

TO: Application File #P20-00247-ECPA

FROM: Pamela Arifian, Planner III

DATE: March 20, 2024

RE: Response to Comments – Winrod Vineyard Conversion  
Agricultural Erosion Control Plan (ECPA) File #P20-00247-ECPA  
Assessor’s Parcel Number APNs 017-110-038  
3465 State Highway 128, Calistoga  
SCH #2023080485

**INTRODUCTION**

This memorandum has been prepared by the County Conservation Division to respond to comments received by the Napa County Department of Planning, Building and Environmental Services (Napa County) on the Proposed Initial Study/Mitigated Negative Declaration (Proposed IS/MND) for the Winrod Vineyard Conversion #P20-00247-ECPA (proposed project). An IS/MND is an informational document prepared by a Lead Agency, in this case, Napa County, that provides environmental analysis for public review. The agency decision-maker considers it before taking discretionary actions related to any proposed project that may have a significant effect on the environment. The Proposed IS/MND analyzed the impacts resulting from the proposed project and where applicable, identified mitigation measures to minimize the impacts to less-than-significant levels.

This memorandum for the Winrod Vineyard Conversion Agricultural Erosion Control Plan #P20-00247-ECPA Proposed IS/MND presents the name of the persons and/or organizations commenting on the Proposed IS/MND and responses to the received comments. This memorandum, in combination with the IS/MND, completes the Final IS/MND.

**CEQA PROCESS**

In accordance with Section 15073 of the CEQA *Guidelines*, Napa County submitted the Proposed IS/MND to the State Clearinghouse for a 30-day public review period starting August 22, 2023. In addition, Napa County circulated a Notice of Intent to Adopt the Proposed IS/MND to interested agencies and individuals. The public review period ended on September 21, 2023. During the public review period, Napa County received one (1) comment letter on the Proposed IS/MND. Table 1 below lists the entity

that submitted comments on the Proposed IS/MND during the public review and comment period. The comment letter is attached as identified in Table 1.

**TABLE 1  
COMMENTS RECEIVED ON THE PROPOSED IS/MND**

Comment N <sup>o</sup> / Attachment	Comments Received from	Date Received
1	California Department of Fish and Wildlife (CDFW)	September 25, 2023

**TABLE 2  
ERRATA**

- |   |                            |
|---|----------------------------|
| 1 | Erratum: Farming Practice  |
| 2 | Erratum: Groundwater Wells |

In accordance with CEQA *Guidelines* Section 15074(b), Napa County considers the Proposed IS/MND together with comments received, both during the public review process and before action on the project, prior to adopting the Proposed IS/MND and rendering a decision the project. The CEQA *Guidelines* do not require the preparation of a response to comments for mitigated negative declarations; however, this memorandum responds to comments received.

Based on review of the comments received, as well as the Errata discussed herein, no new potentially significant impacts beyond those identified in the Proposed IS/MND would occur, no new or additional mitigation measures, or project revisions, must be added to reduce impacts to a less than significant level, and none of the grounds for recirculation of the Proposed IS/MND as specified in State CEQA *Guidelines* Section 15073.5 have been identified. All potential impacts identified in the Proposed IS/MND were determined to be less-than-significant or less-than-significant with mitigation incorporated.

Furthermore, this Response to Comments Memorandum will be provided to the owner/Permittee as **notice** of potential Local, State and Federal permits necessary to implement and operate this project as identified within the attached agency comment letters, and that project approval shall be subject to conditions of approval requiring any and all such permits be obtained prior to the commencement of vegetation removal and earth-disturbing activities (grading) associated with #P20-00247-ECPA.

## RESPONSE TO COMMENTS

### *Comment #1 California Department of Fish and Wildlife (Attachment 1)*

#### **Response to Comment 1.1:**

As disclosed in **Section IV, Biological Resources**, of the Proposed IS/MND and in the Biological Resources Reconnaissance Survey (BRRS, **Exhibit B-1** of the Proposed IS/MND), and stated in the comment letter, the coast redwood and Douglas fir forests on and near the proposed project parcel may have supported moderate habitat for northern spotted owl, but the forests were severely burned and now occur as open xeric habitats not suitable for the cool, shaded forest species, and that the nearest recorded occurrence according to data maintained by CDFW was 1.75 miles to the southwest of the site. The BRRS concluded that habitat for NSO is not present. The comment states that the area is mapped as mostly medium suitability NSO habitat according to California Wildlife Habitat Relationships model, and that the project area is within a habitat patch large enough to support a breeding pair according to the California Bay Area Linkage Network and therefore nesting NSO couple be present at or within 0.25-mile of project activities. The California Wildlife Habitat Relationships model NSO data) was last updated in BIOS on March 8, 2016 (<https://apps.wildlife.ca.gov/bios6/?dslist=897,2185&al=897> accessed on October 3, 2023), and the California Bay Area Linkage Network NSO data was last updated in BIOS on November 21, 2014 (<https://apps.wildlife.ca.gov/bios6/?al=ds876> accessed on October 3, 2023). As disclosed in the project description of the Proposed IS/MND and **Exhibit B-1**, the project site was severely burned in the 2017 Tubbs Fire, and a majority of the burned area on the parcel (and neighboring parcels) was subsequently logged (refer to **Exhibit F** and Figures 2 and 3 of **Exhibit B-1** of the Proposed IS/MND, and as observed on current and historic aerials on Napa County GIS and Google Earth), resulting in the open, xeric habitat referenced in the BRRS and **Section IV, Biological Resources**, of the Proposed IS/MND. The area within 0.25-mile of proposed project activities (the area of which would be reduced following implementation of Mitigation Measures BR-5 and BR-6) contains vineyard or land that is recovering from the fire and subsequent logging, and does not contain suitable habitat for nesting NSO. As a result, the County appropriately considers the potential impacts on NSO to be less than significant without need for further mitigation, as identified in the Proposed IS/MND.

However, as added assurance against any potential disturbance, the condition below will be included in any approving action by the County:

**Condition of Approval – Northern Spotted Owl:** For project activities occurring between March 15 and July 31, prior to any vegetation removal or vineyard development activities, a qualified biologist shall perform a NSO habitat assessment to determine the potential for this species to be present within the proposed vineyard blocks and within a 0.25-mile buffer surrounding each block. The assessment shall include both a review of recent aerial photography and a field visit to review conditions directly. Additionally, the qualified biologist shall perform an on-site nocturnal calling survey for NSO from at least mid-March onward and prior to initiation of vineyard development activities. Survey stations for the calling survey shall be sited to cover post-fire forest stands that are most suitable for NSO occupation. The results of the updated habitat assessment and survey shall be provided to the County for review prior to project initiation. If NSO is observed or otherwise believed to be present within the focal area described above, prior to project initiation, measures such as a no-disturbance buffer zone shall be implemented in consultation with CDFW to ensure that

project activities would not result in a take of the species and that any potential impacts are otherwise minimized to the extent feasible.

**Response to Comment 1.2:** Comment noted. The CDFW recommendation to submit to the California Natural Diversity Database reports of any special-status species and natural communities detected during project pre-construction surveys shall be included as a condition of approval, should the project be approved:

**Wildlife Survey Reporting Condition** – The permittee shall use its best efforts to submit any reports of special-status species and natural communities detected during project pre-construction surveys to the California Natural Diversity Database.

**Response to Comment 1.3:** The CDFW Environmental Filing Fee for a Mitigated Negative Declaration will be paid upon filing of the CEQA Notice of Determination for this project, if approved.

### *Errata*

**Erratum 1, Farming Practice:** During final review prior to taking action, the County identified a minor error in the Proposed IS/MND regarding the proposed project farming practice. The original project (**Exhibit A** of the Proposed IS/MND) and associated technical studies (**Exhibits C and D** of the Proposed IS/MND) proposed alternate-row till farming practice. The proposed alternate-row till practice was analyzed for potential impacts to soil loss and runoff during project application completeness review in the USLE and Hydrologic Analyses, which were deemed complete in a Technical Adequacy memo by County Engineering Division dated July 30, 2021 (**Exhibit G** of the Proposed IS/MND). The Proposed IS/MND erroneously identified that the project proposed permanent no-till farming practice, and included the same error in the Erosion and Runoff Control (i.e., Hydromodification) Installation and Operation Condition of Approval found in **Section VII, Geology and Soils**.

The Project Proponent submitted revised project plans and associated technical studies for action; these documents reflect the reduced project development footprint resulting from incorporation of relevant mitigation measures found in the Proposed IS/MND, and as attested in the Project Revision Statement (**Exhibit H** of the Proposed IS/MND). The plans include the originally proposed alternate-row till farming practice. The County Engineering Division reviewed the revised USLE and Hydrologic Analyses with the revised plans, and deemed these analyses complete in a Technical Adequacy memo dated March 18, 2024 (included herein as Attachment 2). Project impacts related to soil loss and runoff remain less than significant.

**Erratum 2, Groundwater Wells:** Following the public review period for the Proposed IS/MND, Napa County updated its guidance for compliance with the Public Trust Doctrine in a Memorandum from County Counsel entitled “Application of Public Trust Doctrine to Projects Dependent on Groundwater” and dated January 10, 2024 (<https://www.countyofnapa.org/3074/Groundwater-Sustainability>; hereafter referred to as “Public Trust Memorandum”). The updated guidance in the Public Trust Memorandum required that, for project wells located within 1,500 feet of a Significant Stream and for which

connectivity exists with the Significant Stream, a project must propose modifications to the project well(s) to reduce impacts on Public Trust resources.

As discussed in **Section X, Hydrology and Water Quality**, of the Proposed IS/MND, the project proposed to utilize the existing well onsite to provide water to all existing and proposed uses on the parcel, and that the well was located within 1,455 feet from Blossom Creek, a County-designated Significant Stream, and that connectivity exists for a short window of time during the year. In lieu of modifying the existing well to reduce impacts to Public Trust resources pursuant to the Public Trust Memorandum, the Owner has proposed to drill a new “Project Well” prior to any vegetation removal or earthmoving associated with the proposed vineyard development project. The “Project Well” would provide water for all agricultural uses on the site, and the existing well would become the “Domestic Well” serving domestic purposes exclusively. The revised Tier 1 Water Availability Analysis dated January 2024 reflects this change in the project well conditions, and that the new project well would be located outside of the interference zones from Significant Streams, springs and neighboring wells as identified in the County’s WAA Guidance Document (refer to Exhibit 1, Well Interference Exhibit, in the revised Tier 1 WAA (Attachment 3)). The resulting project would reduce impacts on Public Trust by reducing groundwater demand on the existing well (to become the “Domestic Well”) and by locating the new “Project Well” outside of the Significant Stream interference zone, as well as interference zones with neighboring wells or springs. This project modification would result in reduced impacts to groundwater resources compared to what was analyzed in the Proposed IS/MND.

To ensure that the groundwater resources are utilized as proposed, the Groundwater Management Condition of Approval found in **Section X, Hydrology and Water Quality**, has been modified as follows (added language in *bold italics*, deleted language in strikethrough):

*Groundwater Management, Wells – Existing / “Domestic Well”*

- a. The permittee shall install a meter on the existing well, which will become the “Domestic Well” following installation of the “Project Well” prior to initiation of any vegetation removal associated with approved #P20-00247-ECPA. The meter shall be installed on the “Domestic Well” within 30 days of the date of project approval and prior to any vegetation removal or earth disturbing activities associated with vineyard installation. Monitoring of the well shall begin immediately.*
- b. Within 14 days of installation, evidence shall be provided to the County demonstrating installation and operation of the well meter on the “Domestic Well.” The PBES Department may extend these dates by taking into consideration the severity of the required changes with respect to public safety, or other factors that the PBES Department determines are reasonable. Any request for extension of time must be submitted in writing by the permittee and received by the PBES Department two (2) weeks prior to the end of the timelines specified herein and the PBES Department will determine the extension timeframe.*
- c. For the first 12 months of operation under this permit (i.e., following any portion of approved vineyard installation), the permittee shall read the meters at the beginning of each month and provide the data monthly to the PBES Director or designee. If the water usage on the “Domestic Well” exceeds, or is on track to exceed, 0.75-acre-feet per year, or if*

*the permittee fails to report, additional reviews and analysis and/or a corrective action program at the permittee's expense shall be required and shall be submitted to the PBES Director for review and action. The permittee's wells (including the "Domestic Well" and the "Project Well") shall be included in the Napa County Groundwater Monitoring program if the County finds the wells suitable.*

- d. At the completion of the reporting period (10(c), above), and so long as the water usage is within the maximum acre-feet per year as specified above, the permittee may begin the following meter reading schedule:*
- On or near the first day of each month the permittee shall read the water meter and provide the data to the PBES Director during the first weeks of April and October. The PBES Director or designee has the right to access and verify the operation and readings of the meters during regular business hours.*

**Groundwater Management, Wells – "Project Well" Condition**

- a. The new "Project Well" shall be installed with necessary permits prior to any vegetation removal associated with the approved #P20-00247-ECPA. The "Project Well" shall be installed in an area outside of the area indicated in red as the "area not suitable for well drilling" as identified on the Well Interference Exhibit in the Tier 1 Water Availability Analysis prepared by Bartelt Engineering and dated January 2024 and as follows:*
- The well shall be installed outside of the required 1,500-foot interference zone from Blossom Creek (a County-designated "Significant Stream") as identified on the Exhibit;*
  - The well shall be installed outside of the required 1,500-foot interference zone from existing spring identified on the Exhibit on the neighboring parcel to the south of the project parcel (APN 020-410-011-000); and*
  - The well shall be installed outside of the required 500-foot interference zone from existing wells as identified on the Exhibit.*

*Please note that, pursuant to NCC Section 18.108.050(F), earthmoving activities necessary for preliminary testing for site suitability and the construction of a water well are exempt from the Conservation Regulations. Pursuant to NCC Section 18.108.050(G), earthmoving activities necessary for preliminary testing for site suitability for water wells (as approved by PBES) is exempt from the Conservation Regulations provided that the testing does not involve construction of roads, and that disturbed areas are revegetated and treated for erosion control.*

- b. The Owner/Permittee shall be required (at the permittee's expense) to **install a well meter and** to record well monitoring data (specifically, static water level no less than quarterly, and the volume of water no less than monthly) **on the "Project Well."** Such data shall be provided to the County, if the PBES Director determines that substantial evidence indicates that water usage is affecting, or would potentially affect, groundwater supplies. If data indicates the need for additional monitoring, and if the owner/permittee is unable to secure monitoring access to neighboring wells, onsite monitoring wells may need to be established to gauge potential impacts on the groundwater resource utilized for the project. Water*

usage shall be minimized by use of best available control technology and best water management conservation practices.

- c. In order to support the County's groundwater monitoring program, well monitoring data as discussed above shall be provided to the County if the PBES Director determines that such data could be useful in supporting the County's groundwater monitoring program. The project well shall be made available for inclusion in the groundwater monitoring network if the PBES Director determines that the well could be useful in supporting the program.
- d. In the event that changed circumstances or significant new information provide substantial evidence that the groundwater system referenced in the Erosion Control Plan #P20-00247-ECPA would significantly affect the groundwater basin, the PBES Director shall be authorized to recommend additional reasonable conditions on the owner/permittee, or revocation of this permit, as necessary to meet the requirements of the Napa County Code and to protect public health, safety, and welfare.

#### **List of Attachments**

Attachment 1 – California Department of Fish and Wildlife letter dated September 22, 2023.

Attachment 2 – Napa County Engineering Division Technical Adequacy Memorandum dated March 18, 2024.

Attachment 3 – Bartelt Engineering, Tier 1 Water Availability Analysis revised January 2024

**ATTACHMENT 1**

**California Department of Fish and Wildlife**





State of California – Natural Resources Agency  
DEPARTMENT OF FISH AND WILDLIFE  
Bay Delta Region  
2825 Cordelia Road, Suite 100  
Fairfield, CA 94534  
(707) 428-2002  
[www.wildlife.ca.gov](http://www.wildlife.ca.gov)

GAVIN NEWSOM, Governor  
CHARLTON H. BONHAM, Director



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September 22, 2023

Pamela Arifian, Planner III  
Napa County  
1195 Third Street Second Floor  
Napa, CA 94559  
[Pamela.Arifian@countyofnapa.org](mailto:Pamela.Arifian@countyofnapa.org)

Subject: Winrod Vineyard Conversion Agricultural Erosion Control Plan #P20-00247-  
ECPA, Mitigated Negative Declaration, SCH No. 2023080485, Napa County

Dear Ms. Arifian,

The California Department of Fish and Wildlife (CDFW) received a Mitigated Negative Declaration (MND) from Napa County (County) for the Winrod Vineyard Conversion Agricultural Erosion Control Plan # P20-00247-ECPA (Project) pursuant to the California Environmental Quality Act (CEQA) and CEQA Guidelines.<sup>1</sup>

CDFW is submitting comments on the MND to inform the County, as the Lead Agency, of potentially significant impacts to biological resources associated with the Project. CDFW would like to thank Napa County for including in the MND Mitigation Measure BR-5 limiting impacts to Madrone Forest, a CDFW-designated Sensitive Natural Community, and requiring preservation of Madrone Forest at a 3:1 preservation to impact ratio under a perpetual deed restriction or conservation easement or other means of permanent protection.

## CDFW ROLE

CDFW is a **Trustee Agency** with responsibility under CEQA pursuant to CEQA Guidelines section 15386 for commenting on projects that could impact fish, plant, and wildlife resources. CDFW is also considered a **Responsible Agency** if a project would require discretionary approval, such as permits issued under the California Endangered Species Act (CESA), the Lake and Streambed Alteration (LSA) Program, or other provisions of the Fish and Game Code that afford protection to the state's fish and wildlife trust resources.

## PROJECT DESCRIPTION SUMMARY

**Proponent:** Winrod Family Trust, represented by Michael A. Winrod

<sup>1</sup> CEQA is codified in the California Public Resources Code in section 21000 et seq. The "CEQA Guidelines" are found in Title 14 of the California Code of Regulations, commencing with section 15000.

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**Objective:** The Project involves clearing of vegetation, earthmoving, and installation and maintenance of erosion control measures associated with the development of approximately 16.5 gross acres of vineyard with approximately 13.0 net planted acres in three vineyard blocks located on a 104.8-acre property (i.e., Project site). This includes approximately 6.0 gross acres (4.6 net acres) of existing vineyard that was installed without benefit of an approved Erosion Control Plan (Blocks 1 and 2). Portions of Block 2 would be removed from the stream setback and the area revegetated with a native seed blend. Proposed Block 1 would include 2.0 gross acres (1.4 net acres), proposed Block 2 would include 6.3 gross acres (5 net acres), and proposed Block 3 would include 8.2 gross acres (6.6 net acres) of new vineyard. An estimated 692 trees with a diameter-at-breast-height (dbh) greater than six (6) inches are proposed for removal with development of the Project, including blue oak (*Quercus douglasii*), California black oak (*Quercus kelloggii*), coast live oak (*Quercus agrifolia*), Oregon white oak (*Quercus garryana* var. *garryana*), and Pacific madrone (*Arbutus menziesii*), resulting in removal of a total of approximately 8.83 acres, which includes approximately 6.07 acres of mixed oak woodland, 2.76 acres of blue oak woodland, and 1.05 acres of Pacific madrone forest. Rock removed during the clearing and development of the land would be used as part of the erosion control measures, including the graveled vineyard avenue and rock outfalls. There would be no transport of spoils off-site. The vineyard would be irrigated with approximately 6.2 acre-feet per year (AF/year) of groundwater. New wildlife exclusion fencing would connect with existing fencing in the Project site to enclose the proposed vineyard blocks. The Project includes relocation of the existing driveway and revegetation of approximately 0.46-acre within the stream setback using a native seed blend.

**Location:** The Project area is at 3465 State Highway 128, Calistoga, CA 94515; approximately Latitude: 38.592574°, Longitude: -122.631332°

## REGULATORY REQUIREMENTS

### California Endangered Species Act

Please be advised that a CESA Incidental Take Permit (ITP) must be obtained if the Project has the potential to result in "take" of plants or animals listed under CESA, either during construction or over the life of the Project. **The Project has the potential to impact northern spotted owl (NSO) (*Strix occidentalis caurina*), CESA listed as threatened species, as further described below.** Issuance of an ITP is subject to CEQA documentation; the CEQA document must specify impacts, mitigation measures, and a mitigation monitoring and reporting program. If the Project will impact CESA listed species, early consultation is encouraged, as significant modification to the Project and mitigation measures may be required in order to obtain an ITP.

CEQA requires a Mandatory Finding of Significance if a project is likely to substantially restrict the range or reduce the population of a threatened or endangered species. (Pub.

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Resources Code, §§ 21001, subd. I & 21083; CEQA Guidelines, §§ 15380, 15064, & 15065). Impacts must be avoided or mitigated to less-than-significant levels unless the CEQA Lead Agency makes and supports Findings of Overriding Consideration (FOC). The CEQA Lead Agency's FOC does not eliminate the Project proponent's obligation to comply with CESA.

## COMMENTS AND RECOMMENDATIONS

CDFW offers the comments and recommendations below to assist the County in adequately identifying and/or mitigating the Project's significant, or potentially significant, direct and indirect impacts on fish and wildlife (biological) resources. Based on the Project's avoidance of significant impacts on biological resources with implementation of mitigation measures, including those CDFW recommends below and in **Attachment 1**, CDFW concludes that an MND is appropriate for the Project.

**Mandatory Findings of Significance: Does the Project have the potential to substantially reduce the number or restrict the range of an endangered, rare, or threatened species?**

### **Comment 1: Northern Spotted Owl – Environmental Setting Shortcoming**

**Issue:** The MND discusses that the severely burned forest in the Project site is now an open xeric habitat not suitable for NSO. However, NSO often have a strong site fidelity and will return to a previous nesting site multiple seasons even after a burn and recent Google Earth aerial imagery dated May 13, 2023, appears to show intact forest within the Project site and vicinity. Additionally, it was determined that the nearest recorded occurrence according to the California Natural Diversity Database (CNDBB) is located 1.75 miles to the southwest of the site. According to the parcel mapped in Figure 1 from the Biological Assessment report, the Project site is within a habitat patch large enough to support a breeding pair according to the California Bay Area Linkage Network connectivity modeling for NSO. It is also mapped as mostly medium suitability NSO habitat according to the California Wildlife Habitat Relationships model. Therefore, it appears that nesting NSO could be present at or within 0.25 miles of the Project site, which is the distance at which nesting NSO may be impacted.

**Specific impacts and why they may occur and be significant:** If suitable NSO nesting habitat occurs within a 0.25-mile radius of the Project site and active NSO nests are present but not detected because surveys did not occur, the Project may result in audio or visual disturbances to nesting NSO, which may cause nest abandonment and loss of eggs or reduced health and vigor and loss of young, thereby substantially reducing the number of the species. NSO is CESA listed as threatened species and therefore is considered to be a threatened species pursuant to CEQA Guidelines section 15380. Therefore, if an active NSO nest is disturbed by the Project, the Project may result in a substantial reduction in the number of a threatened species, which is

1.1

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considered a Mandatory Finding of Significance pursuant to CEQA Guidelines section 15065, subdivision (a)(1).

**Recommended Mitigation Measure:** To reduce impacts to NSO to less-than-significant and comply with CESA, CDFW recommends including the following mitigation measure.

MM BR-7. Northern Spotted Owl Habitat Assessment and Surveys: A qualified biologist shall provide an assessment of potential NSO nesting habitat within the Project site and a 0.25-mile radius and obtain CDFW's written acceptance of the assessment. Alternatively, if the assessment is not completed, or if it concludes that NSO nesting habitat is present, then no Project activities shall occur between March 15 and July 31 unless a qualified biologist conducts NSO surveys within a 0.25-mile radius around the Project site following the U.S. Fish and Wildlife Service (USFWS) Protocol for Surveying Proposed Management Activities That May Impact Northern Spotted Owls, dated (revised) January 9, 2012 and no nesting NSO are detected. Surveys shall be conducted in accordance with Section 9 of the survey protocol, Surveys for Disturbance-Only Projects. If nesting NSO are detected during surveys, a 0.25-mile no-disturbance buffer zone shall be implemented around the nest until the end of the breeding season, or a qualified biologist determines that the nest is no longer active, unless otherwise approved in writing by CDFW. The Project shall obtain CDFW's written acceptance of the qualified biologist and survey report prior to Project construction occurring between March 15 and July 31 for each year, unless otherwise approved in writing by CDFW.

1.1

Alternate buffer zones may be proposed to CDFW after conducting an auditory and visual disturbance analysis following the USFWS guidance, Estimating the Effects of Auditory and Visual Disturbance to Northern Spotted Owls and Marbled Murrelets in Northwestern California, dated October 1, 2020. Alternative buffers must be approved in writing by CDFW.

If take of NSO cannot be avoided, the Project shall consult with CDFW pursuant to CESA and obtain an ITP, and also consult with USFWS pursuant to the federal Endangered Species Act (ESA).

## ENVIRONMENTAL DATA

CEQA requires that information developed in environmental impact reports and negative declarations be incorporated into a database which may be used to make subsequent or supplemental environmental determinations. (Pub. Resources Code, § 21003, subd. (e)). Accordingly, please report any special-status species and natural communities detected during Project surveys to CNDDDB. The CNDDDB field survey form can be filled out and submitted online at the following link:

1.2

<https://wildlife.ca.gov/Data/CNDDDB/Submitting-Data>. The types of information reported

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to CNDDDB can be found at the following link:  
<https://www.wildlife.ca.gov/Data/CNDDDB/Plants-and-Animals>

**ENVIRONMENTAL DOCUMENT FILING FEES**

The Project, as proposed, would have an impact on fish and/or wildlife, and assessment of environmental document filing fees is necessary. Fees are payable upon filing of the Notice of Determination by the Lead Agency and serve to help defray the cost of environmental review by CDFW. Payment of the environmental document filing fee is required in order for the underlying project approval to be operative, vested, and final. (Cal. Code Regs, tit. 14, § 753.5; Fish & G. Code, § 711.4; Pub. Resources Code, § 21089).

1.3

**CONCLUSION**

CDFW appreciates the opportunity to comment on the MND to assist the County in identifying and mitigating Project impacts on biological resources.

Questions regarding this letter or further coordination should be directed to Nikolas Storm, Environmental Scientist, at [Nikolas.Storm@wildlife.ca.gov](mailto:Nikolas.Storm@wildlife.ca.gov) or (707) 980-5172; or Melanie Day, Senior Environmental Scientist (Supervisory), at (707) 210-4415 or [Melanie.Day@wildlife.ca.gov](mailto:Melanie.Day@wildlife.ca.gov).

Sincerely,

DocuSigned by:  
*Erin Chappell*  
B77E9A6211EF488  
Erin Chappell  
Regional Manager  
Bay Delta Region

**Attachment 1: Draft Mitigation Monitoring and Reporting Program**

ec: Office of Planning and Research, State Clearinghouse (SCH No. 2023080485)

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## ATTACHMENT 1

### Draft Mitigation Monitoring and Reporting Program (MMRP)

CDFW provides the following language to be incorporated into the MMRP for the Project.

<b>Biological Resources (BIO)</b>			
<b>Mitigation Measure (MM)</b>	<b>Description</b>	<b>Timing</b>	<b>Responsible Party</b>
<b>MM BR-7</b>	<p>Northern Spotted Owl Habitat Assessment and Surveys. A qualified biologist shall provide an assessment of potential NSO nesting habitat within the Project site and a 0.25-mile radius and obtain CDFW's written acceptance of the assessment. Alternatively, if the assessment is not completed, or if it concludes that NSO nesting habitat is present, then no Project activities shall occur between March 15 and July 31 unless a qualified biologist conducts NSO surveys within a 0.25-mile radius around the Project site following the USFWS Protocol for Surveying Proposed Management Activities That May Impact Northern Spotted Owls, dated (revised) January 9, 2012 and no nesting NSO are detected. Surveys shall be conducted in accordance with Section 9 of the survey protocol, Surveys for Disturbance-Only Projects. If nesting NSO are detected during surveys, a 0.25-mile no-disturbance buffer zone shall be implemented around the nest until the end of the breeding season, or a qualified biologist determines that the nest is no longer active, unless otherwise approved in writing by CDFW. The Project shall obtain CDFW's written acceptance of the qualified biologist and survey report prior to Project construction occurring between March 15 and July 31 for each year, unless otherwise approved in writing by CDFW.</p> <p>Alternate buffer zones may be proposed to CDFW after conducting an auditory and visual disturbance analysis following the USFWS guidance, Estimating the Effects of Auditory and Visual Disturbance to Northern Spotted Owls and Marbled Murrelets in Northwestern California, dated October 1, 2020.</p>	<p>Prior to Ground Disturbance</p>	<p>Project Applicant</p>

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	<p>Alternative buffers must be approved in writing by CDFW.</p> <p>If take of NSO cannot be avoided, the Project shall consult with CDFW pursuant to CESA and obtain an ITP, and also consult with USFWS pursuant to the federal ESA.</p>		
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**ATTACHMENT 2**

**Napa County Engineering Division Technical Adequacy  
Memorandum**



## MEMORANDUM

To: Pamela Arifian  
Conservation Division

From: Raulton Haye  
Engineering Service

Date: March 18, 2024

Re: **Permit No. P20-00247**  
**Winrod Vineyards ECP-Track I**  
APN# 017-110-038

The Engineering Division has reviewed the technical studies for the proposed Winrod Vineyard Development – Erosion Control Plan (ECP) application, P20-00247, located on assessor’s parcel number 017-110-038. The proposed plan requests the replanting of 4.6 acres of vineyard and the development of approximately 5.3 acres of new vineyard, for a total of 9.9 acres, within three vineyard blocks.

The Engineering Division has determined the proposed project’s Soil Loss and Hydrology Studies prepared by Bartelt Engineering to be technically adequate with respect to Napa County’s Conservation Regulations Chapter 18.108, including Policy CON-48 and Policy CON-50(c) of Napa County’s General Plan.

Any changes in use or design may necessitate additional review and approval. If you have any questions regarding the above items please contact Raulton Haye from Napa County PBES Department Engineering Division at (707) 253-4621 or via e-mail at [raulton.haye@countyofnapa.org](mailto:raulton.haye@countyofnapa.org).

**ATTACHMENT 3**

**Tier 1 Water Availability Analysis**

**Revised January 2024**

TIER 1  
WATER AVAILABILITY ANALYSIS FOR  
WINROD VINEYARDS  
3465 STATE HIGHWAY 128  
NAPA COUNTY, CA  
APN 017-110-038

Prepared For:

Winrod Family Trust  
c/o Michael A. Winrod  
3465 State Highway 128  
Calistoga, CA 94515

Prepared By:

Bartelt Engineering  
1303 Jefferson Street, 200 B  
Napa, CA 94559  
(707) 258-1301

Richard Paxton, P.E.  
Project Engineer



January 2024 – Revised  
April 2023 – Revised  
September 2022 – Revised  
October 2021 – Revised  
September 2021 – Revised  
May 2021 – Revised  
August 2020  
Job No. 18-26

**BARTELT**  
ENGINEERING



**TIER 1**  
**WATER AVAILABILITY ANALYSIS FOR**  
**WINROD VINEYARDS**  
**3465 STATE HIGHWAY 128, NAPA COUNTY, CA**  
**APN 017-110-038**

As required by Napa County Planning, Building & Environmental Services (PBES), this study outlines the availability of groundwater for the proposed vineyard development located at 3465 State Highway 128, Napa County, CA. This January 2024 revision supersedes the April 2023 – Revision version of the document. This document has been modified to describe the reduction in the proposed vineyard acreage to be planted and proposed construction of a new “project well”.

**PROJECT DESCRIPTION**

The proposed project involves a Track I Vineyard Development and Erosion Control Plan that includes the planting of three (3) separate vineyard blocks (Vineyard Block 1, Block 2, and Block 3) located on the above referenced subject parcel that is located within the Agricultural Watershed (AW) zoning district. The 104.79± acre subject parcel is currently developed with a residence, garage, well, access roads, and 4.6± acres of vineyard (Vineyard Blocks A, B, C, and D). The project will be constructed under three (3) phases and includes a disturbed area of approximately 12.5± acres.

Permit records for the existing vineyard could not be found; it is our understanding that the existing vineyard was planted incrementally between 1997 and 2009. The Track I Vineyard Development and Erosion Control Plan proposes to develop 5.3± acres of new vineyard, continue to operate the existing 4.6± acres of vineyard that was installed without an approved Erosion Control Plan and ultimately remove and replant the existing vineyards and restore the necessary stream setbacks. The total proposed vineyard area is 9.9± acres. Refer to the attached Track I Vineyard Development and Erosion Control Plan (the Plan) prepared by Bartelt Engineering for the existing and proposed vineyard development.

**EXHIBITS**

The associated USGS “Topographic Site Location Information” and the Site Map of the Well on the Lands of Winrod Family Trust prepared by Terra Firma Surveys, Inc. dated December 12, 2022, shows the project site and approximate property lines and the approximate distance to *Blossom Creek*. Information regarding the proposed project is shown on the Plan including the location of the existing domestic well. The proposed “project well” potential drilling area is shown on the “Well Interference Exhibit”. The approximate locations of neighboring well(s), natural spring(s), and Significant Stream(s) are shown on the “Neighboring Well & Surface Water Location Map”. All maps and drawings mentioned above were prepared by Bartelt Engineering unless noted otherwise.

## SITE FEATURES

The subject parcel is located approximately four (4) miles west of the City of Calistoga, CA and borders the Sonoma County line to the west. The westerly portion of the subject parcel consists predominately of wooded areas and ground slopes greater than 50%. The easterly portion consists of vineyards, a small orchard, and residential improvements. The subject parcel was heavily impacted by the 2017 Tubbs fire and has been undergoing redevelopment of the residential structures. Several drainage courses are located throughout the subject parcel that drain to Blossom Creek which is located to the northeast of the subject parcel and is a tributary to the Napa River.

## SCREENING CRITERIA

Parcel Zoning	Agricultural Watershed (AW)
Project Parcel Locations	All Other Areas
Parcel Size: APN 017-110-039	104.79± acres
Tier 1: Water Use Criteria	Parcel Specific Recharge <sup>1</sup>
Tier 2: Well and Spring Interference	No neighboring well(s) are located within 500 feet of the proposed project well; No known springs (shown on the USGS map) are located within 1,500 feet of the proposed project well location.
Tier 3: Groundwater/Surface Water Interaction	The proposed project well <sup>2</sup> will be located a distance greater than 1,500 feet from Blossom Creek, the nearest Significant Stream.
Screening Tier	Tier 1

The subject parcel is located within the Agricultural Watershed (AW) Zoning District and outside the Napa Valley Subbasin & Groundwater Deficient Area (MST).

Per the Napa County Interim Well Permit Standards and Water Availability Analysis (WAA) Requirements dated January 2024, a Tier 1 analysis is required pursuant to Napa County's WAA Guidelines dated May 12, 2015, Napa County's Drought Emergency, Governor's Executive Order N-7-22/N-3-23, Napa Valley Subbasin Groundwater Sustainability Plan, Napa County Resolution 2022-178, Napa County Code Groundwater Conservation Ordinance - Chapter 13.15, recent court decisions, and pending State litigation.

A Tier 2 analysis will be required if the project well is located less than 500 feet to neighboring well(s) and/or 1,500 feet to a natural spring(s), additionally a Tier 3 analysis

<sup>1</sup> Where existing groundwater use exceeds the Parcel Specific Recharge, No Net Increase or reduction in Groundwater use is required, and shall be demonstrated through a water demand analysis.

<sup>2</sup> *Blossom Creek* is located approximately 1,455 feet from the existing domestic well. Due to the distance between the domestic well and *Blossom Creek* the project proposes to construct a new "project well" in a location greater than 1,500 feet from *Blossom Creek*.

will be required if the project well is located less than 1,500 feet to a Significant Stream Inside the Napa River Watershed.

Per the Napa County's Water Availability Analysis (WAA)-Guidelines dated May 12, 2015, the water use criteria for parcels located Outside Napa Valley Subbasin & MST a.k.a. in "All Other Areas" a Tier 1 Analysis shall be completed based on Parcel Specific Recharge. The water use criteria for the proposed project is considered parcel specific and must be considered in relation to the average annual recharge available to the project parcel.

### **SOURCE WATER INFORMATION**

The subject parcel currently contains one (1) domestic<sup>3</sup> well that supplies all water demands for the subject parcel. Water is pumped from the well to a storage tank(s) and then pumped to the residence and the existing vineyard irrigation system.

The project proposes to construct a new well to be utilized as a Project Well in a location away from neighboring well(s), natural spring(s), and Significant Stream(s)

Neither the existing domestic well nor proposed project well are located within 500 feet of any neighboring well(s), additionally the proposed project well will be located more than 1,500 feet from any USGS mapped natural springs and more than 1,500 feet from the nearest Significant Stream, *Blossom Creek*.

### **Well Description**

Per the Well Completion Report, the existing well (the domestic well) was constructed in 1996 by Fish Brothers Drilling, Inc. The well is reported to be constructed of five (5) inch diameter PVC F480 casing to a completed depth of 200 feet with a 20-foot bentonite annular seal. Refer to the attached Well Completion Report for additional information.

The proposed "project well" will be developed in a timely manner prior to the planting of the proposed vineyard development.

### **Yield Test**

A yield test was performed on the domestic well at the time of drilling with an estimated yield of 50+ gallons per minute (gpm). Based on conversations with the property owner and the well pump installer, it is our understanding that the existing well pump has an optimum efficiency pumping rate at 18 gpm and a performance range from 6 gpm to 28 gpm.

A yield test will be performed on the project well upon completion of its development.

### **Neighboring Water Source(s)**

Based on review of neighboring property records found online from the Napa County PBES Department and the California State Water Resources Control Board (SWRCB) Electronic Water Rights Information Mapping System (eWRIMS), there does not appear to be any

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<sup>3</sup> *Blossom Creek* is located approximately 1,455 feet from the existing domestic well. Due to the distance between the domestic well and *Blossom Creek* the project proposes to construct a new "project well" in a location greater than 1,500 feet from *Blossom Creek*.

neighboring<sup>4</sup> groundwater wells located within 500 feet of the proposed project well location nor any surface water<sup>5</sup> sources located within 1,500 feet of the proposed project well location. Refer to the attached “Neighboring Well & Surface Water Location Map” prepared by Bartelt Engineering for the location of the existing domestic well and proposed project well and neighboring parcels.

### **Water Quality**

Water quality results were not available for the existing domestic well nor the undeveloped project well prior to completion of this WAA.

### **GROUNDWATER SUBAREA**

According to the Napa County Watershed Information & Conservation Council (WICC), the subject parcel is partially located within the Western Mountains Subarea and the Napa Valley Floor-Calistoga Subarea of the Napa River Watershed. The Napa County Groundwater Monitoring Program tested wells in this area in 2014 and 2015. The observed groundwater depth in these wells ranged from 44 feet to 240 feet from ground surface. Ground elevations range from 390 feet to 1,660 feet, mean sea level. The groundwater quality available in this subarea is reported to be generally of good quality. Elevated levels of iron and manganese occur, along with lower than average pH indicating more acidity than groundwater in the Napa Valley Floor.

### **WATERSHED INFORMATION**

The subject parcel is located within the Blossom Creek sub-basin that is part of the Napa River Watershed. The subject parcel is not located within a municipal watershed. The Blossom Creek sub-basin includes 1,686± acres that drain to Blossom Creek which is a tributary to the Napa River.

### **GEOLOGICAL FEATURES**

The attached “Geological Site Location Map” prepared by Bartelt Engineering shows the subject parcel boundary and the geological features present on the subject parcel per the United States Geological Service (USGS) Online Geodatabase. Below is a summary of the geological features located on the subject parcel:

- Tertiary Pyroclastic and Volcanic Mudflow Deposits, Unit 1 (Sonoma Volcanic Field), 95.6% of the subject parcel.
- Quarterly Alluvium and Marine Deposits, 3.3% of the subject parcel.
- Tertiary Volcanic Flow Rocks, Unit 3 (Sonoma Volcanic Field), 1.1% of the subject parcel.

Per the Napa County Baseline Data Report (2005), Sonoma Volcanics consist of dacite, rhyolite and andesite rock types. These rocks are exposed over much of Napa Valley and

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<sup>4</sup> APN 017-110-050 is the only neighboring parcel with a well and is located approximately 1,500 feet from the existing domestic well.

<sup>5</sup> *Blossom Creek* is located approximately 1,455 feet from the existing domestic well. Due to the distance between the domestic well and *Blossom Creek* the project proposes to construct a new “project well” in a location greater than 1,500 feet from *Blossom Creek*.



are the second most commonly exposed rocks in Napa County. In terms of groundwater resources, tuffaceous units within the Sonoma Volcanics host significant volumes of groundwater under both confined and unconfined conditions. Furthermore, surficial deposits consist of the formation of stream channel deposits, alluvium, terrace deposits, alluvial fan deposits, landslide deposits, basing deposits, bay mud, and artificial fill. In terms of groundwater resources, surficial deposits are reported to be typical pathways for groundwater recharge and, depending on the properties and depths of the surficial deposits, may hold groundwater to varying capacity. Within the Napa Valley floor, the majority of the groundwater is hosted within these deposits.

#### **ALL OTHER AREAS ESTIMATED GROUNDWATER RECHARGE<sup>6</sup>**

The allowable water allotment for the subject parcel is determined by estimating groundwater recharge. Groundwater recharge can be estimated by understanding the soil properties and geological materials present and their ability to percolate groundwater to the saturated zone of the aquifer. Water flowing into the ground consists primarily of recharge from precipitation, surface water seepage, and artificial recharge. Water flowing out of the ground primarily involves extraction from wells, spring discharge, and evapotranspiration. In Napa County, precipitation has been primarily established as the primary source of groundwater (Kunkel and Upson, 1960). Since the subject parcel is located in the Western Mountains Subarea and the Napa Valley Floor-Calistoga Subarea of the Napa River Watershed, with watercourses located in the proximity of the project area, direct infiltration from rainfall is likely to be the most significant factor for groundwater recharge. Without having site recorded data showing the change in groundwater, this analysis models groundwater recharge as a percent of rainfall. The amount of rainfall that is estimated to recharge groundwater is impacted by several factors. Some of these factors include precipitation, soil properties, and underlain geological materials.

#### **Precipitation**

Precipitation, or rainfall, data used in this analysis is from Napa County GIS Resources utilizing the PRISM Climate Group at Oregon State University that provides spatial climate dataset which spans over a period of time and provides insight into normal rainfall years as well as periods that deviate into dry and wet years. The selected 800 meter or 4-kilometer (km) resolution grid cells provide average rainfall data for 10-year normal datasets from 2012-2021. The average annual rainfall for the subject parcel is 33.69 inches.

#### **Hydrologic Soil Groups**

Per the United States Department of Agriculture (USDA), hydrologic soil groups (HSG) are based on estimated potential for runoff. Soils are assigned four (4) groups (A, B, C, or D) depending on the ability of water to infiltrate the soil. Group A soils have a high infiltration rate (low runoff potential), and group D soils have very slow infiltration rates (high runoff potential). The infiltration rate is also affected by site slopes; higher slopes limit the time water is available for infiltration.

A custom soils report was generated using the Natural Resources Conservation Service (NRCS) Web Soil Survey for the subject parcel. The Survey shows that five (5) different soil types and land slopes are present with the following characteristics:

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<sup>6</sup> Refer to attached Table IV for Groundwater Recharge Comparison.

- Aiken Loam (Map Unit 101), 15% to 30% slopes, HSG C, 13% of the subject parcel.
- Bale Clay Loam (Map Unit 105), 2% to 5% slopes, HSG C, <0.1% of the subject parcel.
- Forward Silt Loam (Map Unit 139), 5% to 39% slopes, HSG C, 19.1% of the subject parcel.
- Forward Silt Loam (Map Unit 140), 12% to 57% slopes, HSG C, 56.9% of the subject parcel.
- Kidd Loam (Map Unit 156), 30% to 70% slopes, HSG D, 8.7% of the subject parcel.
- Forward Silt Loam (Map Unit FoG), 12% to 57% slopes, HSG C, 2.3% of the subject parcel.

The majority of the subject parcel (91.3% of the subject parcel) includes a HSG “C” rating with “slow” infiltrative properties and an estimated infiltrative rate of 0.10 inches per hour. Refer to the Custom Soil Resource Report for Napa County, California and Sonoma County, California Winrod Vineyards that was submitted with the Erosion Control Plan (ECP) Application for more information regarding soil properties.

### **Recharge Area**

The recharge area on the subject parcel is limited to the areas with ground slopes less than or equal to 30% where precipitation is more likely to infiltrate through the soil and reach the groundwater aquifer. Precipitation on ground slopes greater than 30% are more likely to runoff and not contribute to groundwater recharge. The 104.79± acre subject parcel includes 40.5 acres of ground slopes less than or equal to 30%. This area (40.5 acres) will be used as the area for estimating groundwater recharge. Refer to the Water Availability Analysis Exhibit that is part of the Erosion Control Plan for site slope locations.

### **Geological Comparison for Estimating Recharge Rate**

Groundwater recharge can be estimated by understanding the soil properties and geological materials present and their ability to percolate groundwater to the saturated zone of the aquifer. Sonoma Volcanics are the primary water-bearing geological formation. Based on review of several groundwater publications, a percent of precipitation is assumed to be available for groundwater recharge. Below is a summary of these references and comparison to the geological materials and HSGs present on the subject parcel:

- The “Santa Rosa Plan Watershed Groundwater Management Plan 2014” prepared by the Santa Rosa Plan Basin Advisor Panel includes a specified yield of 0 to 15 percent for Sonoma Volcanics. Specified yield refers to the amount of water contained in the saturated zone that flows by gravity and is available to wells (Johnson 1967).
- The “Napa-Sonoma Valley Groundwater Basin, Sonoma Valley Subbasin” from the California Groundwater Bulletin 118 describes Sonoma Volcanics as having specific yields varying from 0 to 15 percent (DWR 1982).

Based on the methodology utilized in these studies, groundwater recharge for the subject parcel, which predominantly includes Sonoma Volcanics, could be 15% of the annual

precipitation. The volume of rainwater that is estimated to be available for groundwater recharge is calculated below:

$$\begin{aligned}\text{Annual recharge (acre-ft/yr)} &= \text{Recharge area (acres)} \times \text{Precipitation (ft)} \times \text{Recharge rate} \\ &= 40.5 \text{ acres} \times (33.69 \text{ in} \times 1 \text{ ft}/12 \text{ in}) \times 15\% \\ &= 17.1 \text{ acre-ft/yr}\end{aligned}$$

The annual groundwater recharge for the subject parcel is estimated to be 17.1 acre-feet per year.

### **Sub-Watershed Comparison for Estimating Recharge Rate**

Another method used to estimate groundwater recharge is comparing the recharge rate as a percentage of precipitation to the results from the “Updated Hydrogeologic Conceptualization and Characterization of Conditions” by Luhdorff & Scalmanini (L&S) in 2013.

The Napa River Watershed Water Balance (L&S, 2013) was conducted at several subareas throughout Napa Valley. The subject parcel is partially located in the Napa River watershed Calistoga subarea. Data for this subarea was collected from 1940 to 1994 on a monthly time-step basis at stream gauging stations. The Napa River Watershed Water Balance included precipitation, Napa River stream flow, soil infiltration (included precipitation minus runoff), and evapotranspiration (ET) for various types of land use. The estimated groundwater recharge is represented by the difference between infiltration and ET.

*Table 8-7 Percentage Breakdown of Hydrologic Soil Groups* (L&S 2013) shows a weighted average for the HSG present in each gauged watershed. The subject parcel has similar HSG properties to those found in the Calistoga sub-watershed with group C being the most common. The results from the water balance analysis, shown in *Table 8-9 Summary of Water Balance Model Results* (L&S 2013), concluded that 19% of precipitation is available for groundwater recharge in the Calistoga sub-watershed.

The volume of rainwater that is estimated to be available for groundwater recharge under the sub-watershed comparison is calculated below:

$$\begin{aligned}\text{Annual recharge (acre-feet)} &= \text{Recharge area (acres)} \times \text{Precipitation (ft)} \times \text{Recharge rate} \\ &= 40.5 \text{ acres} \times (33.69 \text{ in} \times 1 \text{ ft}/12 \text{ in}) \times 19\% \\ &= 21.6 \text{ acre-feet}\end{aligned}$$

### **Estimated Water Use**

The total water demand for the existing and proposed uses for the project is calculated below based on the Guidelines for Estimating Residential and Non-residential Water Use from the WAA Guidance Document (2015):

**TABLE 2A: EXISTING WATER DEMAND (DOMESTIC WELL)**

Description	Estimated Water Usage (acre-feet/year)
Residential Primary Residence	0.75
Vineyard (4.6± acres, 3,213 vines) <sup>7</sup> Irrigation (Vineyard Blocks A, B, C, & D)	0.99
Orchard (Olive trees, 0.25± acres)	1.00
(Domestic Well) Total Existing Water Demand =	2.74

**TABLE 2B: PROPOSED WATER DEMAND (DOMESTIC WELL)**

Description	Estimated Water Usage (acre-feet/year)
Residential Primary Residence	0.75
Vineyard Irrigation	0.00
Heat Protection	0.00
Orchard	0.00
(Domestic Well) Total Proposed Water Demand =	0.75

**TABLE 2C: PROPOSED WATER DEMAND (PROJECT WELL)**

Description	Estimated Water Usage (acre-feet/year)
Residential Primary Residence	0.00
Vineyard (9.9± acres, 15,401 vines) <sup>7</sup> Irrigation (Vineyard Blocks 1, 2, & 3)	4.73
Heat Protection	2.47
Orchard	0.00
(Project Well) Total Proposed Water Demand =	7.20

As shown in the above tables, the water demand for the domestic well is estimated to decrease from 2.74 to 0.75 acre-feet per year with the proposed project well pumping an estimated 7.20 acre-feet per year for a total estimated parcel water demand increase of 5.21 acre-feet per year as part of the proposed improvements. Refer to the attached Table I, Table II, and Table III for existing and proposed water demand calculations.

<sup>7</sup> Vineyard irrigation is based on irrigation schedule and number of emitters per vine provided by the Owner.

**Estimated Water Use Dry Years**

During dry years, water conservation efforts could include, but not be limited to, a reduction in irrigation volumes, night-time irrigation, vineyard irrigation on rotating schedule to minimize the amount of water pumped from the well in a single day, and temporarily dry farming the vineyard. The estimated water demand during dry years for the proposed uses for the project is calculated below based on a 25% reduction in irrigation volumes.

<b>TABLE 2C: DRY YEAR WATER DEMAND</b>	
<b>Description</b>	<b>Estimated Water Usage (acre-feet/year)</b>
Residential Primary Residence	0.75
Vineyard (9.9± acres, 15,401 vines) Irrigation 25% reduction (Vineyard Blocks 1, 2, & 3) Heat Protection	3.55 2.47
Orchard	0.00
Total Dry Year Water Demand =	6.77

**SUMMARY**

The groundwater demand generated as a result of the proposed vineyard development is estimated to increase from 2.74 acre-feet per year to 7.95 acre-feet per year and can be reduced during the dry years to 6.77 acre-feet per year. Vineyard irrigation water will be sourced from the proposed onsite project well. The existing onsite well will continue to be utilized for domestic use at the primary residence and is expected to be capable of continuing to meet the domestic/residential water demand.

The available water for the proposed project is the estimated groundwater recharge for the subject parcel that is located in “All Other Areas” of Napa County. Groundwater recharge is estimated based on geological and Napa River sub-watershed comparisons based on the project location. The available water for the subject parcel is estimated to be between 17.1 acre-feet per year and 21.6 acre-feet per year based on 10-year average rainfall data.

**CONCLUSION**

This analysis demonstrates that the groundwater demand for the proposed project can feasibly be sourced from a new project well. Furthermore, the estimated groundwater recharge exceeds the proposed water demand for the proposed project and satisfies the Tier 1 Water Use Criterion of the Napa County Water Availability Analysis.

**ATTACHMENTS**

USGS – Topographic Site Location Information  
Site Map of the Well on the Lands of Winrod Family Trust  
Neighboring Well & Surface Water Location Map  
Well Interference Exhibit  
Geological Site Location Map  
Table I – Domestic Well Existing Water Demand  
Table II – Domestic Well Proposed Water Demand  
Table III – New Project Well Proposed Water Demand  
Table IV – Water Availability  
Well Completion Report  
Email from Imboden Pump  
Existing Irrigation Schedule and Emitter Count for Winrod Vineyards

## REFERENCES

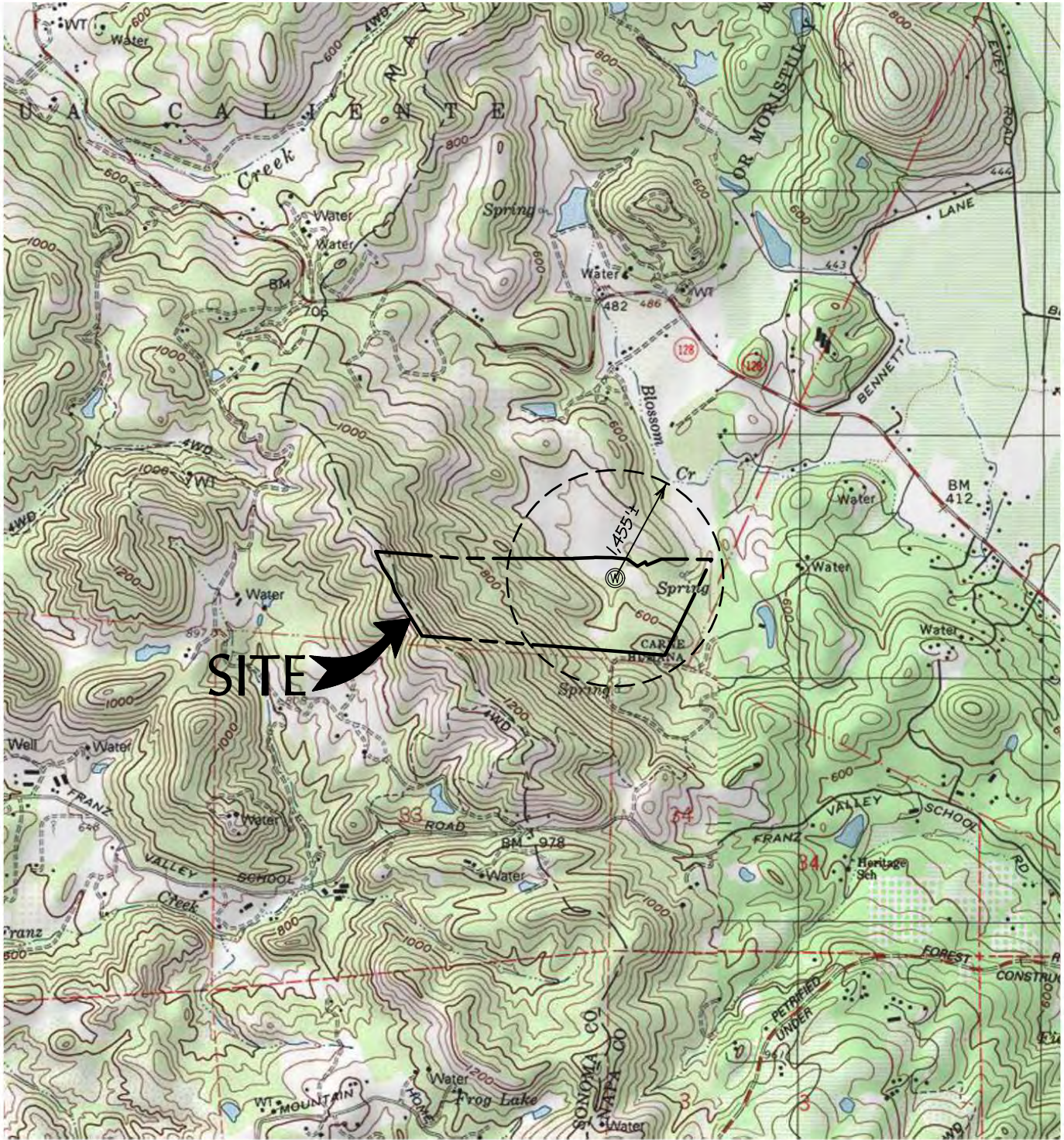
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# TOPOGRAPHIC SITE LOCATION INFORMATION



USGS 7.5 MINUTE QUADRANGLE "MARK WEST SPRINGS"

Scale: 1" = 2000'



**SITE**

R. 7 W.

T. 9 N.

**BARTELT**  
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CIVIL ENGINEERING · LAND PLANNING  
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Telephone: 707-258-1301

**Winrod Vineyards**  
3445 State Highway 128  
Napa County, CA  
APN 017-110-038

Job No. 18-26

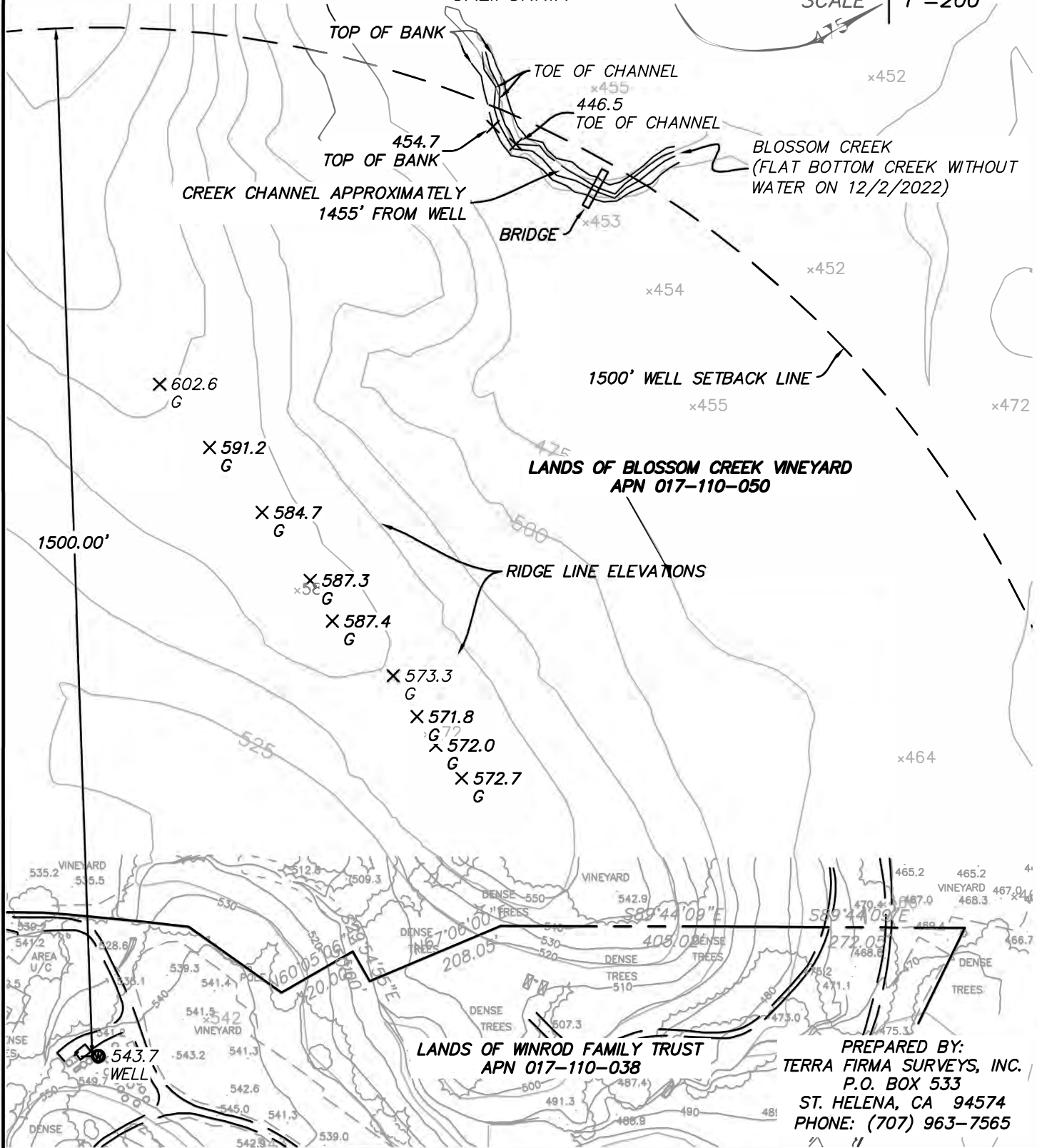


**SITE MAP**  
**OF THE WELL ON THE LANDS OF**  
**WINROD FAMILY TRUST**

APN 017-110-038  
 3465 STATE HIGHWAY 128  
 CALISTOGA  
 NAPA COUNTY  
 CALIFORNIA

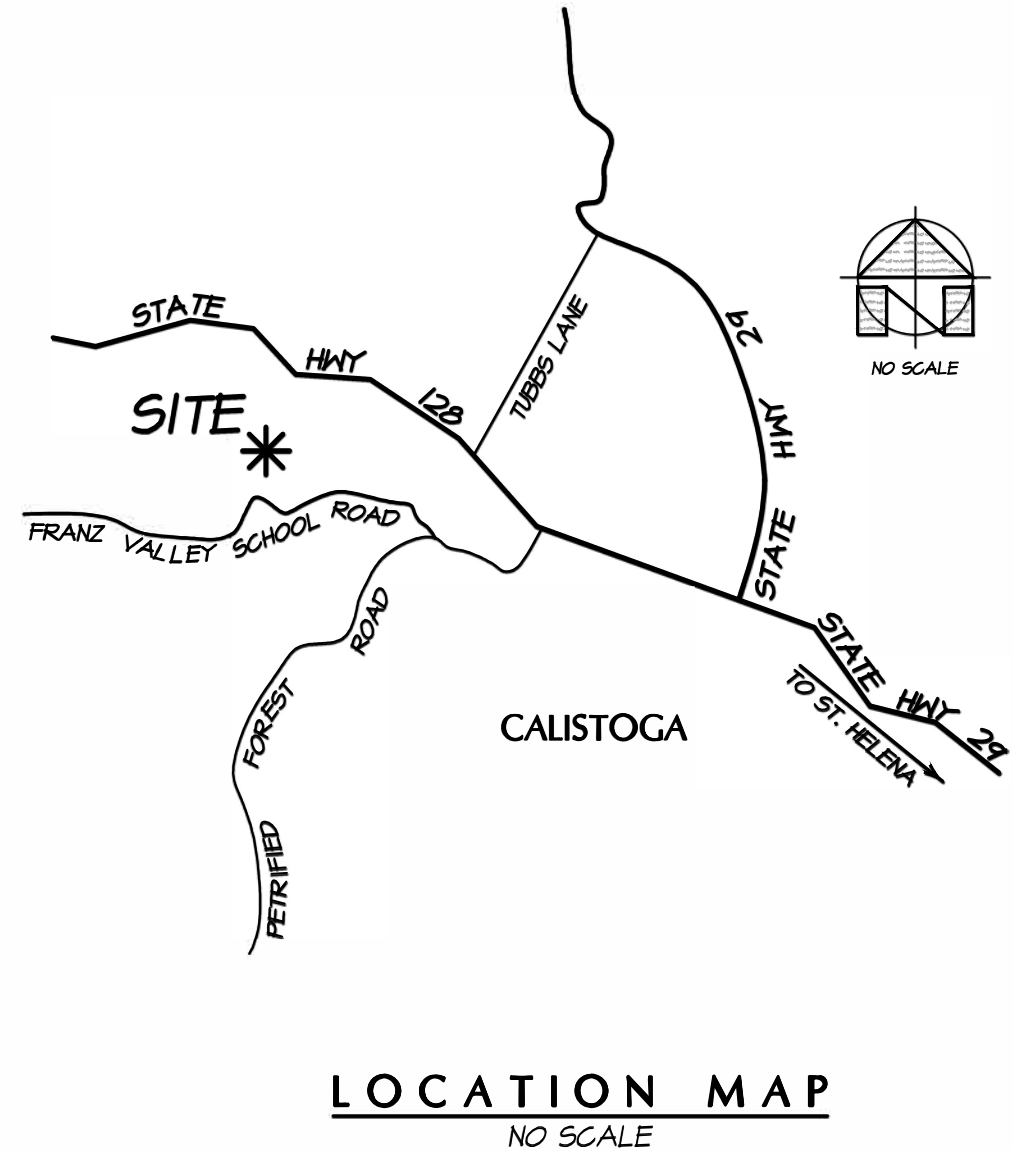
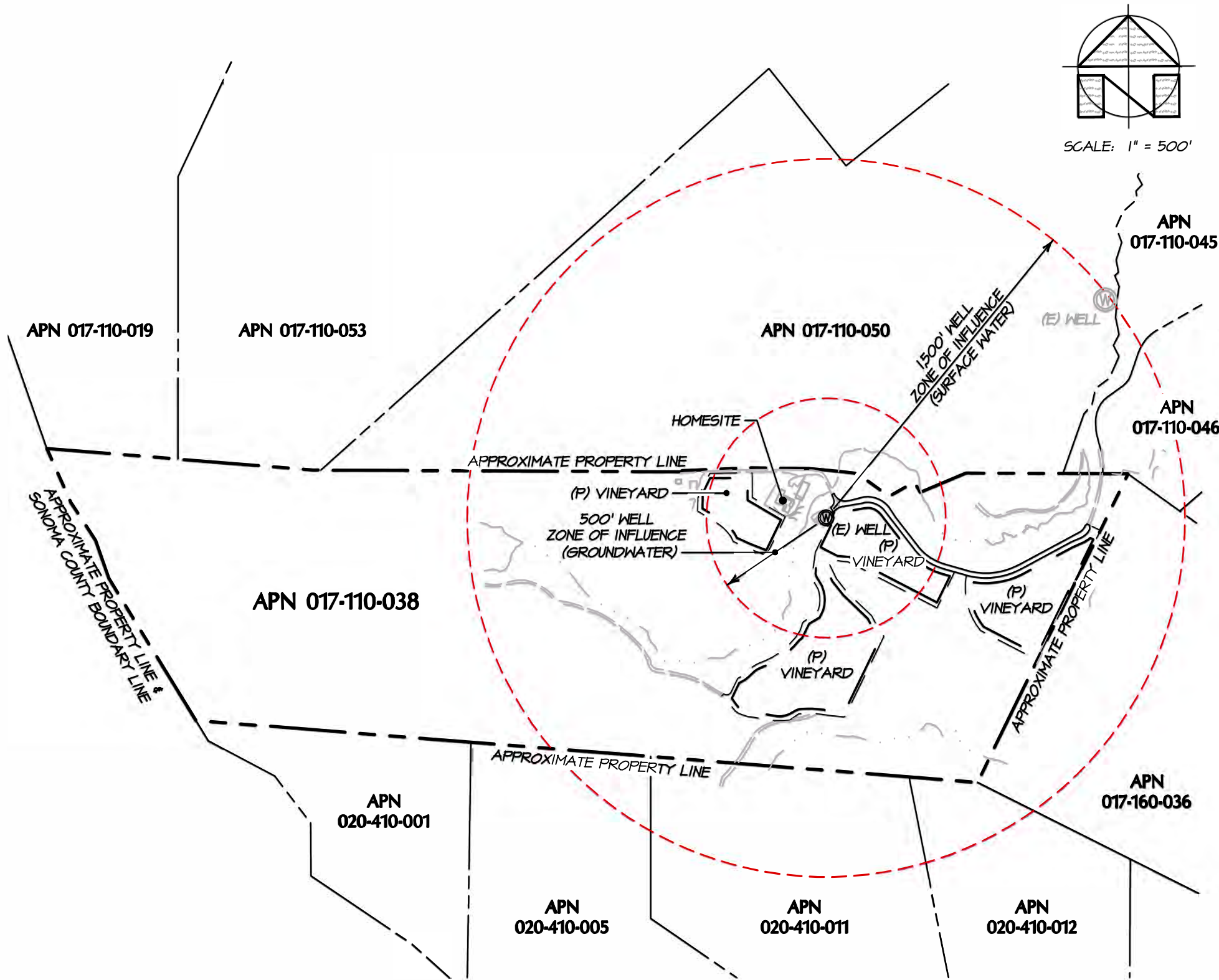


SCALE 1"=200'



PREPARED BY:  
 TERRA FIRMA SURVEYS, INC.  
 P.O. BOX 533  
 ST. HELENA, CA 94574  
 PHONE: (707) 963-7565

DATE: December 12, 2022  
 1720\_5-Well.dwg



**NEIGHBORING WELL &  
SURFACE WATER LOCATION MAP**

SCALE: 1" = 500'

**NOTE:**

PROPERTY LINES ARE SOURCED FROM THE NAPA COUNTY GEOGRAPHIC INFORMATION SYSTEM MAPS.

**BARTELT**  
**ENGINEERING**

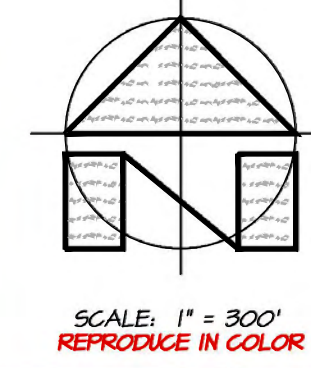
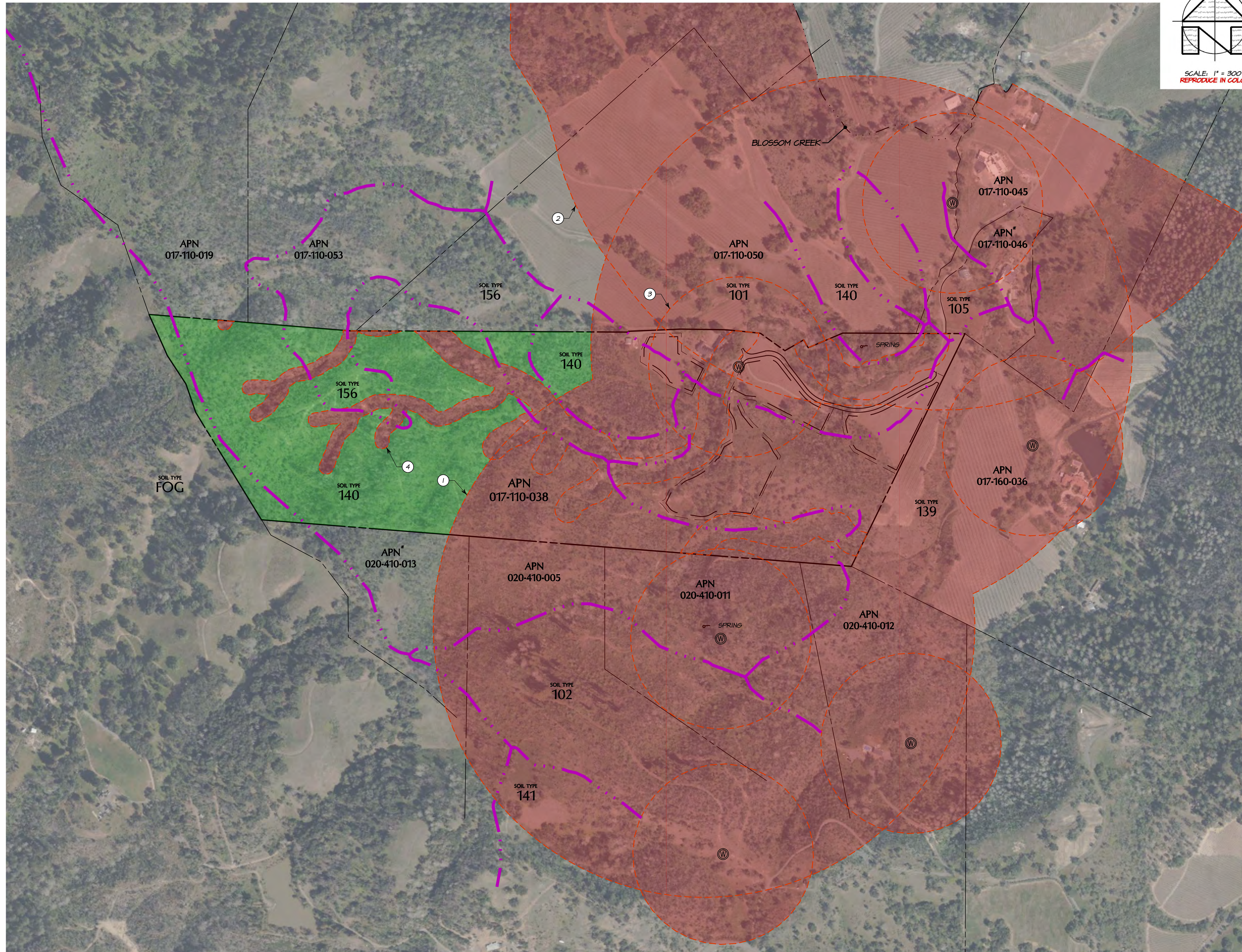
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Winrod Vineyards  
3465 State Highway 128  
Calistoga, CA 94515  
APN 017-110-038  
Job No. 18-26  
January 2024  
Sheet 1 of 1

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# WINROD VINEYARDS

## WELL INTERFERENCE EXHIBIT



- NOTES:**
- 1500 FOOT INTERFERENCE ZONE FROM EXISTING SPRING (TYP)
  - 1500 FOOT INTERFERENCE ZONE FROM BLOSSOM CREEK
  - 500 FOOT INTERFERENCE ZONE FROM EXISTING WELL (TYP)
  - AREA REPRESENTS THE CONSERVATION SETBACKS FOR THE DRAINAGE COURSE(S) RUNNING THROUGH THE PROJECT PARCEL. THIS AREA IS NOT SUITABLE FOR WELL DRILLING.
  - PROPOSED PROJECT WELL SHALL BE DRILLED OUTSIDE OF ALL INTERFERENCE ZONES.

- SOIL TYPE LEGEND:**
- NAPA COUNTY SOILS:**  
 101 - AIKEN LOAM, 15% TO 30% SLOPES  
 105 - BALE CLAY LOAM, 2% TO 5% SLOPES  
 134 - FORWARD SILT LOAM, 5% TO 34% SLOPES  
 140 - FORWARD SILT LOAM, 12% TO 57% SLOPES  
 156 - KIDD LOAM, 30% TO 15% SLOPES
- SONOMA COUNTY SOILS:**  
 FOG - FORWARD SILT LOAM, 12% TO 57% SLOPES

- LEGEND:**
- SOIL TYPE LIMIT DELINEATION
  - EDGE OF PROPOSED VINEYARD AVENUE
  - EDGE OF PROPOSED VINEYARD BLOCK
  - AREA NOT SUITABLE FOR WELL DRILLING
  - POTENTIAL WELL DRILLING AREA
  - EXISTING WELL

WELL INTERFERENCE EXHIBIT  
SCALE: 1" = 300'

OWNERSHIP OF DOCUMENTS  
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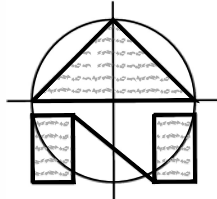
**BARTLETT ENGINEERING**  
 CIVIL ENGINEERING - LAND PLANNING  
 1303 Jefferson Street, 200 B, Napa, CA 94559  
 www.bartlettingeering.com  
 Telephone: 707-258-1301

DES:	RP
DRAWN:	DGB
CHECKED:	FWB

WINROD VINEYARDS  
 WELL INTERFERENCE EXHIBIT  
 NAPA COUNTY  
 CALIFORNIA

DATE: JANUARY 2024  
 JOB NO: 18-26  
 SHEET NO: 1  
 OF 1

3/7/2024 - 2:39 PM D:\WEB 5\LAND PROJECTS\2008-2022\18026\2018 EFP\MAC\EXHIBITS\18026-PROJ\WELLING\_1.PLT PLOTTED BY BARTLETT ENGINEERING 707-258-1301



SCALE: 1" = 400'

APN 017-110-019

APN 017-110-053

APN 017-110-050

APN 017-110-045

APN 017-110-046

APPROXIMATE PROPERTY LINE & SONOMA COUNTY BOUNDARY LINE

APN 017-110-038

APPROXIMATE PROPERTY LINE

HOMESITE

(P) VINEYARD

(E) WELL (P) VINEYARD

(P) VINEYARD

(P) VINEYARD

APPROXIMATE PROPERTY LINE

APN 017-160-036

APPROXIMATE PROPERTY LINE

APN 020-410-001

APN 020-410-005

APN 020-410-011

APN 020-410-012

### GEOLOGICAL AREA CALCULATIONS:\*



GEOLOGICAL UNIT: TERTIARY PYROCLASTIC AND VOLCANIC MUDFLOW DEPOSITS, UNIT 1 (SONOMA VOLCANIC FIELD)  
AREA PRESENT ON PARCEL = 100.6± ACRES  
PARCEL SIZE = 105.2± ACRES  
100.6 ACRES / 105.2 ACRES = 95.6% OF THE SUBJECT PARCEL



GEOLOGICAL UNIT: TERTIARY VOLCANIC FLOW ROCKS, UNIT 3 (SONOMA VOLCANIC FIELD)  
AREA PRESENT ON PARCEL = 1.1± ACRES  
PARCEL SIZE = 105.2± ACRES  
1.1 ACRES / 105.2 ACRES = 1.1% OF THE SUBJECT PARCEL



GEOLOGICAL UNIT: QUATERNARY ALLUVIUM AND MARINE DEPOSITS  
AREA PRESENT ON PARCEL = 3.5± ACRES  
PARCEL SIZE = 105.2± ACRES  
3.5 ACRES / 105.2 ACRES = 3.3% OF THE SUBJECT PARCEL

\* THE SUBJECT PARCEL BOUNDARY AREA IS 105.2± ACRES WHEREAS THE ACTUAL PARCEL SIZE IS LISTED AS 104.79± ACRES.

### GEOLOGICAL SITE LOCATION MAP

SCALE: 1" = 400'

#### NOTES:

1. PROPERTY LINES ARE SOURCED FROM THE NAPA COUNTY GEOGRAPHIC INFORMATION SYSTEM MAPS.
2. THE GEOLOGICAL UNITS AND LOCATIONS ARE SOURCED FROM THE STATE GEOLOGICAL MAP COMPILATION (SGMC) GEODATABASE OF THE CONTERMINOUS UNITED STATES FOUND ONLINE AT [HTTPS://MRDATA.USGS.GOV/GEOLOGY/STATE/](https://MRDATA.USGS.GOV/GEOLOGY/STATE/)

# BARTELT

## ENGINEERING

CIVIL ENGINEERING · LAND PLANNING

1303 Jefferson Street, 200 B, Napa, CA 94559

[www.barteltengineering.com](http://www.barteltengineering.com)

Telephone: 707-258-1301

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Winrod Vineyards  
 3465 State Highway 128  
 Calistoga, CA 94515  
 APN 017-110-038  
 Job No. 18-26  
 January 2024  
 Sheet 1 of 1

1/12/2024 - 1:39 PM, D:\MEB, S:\LAND PROJ\EXHIBITS\1826-GEO MAP.DWG

Winrod Vineyards  
 Domestic Well  
 Existing Water Demand  
 Table I



Vineyard Area: Vineyard Blocks A, B, C, & D 4.6 acres  
 Number of Vines<sup>1</sup>: 3,213 vines  
 Orchard (olive tree) Area: 0.25 acres

<b>EXISTING WATER DEMAND</b>		
<b>Description</b>	<b>Water Usage Rate<sup>2</sup></b>	<b>Water Demand (acre-feet/year)</b>
<u>Residential</u>		
Primary Residence	0.75 acre-feet/acre-year	0.75
Secondary Residence or Farm Labor Dwelling	0.2-0.3 acre-feet/acre-year	-
<u>Agricultural</u>		
Vineyards		
Irrigation Only	0.22 acre-feet/acre-year <sup>3</sup>	0.99
Heat Protection	0.25 acre-feet/acre-year	0
Frost Protection	0.25 acre-feet/acre-year	0
Irrigated Pastures	4.0 acre-feet/acre-year	-
Orchards (olive trees)	4.0 acre-feet/acre-year	1.00
Livestock	0.01 acre-feet/acre-year	-
<u>Winery</u>		
Process Water	2.15 acre-feet/100,000 gallon of wine	-
Domestic & Landscaping	0.50 acre-feet/100,000 gallon of wine	-
Employees	15 gallons/per shift	-
Tasting Room Visitation	3 gallons per visitor	-
Events and Marketing, with on-site catering	15 gallons per visitor	-
<u>Industrial</u>		
Food Processing	31 acre-feet/employee-year	-
Printing/Publishing	0.60 acre-feet/employee-year	-
<u>Commercial</u>		
Office Space	0.01 acre-feet/employee-year	-
Warehouse	0.05 acre-feet/employee-year	-
<i>Estimated Water Demand (acre-feet/year):</i>		2.74
<i>Estimated Water Demand (gallons/year):</i>		891,539
1) Existing vine and row spacing varies from 6 feet by 8 feet to 8 feet by 10 feet 2) Water usage rates referenced from <i>Appendix B: Estimated Water Use of Specified Land Use</i> from Napa County WAA-Guidance Document (2015) unless noted otherwise 3) Vineyard irrigation values are based on irrigation schedule and number of emitters per vine provided by the property Owner for the existing vineyard (irrigation values range from 66 to 132 gallons/vine per year with an average of 100 gallons/vine/year)		

Winrod Vineyards  
 Domestic Well  
 Proposed Water Demand  
 Table II



<b>PROPOSED WATER DEMAND</b>		
<b>Description</b>	<b>Water Usage Rate<sup>1</sup></b>	<b>Water Demand (acre-feet/year)</b>
<u>Residential</u>		
Primary Residence	0.75 acre-feet/acre-year	0.75
Secondary Residence or Farm Labor Dwelling	0.2-0.3 acre-feet/acre-year	-
<u>Agricultural</u>		
Vineyards		
Irrigation Only	48.00 acre-feet/acre-year	
Heat Protection	0.25 acre-feet/acre-year	
Frost Protection	0.25 acre-feet/acre-year	0
Irrigated Pastures	4.0 acre-feet/acre-year	-
Orchards (olive trees)	4.0 acre-feet/acre-year	0
Livestock	0.01 acre-feet/acre-year	-
<u>Winery</u>		
Process Water	2.15 acre-feet/100,000 gallon of wine	-
Domestic & Landscaping	0.50 acre-feet/100,000 gallon of wine	-
Employees	15 gallons/per shift	-
Tasting Room Visitation	3 gallons per visitor	-
Events and Marketing, with on-site catering	15 gallons per visitor	-
<u>Industrial</u>		
Food Processing	31 acre-feet/employee-year	-
Printing/Publishing	0.60 acre-feet/employee-year	-
<u>Commercial</u>		
Office Space	0.01 acre-feet/employee-year	-
Warehouse	0.05 acre-feet/employee-year	-
<i>Estimated Water Demand (acre-feet/year):</i>		0.75
<i>Estimated Water Demand (gallons/year):</i>		244,388
1) Water usage rates referenced from <i>Appendix B: Estimated Water Use of Specified Land Use</i> from Napa County WAA-Guidance Document (2015) unless noted otherwise		

Winrod Vineyards  
 New Project Well  
 Proposed Water Demand  
 Table III



Vineyard Area: Vineyard Blocks 1, 2, & 3  
 Number of Vines<sup>1</sup>:  
 Orchard (olive tree) Area:

9.9 acres  
 15,401 vines  
 0 acres

<b>PROPOSED WATER DEMAND</b>		
<b>Description</b>	<b>Water Usage Rate<sup>2</sup></b>	<b>Water Demand (acre-feet/year)</b>
<u>Residential</u>		
Primary Residence	0.75 acre-feet/acre-year	
Secondary Residence or Farm Labor Dwelling	0.2-0.3 acre-feet/acre-year	-
<u>Agricultural</u>		
Vineyards		
Irrigation Only	0.48 acre-feet/acre-year <sup>3</sup>	4.73
Heat Protection	0.25 acre-feet/acre-year	2.475
Frost Protection	0.25 acre-feet/acre-year	0
Irrigated Pastures	4.0 acre-feet/acre-year	-
Orchards (olive trees)	4.0 acre-feet/acre-year	0
Livestock	0.01 acre-feet/acre-year	-
<u>Winery</u>		
Process Water	2.15 acre-feet/100,000 gallon of wine	-
Domestic & Landscaping	0.50 acre-feet/100,000 gallon of wine	-
Employees	15 gallons/per shift	-
Tasting Room Visitation	3 gallons per visitor	-
Events and Marketing, with on-site catering	15 gallons per visitor	-
<u>Industrial</u>		
Food Processing	31 acre-feet/employee-year	-
Printing/Publishing	0.60 acre-feet/employee-year	-
<u>Commercial</u>		
Office Space	0.01 acre-feet/employee-year	-
Warehouse	0.05 acre-feet/employee-year	-
<i>Estimated Water Demand (acre-feet/year):</i>		7.20
<i>Estimated Water Demand (gallons/year):</i>		2,346,638
1) Proposed vine and row spacing is 4 feet by 7 feet 2) Water usage rates referenced from <i>Appendix B: Estimated Water Use of Specified Land Use</i> from Napa County WAA-Guidance Document (2015) unless noted otherwise 3) Vineyard irrigation values are based on the proposed irrigation schedule and number of emitters per vine provided by the property Owner for the proposed vineyard (irrigation values range from 66 to 132 gallons/vine per year with an average of 100 gallons/vine per year)		

Winrod Vineyards  
 Water Availability  
 Table IV



**Total Parcel Area:** 104.79 acres  
**Parcel Area w/ Slopes < 30%:** 40.5 acres  
**Sonoma Volcanics Recharge Rate:** 15%  
**Sub-Watershed Recharge Rate:** 19%

<i>GROUNDWATER RECHARGE COMPARISON</i>					
Scenario	Rainfall <sup>1</sup>		Recharge	Recharge Rate (%)	Estimated Recharge (acre-ft/year)
	(inches)	(feet)	Area <sup>2</sup> (acres)		
30-Year Average Geological Comparison	33.69	2.8	40.5	15%	17.1
Sub-Watershed Comparison	33.69	2.8	40.5	19%	21.6

- 1) Refer to website:  
<https://www.countyofnapa.org/3391/GIS-Resources-from-the-PBES-Department>  
 2) Recharge area is equal to parcel area with ground slopes less than 30%.



**QUADRUPPLICATE  
For Local Requirements**

STATE OF CALIFORNIA  
**WELL COMPLETION REPORT**  
Refer to Instruction Pamphlet

017-110-038

DWR USE ONLY - DO NOT FILL IN

STATE WELL NO./STATION NO.

LATITUDE LONGITUDE

APN/TRS/OTHER

Page 1 of 1

Owner's Well No. 3422

No. **442577**

Date Work Began 3-26-96, Ended 3-29-96

Local Permit Agency Napa

Permit No. 41519 Permit Date 3-4-96

**GEOLOGIC LOG**

**WELL OWNER**

ORIENTATION ( )  VERTICAL  HORIZONTAL  ANGLE  (SPECIFY)

Name Barbara Davies

DEPTH TO FIRST WATER \_\_\_\_\_ (Ft.) BELOW SURFACE

Mailing Address 3455 Hwy. 128

DEPTH FROM SURFACE	
Ft.	to Ft.
0	20
20	40
40	160
160	180
180	200

**DESCRIPTION**

Describe material, grain size, color, etc.

City Callistoga, CA STATE CA ZIP 94515

Ft.	to	Ft.	DESCRIPTION
0	20		<b>Topsoil/Brown Volcanic Rock</b>
20	40		<b>Grey Volcanic Rock</b>
40	160		<b>Grey &amp; Brown Volcanic Rock</b>
160	180		<b>Red Volcanic Rock</b>
180	200		<b>Grey Volcanic Rock</b>

WELL LOCATION

Address 3455 Hwy. 128

City Callistoga, CA

County Napa

APN Book 017 Page 110 Parcel 033

Township \_\_\_\_\_ Range \_\_\_\_\_ Section \_\_\_\_\_

Latitude \_\_\_\_\_ NORTH Longitude \_\_\_\_\_ WEST

**LOCATION SKETCH**

**ACTIVITY ( )**

NEW WELL

**MODIFICATION/REPAIR**

Deepen

Other (Specify)

DESTROY (Describe Procedures and Materials Under "GEOLOGIC LOG")

**PLANNED USE(S)**

MONITORING

**WATER SUPPLY**

Domestic

Public

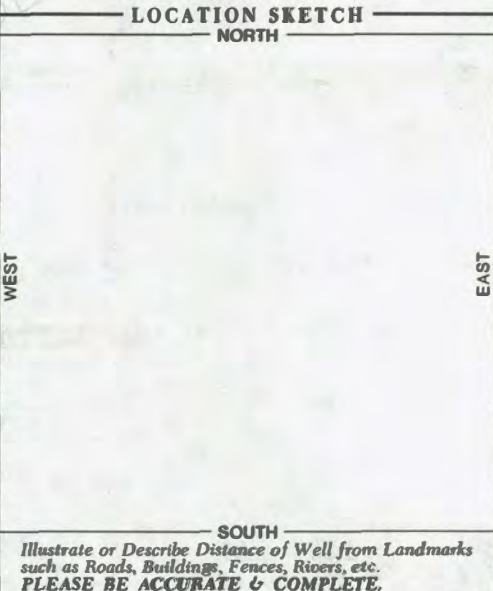
Irrigation

Industrial

"TEST WELL"

CATHODIC PROTECTION

OTHER (Specify)



DRILLING METHOD Rotary Mud FLUID \_\_\_\_\_

**WATER LEVEL & YIELD OF COMPLETED WELL**

DEPTH OF STATIC WATER LEVEL 60 (Ft.) & DATE MEASURED 3-27-96

ESTIMATED YIELD 50+ (GPM) & TEST TYPE air lift

TEST LENGTH 2 (Hrs.) TOTAL DRAWDOWN 140 (Ft.)

\* May not be representative of a well's long-term yield.

TOTAL DEPTH OF BORING 200 (Feet)

TOTAL DEPTH OF COMPLETED WELL 200 (Feet)

RECEIVED  
APR 1 1996  
DEPT. OF ENVIRONMENTAL MANAGEMENT

DEPTH FROM SURFACE Ft. to Ft.	BORE-HOLE DIA. (Inches)	CASING(S)					ANNULAR MATERIAL			
		TYPE ( )	MATERIAL / GRADE	INTERNAL DIAMETER (Inches)	GAUGE OR WALL THICKNESS	SLOT SIZE IF ANY (Inches)	CE-MENT ( )	BEN-TONITE ( )	FILL ( )	FILTER PACK (TYPE/SIZE)
0 : 205	10 5/8	X	F48PVC	5	200					
25 : 80	8 3/4	X	"	"	"			X	3/8 pea	
80 : 100	7 7/8	X	"	"	"					
100 : 200	"	X	"	"	"				micro	

**ATTACHMENTS ( )**

- Geologic Log
- Well Construction Diagram
- Geophysical Log(s)
- Soil/Water Chemical Analyses
- Other \_\_\_\_\_

ATTACH ADDITIONAL INFORMATION, IF IT EXISTS.

**CERTIFICATION STATEMENT**

I, the undersigned, certify that this report is complete and accurate to the best of my knowledge and belief.

**FISCH BROS. DRILLING INC.**

NAME (PERSON, FIRM, OR CORPORATION) (TYPED OR PRINTED)

**5001 GRAVENSTEIN HWY NO. SEBASTOPOL CA. 95472**

ADDRESS CITY STATE ZIP

Signed **Steve Unterseher by c.l. hughes** DATE SIGNED **3-28-96** 399226

WELL DRILLER/AUTHORIZED REPRESENTATIVE C-57 LICENSE NUMBER

**From:** [mkwinrod@aol.com](mailto:mkwinrod@aol.com)  
**To:** [Richard Paxton](#)  
**Subject:** Fwd: Imboden Pump 18gs15  
**Date:** Tuesday, January 31, 2023 2:48:24 PM

---

-----Original Message-----

From: Cinthya Garcia <[cinthya@imbodenpump.com](mailto:cinthya@imbodenpump.com)>  
To: [mkwinrod@aol.com](mailto:mkwinrod@aol.com) <[mkwinrod@aol.com](mailto:mkwinrod@aol.com)> Sent:  
Tue, Jan 31, 2023 2:40 pm  
Subject: Imboden Pump 18gs15

<b>Brand</b>	Goulds
<b>Mfg. Number</b>	18GS15
<b>Model Number</b>	18GS
<b>Series</b>	GS
<b>Product Type</b>	Submersible well pump
<b>Application</b>	Water systems
<b>Horsepower Required</b>	1-1/2 HP
<b>Stages</b>	11
<b>Minimum Well Size</b>	4"
<b>Rotation</b>	Counterclockwise
<b>Discharge Connection</b>	1-1/4" NPT
<b>Best Efficiency Flow</b>	18 gpm
<b>Flow Range</b>	6 - 28 gpm
<b>Discharge Head</b>	AISI 303 stainless steel
<b>Pump Casing</b>	AISI 304 stainless steel
<b>Impeller</b>	Noryl
<b>Check Valve Poppet</b>	AISI 304 stainless steel
<b>Check Valve Seal</b>	BUNA, FDA compliant

<b>Check Valve Retaining Ring</b>	AISI 302 stainless steel
<b>Bearing</b>	Proprietary engineered polymer
<b>Motor Adapter</b>	AISI 303 stainless steel
<b>Cable Guard</b>	AISI 304 stainless steel
<b>Suction Screen</b>	AISI 304 stainless steel
<b>Motor</b>	Not included
<b>Length</b>	16.1"

Let me know if this is ok or if you need more information please.

-Cinthya  
Imboden Pump

# Winrod Vineyards

## Existing Irrigation Schedule and Emitter Count

8x10 1 each  
1/2 gallon Emitter

BLOCK A  
1.15

8x10 1 each  
1/2 gallon Emitter

BLOCK C  
1.05

BLOCK B  
.37

8x10 1 each  
1/2 gallon Emitter

BLOCK D  
2.0

6x8 2 each  
1/2 gallon Emitter

3465 CA-128



800 ft

# April 2021

Notes:  
Block 1 = Block A  
Block 2 = Blocks B & C  
Block 3 = Block D

Sun	Mon	Tue	Wed	Thu	Fri	Sat
				1	2	3
4	5 <i>Block 1</i> <i>6 am—12 pm</i>	6 <i>Block 2</i> <i>6 am—12 pm</i>	7 <i>Block 3</i> <i>6 am—12 pm</i>	8	9	10
11	12 <i>Block 1</i> <i>6 am—12 pm</i>	13 <i>Block 2</i> <i>6 am—12 pm</i>	14 <i>Block 3</i> <i>6 am—12 pm</i>	15	16	17
18	19 <i>Block 1</i> <i>6 am—12 pm</i>	20 <i>Block 2</i> <i>6 am—12 pm</i>	21 <i>Block 3</i> <i>6 am—12 pm</i>	22	23	24
25	26 <i>Block 1</i> <i>6 am—12 pm</i>	27 <i>Block 2</i> <i>6 am—12 pm</i>	28 <i>Block 3</i> <i>6 am—12 pm</i>	29	30	

# May 2021

Notes:  
Block 1 = Block A  
Block 2 = Blocks B & C  
Block 3 = Block D

Sun	Mon	Tue	Wed	Thu	Fri	Sat
						1
2	3 <i>Block 1</i> <i>6 am—12 pm</i>	4 <i>Block 2</i> <i>6 am—12 pm</i>	5 <i>Block 3</i> <i>6 am—12 pm</i>	6	7	8
9	10 <i>Block 1</i> <i>6 am—12 pm</i>	11 <i>Block 2</i> <i>6 am—12 pm</i>	12 <i>Block 3</i> <i>6 am—12 pm</i>	13	14	15
16	17 <i>Block 1</i> <i>6 am—12 pm</i>	18 <i>Block 2</i> <i>6 am—12 pm</i>	19 <i>Block 3</i> <i>6 am—12 pm</i>	20	21	22
23	24 <i>Block 1</i> <i>6 am—12 pm</i>	25 <i>Block 2</i> <i>6 am—12 pm</i>	26 <i>Block 3</i> <i>6 am—12 pm</i>	27	28	29
30	31 <i>Block 1</i> <i>6 am—12 pm</i>					

# June 2021

Notes:  
 Block 1 = Block A  
 Block 2 = Blocks B & C  
 Block 3 = Block D

Sun	Mon	Tue	Wed	Thu	Fri	Sat
		1 <i>Block 2</i> 6 am—12 pm	2 <i>Block 3</i> 6 am—12 pm	3	4	5
6	7 <i>Block 1</i> 6 am—12 pm	8 <i>Block 2</i> 6 am—12 pm	9 <i>Block 3</i> 6 am—12 pm	10	11	12
13	14 <i>Block 1</i> 6 am—12 pm	15 <i>Block 2</i> 6 am—12 pm	16 <i>Block 3</i> 6 am—12 pm	17	18	19
20	21 <i>Block 1</i> 6 am—12 pm	22 <i>Block 2</i> 6 am—12 pm	23 <i>Block 3</i> 6 am—12 pm	24	25	26
27	28 <i>Block 1</i> 6 am—12 pm	29 <i>Block 2</i> 6 am—12 pm	30 <i>Block 3</i> 6 am—12 pm			

# July 2021

Notes:  
Block 1 = Block A  
Block 2 = Blocks B & C  
Block 3 = Block D

Sun	Mon	Tue	Wed	Thu	Fri	Sat
				1	2	3
4	5 <i>Block 1</i> <i>6 am—12 pm</i>	6 <i>Block 2</i> <i>6 am—12 pm</i>	7 <i>Block 3</i> <i>6 am—12 pm</i>	8	9	10
11	12 <i>Block 1</i> <i>6 am—12 pm</i>	13 <i>Block 2</i> <i>6 am—12 pm</i>	14 <i>Block 3</i> <i>6 am—12 pm</i>	15	16	17
18	19 <i>Block 1</i> <i>6 am—12 pm</i>	20 <i>Block 2</i> <i>6 am—12 pm</i>	21 <i>Block 3</i> <i>6 am—12 pm</i>	22	23	24
25	26 <i>Block 1</i> <i>6 am—12 pm</i>	27 <i>Block 2</i> <i>6 am—12 pm</i>	28 <i>Block 3</i> <i>6 am—12 pm</i>	29	30	31



# August 2021

Notes:  
Block 1 = Block A  
Block 2 = Blocks B & C  
Block 3 = Block D

Sun	Mon	Tue	Wed	Thu	Fri	Sat
1	2 <i>Block 1</i> <i>6 am—12 pm</i>	3 <i>Block 2</i> <i>6 am—12 pm</i>	4 <i>Block 3</i> <i>6 am—12 pm</i>	5	6	7
8	9 <i>Block 1</i> <i>6 am—12 pm</i>	10 <i>Block 2</i> <i>6 am—12 pm</i>	11 <i>Block 3</i> <i>6 am—12 pm</i>	12	13	14
15	16 <i>Block 1</i> <i>6 am—12 pm</i>	17 <i>Block 2</i> <i>6 am—12 pm</i>	18 <i>Block 3</i> <i>6 am—12 pm</i>	19	20	21
22	23 <i>Block 1</i> <i>6 am—12 pm</i>	24 <i>Block 2</i> <i>6 am—12 pm</i>	25 <i>Block 3</i> <i>6 am—12 pm</i>	26	27	28
29	30 <i>Block 1</i> <i>6 am—12 pm</i>	31 <i>Block 2</i> <i>6 am—12 pm</i>				

# September 2021

Notes:  
Block 1 = Block A  
Block 2 = Blocks B & C  
Block 3 = Block D

Sun	Mon	Tue	Wed	Thu	Fri	Sat
			<i>1</i> <i>Block 3</i> <i>6 am—12 pm</i>	<i>2</i>	<i>3</i>	<i>4</i>
<i>5</i>	<i>6</i>	<i>7</i>	<i>8</i>	<i>9</i>	<i>10</i>	<i>11</i>
<i>12</i>	<i>13</i>	<i>14</i>	<i>15</i>	<i>16</i>	<i>17</i>	<i>18</i>
<i>19</i>	<i>20</i>	<i>21</i>	<i>22</i>	<i>23</i>	<i>24</i>	<i>25</i>
<i>26</i>	<i>27</i>	<i>28</i>	<i>29</i>	<i>30</i>		