exception Skid Trails" on the "Yarding Methods" maps at the end of Section II.

Justification: Cable yarding operations are not feasible in these areas due to poor deflection, blind leads, and lack of access points for safe operation of cable yarding machines. The trails that exist in these areas are not extensive and provide the only access to certain areas of the THP that would otherwise be inaccessible. Abiding by the standard rule would exclude these areas from timber operations which would not help meet a goal of maximum sustained production of high-quality timber products. Skid trails proposed for use are flagged with yellow "skid trail" flagging, are existing trails, and are in stable condition. No new skid trails may be constructed in these areas. Skid trails blocked off with skid trail flagging shall not be used by the timber operator. No winter operations on these exception skid trails unless amended otherwise.

Mitigation: Water bars on these designated skid trails shall be spaced and constructed to meet the guidelines for the extreme erosion hazard rating.

ITEM 21(j): GROUND BASED EQUIPMENT ON SLOPES BETWEEN 50-65% with MODERATE EHR

Explanation: There are areas within the THP in which tractor operations are proposed on skid trails where slopes are between 50% - 65%. The EHR in these areas is Moderate. Skid trails proposed for use are flagged with yellow "skid trail" flagging, are existing trails, and are in stable condition. No new skid trails may be constructed in these areas. Skid trails blocked off with skid trail flagging shall not be used by the timber operator. Cable yarding operations are not feasible in these areas due to poor deflection, blind leads, and lack of access points for safe operation of cable yarding machines. The trails that exist in these areas are not extensive and provide the only access to certain areas of the THP that would otherwise be inaccessible.

Justification: Cable yarding operations are not feasible in these areas due to poor deflection, property boundary constraints, blind leads, and lack of access points for safe operation of cable yarding machines. The trails that exist in these areas are not extensive and provide the only access to certain areas of the THP that would otherwise be inaccessible. Abiding by the standard rule would exclude these areas from timber operations which would not help meet a goal of maximum sustained production of high-quality timber products. Skid trails proposed for use are flagged with yellow "skid trail" flagging, are existing trails, and are in stable condition. No new skid trails may be constructed in these areas. Skid trails blocked off with skid trail flagging shall not be used by the timber operator. No winter operations on these exception skid trails unless amended otherwise.

ITEM 27(a) & (f): WLPZ FACILITIES- Roads, Landings, and Skid Trails.

14 CCR 916.3 Prohibits the construction or reconstruction of roads, construction or use of tractor roads or landings in Class I, II, III, or IV watercourses, WLPZs, marshes, wet meadows, and other wet areas except at prepared tractor road crossings, crossings of Class III watercourses, which are dry at time of timber operations, at existing road crossings and at new tractor and road crossings approved by Department of Fish and Game. In lieu of that rule, existing landings and skid trails that are within the WLPZ of a Class I watercourse (Russian River and Mays Canyon Creek) are proposed for use.

1. These areas are explained and described in Section II under item 24 as map points L1, L2, L3, and L4.
2. The proposed practices differ from the standard practice as portions of existing roads, landings and skid trails that are within the WLPZ of I watercourses are proposed for use.

few inches of soil. It will also protect soil fertility and moisture conservation and protect the microorganisms that are critical in nutrient cycling. No significant loss of surface soil is anticipated due to this project.

Soil Compaction:

Highly compacted soils inhibit plant growth for a variety of reasons, and can cause increased surface water runoff resulting in erosion. Soil compaction in timberlands is typically caused by heavy equipment running repeatedly over soils that are partially saturated. Heavy equipment operations will primarily be conducted, pursuant to the FPR's, during the dry summer season.

Finding: The exclusion of ground-based equipment usage during the winter period will significantly minimize the excessive compaction of saturated soils. Use of cable yarding operations within larger portions of the plan area shall reduce soil compaction. Limitations to tractor operations will also reduce soil compaction. By doing this, the level of soil compaction will be kept minimal and the general character of the soil will not be degraded. No significant adverse impacts related to soil compaction are expected to occur as a result of operations associated with this THP.

Growing Space Loss:

Potential losses to growing space would primarily result from new road, landing, skid trail construction, and/or mass wasting events. The roads to be construction include maximum width specifications which will reduce the amount of road construction and ensure that no unnecessary land be taken out of production.

Finding: Growing space will improve after implementation of the proposed project. There will most likely be a gain in growing space by non-use of skid trails located in the proposed cable operating area. These tractor roads used during the previous harvest entries have revegetated between harvest entries. As such, there will be a net gain of growing space associated with this plan.

The Caspar Creek watershed study (Keppeler, Reid, and Lisle, 2009) provides an example of how practices related to growing space have improved over the past two to three decades. When the South Fork was logged selectively with crawler tractors from 1971 to 1973, approximately 15% of the watershed was compacted through the creation of roads, skid trails, and landings. When the North Fork was logged from 1985 through 1991, only about 3% of the basin was found to be compacted by creating new roads. Since practices have continued to improve, this level of impact to growing space can be anticipated to continue at the 1985 through 1991 level or decline even further.

No significant adverse impacts related to growing space loss are expected to occur as a result of operations associated with this THP.

Soil productivity impacts tend to occur when operations are conducted without regard for minimizing effects on soil resources. This operation will limit effects by operating under the BMP's of the Forest Practice Rules to minimize organic matter, surface soil, soil compaction and growing space losses. Based on the above information, no significant adverse cumulative effect associated with soil productivity is anticipated with this plan.

3. BIOLOGICAL RESOURCES ASSESSMENT AREA

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environment suitable for wildlife needs. No key habitat elements will be lost because of these operations. There are no other known wildlife or fishery resource concerns. The THP's impact on wildlife habitat has been evaluated across the watersheds, it is not simply site and species specific. This broadens the context within which the THP has been analyzed and thus provides a better understanding of how the individual THP impacts wildlife habitat across a watershed. Based upon the observations and professional opinion of the RPF, no significant cumulative impacts will be incurred by any non-listed species.

4. RECREATION ASSESSMENT AREA

The recreation resources assessment area consists of the THP area plus 300 feet around its perimeter, as per CDF Technical Rule Addendum #2.

Findings: The harvest area is adjacent to the Russian River, an area commonly used for recreation. There is an unusually high number of homeless encampments and trespassers within the project area. Since the harvest area is not open to public use, and the Core Zone of the Russian River is not proposed for harvest this project will have an insignificant effect on the Recreational Assessment Area. The Russian River is commonly used for recreational activities such as swimming, fishing, and kayaking. Johnson beach, a popular beach destination, and Northwood Golf Course are also in the recreation assessment area. No recreational special treatment areas have been designated by the Board of Forestry within or adjacent to the plan area. Timber operations will be conducted primarily during the week on private property and therefore will not impact significant numbers of people. No known past or future projects within the Recreational Assessment Area, when combined with the potential effects of this project, are expected to significantly impact recreational opportunities.

5. VISUAL ASSESSMENT AREA

CDF Technical Rule Addendum #2 states "the visual assessment area is generally the logging area that is readily visible to significant numbers of people who are no further than three miles from the timber operation." Technical Rule Addendum #2 further refers to viewing by "the public".

The plan area is located just outside the town of Guerneville, CA.

The majority of the plan area lies within a County and State Designated Scenic Corridor for Highway 116, however approximately 40% of the plan cannot be seen from Highway 116. The silviculture proposed within the plan area are un-evenaged methods and will result in minor effects to the aesthetics of the stands that are visible from the Highway 116. Crown canopy and stocking will be reduced through the proposed harvest methods, however these changes will be difficult to discern post-harvest considering basal area retentions required for Selection, Group Selection and Transition silviculture. According to the 1988 "Final Report of the Sonoma 116 Scenic Highway Corridor Study" the "Special Features" described in report that are contributing to the scenic quality of the scenic corridor include the tall trees along the Russian River. Since the Core Zone of the Russian River is a No Harvest (NH) area, and the remainder of the Watercourse Lake and Protection Zone adjacent to the river that is proposed for harvest is comprised of 50-80% canopy retention and single- tree selection, it is not expected that these "Special Features" will change or impact the scenic corridor post-harvest.

The plan area is readily seen from State Highway 116, Mays Canyon Road, Neely Road, the Russian River, the Northwood Golf Course area, and the subdivisions of East Guerneville, West Guerneville, and Vacation Beach. The closest distance "significant" numbers of people can view the proposed timber operations is approximately 1,000 feet, from a section of Highway 116. This is a busy thoroughfare and many people drive this road daily. People will be viewing the THP area from a moving vehicle traveling east and west on Highway 116.

Findings: The landowner is very aware of public perception and the selected silviculture is a reflection of that concern. The silvicultural prescriptions proposed in this plan provide for significant retention as a visual objective. Form, texture and color will not be significantly altered in portions of the plan area where road, skid trail, or harvest management is proposed. Management activities will be visually subordinate to the characteristic landscape. In the middle ground view, small unconnected areas will be visible from available vantage points, due to the steep mountainous characteristics, bisecting draws, and viewing angles. In the foreground the retention of eye level vegetation will obstruct the view of harvesting activities. Uneven-aged management will provide

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sufficient residual trees and vegetation that will not be visually displeasing. No reasonably significant potential effects will occur to visual qualities. No known past or future projects within the Visual Assessment Area, when combined with the potential effects of this project, are expected to significantly impact visual qualities.

6. TRAFFIC ASSESSMENT AREA

CDF Technical Rule Addendum #2 states "the traffic assessment area includes the first roads not part of the logging area on which logging traffic must travel and those roads commonly used by logging traffic."

Findings: Timber will be hauled from this THP via Mays Canyon Road, Neely Road, and State Highway 116, all are paved county maintained roads. These roads have been used historically for log transport in 1998, 2000, and 2001. The road conditions may have changed slightly over the last 18 years since the last Timber Harvest. Neely Road and Mays Canyon road are still narrow residential roads. Generally speaking since the last harvest both roads surfaces have deteriorated, potholes have been created, the road has been repaired in several locations, culverts have been poorly maintained, cutbank / fill slope failures have blocked the road on several occasions, and the traffic load has increased. Mays Canyon and Neely Road are primarily used by residents of the area, tourists, as well as for commercial use. Hauling associated with the proposed timber operation will generally take place on weekdays, when tourist traffic is at a minimum, thus minimizing any potential adverse effect log hauling as a part of this THP could have on current traffic conditions. The total number of expected loads is approximately 100, averaging 4-5 loads per day. Due to the relatively low volume of conifer to be removed from the plan area the proposed hauling operations will be of short duration, approximately 3-4 weeks. Mays Canyon Road and Neely Road are narrow residential streets where pedestrians are common. Log truck drivers shall be warned to drive slow through all residential areas.

The Sweetwater Springs Water District (SSWD) of Sonoma County, CA has contacted the RPF and landowner to discuss potential impacts to their water lines that run adjacent to and underneath Neely Road. The SSWD has stated that they have 2" steel pipe from the early 1900's, and 6" and 8" asbestos pipe (very brittle pipe) from the 1950/1960's that are on Neely road that could be damaged from log truck traffic. The water district representative, the landowner representative, and the RPF met in the field on May 14th, 2020 and discussed possible mitigations for protecting the waterlines such as steel plates or painting the lines on the road surface for avoidance by log trucks.

California DOT legal load size & weight limitations for 18-wheeler semi-trucks

General Rule

35550. (a) The gross weight on any one axle shall not exceed 20,000 pounds, and the gross weight upon any one wheel, or wheels, supporting one end of an axle, shall not exceed 10,500 pounds.

(b) The gross weight limit for any one wheel, or wheels, shall not apply to vehicles with loads of livestock.

(c) The maximum wheel load is the lesser of the following:

(1) The load limit established by the tire manufacturer, on the tire sidewall.

(2) A load of 620 pounds per lateral inch of tire width, as determined by the manufacturer's rated tire width on the tire sidewall. The steering axle, however, must go by the load limit by the tire manufacturer.

Length: Many measurements for semitrailers by California DOT seem very short because they're referring to the distance from the king-pin to the rear axle. For passenger related vehicles the maximum is 45' in length overall on approved routes. Semi-trailers: for a single axle semitrailer the maximum length of the trailer allowed is 53' overall as long as it has two axles. If it has only one axle the maximum trailer length is 38' overall. The maximum overall legal combination length is 65' for the heavy haul and oversize sector of the trucking industry however there are additional laws for trucks pulling doubles or triples (dry box) that allows them to max out at 75 feet overall.

Width: 8' 6" is the maximum width allowed to travel on any road in the state of California.

Height: 14' is the maximum legal height allowed to travel in the state of California.

Weight: 80,000 lbs with no more than 12,500 on a steer axle, 20,000 pounds maximum weight on any single axle, 34,000 pounds maximum on tandem axles and on tridem axle configurations depending on axle spread.

Exception - Log Haulers

35552. (a) Vehicles transporting logs may exceed tandem weight by 1,500 pounds and may carry a gross weight of 69,000 pounds on two consecutive sets of tandem axles, under certain conditions. See Log Haulers Weight Exemptions.

(b) One set of tandem axles of log trucks shall be in compliance with Section 35551 if the total gross weight of

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34,000 pounds is not exceeded by more than 1,500 pounds. Two consecutive sets of tandem axles shall be in compliance with Section 35551 if the consecutive sets of tandem axles do not carry a combined total gross weight of more than 69,000 pounds, if:

- the total gross weight on any one set does not exceed 35,500 pounds, and
- the distance between the first and last axle of the consecutive sets of tandem axles is 34 feet or more.

All such truck and vehicle combinations shall be subject to all other provisions.

(c) The gross weight limits expressed in this section shall include all enforcement tolerances.

(d) If any total gross weight is exceeded, the allowed weight in pounds set forth in Section 35551 shall be the maximum permitted weight for determining the fine for the violation as specified in the table in Section 42030; except that, whenever the violation is for exceeding the total gross weight for two consecutive sets of tandem axles, and if the overall distance between the first and last axle of such sets is 34 feet or more, the allowed weight on the two consecutive sets shall be 68,000 pounds.

Log Haulers Weight Exemptions

Following is a selective paraphrase of the CVC. It is not guaranteed and may be subject to change.

Per California Vehicle Code (CVC) Section 35552, trucks and vehicle combinations hauling logs have the following weight exceptions:

1. The maximum weight of one set of tandem axles is 1,500 pounds more than the standard 34,000 pounds, for a total of 35,500 pounds.
2. The maximum combined weight of two sets of consecutive tandem axles is 69,000 pounds, provided that the gross weight on any one set of tandems does not exceed 35,500 pounds, and that the distance from the first axle to the last axle in the two-tandem set is 34 feet or more.
3. If any gross weights are exceeded, the non-exempted maximum weights in Section 35551 shall be used to determine fines for violations, except that
4. If the total gross weight for two consecutive sets of tandem axles is exceeded, and if the distance between the first and last axle of the sets is 34 feet or more, then the allowed weight on the two consecutive sets shall be considered 68,000 pounds for purposes of determining fines for violations.

The following is a list of bridges with posted weight limits as per Sonoma County Ordinance and are not to be exceeded.

Do not, under any circumstances, assume these bridges are safe beyond the posted limits.

20C-017	Watmaugh Road at Sonoma Creek	17 Ton - Single Truck 24 Ton - Semi; Combination 24 Ton - Full Truck & Full Trailer
20C-141	Annapolis Road at Clark's Crossing - 15 MPH	
20C-155	Wohler Road at Russian River	21 Ton - Single Truck 32 Ton - Semi; Combination 32 Ton - Full Truck & Full Trailer
20C-205	Adobe Road at Lynch Creek	22 Ton - Single Truck 33 Ton - Semi; Combination 39 Ton - Full Truck & Full Trailer
20C-213	Arnold Drive at Sonoma Creek Steel Truss North State Hospital	20 Ton - Single Truck 31 Ton - Semi; Combination 31 Ton - Full Truck & Full Trailer
20C-248	Lambert Bridge Road at Dry Creek	15 Ton - Single Truck 17 Ton - Semi; Combination

State Bridge Number	Location	Posted Weight Limits
		17 Ton - Full Truck & Full Trailer
20C-324	O'Donnell Lane at Calabazas Creek (Bypass ½ block North)	16 Ton - Single Truck 32 Ton - Semi; Combination
20C-418	Fitch Mountain Road at Sidehill Viaduct	17 Ton - Single Truck 27 Ton - Semi; Combination 33 Ton - Full Truck & Full Trailer
20C-430	Old Cazadero Road at Austin Creek	16 Ton - Single Truck 25 Ton - Semi; Combination 31 Ton - Full Truck & Full Trailer
20C-440	Freestone Flat Road at Salmon Creek	22 Ton - Single Truck 31 Ton - Semi; Combination 38 Ton - Full Truck & Full Trailer

Summary:

The logging trucks leaving the Silver Estates Timber Harvest Plan will not be utilizing any bridges listed above with posted weight limits. None of the roads utilized for log transport have posted weight restrictions. All loads and log trucks leaving the Silver Estates THP will follow all California Department of Transportation rules and regulations.

As such, there will not be significant adverse cumulative impacts to the Traffic Assessment Area as the THP will be operating within the county weight restrictions on Neely Road and all other traffic codes.

7. Green House Gases (GHG)

912.9 Technical Rule Addendum #2 states the following concerning analysis of GHG impacts:

GREENHOUSE GAS (GHG) IMPACTS

Forest management activities may affect GHG sequestration and emission rates of forests through changes to forest inventory, growth, yield, and mortality. Timber Operations and subsequent production of wood products, and in some instances energy, can result in the emission, storage, and offset of GHGs. One or more of the following options can be used to assess the potential for significant adverse cumulative GHG Effects:

- 1. Incorporation by reference, or tiering from, a programmatic assessment that was certified by the Board, CAL FIRE, or other State Agency, which analyzes the net Effects of GHG associated with forest management activities.*
- 2. Application of a model or methodology quantifying an estimate of GHG emissions resulting from the Project. The model or methodology should at a minimum consider the following:*
 - a. Inventory, growth, and harvest over a specified planning horizon*
 - b. Projected forest carbon sequestration over the planning horizon*
 - c. Timber Operation related emissions originating from logging equipment and transportation of logs to manufacturing facility*
 - d. GHG emissions and storage associated with the production and life cycle of manufactured wood products.*
- 3. A qualitative assessment describing the extent to which the Project in combination with Past Projects and Reasonably Foreseeable Probable Future Projects may increase or reduce GHG emissions compared to the existing environmental setting. Such assessment should disclose if a known 'threshold of significance' (14 CCR§ 15064.7) for the Project type has been identified by the Board, CAL FIRE or other State Agency and if so whether or not the Project's emissions in combination with other forestry Projects are anticipated to exceed this threshold.*

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In addition to redwood, RMB Revocable Family Trusts timberlands grow hearty and resilient species such as Douglas-fir, a species that thrives in open stands following harvest. Douglas-fir grows in a variety of climates throughout western North America and are believed to have rapidly colonized vast areas following the end of the last Ice Age. Through its substantial and continuous investment in their timberlands, the RMB Revocable Family Trust has a strong incentive to nurture healthy and resilient forest stands on its property.

Findings: This plan, alone or in combination with other harvest plans in the watershed, ownership, Sonoma County, or State of California is not expected to have an adverse impact on global warming. Carbon from trees harvested will be sequestered for decades or longer in the form of the wood products cut from the logs. Importantly, additional carbon will be sequestered in the future as newly planted, sprouting, and growing crop trees occupy and grow on the site.

Silver Estates THP – GHG Summary Estimate

Emissions Source/Sink/Reservoir	Total Tonnes CO2 Sequestered/Emitted
Live Trees	32,609
Wood Products	16,151
Site Prep Emissions	0
Non-Bio Harvest Emissions	-489
Non-Bio Milling Emissions	-205
Total Sequestration	47,140
Years to Recoup	16 years

8. Fire Prevention and Protection

A. Wildfire Risk and Hazard

Fire is an integral part of California's forested ecosystems, and as such is always a factor that must be considered while managing California forestlands. This analysis seeks to assess the fire risk of the Plan area both before and after harvest operations and characterize the fire risk going forward into the future.

1. Fires Severity Zoning

The Fire Hazard Severity Zone for the project area is high according to the Sonoma County Fire Hazard Severity Zone Map.

2. Existing and probable future fuel conditions including vertical and horizontal continuity of live and dead fuels.

The THP silviculture (Selection, Group Selection, and Transition) will not significantly increase the risk of increased horizontal and/or vertical continuity or forest fuel loading. Trees to be harvested will be spaced and slash will spread throughout the stand. The plan area fire fuel conditions are typical of Sonoma county timberlands of the Redwood, Douglas-fir, and oak woodland types with a high amount of fuels as a result of past land uses associated with grazing, clearcut timber harvests, and fire suppression. The harvest area has been previously harvested, and some areas of the plan were repeatedly burned to allow for livestock grazing. The areas have since reforested and much of the plan area has been

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logged in the 1980's, 1990s, and early 2000's. The intention of the RMB Revocable Family Trust is to enter stands (where appropriate) approximately every ten to twenty years under uneven-aged silvicultures. This approach will reduce stand densities and lower fuel density by capturing mortality that occurs from self-thinning in the treated stands lowering the chance of high intensity fire. Further, the landowner restricts public access within the ownership to lower the risk of anthropogenic fires.

The existing and probable future fuel conditions associated with vertical and horizontal continuity of live and dead fuels will continue to fluctuate via the commercial harvest regime discussed above. Stands will tend to be less flammable immediately following a typical selective type harvest where the stand is opened to provide new growing space. As the slash created by the timber harvest dries it will slightly increase the fuel continuity component but as it decomposes it will become less of a fire threat. The use of unevenaged silviculture will release less of an understory brush component than evenaged silvicultures.

To produce a more fire-resistant stand is economically impractical without a cohesive, state-wide program for biomass allowing for commercially feasible fuel treatments or at least supplanted with subsidies for precommercial thinning or shaded fuel breaks. It is cost prohibitive for large landowners in Sonoma County to conduct specific fuel treatments on their properties on a large scale for fire protection due to the lack of available outlets for the products that would be created. The current and trending sawlog market is not viable enough to allow any additional monies to be invested in fuel treatments due to the high cost and zero return to treat areas for fuel reduction. Therefore, fire prevention done in conjunction with timber harvests is the most cost-effective way to treat timberland on a large scale rather than projects that focus solely on fuel reduction.

3. Location of known existing public and private Fuelbreaks and fuel hazard reduction activities. There is one known fuelbreak within the assessment area on the adjacent property owned by the Bohemian Grove. In 2017/2018 the Bohemian Grove implemented fuel breaks along the ridge tops surrounding the Grove. The plan area is near the community of Guerneville, CA. The area is heavily populated with roads maintained by Sonoma County that can act as fuel breaks during a low/moderate intensity fire. Road masticating associated with the THP allows for access to roads as well as also reducing fuel loads along roads making them more defensible in the event of low/moderate intensity fires. The harvesting of timber allows the landowner to offset the cost of maintaining and improving road access.

4. Road access for fire suppression resources.

Road access for fire suppression is provided by Neely Road and Mays Canyon Road along with allowing the Local and State Fire Agencies access to RMB Revocable Family Trust private roads which are often in better condition than other private roads, allowing for a more rapid emergency response in the event of a fire. The plan is well accessed with existing roads and during operations all roads will remain open in case of fire suppression activities. The timber harvest area has cell service in most locations of the plan for immediate reporting and directing of fire suppression equipment.

Timber Operations rely on the Forest Practice rules to regulate fire prevention during timber harvest. Fire Prevention Rules are posted at the entrance to logging operations during fire season when burning permits are required, these rules list the requirements for smoking, warming fires, maintenance of power saws and equipment, resources required and warning of additional safeguards when fire danger is high. The timber operator is required to have a Fire Box on all active landings containing one backpack pump-type fire extinguisher filled with water, two axes, two McLeod fire tools, and sufficient number of shovels so that each employee at the operation can be equipped to fight fire. The LTO is also required to have a serviceable chainsaw and all vehicles shall have a shovel and an axe.

B. Impacts Evaluation.

When viewed at a landscape level, management is required across the majority of the landscape to reduce fire risk. This is best achieved through unevenage management, selection, group selection, and transition, that results in a reduction of the vertical and horizontal continuity of fuels. With the landowner's long term focus on unevenage management, an increase in fire resilience can be expected.

In summary, the net result of the proposed Plan is a slight reduction in fire risk in the Plan area. The assessment of the area as one of high fire risk would remain the best assessment of the general area in which the Plan is located.

9) Trespass

The Silver Estate property has experienced trespass and illegal dumping for over 20 years. This has been well documented by the landowner overtime. The landowner has spent thousands of dollars over the last 20 years cleaning up garbage and homeless camps from the Neely Road and Mays Canyon side of the property. Homeless camps and illegal dumping are generally concentrated near the county roads, but old camps, illegal marijuana grows, and dump sites are scattered throughout the entire property. Camps tend to be built on flat surfaces adjacent to watercourses. This has resulted in an unusually large amount of garbage in watercourses and wet areas. During field layout several trespassers were seen on both the Neely Road and Mays Canyon entrances and several homeless encampments were observed. The landowner has attempted to control and limit the trespassing by posting signs, installing video cameras, constructing barricades, doing yearly clean-ups, and regularly patrolling the area. Despite all the effort by the landowner to keep trespassers out, it is still a major problem throughout the property.

(Please see photos below):

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Calfire GIS Data 2020

California Regional Water Quality Control Board (CRWQCB), Technical Support Document for the Total Maximum Daily Load for Sediment and Temperature for the Russian River Watershed

California Salmonid Stream Habitat Restoration Manual; State of California Resources Agency Department of Fish and Game; Second Edition; October 1994.

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Soil Survey, Sonoma County, USDA Soil Conservation Service

C. Biological Resources:

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California Department of Fish and Game (CDFG). 2009. *Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities*. Ca. Dept. of Fish and Game, Sacramento, CA

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California Forest Carbon Plan, California Department of Forestry and Fire Protection, California Natural Resources Agency, California Environmental Protection Agency, May 2018.

I. Noise

Sonoma County General Plan 2020 – Noise Element

Personal Communications

Best, Timothy C., 2006-2015, Certified Engineering Geologist, Santa Cruz, CA

Bartolemei, Jennifer. 2005-2011. Professional Consulting Biologist. North Coast Resource Management. Calpella, CA

Clifton, Estelle. 2005-2015. Botanist. North Coast Resource Management. Calpella, CA

Martin, Stephanie, 2013-2015. Wildlife Scientist, North Coast Resource Management, Calpella, CA

Smythe, Thomas E., 2008-2020, Registered Professional Forester, North Coast Resource Management, Ukiah, CA.

Weaver, Jesse D., Registered Professional Forester and Forest Manager, Redwood Empire Sawmills, Cloverdale, CA.

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MAP POINT	FEATURE	DESCRIPTION
G3	Type: Deep-seated Landslide Age: Historically-Active Size: 1.5 acres	<p>DESCRIPTION</p> <p>This is a 1.5 acre historically active deep-seated translational landslide located on north facing slopes above the Russian River. The slide is approximately 250 feet wide, 400 feet long and estimated to be 30 to 50 feet deep. The slide is characterized by local benched topography with relatively sharp and distinct scarps and a couple of leaning trees. Neeley Road cuts across the toe of the slide resulting in steep 10 to 20-foot-high cutslopes with local shallow cutbank instability. The slide likely toes out either along Neeley Road or in the Russian River. Though located along the toe of questionable landslide G2 we believe that this is a separate feature that moves independently.</p> <p>The slide is considered marginally stable and future small-scale incremental movement is expected under adverse climatic or seismic events regardless of landuse activities. Future movement will most likely result in small-scale ground cracking similar to what is presently observed. Continued shallow instability along the steep cut of Neely Road is also expected.</p> <p>To minimize the potential impact of timber harvesting on this slide we recommended that the harvest boundary be offset a minimum of 75 feet from Neeley Road and that the harvest on the slide be restricted to individual tree selection retaining a minimum of 100 sf/ac total basal area. In addition, no group openings shall be located between the slide and midslope road. For reasons discussed in Slope Stability and Landsliding section of this report this level of harvest appears adequate to minimize potential changes in root strength and evapotranspiration that could potentially increase the risk of slope displacements.</p> <p>The THP proposes limited tractor operations on slide G3 which based on our field observations appear appropriate since the mass balance and hydrology of the slide will not be altered. No further restrictions on tractor operations are required.</p> <p>RECOMMENDATIONS</p> <ul style="list-style-type: none"> • A Special Treatment Zone (STZ-G3) shall be established on and upslope of this slide as mapped on Figure 1. Within the STZ the harvest shall be restricted as follows: <ul style="list-style-type: none"> ◦ Harvesting on this slide shall be excluded within an area extending 75 horizontal feet from Neeley Road. The current harvest boundaries conform to this recommendation. ◦ Harvesting on Slide G3 shall be restricted to individual tree selection retaining a minimum of 100 sf/ac total basal area when averaged across the entirety of slide. The current marking of timber appears to conform to this recommendation. ◦ Within the STZ, harvesting between the slide and the midslope road shall be restricted to individual tree selection. No group openings shall occur within STZ-G3.

MAP POINT	FEATURE	DESCRIPTION
G4	Type: Cutbank Failures Age: Old to historic	<p>DESCRIPTION</p> <p>Steep (65% to 80+%) gradient slopes with scattered cut bank failures exist for several hundred feet along the Neeley Road, extending 25 to 125 feet upslope of the road. Most of the features are revegetating but it is clear that infrequent shallow cutbank instability continues. Harvesting on these slopes could increase the potential of slope instability on these steep slopes, primarily through reduce root reinforcement.</p> <p>To mitigate the risk of harvest related instability we recommend that harvesting be excluded from the steep cutslopes above Neeley Road and that a 50 foot wide buffer be established upslope of the steep cut where harvesting shall be restricted to individual tree selection. Group selection is appropriate upslope of the STZ.</p> <p>RECOMMENDATIONS</p> <ul style="list-style-type: none"> A Special Treatment Zone (STZ-G4) shall be established at this site extending 50 feet upslope of the top of the steep road cut of Neeley Road as mapped on Figure 1. <ul style="list-style-type: none"> Exclude harvesting on the steep 65% to 80% gradient cut bank of Neeley Road. The current harvest boundaries conform to this recommendation. Within the STZ the harvest shall be restricted to individual tree selection. No group openings shall occur within STZ-G4.
G5	Type: Debris slide Slopes / Cutbank Failures Age: Old to historic	<p>DESCRIPTION</p> <p>This is a 3-acre area of steep (80%) gradient debris slide slopes with scattered old debris slide scarps located above Neeley Road. We did not observe any evidence of recent instability during our field traverse or in our review of the historic aerial photographs. Schlosser (2001) reports "Most of the debris slide activity occurred at least 10 years ago, and some is perhaps 40 or 50 years old. The scars are revegetating to various degrees. There are still some slightly leaning trees on the scars and along the edges of the scars." Schlosser's observations are consistent with ours.</p> <p>Based on our field observations, harvesting on these slopes could increase the potential of slope instability on these steep slopes, primarily through reduce root reinforcement. To mitigate the risk of harvest related instability we recommend that harvesting be excluded from the steep debris slide slopes above Neeley Road and that a 50 foot wide buffer be established upslope of the mapped debris slide slopes where harvesting shall be restricted to individual tree selection. Group selection is appropriate upslope of the STZ.</p> <p>RECOMMENDATIONS</p> <ul style="list-style-type: none"> A Special Treatment Zone (STZ-G5) shall be established at this site extending 50 feet upslope of the top of the steep debris slide slopes above Neeley Road as mapped on Figure 1. <ul style="list-style-type: none"> Exclude harvesting on the steep 65% to 80% gradient debris slide slopes above Neeley Road. The current harvest boundaries conform to this recommendation. Within the STZ the harvest shall be restricted to individual tree selection. No group openings shall occur within STZ-G5. The current harvest boundaries appear to conform to this recommendation.

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				<ul style="list-style-type: none"> • Inform County Public Works about the observed condition of the culvert and the temporary measures that are being implemented to partially stabilize the portion of the culvert on the subject property. • Water bar upslope of crossing shall be maintained once operations are complete. • Follow the requirements of the 1600 Agreement. • Exposed soils shall be stabilized as per Item #18 Soil Stabilization Measures. • See Diagram #1 and #2.
2	CSDS, Class III Crossing	2, Low	Yes	<p>A Class III watercourse crosses an existing permanent road via Rocked Ford. The dip of the rocked ford is shallow, and water appears to overtop the ford during periods of high flow. ($Q_{100}=9.2$ cfs)</p> <ul style="list-style-type: none"> • Enhance the dip in the Rocked Ford to ensure water does not over top the Ford during rain events. • Add additional minimum 16" D50 rock to the Rocked Ford outlet at a 2:1 gradient to dissipate energy and prevent erosion. • Exposed soils shall be stabilized as per Item #18 Soil Stabilization Measures.
		Yes	No	
3	CSDS, Class III Crossing	4, Low	Yes	<p>A Class III watercourse crosses an existing permanent road via Rocked Ford. The watercourse drains to the road surfaces and flows down the road for approximately 50' before draining off the road. ($Q_{100}=4.6$ cfs)</p> <ul style="list-style-type: none"> • An 18" Culvert shall be installed to re-establish the watercourse in the natural channel flagged with three glo-orange flags in the field. • Exposed soils shall be stabilized as per Item #18 Soil Stabilization Measures.
		Yes	No	
4	CSDS, Class III Crossing	3, Low	Yes	<p>A Class III watercourse crosses an existing permanent road via rocked ford. The road surface is showing signs of rill erosion through the ford. ($Q_{100}=15.4$ cfs)</p> <ul style="list-style-type: none"> • Enhance the dip in the Rocked Ford. • Add additional road rock if necessary to create a smooth operating surface. • Exposed soils shall be stabilized as per Item #18 Soil Stabilization Measures.
		Yes	No	
5	CSDS, Class III Crossing	3, Low	Yes	<p>A Class III watercourse crosses an existing permanent road via rocked ford. The outlet of the rocked ford is showing signs of erosion. ($Q_{100}=9.2$ cfs)</p> <ul style="list-style-type: none"> • Add additional minimum 16" D50 rock to the Rocked Ford outlet at a 2:1 gradient to dissipate energy and prevent erosion. • Exposed soils shall be stabilized as per Item #18 Soil Stabilization Measures.
		Yes	No	

6	CSDS, Class III Crossing	6, Low	Yes	<p>A Class III watercourse crosses an existing permanent road with no drainage facility in place. There is a bank seep with an inside ditch upslope of the crossing for approximately 50 feet. ($Q_{100}=10.8$ cfs)</p> <ul style="list-style-type: none"> Install Rocked Ford with 17" D₅₀ rock with an outfall gradient of 2:1. Install Rocked Ford as per diagram B5. Re-establish inside ditch upslope of crossing for approximately 50 feet per diagram C6. Exposed soils shall be stabilized as per Item #18 Soil Stabilization Measures.
		Yes	No	
7	CSDS, Head of Class III	1, Low	Yes	<p>An existing permanent road crosses above the head of a Class III watercourse. There is a small amount of erosion visible in the road surface for approximately 40 feet upslope of the crossing.</p> <ul style="list-style-type: none"> Install rock armored rolling dip with rock armored outfall with 14" D50 rock with an outfall gradient of 2:1. Exposed soils shall be stabilized as per Item #18 Soil Stabilization Measures.
		No	No	
8	CSDS, Class III Crossing	5, Low	Yes	<p>A Class III watercourse crosses an existing permanent road via rocked ford. The rocked ford appears to overtop during high flows allowing water to run down the road surface to the water bar below the crossing. This is causing erosion on the road surface and at the water bar outlet. ($Q_{100}=4.6$ cfs)</p> <ul style="list-style-type: none"> Install an 18" Culvert to watercourse grade. Exposed soils shall be stabilized as per Item #18 Soil Stabilization Measures.
		Yes	No	
10	CSDS, Class III Watercourse	3, Low	Yes	<p>A Class III watercourse crosses an existing permanent road with no drainage facility in place. ($Q_{100}=4.6$ cfs)</p> <ul style="list-style-type: none"> Install an 18" culvert to watercourse grade. Install critical dip with rock armored outfall using 14" D50 rock approximately 30 feet downgrade of crossing with an outfall gradient of 2:1. Exposed soils shall be stabilized as per Item #18 Soil Stabilization Measures.
		Yes	No	
13	CSDS, Class III Watercourse	9, Moderate	Yes	<p>A Class III watercourse crosses an existing permanent road via an 18" CMP. The culvert draining the Class III watercourse is completely buried and non-functional. There is also an 18" CMP installed above the non-functional culvert draining both the inside ditch and the watercourse. This culvert is functional; however, it is not installed to watercourse grade, and is hydrologically connected to the road. ($Q_{100}=4.5$ cfs)</p> <ul style="list-style-type: none"> Remove both the 18" and the 24" culvert. Install a 24" culvert to watercourse grade. Re-establish the channel upstream of the newly installed culvert to ensure all flows stay within the channel. The re-established channel shall be 3' wide and 2' deep. This will re-establish the channel
		Yes	No	

				<p>to the outlet of culvert at crossing #10.</p> <ul style="list-style-type: none"> • Install a critical dip with rock armored outfall using 14" D50 rock approximately 30 feet downgrade of the crossing with an outfall gradient of 2:1. • Exposed soils shall be stabilized as per Item #18 Soil Stabilization Measures.
23	CSDS, Class III Watercourse	4, Low	No	<p>A Class III Watercourse crosses an existing permanent road via an 18" CMP with downspout. The culvert inlet is slightly crushed, and the downspout has become disconnected.</p> <ul style="list-style-type: none"> • Leave culvert in place. • Open the culvert inlet to improve flow capacity. • Remove culvert downspout from channel. • Exposed soils shall be stabilized as per Item #18 Soil Stabilization Measures.
		No	No	
24	CSDS Class II Watercourse	6, Low	Yes	<p>A Class II Watercourse crosses an existing permanent road via a 24" CMP. The culvert is functional but is undersized.</p> <ul style="list-style-type: none"> • Remove culvert. • Install a 48" culvert to watercourse grade. • Install a sediment trap in the inside ditch approximately 30 feet upgrade of the crossing. • Install a critical dip approximately 120 feet down grade of the crossing at the flagged location. • Follow requirements of 1600 Agreement. • Exposed soils shall be stabilized as per Item #18 Soil Stabilization Measures.
		Yes	No	
E	CSDS, Unstable Feature	35, High	Yes	<p>About 75 feet of the outer edge of an existing permanent access road failed in 2019 as a shallow debris slide with the failure extending 7 feet back into the old road prism, narrowing the road to less than 7 feet in width. This road is a main access route to the property and has provided a secondary access route to RRCSD spray fields. The THP proposes to reopen the road past this slide for timber operations.</p> <p>The failure occurred where the road was constructed across 85% gradient slopes at a 14-foot width on cut and fill. The age of the road is unknown but based on review of orthophotos, appears to have been constructed sometime between 1971 and 1983. The native hillside above the road appear smooth without signs of instability.</p> <p>Initial road construction resulted in a steep cut that exposes relatively competent fractured Franciscan sandstone bedrock capped by a 2 to 3 feet of loose gravelly sand (colluvium and weathered bedrock). The cut into bedrock is inclined at roughly a 0.6H:1V to 0.75H:1V slope with the relatively weaker overlying colluvial soils having failed back to a gentler 1:1 slope. No seeps or springs were observed</p>
		No	Yes Map Point G17	

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Revised 7/14/20

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Survey coverage outside the property boundary was limited in some areas due to access restrictions. Most areas were restricted due to this being a rural/residential area with private driveways.

Additional Surveys

This NSO information is effective until 01FEB2021. Timber harvests require NSO surveys according to USFWS protocols. Re-evaluation will be completed if a new northern spotted owl territory is identified within 0.7 miles of the plan boundary or if the existing NSO moves more than ¼ mile. NSO survey data shall be submitted prior to every subsequent timber harvest and the survey data shall include: survey route, survey summary sheets, including the survey date, the survey start time, and the survey results; follow up forms, if NSOs are detected during surveys; and maps of detection and response locations, if NSOs are detected during surveys. If a northern spotted owl is detected during timber operations, all harvest activities shall be halted, and CAL-FIRE and CDFW will be consulted to determine adequate protection measures.



Alicia Ives Ringstad
Senior Wildlife Biologist
Jacobszoon & Associates, Inc.

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Appendix 6: Template Field Data Collection Form
SITE VISIT FORM

SITE ID NUMBER: _____ SITE NAME Silver Twp STATE: CA

VISIT #: 2 OUTING #: 2 YEAR: 2018 OUTING DATE: 4/28/18

LANDOWNER: RES PHYSIOGRAPHIC PROVINCE Guernseyville

COMPLETE VISIT: (Y/N) Y OBSERVERS: A112

TYPE OF SURVEY: ACS SC CC FO RV AV OPP

ACS=Activity Center Search SC=Station Calling CC=Continuous Calling FC=Follow Up Calling RV=Reproductive Visit
AV=Additional Visit OFF=Opportunistic Sighting

HISTORICAL SITE CENTER LOCATION (use if historical site center is being surveyed) *for*
T R Sec 1/4 1/16 WEATHER: *Clear, calm, sunny*

OWLS DETECTED: (Y/N)

[illegible]

ObsType = V=Visual A=Audio S=Sign

* see map for route location

* habitat is
second growth
road along for w/1
to a truck le. ben.

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* NO. white-wash pellets or feathers were observed during stand-down

357.1

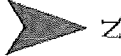
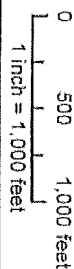
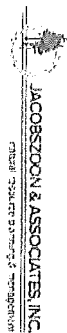
Additional Page 7/20/20

Redwood Empire Silver THP

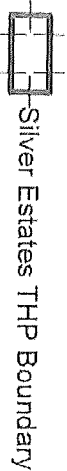
Section 5, 17N, R10W &

Section 31 & 32 T8N, R10W, MDBM

Duncan Mills & Camp Meeker USGS 7.5 Minute Quads



NSO Survey Stations for the Silver Estates THP



NSO Survey Stations

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Appendix 6: Template Field Data Collection Form

SITE VISIT FORM

SITE ID NUMBER: _____ SITE NAME Silver THP STATE: CA

VISIT #: 1 OUTING #: 2 YEAR: 2019 OUTING DATE: 4/22/19

LANDOWNER: RES PHYSIOGRAPHIC PROVINCE Guernsey

COMPLETE VISIT: (Y/N) Y OBSERVERS: AIR

TYPE OF SURVEY: ACS SC CC FO RV AV OPP

ACS-Activity Center Search SC-Station Calling CC-Continuous Calling FO-Follow Up Calling RV-Reproductive Visit
AV-Additional Visit OPP-Opportunistic Siting

AV-Additional Visit; OPP-Operational; Siting
Daytime Stand Search for New

HISTORICAL SITE CENTER LOCATION (use if historical site center is being surveyed)
T _____ R _____ Sec _____ 1/4 _____ 1/16 _____ WEATHER: Clear & Cool

OWLS DETECTED: (Y/N)

[illegible]

¹ObaType = V=Visual A=Audio S=Sign

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* 150 whitewash pellets and feathers were searched for & none were observed.

357.3

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Redwood Empire Silver THP

Section 5, T7N, R10W &

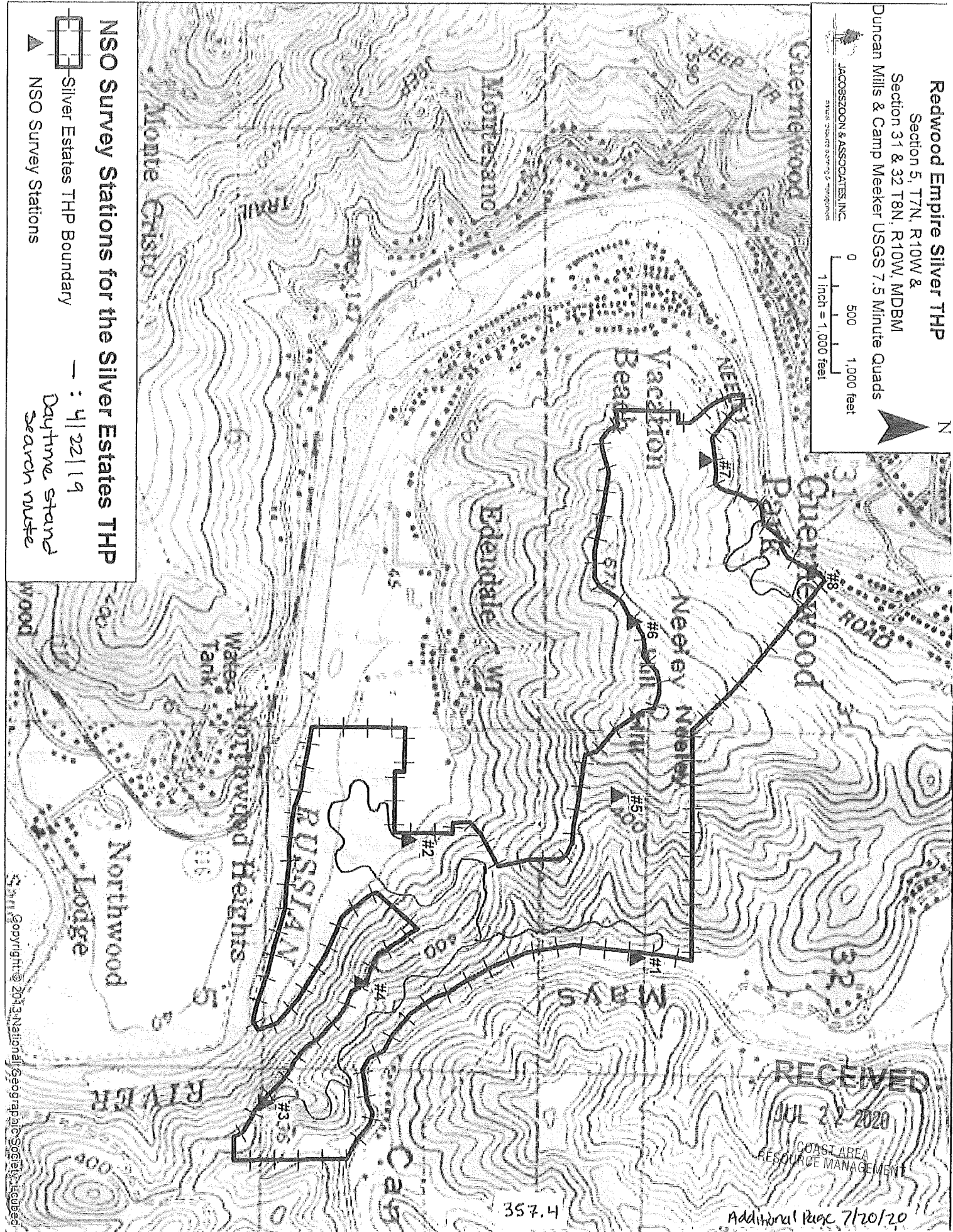
Section 31 & 32 T8N, R10W, MDBM

Duncan Mills & Camp Meeker USGS 7.5 Minute Quads

JACOBSZON & ASSOCIATES, INC.

STATION 250470 04/27/05 5' TRANSPARENT

0 500 1,000 feet
1 inch = 1,000 feet



NSO Survey Stations for the Silver Estates THP

— Silver Estates THP Boundary

▲ NSO Survey Stations

— : 4/22/19

Daytime stand
Search route

Redwood Empire Silver THP

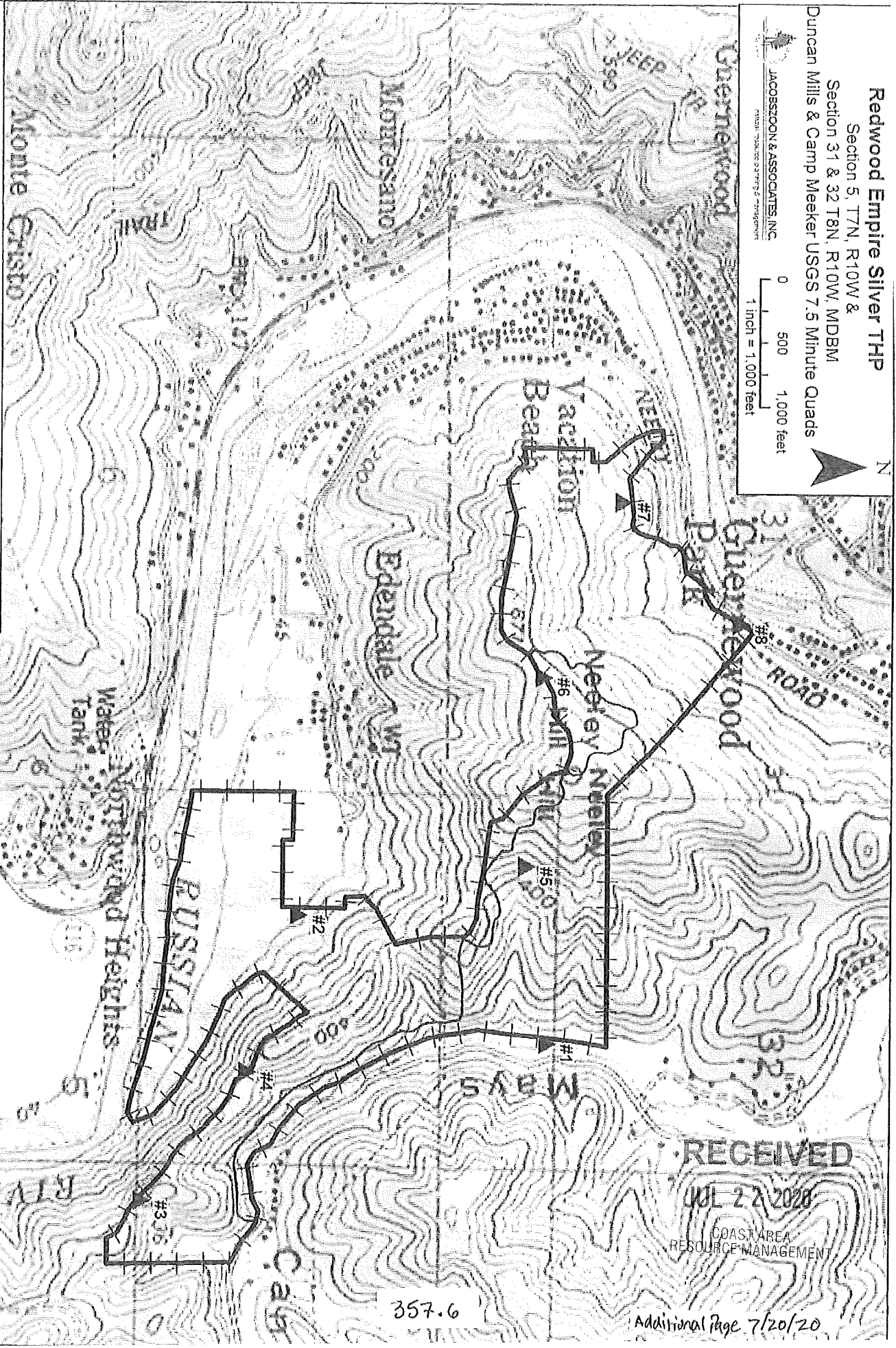
Section 5, T7N, R10W &

Section 31 & 32 T8N, R10W, MDBM

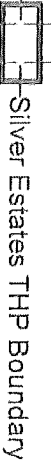
Duncan Mills & Camp Meeker USGS 7.5 Minute Quads



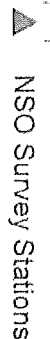
0 500 1,000 feet
1 inch = 1,000 feet



NSO Survey Stations for the Silver Estates THP



3/09/2020



Daytime stand search

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Additional NSO Survey Information
from Adjacent Landowners

2014-2020

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Northern Spotted Owl Survey Form

Surveyor Mike Stephens Date 04/25/14 (mm/dd/yy) Landowner Bohemian Grove
 Calling Area - Township 7N Range 10W Section(s) 3,4,5,6,7,8,9,10,16,17,18
 THP/Plan Area Being Surveyed Bohemian Grove NTMP Units All Watershed Smith G./Russian
 (1-06 NTMP-011 SON)

Weather

Wind: ~~Calm~~ Breeze, Moderate, Windy, Gust

Clouds: Clear, Scattered Overcast, Fog

Precipitation: Dry Fog, Misty, Drizzle, Light Rain, Rain, Heavy Rain, Intermittent, Hail

Significant Weather Changes During Survey

Complete THP Visit? ☒ Y ☐ N

With other visit? on 4/26/14

Other THP's?

TIME

Station	Start	Stop	Total	Response	Sex	Azimuth	Comments
BG20	0429	0439	10	NO			
BG21	0445	0455	10	NO			* BDOW ♀ very faint/distant @ 176° could be 1000+ m
BG22	0459	0509	10	NO			
BG23	0519	0529	10	NO			→ Do MAMA Survey + continue survey in evening
BG19	2233	2243	10	NO			
BG24	2250	2300	10	NO			
BG25	2305	2315	10	NO			
BG26	2320	2330	10	NO			* ♀ BDOW @ station @ 2327
BG27	2333	2341	14	Yes, 2341	♂	70°	* ♂ BDOW @ station @ 2340 - distinct + different vocalization than ♀ @ BG26, @ 2341 ♂ SPOW responds @ 70° down below: probably just off property - Both owls continue hooting through when I leave. ♂ SPOW is likely SONOTB Drop station BG28
BG29	2354	0004	10	NO			* ♂ BDOW @ station @ 0001 then starts hooting in direction of station BG30 so will drop station BG30
BG31	0011	0021	10	NO			
BG32	0026	0036	10	NO			
BG36	0045	0055	10	NO			
BG33	0104	0114	10	NO			* NSWO @ 284° ≈ 100m ♀ strike contact call above station - sounds like BDOW cc home
BG34	0119	0129	10	NO			
BG36	0133	0143	10	NO			
BG35	0149	0151	2	NO			* Get out of truck @ station and ♂ BDOW is hooting @ 273° ≈ 25m Drop stations BG10 + BG37

Owl Response Location(s)

~~MECH~~ # 076 Township 7N Range 10W Section 4 ¼ sec NE 1/16 sec SE 1/64 sec NW
 SON UTM East 503066 UTM North 4258904 Coordinate system NAD27 GARS
~~MECH~~ # _____ Township _____ Range _____ Section _____ ¼ sec _____ 1/16 sec _____ 1/64 sec _____
 SON UTM East _____ UTM North _____ Coordinate system _____

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Y N

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Y N

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Northern Spotted Owl Survey Form

Surveyor Milce Stephens Date 04/26/14 (mm/dd/yy) Landowner Bohemian Grove

Calling Area - Township 7N Range 10W Section(s) 3, 4, 5, 6, 7, 8, 9, 10, 16, 17, 18

THP/Plan Area Being Surveyed Bohemian Grove NTMP Units A11 Watershed Smith Cr./Russ. Cr.
(1-06 NTMP - 011 SON)

Weather

Wind Calm Breeze, Moderate, Windy, Gust

Clouds: Clear, ~~Scattered~~, Overcast, Fog

Precipitation: Dry, Fog, Misty, Drizzle, Light Rain, Rain, Heavy Rain, Intermittent, Hail

Significant Weather Changes During Survey

Complete THP Visit? (Y) N

With other visit? on 4/25/14

Other THP's?

TIME

[illegible]

Owl Response Location(s)

MEN# 036 Township 7N Range 10W Section 16 ¼ sec SW 1/16 sec SW 1/64sec SW
50N UTM East 501690 UTM North 4254423 Coordinate system NAD83 CONUS
 MEN# _____ Township _____ Range _____ Section _____ ¼ sec _____ 1/16 sec _____ 1/64sec _____
 UTM East _____ UTM North _____ Coordinate system _____

Additional Comments

Additional Page 7/20/20

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Scanned **Y** **N**

Entered into Spreadsheet/Database	Y	N
-----------------------------------	---	---

	Y	N
1	0.0000	0.0000
2	0.0000	0.0000
3	0.0000	0.0000
4	0.0000	0.0000
5	0.0000	0.0000
6	0.0000	0.0000
7	0.0000	0.0000
8	0.0000	0.0000
9	0.0000	0.0000
10	0.0000	0.0000
11	0.0000	0.0000
12	0.0000	0.0000
13	0.0000	0.0000
14	0.0000	0.0000
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16	0.0000	0.0000
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24	0.0000	0.0000
25	0.0000	0.0000
26	0.0000	0.0000
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29	0.0000	0.0000
30	0.0000	0.0000
31	0.0000	0.0000
32	0.0000	0.0000
33	0.0000	0.0000
34	0.0000	0.0000
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37	0.0000	0.0000
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97	0.0000	0.0000
98	0.0000	0.0000
99	0.0000	0.0000
100	0.0000	0.0000

Bohemian Grove Northern Spotted Owl Survey Stations

6
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 JUL 22 2020
 COAST AREA
 RESOURCE MANAGEMENT

373.4

Legend 18

- NSO Survey Stations
- ▬ NTMP Boundary
- ▬ Property Boundary

Bohemian Grove NTMP NSO Survey Stations

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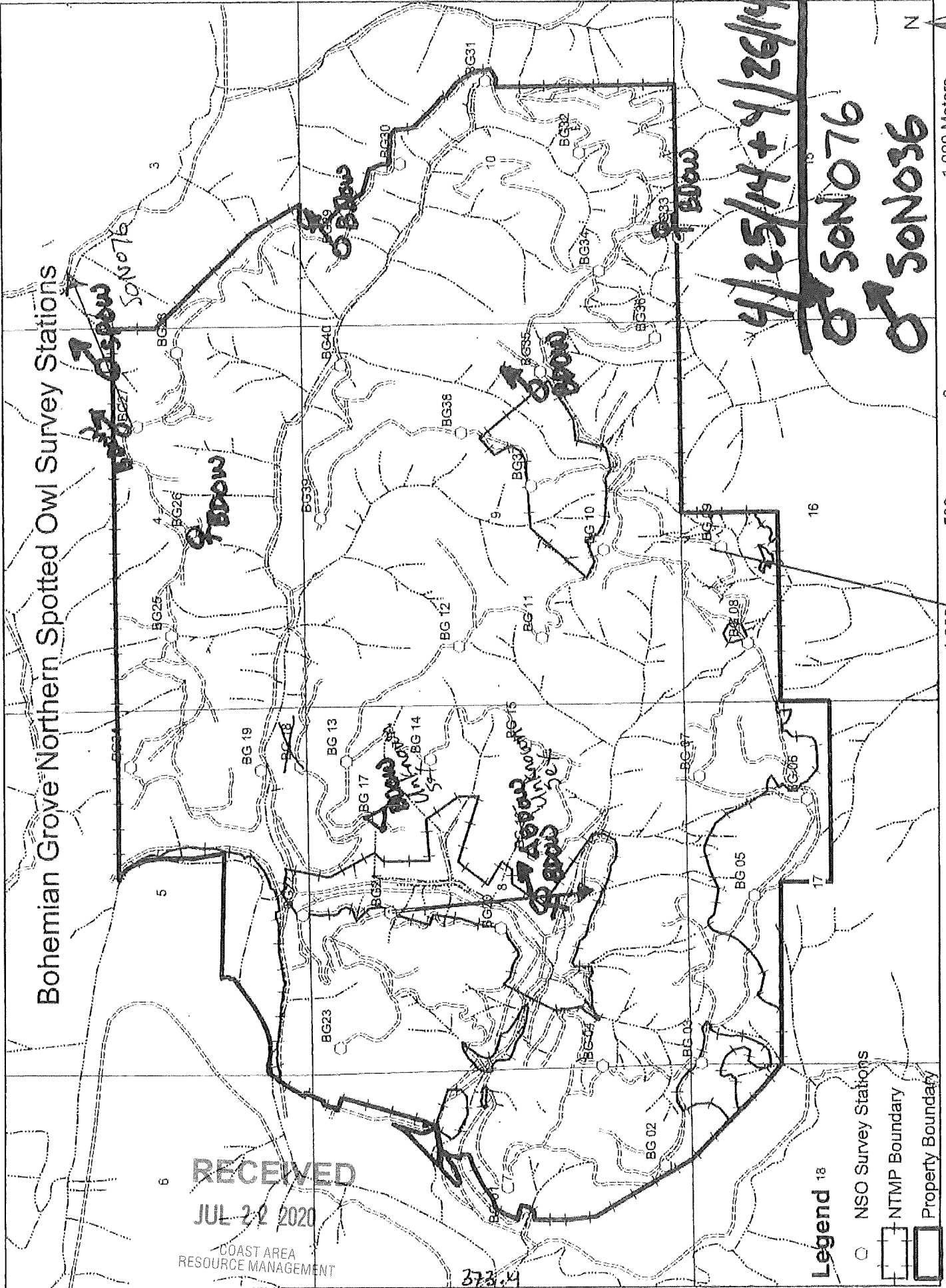
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Survey

Page 3 of 3

Additional Page 7/20/20

4/25/14 + 4/26/14
 ♂ SONO76
 ♂ SONO36



Northern Spotted Owl Survey Form

Surveyor Mike Stephens Date 05/16/14 (mm/dd/yy) Landowner Bohemian Grove

Calling Area - Township 7N Range 10W Section(s) 3,4,5,6,7,8,9,10,16,17,18

THP/Plan Area Being Surveyed Bohemian Grove NFM Units All Watershed South C/Russian River
(1-06 N Tmp - 011 SON)

Weather

Wind: Calm Breeze, Moderate, Windy, Gust

Clouds: Clear, Scattered, Overcast, Fog

Precipitation: 0 Fog, Misty, Drizzle, Light Rain, Rain, Heavy Rain, Intermittent, Hail

Significant Weather Changes During Survey

Complete THP Visit? ☒ N

With other visit? On 5/17/14

Other THP'S

TIME

Station	Start	Stop	Total	Response	Sex	Azimuth	Comments
BG19	2208	2218	10	NO			
BG24	2223	2236	13	NO			
BG25	2242	2252	10	NO			
BG26	2257	2307	10	NO			
BG27	2312	2323	11	Yes, 2321	♂	49°	* Arrive at station and BDO pair is hooting @ 234° approximately 100m away. At 2321 ♂ spow responds faintly/dist at 49° below my elevation in bottom most likely SON076 Near detection on 4/25/14.
BG28	2327	2352	25	NO			* BDOw flies into station @ 2331 th starts vocalizing it's a ♂ @ 2337 hear a BDOw fledgling - I put mouse out and ♀ gets it right away then fled flies in to ♀ to get mouse - stay with owls for additional 10 minutes to see if there is another fledgling - There wasn't. Drop station BG29
BG30	2358	0008	10	NO			
BG31	0015	0025	10	NO			
BG36	0034	0044	10	NO			
BG32	0057	0107	10	NO			
BG33	0115	0125	10	NO			* ♂ BDOw @ station @ 0122
BG34	0130	0135	5	NO			* Hear same ♂ BDOw back @ BG33 - Drop BG34

SON # 076 Owl Response Location(s)
Sex ♂ 1) Township 7N Range 10W Section 3 1/4 sec NW 1/16 sec NW 1/64 sec SE
MEN # 2 UTM East 503332 UTM North 4259390 Coordinate system NAD 27 CONUS
Sex ♂ 2) Township 7N Range 10W Section 3 1/4 sec NW 1/16 sec NW 1/64 sec SE
MEN # 2 UTM East 503332 UTM North 4259390 Coordinate system NAD 27 CONUS

Additional Comments

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COAST AREA
RESOURCE MANAGEMENT

373.5

Additional Page 7/20/20

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Northern Spotted Owl Survey Form

Surveyor Mike Stephens Date 05/17/14 (mm/dd/yy) Landowner Bohemian Grove

Calling Area - Township 7N Range 10W Section(s) 3-10, 16, 17, 18

THP/Plan Area Being Surveyed Bohemian Grove NTP Units All Watershed Smith Cr/Russian River
(1-06 NTP - oil son)

Weather

Wind: Calm Breeze, Moderate, Windy, Gust

Clouds: Clear, Scattered, Overcast, Fog

Precipitation: Dry Fog, Misty, Drizzle, Light Rain, Rain, Heavy Rain, Intermittent, Hail

Significant Weather Changes During Survey

Complete THP Visit? (Y) N

With other visit? on 5/16/14

Other THP'S

TIME

Station	Start	Stop	Total	Response	Sex	Azimuth	Comments
BG35	0143	0155	12	NO			* ♂ BPOW @ station @ 0149
BG10	0207	0217	10	NO			* ♂ BPOW @ station @ 0217
BG08	0223	0233	10	NO			
BG09	0239	0249	10	NO			* ♂ BPOW @ station @ 0248
BG06	0301	0311	10	NO			
BG07	0315	0325	10	NO			
BG05	0334	0344	10	NO			
BG03	0350	0400	10	NO			
BG04	0405	0415	10	NO			
BG02	0423	0439	16	YES	0432 ♀	258°	* ♂ spow replies first then ♀ below my elevation and across creek and highway most likely SONO93
BG01	0446	0456	10	NO			MORNING ↑
BG40	2253	2303	10	NO			EVENING ↓
BG39	2309	2319	10	NO			
BG38	2330	2340	10	NO			
BG37	2350	0000	10	NO			* wind picks up to Breeze
BG11	0018	0028	10	NO			
BG12	0033	0043	10	NO			
BG17	0050	0100	10	NO			
BG13	0107	0117	10	NO			
BG14	0121	0131	10	NO			
BG15	0137	0147	10	NO			* BPOW ♀ @ station @ 0146
BG16	0154	0204	10	NO			

SON

Owl Response Location(s)

1) Township 7N Range 10W Section 16 1/4 sec NW 1/16 sec NW 1/64 sec NW
Sex ♀ UTM East 998891 UTM North 4256343 Coordinate system NAD27 CONUS
MEN 2) Township Range Section 1/4 sec 1/16 sec 1/64 sec
Sex UTM East UTM North Coordinate system

Additional Comments

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COAST AREA
RESOURCE MANAGEMENT

373.6

Additional Page 7/20/20

Page 2 of 3

Bohemian Grove Northern Spotted Owl Survey Stations

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COAST AREA
RESOURCE MANAGEMENT

373.7

5/16/14 + 5/17/14
SON076
SON093

Legend 18

- NSO Survey Stations
- ▭ NTMP Boundary
- ▭ Property Boundary



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Bohemian Grove NTMP NSO Survey Stations

NORTHERN SPOTTED OWL SURVEY FORM

Surveyor Mike Stephens Date 06/20/14 (mm/dd/yy) Landowner Bohemian Grove

Calling Area - Township 7N Range 10W Section(s) 3-10, 16, 17, 18

THP/Plan Area Being Surveyed Bohemian Grove NTMP Units All Watershed Smith Cr/Russian
(1-06 NTMP - 011 SON)

Weather

Wind Calm, Breeze, Moderate, Windy, Gusty

Clouds Clear, Scattered, Overcast, Fog

Precipitation Dry, Fog, Misty, Drizzle, Light Rain, Rain, Heavy Rain, Intermittent, Hail

Significant Weather Changes During Survey

Complete THP Visit? (Y) N

With other visit? in Max Morque 2014 6/20

Other THP'S

M. Stephens 6/21

TIME

Station	Start	Stop	Total	Response	Sex	Azimuth	Comments
BG36	0223	0233	10	NO			
BG33	0237	0247	10	NO			
BG28	0256	0306	10	NO			
BG30	0314	0324	10	NO			
BG29	0327	0337	10	NO			
BG27	0346	0356	10	Yes ⁰³⁴⁸	♀	39°	* ♂ BDow 20 station @ 0331 + ♀ @ 02610 @ 0334 ~ 100m away Drop BG28 * ♀ spow responds 1st w/ agitated crawparks then ♂ responds w/ 4-note hoos - very faint + distant + below my elevation
BG26	0403	0413	10	NO			
BG25	0416	0426	10	NO			
BG24	0429	0439	10	NO			
BG02	0500	0510	10	Yes, spow	♀	273°	* while getting ready for MAMU Survey I hear pair of spow's hooting across Russian River to West also hear BDow hooting nearby as well. This is first time BDow's are detected outside of NTMP.

ON 076 Owl Response Location(s)

1) Township 7N Range 10W Section 3 1/4 sec NW 1/16 sec NW 1/64 sec SE

UTM East 503 269 UTM North 4259299 Coordinate system NAD 83 CONUS

2) Township 7N Range 10W Section 7 1/4 sec SW 1/16 sec SW 1/64 sec SE

UTM East 498611 UTM North 4256675 Coordinate system NAD 83 CONUS

Additional Comments

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COAST AREA
RESOURCE MANAGEMENT

373.8

Additional Page 7/20/20

Page 1 of 3

Page 1 of 3

Bohemian Grove Northern Spotted Owl Survey Stations

SON076

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COAST AREA
RESOURCE MANAGEMENT

373.10

SON093

Legend 18

- NSO Survey Stations
- ▭ NTMP Boundary
- ▭ Property Boundary

6/20/14 + 6/21/14
SON076 ♀
SON093 ♀

Bohemian Grove NTMP NSO Survey Stations

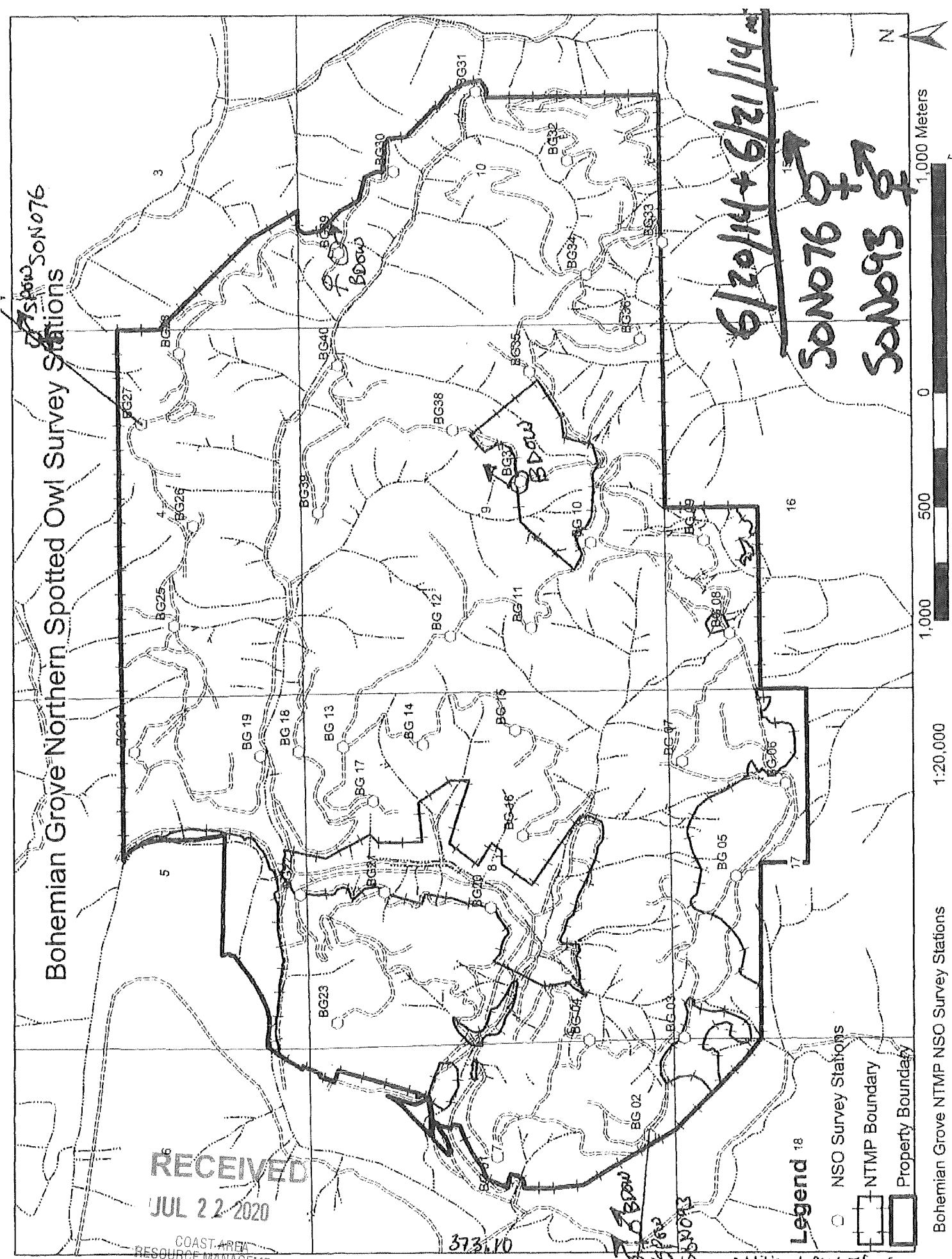
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1,000 Meters



Northern Spotted Owl Survey Form

Surveyor M. Marguez Date 6/20/14 (mm/dd/yy) Landowner Bohemian Grove

Calling Area - Township 7N Range 10W Section(s) 10, 9, 15, 16, 17

THP/Plan Area Being Surveyed Bohemian Grove NTMP Units All Watershed Smith Cr./Russ. Cr.
(1-06 NTMP - Oil Solⁿ)

Weather

Wind: Calm, Breeze, Moderate, Windy, Gust

Clouds: Clear, Scattered, Overcast, Fog

Precipitation: Dry, Fog, Misty, Drizzle, Light Rain, Rain, Heavy Rain, Intermittent, Hail

Significant Weather Changes During Survey

Complete THP Visit? ☒ Y ☐ N

With other visit? w/ m. Stephen 6/20/16

Other THP's?

TIME

[illegible]

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COAST AREA
RESOURCE MANAGEMENT

Owl Response Location(s)

MEN# _____ Township _____ Range _____ Section _____ ¼ sec _____ 1/16 sec _____ 1/64sec _____
UTM East UTM North Coordinate system

MEN# _____ Township _____ Range _____ Section _____ ¼ sec _____ 1/16 sec _____ 1/64sec _____
UTM East _____ UTM North _____ Coordinate system _____

Additional Comments

373.11

Additional Page 7/20/20

Page 1 of 2

Office Use Only

Scanned	Y	N
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Entered into Spreadsheet/Database Y N

Bohemian Grove Northern Spotted Owl Survey Stations

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COAST AREA
RESOURCE MANAGEMENT

373.12

6/20/14 map

Legend 18

- NSO Survey Stations
- ▭ NTMP Boundary
- ▭ Property Boundary

1,000 Meters

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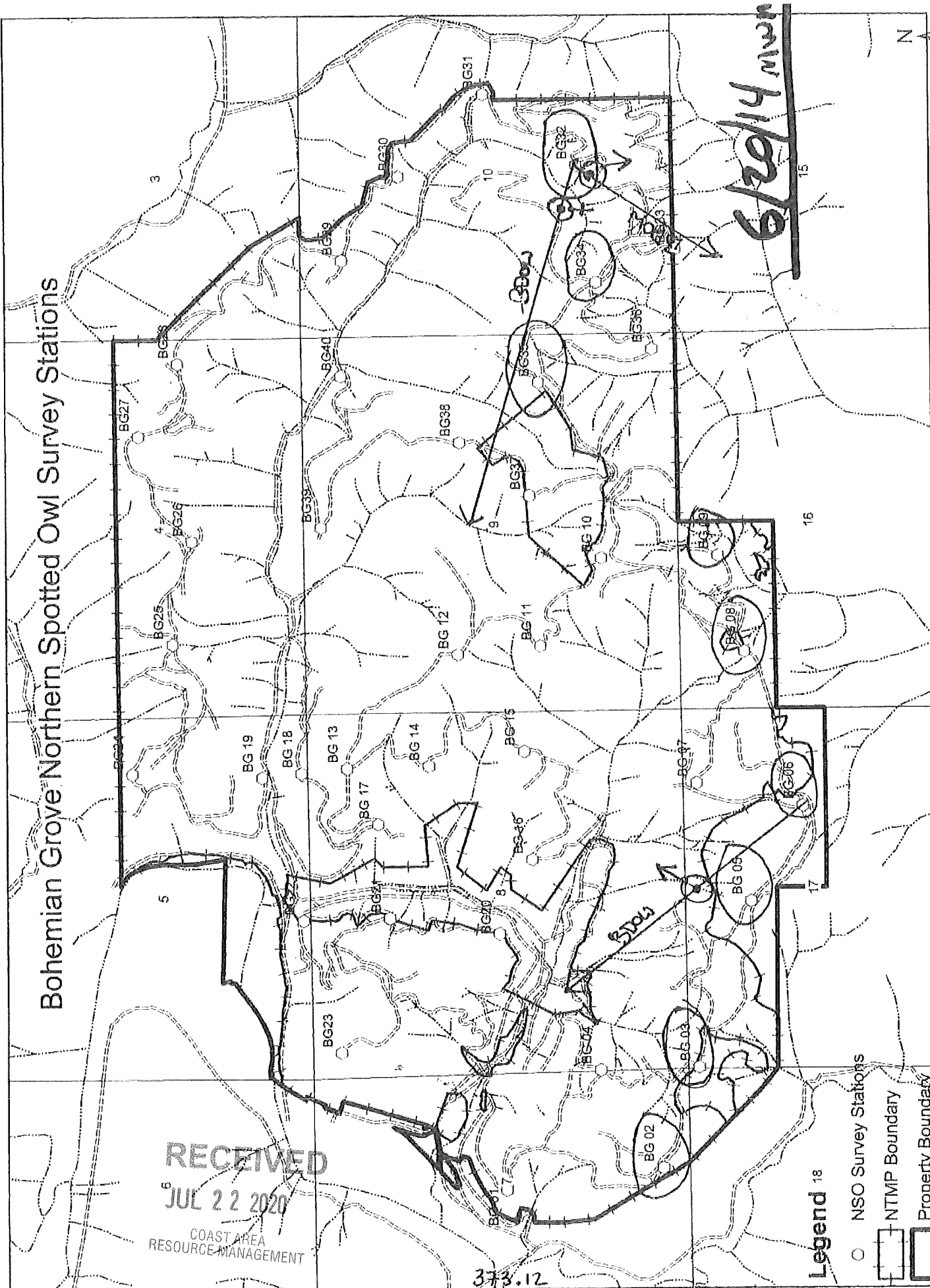
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Bohemian Grove NTMP NSO Survey Stations

Page 2 of 2



Additional Page 7/20/20

Northern Spotted Owl Survey Form

Surveyor Mike Stephens Date 04/18/15 (mm/dd/yy) Landowner Bohemian Grove

Calling Area - Township 7N Range 10W Section(s) 3,4,5,6,7,8,9,10,16,17,18

THP/Plan Area Being Surveyed Bohemian Grove NTA Units All Watershed Smith Cr/Russian
(1-06 NTMP - D11 SON)

Weather

Wind: Calm Breeze, Moderate, Windy, Gust

Clouds: Clear, Scattered, Overcast, Fog

Precipitation: 0.3 Fog, Misty, Drizzle, Light Rain, Rain, Heavy Rain, Intermittent, Hail

Significant Weather Changes During Survey

Complete THP Visit? (Y) N

With other visit? 4/19

Other THP'S

TIME

Station	Start	Stop	Total	Response	Sex	Azimuth	Comments
BG 19	2259	2309	10	No			
BG 24	2315	2325	10	Yes, 2322	♂	75°	* Faint distant reply, below my elevation only gave a couple of 4-note calls likely SON076 Also NSWO tooting @ station
BG 25	2331	2341	10	No			
BG 26	2344	2354	10	No			
BG 27	2358	0008	10	No			
BG 28	0011	0021	10	No			
BG 29	0027	0037	10	No			
BG 30	0041	0051	10	Yes, 0049	♂	57°	* Very faint reply, hard to tell elevation but sounds below mine by SON083
BG 31	0056	0107	11	No			* ♂ BADO @ station
BG 40	0112	0122	10	No			
BG 39	0128	0138	10	No			
BG 38	0142	0152	10	No			* NSWO @ 175° x 50m + ♂ BADO @ 274° @ 0148
BG 37	0156	0206	10	No			* NSWO @ 282° x 50m
BG 35	0218	0228	10	No			* NSWO @ station
BG 34	0232	0242	10	No			
BG 32	0255	0305	10	No			
BG 96	0312	0322	10	No			* BADO @ station @ 0322
BG 33	0328	0338	10	No			* GHow @ 171° faint x 50m
BG 36	0343	0353	10	No			* GHow @ 154° faint Pair, same from BG33
BG 10	0407	0417	10	Yes, 0409	♂	337°	* Very faint reply x 1000+ meters SON ???
BG 08	0423	0433	10	No			* GHow Pair 134° faint/distant

SON

Owl Response Location(s)

~~SON~~ #076 1) Township 7N Range 10W Section 4 1/4 sec NW 1/16 sec SE 1/64 sec NW

Sex Male UTM East 501993 UTM North 4259249 Coordinate system NAD83

~~SON~~ #083 2) Township 7N Range 10W Section 10 1/4 sec NE 1/16 sec NE 1/64 sec NW

Sex Male UTM East 504506 UTM North 4258307 Coordinate system NAD83

~~SON~~ ??? ♂ UTM East - 501800 UTM North 4258041 (NAD83) T7N, R10W, Sec 9, 1/4NW, 1/16NW, 1/64SE

Additional Comments

SPOW detection @ BG10 could have been further - possibly near SON076 detection

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Additional Page 7/20/20

Page 1 of 4

Northern Spotted Owl Survey Form

Surveyor Mike Stephens Date 04/18/15 (mm/dd/yy) Landowner Bohemian Grove

Calling Area - Township 7 N Range 10 W Section(s) 3, 4, 5, 6, 7, 8, 9, 10, 16, 17, 18

THP/Plan Area Being Surveyed Bohemian Grove NRP Units All Watershed Smith Cr/Russian
(1-DGNTMP-011 SON)

Weather

Wind Calm, Breeze, Moderate, Windy, Gust

Clouds: Clear, Scattered, Overcast Fog

Precipitation: ☒ Dry, ☐ Fog, ☐ Misty, ☐ Drizzle, ☐ Light Rain, ☐ Rain, ☐ Heavy Rain, ☐ Intermittent, ☐ Hail

Significant Weather Changes During Survey

Complete THP Visit? (Y) N

With other visit ? 4719

Other THP'S

TIME

[illegible]

Owl Response Location(s)

MEN #	1) Township	Range	Section	¼ sec	1/16sec	1/64sec
-------	-------------	-------	---------	-------	---------	---------

Sex	UTM East	UTM North	Coordinate system
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MEN # 2) Township Range Section ¼ sec 1/16 sec 1/64sec

Sex	UTM East	UTM North	Coordinate system
-----	----------	-----------	-------------------

Additional Comments

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COAST AREA
RESOURCE MANAGEMENT

373.14

Additional Page 7/20/20

Page 2 of 4

Northern Spotted Owl Survey Form

Surveyor Mike Stephens Date 04/19/15 (mm/dd/yy) Landowner Bohemian Grove

Calling Area - Township 7 N Range 10 W Section(s) 3, 4, 5, 6, 7, 8, 9, 10, 16, 17, 18

THP/Plan Area Being Surveyed Bohemian Grove NTP Units A11 Watershed Smith Cr/Russian

Weather

Wind: Calm, Breeze, Moderate, Windy, Gust

Clouds: Clear, Scattered Overcast, Fog

Precipitation: Dry Fog, Misty, Drizzle, Light Rain, Rain, Heavy Rain, Intermittent, Hail

Significant Weather Changes During Survey

Complete THP Visit? ☒ Y ☐ N

With other visit ? 4/18

Other THP'S

TIME

[illegible]

Owl Response Location(s)

~~SEX~~ #093 1) Township 7N Range 10W Section 7 $\frac{1}{4}$ sec SE $\frac{1}{16}$ sec SE $\frac{1}{64}$ sec SW
Sex Male UTM East 499621 UTM North 4256746 Coordinate system NAD83
MEN # 2 Township Range Section $\frac{1}{4}$ sec $\frac{1}{16}$ sec $\frac{1}{64}$ sec
Sex UTM East UTM North Coordinate system

Additional Comments

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COAST AREA
RESOURCE MANAGEMENT

373.15

Additional Page 7/20/20

Page 3 of 4

Bohemian Grove Northern Spotted Owl Survey Stations

SON076 ♂ spow 4/18

SON083 ♂ spow 4/18

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COAST AREA
RESOURCE MANAGEMENT

Additional Page 7120/20

4/18-19/15
SON076 ♂ SON093
SON083 ♂ SON172

Legend 18

- NSO Survey Stations
- ▭ NTMP Boundary
- ▭ Property Boundary

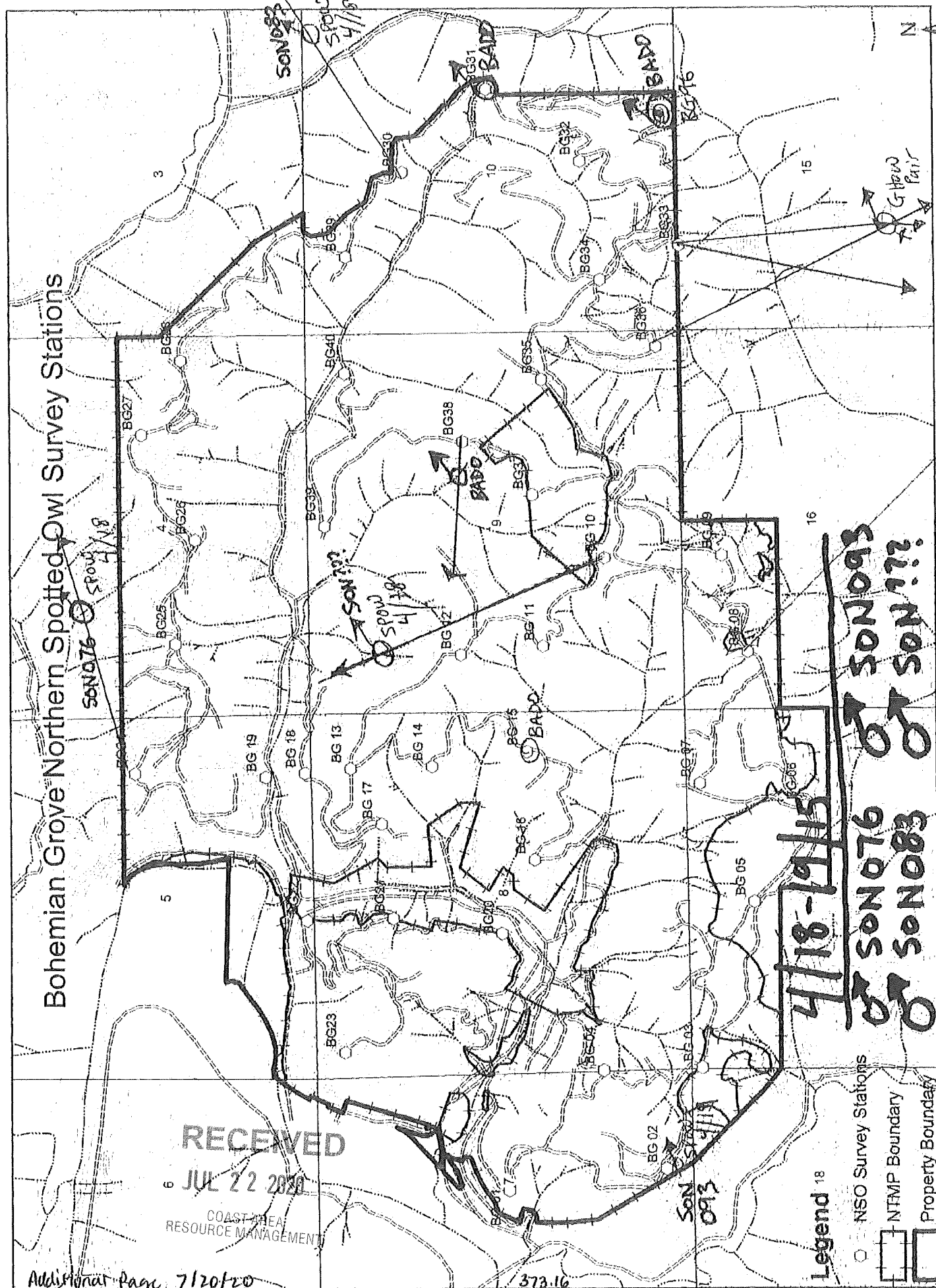
Bohemian Grove NTMP NSO Survey Stations

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♂ catlow

Page 4 of 4



Northern Spotted Owl Survey Form

Surveyor Mike Stephens Date 05/09/15 (mm/dd/yy) Landowner Bohemian Grove

Calling Area - Township 7N Range 10W Section(s) 3,4,5,6,7,8,9,10,16,17,18

THP/Plan Area Being Surveyed Bohemian Grove Units All Watershed Smith Cr
(1-06NTMP-011 SON)

Weather

Wind: Calm, Breeze, Moderate, Windy, Gust

Clouds: Clear, Scattered, Overcast, Fog

Precipitation: Dry, Fog, Misty, Drizzle, Light Rain, Rain, Heavy Rain, Intermittent, Hail

Significant Weather Changes During Survey

Complete THP Visit? ☒ N

With other visit? 5/10

Other THP'S

TIME

Station	Start	Stop	Total	Response	Sex	Azimuth	Comments
BG19	2345	2355	10	NO			
BG24	0000	0010	10	NO			
BG25	0014	0017	3	NO			* Pull up to station and hear o BADO @ 230° x nearby 50m ♀ also @ 230° x faint Don't Bother playing calls @ station
BG26	0021	0031	10	NO			
BG27	0035	0045	10	Yes, 0041	♂	243, 109°	* 1st ♂ reply is nearby @ 243° ≈ 30m SON @ 2nd ♂ reply is very faint + distant @ 109° SON @ 83
BG28	0049	0059	10	NO			
BG29	0106	0116	10	NO			
BG30	0120	0130	10	NO			* BADO - silent fly-in to station @ 0129
BG31	0134	0144	10	NO			* BADO - silent fly-in to station @ 0141
BG36	0150	0200	10	NO			* GHow distant @ 164° BADO @ station
BG33	0219	0229	10	NO			* BADO @ station @ 0229
BG34	0233	0237	4	NO			* Pull up to station + hear BADO @ BG33
BG36	0243	0250	7	NO			* BADO ♂ @ BG33 responding still
BG35	0257	0300	3	NO			* Pull up to station + now hear BADO is @ station 36?
BG10	0307	0317	10	NO			
BG09	0328	0338	10	NO			
BG08	0342	0352	10	NO			
BG07	0359	0409	10	NO			
BG06	0416	0426	10	NO			
BG05	0429	0439	10	NO			
BG03	0443	0453	10	NO			

BG04 0458 0508 10 NO

Owl Response Location(s)

SON

#076 1) Township 7N Range 10W Section 4 1/4 sec SE 1/16 sec NW 1/64 sec SE

Sex Male UTM East 502694 UTM North 4259023 Coordinate system NAD83

#083 2) Township 7N Range 10W Section 3 1/4 sec SW 1/16 sec SE 1/64 sec NW

Sex Male UTM East 503912 UTM North 4258254 Coordinate system NAD83

Additional Comments

373.17

Additional Page 7/20/20

Page 1 of 3

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COAST AREA
RESOURCE MANAGEMENT

Northern Spotted Owl Survey Form

Surveyor Mike Stephens Date 05/10/15 (mm/dd/yy) Landowner Bohemian Grove

Calling Area - Township 7N Range 10W Section(s) 3,4,5,6,7,8,9,10,16,17,18

THP/Plan Area Being Surveyed Bohemian Grove NTMP Units A11 Watershed Smith Cr./Russian
(1-06 NTMP-011 SON)

Weather

Wind. ~~Calm~~, Breeze, Moderate, Windy, Gust

Clouds: Clear, Scattered, Overcast, Fog

Precipitation: Dry, Fog, Misty, Drizzle, Light Rain, Rain, Heavy Rain, Intermittent, Hail

Significant Weather Changes During Survey

Complete THP Visit? (Y) N

With other visit ? 5/9

Other 'THP'S

TIME

[illegible]

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COAST AREA
RESOURCE MANAGEMENT

Owl Response Location(s)

MEN # 1) Township Range Section $\frac{1}{4}$ sec 1/16sec 1/64sec

Sex	UTM East	UTM North	Coordinate system
-----	----------	-----------	-------------------

MEN #	2) Township	Range	Section	¼ sec	1/16 sec	1/64sec
-------	-------------	-------	---------	-------	----------	---------

Sex	UTM East	UTM North	Coordinate system
-----	----------	-----------	-------------------

Additional Comments

373.18

Additional Page 7/20/20

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Bohemian Grove Northern Spotted Owl Survey Stations

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COAST AREA
RESOURCE MANAGEMENT

Additional Page 7/20/20

373.19

Legend 18

○ NSO Survey Stations

NTMP Boundary

Property Boundary

5/19-5/10
SON076 ♂ SON083

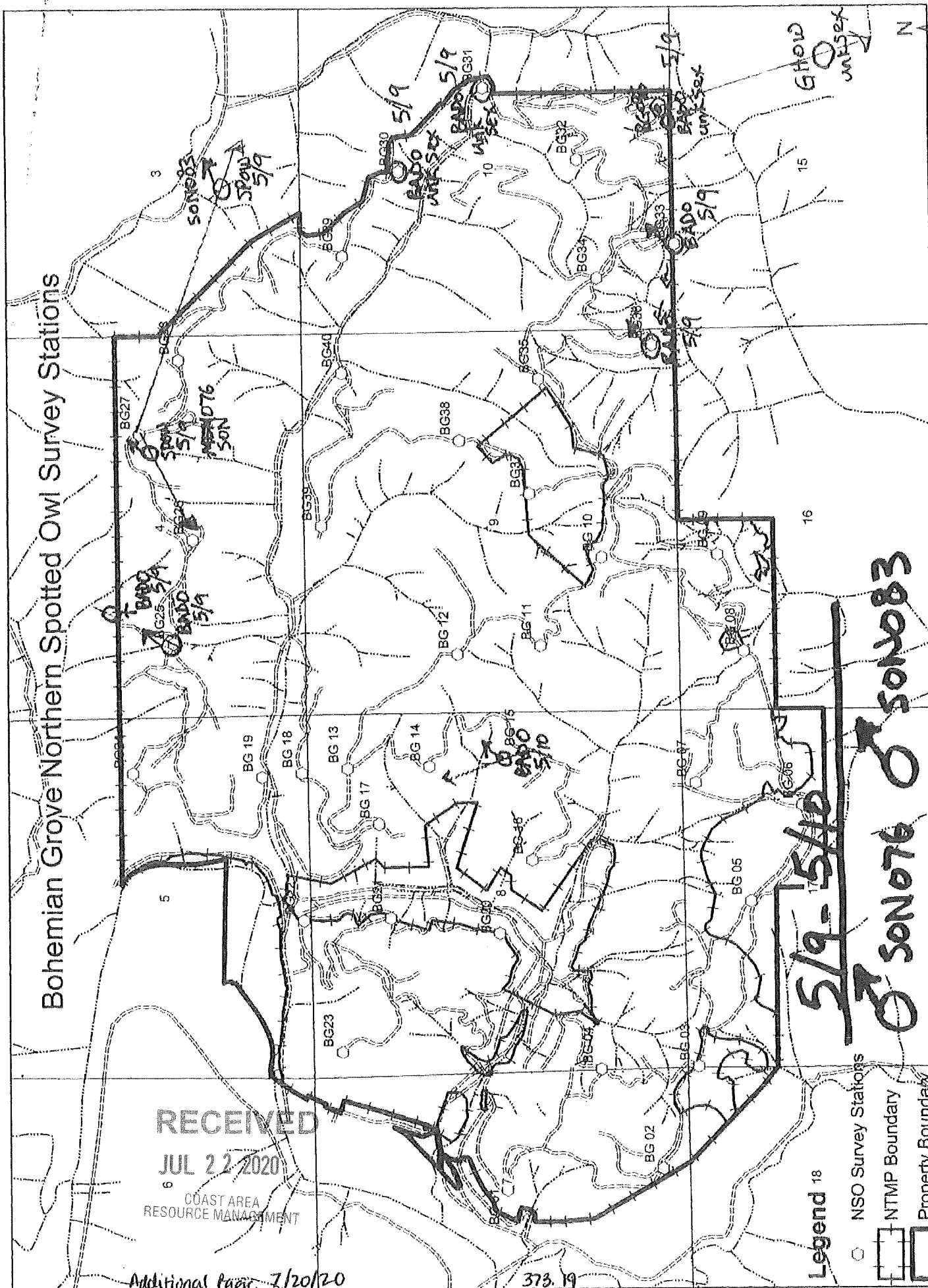
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Bohemian Grove NTMP NSO Survey Stations

1,000 500 0

1,000 Meters

Page 3 of 3



Northern Spotted Owl Survey Form

Surveyor Mike Stephens Date 06/09/15 (mm/dd/yy) Landowner Bohemian Grove

Calling Area - Township 7N Range 10W Section(s) 3,4,5,6,7,8,9,10,16,17,18

THP/Plan Area Being Surveyed Bohemian Grove NTMP Units All Watershed Smith Cr./Russian
(1-06NTMP-011 SON)

Weather

Wind Calm Breeze, Moderate, Windy, Gust

Clouds: Clear, Scattered, Overcast, Fog

Precipitation Dry Fog, Misty, Drizzle, Light Rain, Rain, Heavy Rain, Intermittent, Hail

Significant Weather Changes During Survey

Complete THP Visit? ☒ N

With other visit? 6/10

Other THP'S

TIME

Station	Start	Stop	Total	Response	Sex	Azimuth	Comments
BG02	2128	2138	10	Yes, 2130	♂	260°	* Distant/faint reply across Hwy/river same elevation as me SON093 located off-map
BG04	2144	2154	10	Yes, 2148	Unk	@ station	* Spow flies into station silently → I put out fake rat which owl goes for I can see it's unbanded likely from SON093 foraging in recent harvest area.
BG03	2202	2212	10	NO			
BG05	2218	2228	10	NO			
BG06	2232	2242	10	NO			
BG07	2247	2257	10	NO			
BG08	2304	2314	10	NO			
BG09	2318	2328	10	NO			
BG35	2334	2344	10	NO			
BG36	2348	2350	2	NO			* Arrive @ station + hear ♂ BADO @ 117' over by BG33 which is also near an active Osprey nest - decide to end @ station and drop BG33
BG34	2355	2357	2	NO			* Arrive @ station and hear ♂ BADO @ 193' in same area as detection at last station + I decide to end survey at this station
BG96	0005	0015	10	NO			
BG32	0021	0031	10	NO			
BG31	0035	0045	10	NO			
BG30	0059	0109	10	NO			
BG29	0113	0123	10	NO			

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JUL 22 2020

COAST AREA
RESOURCE MANAGEMENT

SON 093 Owl Response Location(s)

~~SON~~ # ~~093~~ 1) Township 7N Range 10W Section 7 1/4 sec SW 1/16 sec SW 1/64 sec SE

Sex Male UTM East 498534 UTM North 4256626 Coordinate system NAD83

~~N~~ # ~~093~~ 2) Township 7N Range 10W Section 8 1/4 sec SW 1/16 sec SW 1/64 sec NW

Sex Unk UTM East 500017 UTM North 4257064 Coordinate system NAD83

Additional Comments

373.20

Additional Page 7/20/20

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Northern Spotted Owl Survey Form

Surveyor Mike Stephens Date 06/09/15 (mm/dd/yy) Landowner Bohemian Grove

Calling Area - Township 7N Range 10W Section(s) 3,4,5,6,7,8,9,10,16,17,18

THP/Plan Area Being Surveyed Bohemian Grove NMA Units All Watershed Smith Cr/Russigan
(1-DGNTMP-011 SON)

Weather

Wind ~~Calm~~ Breeze, Moderate, Windy, Gust

Clouds: Clear, Scattered, Overcast, Fog

Precipitation: Dry, Fog, Misty, Drizzle, Light Rain, Rain, Heavy Rain, Intermittent, Hail

Significant Weather Changes During Survey

Complete THP Visit? ☒ Y ☐ N

With other visit ? 6/10

Other THP'S

TIME

[illegible]

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COAST AREA
RESOURCE MANAGEMENT

Owl Response Location(s)

~~Block~~ # 036 1) Township 7N Range 10W Section 9 $\frac{1}{4}$ sec SW $\frac{1}{16}$ sec SE $\frac{1}{64}$ sec NW

Sex Male UTM East 502207 UTM North 4257050 Coordinate system NAD83

MEN # 2) Township Range Section $\frac{1}{4}$ sec 1/16 sec 1/64sec

Sex _____ UTM East _____ UTM North _____ Coordinate system _____

Additional Comments

373.21

Additional Page 7/20/20

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Northern Spotted Owl Survey Form

Surveyor Mike Stephens Date 06/10/15 (mm/dd/yy) Landowner Bohemian Grove

Calling Area - Township 7N Range 10W Section(s) 3, 4, 5, 6, 7, 8, 9, 10, 16, 17, 18

THP/Plan Area Being Surveyed Bohemian Grove NTMP Units All Watershed Smith Cr/Russian
(i-06 NTMP-21150N)

Weather

Wind. Calm Breeze, Moderate, Windy, Gust

Clouds: Clear, Scattered Overcast, Fog

Precipitation: Dry, Fog, Misty, Drizzle, Light Rain, Rain, Heavy Rain, Intermittent, Hail

Significant Weather Changes During Survey

Complete THP Visit? (Y) N

With other visit? 6/9

Other THP'S

TIME

[illegible]

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COAST AREA
RESOURCE MANAGEMENT

SON	Owl Response Location(s)
1	1
2	1
3	1
4	1
5	1
6	1
7	1
8	1
9	1
10	1
11	1
12	1
13	1
14	1
15	1
16	1
17	1
18	1
19	1
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22	1
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86	1
87	1
88	1
89	1
90	1
91	1
92	1
93	1
94	1
95	1
96	1
97	1
98	1
99	1
100	1

~~1093~~ #093 1) Township 7N Range 10W Section 7 $\frac{1}{4}$ sec SE $\frac{1}{16}$ sec NW $\frac{1}{64}$ sec SE

Sex Female UTM East 499466 UTM North 4257228 Coordinate system NAD83

✓ ~~1002~~ #002 2) Township 7N Range 10W Section 8 ¼ sec NE 1/16 sec SE 1/64 sec NW

Sex Male UTM East 501274 UTM North 4257800 Coordinate system NAD83

Additional Comments

373.22

Additional Page 7/20/20

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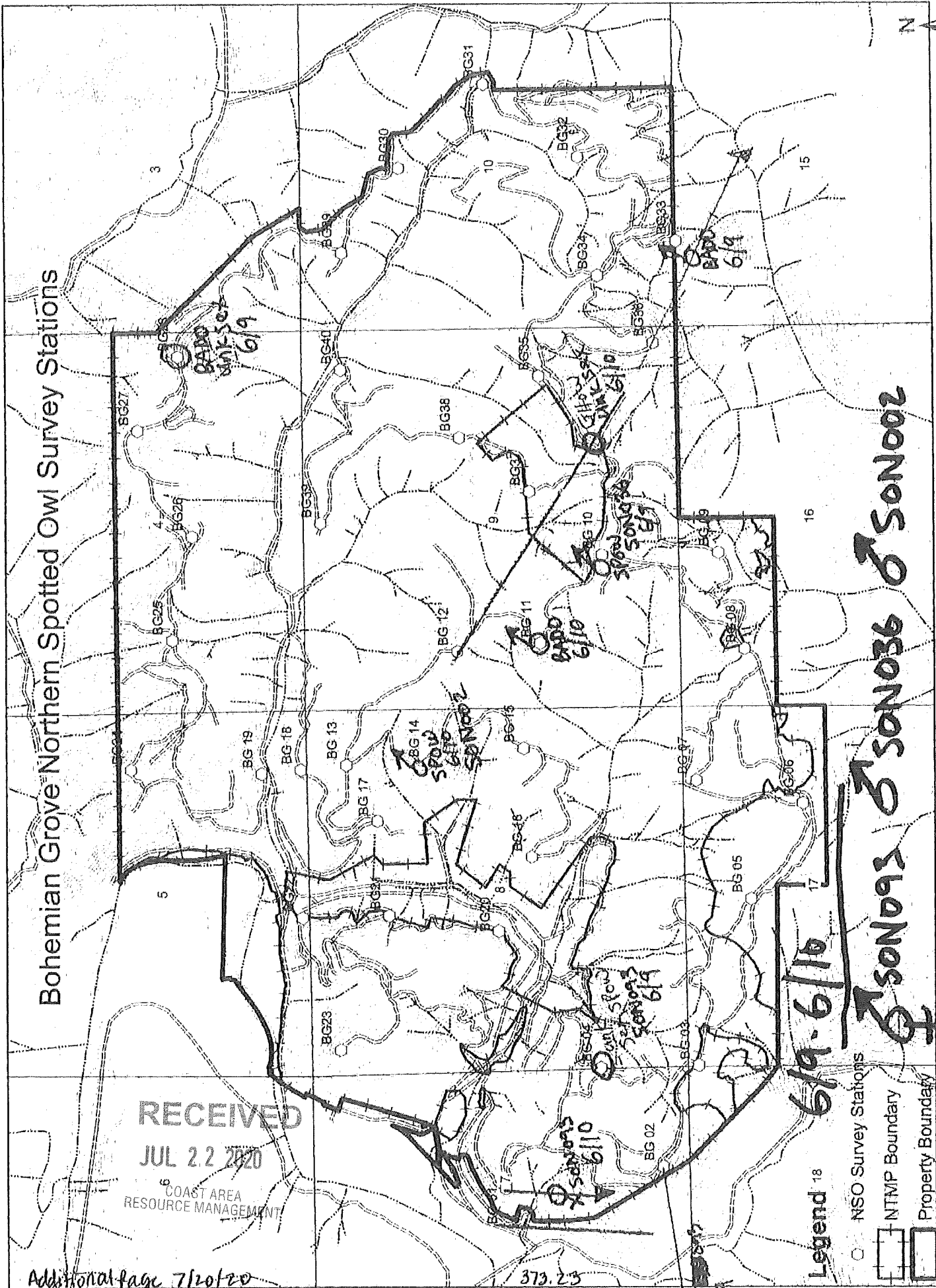
Bohemian Grove Northern Spotted Owl Survey Stations

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COAST AREA
RESOURCE MANAGEMENT

Additional page 7/20/20



Legend 18

- NSO Survey Stations
- ▭ NTMP Boundary
- ▭ Property Boundary

Bohemian Grove NTMP NSO Survey Stations

1:20,000

1,000 500 0

1,000 Meters

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Northern Spotted Owl Survey Form

Surveyor Mike Stephens Date 06/17/15 (mm/dd/yy) Landowner Bohemian Grove

Calling Area - Township 7 N Range 10 W Section(s) 7

THP/Plan Area Being Surveyed Bohemian Grove NPA Units 50N093 Watershed Dutch Bill Creek Russian

Weather

Wind ~~Calm~~ Breeze, Moderate, Windy, Gust

Clouds: Clear, Scattered, Overcast, Fog

Precipitation: Dry, Fog, Misty, Drizzle, Light Rain, Rain, Heavy Rain, Intermittent, Hail

Significant Weather Changes During Survey

Complete THP Visit? Y N

With other visit ?

Other THP'S

TIME

[illegible]

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COAST AREA
RESOURCE MANAGEMENT

SON Owl Response Location(s)
~~SON~~ #093 1) Township 7N Range 10W Section 7 1/4 sec SE 1/16sec SW 1/64sec SE
 Sex Female UTM East 499491 UTM North 4256804 Coordinate system NAD 83
 MEN # 2 2) Township Range Section 1/4 sec 1/16 sec 1/64sec
 Sex UTM East UTM North Coordinate system

Additional Comments

373.24

Additional Page 7/20/20

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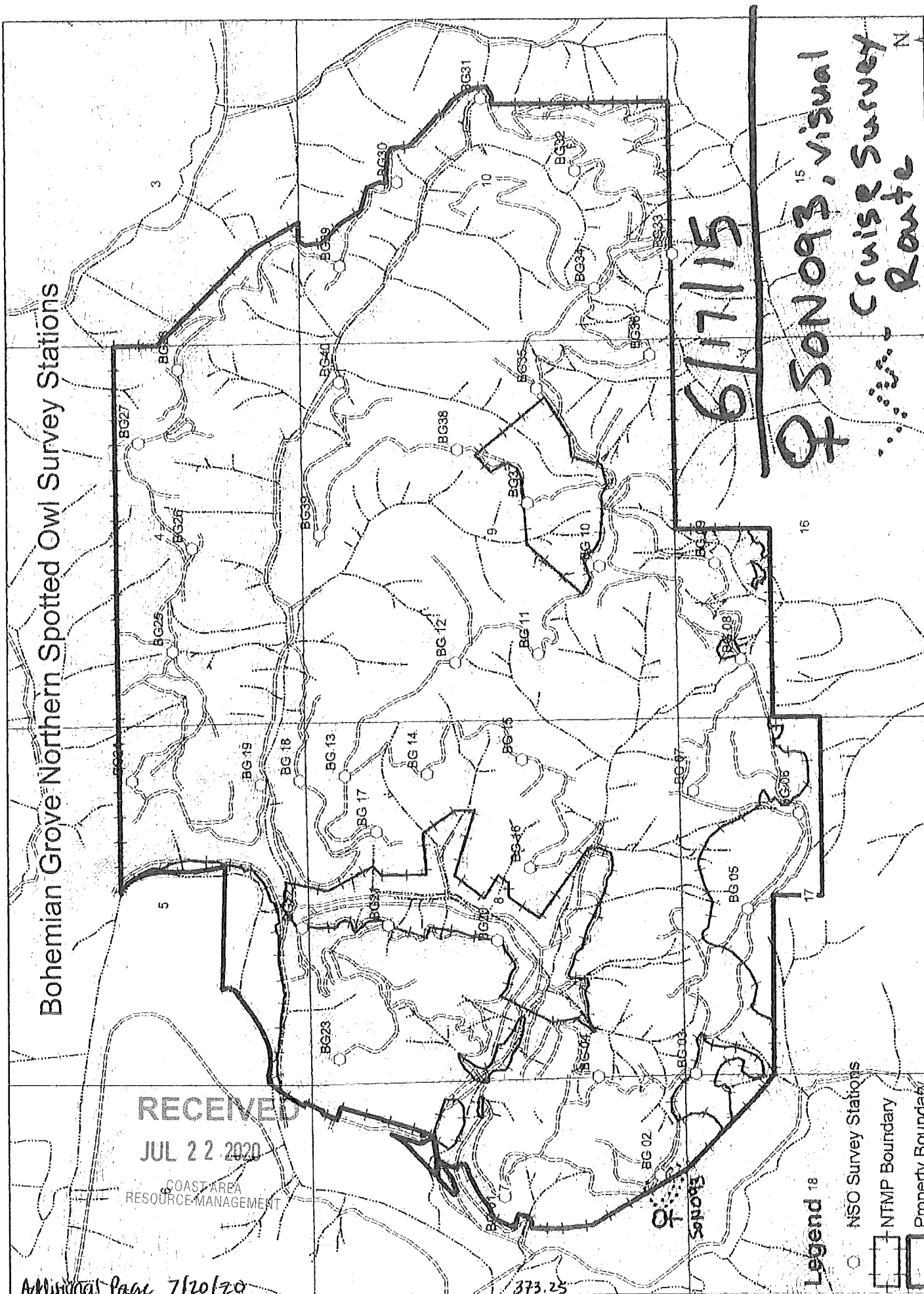
Bohemian Grove Northern Spotted Owl Survey Stations

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COAST AREA
RESOURCE MANAGEMENT

Additional Page 7/20/20



6/17/15

SONO93, visual

Cruise Survey Route

Legend 18

- NSO Survey Stations
- NTMP Boundary
- Property Boundary

Bohemian Grove NTMP NSO Survey Stations

1,000 500 0 1,000 Meters

1:20,000

Page 2 of 2

Northern Spotted Owl Survey Form

Surveyor Mike Stephens Date 06/18/15 (mm/dd/yy) Landowner Bohemian Grove

Calling Area - Township 7 N Range 10 W Section(s) 9

THP/Plan Area Being Surveyed Bohemian Grove NHP Units Follow-up Watershed Smith Cr/Russian

Weather

Wind: Calm, Breeze, Moderate, Windy, Gust

Clouds: Clear, Scattered, Overcast, Fog

Precipitation (Dry, Fog, Misty, Drizzle, Light Rain, Rain, Heavy Rain, Intermittent, Hail)

Significant Weather Changes During Survey

Complete THP Visit? Y N

With other visit ?

Other THP'S

TIME

[illegible]

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COAST AREA
RESOURCE MANAGEMENT

Owl Response Location(s)

MEN # _____ 1) Township _____ Range _____ Section _____ ¼ sec _____ 1/16sec _____ 1/64sec _____

Sex	UTM East	UTM North	Coordinate system
-----	----------	-----------	-------------------

MEN # _____ 2) Township _____ Range _____ Section _____ ¼ sec _____ 1/16 sec _____ 1/64sec _____

Sex	UTM East	UTM North	Coordinate system
-----	----------	-----------	-------------------

Additional Comments

373.26

Additional Page 7/20/20

Page 1 of 2

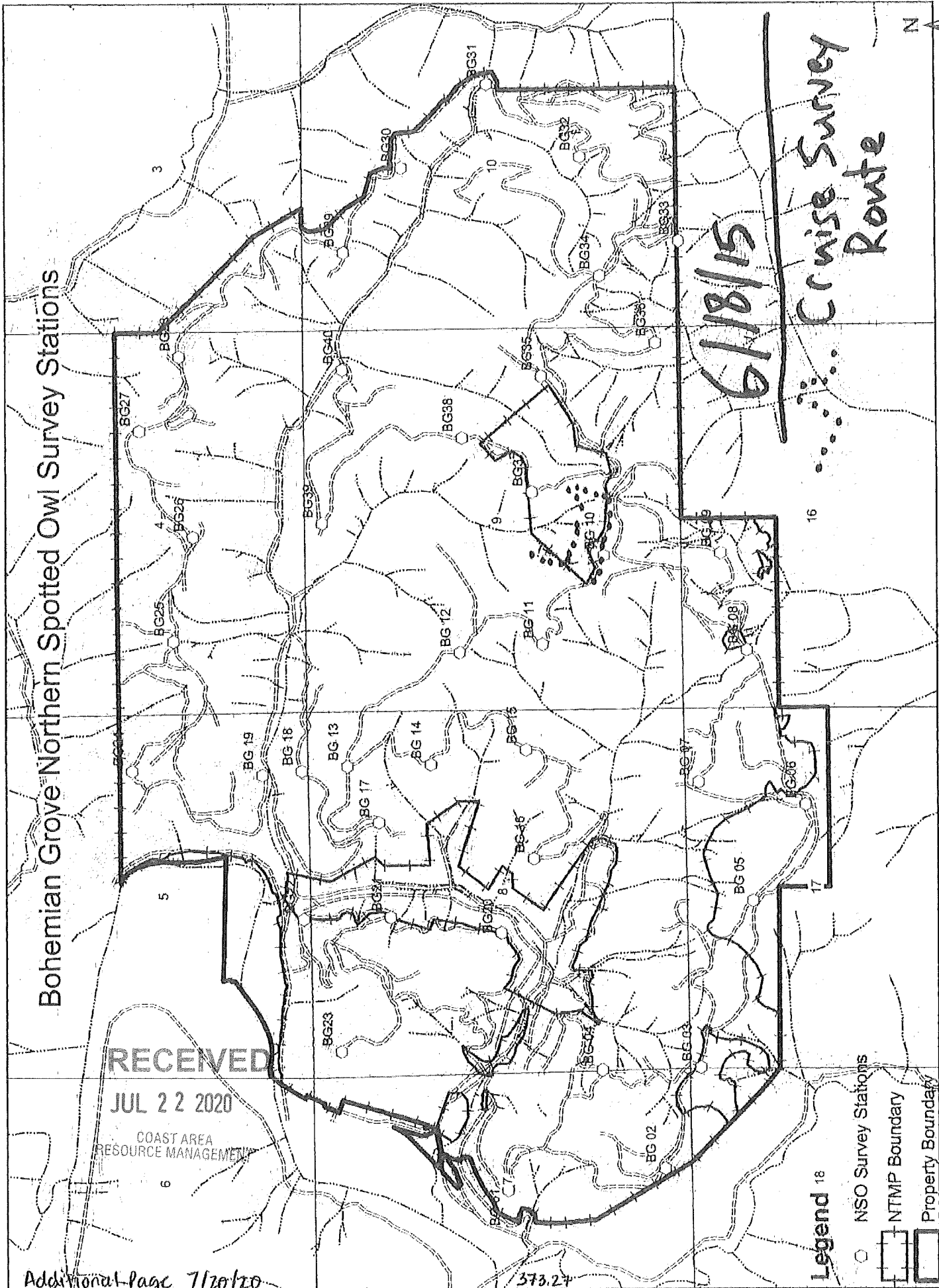
Bohemian Grove Northern Spotted Owl Survey Stations

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COAST AREA
RESOURCE MANAGEMENT

Additional Page 7/10/20



6/18/15

Cruise Survey
Route

1,000 Meters

0

500

1,000

1:20,000

Bohemian Grove NTMP NSO Survey Stations

Page 2 of 2

NORTHERN SPOTTED OWL SURVEY FORM

Surveyor Mike Stephens Date 04/22/16 (mm/dd/yy) Landowner Bohemian Grove

Calling Area - Township 7N Range 10W Section(s) 3,4,5,6,7,8,9,10,16,17,18

THP/Plan Area Being Surveyed Bohemian Grove NTP Units All Watershed Smith Cr/Russian River
(1-06NTP-01150N)

Weather

Wind: Calm Breeze, Moderate, Windy, Gust

Clouds: Clear Scattered, Overcast, Fog

Precipitation: Dry Fog, Misty, Drizzle, Light Rain, Rain, Heavy Rain, Intermittent, Hail

Significant Weather Changes During Survey

Complete THP Visit? ☒ N

With other visit? 4/23

Other THP'S

TIME

Station	Start	Stop	Total	Response	Sex	Azimuth	Comments
BG19	2306	2316	10	NO			
BG24	2324	2334	10	NO			*WESO @ station
BG25	2338	2348	10	NO			
BG26	2352	0002	10	NO			
BG27	0007	0017	10	NO			
BG28	0021	0031	10	NO			
BG29	0036	0046	10	NO			
BG30	0051	0101	10	NO			
BG31	0105	0115	10	NO			
BG32	0120	0130	10	NO			
BG96	0135	0145	10	Yes, 0144	M+F	@ station	A single BADO flies into station then flies across rd + then pair starts vocalizing
BG33	0151	0201	10	NO			
BG34	0205	0215	10	NO			
BG35	0222	0232	10	NO			
BG36	0238	0248	10	NO			*NSWO @ 202° ≈ 100m
BG37	0258	0308	10	NO			
BG38	0311	0321	10	NO			
BG39	0326	0336	10	NO			*NOPO @ 190° ≈ 75m
BG40	0341	0355	14	Yes, 343	F	@ station	*F BADO contact calling above station - I drag fake rat + BADO comes down for it - so it is a BADO ♀

Owl Response Location(s)

MEN # 1) Township Range Section 1/4 sec 1/16 sec 1/64 sec

Sex UTM East UTM North Coordinate system

MEN # 2) Township Range Section 1/4 sec 1/16 sec 1/64 sec

Sex UTM East UTM North Coordinate system

Additional Comments

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COAST AREA
RESOURCE MANAGEMENT

373.28

Additional Page 7/20/20

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Northern Spotted Owl Survey Form

Surveyor Mike Stephens Date 04/23/16 (mm/dd/yy) Landowner Bohemian Grove

Calling Area - Township 7N Range 10W Section(s) 3,4,5,6,7,8,9,10,16,17,18

THP/Plan Area Being Surveyed Bohemian Grove NMP Units A-1 Watershed Smith C/Russian River
(1-06 NTMP-011 SON)

Weather

Wind: Calm Breeze, Moderate, Windy, Gust

Clouds: Clear Scattered, Overcast, Fog

Precipitation: Dry Fog, Misty, Drizzle, Light Rain, Rain, Heavy Rain, Intermittent, Hail

Significant Weather Changes During Survey

Complete THP Visit? ☒ N

With other visit? on 4/22

Other THP'S

TIME

Station	Start	Stop	Total	Response	Sex	Azimuth	Comments
BG 20	2204	2214	10	NO			
BG 21	2218	2228	10	NO			
BG 22	2231	2241	10	NO			
BG 23	2248	2258	10	NO			
BG 1	2316	2326	10	NO			
BG 2	2331	2341	10	Yes, 1332	♂	342°	*SPOW replies 2x very faint across Russian River + Hwy 116, not best azimuth SON 093
BG 4	2346	2356	10	NO			
BG 3	0000	0010	10	NO			
BG 5	0014	0024	10	NO			
BG 6	0027	0037	10	NO			
BG 7	0042	0052	10	NO			
BG 8	0058	0108	10	NO			
BG 9	0112	0122	10	NO			
BG 10	0127	0137	10	NO			
BG 11	0143	0153	10	NO			
BG 12	0156	0206	10	NO			
BG 13	0211	0221	10	NO			
BG 14	0224	0234	10	NO			
BG 15	0238	0248	10	NO			*WESO @ station
BG 16	0252	0302	10	NO			

SON

#093

Sex

♂

MEN #

Sex

Owl Response Location(s)

1) Township 7N Range 10W Section 7 1/4 sec NE 1/16 sec NW 1/64 sec SW

UTM East 499009 UTM North 4258297 Coordinate system NAD 83

2) Township Range Section 1/4 sec 1/16 sec 1/64 sec

UTM East UTM North Coordinate system

Additional Comments

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JUL 22 2020

COAST AREA
RESOURCE MANAGEMENT

373.29

Additional Page 7/20/20

Page 2 of 3

Bohemian Grove Northern Spotted Owl Survey Stations

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COAST AREA
RESOURCE MANAGEMENT

Additional Page 7/20/20

373.30'

Legend

- NSO Survey Stations
- NTMP Boundary
- Property Boundary

4/22 + 4/23/16 ns
SON093

1,000 Meters
Page 3 of 3

1,000 500 0

1:20,000

Bohemian Grove NTMP NSO Survey Stations

Northern Spotted Owl Survey Form

Surveyor Mike Stephens Date 05/20/16 (mm/dd/yy) Landowner Bohemian Grove

Calling Area - Township 7N Range 10W Section(s) 3,4,5,6,7,8,9,10,16,17,18

THP/Plan Area Being Surveyed Bohemian Grove NMP Units All Watershed San Hc/Russian River
(1-06 NMP - oil SON)

Weather

Wind: Calm Breeze, Moderate, Windy, Gust

Clouds: Clear Scattered, Overcast, Fog

Precipitation: Dr Fog, Misty, Drizzle, Light Rain, Rain, Heavy Rain, Intermittent, Hail

Significant Weather Changes During Survey

Complete THP Visit? ☒ N

With other visit? on 5/21

Other THP'S

TIME

Station	Start	Stop	Total	Response	Sex	Azimuth	Comments
BG 1	2245	2255	10	NO			
BG 2	2259	2309	10	NO			
BG 4	2316	2326	10	NO			
BG 3	2330	2340	10	NO			
BG 5	2344	2354	10	NO			
BG 6	2358	0008	10	NO			
BG 7	0013	0023	10	NO			
BG 8	0032	0042	10	NO			
BG 9	0048	0058	10	Yes, 0055	♂	Q station	* BADO ♂ Q station Drop BG 10
BG 11	0104	0114	10	NO			
BG 12	0118	0128	10	NO			
BG 13	0134	0144	10	NO			
BG 14	0151	0201	10	NO			
BG 15	0207	0217	10	NO			
BG 16	0223	0233	10	NO			
BG 17	0245	0255	10	NO			
BG 32	0311	0321	10	Yes, 0314	♀	Q station	* SPOW ♀ replies Q station then flies off to SE in direction of SON 036
BG 33	0326	0336	10	NO			* G How ♂ @ 199° - distant
BG 34	0340	0343	3	Yes, 0340	♂	183°	* Arrive Q station + hear BADO ♂ @ 183° ± 100m
BG 36	0347	0349	2	Yes, 0347	♂	118°	* Arrive Q station + hear BADO ♂ @ 118° same as BG 34
BG 35	0354	0404	10	NO			
BG 37	0412	0422	10	NO			
BG 38	0425	0435	10	NO			
BG 39	0440	0450	10	Yes, 0440	♂ + ♂	178° + Q station	* BADO ♂ distant 178° + Q 0450 ♂ BADO ♂ stat

SON

36

Sex ♀

MEN #

Sex

Owl Response Location(s)

1) Township 7N Range 10W Section 10 1/4 sec SE 1/16 sec NW 1/64 sec NW

UTM East 503885 UTM North 4257144 Coordinate system NAD83

2) Township Range Section 1/4 sec 1/16 sec 1/64 sec

UTM East UTM North Coordinate system

Additional Comments

Follow up to SPOW ♀ detection @ BG 32 done the following morning - on next survey form.

373.31

Additional Page 7/20/20

Page 1 of 3

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COAST AREA
RESOURCE MANAGEMENT

Northern Spotted Owl Survey Form

Surveyor Mike Stephens Date 05/21/16 (mm/dd/yy) Landowner Bohemian Grove

Calling Area - Township 7N Range 10W Section(s) 3,4,5,6,7,8,9,10,16,17,18

THP/Plan Area Being Surveyed Bohemian Grove NMP Units All Watershed Smith Cr/Russian River
(1-06 NMP-011 SON)

Weather

Wind: Calm, Breeze, Moderate, Windy, Gust

Clouds: Clear, Scattered, Overcast, Fog

Precipitation: Dry, Fog, Misty, Drizzle, Light Rain, Rain, Heavy Rain, Intermittent, Hail

Significant Weather Changes During Survey

Complete THP Visit? ☒ N

With other visit? on 5/20

Other THP'S

TIME

Station	Start	Stop	Total	Response	Sex	Azimuth	Comments
Cruise	0902	1009	67	NO			* Follow-up to last night's detection of spous ♀ @ BG 32. Started @ station BG 32 and hiked uphill - clear that this was a foraging location as brush clearing had occurred recently along road and habitat that remains is not suited for roosting/nest. likely ♀ was from SONOS6 - off property to SE
BG 20	2307	2317	10	NO			
BG 21	2322	2332	10	NO			
BG 22	2337	2347	10	NO			
BG 23	2358	0008	10	NO			
BG 19	0057	0107	10	NO			
BG 40	0115	0125	10	NO			
BG 31	0130	0140	10	NO	♀	@ station	* BADO ♀ @ station
BG 29	0147	0157	10	NO			
BG 28	0206	0216	10	NO			
BG 27	0220	0230	10	NO			
BG 26	0235	0245	10	NO			
BG 25	0249	0259	10	NO			
BG 24	0307	0317	10	NO			

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JUL 22 2020

COAST AREA
RESOURCE MANAGEMENT

Owl Response Location(s)

MEN # 1) Township 7N Range 10W Section 3 ¼ sec 1/16sec 1/64sec
Sex UTM East UTM North Coordinate system
MEN # 2) Township 7N Range 10W Section 3 ¼ sec 1/16sec 1/64sec
Sex UTM East UTM North Coordinate system

Additional Comments

373.32

Additional Page 7/20/20

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Bohemian Grove Northern Spotted Owl Survey Stations

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COAST AREA
RESOURCE MANAGEMENT

Additional Page 7/20/20

373.35

Legend 18

- NSO Survey Stations
- ▭ NTMP Boundary
- ▭ Property Boundary

5/20+5/21/16ms
♀ SONO36

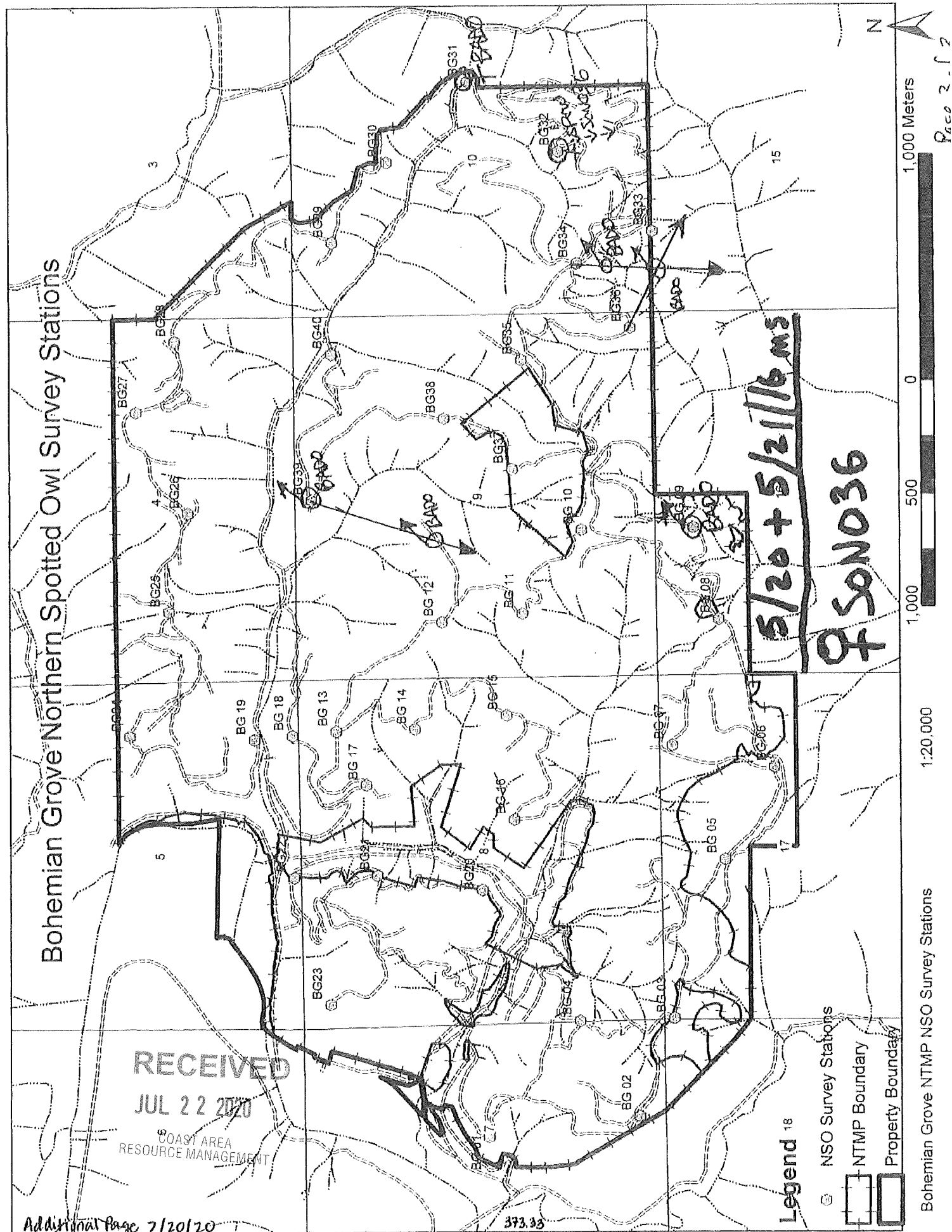
Bohemian Grove NTMP NSO Survey Stations

1:20,000

1,000 500 0

1,000 Meters

Page 2 of 2



Northern Spotted Owl Survey Form

Surveyor Mike Stephens Date 06/11/16 (mm/dd/yy) Landowner Bohemian Grove

Calling Area - Township 7N Range 10W Section(s) 3,4,5,6,7,8,9,10,16,17,18

THP/Plan Area Being Surveyed Bohemian Grove NTMP Units All Watershed Smith Cr/Russian River
(1-06NTMP-011 SON)

Weather

Wind: Calm Breeze, Moderate, Windy, Gust

Clouds: Clear Scattered, Overcast, Fog

Precipitation: Dry Fog, Misty, Drizzle, Light Rain, Rain, Heavy Rain, Intermittent, Hail

Significant Weather Changes During Survey

Complete THP Visit? ☒ N

With other visit? on 6/12/16

Other THP'S

TIME

Station	Start	Stop	Total	Response	Sex	Azimuth	Comments
BG1	2307	2317	10	No			
BG2	2324	2338	14	Yes, 2334	♀	318°	*♀ BADO heard faint/distant on oth side of river + Hwy 116 in area the I used to detect spow
BG4	2343	2353	10	No			
BG3	2351	0007	10	No			
BG5	0012	0022	10	No			
BG6	0026	0036	10	No			
BG7	0042	0052	10	No			
BG8	0100	0110	10	No			
BG9	0114	0124	10	No			
BG35	0133	0142	9	Yes, 0140	♀	@ station	*♀ BADO @ station does contact calls
BG36	0145	0147	2	Yes, 0145	♂	267°	*♂ BADO calling @ station when I pullup
BG34	0150	0152	2	Yes, 0150	♂	239°	*♂ BADO calling when I pullup to this station likely same ♂ as detected @ BG36 will drop station BG33 because I'd heard that & also
BG32	0159	0209	10	No			
BG96	0216	0226	10	Yes, 0220	♂	207°	*SPOW ♂ faint/distant reply only 1-4 not
BG31	0237	0247	10	Yes, 0243	♂	62°	*SPOW ♂ faint/distant only a couple of rep same SPOW as @ BG96? SON 083
BG30	0253	0303	10	No			
BG29	0306	0316	10	Yes, 0309	♂	323°	*Faint BADO heard 2-8 note calls
BG28	0323	0333	10				
BG27	0337	0347	10				
BG26	0351	0401	10				
BG25	0406	0416	10	Yes, 0415	unk	@ station	*BADO flies into station silently
BG24	0420	0430	10	No			

Owl Response Location(s)

SON

#36 1) Township 7N Range 10W Section 15 1/4 sec NE 1/16 sec NW 1/64 sec SW

Sex male UTM East 503935 UTM North 425649 Coordinate system NAD83

#83 2) Township 7N Range 10W Section 10 1/4 sec NE 1/16 sec SE 1/64 sec NE

Sex male UTM East 504849 UTM North 4257804 Coordinate system NAD83

Additional Comments

373.34

Additional Page 7/20/20

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Bohemian Grove Northern Spotted Owl Survey Stations

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COAST AREA
RESOURCE MANAGEMENT

Additional page 7/20/20

373.36

Legend 18

- NSO Survey Stations
- ▭ NTMP Boundary
- ▭ Property Boundary

6/11 + 6/12/16 ms
SON083
SON036

Bohemian Grove NTMP NSO Survey Stations

1:20,000

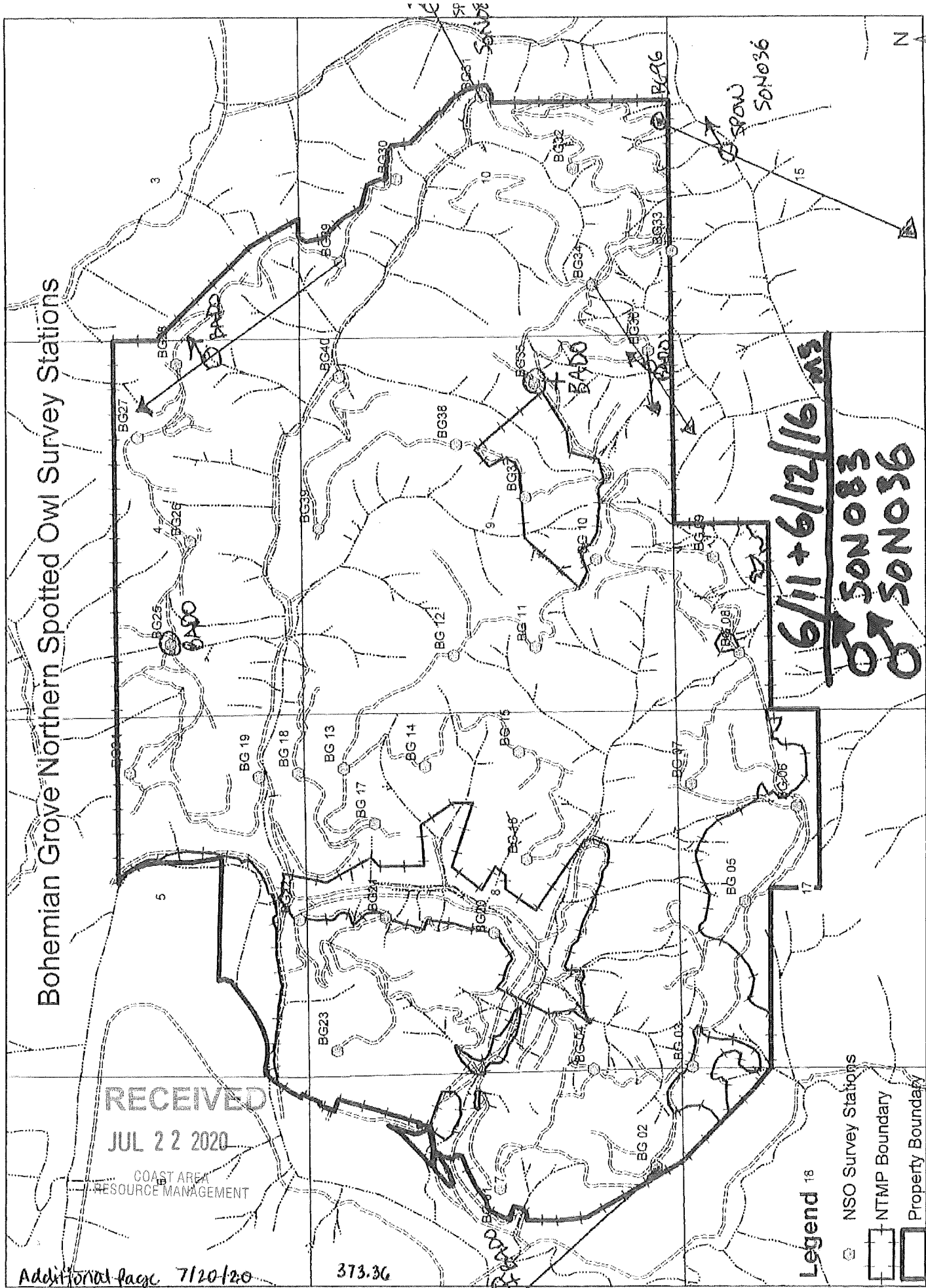
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1,000 Meters

Page 3 of 3



Northern Spotted Owl Survey Form

Surveyor Mike Stephens Date 04/22/19 (mm/dd/yy) Landowner Bohemian Grove

Calling Area - Township 7N Range 10W Section(s) 3,4,5,6,7,8,9,10,16,17,18

THP/Plan Area Being Surveyed Bohemian Grove NTMP Units All Watershed Smith Cr/Russian River
(1-06NTMP-01150N)

Weather

Wind: Calm ~~Breeze~~ Moderate, Windy, Gust

Clouds: Clear Scattered, Overcast, Fog

Precipitation: Dry Fog, Misty, Drizzle, Light Rain, Rain, Heavy Rain, Intermittent, Hail

Significant Weather Changes During Survey

Complete THP Visit? (Y) N

With other visit? W/follow-up and stations on 4/1

Other THP'S

TIME

Station	Start	Stop	Total	Response	Sex	Azimuth	Comments
BG01	2141	2151	10	No			
BG02	2158	2208	10	No			
BG04	2227	2237	10	No			* NSWO Faint in North
BG03	2244	2254	10	No			
BG05	2259	2309	10	No			
BG06	2315	2325	10	No			
BG07							* Station dropped - No Access
BG08	2341	2355	14	Yes, 2342	♀	113°	* Soft contact calls sounding like a spow ♀ ~ 50m from station I drag fake rat around and spow eventually comes in for it very aggressively - Drop nearby stations
BG09		DROPPED					
BG10		DROPPED					
BG35	0004	0014	10	Yes, 0005	♀	@ B station	* BADO ♀ - raspy contact calls eventually flies into station
BG36		DROPPED					
BG34	0019	0029	10	No			
BG33	0044	0054	10	No			
BG32	0102	0112	10	No			* NSWO @ station
BG96	0122	0132	10	No			
BG31	0139	0149	10	No			
BG40	0159	0209	10	No			
BG39	0226	0236	10	No			
BG38	0241	0251	10	No			
BG11	0300	0310	10	No			
BG12	0314	0324	10	No			
BG13	0331	0341	10	No			

RECEIVED

JUL 22 2020

COAST AREA
RESOURCE MANAGEMENT

SON # ? Owl Response Location(s)
 Sex Female 1) Township 7N Range 10W Section 16 ¼ sec NW 1/16 sec NW 1/64 sec SE
 UTM East 501848 UTM North 4256416 Coordinate system NAD83
 MEN # 2) Township _____ Range _____ Section _____ ¼ sec _____ 1/16 sec _____ 1/64 sec _____
 Sex _____ UTM East _____ UTM North _____ Coordinate system _____

Additional Comments

373.87

Additional Page 7/20/20

Page 1 of 3

Northern Spotted Owl Survey Form

Surveyor Mike Stephens Date 04/22/17 (mm/dd/yy) Landowner Bohemian Grove

Calling Area Township 7N Range 10W Section(s) 3,4,5,6,7,8,9,10,16,17,18

THP/Plan Area Being Surveyed Bohemian Grove NTMP Units A11 Watershed Smith Cr/Russian River
(1-06 NTMP-01150N)

Weather

Wind: Calm Breeze Moderate, Windy, Gust

Clouds Clear Scattered, Overcast, Fog

Precipitation: Dry, Fog, Misty, Drizzle, Light Rain, Rain, Heavy Rain, Intermittent, Hail

Significant Weather Changes During Survey

Complete THP Visit? Y N

With other visit? follow-up + stations on 4/2

Other THP's

TIME

[illegible]

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JUL 22 2020

COAST AREA
RESOURCE MANAGEMENT

Owl Response Location(s)

MEN # 1) Township Range Section 1/4 sec 1/16sec 1/64sec

Sex	UTM East	UTM North	Coordinate system
-----	----------	-----------	-------------------

MEN # 2) Township Range Section ¼ sec 1/16 sec 1/64 sec

Sex	UTM East	UTM North	Coordinate system
-----	----------	-----------	-------------------

Additional Comments

373.38

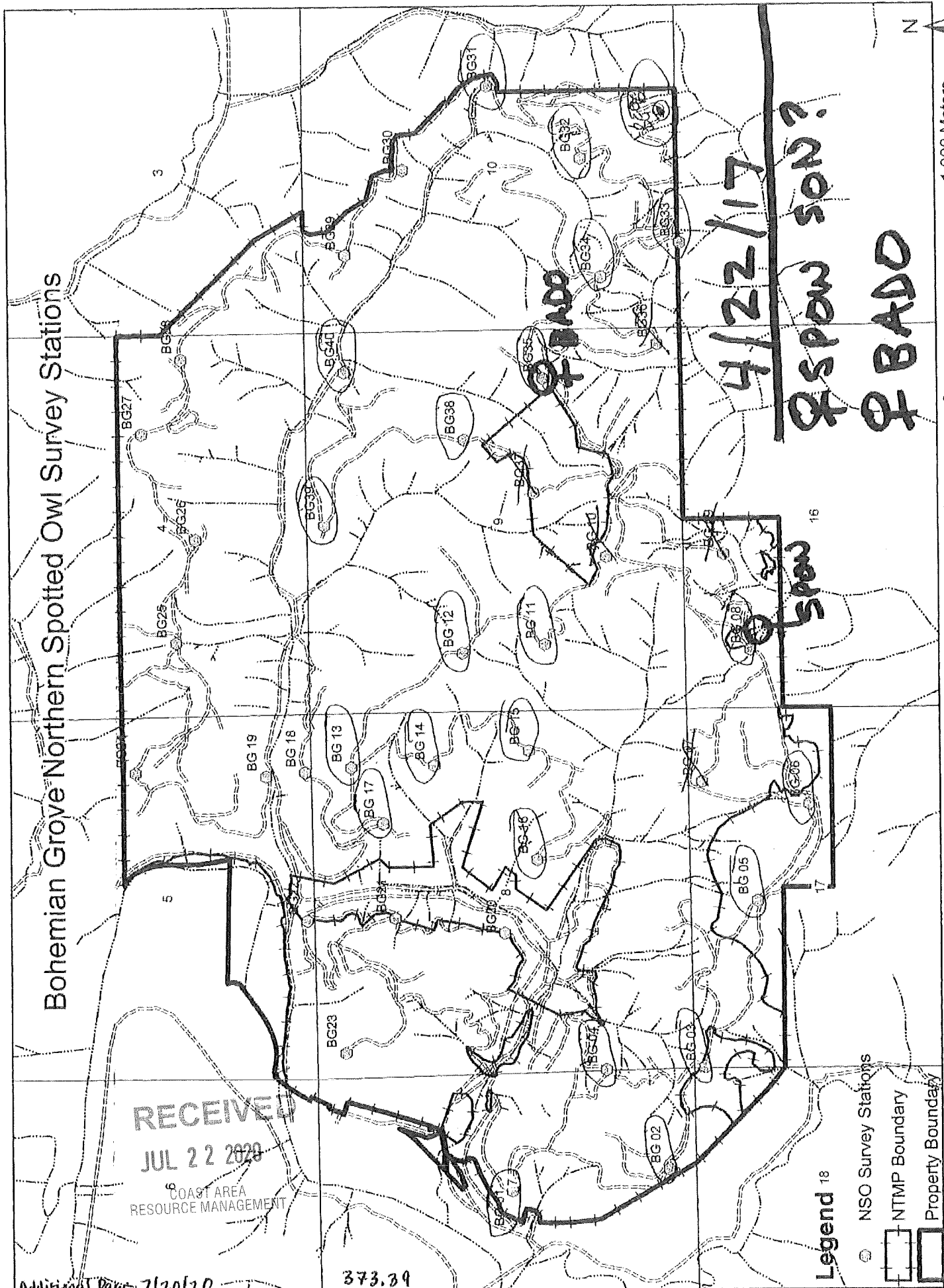
Additional Page 7/20/20

Bohemian Grove Northern Spotted Owl Survey Stations

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COAST AREA
RESOURCE MANAGEMENT

Additional Page 7/20/20

373.39



1,000 Meters

1,000 500 0

1:20,000

Bohemian Grove NTMP NSO Survey Stations

Page 3 of 2

Northern Spotted Owl Survey Form

Surveyor Mike Stephens Date 04/23/17 (mm/dd/yy) Landowner Bohemian Grove

Calling Area - Township 7N Range 10W Section(s) 3,4,5,6,7,8,9,10,16,17,18

THP/Plan Area Being Surveyed Bohemian Grove NTP Units All Watershed Smith Cr./Russian River
(1-06 NTP - 01150N)

Weather

Wind: Calm Breeze Moderate, Windy, Gust

Clouds: Clear, Scattered, Overcast, Fog

Precipitation: Dry, Fog, Misty, Drizzle, Light Rain, Rain, Heavy Rain, Intermittent, Hail

Significant Weather Changes During Survey

Complete THP Visit? (Y) N

With other visit? on 4/22

Other THP'S

		TIME		Total	Response	Sex	Azimuth	Comments
Station	Start	Stop						
Follow-up	1917	2026	69	Yes, 1956	♀			* Follow-up to SPow detection @ BG08 on 4/22 (last night). Start @ station BG08 then go SE where initial detection was - quickly see this was foraging habitat @ best way to BG08 then went north to ridge nose and called there until sunset then made my way back, got a few hundred feet and heard very soft contact calls back where I had been. So I went there and did soft squaw and SPow flew in. Obvious that sh was being quiet as nesting BADO territory is adjacent drainage to N. She was also skittish in open lost sig of her @ 2026
BG30	2059	2109	10	Yes, 2102	U		150°	* BADO 8-note below in elevation, ve echo-Y. Also NSW0 in NW
BG29	2115	2125	10	Yes, 2119	♀		@ Station	* BADO replies @ station - put false call out BADO gets it then 2nd BADO comes out of nowhere and goes after BADO. * Dropped due to BADO @ BG29
BG28								
BG27	2134	2144	10	No				
BG26	2150	2200	10	No				
BG25	2207	2217	10	No				
BG24	2223	2233	10	No				
BG19	2240	2250	10	No				
BG20	2317	2327	10	No				* NSW0 @ 231° ~ 50m

SON # 1 Owl Response Location(s)
 1) Township 7N Range 10W Section 9 1/4 sec SW 1/16 sec SW 1/64 sec SE
 Sex ♀ UTM East 501735 UTM North 4256721 Coordinate system NAD83
 MEN # 1 2) Township 7N Range 10W Section 9 1/4 sec SW 1/16 sec SW 1/64 sec SE
 Sex ♀ UTM East 501735 UTM North 4256721 Coordinate system NAD83

Additional Comments

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COAST AREA
RESOURCE MANAGEMENT

373.40

Additional Page 7/20/20

Page 1 of 3

Surveyor Mike Stephens Date 04/23/17 (mm/dd/yy) Landowner Bohemian Grove

Calling Area - Township 7N Range 10W Section(s) 3, 4, 5, 6, 7, 8, 9, 10, 16, 17, 18

THP/Plan Area Being Surveyed Bohemian Grove NTP Units All Watershed Smith Cr/Russian River
(1-06 NTP-01150N) Late THP Visit? ☒ N

Complete THP Visit? ☒ Y ☐ N

With other visit? on 4/22

Other THP'S

Wind: Calm, Breeze, Moderate, Windy, Gust

Clouds: Clear, Scattered, Overcast, Fog

Clouds: Clear, Scattered, Overcast, Fog
Precipitation: Dry, Fog, Misty, Drizzle, Light Rain, Rain, Heavy Rain, Intermittent, Hail

Significant Weather Changes During Survey

[illegible]

Owl Response Location(s)

MEN # 1) Township Range Section 1/4 sec 1/16sec 1/64sec
Sex UTM East UTM North Coordinate system

MEN # 2) Township Range Section 1/4 sec 1/16 sec 1/64sec
Sex UTM East UTM North Coordinate system

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COAST AREA
RESOURCE MANAGEMENT

Additional Comments

373.41

Additional Page 7/20/20

Page 2 of 3

Bohemian Grove Northern Spotted Owl Survey Stations

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COAST AREA
RESOURCE MANAGEMENT

Additional Page 7/10/20

373.42

Legend 18

NSO Survey Stations

NTMP Boundary

Property Boundary

Bohemian Grove NTMP NSO Survey Stations

1:20,000

1,000 500

1,000 Meters

Page 2 of 2

4/23/17

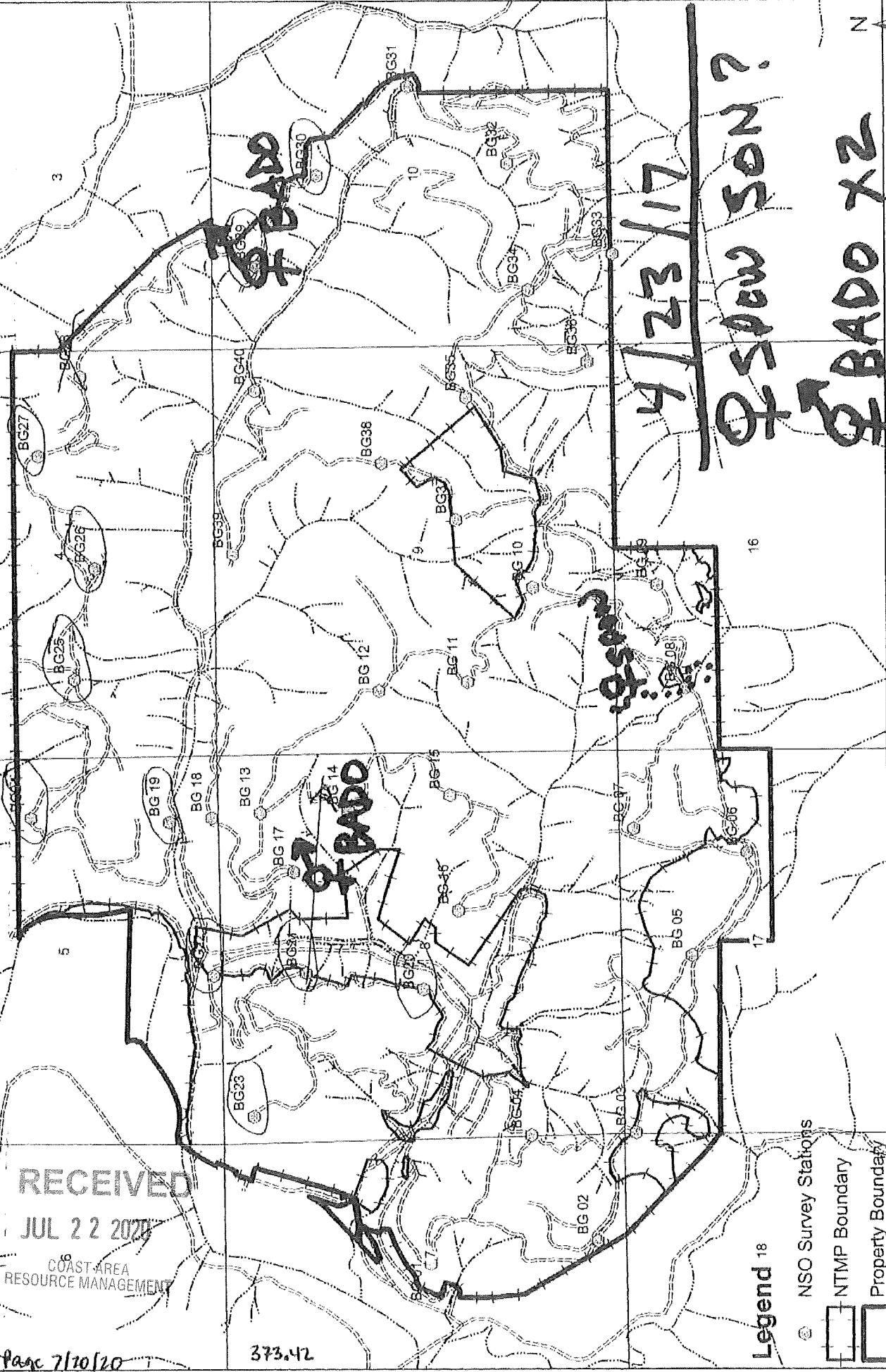
♀ SPW SON?

♀ BADO X2

♀ SPW

♀ BADO

♀ BADO



Northern Spotted Owl Survey Form

Surveyor Mike Stephens Date 05/20/17 (mm/dd/yy) Landowner Bohemian Grove

Calling Area Township 7N Range 10W Section(s) 3,4,5,6,7,8,9,10,16,17,18

THP/Plan Area Being Surveyed Bohemian Grove NMP Units All Watershed Smith Cr/Russian River
(1-06NMP-DILSON)

Weather

Wind Calm Breeze, Moderate, Windy, Gust

Clouds Clear Scattered, Overcast, Fog

Precipitation Dry Fog, Misty, Drizzle, Light Rain, Rain, Heavy Rain, Intermittent, Hail

Significant Weather Changes During Survey

Complete THP Visit? (Y) N

With other visit? Follow-up + Stations on 5/24

Other THP'S

TIME

Station	Start	Stop	Total	Response	Sex	Azimuth	Comments
BG19	2048	2058	10	No			
BG24	2105	2115	10	No			
BG25	2120	2130	10	No			
BG26	2135	2151	16	Yes, 2145	♀	@ station	* ♀ replies first @ station then ♂ replies @ 2148 @ 107° ≈ 50m downhill eventually ♀ flies to ♂'s location SON T6 > Dropped due to spow pair @ BG26
BG27							
BG28							
BG29	2159	2209	10	No			
BG30	2214	2224	10	Yes, 2221	♂	185°	* BADO ♂ ≈ 100m > Dropped due to BADO ♂ @ BG30
BG31							
BG32							
BG36	2233	2243	10	Yes, 2243	♀	@ station	* Scan station area w/ flashlight and see BADO - unk. Sex, until I leave then it hoots - it's a ♂
BG33	2251	2301	10	No			* WESO @ 1730 ≈ 25m
BG34	2307	2312	5	Yes, 2307	♂	163°	* Pull up to station and hear BADO's ≈ 150-200m * Station Dropped due to BADO @ BG34 * BADO ♂ Same on as detected @ BG34
BG36							
BG35	2317	2320	3	Yes, 2317	♂	141°	
BG09	2326	2336	10	No			
BG08	2341	2351	10	No			
BG07	2358	0008	10	No			
BG06	0014	0024	10	Yes, 0020	♂	351°	* Very very faint ♂ spow detection only hoots a couple of times unsure of Azimuth

SON

Owl Response Location(s)

#076 1) Township 7N Range 10W Section 4 ¼ sec SE 1/16 sec NW 1/64 sec SW

Sex Pair UTM East 502311 UTM North 4258771 Coordinate system NAD83

ON # ? 2) Township 7N Range 10W Section 17 ¼ sec NW 1/16 sec NW 1/64 sec SW

Sex ♂ UTM East 501094 UTM North 4256570 Coordinate system NAD83

Additional Comments

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COAST AREA
RESOURCE MANAGEMENT

373.43

Additional Page 7/20/20

Page 1 of 3

Northern Spotted Owl Survey Form

Surveyor Mike Stephens Date 05/20/17 (mm/dd/yy) Landowner Bohemian Grove

Calling Area - Township 7N Range 10W Section(s) 3,4,5,6,7,8,9,10,16,17,18

THP/Plan Area Being Surveyed Bohemian Grove NTP Units A/I Watershed Smith Cr/Russian River
(1-06 NTP-01150N)

Weather

Wind Calm Breeze, Moderate, Windy, Gust

Clouds Clear Scattered, Overcast, Fog

Precipitation Dry Fog, Misty, Drizzle, Light Rain, Rain, Heavy Rain, Intermittent, Hail

Significant Weather Changes During Survey

Complete THP Visit? ☒ N

With other visit? Follow-up + Stations on 5/21

Other THP'S

		TIME		Total	Response	Sex	Azimuth	Comments
Station	Start	Stop						
BG05	0029	0039	10	Yes, 0033	♂	84°	* Spow ♂ same as detected @ previous station (BG06) only heard once and it was extremely faint	
BG03	0048	0058	10	Yes, 0048	♂	18°	* BADO ♂ heard very faint	
BG04							* Dropped due to BADO detection @ BG03	
BG01	0105	0115	10	No				
BG02	0121	0139	18	Yes, 0132	W	@ station	* BADO flies in no vocalization	
BG10	0152	0202	10	Yes, 0202	W	@ station	* Scan station area w/ flash light and see BADO perched nearby	
BG11							> Dropped due to BADO @ BG10	
BG37								
BG12	0215	0227	12	Yes, 0225	♂	225°	* BADO ♂ ~ 200m	
BG13	0233	0244	11	Yes, 0243	♀	237°	* BADO ♀ faint/distant	
BG14	0247	0257	10	Yes, 0255	♂	317	* BADO ♂ faint/distant	
BG17							* Dropped due to BADO @ BG14+13	
BG15	0304	0314	10	No				
BG16	0320	0330	10	No				
BG40	0349	0359	10	No				
BG38	0409	0421	12	Yes, 0413	♂	@ station	* BADO ♂ @ station	
BG39	0426	0436	10	Yes, 0426	♀	178°	* BADO ♀ faint then hear same BADO ♂ as from BG38 ♀ goes and joins ♂ and they start caterwauling then both go to original location	

Owl Response Location(s)

MEN # 1) Township 7N Range 10W Section 3,4,5,6,7,8,9,10,16,17,18 ¼ sec 1/16sec 1/64sec 1/64sec

Sex UTM East UTM North UTM North Coordinate system UTM North

MEN # 2) Township 7N Range 10W Section 3,4,5,6,7,8,9,10,16,17,18 ¼ sec 1/16sec 1/64sec 1/64sec

Sex UTM East UTM North UTM North Coordinate system UTM North

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Additional Comments

COAST AREA
RESOURCE MANAGEMENT

373.414

Additional Page 7/20/20

Page 2 of 3

Bohemian Grove Northern Spotted Owl Survey Stations

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COAST AREA
RESOURCE MANAGEMENT

6

Additional Page 7/20/20

373.45

Legend 18

● NSO Survey Stations

▭ NTMP Boundary

▭ Property Boundary

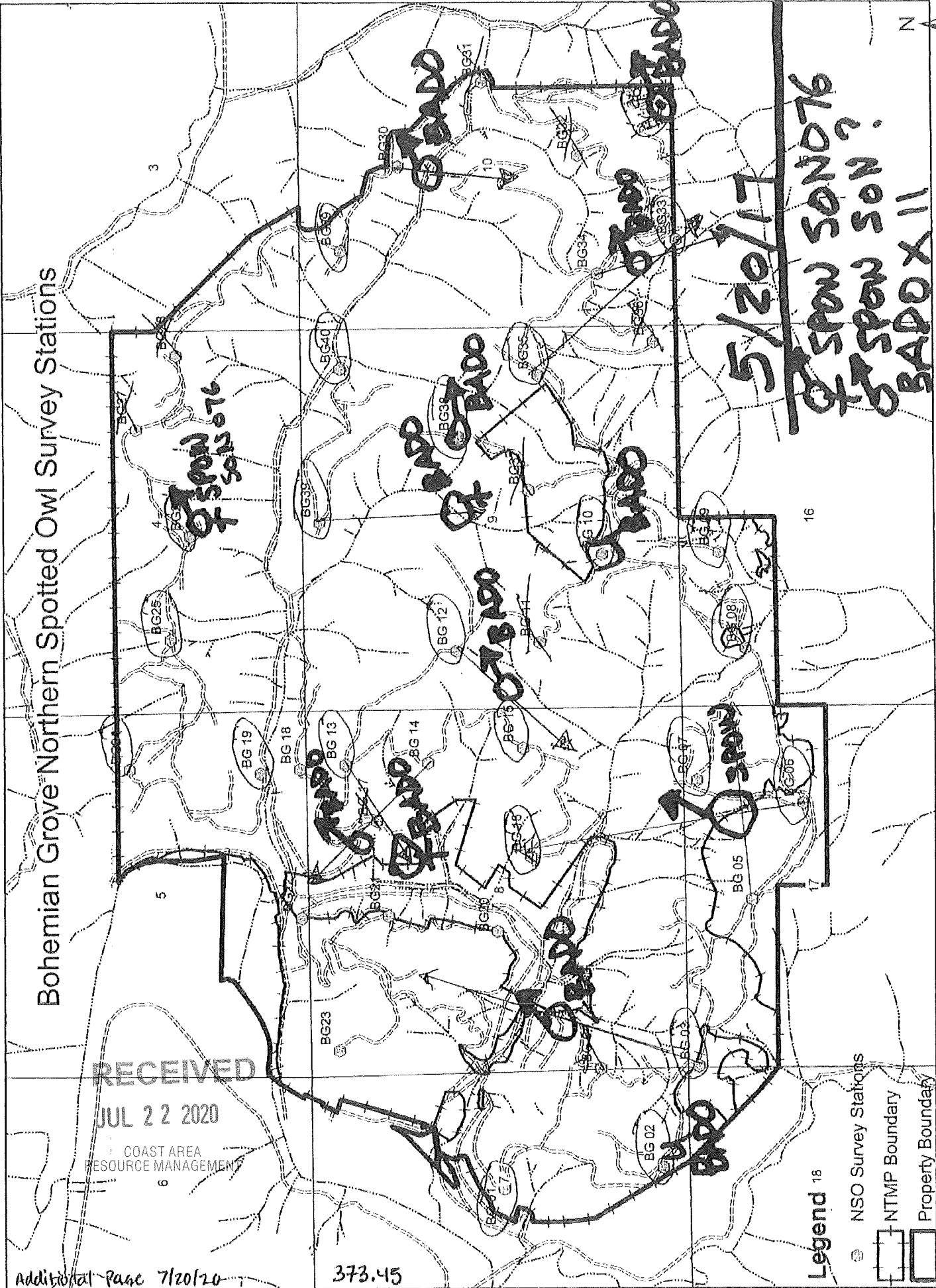
Bohemian Grove NTMP NSO Survey Stations

1:20,000

1,000 500

1,000 Meters

Page 3 of 3



Northern Spotted Owl Survey Form

Surveyor Mike Stephens Date 05/21/17 (mm/dd/yy) Landowner Bohemian Grove

Calling Area - Township 7N Range 10W Section(s) 3,4,5,6,7,8,9,10,16,17,18

THP/Plan Area Being Surveyed Bohemian Grove THP (1-00 NTMP - OLLSON) Limits All Watershed Smith Cr / Russian River

Weather

Wind Calm Breeze, Moderate, Windy, Gust

Clouds Clear Scattered, Overcast, Fog

Precipitation Dry Fog, Misty, Drizzle, Light Rain, Rain, Heavy Rain, Intermittent, Hail

Significant Weather Changes During Survey _____

Complete THP Visit? (Y) N

With other visit? N Stations on 5/20

Other THP'S _____

TIME

Station	Start	Stop	Total	Response	Sex	Azimuth	Comments
Follow-up	0744	0851	67	NO			* Follow-up to SLOW pair detection @ BG 26 from last night started by following old road bed west of station. I follow downhill into some nice habitat however it transitions to foraging habitat as you go south downhill - dense mixed hardwoods small diameter. I check out habitat on north side of road and it seems better, this is towards SONO76 territory closed canopy over rd. which allows spow to cross over into Smith Creek Watershed. This is one of the few places along ridge rd. where this occurs. Most of road has been treated as a fuel break.
BG 20	2232	2242	10	No			
BG 21	2249	2259	10	No			
BG 22	2307	2317	10	No			
BG 23	2331	2341	10	Yes, 2336	♂	134°	* BADO ♂ heard distant/faint

Owl Response Location(s)

MEN # 1) Township 7N Range 10W Section 3 ¼ sec 1/16sec 1/64sec
 Sex UTM East UTM North UTM North Coordinate system UTM North
 MEN # 2) Township 7N Range 10W Section 3 ¼ sec 1/16sec 1/64sec
 Sex UTM East UTM North UTM North Coordinate system UTM North

Additional Comments

See map for follow-up Survey Route

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JUL 22 2020

COAST AREA
RESOURCE MANAGEMENT

373.46

Additional Page 7/20/20

Bohemian Grove Northern Spotted Owl Survey Stations

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COAST AREA
RESOURCE MANAGEMENT

Additional page 7/20/20

373.47

Legend

-  NSO Survey Stations
-  NTMP Boundary
-  Property Boundary

Bohemian Grove NTMP NSO Survey Stations

1:20,000

1,000

500

0

1,000 Meters

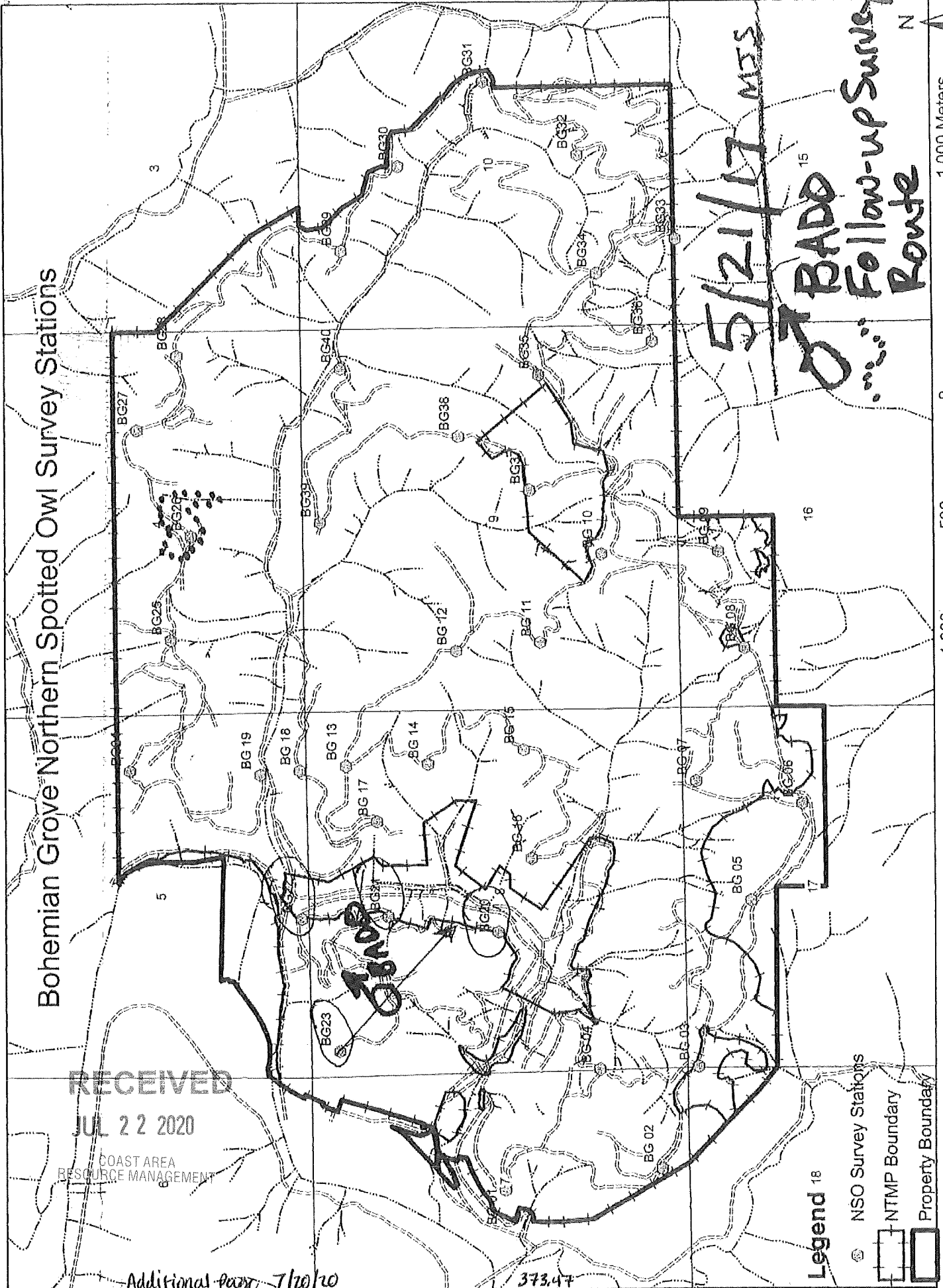
8-1-0 7 n 7

5/21/17 MJS

BADO

Follow-up Survey
Route

N



Northern Spotted Owl Survey Form

Surveyor Mike Stephens Date 06/13/17 (mm/dd/yy) Landowner Bohemian Grove

Calling Area - Township 7N Range 10W Section(s) 3,4,5,6,7,8,9,10,16,17,18

THP/Plan Area Being Surveyed Bohemian Grove NTP Units All Watershed Smith Creek/Russian River
(1-06 NTP-011SON)

Weather

Wind Calm Breeze, Moderate, Windy, Gust
Clouds: Clear Scattered, Overcast, Fog
Precipitation Dry Fog, Misty, Drizzle, Light Rain, Rain, Heavy Rain, Intermittent, Hail
Significant Weather Changes During Survey _____

Complete THP Visit? ☒ N

With other visit? _____

Other THP'S _____

		TIME		Total	Response	Sex	Azimuth	Comments
Station		Start	Stop					
BG19		2258	2308	10	No			
BG24		2314	2324	10	No			
BG25		2328	2338	10	No			
BG26		2342	2352	10	No			
BG27		2356	0006	10	Yes, 0003	♀	52°	* Faint distant Spow contact calls
BG28		0009	0019	10	No			
BG29		0025	0035	10	Yes, 0033	♂	33°	* Spow ♂ ± 150m away
BG30		0041	0051	10	Yes, 0051	♂	294°	* BADO ♂ ± 100m
BG31		0059	0109	10	No			
BG32		0113	0123	10	No			
BG36		0131	0141	10	No			
BG33		0150	0200	10	No			
BG34		0205	0215	10	No			
BG36		0220	0230	10	No			
BG35		0234	0244	10	No			
BG10		0250	0300	10	No			
BG08		0301	0317	10	No			
BG07		0322	0332	10	No			
BG06		0338	0348	10	No			
BG05		0351	0401	10	No			
BG03		0404	0414	10	No			
BG02		0432	0442	10	No			
BG01		0445	0455	10	No			

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JUL 22 2020

COAST AREA
RESOURCE MANAGEMENT

Owl Response Location(s)
SON #076 1) Township 7N Range 10W Section 4 1/4 sec NE 1/16 sec SE 1/64 sec NE
Sex ♀ UTM East 502968 UTM North 4259159 Coordinate system NAD83
SON #083 2) Township 7N Range 10W Section 3 1/4 sec SW 1/16 sec SW 1/64 sec SE
Sex ♂ UTM East 503645 UTM North 4258457 Coordinate system NAD83

Additional Comments

373.48

Additional Page 7/20/20

Page 1 of 2

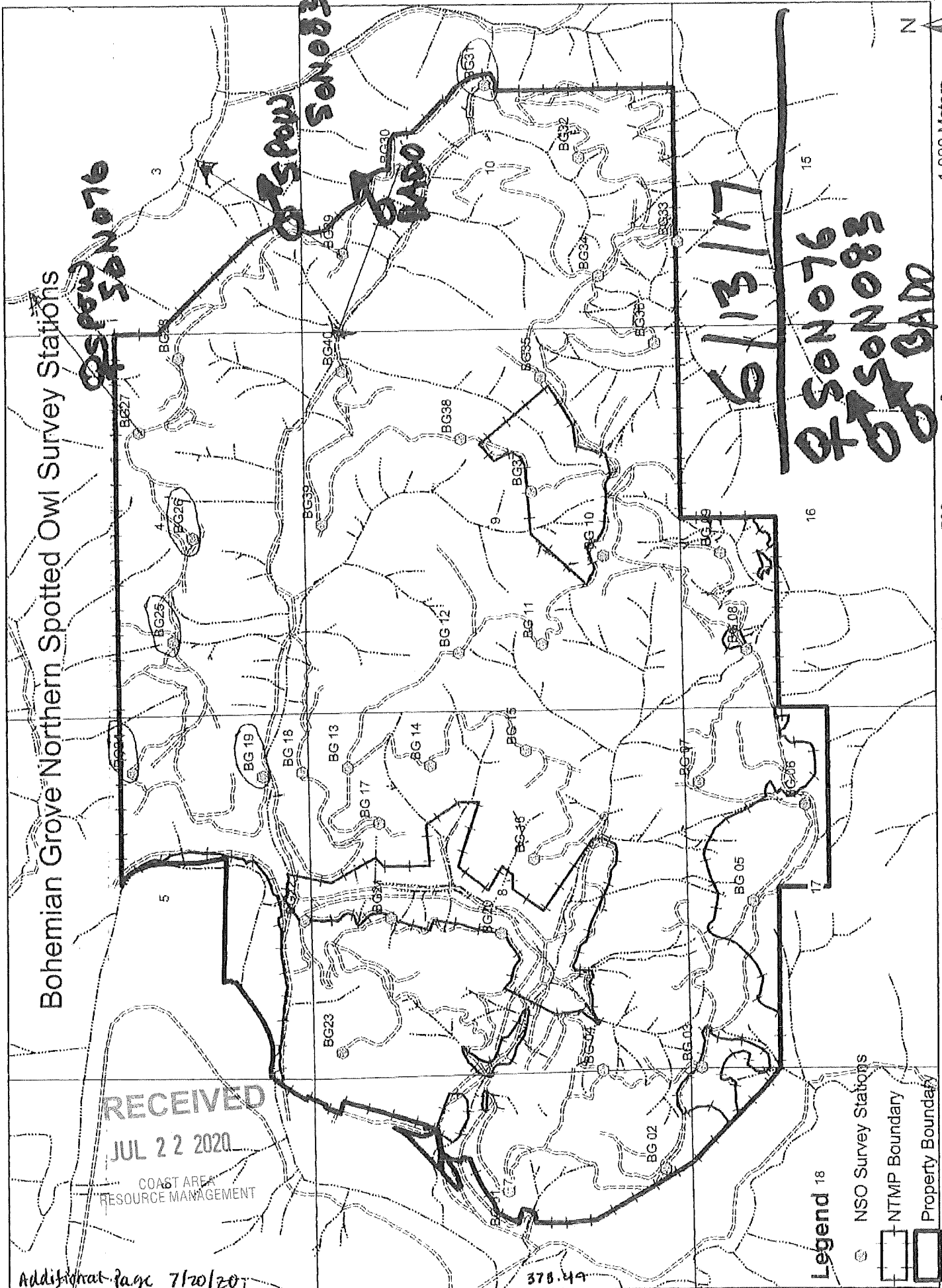
Bohemian Grove Northern Spotted Owl Survey Stations

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COAST AREA
RESOURCE MANAGEMENT

Addendum Page 7/20/20



Legend 18

NSO Survey Stations

NTMP Boundary

Property Boundary

Bohemian Grove NTMP NSO Survey Stations

1:20,000

1,000

500

0

1,000 Meters

0.00 7.12

Northern Spotted Owl Survey Form

Surveyor Mike Stephens Date 06/14/17 (mm/dd/yy) Landowner Bohemian Grove

Calling Area - Township 7N Range 10W Section(s) 3,4,5,6,7,8,9,10,16,17,18

THP/Plan Area Being Surveyed Behemian Grove NTP Units All Watershed Smith Cr/Russian River
(1-06 NTP-01150N)

Weather

Wind: Calm, Breeze, Moderate, Windy, Gust

Clouds Clear Scattered, Overcast, Fog

Precipitation (Dry) Fog, Misty, Drizzle, Light Rain, Rain, Heavy Rain, Intermittent, Hail

Significant Weather Changes During Survey

Complete THP Visit? ☒ Y ☐ N

With other visit? on 6/13

Other THP²S

TIME

[illegible]

Owl Response Location(s)

MEN #	1) Township	Range	Section	$\frac{1}{4}$ sec	$\frac{1}{16}$ sec	$\frac{1}{64}$ sec
-------	-------------	-------	---------	-------------------	--------------------	--------------------

Sex _____ UTM East _____ UTM North _____ Coordinate system _____

MEN # 2) Township Range Section ¼ sec 1/16 sec 1/64sec

Sex	UTM East	UTM North	Coordinate system
-----	----------	-----------	-------------------

Additional Comments

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COAST AREA
RESOURCE MANAGEMENT

373.50

Additional Page 7/20/20

Page 1 of 2

Bohemian Grove Northern Spotted Owl Survey Stations

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COAST AREA
RESOURCE MANAGEMENT

Additional Page 7/20/20

373.51

Legend 18

NSO Survey Stations

NTMP Boundary

Property Boundary

Bohemian Grove NTMP NSO Survey Stations

1:20,000

1,000

500

0

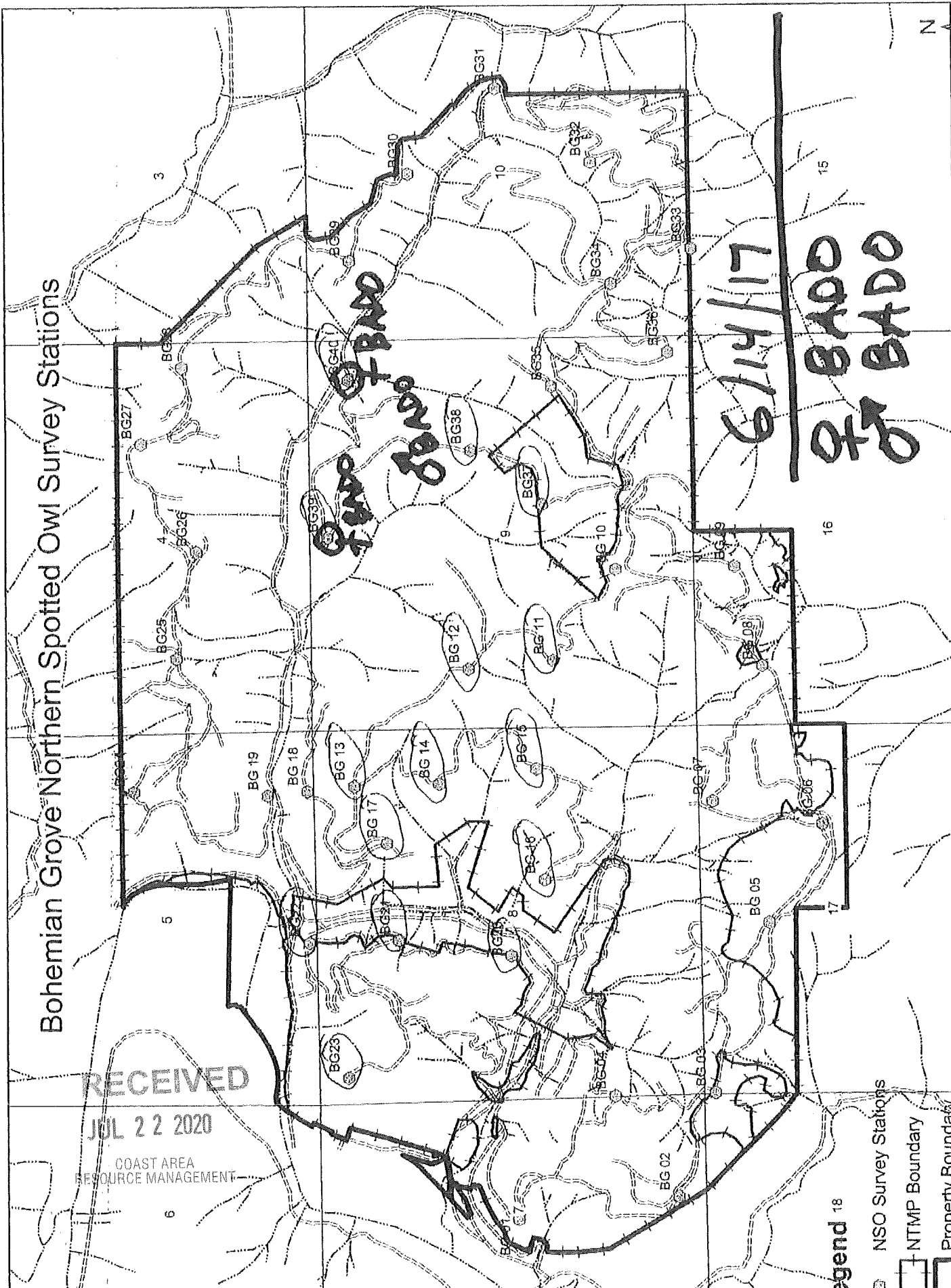
1,000 Meters

N

6/14/17

BADO
♀
♂

Page 2 of 2



Northern Spotted Owl Survey Form

Surveyor Mike Stephens Date 05/05/18 (mm/dd/yy) Landowner Bohemian Grove

Calling Area - Township 7N Range 10W Section(s) 3, 4, 5, 8, 9, 10, 16, 17

THP/Plan Area Being Surveyed Bohemian Grove THP Units N70#7 Watershed Smith Cr/Russian

Weather

Wind: Calm Breeze Moderate, Windy, Gust

Clouds: Clear, Scattered Overcast, Fog

Precipitation: 0.00 Fog, Misty, Drizzle, Light Rain, Rain, Heavy Rain, Intermittent, Hail

Significant Weather Changes During Survey

Complete THP Visit? ☒ Y ☐ N

With other visit? follow up on 5/6

Other THP'S

TIME

Station	Start	Stop	Total	Response	Sex	Azimuth	Comments
BG 19	2108	2118	10	No			
BG 24	2123	2133	10	No			
BG 25	2138	2148	10	No			
BG 26	2153	2203	10	No			
BG 27							} could not access these stations as fuel-break work has equipment in road
BG 28							
BG 31	2225	2235	10	No			
BG 30	2240	2250	10	No			
BG 29	2257	2307	10	No			
BG 32	2323	2333	10	No			
BG 33	2340	2350	10	No			
BG 34	2353	0003	10	No			
BG 36	0007	0017	10	No			
BG 35	0021	0031	10	No			
BG 37	0042	0052	10	No			
BG 38	0055	0105	10	No			
BG 39	0109	0119	10	No			
BG 40	0125	0135	10	No			
BG 17	0145	0155	10	Yes, 0150	♀	estation	* BADO ♀ Attacks speaker then starts agitation calls. Silent fly-in. BANO 0314:30
BG 13							} Stations Dropped due to aggressive BADO & BG 17
BG 14							
BG 16	0210	0220	10	Yes, 0219	♂	228°	* BADO ♂ faint
BG 15	0229	0239	10	Yes, 0234	♂	257°	* BADO ♂ faint. possibly same as detected ab
BG 12	0249	0259	10	No			

Owl Response Location(s)

1) Township _____ Range _____ Section _____ ¼ sec _____ 1/16 sec _____ 1/64 sec _____

UTM East _____ UTM North _____ Coordinate system _____

2) Township _____ Range _____ Section _____ ¼ sec _____ 1/16 sec _____ 1/64 sec _____

UTM East _____ UTM North _____ Coordinate system _____

Additional Comments

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JUL 22 2020

COAST AREA
RESOURCE MANAGEMENT

373-62

Additional Page 7/20/20

Page / of 3

Northern Spotted Owl Survey Form

Surveyor Mike Stephens Date 05/06/18 (mm/dd/yy) Landowner Bohemian Grove

Calling Area - Township 7N Range 10W Section(s) 3,4,5,8,9,10,16,17

THP/Plan Area Being Surveyed Bahenian Grove NTP Units NTO #7 Watershed Smith Cr/Russian river

Weather

Wind: Calm, Breeze, Moderate, Windy, Gust

Clouds: Clear, Scattered Overcast, Fog

Precipitation: Dry, Fog, Misty, Drizzle, Light Rain, Rain, Heavy Rain, Intermittent, Hail

Significant Weather Changes During Survey

Complete THP Visit? ☒ Y ☐ N

With other visit? Follow up in afternoon

Other 'TIP'S

TIME

[illegible]

Owl Response Location(s)

1) Township 7N Range 10W Section 16 $\frac{1}{4}$ sec NW $\frac{1}{16}$ sec NW $\frac{1}{64}$ sec SE

UTM East 502037 UTM North 4256304 Coordinate system NAD 83

2) Township _____ Range _____ Section _____ 1/4 sec _____ 1/16 sec _____ 1/64sec _____

UTM East UTM North Coordinate system

Additional Comments

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COAST AREA
RESOURCE MANAGEMENT

373.53

Additional Page 7/20/20

Page 2 of 3

Paw ♀ BG 9
50N?

Northern Spotted Owl Visit Form

Surveyor Mike Stephens Date 05/06/18 (MM/DD/YY) Landowner Bohemian Grove

Visit Area - Township 7N Range 10W Section(s) 16

MD _____ Territory Name _____ THP Bohemian Grove Watershed Dutch B. // Cr/Russian
NTMP

Survey Start 1737 Survey End 1859 Total Survey Minutes 82

Weather

Wind: Calm, Breeze, Moderate, Windy, Gusty

Clouds: Clear, Scattered, Overcast, Fog

Precipitation: Dry, Fog, Misty, Drizzle, Light Rain, Rain, Heavy Rain, Intermittent, Hail

Owl Status

Non-Nesting

Nesting

Unknown/Inconclusive

No response or detection

Auditory detection only (AN)

Visual detection (VN, VI, VB, UB)

Captured and fitted with bands

Captured and cohort band replaced

* M=Male

* F=Female

* E=Eats

* C=Caches

* T=Takes to

* N=Nest

* J=Juvenile

* U=Unknown

* X= Cached or Eaten
(not unknown)

* R=Refused (Prey in view <30 min and not taken)

Mouse 1	
Mouse 2	
Mouse 3	
Mouse 4	
Mouse 5	
Mouse 6	
Mouse 7	
Mouse 8	
Mouse 9	

Owl sex	Detection type	Age	Detection time	Band Info	Legal Location	UTM Location
Male	Visual, VN	SA	1739	Unknown	7N, 10W, 16, NW, NW, SE	502040E, 4256275N
Female	Auditory	unk	1748	Unknown	7N, 10W, 16, NW, NW, SE	502167E, 4256299N

Capture Information

Owl sex	Age	USFWS Band #	Color Band	Weight	Hippoboscids	Samples Collected?

Comments Started @ BG8 @ 1737 ♂ replies right away @ 112° downslope go down towards ♂ @ 1748 hear ♀ contact calling while hiking down, very soft culls. See ♂ @ 1756 being mobbed by Robins then stellar jays. ♂ looks like he may be a sub-adult - retrices have white pointy tips. ♂ being aggressively mobbed - being hit by jays. Hear ♀ getting mobbed @ her location. ♂ not interested in mice @ this point as mobbing is incredibly aggressive. decide to leave pair alone and retreat.

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373.54

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COAST AREA
RESOURCE MANAGEMENT

Northern Spotted Owl Survey Form

Surveyor Mike Stephens Date 06/08/18 (mm/dd/yy) Landowner Bohemian Grove

Calling Area - Township 7N Range 10W Section(s) 3,4,5,8,9,10,16,17

THP/Plan Area Being Surveyed Bohemian Grove NTP Units Nto#7 Watershed Smith Cr/Russian r. w

Weather

Wind: Calm Breeze, Moderate, Windy, Gust

Clouds: Clear Scattered, Overcast, Fog

Precipitation: 0 Fog, Misty, Drizzle, Light Rain, Rain, Heavy Rain, Intermittent, Hail

Significant Weather Changes During Survey

Complete THP Visit? ☒ N

With other visit? _____

Other THP'S _____

TIME

Station	Start	Stop	Total	Response	Sex	Azimuth	Comments
BG 4	2235	2245	10	No			
BG 3	2250	2300	10	No			
BG 5	2306	2316	10	No			
BG 6	2320	2330	10	No			
BG 7	2336	2346	10	No			
BG 8	2352	0002	10	No			
BG 9	0006	0016	10	No			
BG 10	0025	0035	10	No			
BG 35	0041	0051	10	No			
BG 36	0058	0108	10	Yes, 0105	♀	@ station	* BADO ♀ starts calling @ station, agitated
BG 34							} stations Dropped due to BADO @ BG 36
BG 33							
BG 32	0117	0127	10	Yes, 0120	♀	@ station	* BADO ♀ calls @ station
BG 31							} stations Dropped due to BADO @ BG 32
BG 30							
BG 29	0136	0146	10	No			
BG 28	0153	0203	10	No			
BG 27	0208	0218	10	Yes, 0213	♂+♀	@ station	* SP owl ♂ replies @ station on north side of road, ♀ replies w/ contact calls @ 0215 further north + downslope off-property. * station Dropped due to detection @ BG 27
BG 26							
BG 25	0228	0238	10	No			
BG 24	0244	0254	10	No			
BG 19	0259	0309	10	No			
BG 17	0317	0327	10	No			
BG 13	0330	0340	10	Yes, 0338	♂	258°	* BADO ♂ responding from last station - BG 17

Owl Response Location(s)

1) Township _____ Range _____ Section _____ ¼ sec _____ 1/16 sec _____ 1/64 sec _____

UTM East _____ UTM North _____ Coordinate system _____

2) Township _____ Range _____ Section _____ ¼ sec _____ 1/16 sec _____ 1/64 sec _____

UTM East _____ UTM North _____ Coordinate system _____

Additional Comments

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COAST AREA
RESOURCE MANAGEMENT

373-56

Additional Page 7/20/20

Page 1 of 3

Northern Spotted Owl Survey Form

Surveyor Mike Stephens Date 06/04/18 (mm/dd/yy) Landowner Bohemian Grove

Calling Area - Township 7N Range 10W Section(s) 3, 4, 5, 8, 9, 10, 16, 17

THP/Plan Area Being Surveyed Bohemian Grove NTP Units NTO#1 Watershed Smith Cr / Russian river

Weather

Wind: ~~Calm~~ Breeze, Moderate, Windy, Gust

Clouds: ~~Clear~~ Scattered, Overcast, Fog

Precipitation: Dry, Fog, Misty, Drizzle, Light Rain, Rain, Heavy Rain, Intermittent, Hail

Significant Weather Changes During Survey

Complete THP Visit? (Y) N

With other visit ?

Other THP's

TIME

[illegible]

Owl Response Location(s)

1) Township _____ Range _____ Section _____ $\frac{1}{4}$ sec _____ $\frac{1}{16}$ sec _____ $\frac{1}{64}$ sec _____

UTM East	UTM North	Coordinate system
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2) Township _____ Range _____ Section _____ ¼ sec _____ 1/16 sec _____ 1/64 sec _____

UTM East UTM North Coordinate system

Additional Comments

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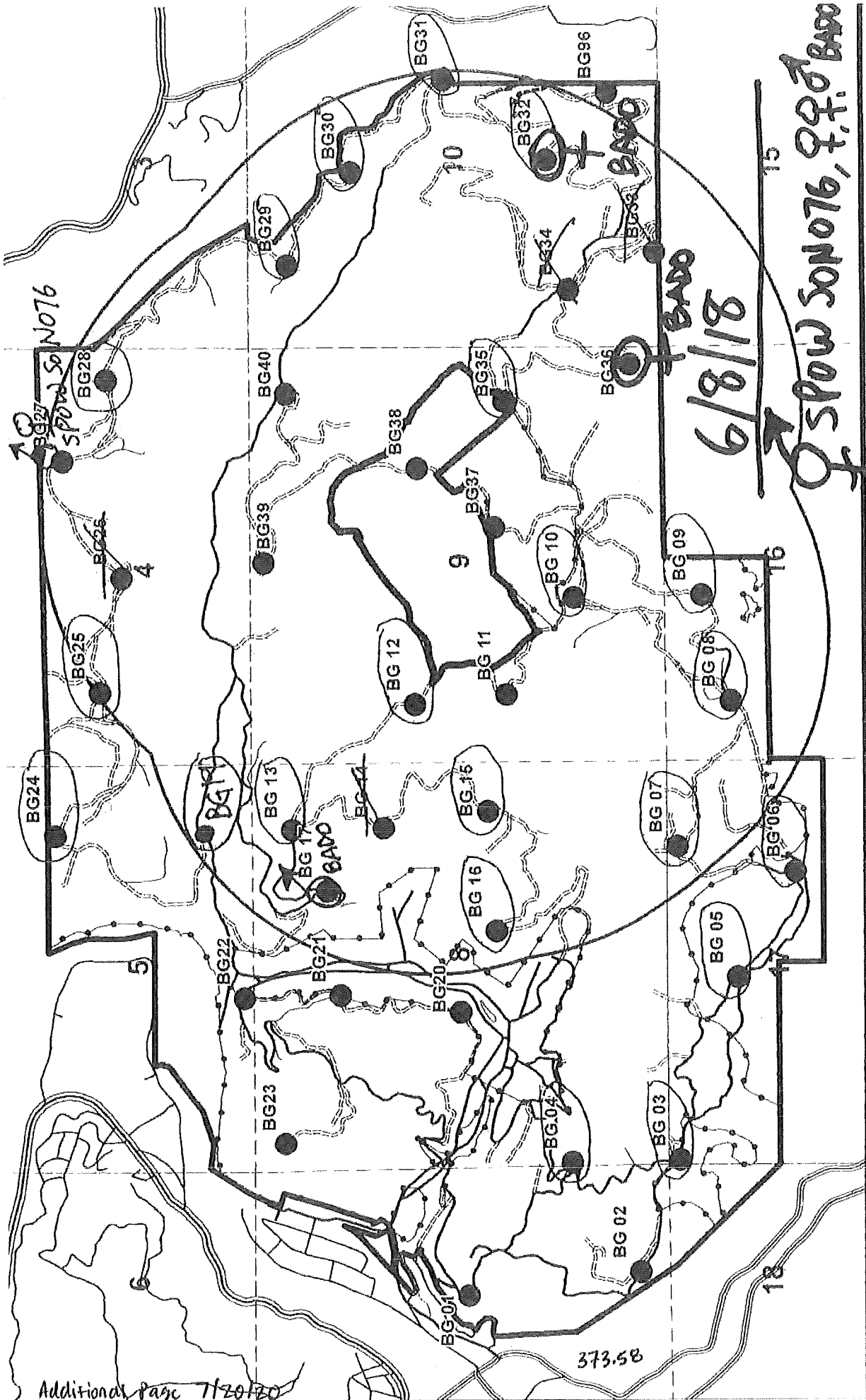
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COAST AREA
RESOURCE MANAGEMENT

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2018 NTO #7 NSO Call Stations
 Bohemian Grove NTMP
 T7N, R10W, MDBM
 Camp Meeker USGS 7.5 min Quadrangle
 Environmental Resource Solutions, Inc.

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 COAST AREA
 RESOURCE MANAGEMENT

Scale = 1:20,000
 1 inch = 1,667 Feet

0 1,650 Feet

Legend

- Unimproved Watercourse
- Class 1 Contour
- Class 2 Large Watercourse
- Class 3 Standard Watercourse
- Class 4 Watercourse
- Class 5 Watercourse
- Class 6 Watercourse
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- Class 100 Watercourse

Northern Spotted Owl Survey Form

Surveyor Mike Stephens Date 06/24/18 (mm/dd/yy) Landowner Bohemian Grove

Calling Area - Township 7N Range 10W Section(s) 3,4,5,8,9,10,16,17

THP/Plan Area Being Surveyed Belknap Grove NTP Units N to #7 Watershed Smith Cr/Russian river

Weather

Wind: Calm, Breeze, Moderate, Windy, Gust

Clouds: Clear Scattered, Overcast, Fog

Precipitation (Dry) Fog, Misty, Drizzle, Light Rain, Rain, Heavy Rain, Intermittent, Hail

Significant Weather Changes During Survey

Complete THP Visit? ☒ Y ☐ N

With other visit ?

Other 'TIP'S

TIME

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COAST AREA
RESOURCE MANAGEMENT

Owl Response Location(s)

1) Township _____ Range _____ Section _____ $\frac{1}{4}$ sec _____ $\frac{1}{16}$ sec _____ $\frac{1}{64}$ sec _____

UTM East	UTM North	Coordinate system
----------	-----------	-------------------

2) Township	Range	Section	¼ sec	1/16 sec	1/64sec
-------------	-------	---------	-------	----------	---------

UTM East UTM North Coordinate system

Additional Comments

373.59

Additional Page 7/20/20

Page 1 of 2

Northern Spotted Owl Survey Form

Surveyor Mike Stephens Date 07/07/18 (mm/dd/yy) Landowner Bohemian Grove

Calling Area - Township 7N Range 10W Section(s) 3,4,5,8,9,10,16,17

THP/Plan Area Being Surveyed Bohemian Grove NMP Units NTO#7 Watershed Smith Cr/Russian River

Weather

Wind: Calm Breeze, Moderate, Windy, Gust

Clouds: Clear Scattered, Overcast, Fog

Precipitation: 0 Fog, Misty, Drizzle, Light Rain, Rain, Heavy Rain, Intermittent, Hail

Significant Weather Changes During Survey

Complete THP Visit? ☒ N

With other visit? follow-ups on 7/8

Other THP'S

TIME

Station	Start	Stop	Total	Response	Sex	Azimuth	Comments
BG19	2145	2155	10	No			
BG24	2202	2212	10	No			
BG25	2218	2228	10	No			
BG26	2232	2239	7	Yes, 2235	♀	82°	* SPow ♂ replies first then ♀ stop early to try and triangulate @ next station.
BG27	2244	2254	10	Yes, 2244	♀	2 station	* SPow ♀ replies right away @ 310° nearby SPow ♂ then replies then pair get together and then head north off-property SO N076
BG28							* Station Dropped due to SPow ♀ @ BG27
BG29	2306	2313	7	Yes, 2309	♂	North	* SPow ♂ nearby in north SO N036
BG30	2317	2327	10	Yes, 2319	♂	@ station	* SPow ♂ @ station following me?
BG31							2 stations Dropped due to SPow ♂
BG32							5 @ BG29 + BG30
BG33	2342	2352	10	No			
BG34	2356	0006	10	Yes, 0000	♂	174°	* BADO ♂ @ 174° ≈ 100m
BG36							* Station Dropped due to BADO @ BG34
BG35	0011	0021	10	No			
BG37	0032	0042	10	Yes, 0039	♀	@ station	* SPow ♀ responds @ station
BG38							* Station Dropped due to SPow @ BG37
BG39	0048	0054	6	Yes, 0051	♂	2176°	* SPow ♂ near ♀ location @ BG37
BG40	0059	0109	10	Yes, 0105	♀	89°	* BADO ♀ ≈ 100m
BG17	0125	0135	10	No			
BG16	0149	0205	16	Yes, 0158	♂	81° + 260°	* SPow ♂ heard 1st @ 81° coming to my location likely same SPow ♂ detected from BG39 BADO ♂ heard faintly @ 260°

ON076 ♀
2 BG27
ON036 ♂
1 BG29
SON036 ♂
@ BG30

Owl Response Location(s)

1) Township 7N Range 10W Section 4 1/4 sec SE 1/16 sec NW 1/64 sec SE

UTM East 502734 UTM North 4259036 Coordinate system NAD83

2) Township 7N Range 10W Section 10 1/4 sec NW 1/16 sec NW 1/64 sec SE

UTM East 503489 UTM North 4258215 Coordinate system NAD83

503838

4257909

Additional Comments

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COAST AREA
RESOURCE MANAGEMENT

373.61

Additional Page 7/20/20

Page 1 of 3

Northern Spotted Owl Survey Form

Surveyor Mike Stephens Date 07/08/18 (mm/dd/yy) Landowner Bohemian Grove

Calling Area - Township 7N Range 10W Section(s) 3,4,5,8,9,10,16,17

THP/Plan Area Being Surveyed Bohemian Grove NTP Units N To #7 Watershed Smith G/Russian River

Weather

Wind ~~Calm~~ Breeze, Moderate, Windy, Gust

Clouds: Clear ~~Scattered~~ Overcast, Fog

Precipitation: Dry, Fog, Misty, Drizzle, Light Rain, Rain, Heavy Rain, Intermittent, Hail

Significant Weather Changes During Survey

Complete THP Visit? ☒ Y ☐ N

With other visit ? follow-ups on 7/8

Other TLP'S

TIME

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COAST AREA
RESOURCE MANAGEMENT

Owl Response Location(s)

Owl Response Location(s)

POW & SON? 1) Township 7N Range 10W Section 9 ¼ sec SE 1/16 sec NW 1/64 sec NW
ear BG 37 UTM East 502496 UTM North 4257362 Coordinate system NAD 83

POW & SON? 2) Township 7N Range 10W Section 8 ¼ sec SE 1/16 sec NE 1/64 sec NE
ear BG 15 UTM East 501383 UTM North 4257354 Coordinate system NAD 83

Additional Comments

373.62

Additional Page 7/20/20

Page 2 of 3

Northern Spotted Owl Survey Form

Surveyor Mike Stephens Date 07/28/18 (mm/dd/yy) Landowner Bohemian Grove

Calling Area - Township 7N Range 10W Section(s) 9, 16

THP/Plan Area Being Surveyed Bohemian Grove NTHP Units NTHP#7 Watershed Smith Cr/Russian river

Weather

Wind: Calm, Breeze, Moderate, Windy. Gust

Clouds: Clear Scattered Overcast, Fog

Precipitation: ~~Dry~~ Fog, Misty, Drizzle, Light Rain, Rain, Heavy Rain, Intermittent, Hail

Significant Weather Changes During Survey

Complete THP Visit? ☒ Y ☐ N

With other visit? Station previous night

Other THP²²S

TIME

Station	Start	Stop	Total	Response	Sex	Azimuth	Comments
	0728	0824	56	NO			* Start @ BG 37 where SPow pair was detected last night go east along trail through old-Grow Patch in Bull Barn. This area has had BAO nest in past years. Follow trail across road to west then climb uphill to BG 37. Good habitat in Bull-Barn area, other areas outside of MAMU habitat is OK NSO habitat - mostly more open small trees greater hard wood component
Cruise	0833	0931	58	No			* Follow-up to previous night's detections by re-visiting the 2 areas where these SPow's have been found in the daytime. Started @ BG 8 and hiked downhill to area where I found pair on 5/6/18 in daytime. No sign of SPow still marginal habitat. Back @ BG 8 I then go along trail to NW to area I found ♀ roosting last year on 4/23/17 - No owl sign along cruise - no pellets, feathers, or Whitewash.

Owl Response Location(s)

1) Township _____ Range _____ Section _____ ¼ sec _____ 1/16 sec _____ 1/64sec _____

UTM East	UTM North	Coordinate system
----------	-----------	-------------------

2) Township Range Section ¼ sec 1/16 sec 1/64sec RE

UTM East UTM North Coordinate system

Additional Comments

Additional Comments
Follow-up's to SPow pair detected in this part of property

373.64

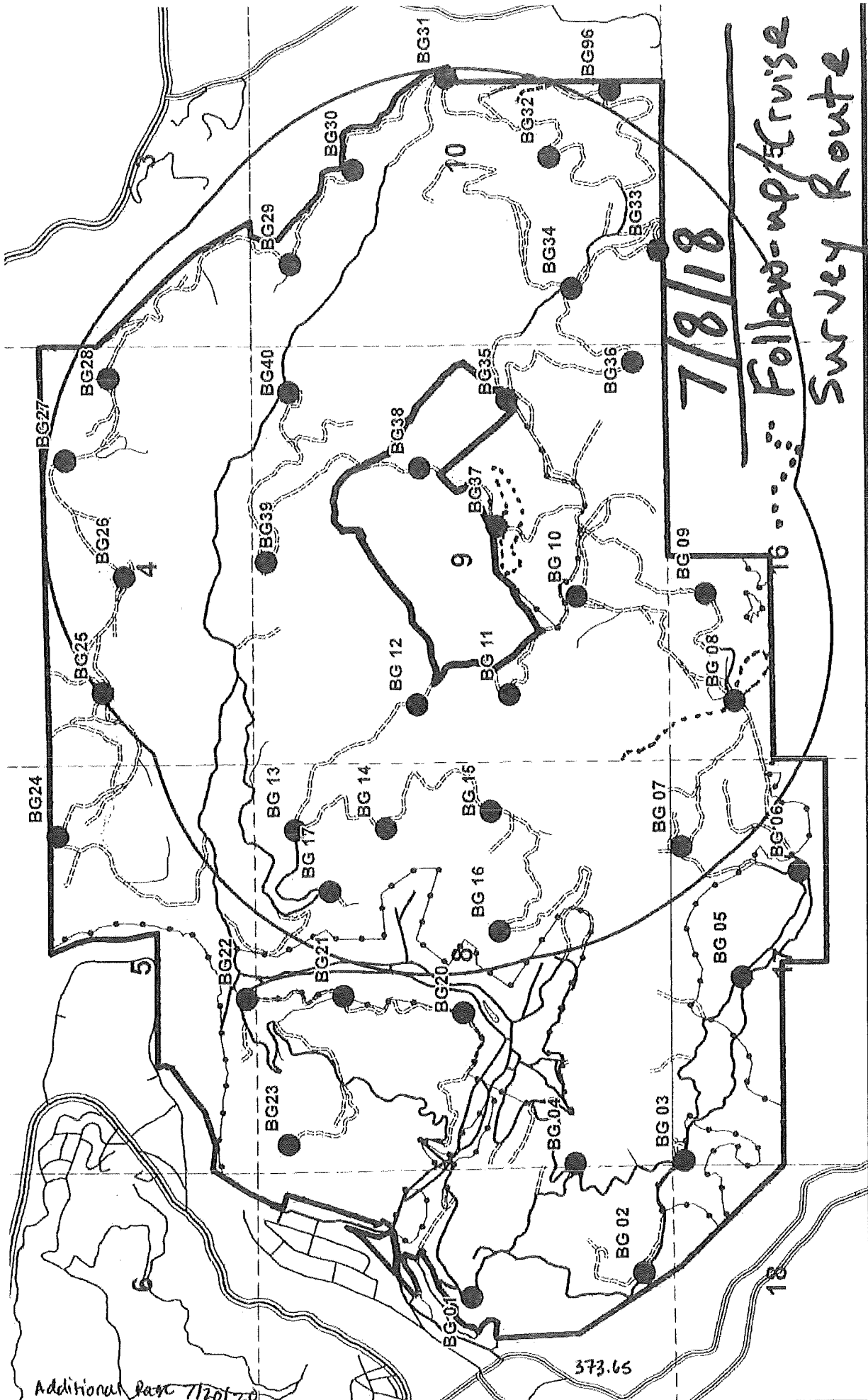
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COAST AREA
RESOURCE MANAGEMENT



7/8/18
Follow-up/Cruise
Survey Route

- Legend**
- Bohemian Grove NSO Survey Station
 - Call 1: Unimproved Vegetation
 - Call 2: Call 1 Vegetation
 - Call 3: Call 2 Vegetation
 - Call 4: Call 3 Vegetation
 - Call 5: Call 4 Vegetation
 - Call 6: Call 5 Vegetation
 - Call 7: Call 6 Vegetation
 - Call 8: Call 7 Vegetation
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COAST AREA
RESOURCE MANAGEMENT

2018 NTO #7 NSO Call Stations
 Bohemian Grove NTMP
 T7N, R10W, MDBM
 Camp Meeker USGS 7.5 min Quadrangle
 Environmental Resource Solutions, Inc.

Scale = 1:20,000
 1 inch = 1,667 Feet
 0 1,650 Feet

Additional Page 7/20/20

Northern Spotted Owl Survey Form

Surveyor Mike Stephens Date 07/25/18 (mm/dd/yy) Landowner Bohemian Grove

Calling Area - Township 7N Range 10W Section(s) 3,4,5,8,9,10,16,17

THP/Plan Area Being Surveyed Bohemian Grove NTP Units NTO#7 Watershed Smith Cr/Russian Riv

Weather

Wind: Calm Breeze, Moderate, Windy, Gust

Clouds: Clear Scattered, Overcast, Fog

Precipitation: Dry Fog, Misty, Drizzle, Light Rain, Rain, Heavy Rain, Intermittent, Hail

Significant Weather Changes During Survey _____

Complete THP Visit? (Y) N

With other visit? _____

Other THP's _____

TIME

Station	Start	Stop	Total	Response	Sex	Azimuth	Comments
BG2	2319	2329	10	No			
BG4	2335	2345	10	No			
BG3	2349	2359	10	No			
BG5	0006	0016	10	No			* BANO screeching South to West
BG6	0020	0030	10	No			
BG7	0039	0049	10	No			
BG8	0055	0105	10	No			
BG35	0116	0126	10	No			* WESO in South ~ 50 m
BG36	0133	0143	10	Yes, 0140	♂+J	@ station	* BADO ♂+J @ station
BG34							2 stations Dropped due to BADO's @
BG33							3 BG36
BG32	0157	0207	10	Yes, 0202	♂	11°	* SPOW ♂ ~ 200-300 m
BG31	0211	0221	10	No			
BG30	0226	0236	10	Yes, 0230	♂	@ station	* SPOW ♂ @ station - area recently cleared in fuel break project ♂ is foraging here
BG29							* Station Dropped due to SPOW @ BG30
BG28	0246	0256	10	No			
BG27	0306	0316	10	No			
BG26	0322	0332	10	No			
BG25	0338	0348	10	No			
BG24	0355	0405	10	No			
BG19	0412	0422	10	No			
BG40	0430	0440	10	No			

Owl Response Location(s)

1) Township _____ Range _____ Section _____ ¼ sec _____ 1/16 sec _____ 1/64 sec _____

UTM East _____ UTM North _____ Coordinate system _____

2) Township _____ Range _____ Section _____ ¼ sec _____ 1/16 sec _____ 1/64 sec _____

UTM East _____ UTM North _____ Coordinate system _____

Additional Comments _____

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COAST AREA
RESOURCE MANAGEMENT

373.66

Additional Page 7/20/20 Page 1 of 2

Northern Spotted Owl Survey Form

Surveyor Mike Stephens Date 04/13/19 (mm/dd/yy) Landowner Bohemian Grove

Calling Area - Township 7N Range 10W Section(s) 3,4,5,6,7,8,9,10,16,17,18

THP/Plan Area Being Surveyed Bohemian Grove NTMP Units All Watershed Smith Cr/Russian river
(1-06 NTMP - 011 SON)

Weather

Wind Calm Breeze, Moderate, Windy, Gust

Clouds Clear Scattered, Overcast, Fog

Precipitation Dry Fog, Misty, Drizzle, Light Rain, Rain, Heavy Rain, Intermittent, Hail

Significant Weather Changes During Survey

Complete THP Visit? (Y) N

With other visit?

Other THP'S

TIME

Station	Start	Stop	Total	Response	Sex	Azimuth	Comments
BG20	2122	2132	10	No			
BG21	2147	2157	10	No			
BG22	2201	2211	10	No			
BG23	2217	2227	10	No			
BG19	2238	2248	10	No			
BG24	2253	2303	10	No			
BG25	2307	2317	10	No			
BG26	2321	2331	10	Yes, 2329	♂	238°	* BADO ♂ faint ≈ 1,000 m
BG27	2335	2345	10	Yes, 2342	♀	71°	* SPOW ♀ ≈ 150m - off property (SON) BADO ♂ ♀ 235° ≈ 500m R 2344
BG28							* Station Dropped due to SPOW + BADO detections @ previous station
BG29	2352	0002	10	Yes, 2355	♂	285°	* BADO ♂ ≈ 500m very agitated, likely same as detected @ BG26- BG27 - listen for duration of survey
BG30	0006	0016	10	Yes, 0010	♂	53°	* SPOW ♂ very faint ≈ 200+m NSWO ♀ 226° ≈ 200m (SON 083)
BG31							* Station dropped due to nearby SPOW detection
BG40	0026	0036	10	Yes, 0031	♂	@ station	* BADO ♂ above station, I listen for duration of survey
BG39	0040	0050	10	No			
BG38	0056	0106	10	No			* NSWO @ 106° ≈ 200m
BG37	0109	0119	10	No			
BG10	0124	0134	10	Yes, 0127	♂	51°	* SPOW ♂ very faint on ridge near Q SPOW detected @ BG27 (SON 076) + SPOW ♂ @ 267° very faint (SON?)

Owl Response Location(s)

SON # 076 1) Township 7N Range 10W Section 10 1/4 sec 1/16 sec 1/64 sec
Sex ♀ UTM East 503108 UTM North 4259021 Coordinate system NAD83
SON # 083 2) Township 7N Range 10W Section 10 1/4 sec 1/16 sec 1/64 sec
Sex ♂ UTM East 504469 UTM North 4258235 Coordinate system NAD83

Additional Comments

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COAST AREA
RESOURCE MANAGEMENT

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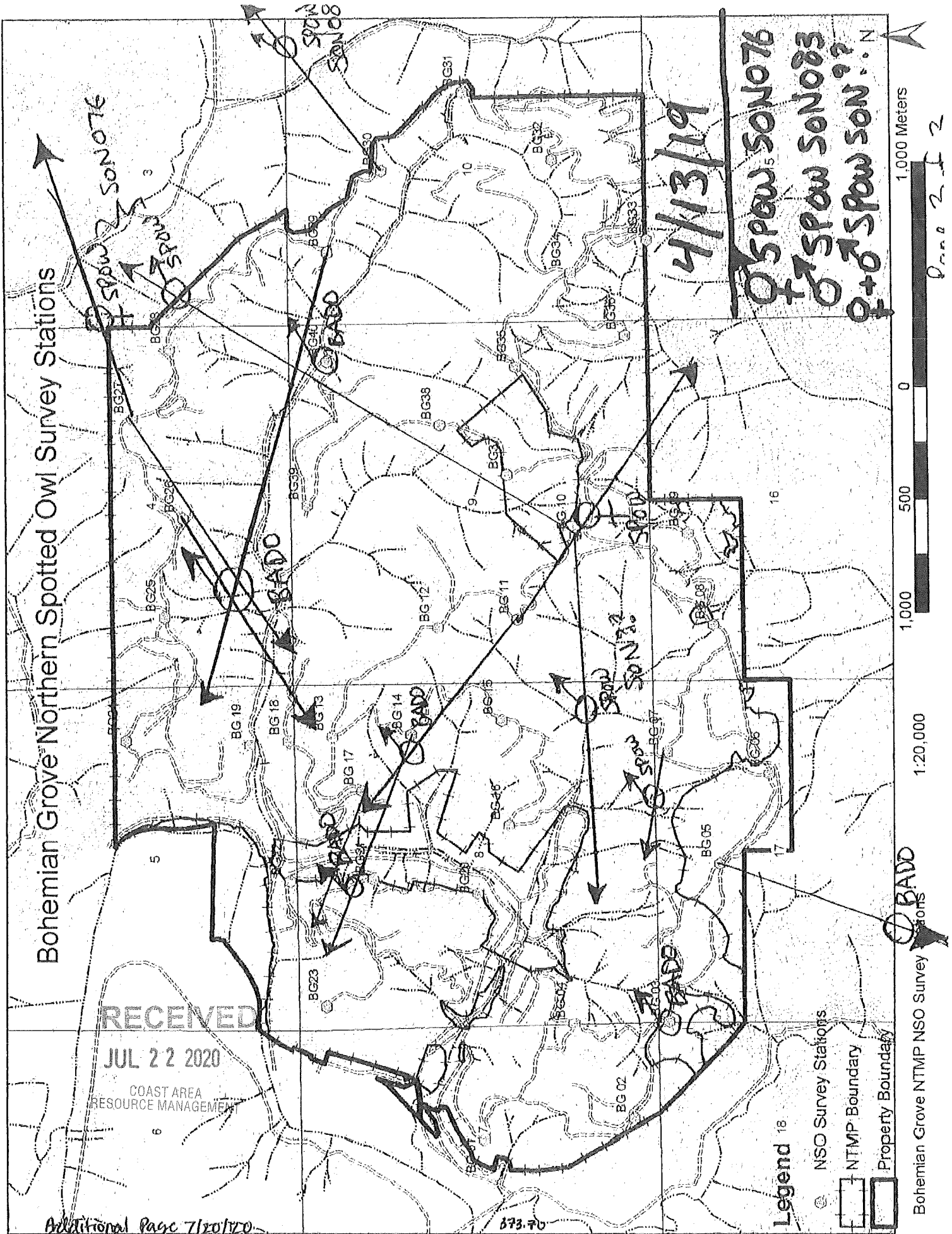
Bohemian Grove Northern Spotted Owl Survey Stations

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COAST AREA
RESOURCE MANAGEMENT

Additional Page 7/20/20



Bohemian Grove NTMP NSO Survey Stations

BADD

SON076
SON08
SON09
SON10
SON11
SON12
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Northern Spotted Owl Survey Form

Surveyor Mike Stephens Date 05/14/19 (mm/dd/yy) Landowner Bohemian Grove

Calling Area Township 7N Range 10W Section(s) 3-10, 16-18

THP/Plan Area Being Surveyed Bohemian Grove N/TMP Units All Watershed Smither/Russian Riv
(1-06N/TMP-01150N)

Weather

Wind: Calm Breeze Moderate Windy Gust

Clouds: Clear Scattered Overcast Fog

Precipitation: Dry Fog Misty Drizzle Light Rain Rain Heavy Rain Intermittent Hail

Significant Weather Changes During Survey _____

Complete THP Visit? ☒ N

With other visit? _____

Other THP's _____

TIME

Station	Start	Stop	Total	Response	Sex	Azimuth	Comments
BG23	2114	2124	10	No			
BG22	2130	2140	10	No			
BG21	2143	2153	10	Yes, 2150	♀	@station	*BADO ♀ @ station first is silent, soon as I get light on it flies down hill. doing continuous trill.
BG20	2157	2207	10	No			
BG01	2216	2226	10	No			
BG02	2230	2240	10	No			
BG04	2246	2256	10	No			
BG03	2259	2309	10	No			* starts to sprinkle
BG05	2313	2323	10	No			
BG06	2326	2336	10	No			* sprinkles stop
BG07	2340	2350	10	No			
BG08	2353	0003	10	No			
BG09	0008	0018	10	No			
BG10	0021	0031	10	No			
BG11	0037	0047	10	No			
BG12	0050	0100	10	No			
BG13	0103	0113	10	No			
BG14	0117	0127	10	Yes, 0122	♀	@station	*BADO pair @ station ♀ downslope
BG16	0133	0143	10	No			
BG15	0147	0157	10	No			
BG17	0203	0213	10	Yes, 0208	♀	151°	*BADO ♀ same as detected @ BG14 imitating some spow calls listen for duration of survey

Owl Response Location(s)

MEN # 1) Township 7N Range 10W Section 3-10, 16-18 ¼ sec 1/16sec 1/64sec
Sex UTM East UTM North Coordinate system
MEN # 2) Township 7N Range 10W Section 3-10, 16-18 ¼ sec 1/16sec 1/64sec
Sex UTM East UTM North Coordinate system

Additional Comments

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COAST AREA
RESOURCE MANAGEMENT

373.71

Additional Page 7/20/20

Page 1 of 3

Northern Spotted Owl Survey Form

Surveyor Mike Stephens Date 05/14/19 (mm/dd/yy) Landowner Bohemian Grove

Calling Area - Township 7N Range 10W Section(s) 3-10, 16-18

THP/Plan Area Being Surveyed Bohemian Grove NTMP Units (1-06 NTMP-011 SON) All Watershed Smith Cr./Russian river

Weather

Wind: Calm Breeze, Moderate, Windy, Gust

Clouds: Clear, Scattered, Overcast Fog

Precipitation ☒ Dry, ☐ Fog, ☐ Misty, ☐ Drizzle, ☐ Light Rain, ☐ Rain, ☐ Heavy Rain, ☐ Intermittent, ☐ Hail

Significant Weather Changes During Survey

Complete THP Visit? ☒ Y ☐ N

With other visit ?

Other THP's

TIME

[illegible]

Owl Response Location(s)

#076 1) Township _____ Range _____ Section _____ ¼ sec _____ 1/16sec _____ 1/64sec _____
 Sex ♀ UTM East 503114 UTM North 4259114 Coordinate system NAD 83
 MEN # 2) Township _____ Range _____ Section _____ ¼ sec _____ 1/16 sec _____ 1/64sec _____
 Sex _____ UTM East _____ UTM North _____ Coordinate system _____

Additional Comments

JUL 22 2020

COAST AREA
RESOURCE MANAGEMENT

373.72

Additional Page 7/20/20

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Bohemian Grove Northern Spotted Owl Survey Stations

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COAST AREA
RESOURCE MANAGEMENT

Additional Page 7/20/20

373.73

5/14/19

♀ SPAN 5 SON 076

Legend 18

- NSO Survey Stations
- ▭ NTMP Boundary
- ▭ Property Boundary

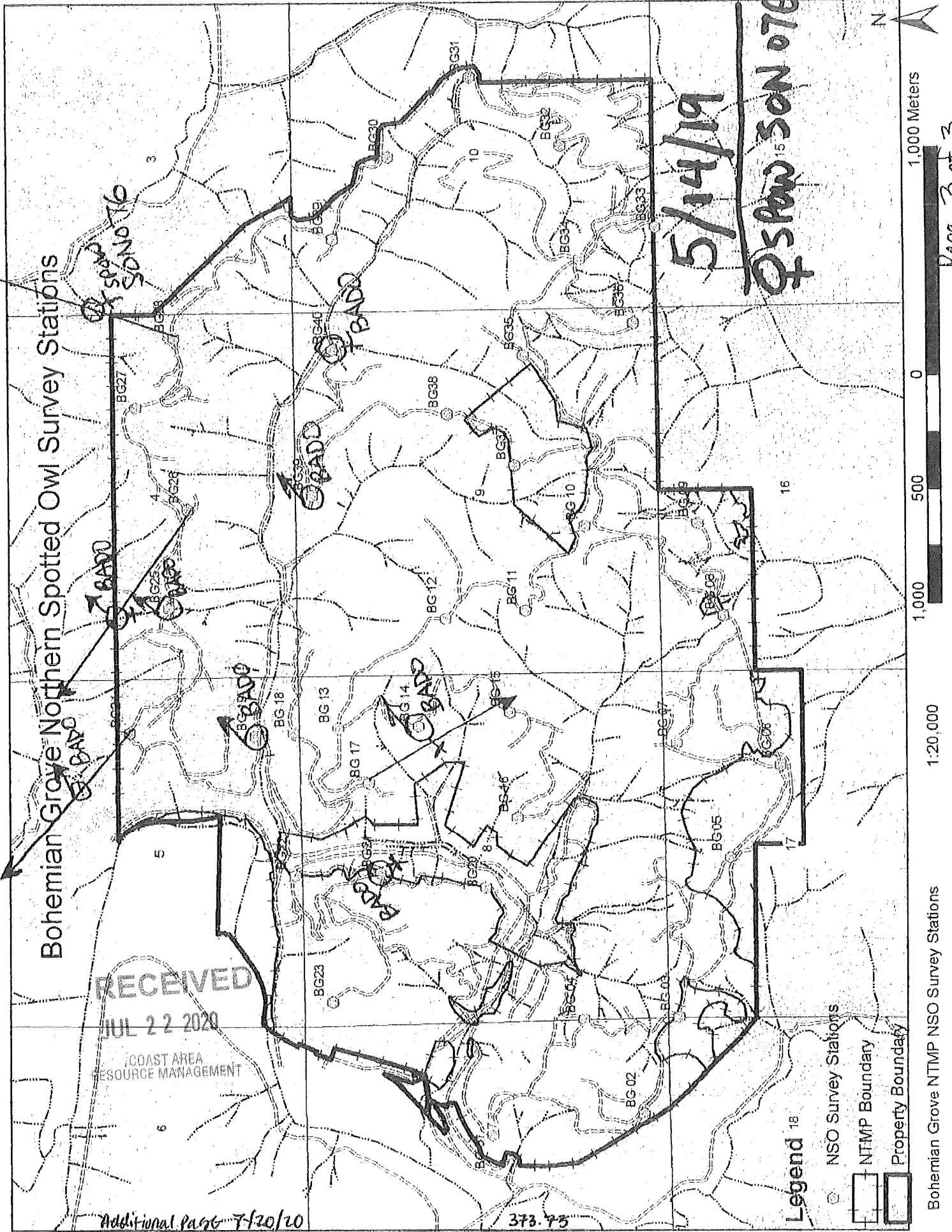
Bohemian Grove NTMP NSO Survey Stations

1:20,000

1,000 500 0

1,000 Meters

Page 3 of 3



Northern Spotted Owl Survey Form

Surveyor Mike Stephens Date 06/14/19 (mm/dd/yy) Landowner Bohemian Grove

Calling Area - Township 7N Range 10W Section(s) 3-10, 16-18

THP/Plan Area Being Surveyed Bohemian Grove NTP Units All Watershed Smith G/Russian River
(1-06NTP-011SON)

Weather

Winds Calm Breeze, Moderate, Windy, Gust
Clouds Clear Scattered, Overcast, Fog
Precipitation Dry Fog, Misty, Drizzle, Light Rain, Rain, Heavy Rain, Intermittent, Hail
Significant Weather Changes During Survey _____

Complete THP Visit? ☒ N

With other visit? _____

Other THP'S _____

TIME

Station	Start	Stop	Total	Response	Sex	Azimuth	Comments
BG23	2047	2057	10	No			
BG22	2107	2117	10	Yes, 2113	♀	@station	*BADO ♀ trilling @ station, I listen for duration of survey
BG21	2121	2131	10	No			
BG20	2138	2148	10	No			
BG01	2158	2208	10	No			
BG04	2212	2222	10	No			
BG03	2226	2236	10	No			
BG05	2242	2252	10	No			
BG06	2256	2306	10	Yes, 2300	♂	~ South	*BADO ♂ faint/distant to South - only a few vocalizations
BG07	2315	2325	10	No			
BG08	2332	2342	10	No			
BG09	2347	2357	10	Yes, 2352	♀	63°	*SPOW ♀ crowbarks ~ 25m *station dropped due to SPOW @ BG09
BG10							
BG11	0006	0016	10	No			
BG12	0021	0031	10	Yes, 0026	♀	@station	*♀ BADO @ station, listen for duration
BG13	0038	0048	10	No			
BG14	0053	0103	10	No			
BG15	0108	0118	10	No			
BG16	0124	0134	10	No			
BG17	0146	0156	10	No			
BG40	0205	0215	10	Yes, 0209	♂	@station	*BADO ♂ responds in treetop above station - I listen for duration
BG37	0236	0246	10	No			

SON

?

Sex ♀

MEN #

Sex

Owl Response Location(s)

1) Township _____ Range _____ Section _____ ¼ sec _____ 1/16 sec _____ 1/64 sec _____

UTM East 502303 UTM North 4256596 Coordinate system NAD83

2) Township _____ Range _____ Section _____ ¼ sec _____ 1/16 sec _____ 1/64 sec _____

UTM East _____ UTM North _____ Coordinate system _____

Additional Comments

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COAST AREA
RESOURCE MANAGEMENT

373.74

Additional Page 7/20/20

Page 1 of 3

Northern Spotted Owl Survey Form

Surveyor Mike Stephens Date 06/14/19 (mm/dd/yy) Landowner Bohemian Grove

Calling Area - Township 7N Range 10W Section(s) 3-10, 16-18

THP/Plan Area Being Surveyed Bohemian Grove NTP Units A11 Watershed Sm. H. C. / Russian River

Weather

Complete THP Visit? ☒ Y ☐ N

Wind ~~Calm~~ Breeze, Moderate, Windy, Gust

With other visit ?

Clouds: Clear, Scattered, Overcast, Fog

Other THP^{ns}

Precipitation (Dry, Fog, Misty, Drizzle, Light Rain, Rain, Heavy Rain, Intermittent, Hail)

Significant Weather Changes During Survey

TIME

[illegible]

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COAST AREA
RESOURCE MANAGEMENT

Owl Response Location(s)

MEN # _____ 1) Township _____ Range _____ Section _____ $\frac{1}{4}$ sec _____ $\frac{1}{16}$ sec _____ $\frac{1}{64}$ sec _____

Sex	UTM East	UTM North	Coordinate system
-----	----------	-----------	-------------------

MEN #	2) Township	Range	Section	¼ sec	1/16 sec	1/64sec
-------	-------------	-------	---------	-------	----------	---------

Sex	UTM East	UTM North	Coordinate system
-----	----------	-----------	-------------------

Additional Comments




373.75

Additional Page 7/20/20

Page 2 of 3

373.76

Legend 18

-  NSO Survey Stations
 NTMP Boundary
 Property Boundary

Bohemian Grove NTMP NSO Survey Stations

1:20,000

1,000	500	0	1,000 Meters

24

61/4/19

Spald
SON?

A hand-drawn diagram of a river system. It features a main horizontal line with several tributaries. Labels include 'BADG' and 'BAG' in large, bold letters. Arrows indicate the direction of flow, with some pointing towards the main line and others away from it. The drawing is done in black ink on a white background.

B-10

Northern Spotted Owl Survey Form

Surveyor Mike Stephens Date 07/05/19 (mm/dd/yy) Landowner Bohemian Grove

Calling Area - Township 7N Range 10W Section(s) 3-10, 16-18

THP/Plan Area Being Surveyed Bohemian Grove NTHP Units A-11 Watershed Smith Cr/Russian River
(1-06 NTHP-01150N)

Weather

Wind Calm Breeze, Moderate, Windy, Gust

Clouds Clear Scattered, Overcast, Fog

Precipitation Dry Fog, Misty, Drizzle, Light Rain, Rain, Heavy Rain, Intermittent, Hail

Significant Weather Changes During Survey

Complete THP Visit? ☒ N

With other visit?

Other THP'S

TIME

Station	Start	Stop	Total	Response	Sex	Azimuth	Comments
BG20	2109	2119	10	No			
BG21	2125	2135	10	No			
BG22	2139	2149	10	No			
BG23	2158	2208	10	No			
BG19	2230	2240	10	No			
BG24	2245	2255	10	No			
BG25	2301	2311	10	No			
BG26	2316	2326	10	No			
BG27	2330	2340	10	Yes, 2335	♂	238°	*BADO ♂ ≈ 150m, listen for duration * Drop station because of BADO BG27
BG28							
BG17	2355	0005	10	No			
BG16	0017	0027	10	No			
BG15	0032	0042	10	No			
BG14	0049	0059	10	No			
BG13	0105	0115	10	Yes, 0107	♀	219°	*BADO ♀ ≈ 200m - listen for duration ♂ kept hooting entire time
BG12	0120	0130	10	Yes, 0121	♂	339°	*BADO ♂ ≈ 300m - listen for duration
BG11	0137	0147	10	No			
BG10	0152	0202	10	No			
BG08	0208	0218	10	No			
BG09	0224	0234	10	No			
BG37	0246	0256	10	No			
BG38	0300	0310	10	Yes, 0305	♂	@station	*BADO ♂ @ station - listen for duration * station dropped due to BADO BG38
BG39							
BG40	0318	0328	10	Yes, 0322	♀	@station	*BADO ♀ @ station - listen only for duration

Owl Response Location(s)

MEN # 1) Township 7N Range 10W Section 3-10, 16-18 ¼ sec 1/16sec 1/64sec
Sex UTM East UTM North Coordinate system
MEN # 2) Township 7N Range 10W Section 3-10, 16-18 ¼ sec 1/16sec 1/64sec
Sex UTM East UTM North Coordinate system

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Additional Comments

COAST AREA
RESOURCE MANAGEMENT

373.77

Additional Page 7/20/20

Northern Spotted Owl Survey Form

Surveyor Mike Stephens Date 07/05/19 (mm/dd/yy) Landowner Bohemian Grove

Calling Area - Township 7N Range 10W Section(s) 3-10, 16-18

THP/Plan Area Being Surveyed Bohemian Grove NTP Units All Watershed Smith Co./Russian Rive
(1-06 NTP-011 Son)

Weather

Complete THP Visit? ☒ Y ☐ N

Wind Calm Breeze, Moderate, Windy, Gust

With other visit ? _____

Clouds: Clear, Scattered, Overcast, Fog

Other THP'S

Precipitation (Dry, Fog, Misty, Drizzle, Light Rain, Rain, Heavy Rain, Intermittent, Hail)

Significant Weather Changes During Survey

TIME

[illegible]

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COAST AREA
RESOURCE MANAGEMENT

Owl Response Location(s)

MEN # _____ 1) Township _____ Range _____ Section _____ $\frac{1}{4}$ sec _____ $\frac{1}{16}$ sec _____ $\frac{1}{64}$ sec _____

Sex _____ UTM East _____ UTM North _____ Coordinate system _____

MEN # 2) Township Range Section ¼ sec 1/16 sec 1/64sec

Sex _____ UTM East _____ UTM North _____ Coordinate system _____

Additional Comments

373.78

Additional Page 7/20/20

Page 2 of 3

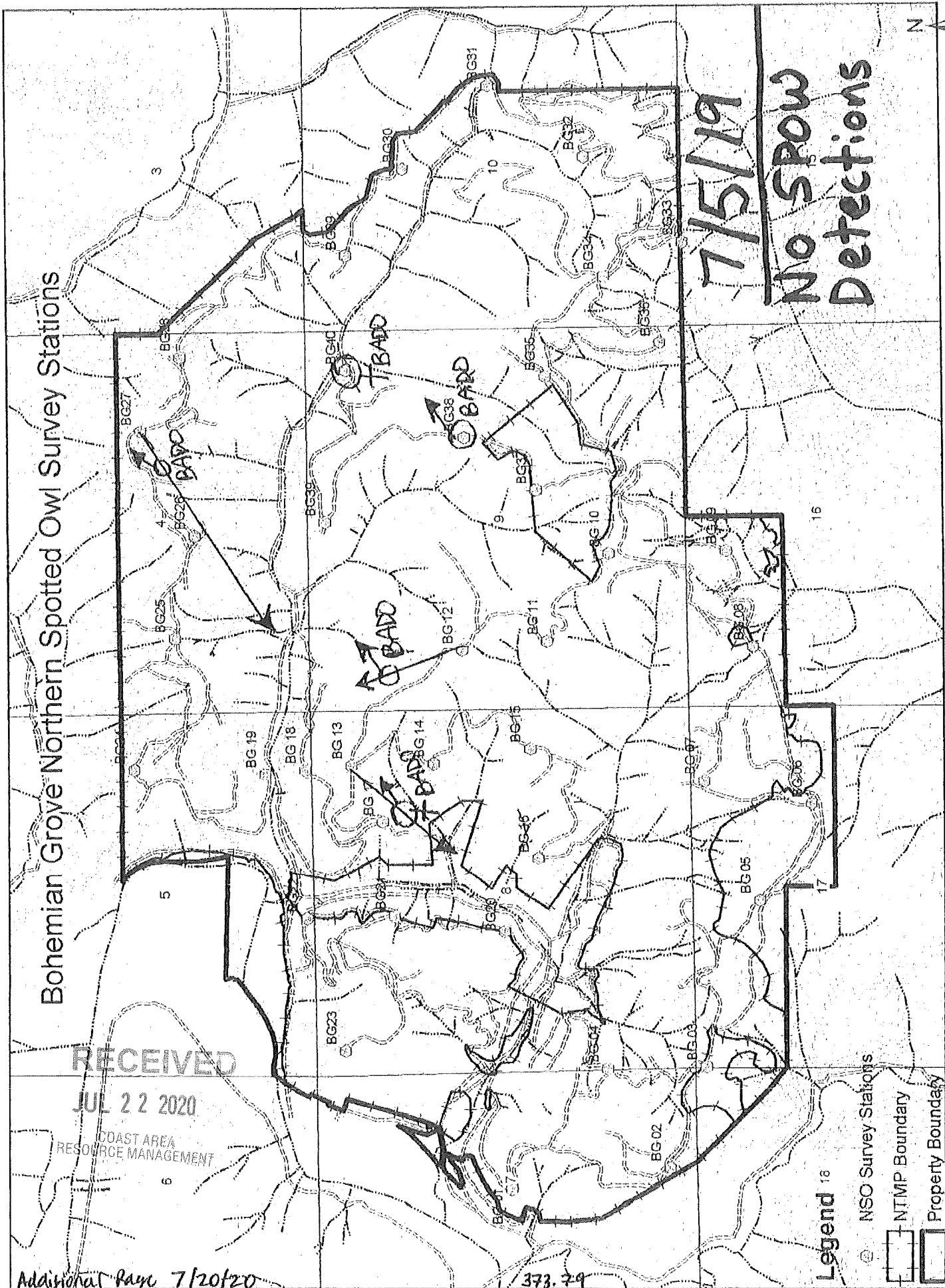
Bohemian Grove Northern Spotted Owl Survey Stations

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COAST AREA
RESOURCE MANAGEMENT

Additional Page 7/20/20



1:20,000

Bohemian Grove NTMP NSO Survey Stations

1,000 Meters

0

500

1,000

D.no 2 of 3

Northern Spotted Owl Survey Form

Surveyor Mike Stephens Date 08/09/19 (mm/dd/yy) Landowner Bohemian Grove

Calling Area - Township 7N Range 10W Section(s) 3-10, 16-18

THP/Plan Area Being Surveyed Bohemian Grove NTMP Units A11 Watershed Smith Cr/Russian River
(1-06 NTMP - 011 SON)

Weather

Wind: Calm Breeze Moderate, Windy, Gust

Clouds: Clear, Scattered, Overcast Fog

Precipitation: Dry Fog, Misty, Drizzle, Light Rain, Rain, Heavy Rain, Intermittent, Hail

Significant Weather Changes During Survey _____

Complete THP Visit? ☒ N

With other visit? _____

Other THP'S _____

TIME

Station	Start	Stop	Total	Response	Sex	Azimuth	Comments
BG 20	2010	2023	13	No			
BG 21	2027	2037	10	No			
BG 22	2041	2051	10	No			
BG 23	2101	2111	10	No			
BG 19	2130	2140	10	No			
BG 24	2146	2156	10	Yes, 2153	♂	83°	* SPOW ♂ very faint, distant
BG 25	2201	2207	6	Yes, 2204	♂	327°	* SPOW ♂ faint - same as detected BG
BG 26	2211	2221	10	No			
BG 27	2227	2237	10	No			
BG 28	2244	2254	10	No			
BG 17	2315	2325	10	No			
BG 16	2336	2346	10	No			
BG 15	2350	0000	10	No			
BG 14	0005	0015	10	No			
BG 13	0020	0030	10	No			
BG 12	0034	0044	10	No			
BG 11	0049	0059	10	No			
BG 10	0106	0116	10	No			
BG 08	0121	0131	10	No			
BG 09	0135	0145	10	No			
BG 35	0151	0201	10	No			
BG 40	0213	0223	10	Yes, 0222	♀	@ station	* BADO ♀ @ station listen only for duration * station skipped due to BADO BG 40
BG 39							
BG 38	0230	0240	10	No			
BG 37	0244	0254	10	No			

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COAST AREA
RESOURCE MANAGEMENT

SON

Owl Response Location(s)

076 1) Township _____ Range _____ Section _____ 1/4 sec _____ 1/16 sec _____ 1/64 sec _____
Sex ♂ UTM East 501763 UTM North 4259039 Coordinate system NAD 83
MEN # _____ 2) Township _____ Range _____ Section _____ 1/4 sec _____ 1/16 sec _____ 1/64 sec _____
Sex _____ UTM East _____ UTM North _____ Coordinate system _____

Additional Comments

373.80

Additional Page 7/20/20

Page 1 of 3

Northern Spotted Owl Survey Form

Surveyor Mike Stephens Date 08/09/19 (mm/dd/yy) Landowner Bohemian Grove

Calling Area - Township 7N Range 10W Section(s) 3-10, 16-18

THP/Plan Area Being Surveyed Bohemian Grove MHP Units All Watershed Smith Cr/Russian River
(1-06NTMP-0115015)

Weather

Wind: Calm Breeze, Moderate, Windy, Gust

Clouds: Clear, Scattered, Overcast, Fog

Precipitation ☒ Dry ☐ Fog ☐ Misty ☐ Drizzle ☐ Light Rain ☐ Rain ☐ Heavy Rain ☐ Intermittent ☐ Hail

Significant Weather Changes During Survey

Complete THP Visit? (Y) N

With other visit ?

Other THP'S

TIME

Station	Start	Stop	Total	Response	Sex	Azimuth	Comments
---------	-------	------	-------	----------	-----	---------	----------

[illegible]

* WESO @ station

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COAST AREA
RESOURCE MANAGEMENT

Owl Response Location(s)

MEN #	1) Township	Range	Section	¼ sec	1/16sec	1/64sec
-------	-------------	-------	---------	-------	---------	---------

Sex	UTM East	UTM North	Coordinate system
-----	----------	-----------	-------------------

MEN #	2) Township	Range	Section	¼ sec	1/16 sec	1/64sec
-------	-------------	-------	---------	-------	----------	---------

Sex	UTM East	UTM North	Coordinate system
-----	----------	-----------	-------------------

Additional Comments

Station BGO2 not accessible

373.81

Additional Page 7/20/20

Page 2 of 3

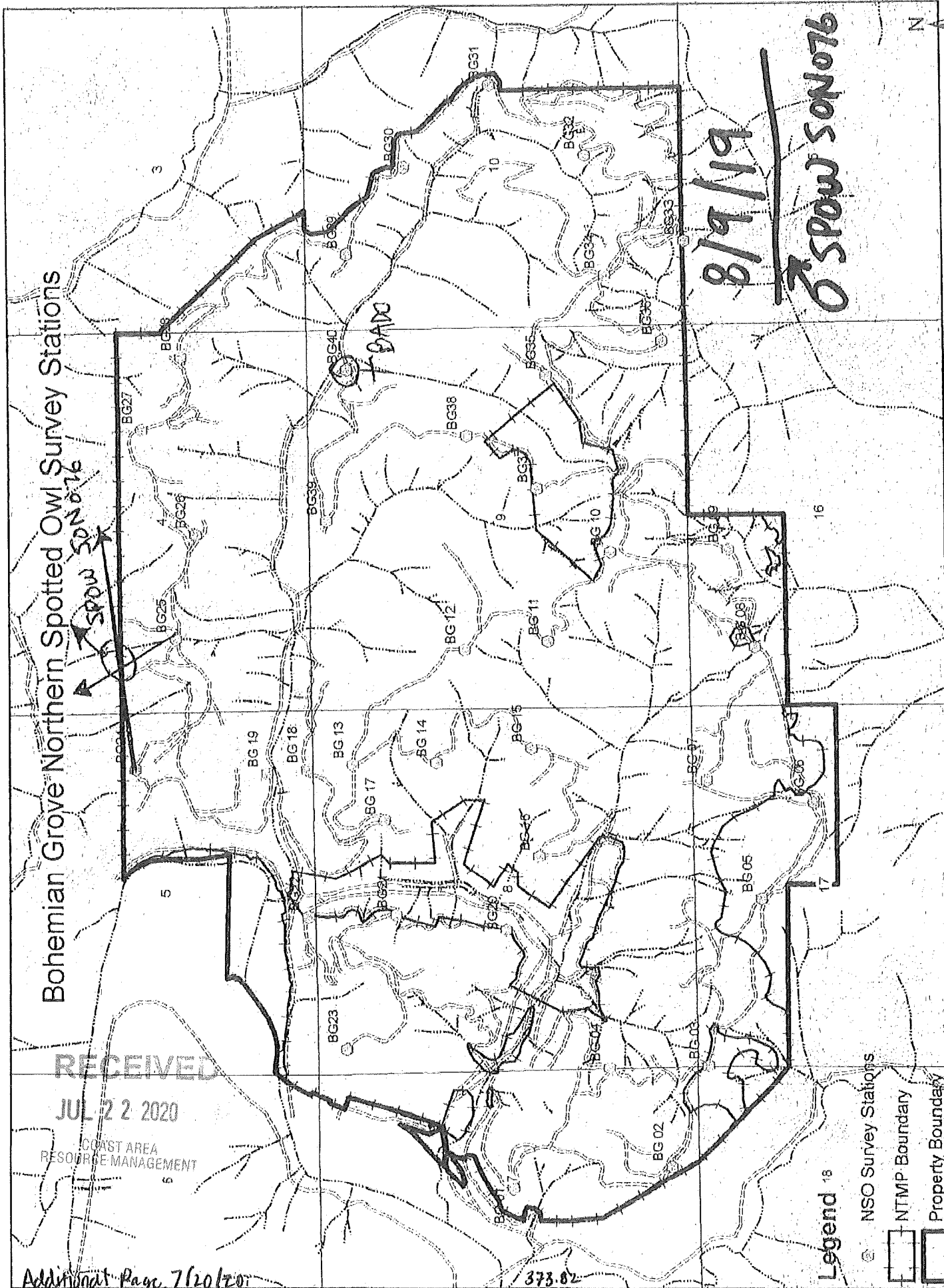
Bohemian Grove Northern Spotted Owl Survey Stations

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COAST AREA
RESOURCE MANAGEMENT

Additional Page 7/20/20



Legend 18

NSO Survey Stations

NTMP Boundary

Property Boundary

Bohemian Grove NTMP NSO Survey Stations

1:20,000

1,000

500

0

1,000 Meters

Page 3 of 2

Northern Spotted Owl Survey Form

Surveyor Mike Stephens Date 08/26/19 (mm/dd/yy) Landowner Bohemian Grove

Calling Area - Township 7N Range 10W Section(s) 3-10, 16-18

THP/Plan Area Being Surveyed Bohemian Grove NTMP Units All Watershed Smith Cr/Russian River
(1-06NTMP-01150N)

Weather

Wind: Calm Breeze, Moderate, Windy, Gust

Clouds: Clear, Scattered, Overcast Fog

Precipitation: Dry Fog, Misty, Drizzle, Light Rain, Rain, Heavy Rain, Intermittent, Hail

Significant Weather Changes During Survey

Complete THP Visit? ☒ Y ☐ N

With other visit? _____

Other THP'S _____

TIME

Station	Start	Stop	Total	Response	Sex	Azimuth	Comments
BG 20	2012	2022	10	No			
BG 21	2027	2037	10	No			
BG 22	2041	2051	10	No			
BG 23	2101	2111	10	No			
BG 01	2125	2135	10	No			
BG 04	2139	2149	10	No			
BG 03	2153	2203	10	Yes, 2203	♂	273°	* BADO ♂ ≈ 200m as I'm leaving
BG 05	2208	2218	10	No			
BG 06	2223	2233	10	No			
BG 07	2238	2248	10	No			
BG 08	2253	2303	10	No			
BG 09	2310	2320	10	No			
BG 10	2324	2334	10	No			
BG 11	2346	2356	10	No			
BG 12	2359	0009	10	No			
BG 13	0013	0023	10	No			
BG 14	0027	0037	10	Yes, 0032	♀	@ station	* BADO ♀ @ station, I just listen for survey data
BG 15							* station dropped due to BADO & BG 14
BG 17							* "
BG 16	0043	0053	10	Yes, 0050	♂	53°	* BADO ♂ single call ≈ 300m
BG 19	0109	0119	10	No			* BANO flying over station
BG 24	0124	0134	10	No			
BG 25	0139	0149	10	No			
BG 26	0153	0203	10	No			
BG 27	0206	0216	10	No			

Owl Response Location(s)

MEN # _____ 1) Township _____ Range _____ Section _____ ¼ sec _____ 1/16 sec _____ 1/64 sec _____
Sex _____ UTM East _____ UTM North _____ Coordinate system _____
MEN # _____ 2) Township _____ Range _____ Section _____ ¼ sec _____ 1/16 sec _____ 1/64 sec _____
Sex _____ UTM East _____ UTM North _____ Coordinate system _____

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JUL 22 2020

Additional Comments

COAST AREA
RESOURCE MANAGEMENT

373.83

Additional Page 7/20/20

Page 1 of 3

Northern Spotted Owl Survey Form

Surveyor Mike Stephens Date 08/26/19 (mm/dd/yy) Landowner Bohemian Grove

Calling Area - Township 7N Range 10W Section(s) 3-10, 16-18

THP/Plan Area Being Surveyed Boltonian Grave NTP Units A11 Watershed Smith Cr/Russian Rive
(1-06 NTP-011 SON)

Weather

Wind Calm Breeze, Moderate, Windy, Gust

Clouds: Clear, Scattered, Overcast, Fog

Precipitation Dry Fog, Misty, Drizzle, Light Rain, Rain, Heavy Rain, Intermittent, Hail

Significant Weather Changes During Survey

Complete THP Visit? ☒ Y ☐ N

With other visit ?

Other THP'S

TIME

[illegible]

Owl Response Location(s)

MEN # _____ 1) Township _____ Range _____ Section _____ $\frac{1}{4}$ sec _____ $\frac{1}{16}$ sec _____ $\frac{1}{64}$ sec _____

Sex	UTM East	UTM North	Coordinate system
Male	500000	6000000	WGS 84
Female	500000	6000000	WGS 84

MEN #	2) Township	Range	Section	¼ sec	1/16 sec	1/64sec
-------	-------------	-------	---------	-------	----------	---------

Sex	UTM East	UTM North	Coordinate system
-----	----------	-----------	-------------------

Additional Comments

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COAST AREA
RESOURCE MANAGEMENT

373.84

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Bohemian Grove Northern Spotted Owl Survey Stations

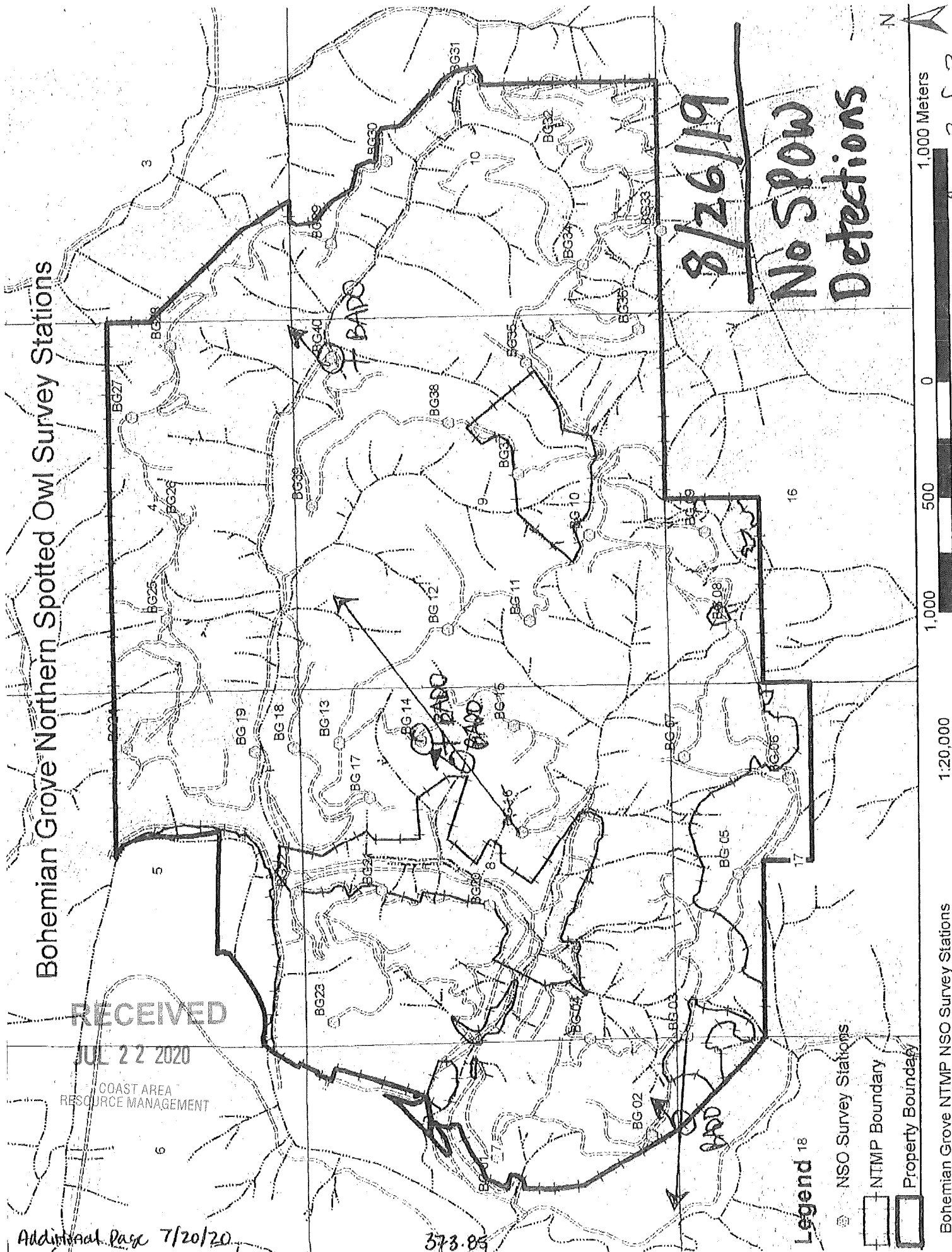
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COAST AREA
RESOURCE MANAGEMENT

Additional Page 7/20/20

373.85



Legend 18

- NSO Survey Stations
- NTMP Boundary
- Property Boundary

Bohemian Grove NTMP NSO Survey Stations

Northern Spotted Owl Survey Form

Surveyor Mike Stephens Date 03/06/20 (mm/dd/yy) Landowner Bohemian Grove

Calling Area - Township 7N Range 10W Section(s) 3-10, 16-18

THP/Plan Area Being Surveyed Bohemian Grove Units 2020 NTP Watershed Smith Cr/Ross, in five
Spot-checks

Weather

Wind: Calm Breeze, Moderate, Windy, Gust

Clouds: Clear, Scattered, Overcast, Fog

Precipitation: Dry, Fog, Misty, Drizzle, Light Rain, Rain, Heavy Rain, Intermittent, Hail

Significant Weather Changes During Survey Started calm, turned to breeze @ 2130

Complete THP Visit? ☒ N

With other visit? _____

Other THP's _____

TIME

Station	Start	Stop	Total	Response	Sex	Azimuth	Comments
BG20	1931	1941	10	NO			
BG21	1948	1958	10	NO			
BG22	2001	2011	10	NO			
BG23	2023	2033	10	NO			
BG19	2051	2101	10	NO			
BG17	2110	2120	10	NO			
BG16	2132	2142	10	Yes, 2135	♂	325°	* NSW very faint/distant in NE * BADO ♂ faint + echoing - only 2 8-note calls during survey
BG15	2147	2157	10	NO			
BG14	2202	2212	10	NO			
BG13	2216	2226	10	NO			
BG12	2230	2240	10	NO			
BG11	2244	2254	10	NO			
BG10	2259	2309	10	NO			
BG08	2315	2325	10	NO			
BG09	2329	2339	10	NO			
BG07	2348	2358	10	NO			
BG06	0006	0016	10	NO			
BG05	0021	0031	10	NO			
BG03	0035	0045	10	NO			
BG04	0048	0058	10	NO			
BG01	0107	0117	10	NO			
BG02							
BG35	0134	0144	10	NO			
BG38	0154	0204	10	NO			

3 power @ BG07
 50N 076 ♂
 1) Township _____ Range _____ Section _____ 1/4 sec _____ 1/16 sec _____ 1/64 sec _____
 UTM East 502882 UTM North 4259164 Coordinate system NAD83
 0N ? ♂
 2) Township _____ Range _____ Section _____ 1/4 sec _____ 1/16 sec _____ 1/64 sec _____
 0W @ BG24 UTM East 501189 UTM North 4259346 Coordinate system NAD83

Additional Comments

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COAST AREA
RESOURCE MANAGEMENT

373.86

Additional Page 7/20/20

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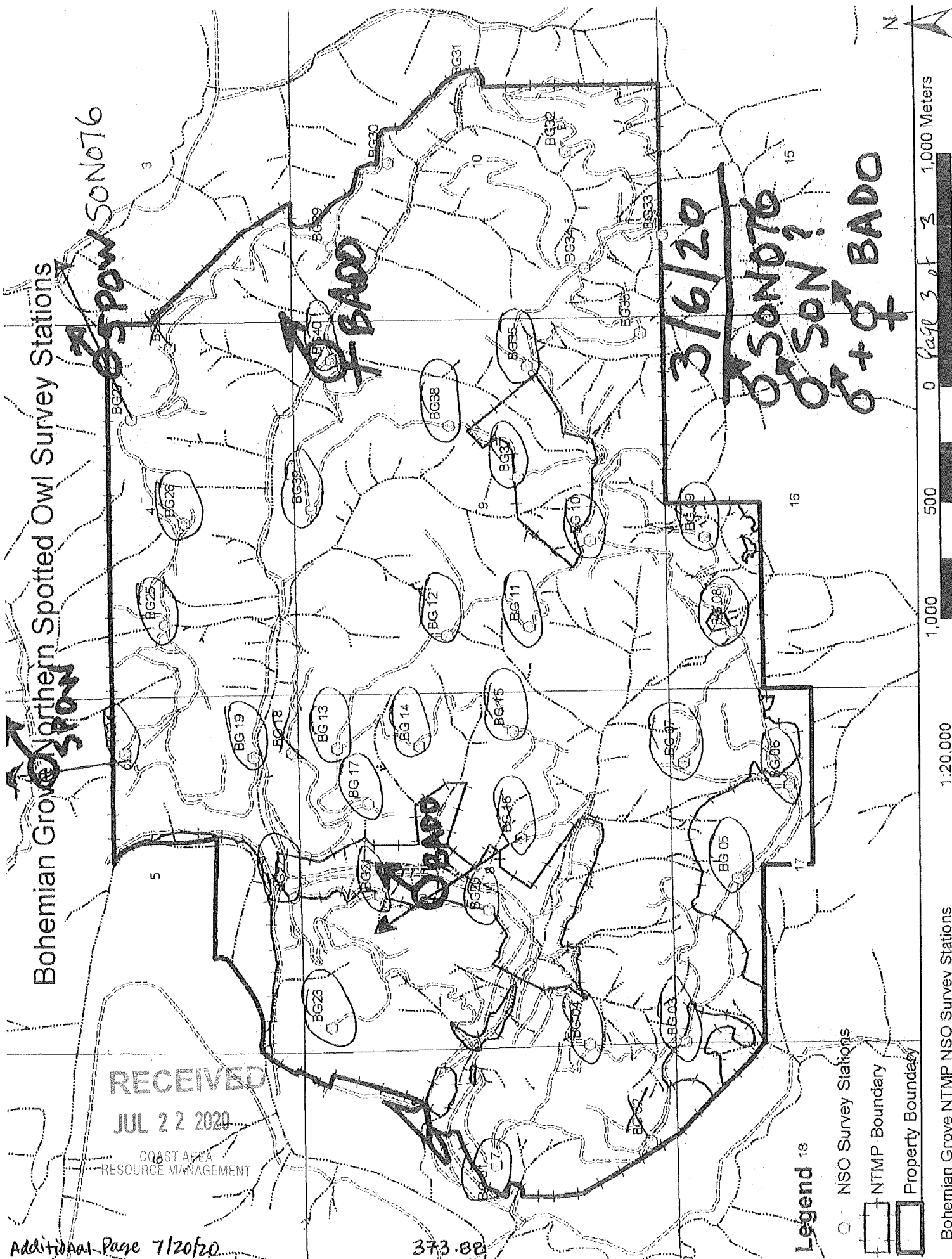
Page 2 of 3

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COAST AREA
RESOURCE MANAGEMENT

Bohemian Grove Northern Spotted Owl Survey Stations



Legend 18

- NSO Survey Stations
- NTMP Boundary
- Property Boundary

Bohemian Grove NTMP NSO Survey Stations

1:20,000

1,000

500

0

Page 3 of 3

1,000 Meters

Northern Spotted Owl Survey Form

Surveyor Mike Stephens Date 03/21/20 (mm/dd/yy) Landowner Bchemien Grove

Calling Area - Township 7N Range 10W Section(s) 3-10, 16-18

THP/Plan Area Being Surveyed Bchemien Grove NTP Units 2020 NTP Watershed Smith Cr/Russian

Weather

Wind: Calm, Breeze, Moderate, Windy, Gust

Clouds: Clear, Scattered, Overcast, Fog

Precipitation: Dry, Fog, Misty, Drizzle, Light Rain, Rain, Heavy Rain, Intermittent, Hail

Significant Weather Changes During Survey _____

Complete THP Visit? ☒ N

With other visit? _____

Other THP'S _____

TIME

Station	Start	Stop	Total	Response	Sex	Azimuth	Comments
BG20	1954	2004	10	No			
BG21	2010	2020	10	Yes	♀	@ station	* BADO ♀ @ station as I'm leaving
BG22	2027	2037	10	Yes, 2031	♀	@ station	* BADO ♀ from BG21 shows up @ station
BG23	2047	2057	10	No			I listen for duration of survey
BG19	2114	2124	10	Yes, 2121	♂	92°	* BADO ♂ faint/distant echoing
BG24	2131	2141	10	No			
BG25	2146	2156	10	No			
BG26	2201	2211	10	No			
BG27	2215	2220	5	Yes, 2218	♀	82°	* SPOW ♀ contact calling in response down hill off-property
BG17	2238	2248	10	No			
BG16	2258	2308	10	No			
BG15	2313	2323	10	No			
BG14	2327	2337	10	Yes, 2332	♂	253°	* BADO ♂ doing single "trills" repeatedly ~ 250m down hill
BG13	2341	2351	10	No			
BG12	2355	0005	10	No			
BG11	0008	0018	10	No			
BG10	0024	0034	10	No			
BG08	0039	0049	10	No			* NSWO @ 111° ~ 100m
BG07	0055	0105	10	No			
BG06	0111	0121	10	No			* WESO @ 153° ~ 25m
BG05	0125	0135	10	No			
BG03	0144	0154	10	No			* WESO Pair @ 179° ~ 50m
BG04	0159	0209	10	No			

SON #076 Owl Response Location(s)
 Sex ♀ 1) Township _____ Range _____ Section _____ 1/4 sec _____ 1/16 sec _____ 1/64 sec _____
 UTM East 502912 UTM North 4259164 Coordinate system NAD 83
 MEN # 2) Township _____ Range _____ Section _____ 1/4 sec _____ 1/16 sec _____ 1/64 sec _____
 Sex _____ UTM East _____ UTM North _____ Coordinate system _____

Additional Comments _____

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COAST AREA
RESOURCE MANAGEMENT

373.89

Additional Page 7/20/20

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Northern Spotted Owl Survey Form

Surveyor Mike Stephens Date 03/21/22 (mm/dd/yy) Landowner Bohemian Grove

Calling Area - Township 7N Range 10W Section(s) 3-10, 16-18

THP/Plan Area Being Surveyed Bohemian Grove NTP Units 2020 NTP Watershed Smith Cr./Russian

Weather

Complete THP Visit? (Y) N

Wind: Calm, Breeze, Moderate, Windy, Gust

With other visit ?

Clouds: Clear, Scattered, Overcast, Fog

Other THP's

Precipitation: Dry, Fog, Misty, Drizzle, Light Rain, Rain, Heavy Rain, Intermittent, Hail

Significant Weather Changes During Survey

TIME

[illegible]

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COAST AREA
RESOURCE MANAGEMENT

Owl Response Location(s)

1) Township _____ Range _____ Section _____ $\frac{1}{4}$ sec _____ $\frac{1}{16}$ sec _____ $\frac{1}{64}$ sec _____

UTM East UTM North Coordinate system

2) Township _____ Range _____ Section _____ $\frac{1}{4}$ sec _____ $\frac{1}{16}$ sec _____ $\frac{1}{64}$ sec _____

UTM East UTM North Coordinate system_____

Additional Comments

373.90

Additional Page 7/20/20

Page 2 of 3

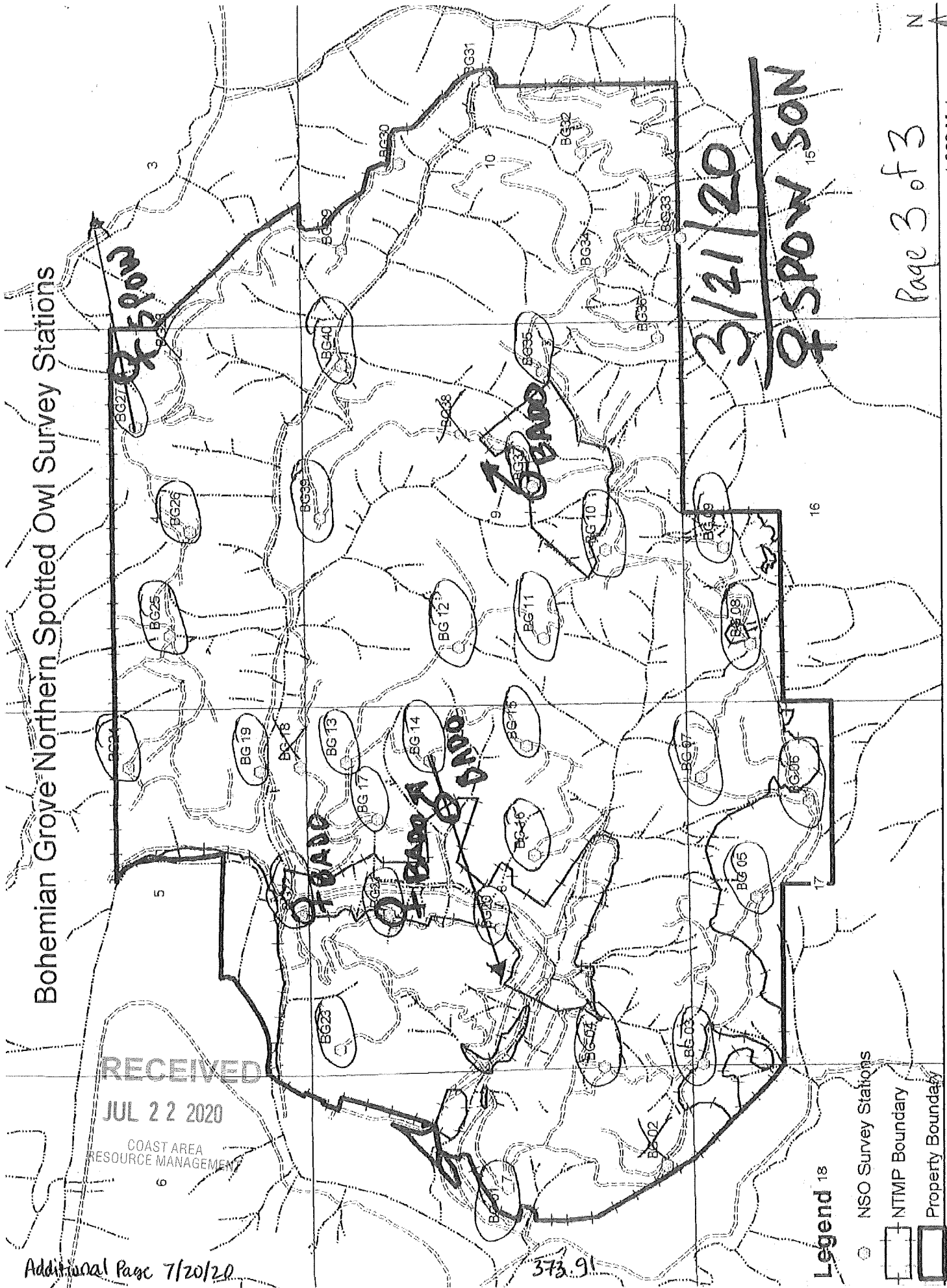
Bohemian Grove Northern Spotted Owl Survey Stations

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COAST AREA
RESOURCE MANAGEMENT

Additional Page 7/20/20



Legend 18

○ NSO Survey Stations

□ NTMP Boundary

□ Property Boundary

Bohemian Grove NTMP NSO Survey Stations

1:20,000

1,000

500

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1,000 Meters

Page 3 of 3

Northern Spotted Owl Survey Form

Surveyor Mike Stephens Date 03/29/20 (mm/dd/yy) Landowner Bohemian Grove

Calling Area - Township _____ Range _____ Section(s) _____

THP/Plan Area Being Surveyed Bohemian Grove NTP Units All-Purple Watershed Smith Cr/Russian River

Weather

Wind: Calm, Breeze, Moderate, Windy, Gust

Clouds: Clear, Scattered, Overcast, Fog

Precipitation: Dry, Fog, Misty, Drizzle, Light Rain, Rain, Heavy Rain, Intermittent, Hail

Significant Weather Changes During Survey Light Drizzle starts @ 0530

Complete THP Visit? ☒ N

With other visit? _____

Other THP'S _____

TIME

Station	Start	Stop	Total	Response	Sex	Azimuth	Comments
BG19	2009	2019	10	No			* WESO @ station
BG24	2025	2035	10	No			
BG25	2041	2051	10	Yes, 2043	♂	352°	* SPow ♂ replies - faint/distant can barely hear, down towards bottom of drainage. Listen for down.
BG29	2059	2109	10	Yes, 2106	♂	@ station	* BADO ♂ @ station - I listen for down
BG28	2114	2124	10	Yes, 2117	♀	167°	* BADO ♀ faint/distant in bottom
				2121	♂	333°	* SPow ♂ ~ 75m, while I'm just listening after detecting ♀ BADO son 076
BG26	2128	2138	10	No			* NSWO @ 223° ~ 250m
BG27							* station dropped due to SPow/BADO
BG17	2153	2203	10	No			
BG16	2211	2221	10	No			
BG15	2225	2235	10	No			
BG14	2240	2250	10	No			
BG13	2253	2303	10	No			
BG12	2307	2317	10	No			
BG11	2320	2330	10	No			
BG10	2335	2345	10	No			
BG08	2349	2359	10	No			
BG09	0005	0015	10	No			
BG07	0020	0030	10	No			
BG06	0035	0045	10	No			
BG05	0048	0058	10	No			* WESO @ 235° ~ 75m

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COAST AREA
RESOURCE MANAGEMENT

Owl Response Location(s)

1) Township _____ Range _____ Section _____ ¼ sec _____ 1/16 sec _____ 1/64 sec _____
 iPow ♂ BG25 SON ?? UTM East 501760 UTM North 4259377 Coordinate system NAD 83

2) Township _____ Range _____ Section _____ ¼ sec _____ 1/16 sec _____ 1/64 sec _____
 iPow ♂ BG28 SON 076 UTM East 502964 UTM North 4259013 Coordinate system NAD 83

Additional Comments

373.92

Additional Page 7/20/20

Page 1 of 3

Northern Spotted Owl Survey Form

Surveyor Mike Stephens Date 03/29/20 (mm/dd/yy) Landowner Bohemian Grove

Calling Area - Township _____ Range _____ Section(s) _____

THP/Plan Area Being Surveyed Bohemian Grove NTHU Units All-Property Watershed Smith Cr/ Russian River

Weather

Wind: Calm Breeze, Moderate, Windy, Gust

Clouds: Clear, Scattered, Overcast, Fog

Precipitation: Dry, Fog, Misty, Drizzle, Light Rain, Rain, Heavy Rain, Intermittent, Hail

Significant Weather Changes During Survey

light drizzle starts @ 0530

Complete THP Visit? (Y) N

With other visit? _____

Other THP'S _____

TIME

Station	Start	Stop	Total	Response	Sex	Azimuth	Comments
BG03	0102	0112	10	NO			
BG04	0115	0125	10	NO			
BG01	0129	0139	10	Yes, 0137	♂	288°	* BADO ♂ ≈ 750m across Hwy 116 NSWO @ 2° ≈ 200m
BG20	0149	0159	10	NO			
BG21	0204	0214	10	NO			
BG22	0217	0227	10	NO			* GHOW @ 13° faint/distant
BG23	0234	0244	10	NO			* NSWO @ 313° ≈ 1000m
BG40	0315	0325	10	NO			
BG39	0329	0339	10	NO			
BG38	0343	0353	10	Yes, 0351	♂	293°	* BADO ♂ ≈ 150m, I listen for duration
BG37	0356	0406	10	NO			
BG35	0412	0422	10	NO			
BG36	0426	0436	10	NO			
BG34	0439	0449	10	NO			
BG33	0453	0503	10	Yes, 0457	♂	@ station	* BADO ♂ at station, I listen for duration
BG32	0507	0517	10	NO			
BG96	0522	0532	10	NO			
BG30	0538	0548	10	Yes, 0546	♂	157°	* BADO ♂ nearby ≈ 50m
BG31	0552	0602	10	NO			

Owl Response Location(s)

1) Township _____ Range _____ Section _____ ¼ sec _____ 1/16 sec _____ 1/64 sec _____

UTM East _____ UTM North _____ Coordinate system _____

2) Township _____ Range _____ Section _____ ¼ sec _____ 1/16 sec _____ 1/64 sec _____

UTM East _____ UTM North _____ Coordinate system _____

Additional Comments _____

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RESOURCE MANAGEMENT

373.93

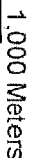
Additional Page 7/20/20

Page 2 of 3

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COAST AREA
RESOURCE MANAGEMENT

Additional Page 7/20/20



~~3/29/20~~

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Northern Spotted Owl Survey Form

Surveyor Mike Stephens Date 03/06/20 (mm/dd/yy) Landowner Bohemian Grove

Calling Area - Township 7N Range 10W Section(s) 3-10, 16-18

THP/Plan Area Being Surveyed Bohemian Grove Units 2020 NTO Watershed Smith Cr/Ross, in five
N TMP Spot-checks

Weather

Wind: Calm Breeze, Moderate, Windy, Gust

Clouds: Clear, Scattered, Overcast, Fog

Precipitation: Dry, Fog, Misty, Drizzle, Light Rain, Rain, Heavy Rain, Intermittent, Hail

Significant Weather Changes During Survey Started calm, turned to breeze @ 2130

Complete THP Visit? ☒ N

With other visit? _____

Other THP's _____

TIME

Station	Start	Stop	Total	Response	Sex	Azimuth	Comments
BG20	1931	1941	10	NO			
BG21	1948	1958	10	NO			
BG22	2001	2011	10	NO			
BG23	2023	2033	10	NO			
BG19	2051	2101	10	NO			
BG17	2110	2120	10	NO			
BG16	2132	2142	10	Yes, 1135	♂	325°	*NSWO very faint/distant in NE *BADO ♂ faint + echo key - only 2 8-note calls during survey
BG15	2147	2157	10	NO			
BG14	2202	2212	10	NO			
BG13	2216	2226	10	NO			
BG12	2230	2240	10	NO			
BG11	2244	2254	10	NO			
BG10	2259	2309	10	NO			
BG08	2315	2325	10	NO			
BG09	2329	2339	10	NO			
BG07	2348	2358	10	NO			
BG06	0006	0016	10	NO			
BG05	0021	0031	10	NO			
BG03	0035	0045	10	NO			
BG04	0048	0058	10	NO			
BG01	0107	0117	10	NO			
BG02							*station no longer accessible due to slick @ station + road closed
BG35	0134	0144	10	NO			
BG38	0154	0204	10	NO			

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COAST AREA
RESOURCE MANAGEMENT

SPW @ BG27
SONOT6 ♂ 1) Township _____ Range _____ Section _____ 1/4 sec _____ 1/16 sec _____ 1/64 sec _____

UTM East 502882 UTM North 4259164 Coordinate system NAD83

ON ? ♂ 2) Township _____ Range _____ Section _____ 1/4 sec _____ 1/16 sec _____ 1/64 sec _____

POW @ BG24 UTM East 501189 UTM North 4259346 Coordinate system NAD83

Additional Comments

373.95

Additional Page 7/20/20

Page 1 of 3

Bohemian Grove Northern Spotted Owl Survey Stations

SON076
 ♂ + ♀ BADO

3/6/20
 ♂ SON076
 ♂ SON?
 ♂ + ♀ BADO

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 COAST AREA
 RESOURCE MANAGEMENT

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Legend 18

- NSO Survey Stations
- NTMP Boundary
- Property Boundary

Bohemian Grove NTMP NSO Survey Stations

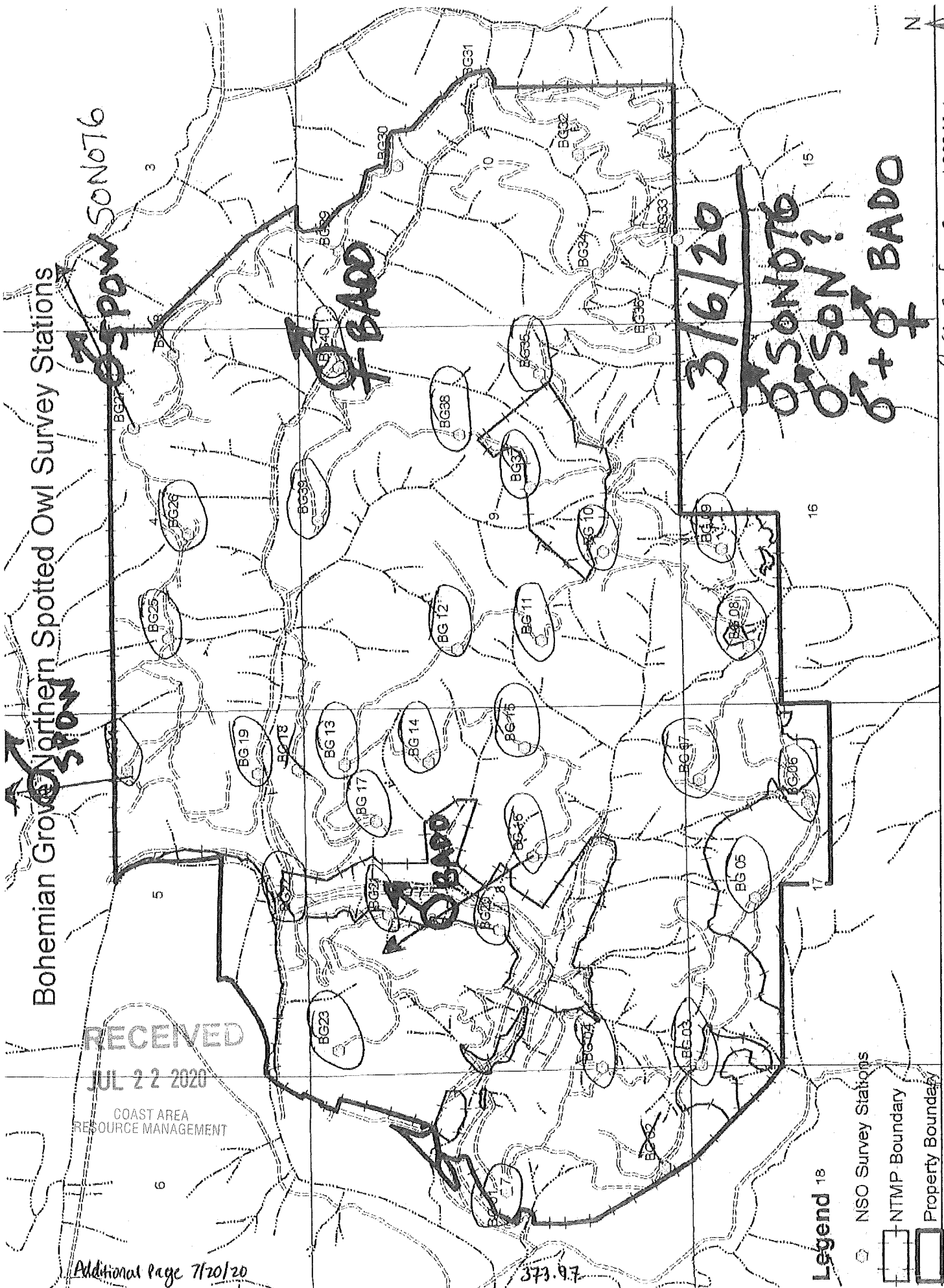
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0 Page 3 of 3

1,000 Meters



Northern Spotted Owl Survey Form

Surveyor Mike Stephens Date 03/21/20 (mm/dd/yy) Landowner Bohemian Grove

Calling Area - Township 7N Range 10W Section(s) 3-10, 16-18

THP/Plan Area Being Surveyed Bohemian Grove NTH Units 2000 NTO Watershed Smith Cr/Russian

Weather

Wind Calm, Breeze, Moderate, Windy, Gust

Clouds: Clear, Scattered, Overcast, Fog

Precipitation: Dry, Fog, Misty, Drizzle, Light Rain, Rain, Heavy Rain, Intermittent, Hail

Significant Weather Changes During Survey _____

Complete THP Visit? ☒ N

With other visit? _____

Other THP'S _____

TIME

Station	Start	Stop	Total	Response	Sex	Azimuth	Comments
BG20	1954	2004	10	No			
BG21	2010	2020	10	Yes	F	@ station	* BADO ♀ @ station as I'm leaving
BG22	2027	2037	10	Yes, 2031	F	@ station	* BADO ♀ from BG21 shows up @ station
BG23	2047	2057	10	No			I listen for duration of survey
BG19	2114	2124	10	Yes, 2121	♂	92°	* BADO ♂ faint/distant echoing
BG24	2131	2141	10	No			
BG25	2146	2156	10	No			
BG26	2201	2211	10	No			
BG27	2215	2220	5	Yes, 2218	F	82°	* SPOW ♀ contact calling in response down hill off-property
BG17	2238	2248	10	No			
BG16	2258	2308	10	No			
BG15	2313	2323	10	No			
BG14	2327	2337	10	Yes, 2332	♂	253°	* BADO ♂ doing single "trills" repeatedly ~ 250m down hill
BG13	2341	2351	10	No			
BG12	2355	0005	10	No			
BG11	0008	0018	10	No			
BG10	0024	0034	10	No			
BG08	0039	0049	10	No			* NSWO @ 111° ~ 100m
BG07	0055	0105	10	No			
BG06	0111	0121	10	No			* WESO @ 153° ~ 25m
BG05	0125	0135	10	No			
BG04	0144	0154	10	No			* WESO Pair @ 179° ~ 50m
BG04	0159	0209	10	No			

SON

Owl Response Location(s)

#076 1) Township _____ Range _____ Section _____ ¼ sec _____ 1/16 sec _____ 1/64 sec _____

Sex ♀ UTM East 502912 UTM North 4259164 Coordinate system NAD 83

VEN # _____ 2) Township _____ Range _____ Section _____ ¼ sec _____ 1/16 sec _____ 1/64 sec _____

Sex _____ UTM East _____ UTM North _____ Coordinate system _____

Additional Comments

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COAST AREA
RESOURCE MANAGEMENT

373.98

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Northern Spotted Owl Survey Form

Surveyor Mike Stephens Date 03/21/22 (mm/dd/yy) Landowner Bohemian Grove

Calling Area - Township 7N Range 10W Section(s) 3-10, 16-18

THP/Plan Area Being Surveyed Bohemian Grove NTP Units 2020 N To Watershed Smith Cr / Russian

Weather

Complete THP Visit? (Y) N

Wind: ~~Calm~~ Breeze, Moderate, Windy, Gust

With other visit ?

Clouds: Clear, Scattered, Overcast, Fog

Other THP'S

Precipitation: Dry, Fog, Misty, Drizzle, Light Rain, Rain, Heavy Rain, Intermittent, Hail

Significant Weather Changes During Survey

TIME

[illegible]

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COAST AREA
RESOURCE MANAGEMENT

Owl Response Location(s)

1) Township _____ Range _____ Section _____ 1/4 sec _____ 1/16 sec _____ 1/64sec _____

UTM East UTM North Coordinate system

2) Township _____ Range _____ Section _____ 1/4 sec _____ 1/16 sec _____ 1/64sec _____

UTM East UTM North Coordinate system

Additional Comments

373.99

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Bohemian Grove Northern Spotted Owl Survey Stations

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COAST AREA
RESOURCE MANAGEMENT

Additional Page 7/20/20



Legend 18

- NSO Survey Stations
- ▭ NTMP Boundary
- ▭ Property Boundary

Bohemian Grove NTMP NSO Survey Stations

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1,000 Meters

Page 3 of 3

Northern Spotted Owl Survey Form

Surveyor Mike Stephens Date 03/29/20 (mm/dd/yy) Landowner Bohemian Grove

Calling Area - Township _____ Range _____ Section(s) _____

THP/Plan Area Being Surveyed Bohemian Grove NTP Units All-Purpose Watershed Smith Cr/Russian River

Weather

Wind: Calm, Breeze, Moderate, Windy, Gust

Clouds: Clear, Scattered, Overcast, Fog

Precipitation: Dry, Fog, Misty, Drizzle, Light Rain, Rain, Heavy Rain, Intermittent, Hail

Significant Weather Changes During Survey Light Drizzle starts @ 0530

Complete THP Visit? ☒ Y ☐ N

With other visit? _____

Other THP's _____

TIME

Station	Start	Stop	Total	Response	Sex	Azimuth	Comments
BG19	2009	2019	10	No			* WESO @ station
BG24	2025	2035	10	No			
BG25	2041	2051	10	Yes, 2043	♂	352°	* SPow ♂ replies - faint/distant can barely hear, down towards bottom of drainage. Listen for drat.
BG29	2059	2109	10	Yes, 2106	♂	@ station	* BADO ♂ @ station - I listen for drat
BG28	2114	2124	10	Yes, 2117	♀	167°	* BADO ♀ faint/distant in bottom
				2121	♂	333°	* SPow ♂ ≈ 75m, while I'm just listening after detecting ♀ BADO SON 076
BG26	2128	2138	10	No			* NSWO @ 223° ≈ 250m
BG27							* Station dropped due to SPow/BADO
BG17	2153	2203	10	No			
BG16	2211	2221	10	No			
BG15	2225	2235	10	No			
BG14	2240	2250	10	No			
BG13	2253	2303	10	No			
BG12	2307	2317	10	No			
BG11	2320	2330	10	No			
BG10	2335	2345	10	No			
BG08	2349	2359	10	No			
BG09	0005	0015	10	No			
BG07	0020	0030	10	No			
BG06	0035	0045	10	No			
BG05	0048	0058	10	No			* WESO @ 235° ≈ 75m

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COAST AREA
RESOURCE MANAGEMENT

Owl Response Location(s)

1) Township _____ Range _____ Section _____ 1/4 sec _____ 1/16 sec _____ 1/64 sec _____
 iPow ♂ BG25 SON ?? UTM East 501760 UTM North 4259377 Coordinate system NAD 83

2) Township _____ Range _____ Section _____ 1/4 sec _____ 1/16 sec _____ 1/64 sec _____
 iPow ♂ BG28 SON 076 UTM East 502964 UTM North 4259013 Coordinate system NAD 83

Additional Comments

373.101

Additional Page 7/20/20

Page 1 of 3

Northern Spotted Owl Survey Form

Surveyor Mike Stephens Date 03/29/20 (mm/dd/yy) Landowner Bohemian Grove

Calling Area - Township _____ Range _____ Section(s) _____

THP/Plan Area Being Surveyed Bohemian Grove NTHA Units All-Property Watershed Smith Cr/ Russian River

Weather

Wind: Calm Breeze, Moderate, Windy, Gust

Clouds: Clear, Scattered, Overcast, Fog

Precipitation: Dry, Fog, Misty, Drizzle, Light Rain, Rain, Heavy Rain, Intermittent, Hail

Significant Weather Changes During Survey Light drizzle starts @ 0530

Complete THP Visit? (Y) N

With other visit? _____

Other THP'S _____

TIME

Station	Start	Stop	Total	Response	Sex	Azimuth	Comments
BG03	0102	0112	10	NO			
BG04	0115	0125	10	NO			
BG01	0129	0139	10	Yes, 0137	♂	288°	* BADO ♂ ≈ 750m across Hwy 116 NSWO @ 2" × 200m
BG20	0149	0159	10	NO			
BG21	0204	0214	10	NO			
BG22	0217	0227	10	NO			* GHOW @ 13° faint/distant
BG23	0234	0244	10	NO			* NSWO @ 313° ≈ 1000m
BG40	0315	0325	10	NO			
BG39	0329	0339	10	NO			
BG38	0343	0353	10	Yes, 0351	♂	293°	* BADO ♂ ≈ 150m, I listen for duration
BG37	0356	0406	10	NO			
BG35	0412	0422	10	NO			
BG36	0426	0436	10	NO			
BG34	0439	0449	10	NO			
BG33	0453	0503	10	Yes, 0457	♂	@ station	* BADO ♂ at station, I listen for duration
BG32	0507	0517	10	NO			
BG96	0522	0532	10	NO			
BG30	0538	0548	10	Yes, 0546	♂	157°	* BADO ♂ nearby ≈ 50m
BG31	0552	0602	10	NO			

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RESOURCE MANAGEMENT

Owl Response Location(s)

1) Township _____ Range _____ Section _____ ¼ sec _____ 1/16 sec _____ 1/64 sec _____

UTM East _____ UTM North _____ Coordinate system _____

2) Township _____ Range _____ Section _____ ¼ sec _____ 1/16 sec _____ 1/64 sec _____

UTM East _____ UTM North _____ Coordinate system _____

Additional Comments

373.102
Additional Page 7/20/20

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Spott

SONO 76

Additional Page 7/20/20

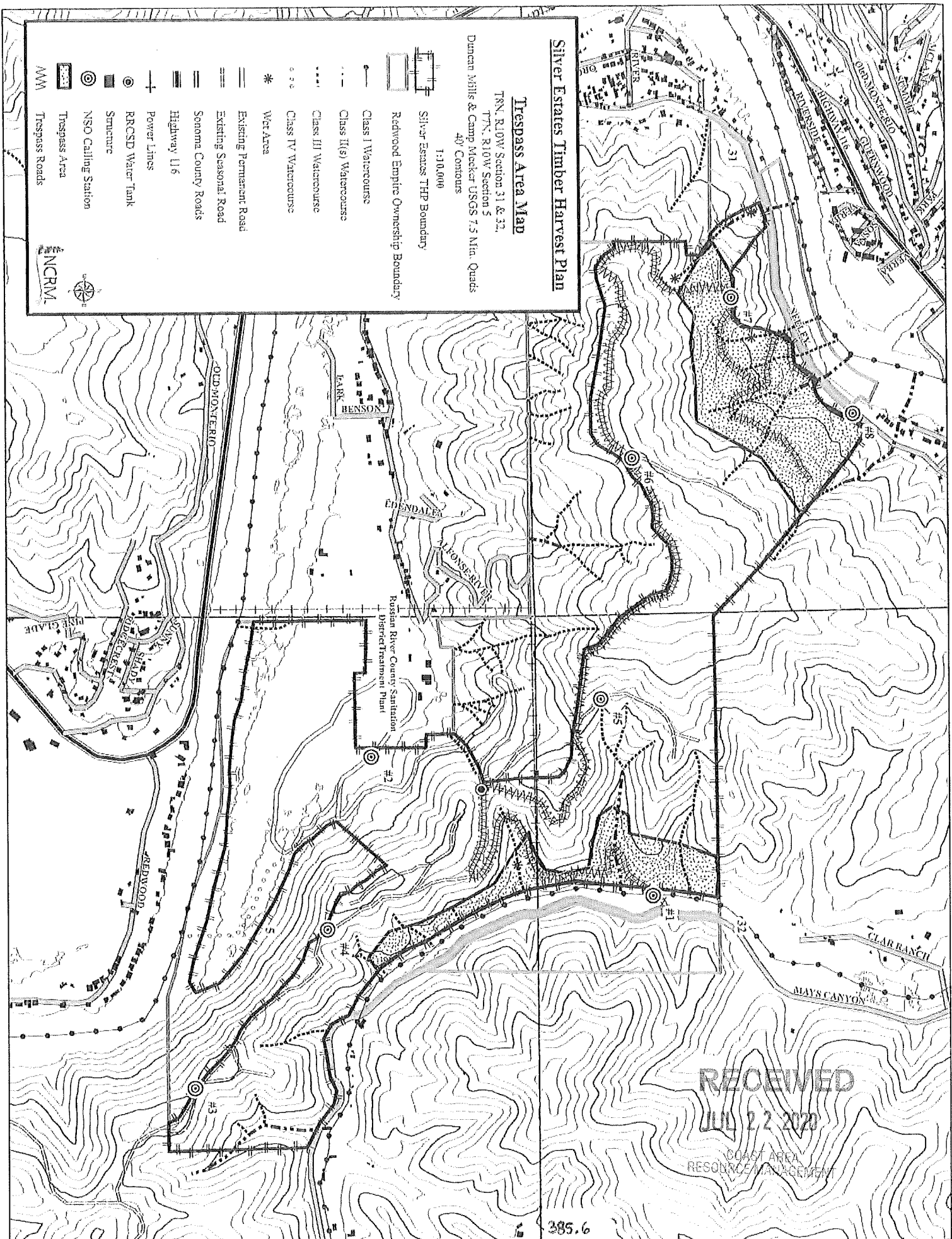


Silver Estates Timber Harvest Plan

Trespass Area Map

TRN, R10W Section 31 & 32,
 T7N, R10W Section 5
 Duncan Mills & Camp Meeker USGS 7.5 Min. Quads
 40' Contours
 1:10,000

- Silver Estates THP Boundary
- Redwood Empire Ownership Boundary
- Class I Watercourse
- Class II(s) Watercourse
- Class III Watercourse
- Class IV Watercourse
- Wet Area
- Existing Permanent Road
- Existing Seasonal Road
- Sonoma County Roads
- Highway 116
- Power Lines
- RR/CSD Water Tank
- Structure
- NSO Calling Station
- Trespass Area
- Trespass Roads

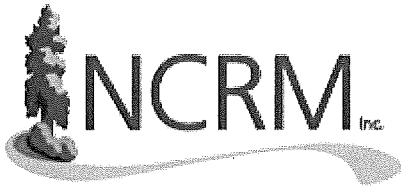


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From: Jamie Pusich <jpusich@ncrm.com>
Sent: Wednesday, July 22, 2020 9:17 AM
To: Santa Rosa Review Team@CALFIRE
Subject: THP # 1-20-00084 SON "
Attachments: THP# 1-20-00084 SON Silver Estates- 1st Review RPF Responses Part 1.pdf

Warning: this message is from an external user and should be treated with caution.

Jamie B. Pusich
Forester, RPF #3043
North Coast Resource Management, INC
Phone: (707) 489-5219



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From: Jamie Pusich <jpusich@ncrm.com>
Sent: Wednesday, July 22, 2020 9:27 AM
To: Santa Rosa Review Team@CALFIRE
Subject: THP #1-20-00084 SON Silver Estates 1st review RPF Responses
Attachments: THP# 1-20-00084 SON Silver Estates- 1st Review RPF Responses Part 2 (Compressed).pdf

Warning: this message is from an external user and should be treated with caution.

Good morning review team,

Here is the second part of the RPF Responses for THP #1-20-00084 SON.

-Jamie

Jamie B. Pusich

Forester, RPF #3043

North Coast Resource Management, INC

Phone: (707) 489-5219



Jamie B. Pusich

Forester, RPF #3043

North Coast Resource Management, INC

Phone: (707) 489-5219



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