COUNTY OF SAN MATEO
PLANNING AND BUILDING DEPARTMENT

DATE: October 9, 2019

TO: Planning Commission

FROM: Planning Staff

SUBJECT: EXECUTIVE SUMMARY: Consideration of a Coastal Development Permit, Planned Agricultural District Permit, Architectural Review Exemption and an Addendum to an adopted Initial Study and Mitigated Negative Declaration to drill a domestic water well to serve a future single-family dwelling on a vacant parcel located in the unincorporated San Gregorio area of San Mateo County. This project is located within the Cabrillo Highway State Scenic Corridor and is appealable to the California Coastal Commission.

County File Number: PLN 2019-00025 (Wilkinson)

PROPOSAL

The applicant proposes to drill a domestic water well to serve a future single-family residence. The proposed well location (identified as "Site 6") is approximately 60 feet from the front/north property line, and 75 feet from the east property line adjacent to the highway. See Attachment C – Site Plan and Attachment E, Figure 8. The proposed project also includes two alternative well locations in the event the Site 6 (preferred location) does not yield sufficient water to serve a single-family residence. One alternative ("Site 5") is located on the south side of the parcel access road, approximately 165 feet from the east property line adjacent to the highway. "Site 4" is located on the north side of the parcel's access road, approximately 55 feet from the east property line at the highway. See Attachment C – Site Plan and Attachment E, Figure 7. All three locations are accessible from the existing road on the property, therefore, no grading or removal of significant vegetation would be necessary. (See Attachment C – Site Plan). No electricity is proposed for the well at this time. Prior domestic water test wells, which included the construction of concrete slabs/pads, were drilled on the parcel as authorized by permits approved in 2015 (Planning Case No. PLN 2014-00421) and 2017 (PLN 2016-00445). The wells, drilled in November 2016, August 2017, and December 2017, however, did not yield a sufficient amount of water for future residential development.

RECOMMENDATION

Approve the, Coastal Development Permit, Planned Agricultural District Permit and Architectural Review Exemption, County File Number PLN 2019-00025, by making the required findings and conditions of approval as contained in Attachment A.

SUMMARY

The proposed project is located on a vacant parcel that is accessible from the west side of Highway 1 ("Cabrillo Highway"), approximately 0.5 mile north of the Cabrillo Highway Tunitas Creek Road intersection. The unimproved parcel is gently-sloped with coastal scrub and a majority of ruderal vegetation extending westerly from the highway to a steep coastal bluff. There is a linear drainage area and freshwater pond located on the southeastern portion of the parcel. The parcel is predominantly surrounded by undeveloped parcels. There is some single-family residential development and agricultural activities in areas to the north, south, and east of the subject parcel.

The proposed project was reviewed for consistency with Local Coastal Program (LCP) and General Plan policies, specifically with respect to Rural Land Use, Soil Resources, Vegetative, Water, Fish, and Wildlife Resources, and Historical and Archaeological Resources. The proposed project is consistent with all applicable policies as contained in the Locating and Planning New Development, Agriculture, Sensitive Habitats, Visual Resources, and Shoreline Access components of the LCP. The proposed project is exempt from Architectural Review due to the existing vegetation and the topography of the parcel. The proposed project meets all applicable zoning regulations, particularly for setbacks. A Planned Agricultural District Permit is required because the parcel is within the PAD zoned district, and the proposed well is considered ancillary to residential development. The proposed project was reviewed under the substantive criteria for issuance of a PAD Permit and found to be in compliance, as it would require minimal site disturbance, does not require any grading or vegetation removal, and aims to provide sufficient, potable well water for the property, should residential use be proposed in the future.

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COUNTY OF SAN MATEO
PLANNING AND BUILDING DEPARTMENT

DATE: October 9, 2019

TO: Planning Commission

FROM: Planning Staff

SUBJECT: Consideration of, a Coastal Development Permit and Planned Agricultural District Permit pursuant to Sections 6328.4 and 6363 of the San Mateo County Zoning Regulations respectively, an Architectural Review Exemption pursuant to Sections 154, 227-229.1, 260, and 261 of the California Streets and Highways Code and an Addendum to an adopted Initial Study and Mitigated Negative Declaration pursuant to the California Environmental Quality Act to drill a domestic water well to serve a future single-family dwelling on a vacant parcel located in the unincorporated San Gregorio area of San Mateo County. This project is located within the Cabrillo Highway State Scenic Corridor and is appealable to the California Coastal Commission.

County File Number: PLN 2019-00025 (Wilkinson)

PROPOSAL

The applicant proposes to drill a domestic water well to serve a future single-family residence. The proposed well location (identified as "Site 6") is approximately 60 feet from the front/north property line, and 75 feet from the east property line adjacent to the highway. See Attachment C – Site Plan and Attachment E, Figure 8. The proposed project also includes two alternative well locations in the event the Site 6 (preferred location) does not yield sufficient water to serve a single-family residence. One alternative ("Site 5") is located on the south side of the parcel access road, approximately 165 feet from the east property line adjacent to the highway. "Site 4" is located on the north side of the parcel's access road, approximately 55 feet from the east property line at the highway. See Attachment C – Site Plan and Attachment E, Figure 7. All three locations are accessible from the existing road on the property, therefore, no grading or removal of significant vegetation would be necessary (See Attachment C – Site Plan). No electricity is proposed for the well at this time. Prior domestic water test wells, which included the construction of concrete slabs/pads, were drilled on the parcel as authorized by permits approved in 2015 (Planning Case No. PLN 2014-00421) and 2017 (PLN 2016-00445). The wells, drilled in November 2016, August 2017, and December 2017, however, did not yield a sufficient amount of water for future residential development.

RECOMMENDATION

Approve the, Coastal Development Permit, Planned Agricultural District Permit and Architectural Review Exemption, County File Number PLN 2019-00025, by making the required findings and conditions of approval.

BACKGROUND

Report Prepared By: Renée Ananda

Applicant: Jim Wilkinson

Owner: Ted Stevenson Angwin

Location: Cabrillo Highway, Half Moon Bay

APN(s): 066-330-130 and 066-330-150

Size: Combined total 26.79 acres

Existing Zoning: PAD/CD (Planned Agricultural District/Coastal Development)

General Plan Designation: Agriculture/Rural

Local Coastal Plan Designation: Agriculture

Sphere-of-Influence: None

Williamson Act: Not under a Williamson Contract

Existing Land Use: Vacant/Undeveloped

Water Supply: Not Applicable. There is no domestic water service available in the area. (The purpose of the proposed project is to identify potential water source to serve a possible single-family residence in the future.)

Sewage Disposal: There is no municipal sewer service available in the area. Future development on the site, e.g. residence, would require the installation of an on-site septic system.

Flood Zone: Zone X (Areas of Minimal Flooding), FEMA Panel No. 06081C0357F, effective August 2, 2017.

Environmental Evaluation: An Initial Study/Mitigated Negative Declaration was prepared and circulated for public review and comment from March 8, 2017 to March 28, 2017, as required by the California Environmental Quality Act (CEQA). The

IS/MND was adopted by the Planning Commission May 24, 2017. This permit application for a new well location on the parcel requires no subsequent environmental review and this report serves as an addendum to the adopted Mitigated Negative Declaration.

Pursuant to CEQA Guidelines Section 15164, an addendum is appropriate where some changes or additions to a previously adopted negative declaration are necessary, but none of the conditions described in Section 15162 requiring the preparation of a subsequent environmental document have occurred. The project does not include substantial changes that require major revisions to the adopted MND pursuant to CEQA Guidelines Section 15162: (1) No new significant environmental effects were identified by Staff during review of this new permit request; (2) There have been no changes in circumstances on or around the project site; and (3) No new information of substantial importance, which was not known previously and could not have been known, has been identified. The minor changes required to the adopted Mitigated Negative Declaration include: an update to the project description to reflect the new proposed well site(s). The applicant re-visited the parcel, assessed hydrologic, biological, and archaeological conditions, and submitted supplemental/updated reports. The well sites proposed in this application do not substantially change results of the previous assessments, and no changes are required to other portions of the initial study checklist. This report constitutes an addendum to the adopted IS/MND. No further action by the Planning Commission is required.

Setting: The subject parcel is located on the west side of Highway 1 (Cabrillo Highway), less than one mile to the south of Martins Beach, and approximately a half-mile north of the intersection of Cabrillo Highway and Tunitas Creek Road. It is in the Tunitas Creek area, east of the Pacific Ocean coastline and west of California State Highway 1 (CA-1), in unincorporated San Mateo County (Attachment B). The parcel is on a gently-sloped marine terrace that extends westward from the highway to a steep coastal bluff. The parcel is vacant with the only development being the existing, unpaved access road. There is a narrow, drainage channel that extends along the property line on the south to the coastal bluff which drains off-site hillside areas east of Cabrillo Highway and south of the property. A freshwater pond, typically collecting rain run-off, is located on the southeastern portion of the parcel, and is connected to a drainage channel located east across Cabrillo Highway. Neighboring parcels are largely undeveloped. However, there are single-family residential development and farming activities present sporadically to the north, south, and east of the subject parcel.

Chronology:

Date		Action
July 22, 2015	-	Planning Commission certified the Initial Study and Mitigated Negative Declaration and Approved the Architectural Review Exemption, Planned Agricultural District Permit, and Coastal Development Permit (PLN 2014-00421) to drill a domestic well on the subject parcel (APN 066-330-130/150).
November 6, 2015	-	Domestic well was drilled, as permitted under PLN 2014-00421, but did not yield a sufficient amount of water to supply a future single-family residence.
May 24, 2017	-	Planning Commission certified the Initial Study and Mitigated Negative Declaration and Approved the Architectural Review Exemption, Planned Agricultural District Permit, and Coastal Development Permit (PLN 2016-00445) to drill a new domestic well on the subject parcel (APN 066-330-130/150).
August 11, 2017	-	Domestic well was drilled, as permitted under PLN 2016-00445, but did not yield a sufficient amount of water to supply a future single-family residence.
December 22, 2017	-	Domestic well was drilled (as permitted under PLN 2016-00445) but did not yield a sufficient amount of water to supply a future single-family residence.
January 24, 2019	-	Third application submitted for an Architectural Review Exemption, Planned Agricultural District Permit, and Coastal Development Permit (PLN 2016-00025) to drill a new domestic well on the subject parcel (APN 066-330-130/150).
April 18, 2019	-	Application PLN 2019-00025 deemed complete.
October 9, 2019	-	Planning Commission public hearing date.

DISCUSSION

A. KEY ISSUES

1. Conformance with the General Plan

Staff has reviewed the proposed project and found that it complies with all applicable County General Plan policies, specifically:

a. Vegetative, Water, Fish and Wildlife Resources Policies

Policy 1.28 (*Regulate Development to Protect Sensitive Habitats*) regulates land uses and development activities adjacent to sensitive habitats in order to protect rare, endangered and unique plants and animals from reduction in their range or degradation of their environment and protect and maintain the biological productivity of important plant and animal habitats. The General Plan defines a sensitive habitat in Policy 1.8 (*Definition of Sensitive Habitats*) as any area where the vegetative, water, fish and wildlife resources provide especially valuable and rare plant and animal habitats that can be easily disturbed or degraded.

Field reviews were conducted by Garcia and Associates (GANDA) November 22 and November 28, 2016; and January 28, 2019. GANDA prepared Habitat Assessment reports dated December 1, 2016 and January 31, 2019 for the proposed project and found that there are occurrences for three special status wildlife species within 2 miles of the project area and critical habitat for one special status wildlife species (Attachment D). The 2016 assessment, supplemented by the January 2019 report, concluded that the project area has suitable habitat for the California red-legged frog (CRLF), the San Francisco garter snake (SFGS), and the saltmarsh common yellowthroat (SCY). All three species have a high potential to occur within the project area. The CRLF would likely occur in the pond and drainage area on the project parcel. These areas have a hydrological potential to hold sufficient water for CRLF egg-laying and tadpole metamorphosis (assuming there is normal, sufficient rainfall to create ponded water for the required 11 to 20 weeks metamorphosing period) during the breeding season (typically December to April). The adjacent riparian area and upland grasslands can provide sufficient refugia for the CRLF with the presence of rocky crevices and rodent burrows. A designated CRLF Critical Habitat area also lies approximately 400 feet southwest of the project area. The project area contains suitable habitat for the SFGS such as densely vegetated freshwater ponds for hunting its preferred prey (CRLF), upland grassy hillsides for sunning, and rodent burrows for hibernating. As for the SCY, the suitable habitat within and around the project area includes densely vegetated ponds and nearby creeks with emergent cattail and willow vegetation cover for foraging and nesting.

The habitat assessment also found that there are occurrences for five special status plant species within 2 miles of the project area. The assessment concluded that the project has suitable habitat for the Coastal marsh milk-vetch and Choris' popcorn flower and have moderate potential to occur within the project area. The suitable

habitat for both species occurs within the vicinity of freshwater ponds and seasonal drainage where moisture is retained in the soil.

The hydrologic conditions report dated April 18, 2019 indicates that the proposed well (including the two alternative locations) would not significantly deplete groundwater supplies or interfere significantly with groundwater re-charge, in a manner that it would result in a net deficit in aquifer volume or lower the local groundwater table. County regulations provide that a new domestic well be 50 feet from the property line and 50 feet from an existing well. The location of the proposed wells sites are greater than 50 feet from the property line and 2,000 feet from the nearest existing well (DWR Well No. e0174995). The estimated area of influence and potential capture zone for the proposed well is significantly less than the distance to the nearest well.

The proposed well will not have an impact on or significantly degrade surface or groundwater quality. The three proposed well sites are located 500 feet from the shoreline at an elevation of 200 feet above sea level. The hydrologic conditions report indicates that the current conditions of the site and area are such that groundwater and surface-water quality would not degrade from any sea-water intrusion.

The proposed project would not significantly alter the existing drainage pattern of the site or area in a manner that would result in significant erosion, siltation, increased rate of runoff, or flooding on or off the site. There is no existing or planned storm water drainage system and the proposed project would not provide a significant additional source of pollutants. It would not create or contribute runoff water. The proposed well project with the required mitigation measures, in addition to having no impact on water resources, will not result in adverse impacts to fish and wildlife resources, particularly CRLF, SFGS, and SCY.

The mitigation measures recommended in the 2017 Initial Study (IS)/Mitigated Negative Declaration (MND), those required for the prior approvals, as well as conditions provided in Attachment A for the subject application will ensure impacts to these species are mitigated. The mitigation measures address issues raised in public review comments submitted for the IS/MND, including those received from the California Coastal Commission and Committee for Green Foothills. See Attachment G.

b. Soil Resources

Policy 2.17 (*Regulate Development to Minimize Soil Erosion and Sedimentation*) regulates development to minimize soil erosion and

sedimentation including, but not limited to, minimizing removal of vegetative cover. Since both proposed well locations will utilize an existing road for access and be located on a relatively flat area, significant vegetation removal is not expected. However, the hydrologic conditions report prepared by Balance Hydrologics, Inc., states that the installation and yield testing of a domestic well may include the use of drilling mud or foam and bring groundwater to the ground surface (Attachment E). The erosion and sediment control measures recommended in the 2017 IS/MND, those required for the prior approvals, as well as conditions provided in Attachment A for the subject application will contain any drilling mud and prevent sediment from moving towards the pond located south of the proposed well locations.

Further, Policy 2.21 (*Protect Productive Soil Resources Against Soil Conversion*) regulates land uses of productive soil resources and encourages appropriate management practices to protect against soil conversion. Although the subject parcel does not contain prime soils, the proposed project area is identified as having "Lands Suitable for Agriculture". While the proposed project will convert a small area of the subject parcel for the proposed well, there is no expectation that the proposed well will result in damage to the capability of the surrounding soil. Given the small portion of agricultural lands proposed for conversion compared to the overall parcel size, the amount of conversion is considered minor as the majority of the parcel remains available for agricultural uses.

c. Visual Quality

Policy 4.15 (*Appearance of New Development*) regulates development to promote and enhance good design, site relationships and other aesthetic considerations. In addition, Policy 4.22 (*Scenic Corridors*), aims to protect and enhance the visual quality of scenic corridors by managing the location and appearance of structural development.

The subject parcel lies entirely within the Cabrillo Highway State Scenic Corridor. An unpaved road provides access directly from Cabrillo Highway and to the proposed well locations. No improvements to the road are necessary or required to access the well locations. The first well location is proposed to be 105 feet west from Cabrillo Highway and the second well location, which will be drilled if the first well location does not yield sufficient water for residential development, will be located 180 linear feet west from Cabrillo Highway. The project site is covered with coastal scrub and other vegetation. The eastern property line of the subject parcel is lined with Cypress trees which screens the parcel from Cabrillo Highway. The

completed well will be approximately 1-foot above natural grade and include a 4-foot by 4-foot cement pad. There is no electricity for the well proposed at this time. Due to the downward slope of the parcel from Cabrillo Highway, the existing vegetation on the parcel, and the potential location of the completed well, it will not be visible from public viewpoints.

d. Historical and Archaeological Resources

Policy 5.20 (*Site Survey*) and Policy 5.21 (*Site Treatment*) encourage the protection and preservation of archaeological sites, require a determination to be made on whether or not sites for new development contain archaeological/paleontological resources, and prior to approval of development for these sites, require mitigation measures be incorporated into the project for handling resources in the event that they are discovered.

A cultural resources report prepared by GANDA was submitted for a well location approved in 2015 under a previous permit. A letter prepared by GANDA verified that the two proposed well locations for this project were included in the analysis from the 2015 report. The report stated that one historic era period resource was identified and recorded within the project area: the Ocean Shore Railroad (OSRR) grade, an earthen berm approximately 100 feet long, 10 feet wide, and 1 to 3 feet in height. Although access to the well location tested in 2015 was west of the railroad grade which required mitigation measures to avoid potential impact, access to the currently proposed well locations are approximately 150 feet east of the railroad grade with access available from the existing unpaved road on the project parcel. Although no impact to the OSRR grade is expected, mitigation measures were recommended as part of the analysis in the Initial Study/Mitigated Negative Declaration and included as Conditions of Approval in Attachment A in the event that these resources are discovered.

A new survey was not conducted for the January 2019 supplemental review as the new proposed well drilling location is within the area previously surveyed by GANDA archaeologist Kruger Frank on February 12, 2015. At that time, an intensive pedestrian survey was conducted to identify both prehistoric and historic-era archaeological resources within the Project Area. Based on the previous records search results and findings of the pedestrian survey, no prehistoric archaeological resources were identified within the Project Area. Mitigation Measures, as identified previously, are required in the event that prehistoric materials such as flaked-stone tools (e.g., projectile points, knives, choppers) or obsidian, chert, basalt, or quartzite

toolmaking debris; bone tools; culturally darkened soil (e.g., midden soil often containing heat-affected rock, ash and charcoal, shellfish remains, faunal bones, and cultural materials); and stone milling equipment (e.g., mortars, pestles, handstones) are encountered, all excavations should be halted within 100 feet of the discovery, the Planning Department must be notified, and an archaeologist retained to examine the finds and assess their potential significance.

e. Rural Land Use

Policy 9.23 *(Land Use Compatibility in Rural Lands)* encourages compatibility of land uses in order to promote the health, safety and economy, and the maintenance of scenic and harmonious nature of the rural lands. Further, Policy 9.30 *(Development Standards to Minimize Land Use Conflicts with Agriculture)* aims to avoid locating non-agricultural activities on soils with agricultural capability and locate non-agricultural activities in areas of agricultural parcels which cause the least disturbance to feasible agricultural activities.

The subject parcel has a General Plan land use designation of "Agriculture." The proposed well will be located on soils identified as suitable for agriculture. Given that there is no municipal water service available for the project parcel, a water well would provide water to the property for both agricultural and domestic purposes, if proposed. Review and approval from the Environmental Health Services will also be required. The estimated temporary impact area of the proposed project would be 0.349 acres and the estimated permanent impact area would be 0.018 acres of the 26.79-acre property. Due to the minor permanent disturbance area, the property would be available for agricultural activities should they be pursued in the future. The existing road on the property would provide easy access to the proposed well and may prompt future development to be proposed in the same vicinity.

2. Conformance with Architectural Review Exemption

The project parcel is located within the Cabrillo Highway State Scenic Corridor. A field inspection of this property determined that the proposed well will be minimal in size and does not result in significant vegetation removal. As discussed in Section A.1.c above, the resulting well, if determined that it will yield sufficient water for a single-family residence, will be approximately 1-foot above grade and include a 4-foot by 4-foot cement pad. The project would not be visible from Cabrillo Highway and therefore is exempt from the Architectural Review requirement.

3. Conformance with the Local Coastal Program (LCP)

Staff has reviewed the proposed project and found it to be in compliance with all applicable Local Coastal Program (LCP) Policies, specifically:

a. Locating and Planning New Development Component

Policy 1.25 (*Protection of Archaeological/Paleontological Resources*) discusses the protection of archaeological resources on sites proposed for development. As discussed in Section A.1 above, an archaeological reconnaissance was performed on the project site and no archaeological or paleontological resources were found. However, the archaeologist stated that one historic era period resource, the OSRR grade, was identified and recorded within the project area. The archaeologist included recommendations on how to protect the potential historic resource and instructions on what to do in the event that resources are found during the well drilling activity. These recommendations were included in the IS/MND and as Conditions of Approval in Attachment A.

b. Agriculture Component

Policy 5.22 (*Protection of Agricultural Water Supplies*) requires the preservation of agricultural water supplies and that there be a water source for all non-agricultural uses. The policy also requires that adequate and sufficient water supplies needed for agricultural production and sensitive habitat protection in the watershed are not diminished.

The applicant also provided an existing hydrologic conditions report prepared by Mark Woyshner of Balance Hydrologic, Inc., which found that a well that utilizes standard best management practices to control drilling fluids, considered pumping at a rate typical for a single-family residence, and location, will not pose any significant impacts to agricultural water resources in the area (see Attachment E). Special care is recommended for the first proposed location to prevent drilling muds, foam, and turbid water from entering the nearby pond. Mitigation measures were recommended in the Initial Study/Mitigated Negative Declaration and included as Conditions of Approval in Attachment A to mitigate any potential impacts.

c. Sensitive Habitats Component

Policy 7.3 (*Protection of Sensitive Habitats*) prohibits any land use or development which would have significant adverse impacts on sensitive habitat areas. This policy also regulates development in

areas adjacent to sensitive habitats and requires development to be sited and designed as to prevent impacts that could significantly degrade the sensitive habitats. As discussed in Section A.1 and the Agricultural Component Section above, a habitat assessment was completed by GANDA for the proposed project and found that there are occurrences for three special status wildlife species and three special status plant species within 2 miles of the project area and critical habitat for one special status wildlife species near the project area (see Attachment D). As these species have a potential to occur within or near the project area, mitigation measures were recommended in the IS/MND and included as conditions of approval in Attachment A to mitigate any potential impacts.

d. Visual Resources Component

Policy 8.5 (*Location of Development*) requires new development to be located on a portion of a parcel where development is least visible from State and County Scenic Roads, least likely to significantly impact views from public viewpoints, and is consistent with all other Local Coastal Program (LCP) requirements which best preserves the visual and open space qualities of the parcel. Policy 8.31 (*Regulation of Scenic Corridors in Rural Areas*) and Policy 8.33 (*Exemptions*) also apply special regulations for the Cabrillo Highway State Scenic Corridor to protect the visual quality and natural settings of rural scenic areas and require a minimum setback of 100 feet from the right-of-way line, and greater where possible, or a 50-foot setback when sufficient screening is provided to shield the structure from public view. If the structure is not visible from the roadway due to localized terrain and vegetative cover, it may be exempt. As discussed in the sections above, the proposed project does not require significant vegetation removal or grading and will be screened by existing trees and vegetation. The proposed well location (identified as “Site 6”) is approximately 60 feet from the front/north property line, and 75 feet from the east property line adjacent to the highway. See Attachment C – Site Plan and Attachment E, Figure 8. The proposed project also includes two alternative well locations in the event the Site 6 (preferred location) does not yield sufficient water to serve a single-family residence. One alternative (“Site 5”) is located on the south side of the parcel access road, approximately 165 feet from the east property line adjacent to the highway. “Site 4” is located on the north side of the parcel’s access road, approximately 55 feet from the east property line at the highway. See Attachment C – Site Plan and Attachment E, Figure 7. Given the topography, existing vegetation, finished height, and location of the proposed well, it will not be visible from the highway or any other public viewpoints. The proposed well is also compliant with all other applicable regulations of the Local Coastal Program. Any

future development proposed on the property will be subject to review and issuance of separate Architectural Review, CDP, and PAD Permits. Furthermore, as discussed in Section A.2, the proposed project is exempt from Architectural Review as it cannot be seen from Cabrillo Highway or any other public viewpoint.

e. Shoreline Access Component

Policy 10.30 (*Requirement of Minimum Access as a Condition of Granting Development Permits*) requires the provision of shoreline access for any private or public development between the sea and the nearest public road. The policy bases the responsibility and requirements of the property owner for the provision of this access on the size and type of development, the benefit to the developer, the priority given to the type of development under the Coastal Act, and the impact of the development, particularly the burden the proposed development would place on the public right of access to and use of the shoreline. The project parcel is located between the sea and the first public road and currently does not have dedicated public access. The proposed project is considered a small non-agricultural development and therefore requires the following: retention of existing public access as defined in LCP Policies 10.5 (Definition of Established Shoreline Access) and 10.6 (Definition of Private Shoreline Access), the posting of hazardous and environmentally sensitive areas, and pay an in-lieu fee of a minimal sum not to exceed 5% of the project cost to contribute to the provision of public access elsewhere along the County shoreline. The proposed project sites are not in an area included in the assessment of access trails and shoreline destinations in Table 10.1 of the Local Coastal Program. As the proposed project is located entirely on the subject parcel, it does not impact the public's ability to access and use the designated access points located in the vicinity of the project parcel (i.e., Tunitas Creek State Beach to the south of the project site (see Attachment B)).

4. Conformance with Planned Agricultural District (PAD) Regulations

a. Setbacks and Height Requirement

	PAD Development Standards	Proposed (Location 1/Location 2)
Minimum Lot Size	N/A	26.79 acres
Minimum Front Setback	50 ft. or 100 ft.[1]	105 ft./180 ft.
Minimum Left Side Setback	20 ft.	>20 ft./>20 ft.
Minimum Right Side Setback	20 ft.	>20 ft./>20 ft.
Minimum Rear Setback	20 ft.	>20 ft./>20 ft.
Maximum Building Height	36 ft.	N/A
Pursuant to LCP Policy 8.31.e, a minimum setback of 100 feet from the right-of-way line is required. A 50-foot setback is permitted when sufficient screening is provided to shield the structure from public view.		

b. PAD Permit Requirements

The subject parcel does not contain prime soils, but is identified as having "Lands Suitable for Agriculture" as defined by Section 6351.B of the Zoning Regulations (PAD zoning district). The parcel is undeveloped with the exception of an existing access road. There are currently no agricultural related activities on the property. Section 6353.B of the PAD regulations states that single-family residences are allowed on "Lands Suitable for Agriculture" and other lands upon issuance of a PAD Permit. Since the proposed well will be certified as domestic, the project is considered ancillary to residential development, and therefore, a PAD Permit is required. In order to approve and issue a PAD Permit, the project must comply with the substantive criteria for the issuance of a PAD Permit, as delineated in Section 6355 of the SMC Zoning Regulations.

As proposed and conditioned, the proposed project complies with the following applicable policies:

General Criteria

(1) The encroachment of all development upon land which is suitable for agricultural use shall be minimized.

As discussed previously, the proposed well would result in minimal site disturbance and convert only a small portion of the 26.79-acre parcel. The remaining portion of the parcel would be open to future agricultural activities.

(2) All development permitted on a site shall be clustered.

The parcel is currently undeveloped with the exception of an existing access road. Aside from the domestic water well which

is considered ancillary to residential development, no other development is proposed at this time. If the applicant pursues future development on the property, the development will be evaluated for conformance with the requirement to cluster development.

(3) Every project shall conform to the Development Review Criteria contained in Chapter 20A.2 of the San Mateo County Ordinance.

The proposed project has been reviewed under and found to be in compliance with the Development Review Criteria within Chapter 20A.2 of the SMC Zoning Regulations. Specifically, the project complies with Sections 6324.1 (*Environmental Quality Criteria*), 6324.4 (*Water Resources Criteria*), and 6324.5 (*Cultural Resources Criteria*) which respectively address the potential for environmental impacts to cultural and water resources. As discussed in the sections above, the proposed project will not introduce noxious odors, chemical agents, or long-term noise and is conditioned to mitigate any significant adverse environmental impact upon primary wildlife or marine resources. The proposed project is also conditioned to include site preparation procedures and construction phasing to control, reduce erosion, exposure of soils, and discharge of solid and liquid waste that may contaminate water resources, and procedures for the discovery of cultural resources.

The proposed project also complies with Section 6325.1 (*Primary Scenic Resources Areas Criteria*) which requires public views within and from Scenic Corridors to be protected and for development to not significantly obscure these viewpoints. As discussed in the sections above, the project would not be seen from Cabrillo Highway or any other public viewpoints.

Water Supply Criteria

(1) *The existing availability of an adequate and potable well water source shall be demonstrated for all non-agricultural uses.*

There is no known water source currently on the project parcel. The proposed project seeks to determine if any on-site domestic water source is available to service the property. While the proposal seeks certification of the well as a potable water source, there is no development proposal at this time. Any domestic water that may be found may serve both domestic and agricultural purposes.

(2) *Adequate and sufficient water supplies needed for agricultural production and sensitive habitat protection in the watershed are not diminished*.

As discussed in the section above, no known water source is currently on the parcel. Although the proposed project aims to find an on-site domestic water source for a future single-family residence, the domestic water found may also serve agricultural purposes.

As discussed in Section 3.b above, the project biologist has recommended mitigation measures to ensure sensitive habitat protection. These mitigation measures are included as conditions of approval in Attachment A of this report. In addition, the proposed well locations are over 500 feet from the coastal bluff area. There is no development or observed sensitive habitats between the proposed well locations and the coastal area that may be impacted. Therefore, the proposed project is not expected to impact sensitive habitats in the watershed.

<u>Criteria for the Conversion of Lands Suitable for Agriculture and Other Land</u>

The subject parcel does not contain prime soils, but is identified as having lands suitable for agriculture. Section 6355.F (*Criteria for the Conversion of Lands Suitable for Agriculture and Other Land*) of the San Mateo County Zoning Regulations states that the conversion of lands suitable for agriculture is not allowed unless all of the following criteria are met:

(5) *All agriculturally unsuitable lands on the parcel have been developed or were determined to be undevelopable.*

The subject parcel consists entirely of soils that have been deemed “lands suitable for agriculture.” However, the proposed well will convert only a small portion of the subject parcel, thus leaving the majority of the 26.79-acre parcel available for agricultural activities. As discussed in the sections above, the proposed well has a minimal footprint and the overall area of disturbance is limited which will allow the large remainder of the property to be available for future agricultural activities.

(2) *The continued or renewed agricultural use of the soils is not capable of being accomplished in a successful manner within a reasonable period of time, and the productivity of adjacent agricultural lands will not be diminished.*

As discussed, the proposed well would convert only a small portion of the parcel which would leave the majority of the parcel available for future agricultural uses.

(3) *Clearly defined buffer areas are developed between agricultural and non-agricultural uses.*

As previously discussed, the subject parcel is undeveloped and there are no agricultural activities currently present on-site. Due to the limited scope of the proposed project and the undeveloped state of the subject parcel, clearly defined buffer areas are not required and do not need to be established. Any future development would be subject to review under this section to ensure conversion of agricultural lands is minimized buffer areas are established.

(4) *The productivity of any adjacent agricultural lands is not diminished, including the ability of the land to sustain dry farming or animal grazing*.

Neighboring parcels are largely undeveloped. Given the distance between the proposed well location and the nearest agricultural uses, no impact is expected on the productivity of adjacent agricultural lands.

(5) *Public service and facility expansions and permitted uses do not impair agricultural viability, either through increased assessment costs or degraded air and water quality.*

The proposed well will not require public service or facility expansions. The proposed well is completely located on the subject parcel and does not limit the agricultural viability of the parcel. A preliminary review by the County's Environmental Health Services found that the proposed plans are in compliance with current health standards, and thus, pose no threat to water quality. Lastly, the proposed project does not include aspects that would result in degraded air quality.

B. ENVIRONMENTAL REVIEW

An Initial Study/Mitigated Negative Declaration was prepared and circulated for public review and comment from March 8, 2017 to March 28, 2017, as required by the California Environmental Quality Act (CEQA). The IS/MND was adopted and certified by the Planning Commission May 24, 2017. This permit application for a new well location on the parcel requires no subsequent Mitigated Negative

Declaration. As discussed previously, this staff report constitutes an addendum to the adopted MND, as provided for by CEQA Guidelines Section 15164. The project, as evaluated against the criteria in CEQA Guidelines Section 15162, does not include substantial changes that require major revisions to the adopted MND: 1) No new significant environmental effects were identified by Staff during review of this new permit request; 2) There have been no changes in circumstances on or around the project site; and 3) No new information of substantial importance, which was not known previously and could not have been known, has been identified.

D. REVIEWING AGENCIES

Several agencies reviewed the proposal to test for a domestic well on the subject parcels (reviewed under planning case numbers PLN 2014-00421 and PLN 2016-00445 respectively approved in 2015 and 2017) including the California Coastal Commission, the County's Building Inspection Section, and Environmental Health Services.

ATTACHMENTS

A. Recommended Findings and Conditions of Approval
B. Vicinity Map
C. Project Plan
D. *Wilkinson Well and Pump Company Habitat Assessment, San Mateo County, California*, prepared by Jane Anfinson of Garcia and Associates, dated January 31, 2019
E. *Existing Hydrologic Conditions Report for Well Permit Application* PLN 2019-00445 at APN 066-330-130/15, prepared by Mark Woyshner of Balance Hydrologics, Inc., dated April 18, 2019
F. *Archaeological Study of PLN 2014-00421/APN 066330 and 066330150, San Mateo County, California*, prepared by Serah E. Timm, Archaeologist of Garcia and Associates, dated January 31, 2019
G. May 24, 2017 Staff Report including Initial Study and Mitigated Negative Declaration.

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Attachment A

County of San Mateo
Planning and Building Department

RECOMMENDED FINDINGS AND CONDITIONS OF APPROVAL

Permit or Project File Number: PLN 2019-00025 Hearing Date: October 9, 2019

Prepared By: Renée Ananda, Project Planner For Adoption By: Planning Commission

RECOMMENDED FINDINGS

Regarding the California Environmental Quality Act, Find:

1. That an addendum to the adopted Mitigated Negative Declaration has been prepared and demonstrates that none of the conditions described in CEQA Guidelines Section 15162, requiring subsequent environmental review, are present.

Regarding the Architectural Review Exemption, Find:

1. That the site evaluation, including a field visit of the property by Planning staff and photos submitted with the application, verifies that the proposed project will not be visible from Highway 1 (Cabrillo Highway). Although the project parcel is located within the Cabrillo Highway State Scenic Corridor, the proposed project will be minimal in size and will not result in significant vegetation removal. Given the topography, existing vegetation, finished height, and location of the proposed well, it will not be visible from Cabrillo Highway or any other public viewpoints.

Regarding the Coastal Development Permit, Find:

2. That the project, as described in the application and accompanying materials required by Section 6328.7, and as conditioned in accordance with Section 6328.14, conforms to the plans, policies, requirements and standards of the San Mateo County Local Coastal Program (LCP) as described in the staff report to the Planning Commission dated October 9, 2019.

3. That the project conforms to the findings required by policies of the San Mateo County Local Coastal Program. Specifically, in regard to the Agriculture and Visual Resources Components, that the domestic well is conditionally permitted with the issuance of a Planned Agricultural District permit, that the project has been proposed to be located in an area that has been defined as "*Lands Suitable*

for Agriculture," and that the proposed project converts only a small portion of the parcel leaving the remaining undisturbed area available for agricultural uses. In addition, the project will not be visible from scenic roadways or corridors, does not result in a significant change to natural landforms, and is mitigated to prevent potential impacts to coastal resources and sensitive habitats.

Regarding the Planned Agricultural Permit, Find:

General Criteria

4. That the encroachment of all development upon land, which is suitable for agricultural use, is minimized. The proposed well will result in only minimal site disturbance and converts only a small portion of the project parcel. The remaining portion of the parcel will be available for future agricultural activities.

5. That the project conforms to the Development Review Criteria contained in Chapter 20A.2 of the San Mateo County Ordinance Code. The project complies with Section 6324.1 and Section 6324.4, which respectively address the potential for environmental impacts and water resources, as the project will not introduce noxious odors, chemical agents, or long-term noise and is conditioned to mitigate any significant adverse environmental impacts upon primary wildlife or marine resources. The project also complies with Section 6325.1, which addresses primary scenic resources areas. While the project is located within the scenic corridor, the impact to scenic public views is minimal as the project is minor in nature and the existing topography and vegetation screen the project from public viewpoints.

Water Supply Criteria

6. That the existing availability of potable and adequate on-site well water source for all non-agricultural uses is demonstrated. The project parcel currently does not have an on-site well water source for either agricultural or domestic purposes. The well is being proposed to determine if any on-site domestic water source exists on the parcel.

7. That adequate and sufficient water supplies needed for agricultural production and sensitive habitat protection in the watershed are not diminished. Per the submitted hydrologist report, the proposed well is located an adequate distance from the nearest existing well as to not impact its production. Further, there is no expectation that the proposed well will result in significant groundwater depletion or interfere with groundwater recharge.

Criteria for the Conversion of Lands Suitable for Agriculture and Other Lands

8. That all agriculturally unsuitable lands on the parcel have been developed or determined to be undeveloped. The proposed well locations have been identified

as the most likely area to find water on the parcel after the first and second attempts (2015 and 2016) did not yield sufficient water to support a single-family residence. The proposed well has a minimal footprint and the overall area of disturbance is limited which allows the large remainder of the parcel to remain available for future agricultural activities.

9. That the continued or renewed agricultural use of the soils is not capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, social, and technological factors. The proposed well will convert only a small portion of the parcel leaving the majority of the parcel available for agriculture uses.

10. That the productivity of any adjacent agricultural lands is not diminished, including the ability of the land to sustain dry farming or animal grazing. Given the distance between the proposed well locations and the nearest agricultural uses, no impact is expected on the productivity of adjacent agricultural lands.

11. That the public service, facility expansions, and permitted uses do not impair agricultural viability, either through increased assessment costs or degraded air and water quality. The proposed well does not require public service or facility expansions. The proposed well is completely located on the subject parcel and does not limit the agricultural viability of the parcel, considering the small portion of the parcel to be converted. Environmental Health Services has preliminarily reviewed the proposed plans and found it to be in compliance with current health standards, thereby assuring there is no threat to water quality.

RECOMMENDED CONDITIONS OF APPROVAL

Current Planning Section

1. The approval applies only to the proposal as described in this report and materials submitted for review and approval by the Planning Commission on October 9, 2019. The Community Development Director may approve minor revisions or modifications to the project if they are found to be consistent with the intent of and in substantial conformance with this approval.

2. This permit shall be valid for one (1) year from the date of approval in which time a well permit shall be issued. Any extension of this permit shall require submittal of an application for permit extension and payment of applicable extension fees sixty (60) days prior to the expiration date.

3. Construction shall be within the dry season (approximately May 1 to September 30) and allowed after the rainy season ends when the ground is dry enough to support equipment at the work area. The applicant shall reference the January 31, 2019 report, *Impact Area Map (Figure 2.)* prepared by the GANDA

biologist to implement mitigation measures required by Condition No. 8 and Condition No. 9b. (below).

4. Upon the start of excavation activities and through to the completion of the project, the applicant shall be responsible for ensuring that dust control measures are implemented as needed. The intent shall be to mitigate excessive dust generation resulting from any and all excavation and earth-moving operations.

5. Prior to the beginning of any well drilling or other associated construction activities, the applicant shall implement the approved erosion and sediment control plan. Erosion control measure deficiencies, as they occur, shall be immediately corrected. The goal is to prevent sediment and other pollutants from leaving the project site and to protect all exposed earth surfaces from erosive forces. Said plan shall adhere to the San Mateo Countywide Stormwater Pollution Prevention Program "General Construction and Site Supervision Guidelines," including:

    a. Stabilizing all denuded areas and maintaining erosion control measures continuously between October 1 and April 30. Stabilizing shall include both proactive measures, such as the placement of hay bales or coir netting, and passive measures, such as revegetating disturbed areas with plants propagated from seed collected in the immediate area.

    b. Storing, handling, and disposing of construction materials and wastes properly, so as to prevent their contact with storm water.

    c. Controlling and preventing the discharge of all potential pollutants, including pavement cutting wastes, paints, concrete, petroleum products, chemicals, wash water or sediments, and non-stormwater discharges to storm drains and watercourses.

    d. Using sediment controls or filtration to remove sediment when dewatering the site and obtaining all necessary permits.

    e. Avoiding cleaning, fueling, or maintaining vehicles on-site, except in a designated area where wash water is contained and treated.

    f. Delineating with field markers clearing limits, easements, setbacks, sensitive or critical areas, buffer zones, trees, and drainage courses.

    g. Protecting adjacent properties and undisturbed areas from construction impacts using vegetative buffer strips, sediment barriers or filters, dikes, mulching, or other measures as appropriate.

    h. Performing clearing and earth-moving activities only during dry weather.

i. Limiting and timing application of pesticides and fertilizers to prevent polluted runoff.

j. Limiting construction access routes and stabilizing designated access points.

k. Avoiding tracking dirt or other materials off-site; cleaning off-site paved areas and sidewalks using dry sweeping methods.

l. The contractor shall train and provide instructions to all employees and sub-contractors regarding the construction best management practices (BMPs).

6. Implement BMPs during all phases of building/drilling to include pre- and post-construction activities. Best management practices shall include but not be limited to the following to prevent spoils from entering the pond and creek located on the southern portion of the parcel, downslope of the drilling impact areas:

   a. Install straw wattles or other natural biodegradable erosion control measures that do not contain plastic monofilament netting, on the perimeter of the project area (i.e., along the existing dirt road and on the perimeters of the 50-foot radius of temporary impact around the drill sites), and particularly around alternative well Site #4.

   b. Restrict construction vehicles to traveling and parking only on the existing dirt road and within the 50-foot radius of temporary impact around the drill site.

   c. Call off work if there is greater than 20% chance of precipitation.

   d. Cover spoils piles at end of each day and prior to rain events.

7. Protect biological resources:

   a. For the Coastal marsh milk-vetch, Choris' popcorn flower, and any other special status and protected species which have a potential to occur within the project area, blooming season plant survey shall be conducted by a qualified biologist in late May or early July to encompass the variability of bloom time triggered by weather variability. If the Coastal marsh milk-vetch, Choris' popcorn flower, or any other special status or protected species are determined to be present, the applicant shall consult a qualified biologist to recommend avoidance measures such as fencing, alteration of the planned impact area, and restricted access. The applicant shall also reference the Impact Area Map prepared by the project biologist for implementation and management of mitigation measures used.

b. Install and maintain a 3-foot tall frog and snake fence around the construction work site and along the road to the parcel's entrance/access point. Fence shall be located ten feet away from well locations.

8. Pre-construction survey (within 48 hours of start of construction) during avian nesting season, generally February 15th to mid-August, to be conducted by a qualified biologist. This survey will capture data regarding nesting birds within the temporary impact area and the surrounding vicinity. If nesting birds are discovered, the following steps will be taken to determine whether the construction activities will disturb the nest, and to minimize construction impact:

   a. Determine and mark a suitable buffer within which no construction activity or access may occur.

   b. A qualified biologist shall monitor the nest during construction for disturbance to the nest.

   c. If it is determined that construction activities are disrupting nesting activities, suspend construction activities until nestlings have fledged.

9. In the event that prehistoric materials such as flaked stone tools (e.g., projectile points, knives, choppers), obsidian, chert, basalt, or quartzite debris, bone tools, culturally darkened soil (e.g., midden soil often contains heat-affected rock, ash and charcoal, shellfish remains, faunal bones, and cultural materials), and stone milling equipment (e.g., mortars, pestles, hand stones) are encountered, all excavations shall be halted immediately, the San Mateo County Planning Department must be notified, and an archaeologist must be retained to examine the finds and assess the potential significance.

10. A discovery of a paleontological specimen during any phase of the project shall result in a work stoppage in the vicinity of the find until it can be evaluated by a professional paleontologist. Should loss or damage be detected, additional protective measures or further action (e.g., resource removal), as determined by a professional paleontologist, shall be implemented to mitigate the impact.

11. Use existing roads to the maximum extent feasible to avoid additional surface disturbance.

12. During all phases of the project, keep equipment and vehicles within the limits of the previously disturbed areas of the project site.

13. The property owner, applicant, and contractors must be prepared to carry out the requirements of California State law with regard to the discovery of human remains during construction, whether historic or prehistoric. In the event that any human remains are encountered during site disturbance, all ground-disturbing work shall cease immediately, and the County coroner shall be notified

immediately. If the coroner determines the remains to be Native American, the Native American Heritage Commission shall be contacted within 24 hours. A qualified archaeologist, in consultation with the Native American Heritage Commission, shall recommend subsequent measures for disposition of the remains.

14. Noise sources associated with demolition, construction, repair, remodeling, or grading of any real property shall be limited to the hours from 7:00 a.m. to 6:00 p.m. weekdays and 9:00 a.m. to 5:00 p.m. Saturdays. Said activities are prohibited on Sundays, Thanksgiving and Christmas (San Mateo Ordinance Code Section 4.88.360).

15. There shall be no removal of any significant vegetation that screens the view of the structure from Cabrillo Highway. Removal of any such vegetation shall be permitted only by the Planning Commission as part of an application for Architectural Review.

16. If any portion of a new structure is visible from Cabrillo Highway after substantiation by the applicant that it will not be visible, the applicant shall be required to submit an application for Architectural Review for the review and approval by the Planning Commission.

17. The approval of this project does not include the energization of the well. No extension of electric service is allowed as part of this permit.

18. The applicant shall notify the Current Planning Section when the work approved under this permit is completed and prior to issuance of the appropriate Environmental Health Services permits.

Environmental Health Services

19. Upon obtaining approval of the planning permits required for this project to drill a domestic water well, the applicant shall obtain a well installation permit from the Environmental Health (EH) Services for the construction of the well. The subject well shall be tested to meet quantity and quality health standards.

20. In the event that either the first or second well drilled does not meet the requisite water quality and quantity standards for domestic water use, the applicant shall properly abandon the well to the satisfaction of the EH Services. This shall have occurred prior to or concurrent with the EH Services' final certification of the well that does meet their standards, or if determined that one or both do not.

21. Upon obtaining approval of the planning permits required for this project to drill a domestic water well, the applicant shall obtain a well abandonment permit from the EH Services for the two wells approved under Planning Permit Case Number PLN 2016-00445 that were drilled in August and December 2017. The concrete

slabs/pads associated with each of the prior wells shall be removed along with the abandonment.

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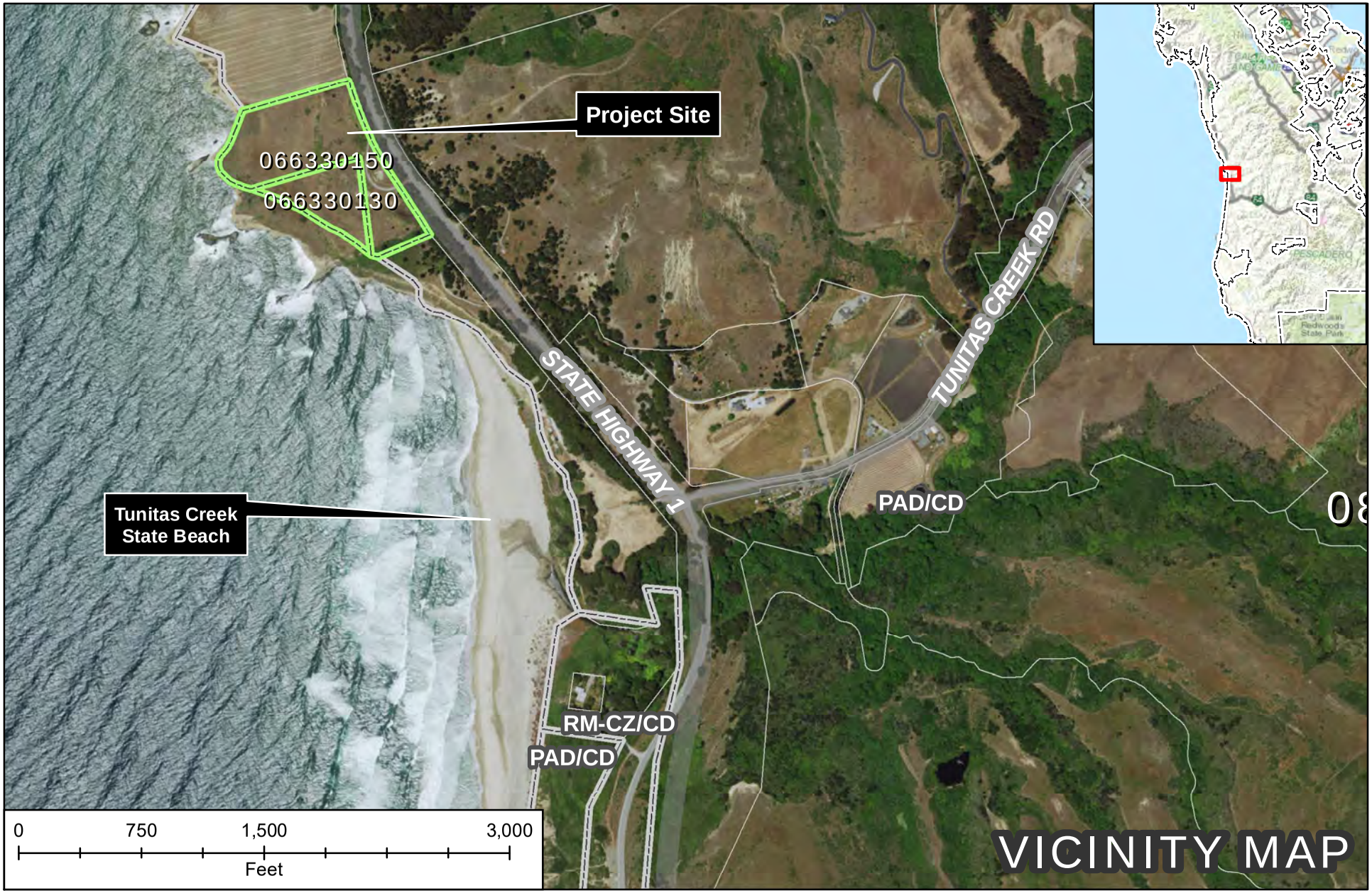
COUNTY OF SAN MATEO - PLANNING AND BUILDING DEPARTMENT

ATTACHMENT B

Attachment B



PLN2019-00025

COUNTY OF SAN MATEO - PLANNING AND BUILDING DEPARTMENT

ATTACHMENT C

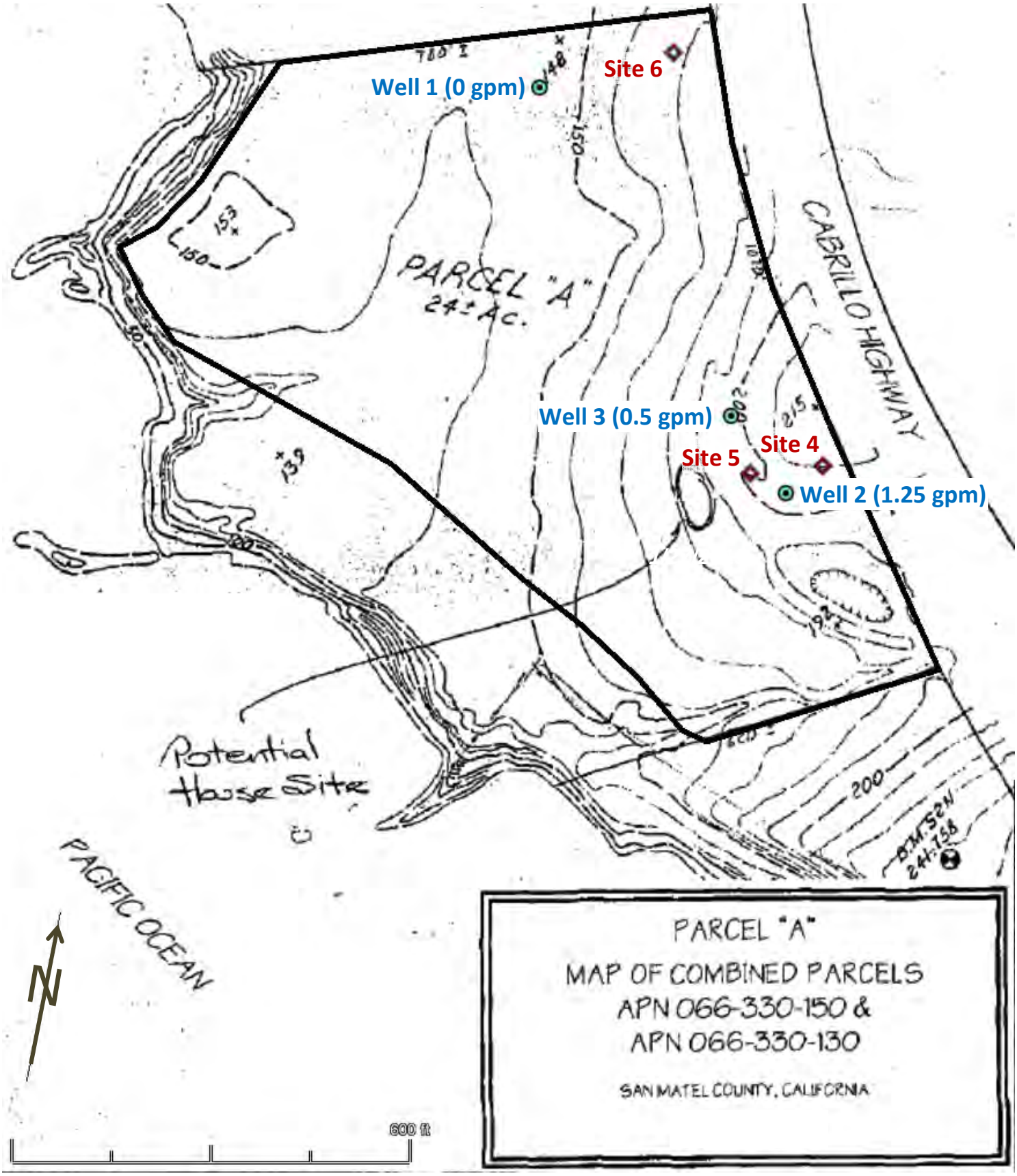


Figure 2. Site topography, APN 066-330-130, -150, San Mateo County, California. Map source: 1995 well drilling permit application filed at San Mateo County Environmental Health. Potential house site indicated on map may not be current.

Balance Hydrologics

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COUNTY OF SAN MATEO - PLANNING AND BUILDING DEPARTMENT

ATTACHMENT D

Habitat Assessment

Garcia and Associates
Natural and Cultural Resources Consultants
1512 Franklin St., Ste. 100
Oakland, CA 94612
Phone: (510) 891-0024; Fax: (510) 891-0027

To: Ellen Crane, Wilkinson Well & Pump Company

From: Jane Anfinson

Date: January 31, 2019

RE: Wilkinson Well and Pump Company Habitat Assessment, San Mateo County, CA

Introduction

This memo presents the findings of a habitat assessment and biological review conducted for the proposed well drilling and access route (project area) for the Wilkinson Well and Pump Company project located on Assessor Parcel Numbers (APN) 066330130 & 066330150, south of the City of Half Moon Bay. The project area (an estimated 16.75 acres) is situated in the Tunitas Creek area, east of the Pacific Ocean coastline and west of California State Highway 1 (CA-1), in unincorporated San Mateo County, California (Figures 1, 2). Wilkinson Well and Pump Company plans to drill one well (Figure 2 and Photo 1), with an estimated temporary impact area of 0.17 acre and an estimated permanent impact area of 0.09 acre. Garcia and Associates (GANDA) conducted an assessment to identify potential biological constraints and identify the dominant plant communities, sensitive plants, wildlife, and habitats within the project area.

Methods:

GANDA initially reviewed available environmental resources information in 2016 to identify potential biological constraints within the project area because of plans to drill for wells at two sites (Appendix 1). A site visit conducted January 28, 2019 by GANDA biologist J. Anfinson confirmed that no further construction activity has occurred on the site after the two wells were drilled and capped. With this data, it was determined that additional biological surveys of the area were not required. The following sources were evaluated for this updated review:

- California Department of Fish and Wildlife (CDFW) Natural Diversity Database (CNDDB) (January 2019);
- California Native Plant Society (CNPS) Rare Plant Inventory (January 2019)
- U.S. Fish and Wildlife Service (USFWS) Critical Habitat GIS Layers (January 2019);
- U. S. Geological Survey (USGS) 7.5-minute Quadrangle Maps: Half Moon Bay (1991), San Gregorio (1991), Pigeon Point (1956); and
- USFWS National Wetlands Inventory (NWI) (Version 2, October 2016).

Desktop resources also included Google maps and Google street view.

Results:

Land cover types: Land cover in the assessment area includes a majority of ruderal grassland, which was historically coastal scrub that has been recently disturbed, likely by grazing or other agricultural activities. Native coyote brush (*Baccharis pilularis)* remains, but the area is currently dominated by non-native species such as hemlock (*Conium* spp.), star-thistle (*Centaurea* spp.), Bermudagrass (*Cynodon* spp.), mustard (*Brassica* spp.), and wild radish (*Raphanus* spp.). A grove of cypress (*Cupressus* spp.*)* trees borders the eastern edge of the project area adjacent to CA-1. A freshwater pond (Photo 2) with the NWI classification PUBHh (indicating palustrine, unconsolidated bottom, permanently flooded, impounded with emergent wetland vegetation [cattails]) lies on the southern portion of the project area. An unnamed drainage (Photo 2) with the NWI classification PSSA (indicating palustrine, scrub-shrub, temporarily flooded) borders the southern edge of the project area, with willow (*Salix* spp.) dominating the cover. A connecting culvert under CA-1 was not detected in site visits, however, the drainage is mapped in the NWI as connected to the unnamed drainage directly east across CA-1.

The newly-planned well excavation is located in uplands in the far northeast corner of the project area, north of the pond and drainage (Figure 2). The land cover types within a 50-foot radius of planned well excavations include ruderal grassland and cypress trees. Within these areas were numerous small mammal burrows with openings approximately 1-2 inches in diameter.

Special-Status Species: The CNDDB lists occurrences for three special-status wildlife species, critical habitat for one special-status wildlife species, and occurrences for two special-status plant species within 2 miles of the project area. Three additional special-status plant species were identified from other sources (e.g., USFWS, CNPS) (Table 1).

Wildlife: Suitable habitat for California red-legged frog, San Francisco garter snake, and salt marsh common yellowthroat was found in the project area.

- There is high potential for California red-legged frog (*Rana draytonii*) (CRLF) to occur in the project area. The pond and

drainage have hydrological potential to hold sufficient water for CRLF egg-laying during the breeding season and tadpole metamorphosis, assuming there is normal, sufficient rainfall during the breeding season (typically December-April) to create ponded water for the required metamorphosing period (11-20 weeks). The adjacent riparian area and upland grasslands can provide sufficient refugia for the frogs with the presence of rocky crevices and rodent burrows. Further, designated CRLF Critical Habitat lies approximately 400 feet southwest of the project area.

- There is high potential for San Francisco garter snake (*Thamnophis sirtalis tetrataenia*) to occur in the project area, including the impact areas surrounding planned well site. The project area contains suitable habitat attributes for the species such as the densely vegetated freshwater pond for hunting its preferred prey, CRLF; upland grassy hillsides for sunning; and rodent burrows for hibernating.
- There is high potential for saltmarsh common yellowthroat (*Geothlypis trichas sinuosa*) to occur in the project area, which contains suitable habitat features such as the densely vegetated pond and nearby creek with emergent cattail and willow vegetation cover for foraging and nesting.

Plants: Suitable habitat for coastal marsh milk-vetch and Choris' popcornflower was found in the project area.

- Coastal marsh milk-vetch (*Astragalus pycnostachhyus* var. *pycnostachhyus*) suitable habitat occurs in the vicinity of the freshwater pond and seasonal drainage, where moisture is retained in the soil.
- Choris' popcornflower (*Plagiobothrys chorisianus* var. *chorisianus*) suitable habitat occurs in the vicinity of the freshwater pond and seasonal drainage, where moisture is retained in the soil.

Table 1 summarizes the biological constraints identified within the project area.

Recommendations:

Work during the dry season: We recommend that construction be allowed after the rainy season ends (approximately May 1) and the ground is dry enough to support equipment at the work area. We recommend the following best management practices to prevent spoils from entering the nearby pond and creek that are downslope of the drilling impact areas:

- Install straw wattles or other natural biodegradable erosion control measures that do not contain plastic monofilament netting, on the perimeter of the project area (i.e., along the existing dirt road and on the perimeters of the 50-foot radius of temporary impact around the drill site)
- Have construction vehicles travel and park only on the existing dirt road and within the 50-foot radius of temporary impact around the drill site,
- Call off work if there is greater than 20% chance of precipitation,
- Cover spoils piles at end of each day and prior to rain events.

Rare plant surveys: The area of temporary and permanent impact is limited to the existing dirt road, the chosen well drill site, and a 50-foot radius around the drill site. As discussed in the biological review, within this impact area, the plant community observed included ruderal vegetation typical of disturbed, well-drained upland coastal habitats. Within the larger project area there is potential for remnants of true coastal prairie grassland complex, and there is suitable habitat in the vicinity of the lowland pond for special-status plant species. If a blooming season plant survey is required, this could be executed in June by a qualified biologist, prior to construction. A botanical survey timed in June would occur within the blooming periods of all of the special-status plant species identified in the habitat assessment, including Coastal marsh milk-vetch and Choris' popcorn flower.

Nesting bird surveys: We recommend a pre-construction survey (within 48 hours of start of construction) during avian nesting season be conducted by a qualified biologist. This survey will capture data regarding nesting birds within the temporary impact area and the surrounding vicinity. If nesting birds are discovered, the following steps will be taken to determine whether the construction activities will disturb the nest, and to minimize construction impact:

- Determine and mark a suitable buffer within which no construction activity or access may occur
- A qualified biologist will monitor the nest during construction for disturbance to the nest
- If it is determined that construction activities are disrupting nesting activities, suspend construction activities until nestlings have fledged.

TABLE 1
Special-Status Species and Habitats

Wildlife	Plants	Plant Habitat/ Blooming Season	Habitat Requirements	Special-Status*	Potential to Occur in the Project Area
Species 1: Saltmarsh common yellowthroat (*Geothlypis trichas sinuosa*)			Resident of the San Francisco Bay region, in fresh and salt water marshes. Requires thick, continuous cover down to water surface for foraging, tall grasses, tule patches, willows for nesting	SOC	High potential to occur. Suitable habitat in pond emergent vegetation and stream riparian vegetation in assessment area.
Species 2: California red-legged frog (*Rana draytonii*)			Inhabits lowlands and foothills in or near permanent ponds and slow-moving perennial streams, generally below 4,000 feet. Requires 11-20 weeks of permanent water for larval development. Must have access to upland aestivation habitat.	FT SOC	High potential to occur. Suitable habitat in freshwater pond, seasonal stream, riparian area, and upland grassland with rocky crevice and small mammal burrow refugia.
Species 3: San Francisco garter snake (*Thamnophis sirtalis tetraenia*)			Vicinity of freshwater marshes, ponds and slow-moving streams in San Mateo County & extreme northern Santa Cruz County. Prefers dense cover & water depths of at least one foot. Upland areas near water are also very important.	FE, SE, FP	High potential to occur. Suitable habitat in freshwater pond and upland grassy hillsides with small mammal burrow refugia.
	Species 4: Coastal marsh milk-vetch (*Astragalus pycnostachhyus* var. *pycnostachhyus*)	June-October	Coastal dunes, marshes and swamps, coastal scrub. Mesic sites in dunes or along streams or coastal salt marshes. 0-155 m	1B.1	Moderate potential to occur. Suitable habitat in vicinity of freshwater pond and seasonal stream, where moisture is retained in the soil.
	Species 5: Kellogg's horkelia (*Horkelia cuneata* var. *sericea*)	April-September	Closed-cone coniferous forest, coastal scrub, coastal dunes, chaparral. Old dunes, coastal sandhills; openings. 5-215 m.	1B.1	Low potential to occur. Coastal scrub plant community has been degraded to include majority of ruderal plant cover.

Wildlife	Plants	Plant Habitat/ Blooming Season	Habitat Requirements	Special-Status*	Potential to Occur in the Project Area
	Species 6: Perennial goldfields (*Lasthenia californica* ssp. *macrantha*)	January-November	Coastal bluff scrub, coastal dunes, coastal scrub. 5-185 m	1B.2	Low potential to occur. Coastal scrub plant community has been degraded to include majority of ruderal plant cover.
	Species 7: Marsh microseris (*Microseris paludosa*)	April-July	Closed-cone coniferous forest, cismontane woodland, coastal scrub, valley and foothill grassland. 5-300 m.	1B.2	Low potential to occur. Coastal scrub plant community has been degraded to include majority of ruderal plant cover.
	Species 8: Choris' popcornflower (*Plagiobothrys chorisianus* var. *chorisianus*)	March-June	Chaparral, coastal scrub, coastal prairie. Mesic sites. 15-160m	1B.2	Moderate potential to occur. Suitable habitat in vicinity of freshwater pond and seasonal stream, where moisture is retained in the soil.

- *F = Federal; S = State; T = Threatened; E = Endangered; R = Rare; FP = Fully Protected; C=Candidate

- SOC = California Dept. of Fish and Wildlife Species of Concern
- FP = California Dept. of Fish and Wildlife Fully Protected

- California Native Plant Society designations:
- 1A Species presumed extinct in California
- 1B Plants rare, threatened or endangered in California and elsewhere.
- 2 Plants rare threatened or endangered in California, but more common elsewhere.

- California Native Plant Society threat categories:
- .1 Seriously endangered in California.
- .2 Fairly endangered in California.

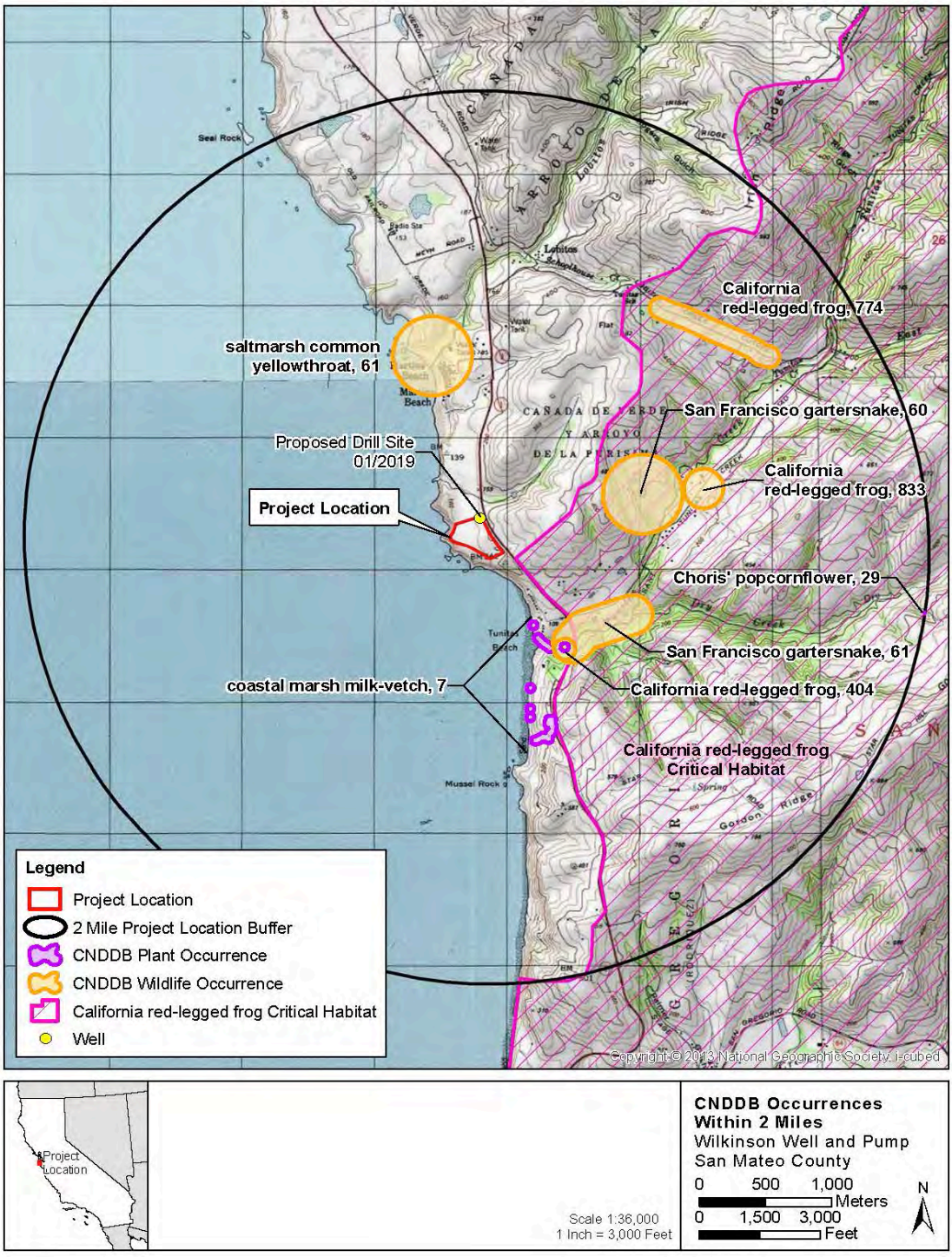


Figure 1. CNDDB special–status species occurrences and critical habitat within 2.0 miles of the project location.

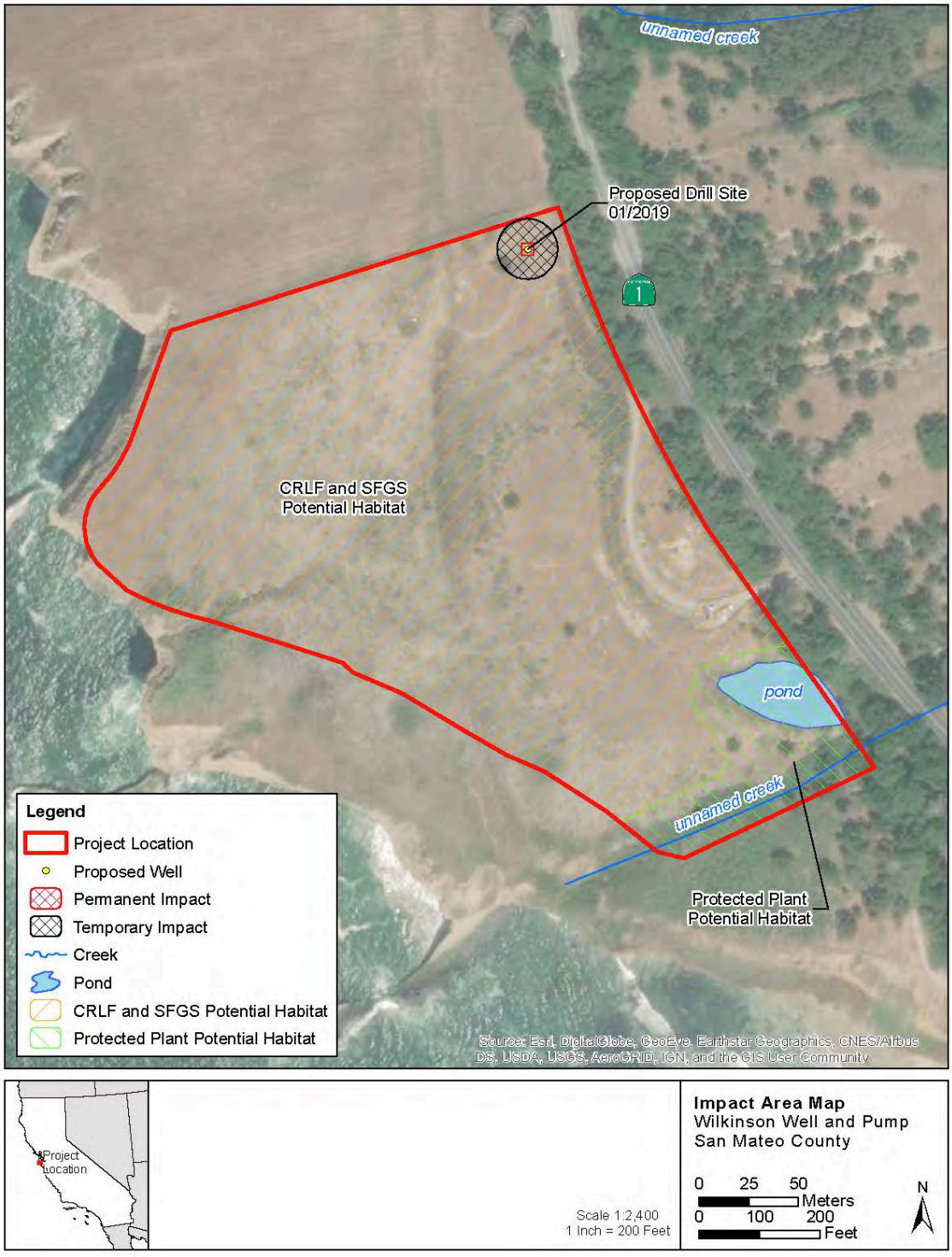


Figure 2. Project area showing proposed well site, area of temporary and permanent impact; and wetland and waterway features within the project area.

Photo 1. Stake marking proposed well site (orange flagged stake in yellow circle). Photo taken from access road. Facing west.

Photo 2. Pond downslope from access road in the southeast corner of the project area. Facing south.

Photo 3. Seasonal drainage that borders the project area on the south side. Facing west.

Appendix 1: GANDA Habitat Assessment, December 1, 2016

Habitat Assessment

Garcia and Associates
Natural and Cultural Resources Consultants
1512 Franklin St., Ste. 100
Oakland, CA 94612
Phone: (510) 891-0024; Fax: (510) 891-0027

To: Ellen Crane, Wilkinson Well & Pump Company

From: Jane Anfinson

Date: December 1, 2016

RE: Wilkinson Well and Pump Company Habitat Assessment, San Mateo County, CA

Introduction

This memo presents the findings of a habitat assessment and biological review conducted for the proposed well drilling and access route (project area) for the Wilkinson Well and Pump Company project located on Assessor Parcel Number (APN) 066330130 & 066330150, south of the City of Half Moon Bay. The project area (an estimated 16.75 acres) is situated in the Tunitas Creek area, east of the Pacific Ocean coastline and west of Cabrillo Highway 1, in unincorporated San Mateo County, California (Figures 1, 2). Wilkinson Well and Pump Company plans to drill for wells at two sites (Figure 2 and Photos 1 and 2), with estimated temporary impact area of 0.349 acres in total and estimated permanent impact area of 0.018 acres in total. Garcia and Associates (GANDA) conducted an assessment to identify potential biological constraints and identify the dominant plant communities, sensitive plants, wildlife, and habitats within the project area.

Methods:

GANDA reviewed available environmental resources information to identify potential biological constraints within the project area. The following sources were evaluated:

- California Department of Fish and Wildlife (CDFW) Natural Diversity Database (CNDDB) (November 2016);
- California Native Plant Society (CNPS) Rare Plant Inventory (November 2016)

- U.S. Fish and Wildlife Service (USFWS) Critical Habitat GIS Layers (September 2016);
- U. S. Geological Survey (USGS) 7.5-minute Quadrangle Maps: Half Moon Bay (1991), San Gregorio (1991), Pigeon Point (1956); and
- USFWS National Wetlands Inventory (NWI) (Version 2, October 2016).

Desktop resources also included Google maps and Google street view. GANDA biologist J. Anfinson conducted the field review on November 22 and November 28, 2016.

Results:

Land cover types: Land cover in the assessment area includes a majority of ruderal grassland, which was historically coastal scrub that has been recently disturbed, likely by grazing or other agricultural activities. Native coyote brush (*Baccharis pilularis)* remains, but the area is currently dominated by non-native species such as hemlock (*Conium* spp.), star-thistle (*Centaurea* spp.), Bermudagrass (*Cynodon* spp.), mustard (*Brassica* spp.), and wild radish (*Raphanus* spp.). A grove of cypress (*Cupressus* spp.*)* trees borders the eastern edge of the project area adjacent to California State Highway 1 (CA-1). A freshwater pond (Photo 3) with the NWI classification PUBHh (indicating palustrine, unconsolidated bottom, permanently flooded, impounded with emergent wetland vegetation [cattails]) lies on the southern portion of the project area. An unnamed drainage (Photo 3) with the NWI classification PSSA (indicating palustrine, scrub-shrub, temporarily flooded) borders the southern edge of the project area, with willow (*Salix* spp.) dominating the cover. The drainage is not culverted under CA-1, and is mapped in the NWI as connected to the unnamed drainage directly east across CA-1.

The planned well excavations are located in uplands northwest of the pond and drainage within the project area (Figure 2). The land cover types within a 50-foot radius of planned well excavations includes the ruderal grassland and cypress trees. Within these areas were numerous small mammal burrows with openings approximately 1-2 inches in diameter.

Special Status Species: The CNDDB lists occurrences for three special status wildlife species, critical habitat for one special status wildlife species, and occurrences for two special status plant species within 2 miles of the project area. Three plant species were identified from other sources (e.g., USFWS, CNPS) (Table 1).

Wildlife: Suitable habitat for California red-legged frog, San Francisco garter snake, and saltmarsh common yellowthroat was found in the project area.

- There is high potential for California red-legged frog (*Rana draytonii*) (CRLF) to occur in the project area. The pond and drainage have hydrological potential to hold sufficient water for CRLF egg-laying during the breeding season and tadpole metamorphosis, assuming there is normal, sufficient rainfall during

the breeding season (typically December-April) that creates ponded water for the required metamorphosing period (11-20 weeks). The adjacent riparian area and upland grasslands can provide sufficient refugia for the frogs with the presence of rocky crevices and rodent burrows. Further, designated CRLF Critical Habitat, lies approximately 400 feet southwest of the project area.

- There is high potential for San Francisco garter snake (*Thamnophis sirtalis tetrataenia*) to occur in the project area, including the impact areas surrounding planned well sites 1 and 2. The project area contains suitable habitat attributes for the species such as the densely vegetated freshwater pond for hunting its preferred prey, CRLF; upland grassy hillsides for sunning; and rodent burrows for hibernating.
- There is high potential for saltmarsh common yellowthroat (*Geothlypis trichas sinuosa*) to occur in the project area, which contains suitable habitat features such as the densely vegetated pond and nearby creek with emergent cattail and willow vegetation cover for foraging and nesting.

Plants: Suitable habitat for Coastal marsh milk-vetch and Choris' popcornflower was found in the project area.

- Coastal marsh milk-vetch (*Astragalus pycnostachhyus* var. *pycnostachhyus*) suitable habitat occurs in the vicinity of the freshwater pond and seasonal drainage, where moisture is retained in the soil.
- Choris' popcornflower (*Plagiobothrys chorisianus* var. *chorisianus*) suitable habitat occurs in the vicinity of the freshwater pond and seasonal drainage, where moisture is retained in the soil.

Table 1 summarizes the biological constraints identified within the project area.

TABLE 1
Special-Status Species and Habitats

Wildlife	Plants	Plant Habitat/ Blooming Season	Habitat Requirements	Special Status*	Potential to Occur in the Project Area
Species 1: Saltmarsh common yellowthroat (*Geothlypis trichas sinuosa*)			Resident of the San Francisco Bay region, in fresh and salt water marshes. Requires thick, continuous cover down to water surface for foraging, tall grasses, tule patches, willows for nesting	SOC	High potential to occur. Suitable habitat in pond emergent vegetation and stream riparian vegetation in assessment area.
Species 2: California red-legged frog (*Rana draytonii*)			Inhabits lowlands and foothills in or near permanent ponds and slow-moving perennial streams, generally below 4,000 feet. Requires 11-20 weeks of permanent water for larval development. Must have access to upland aestivation habitat.	FT SOC	High potential to occur. Suitable habitat in freshwater pond, seasonal stream, riparian area, and upland grassland with rocky crevice and small mammal burrow refugia.
Species 3: San Francisco garter snake (*Thamnophis sirtalis tetraenia*)			Vicinity of freshwater marshes, ponds and slow-moving streams in San Mateo County & extreme northern Santa Cruz County. Prefers dense cover & water depths of at least one foot. Upland areas near water are also very important.	FE, SE, FP	High potential to occur. Suitable habitat in freshwater pond and upland grassy hillsides with small mammal burrow refugia.
	Species 4: Coastal marsh milk-vetch (*Astragalus pycnostachhyus* var. *pycnostachhyus*)	June-October	Coastal dunes, marshes and swamps, coastal scrub. Mesic sites in dunes or along streams or coastal salt marshes. 0-155 m	1B.1	Moderate potential to occur. Suitable habitat in vicinity of freshwater pond and seasonal stream, where moisture is retained in the soil.
	Species 5: Kellogg's horkelia (*Horkelia cuneata* var. *sericea*)	April-September	Closed-cone coniferous forest, coastal scrub, coastal dunes, chaparral. Old dunes, coastal sandhills; openings. 5-215 m.	1B.1	Low potential to occur. Coastal scrub plant community has been degraded to include majority of ruderal plant cover.

Wildlife	Plants	Plant Habitat/ Blooming Season	Habitat Requirements	Special Status*	Potential to Occur in the Project Area
	Species 6: Perennial goldfields (*Lasthenia californica* ssp. *macrantha*)	January-November	Coastal bluff scrub, coastal dunes, coastal scrub. 5-185 m	1B.2	Low potential to occur. Coastal scrub plant community has been degraded to include majority of ruderal plant cover.
	Species 7: Marsh microseris (*Microseris paludosa*)	April-July	Closed-cone coniferous forest, cismontane woodland, coastal scrub, valley and foothill grassland. 5-300 m.	1B.2	Low potential to occur. Coastal scrub plant community has been degraded to include majority of ruderal plant cover.
	Species 8: Choris' popcornflower (*Plagiobothrys chorisianus* var. *chorisianus*)	March-June	Chaparral, coastal scrub, coastal prairie. Mesic sites. 15-160m	1B.2	Moderate potential to occur. Suitable habitat in vicinity of freshwater pond and seasonal stream, where moisture is retained in the soil.

- *F = Federal; S = State; T = Threatened; E = Endangered; R = Rare; FP = Fully Protected; C=Candidate

- SOC = California Dept. of Fish and Wildlife Species of Concern
- FP = California Dept. of Fish and Wildlife Fully Protected

- California Native Plant Society designations:
- 1A Species presumed extinct in California
- 1B Plants rare, threatened or endangered in California and elsewhere.
- 2 Plants rare threatened or endangered in California, but more common elsewhere.

- California Native Plant Society threat categories:
- .1 Seriously endangered in California.
- .2 Fairly endangered in California.

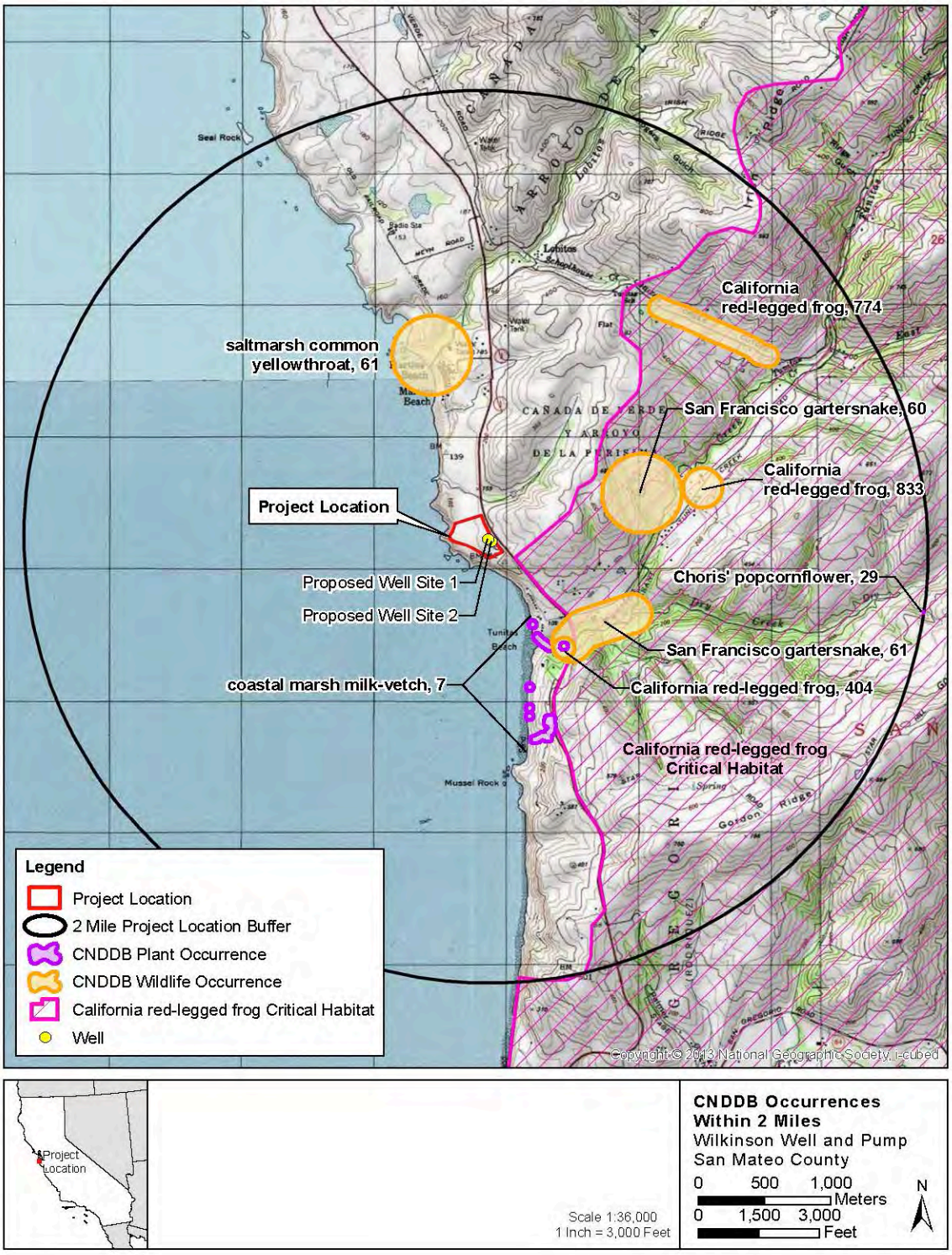


Figure 1. CNDDB special–status species occurrences and critical habitat within 2.0 miles of the project location.

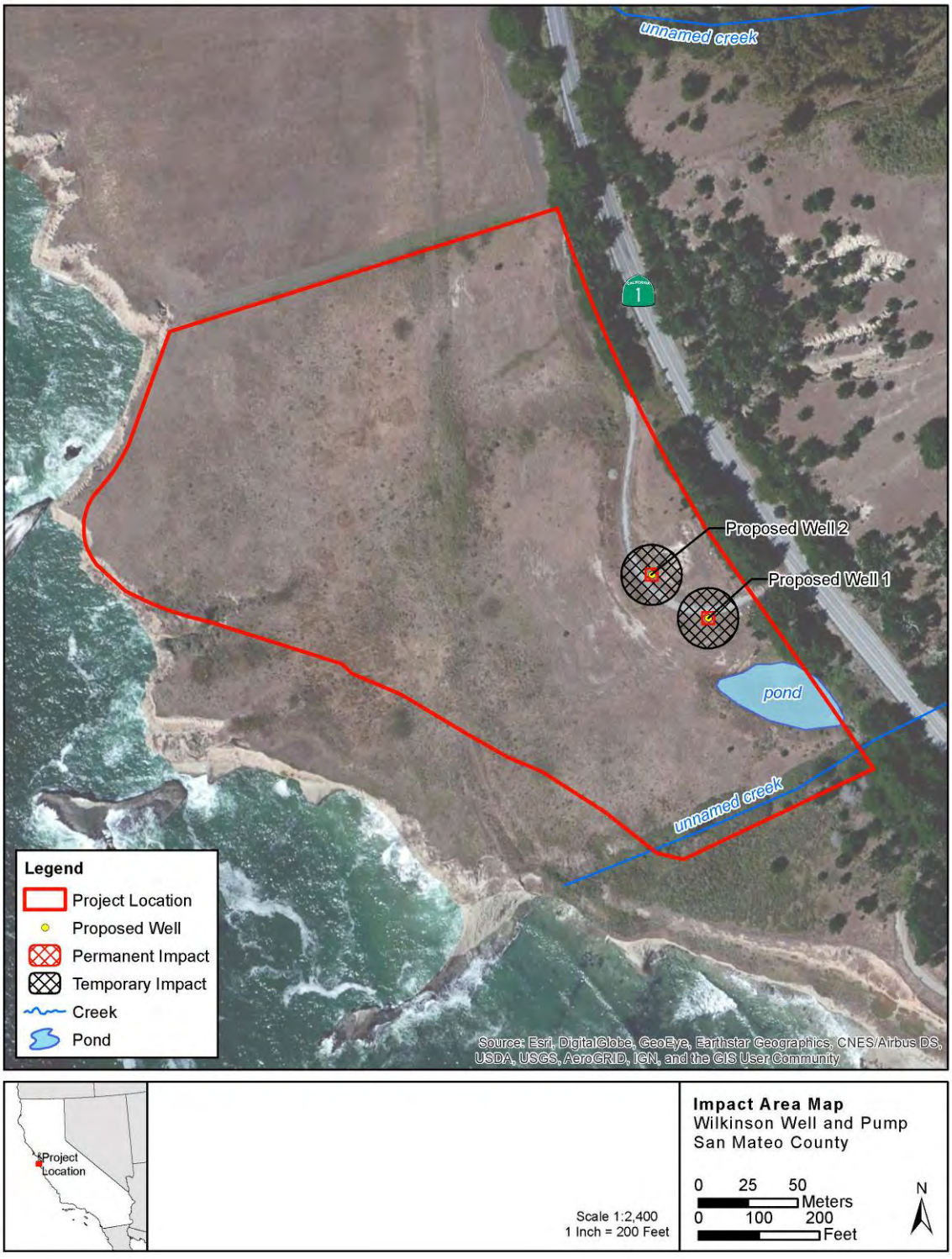


Figure 2. Project area showing proposed well sites, areas of temporary impact, and permanent impact; and wetland and waterway features within the project area.

Photo 1. Stake marking proposed well site 1 (in yellow circle). Facing west.

Photo 2. Stake marking proposed well site 2. Facing west.

Photo 3. Pond downslope from proposed well site 1. Facing south.

Photo 4. Seasonal drainage that borders the project area on the south side. Facing west.

COUNTY OF SAN MATEO - PLANNING AND BUILDING DEPARTMENT

ATTACHMENT E

Balance Hydrologics, Inc.®
800 Bancroft Way • Suite 101 • Berkeley, CA 94710-2227 • (510) 704-1000
www.balancehydro.com • email: office@balancehydro.com
Berkeley • Santa Cruz • Truckee

April 18, 2019

Mr. James Wilkinson
Wilkinson Well and Pump
890 Sonora Avenue,
Half Moon Bay, CA 94019

RE: Existing hydrologic conditions report for well permit application PLN2019-00445 at APN 066-330-130/150

Dear Jim:

The San Mateo County Planning and Building Department (County) prepared and certified a CEQA Initial Study and Mitigated Negative Declaration, Architectural Review Exemption, Coastal Development Permit, and Planned Agricultural Permit to drill a domestic water well to serve a future single-family dwelling for vacant parcel APN 066-330-130/150. The 24-acre Project property at is located west of Highway 1 approximately 0.5 miles north of Tunitas Creek Road in the unincorporated San Gregorio area of coastal San Mateo County **(Figure 1**). Three wells have been recently permitted and completed at the property, each with insufficient yield for the proposed Project (**Figure 2**). A summary of the attached California Department of Water Recourses (DWR) well completion reports for the three wells are as follows:

- Well #1 (DWR No. e0327650), drilled under permit number 15-1985 (Case No. PLN2014-00421), was completed on November 6, 2015 to a depth of 600 feet below ground surface (bgs), with screens from 100 to 600 feet bgs and a 50-ft concrete seal. On November 12, 2015 the depth to static water level in the well was 590 feet bgs (10 feet from the bottom of the well), and the well did not produce water. On April 17, 2019, we measured the depth to water in the well at 28.5 feet from top of casing, which was broken at the concrete slab level.
- Well #2 (DWR No. e0360483), drilled under permit number 17-1112 (Case No. PLN2016-00445), was completed on August 11, 2017 to a depth of 200 feet bgs, with screens from 100 to 200 feet bgs and a 50-ft concrete seal. The depth to static water level in the well was subsequently measured at 27 feet bgs (date not indicated). The well produce 1.25 gallons per minute (gpm) during a 6-hour constant-rate yield test. The total drawdown was 180 feet, and the calculated specific capacity (Cs) of the well is 0.0069 gpm per foot of drawdown. On April 17, 2019, we measured the depth to water in the well at 24.0 feet from top of casing.
- Well #3 (DWR No. e0360489), drilled under permit number 17-1112 (Case No. PLN2016-00445), was completed on December 22, 2017 to a depth of 300 feet bgs, with screens from 100 to 300 feet bgs and a 50-ft concrete seal. The depth to static water level in the well was subsequently measured at 24 feet bgs on February 15, 2018. The well produce 0.5 gpm during a 6-hour constant-rate yield test. The total drawdown was 280 feet, and the calculated specific capacity (Cs) of the well is 0.0018 gpm per foot of drawdown. On April 17, 2019, we measured the depth to water in the well at 32.1 feet from top of casing.

For each of the two water-well permits (15-1985 for Well #1 and 17-1112 for Well #2 and Well #3), the applicant submitted a hydrologic existing conditions report prepared by Balance Hydrologics (February 11, 2015 and updated November 7, 2016) to assist County staff with the completion of the initial study.

Wilkinson Well and Pump has submitted a third application to drill a proposed well at a different location on the property (Case No. PLN2019-00445). The application proposes to install a well at one of three potential sites (Sites 4, 5, and 6 identified in **Figure 2**). Site #6 is the preferred location for the well, with sites #5 and #4 alternate locations. The County has requested a revision of the hydrology report to include analysis for the new well and back-up well locations. This letter report responds to that request by the County.

Hydrologic Setting

The project site is located in the Mediterranean climate zone typical of central coastal California, characterized by dry, mild summers and moist, cool, almost frostless winters. Mean annual rainfall is 26.7 inches at the long-term weather station at Half Moon Bay airport, located 11.5 miles north of the site (**Table 1**). The modeled 30-year normal annual rainfall for the Project site is 27.8 inches (PRISM Climate Group 1981-2010 normals). Influenced by marine air, onshore wind, and frequent summer fog or overcast conditions, the region is generally protected from hot inland weather. The modeled 30-year normal annual temperature for the Project site is 56.3°F, and the warmest mean monthly temperature is 61°F (PRISM Climate Group 1981-2010 normals). Due to its close proximity to the ocean, humidity is rather high and evaporation is low. The site is located in California Irrigation Management Information System (CIMIS) Reference Evapotranspiration (ETo) Zone 1: Coastal Plains Heavy Fog Belt (Snider, 1999). With an estimated mean annual ETo of 33 inches[1], this zone has the lowest annual evapotranspiration in California. It is well suited for growing brussels sprouts, artichokes, and flowers. During the mid-20th century, flax and peas were grown widely in this part of the county.

The 24-acre project parcel is located approximately 4,000 feet south from the Lobitos Creek and 2,000 feet north from Tunitas Creek on a gently-sloping marine terrace extending west from Cabrillo Highway to a steep coastal bluff (**Figure 1**). The site is predominantly covered with grass, forbs, and occasional juncus patches and blackberry thickets. Ground elevation is highest at 215 feet above sea level (asl) near the entrance of the property at Cabrillo Highway and slopes approximately 16 percent across the east portion of the property to a north-south trending 150-foot contour (**Figure 2**). This contour defines a break in the slope where the ground surface is generally level across the west portion of the property.[2] Topography across the west portion of the property is accentuated by a broad hollow in the marine terrace that drains to a centrally located draw in the coastal bluff. Though no discrete stream channel is present within the hollow, there is a short gully at the top of the draw. Surface water from most of the property drains to this hollow and draw, as well as drainage from a portion of the adjoining parcel to the north (APN 066-330-240). The project parcel is outside of the 0.2 percent annual chance 100-year flood area, as identified on the Flood Insurance Rate Map for the area (FEMA, 2012).

The 140-foot contour traces inside the margin of the hollow and extends to the precipice of the bluff, while near the mouth of the draw the bluff elevation is about 130 feet asl. The bluff is remarkably steep,

[1] Considering its location at the coastal bluff, ETo at the project parcel is likely lower than that reported for Zone 1.
[2] An abandoned railroad track is called out in the 1961 soil survey sheet number 17, crossing the property approximately along the 150-foot contour.

dropping nearly vertical to a tidally inundated, wave-beaten, rocky coast featuring bedrock stumps close to shore. A small portion of marine terrace between the hollow and the bluff at the northwest portion of the property is reasonably preserved at the 150-foot contour, matching this elevation contour east of the hollow, where the slope steepens eastward. This slope continues uphill onto the adjoining parcel east of Cabrillo Highway (APN 066-330-160), up to a marine terrace higher in elevation, found above about 370 feet asl.

A notable hydrologic feature on the property is a well-defined narrow, linear drainage channel (gully) extending along the south property line to the coastal bluff, which primarily drains off-site hillside areas east of Cabrillo Highway and south of the property, as well as the southeast corner of the property. It is the largest drainage channel on the property. There is a small, shallow 'cattle pond' on the property near the upper portion of this gully with a retaining berm at 192 feet asl (**Figure 3**). This pond is apparently dredged to bedrock, which outcrops along the north portion of the pond, just below the paved road at the entrance of the property from Cabrillo Highway.[3] The pond contained the only surface water present on the property during our site reconnaissance on January 27, 2015. The specific conductance[4] of the water was 345 micromhos/cm at 13.5 degrees Celsius (or normalized to 451 umhos/cm at 25°C), which was not an unexpected value for springs, seeps and ponds in the region; specific conductance values of between 350 and 550 micromhos/cm were reported in a comprehensive sampling of all seeps and spring on Gordon Ridge, about 1 to 1.5 miles to the southeast (Hecht and others, 2004).

Geologic Setting

Geology of the region is described in the U.S. Geological Survey open file report 98-137 by Brabb and others (1998). Pliocene and upper Miocene marine sedimentary rock, the Purisima Formation is present throughout the region south Montara Mountain, and locally divided into five members: Tunitas Sandstone Member (Tptu), Lobitos Mudstone Member (Tpl), San Gregorio Sandstone Member (Tpsg), Pomponio Mudstone Member (Tpp), and Tahana Member (Tpt). Tunitas Sandstone, the youngest member, is mapped across site and adjoining parcels (**Figure 4**). It dips 7 degrees at the coastal bluff towards a northwest-southeast striking syncline mapped just off shore. Lobitos Mudstone underlies Tunitas Sandstone and outcrops east of the property beyond the adjoining parcels, at Tunitas Creek and in the Martins Beach area. Likewise, San Gregorio Sandstone underlies Lobitos Mudstone and outcrops further to the northeast.

The Tunitas Sandstone is described as greenish−gray to light−gray, pale−orange, or greenish−brown, very fine− to medium−grained sandstone with clay matrix. Concretions generally less than 30 cm across are present locally, which appear as muddy nodules on site. Tunitas Sandstone is reported to range in thickness from 250 to 400 feet. Tunitas Sandstone type material extended to 170 feet below ground surface on one well log from the uphill parcels to the east; other logs noted it to at least 200 feet in thickness (the depth of the well) (**Table 2**). At Well #1 (the dry well) on site, Tunitas Sandstone was

[3] The paved access road to the property which arcs northward from an elevation of 210 feet asl and parallels Cabrillo Highway a short distance is said to be old Highway 1.

[4] Specific conductance (SC) was measured with a YSI field meter, which measures the ability of the water to conduct electricity and is a widely used index for salinity or total dissolved solids (TDS). The basic unit is "mho/cm", also known as 1 Siemen (S/cm). Rainwater has very low specific conductance (nearly zero), and as water passes over and through the ground, salts are dissolved, thereby increasing the specific conductance. The SC of the ocean is around 53,000 micromhos/cm. Higher specific conductance indicates transmittal through salt-bearing geologic formations or longer residence times in the ground. SC is temperature dependent and is normalized to 25 degrees Celsius.

found apparently to a depth of 280 feet, and underlain by Lobitos Mudstone to a depth of 600 feet, the bottom of the borehole. At the bluff on site, it appears to extend at least about 100 feet to the ocean (**Figure 5**). On lithologic logs of wells east of the project site, Tunitas Sandstone type material was described as firm grey sandstone, and underlying Lobitos Mudstone member as firm grey shale. The 100-foot vertical cliff face for the bluff depicts the firmness of the sandstone. Bedrock fracturing of the Tunitas Sandstone member exposure at the bluff appeared quite light and not noted in the well logs reviewed. The driller's geologic log in the well completion reports for Well #2 and Well #3 on site do not specially indicate Tunitas Sandstone. Close interpretation samples from potential wells sites #4 and #5 would help to check the lithology reported on these logs.

Pleistocene marine terrace deposits unconformably overlay Tunitas Sandstone on the project parcel and are continuous with the adjoining parcel to the north. These deposits are a southern-most fragment of the larger Half Moon Bay Terrace groundwater basin (No. 2-22), as classified by California Department of Water Resources in Bulletin 118 (2003 update). The poorly consolidated and poorly indurated well− to poorly−sorted sand and gravel deposits appear to be 30 to 40 feet thick across the west portion of the property, and thin southeastward to outcrops of Tunitas Sandstone member near Cabrillo Highway (**Figure 5**). At Well #1 it was found to be 30 feet deep. The terrace deposits also appear coarser at depth, at its contact with Tunitas Sandstone.

Soils

Soils across most of the project parcel are classified as Watsonville sandy loan, gently-sloping to sloping eroded[5], which formed on the marine terrace, while soils on the eastern-most, steeper portion of the property are hillside soils, classified as Tierra sandy loam, moderately steep, eroded[6] (NRCS, 1961). Both soil types are reported to have a hydrologic group rating "D", with a very slow infiltration potential and a very high runoff potential. Reported surface soil permeability is rapid to moderately rapid, but subsurface permeability is very slow. The Watsonville sandy loam soils are classified with a slight to moderate erosion hazard, while the Terra sandy loam, a high erosion hazard. The recharge and water-holding properties of the surficial soils found on site are summarized in **Table 3**. Soils at the bluff are classified as terrace escarpments.

Water Quality

Water quality in the vicinity of the project parcel generally has elevated dissolved solids (**Figure 6**). Iron and manganese can also be elevated. Salinity can be an issue in all three members of the Purisima Formation. A few miles to the southeast, specific conductance values of about 2,600 to 3,500 micromos/cm at 25C were reported in 9 seeps and springs emanating from the San Gregorio Member on Gordon Ridge about 1.5 miles to the southeast; such values are about double the allowable salt concentrations in public water supplies, and would call for treatment prior to use.[7] Wells a mile or two further south in the Old Stage Road area have water with high salinities. The most recent regional assessment (Zatkin and Hecht, 2009) notes that potable groundwater should not be taken for granted in this immediate area:

[5] http://casoilresource.lawr.ucdavis.edu/soil_web/ssurgo.php?action=explain_component&mukey=456551&cokey=11146646
[6] http://casoilresource.lawr.ucdavis.edu/soil_web/ssurgo.php?action=explain_component&mukey=456528&cokey=11146526
[7] San Mateo County will permit a well meeting its requirements for yield and required setbacks, recognizing that well water quality is usually amenable to treatment.

PLN2019-00025

> *"Groundwater in the [San Gregorio Creek watershed] tends to have higher salinities than is typical of the Santa Cruz Mountains streams. Pockets of groundwater naturally too salty for agricultural and most habitat uses are distributed throughout the watershed,* ***most noticeably beneath the northern ridges in the western part of the watershed.****"* *(emphasis added)*

On April 17, 2019, we measured specific conductance and temperature of a water sample bailed from Well #2 and from Well #3. At Well #2 it was 4,360 umhos/cm at 17°C (normalized to 5,080 umhos/cm at 25°C), and at Well #3 it was 7,762 umhos/cm at 17°C (normalized to 9,120 umhos/cm at 25°C).

Aquifer parameters and drawdown analysis

Transmissivity (T) is a common aquifer coefficient that characterizes how easily water moves through the aquifer (a measure of permeability), and can be used to quantify groundwater flow, drawdown, and zone of influence and capture of a well. Transmissivity can be initially estimated with a relationship to Specific Capacity (Cs)[8] then commonly refined with dynamic data from a 'pump test' or aquifer test. Specific capacity (Cs) is well function describing the quantity of water that a well can produce per unit drawdown of water level in the well. It is the pumping rate divided by the water level drawdown in the well, in gallons per minute per foot drawdown. To estimate Cs and T of the bedrock in the vicinity the project parcel, we acquired well completion reports from the California Department of Water Resources (**Figure 4**), on which drillers air-lift tests and pumping tests are recorded, and we also acquired pump-test reports from County Environmental Health files. Results of the canvas are summarized in **Table 2** and grouped for wells completed in the Tunitas Sandstone, and well completed in Lobitos Mudstone. Hydraulic conductivity (K) for the formation can be estimated by dividing T by the aquifer thickness (b), which is the well depth minus the depth to static water level. Based hydraulic conductivity, the Tunitas Sandstone is roughly four times more permeable than the Lobitos Mudstone; sample variability, though, is similar. Based on the pumping tests at on-site Wells #2 and #3, the Tunitas Sandstone supplying these wells is 25 to 100 times less permeable than wells completed in the Tunitas Sandstone off site (**Table 2**), suggesting a much lower fracture density on site. Well #1 was also a dry well (or yield not at a measureable level).

When a well is pumped it introduces a stress to the aquifer and lowers hydraulic pressures and water levels in the vicinity of the well. With continued pumping, this effect propagates outward from the well, which can be conceptually represented as a "cone of depression" or "area of influence". The area of influence of a pumped well can be roughly estimated using the Cooper-Jacob (1946) distance-drawdown equation, which is an approximation of the Theis (1935) analytical model. Based on estimates of aquifer transmissivity for Tunitas Sandstone from **Table 2** and using a nominal storage coefficient for a shallow fractured bedrock aquifer, we estimated the radius of influence for the proposed well for two cases (**Table 4**):

- Case 1, a maximum daily demand (MDD) of 3 gpm sustained for 24 hours[9]; and,

[8] To estimate aquifer transmissivity (T) with Cs see Appendix 16.D of Driscoll (1983) or p. 128 of DWR Bulletin No. 118-2 (June 1974).

[9] San Mateo County Ordinance Code 4.68.190 standards for adequate water. (1) For a vertical well serving a single family dwelling, said term shall mean a well which produces a minimum of 2 1/2 gallons per minute at a stabilized water level during pumping with at least 1,250 gallons of emergency storage. (2) For a vertical well serving a single family dwelling with the area to be irrigated less than 750 square feet, said term shall mean a well which produces a minimum of 3 gallons per minute at a stabilized water level during pumping with at least 1,500 gallons of emergency storage.

PLN2019-00025

- Case 2, an average dry-season demand for a single-family dwelling of 0.75 acre-feet from April through September (or 0.46 gpm of continuous pumping), based on Monterey Peninsula Water Management District estimates for well source and pumping impact assessments, in absence of coastal San Mateo County estimates.[10]

For a horizontal surface, the estimated radius of influence for the MDD is about 30 feet, while for the dry-season demand, it is about 300 feet. The proposed well sites are currently staked greater than 50 feet from property lines (**Figures 2, 7 and 8**). The closest well to the proposed project well is about 2,000 feet uphill to the east (**Figure 4**), about 6 times further than the estimated extent any influence by dry-season pumping, and 60 times the estimated MDD drawdown effect.[11]

Under conditions of a groundwater gradient, such as in mountainous areas as seen at the site, the capture zone of the well is skewed upgradient. As a guideline for groundwater management, the theoretical capture area can be estimated with uniform flow equations, adapted from Todd (1980) (**Table 5**). For the MDD, the estimated capture area is 138 feet downgradient and 432 feet perpendicular to the proposed well. For the dry-season demand, downgradient and perpendicular capture area is much less (21 feet and 66 feet), suggesting that the primary source of groundwater to the well for seasonal pumping is from the upgradient (eastward) direction.

Analysis of potential hydrologic and water-quality impacts

The following nine CEQA Initial Study questions were previously sent to us from the County Project Planner.

9.a. *Would the Project violate any water quality standards or waste discharge requirements (consider water quality parameters such as temperature, dissolved oxygen, turbidity and other typical stormwater pollutants (e.g., heavy metals, pathogens, petroleum derivatives, synthetic organics, sediment, nutrients, oxygen-demanding substances, and trash))?*

No impact. The installation and yield testing of a domestic well can include the use of drilling mud or foam, and bringing groundwater to the ground surface. Potentially turbid fluids are typically contained in a pit within the immediate vicinity of the borehole and/or allowed to spread onsite to infiltrate into the soil, assisted by the installation of straw waddle and /or silt fence. The proposed well sites are located on the uphill fringe of a gently sloping marine terrace, over 500 feet from a drainage draw at the coastal bluff. The marine terrace is densely covered with grasses and reported to have rapid surface permeability, though subsoil permeability is very slow. Expected yield from the well is 3 gpm. Groundwater pumped to the ground surface would likely not flow at this pumping rate to the draw at the coastal bluff after a period of pumping typical for yield testing the well, but perhaps at most trickle down the rock face of the bluff to the wave-beaten rocky coast without erosion and increasing turbidity. Well sites may require silt fencing and straw waddle to contain drilling mud (or foam) – especially Site #4 from potentially entering

[10] For most parcels in the unincorporated areas of the MPWMD, the District will accept up to 0.5 acre-feet per year (AFY) as the estimated annual demand for a typical single-family dwelling with standard outdoor landscaping. We applied a 'safety factor' of 3 to account for large residences on large parcels with extensive landscaping, gardening, or non-standard uses.

[11] In practice, area-of-influence calculations are generally applied for guidance in groundwater management with the caveat of having quantitatively low resolution as a predictive tool, particularly in fractured-bedrock aquifers. The resolution to a unit of 1-foot would seem reasonable for the conditions at the site.

the on-site pond located south from the well site. During yield testing, a hose may be needed to direct discharge away from or downstream from the pond.

9.b. *Would the Project significantly deplete groundwater supplies or interfere significantly with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?*

No impact. County set-back regulations for a new domestic well is 50 feet from the property line and 50 feet from an existing well. The location of the proposed project well sites are greater than 50 feet from the property line and 2,000 feet from the nearest existing well (DWR Well No. e0174995). In addition, the estimated area of influence and potential capture zone for the proposed well is significantly less than the distance to the nearest well.

9.c. *Would the Project significantly alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner that would result in significant erosion or siltation on- or off-site?*

No impact. See 9.a.

9.d. *Would the Project significantly alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or significantly increase the rate or amount of surface runoff in a manner that would result in flooding on- or off-site?*

No impact. See 9.a.

9.e. *Would the Project create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide significant additional sources of polluted runoff?*

No impact. There is no existing or planned stormwater drainage systems (see 9.a.)

9.f. *Would the Project significantly degrade surface or groundwater water quality?*

No impact. The proposed project well sites are located 500 feet from the coast at an elevation of 200 feet above sea level. Wells in the vicinity are 150 to 300 feet deep (a depth also proposed for the project well) with maximum yields as high as 6 to 7 gpm. Lower well yields are demonstrated on site at the three existing wells, each with insufficient yield for the proposed Project. Area-of-influence and potential capture-zone estimates for the proposed well suggests a limited local capture area for a maximum daily demand and for potential seasonal pumping rates, with the primary source of groundwater flow to the well from the regional upgradient (east) direction. Very few wells are in the vicinity, all over 2,000 feet from the proposed project well. Under these conditions, groundwater quality would not degrade from sea-water intrusion.

Groundwater in the region can naturally have elevated dissolved solids, including iron and manganese. Assuming the water quality of groundwater pumped from the proposed project well is suitable for domestic purposes, then its use would generally not lead to significantly saltier water percolating to

shallow groundwater from the septic system. Widespread irrigation of groundwater with elevated dissolved solids may lead to salt accumulations in the soil.

Surface-water quality would also not degrade (see 9.a).

9.g. *Would the Project result in increased impervious surfaces and associated increased runoff?*

No impact. The Project does not increase the area impervious surface.

17.b. *Would the Project require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?*

No impact. Not applicable. Public water and sewer service is not available at the project parcel and the Project does not propose new connections.

17.d. *Would the Project have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?*

No impact. Not applicable. The Project is to develop a local groundwater source for domestic needs on an undeveloped parcel; no other development proposed at this time.

Conclusions

Existing conditions at the project site support the proposed project to install a water well for domestic use, assuming standard 'best management practices' to control drilling fluids are applied. Special care may be required at proposed Site #4 to contain drilling muds, foam and turbid water from entering the nearby cattle pond on site. We analyzed potential impacts for pumping the well at a rate typical for a single-family dwelling in unincorporated rural coastal areas of central California and found no significant impacts. A reasonable practical analog to this use of the proposed project well would be the success of pumping other domestic well in the vicinity located west of Cabrillo Highway. We found no record of water-quality or well-yield failure in the County Environment Health records for the well in the Martins Beach area.

Closure

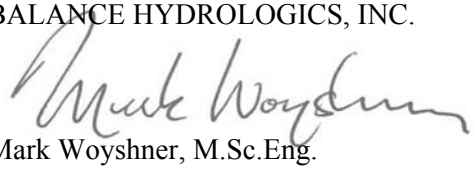
As with all subsurface analyses, we note that the values presented are estimates, based on conditions actually encountered in boreholes or wells. It should be recognized that interpretation and evaluation of subsurface conditions is a difficult and inexact art. Balance Hydrologics has drawn on conventional published data sources for this evaluation, and has not independently verified mapping or findings by agencies and other established sources. This report was prepared for the client's exclusive use on this particular project and in general accordance with the accepted standard of practice existing in Northern California at the time the investigation was performed. No other warranties, expressed or implied, are made.

If there are any follow-up questions regarding the above assessment or if there is a need to conduct more detailed analyses please give a call.

PLN2019-00025

Sincerely,

BALANCE HYDROLOGICS, INC.



Mark Woyshner, M.Sc.Eng.
Senior Consultant and Director

Draft report reviewed by Barry Hecht, CHg
Enclosures: 5 tables, 8 figures, and well completion reports no. e0327650, e0360483, e0360489

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Table 1. Monthly temperature, rainfall and evapotranspiration

APN 066-330-130, -150, San Mateo County, California

Month	Mean Rainfall at Half Moon Bay Airport[1] (inches)	Normal Rainfall at the Project Site[2] (inches)	Normal Temperature at the Project Site[2] (degrees F)	Reference Evapotranspiration[3] (inches)
October	1.59	1.36	59.1	2.48
November	3.08	3.11	55.6	1.20
December	4.66	5.08	52.2	0.62
January	5.36	5.39	52.2	0.93
February	4.53	5.04	53.1	1.40
March	3.81	4.16	53.5	2.48
April	1.89	1.83	54.6	3.30
May	0.77	0.99	56.2	4.03
June	0.28	0.29	58.2	4.50
July	0.12	0.11	59.8	4.65
August	0.21	0.15	60.7	4.03
September	0.38	0.32	60.9	3.30
Annual	26.7	27.8	56.3	32.9

Notes:

[1] NOAA NCDC Station 43714 at Half Moon Bay, CA, 1948 - 2010.

[2] PRISM Climate Group, modeled monthly 1981 - 2010 normals

[3] CIMIS reference evapotranspiration ETo Zone 1 (Snider, 1999), variability between stations is as high as 0.02 inches per day.

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Table 2: Summary of information on acquired well completion reports and estimated aquifer transmissivity in the vicinity of the Angwin Property, APN 066-330-130, -150, San Mateo County, California.

Well completion report number [1]	APN	Approximate map length and heading from proposed well site [2]	Approximate ground elevation [2] (ft)	Depth of well (ft)	Screened interval (ft)	Depth of first water from well log or static water level from pump test report (ft)	Air-lift rate (gpm)	Pump test rate [3] (gpm)	Drawdown [4] (ft)	Aquifer thickness [5] b (ft)	Specific capacity, Cs [6] (gpm per ft drawdown)	Estimated transmissivity [7] T=Cs*1500 (gpd/ft)	Hydraulic conductivity K=T/b (gpd/ft^2)	Hydraulic conductivity K (cm/sec)	Mapped bedrock [8] (Figure 2)	Aquifer description reported on well completion report
Wells completed in the Tunitas sandstone member of the Purisima Formation (Tptu)																
e0174995	066-330-160	2,200 ft; 76.83 degrees	394	200	80 to 200	100	8	--	100	100	0.080	120	1.2	5.7E-05	Tptu	Firm grey sandstone
813234	066-330-040	2,300 ft; 44.51 degrees	261	155	95 to 155	54	10	6	57.5	101	0.17	261	2.6	1.2E-04	Tptu	Firm grey fine sandstone
?	066-330-160	2,400 ft; 87.66 degrees	409	175	?	109.2	?	7.5	6.67	66	~~1.13~~	--	--	--	Tptu	?
e0174997	066-330-160	3,200 ft; 72.25 degrees	446	200	100 to 200	140	15	--	60	60	0.250	375	6.25	2.9E-04	Tptu	Firm grey sandstone with small hard and soft layers
		Average well depth =		**183**		**Average well yield =**		**6.75**		**Average Tptu =**	**0.17**	**252**	**3.3**	**1.58E-04**		
Wells completed in the Lobitos mudstone member of the Purisima Formation (Tpl)																
774584	066-330-170	2,500 ft; 65.50 degrees	386	300	200 to 300	69	3 to 5	5.6	22.4	231	0.25	375	1.6	7.7E-05	Tptu, Tpl	Grey fine sandstone; firm grey shale below 170 ft
31706	066-330-190	4,250 ft; 356.79 degrees	123	130	80 to 130	40	--	2.5	80	90	0.031	47	0.52	2.5E-05	Tpl	Blue clay and shale mix
59982	066-330-090	4,250 ft; 4.49 degrees	180	220	20 to 220	80	--	5	100	140	0.050	75	0.54	2.5E-05	Tpl	Blue clay and shale mix
774583	066-330-020	4,400 ft; 37.29 degrees	363	250	90 to 250	84.3	3	5.2	117	166	0.044	67	0.40	1.9E-05	Tpl	Firm grey shale
902492	066-330-030	4,900 ft; 34.39 degrees	458	240	100 to 220	140	3	--	100	100	0.030	45	0.45	2.1E-05	Tpl	Firm grey shale with small med-hard layers
317863	066-330-030	4,900 ft; 80.75 degrees	185	200	30 to 190	0 (flowing)	0.75	--	180	200	~~0.0042~~	--	--	--	Tpl	Black clay and shale
799768	066-330-210	5,000 ft; 37.23 degrees	436	320	60 to 320	42.4	3	3.1	15.6	278	0.20	298	1.1	5.1E-05	Tpl, Tpsg	Firm grey shale with med-hard layers
		Average well depth =		**237**		**Average well yield =**		**4.3**		**Average Tpl =**	**0.10**	**151**	**0.77**	**3.62E-05**		
Wells completed on site																
e0327650	066-330-130/150	Well #1 on site	145	600	100 to 600	590	--	0	--	--	--	--	--	--	Tptu, Tpl	Grey sandstone, grey clay
e0360483	066-330-130/150	Well #2 on site	200	200	100 to 200	27	--	1.25	180	173	0.0069	10	0.06	2.8E-06	Tptu	Grey serpentine and grey clay
e0360489	066-330-130/150	Well #3 on site	200	300	100 to 300	24	--	0.5	280	276	0.0018	2.7	0.01	4.6E-07	Tptu	Grey clay

Notes:

1. Well completion reports (also called well logs) were acquired from California Department of Water Resources under an agency study request.
2. Well elevation and its length and heading from the proposed well was acquired from Google Earth (datum WGS84).
3. Pump test reports acquired from San Mateo County Environmental Health.
4. Total drawdown as reported in pump test report, otherwise estimated as the difference between the well depth and first water reported in the well completion report.
5. Aquifer thickness, b = well depth - static water level
6. Specific capacity is the pumping rate divided by the drawdown during pumping (Cs=Q/s). The air-lift rate from the well log was used if a pump test was not performed. Highest and lowest values considered outliers and not averaged.
7. To estimate aquifer transmissivity (T) with Cs see Appendix 16.D of Driscoll (1983) or p. 128 of DWR Bulletin No. 118-2 (June 1974).
8. Based on USGS Open-File Report 98-137 (Brabb and others, 1998).

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Table 3. Recharge and water-holding properties of surficial soils, APN 066-330-130, -150, San Mateo County, California

Map Symbol	Soil Series[1]	Parent Material	Taxonomy (order, subgroup, family)	Hydrologic Soil Group	Erosion Hazard	Depth Zone (inches)	USCS[2]	Attenberg Limits Liquid	Attenberg Limits Plastic	Permeability (inches/hour)	Available Water Capacity[3] Per Inch *(in./in. of soil)*	Available Water Capacity[3] Profile *(total, in)*	Remarks
WsB2, WsC2	Watsonville sandy loam, gently sloping, eroded	Marine terrace deposits	Mollisols	D (very slow infiltration, very high runoff potential)	Slight to moderate	0 to 9	CL	29	7	0.4			Found across most of the project parcel.
			Xeric Argialbolls			12 to 21	CH	58	34	0.004			
			Fine, montmorillonitic, thermic			54 to 64	CL	34	16	0.1	*Total*	*6.0*	
TmD2	Tierra sandy loam, moderately steep, eroded	Tunitas Sandstone Member of the Purisma Fm.	Alfisols	D (very slow infiltration, very high runoff potential)	High	7 to 13	CL	27	8	0.5			Found on the eastern-most, steeper portion of the property.
			Mollic Palexeralfs			30 to 41	CH	53	36	0.005			
			Fine, montmorillonitic, thermic			50 to 60	CL	38	22	0.1	*Total*	*6.75*	

Notes

1) Information taken from the USDA soil survey for the area (1969). This soil survey generally does not distinguish areas smaller than about 20 to 40 acres.

2) USCS = Unified Soils Classification System, commonly used in geotechnical or soil-foundation investigations, and in routine engineering geologic logging.

3) Available Water Capacity = Held water available for use by most plants, usually defined as the difference between the amount of soil water at field capacity (one day of drainage after a rain or recharge event) and the amount at the wilting point.

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Table 4. Potential radius of influence for the proposed well on APN 066-330-130, -150
San Mateo County, California.

Case A. Maximum daily demand

Given:				
	Transmissivity, T	50	gpd/ft	a low value based on Table 2
	Storativity, S	0.02	fractured bedrock norm	
	Pumping rate, Q	3	gpm	
	Pumping duration, t	1.0	days	24 hours

Find: drawdown, s(r,t):

Distance from well			Drawdown	
r (ft)	$u=(1.87*r^2*S)/(T*t)$	W(u)	s max (ft) = (264*Q/T) * W(u)	
0.21	3.2E-05	4.24	67.1	radius of well casing
5	1.9E-02	1.48	23.4	
10	7.5E-02	0.88	13.9	
15	1.7E-01	0.52	8.3	
27	5.5E-01	0.01	0.2	
100	7.5E+00	-1.12	0.0	
300	6.7E+01	-2.08	0.0	
500	1.9E+02	-2.52	0.0	ocean
1,000	7.5E+02	-3.12	0.0	
2,000	3.0E+03	-3.73	0.0	nearest well (no. e0174995)

Case B. Average dry-season demand

Given:				
	Transmissivity, T	50	gpd/ft	a low value based on Table 2
	Storativity, S	0.02	fractured bedrock norm	
	Pumping rate, Q	0.46	gpm	0.75 acre-feet (April - Sept)
	Pumping duration, t	184	days	May through October

Find: drawdown, s(r,t):

Distance from well			Drawdown	
r (ft)	$u=(1.87*r^2*S)/(T*t)$	W(u)	s max (ft) = (264*Q/T) * W(u)	
0.21	1.8E-07	6.50	16.0	radius of well casing
5	1.0E-04	3.74	9.2	
10	4.1E-04	3.14	7.7	
15	9.1E-04	2.79	6.8	
27	3.0E-03	2.28	5.6	
100	4.1E-02	1.14	2.8	
300	3.7E-01	0.19	0.5	
500	1.0E+00	-0.26	0.0	ocean
1000	4.1E+00	-0.86	0.0	
2000	1.6E+01	-1.46	0.0	nearest well (no. e0174995)

Method:

Theoretical drawdown was calculated using Cooper and Jacob modified nonequilibrium Theis equation (Driscoll, F.G., 1986, Groundwater and Wells, 2nd Ed., p. 219).

The modified nonequilibrium equation is valid for values of u less than about 0.05, otherwise values are approximate.

Theis' nonequilibrium equation is based on the following assumptions:

a) The water-bearing formation is uniform in character and the hydraulic conductivity is the same in all directions.
b) The formation is uniform in thickness and infinite in areal extent.
c) The formation receives no recharge from any source.
d) The pumped well penetrates, and receives water from, the full thickness of the water-bearing formation.
e) The water removed from storage is discharged instantaneously when the head is lowered.
f) The pumping well is 100 percent efficient.
g) All water removed from the well comes from aquifer storage.
f) Laminar flow exists throughout the well and aquifer.
i) The water table or potentiometric surface has no slope.

Notes:

1. The modified nonequilibrium equation is valid for values of u less than about 0.05, otherwise values are approximate.
2. Transmissivity (T) estimated from specific capacity (see Table 1).

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Table 5. Potential dimensions of groundwater capture area from the proposed well at APN 066-330-130, -150 including influences by regional groundwater flow gradient, San Mateo County, California

Case A. Maximum daily demand		
Well and aquifer specifications:		
Pumping rate, Q	4320	gpd (3 gpm MDD)
Aquifer transmissivity, T	50	gpd/ft (low value based on Table 2)
Regional ground-water gradient, i	0.1	ground between proposed well and well no. e0174995
Calculate capture zone dimensions:		
Stagnation point downgradient distance, $x_o = Q/(2\pi Ti)$	138	feet
Width at well perpendicular to regional ground-water flow, $w_o = Q/(2Ti)$	432	feet
Upgradient width perpendicular to regional ground-water flow, $w = Q/(Ti)$	864	feet
Case B. Average dry-season demand		
Well and aquifer specifications:		
Pumping rate, Q	662	gpd (0.46 gpm dry-season daily average)
Aquifer transmissivity, T	50	gpd/ft (low value based on Table 2)
Regional ground-water gradient, i	0.1	ground between proposed well and well no. e0174995
Calculate capture zone dimensions:		
Stagnation point downgradient distance, $x_o = Q/(2\pi Ti)$	21	feet
Width at well perpendicular to regional ground-water flow, $w_o = Q/(2Ti)$	66	feet
Upgradient width perpendicular to regional ground-water flow, $w = Q/(Ti)$	132	feet

Notes:
1. Uniform flow equations for determining area of contribution to a pumping well adapted from Todd (1980).

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ATTACHMENT E

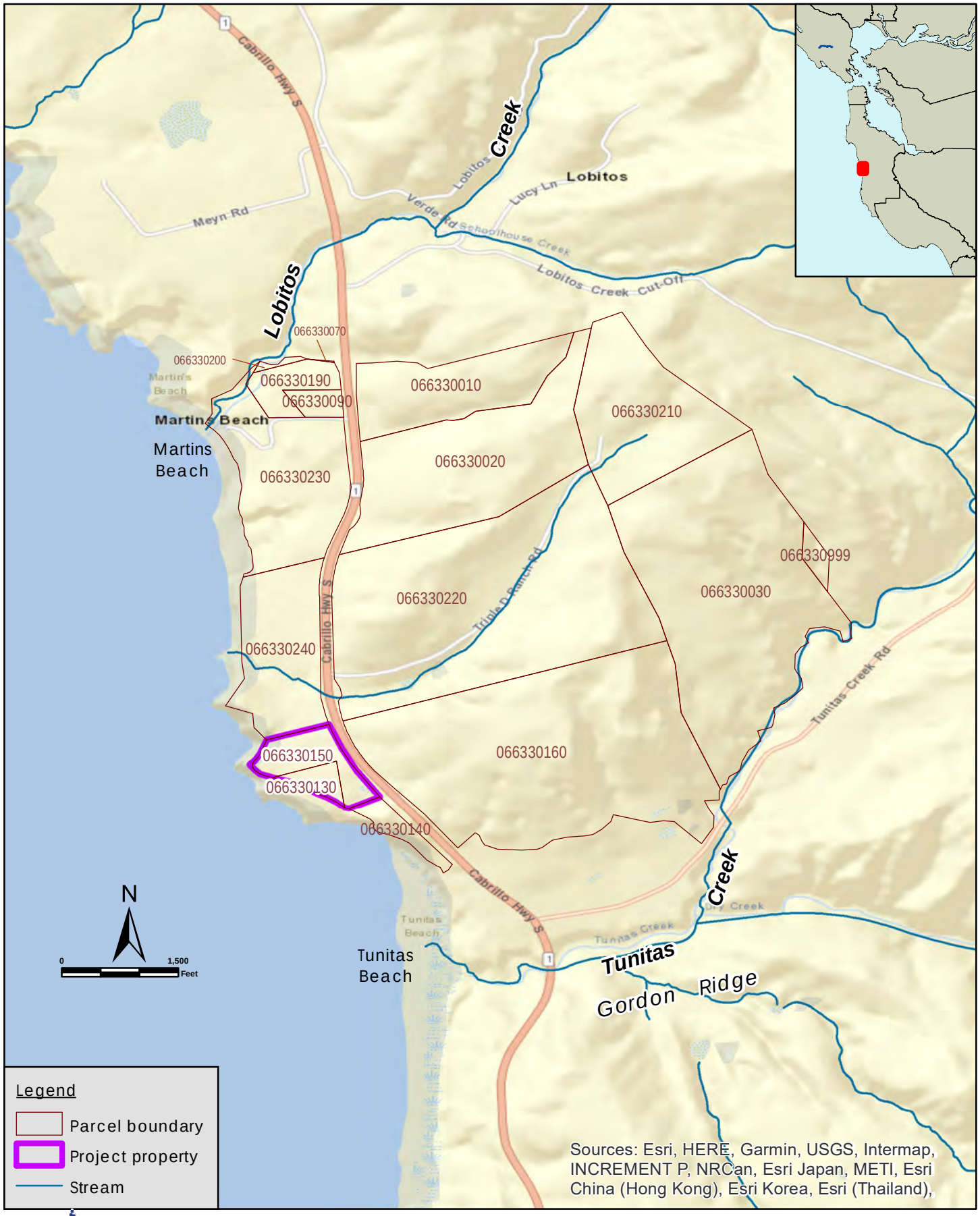

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Figure 1. Location of proposed project and adjacent parcels, San Mateo County, California

214164 location.mxd

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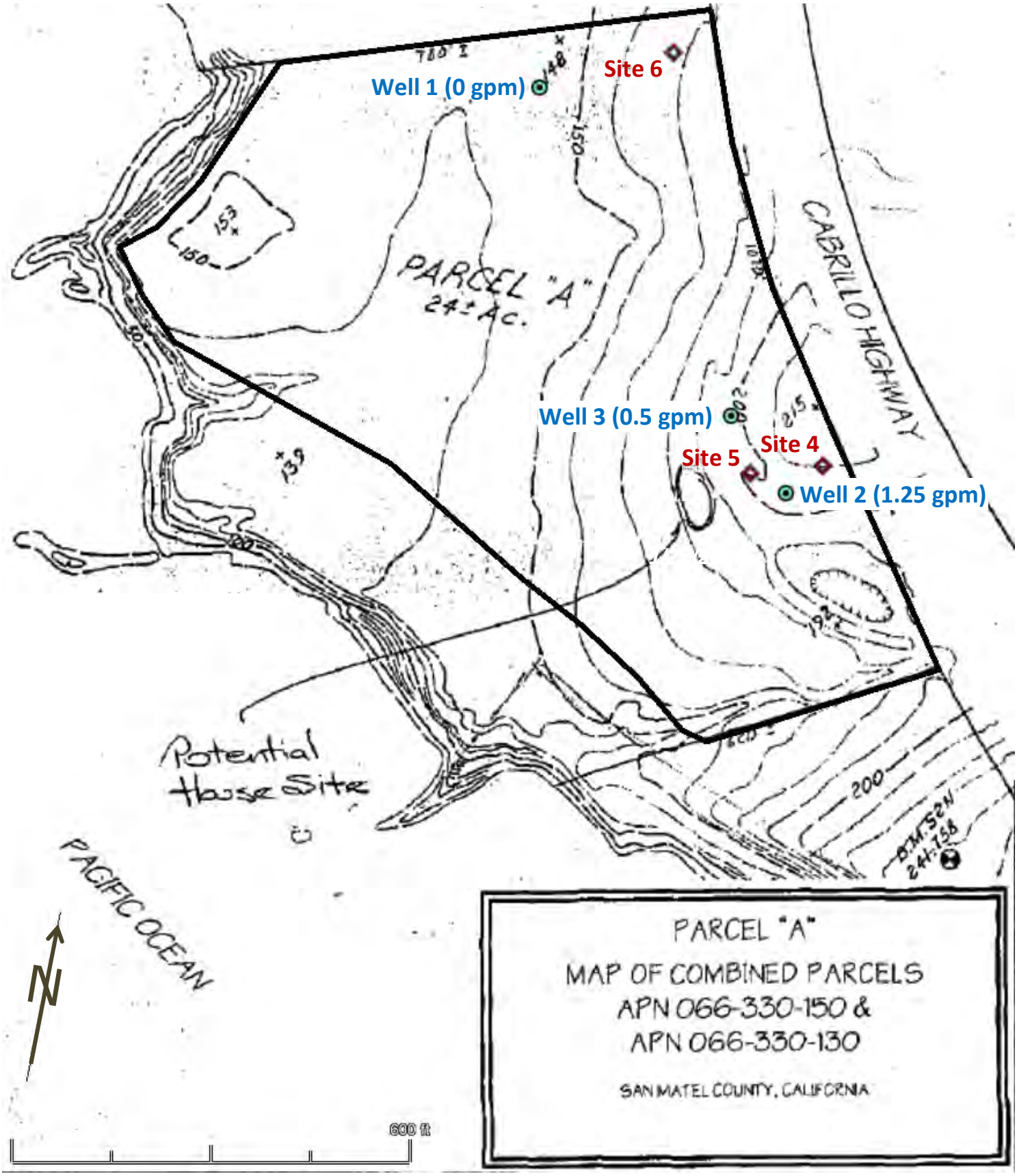

Figure 2. Site topography, APN 066-330-130, -150, San Mateo County, California. Map source: 1995 well drilling permit application filed at San Mateo County Environmental Health. Potential house site indicated on map may not be current.

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View to the southwest.

View to the south.

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Figure 3. Small 'cattle pond' at APN 066-330-130/150, San Mateo County, California. Pond located at the southeast corner of the property with a retaining berm at 192 feet above sea level. The pond drains to the channel along the south property line.

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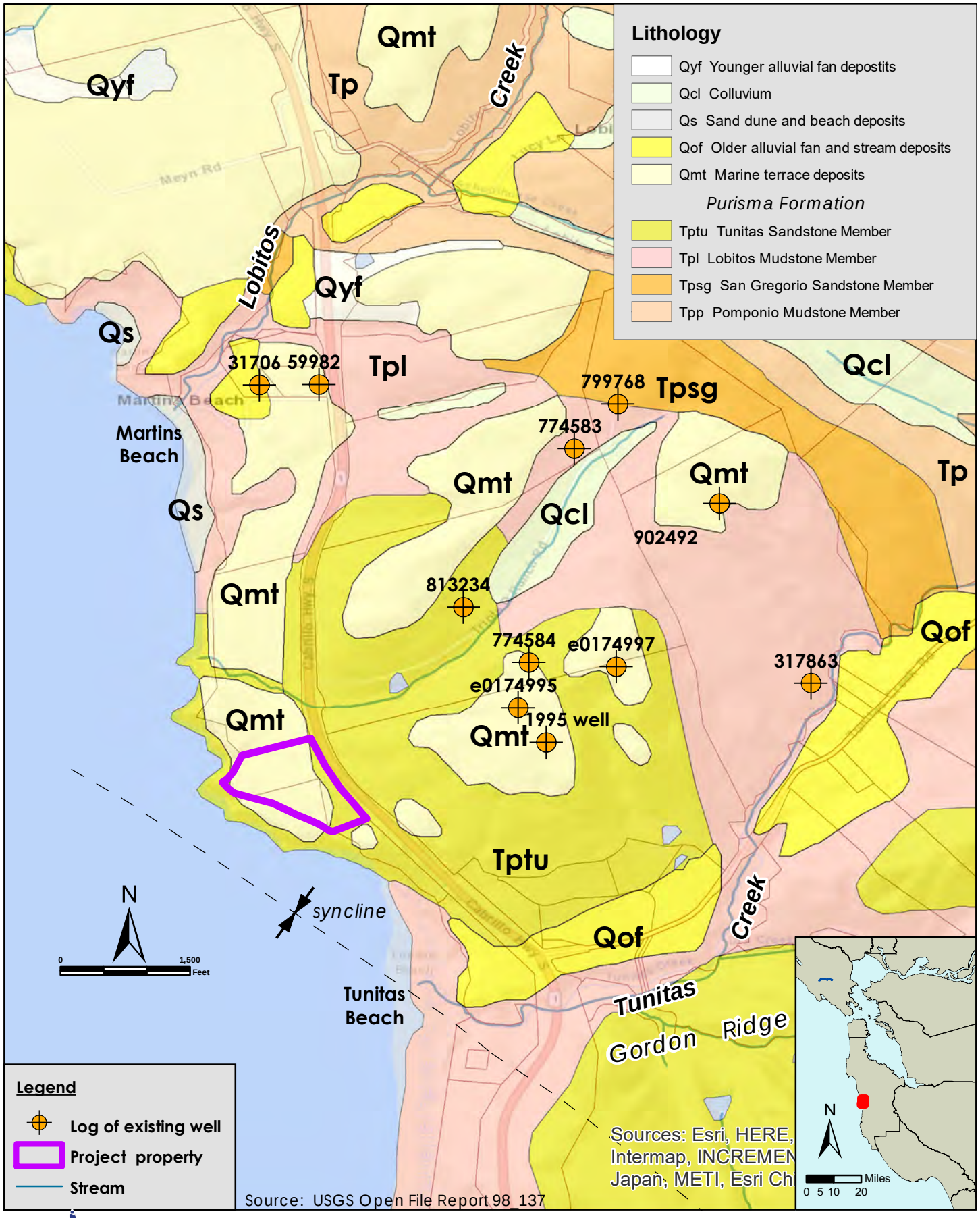

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214164 geology.mxd

PLN2019-00025

Figure 4. Geology and existing wells in the vicinity of APN 066-330-130, -150, San Mateo County, California

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Tunitas Sandstone (Tptu) and overlying marine terrace deposits (Qmt) at the ocean on the west portion of the property. The Tunitas Sansstone appeared hard, poorly fractured, and peppered with mudstone concretion nodules. Groundwater seeps were not observed. The marine terrace is about 30 to 40 feet thick here.

Tunitas Sandstone (Tptu) outcropping at the southwest portion of the property near the pond not far from the entrance of the property from Cabrillo Highway. The rock was soft and easily impacted with a the pick end of a hammer.

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Figure 5. Bedrock exposures at APN 066-330-130/150, San Mateo County, California. Tunitas Sandstone Member of the Purisima Formation (Tptu) is greenish−gray to light−gray, pale−orange, or greenish−brown, very fine− to medium−grained sandstone with clay matrix. Concretions generally less than 30 cm across are present locally (Brabb and others, 1998).

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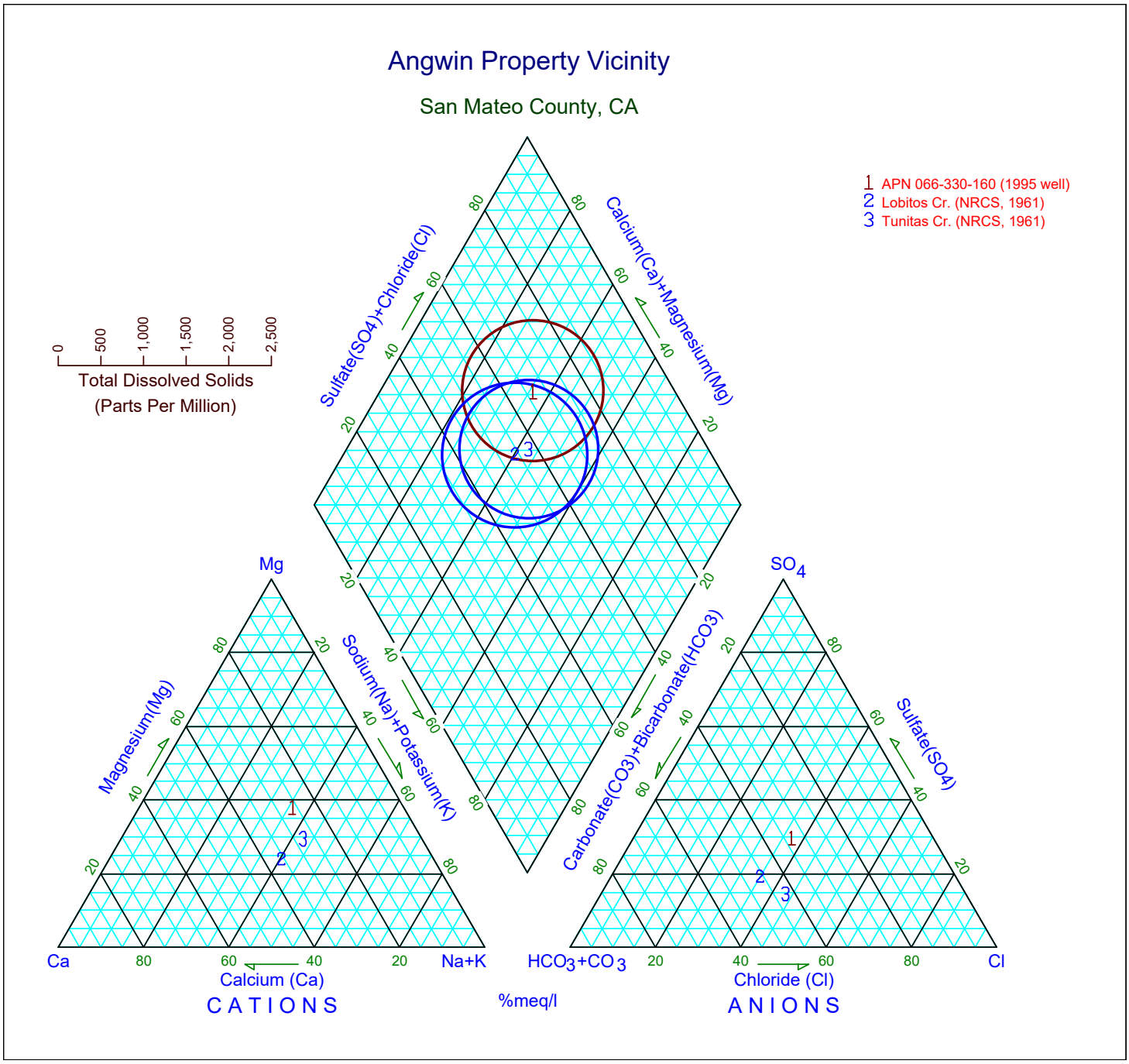

This diagram shows cations in the ternary graph on the left and anions on the right graph. The diamond graph in the center illustrates both cations and anions. Hardness dominated water plots to the left and top of the diamond graph, soft monovalent-salt dominated water to the right, and soft alkaline water towards the bottom. The radius of circle around the plotted points represents the concentration of dissolved solids, calibrated to the scale shown.

Figure 6. Piper diagram illustrating ionic signatures of water samples collected in the vicinity of APN 066-330-130/150.
Data source: San Mateo County Environmental Health and Table 14 of the soils survey (NRCS, 1961).

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Proposed well site #4 is located on the north side of the property access road approximately 55 feet from the east property line at Cabrillo Hwy 37° 21.837'N 122° 24.225'W Datum WGS84. (photo north looking from property access road)

Proposed well site #5 is located on the south side of the property access road approximately 165 feet from the east property line at Carbillo Hwy 37° 21.832'N 122° 24.247'W Datum WGS84. (photo west looking from property access road)

Figure 7. Proposed well site #4 and #5 at APN 066-330-130/150, San Mateo County, California.

Balance Hydrologics

PLN2019-00025

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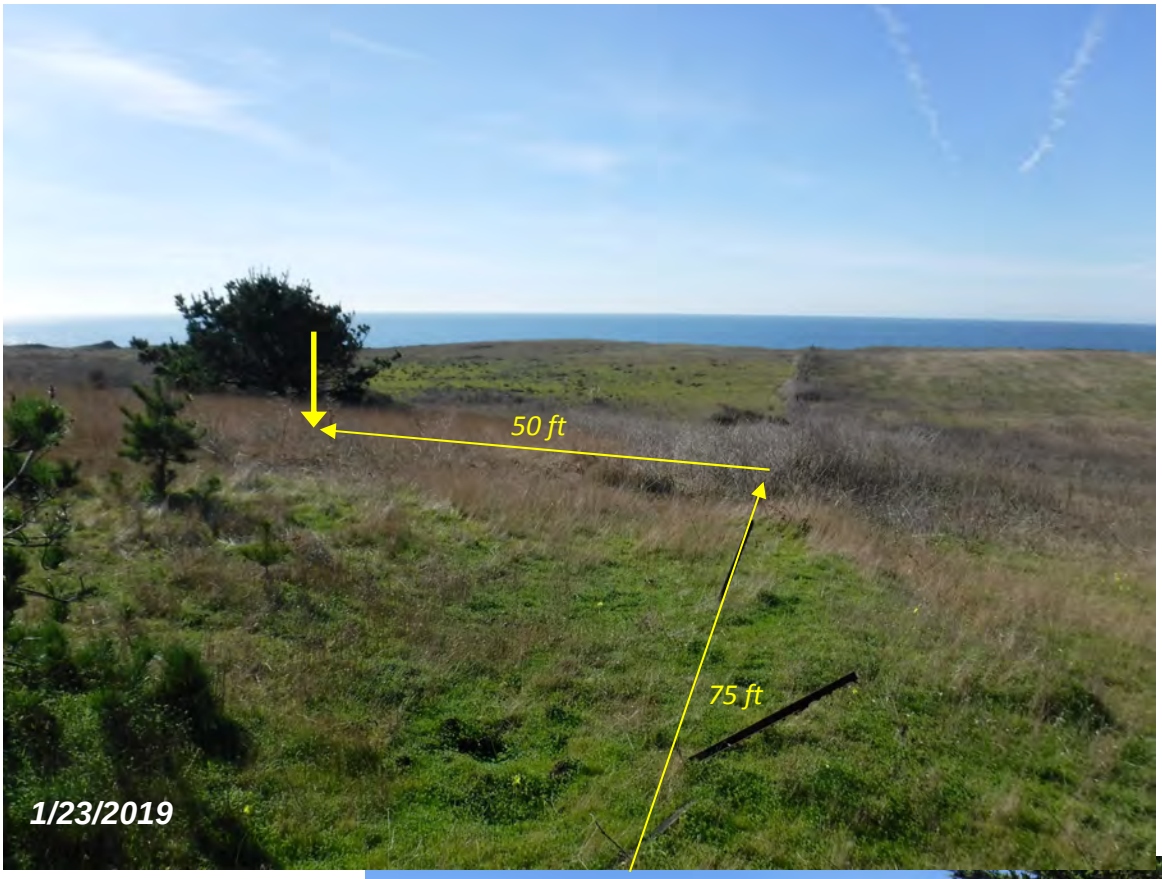

Proposed well site #6 is located 50 feet from the north property line and 75 feet from the east property line at Cabrillo Hwy 37° 21.931'N 122° 24.296'W Datum WGS84. (photo west looking)

Northeast corner of property (photo north looking)

Figure 8. Proposed well site #6 at APN 066-330-130/150, San Mateo County, California. This site is preferred and will be drilled first.

Balance Hydrologics

PLN2019-00025

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ATTACHMENT E

File Original with DWR

State of California

Well Completion Report

Refer to Instruction Pamphlet

No. e0327650

Page 1 of 1

Owner's Well Number 1

Date Work Began 10/22/2015 Date Work Ended 11/6/2015

Local Permit Agency San Mateo County Environmental

Permit Number 15-1985 Permit Date 9/14/15

DWR Use Only – Do Not Fill In

State Well Number/Site Number

N W

Latitude Longitude

APN/TRS/Other

Geologic Log

Orientation ◉ Vertical ○ Horizontal ○ Angle Specify

Drilling Method Direct Rotary Drilling Fluid Polymer mud

Depth from Surface Feet	to Feet	Description Describe material, grain size, color, etc
0	30	Brown color soil 100%
30	90	Grey clay 90%, grey sand 10%
90	155	Grey clay 70%, grey sandstone 30%
155	280	Sandstone 30%, grey clay 70%
280	600	Grey clay 100%

Total Depth of Boring 600 Feet

Total Depth of Completed Well 600 Feet

Well Owner

Name John Franklin & Raymond Angwin

Mailing Address 401 Atlantic Avenue #1201

City Virginia Beach State VA Zip 23451

Well Location

Address APN's 066-330-130, 066-330-150

City County of San Mateo County San Mateo

Latitude Deg. Min. Sec. N Longitude Deg. Min. Sec. W

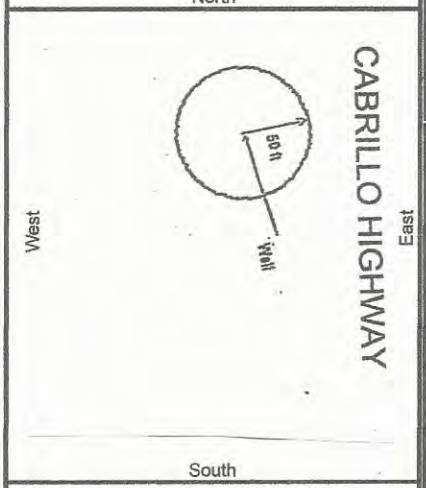
Datum Decimal Lat. Decimal Long.

APN Book 066 Page 330 Parcel 130

Township Range Section

Location Sketch

(Sketch must be drawn by hand after form is printed.)



Illustrate or describe distance of well from roads, buildings, fences, rivers, etc. and attach a map. Use additional paper if necessary. Please be accurate and complete.

Activity

◉ New Well
○ Modification/Repair
○ Deepen
○ Other
○ Destroy
Describe procedures and materials under "GEOLOGIC LOG"

Planned Uses

◉ Water Supply
☑ Domestic ☐ Public
☐ Irrigation ☐ Industrial
○ Cathodic Protection
○ Dewatering
○ Heat Exchange
○ Injection
○ Monitoring
○ Remediation
○ Sparging
○ Test Well
○ Vapor Extraction
○ Other

Water Level and Yield of Completed Well

Depth to first water 10 (Feet below surface)

Depth to Static Water Level 590 (Feet) Date Measured 11/12/2015

Estimated Yield * 0 (GPM) Test Type Constant Rate

Test Length 2.0 (Hours) Total Drawdown 90 (Feet)

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

Casings

Depth from Surface Feet	to Feet	Borehole Diameter (Inches)	Type	Material	Wall Thickness (Inches)	Outside Diameter (Inches)	Screen Type	Slot Size if Any (Inches)
0	100	12	Blank	PVC SDR 21	.265	5.563		
100	600	7 7/8	Screen	PVC SDR 21	.265	5.565	Milled Slots	0.032

Annular Material

Depth from Surface Feet	to Feet	Fill	Description
0	50	Cement	11 Sack sand slurry
50	600	Sand	#3 Sand

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

Name Wilkinson Enterprises Inc., DBA Wilkinson Well and Pump
Person, Firm or Corporation

P O Box 3218 Address Half Moon Bay City CA State 94019 Zip

Signed James M. Wilkinson C-57 Licensed Water Well Contractor Date Signed 11/3/16 511063 License Number

DWR 188 REV. 1/2006

IF ADDITIONAL SPACE IS NEEDED, USE NEXT CONSECUTIVELY NUMBERED FORM

PLN2019-00025

ATTACHMENT E

*The free Adobe Reader may be used to view and complete this form. However, software must be purchased to complete, save, and reuse a saved form.

File Original with DWR

State of California

Well Completion Report

Refer to Instruction Pamphlet

No. e0360483

Page 1 of 1

Owner's Well Number 2

Date Work Began 08/08/2017 Date Work Ended 8/11/2017

Local Permit Agency San Mateo County Environmental Health

Permit Number 17-1112 Permit Date 7/10/17

DWR Use Only – Do Not Fill In

State Well Number/Site Number

Latitude N Longitude W

APN/TRS/Other

Geologic Log

Orientation ◉ Vertical ○ Horizontal ○ Angle Specify

Drilling Method Direct Rotary Drilling Fluid Polymer mud

Depth from Surface Feet	to Feet	Description Describe material, grain size, color, etc
0	50	100% grey clay
50	80	100% grey serpentine
80	150	50% grey serpentine, 50% grey clay
150	170	70% grey serpentine, 30% grey clay
170	200	100% grey clay

Total Depth of Boring 200 Feet

Total Depth of Completed Well 200 Feet

Well Owner

Name John Franklin & Raymond Angwin

Mailing Address 401 Atlantic Avenue #1201

City Virginia Beach State VA Zip 23451

Well Location

Address APN's 066-330-130, 066-330-150

City County of San Mateo County San Mateo

Latitude Deg. Min. Sec. N Longitude Deg. Min. Sec. W

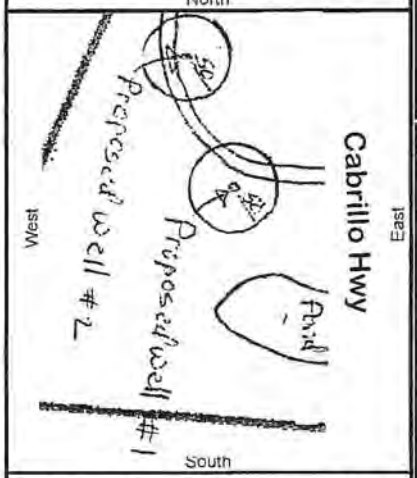
Datum Decimal Lat. Decimal Long.

APN Book 066 Page 330 Parcel 130 & 150

Township Range Section

Location Sketch

(Sketch must be drawn by hand after form is printed.)



Illustrate or describe distance of well from roads, buildings, fences, rivers, etc. and attach a map. Use additional paper if necessary. Please be accurate and complete.

Activity

◉ New Well
○ Modification/Repair
○ Deepen
○ Other
○ Destroy
Describe procedures and materials under "GEOLOGIC LOG"

Planned Uses

◉ Water Supply
☑ Domestic ☐ Public
☐ Irrigation ☐ Industrial
○ Cathodic Protection
○ Dewatering
○ Heat Exchange
○ Injection
○ Monitoring
○ Remediation
○ Sparging
○ Test Well
○ Vapor Extraction
○ Other

Water Level and Yield of Completed Well

Depth to first water 150 (Feet below surface)

Depth to Static Water Level 27 (Feet) Date Measured

Estimated Yield * 1.25 (GPM) Test Type Constant Rate

Test Length 6.0 (Hours) Total Drawdown 180 (Feet)

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

Casings

Depth from Surface Feet	to Feet	Borehole Diameter (Inches)	Type	Material	Wall Thickness (Inches)	Outside Diameter (Inches)	Screen Type	Slot Size if Any (Inches)
0	100	12	Blank	PVC SDR 21	.265	5.563		
100	200	7 7/8	Screen	PVC SDR 21	.265	5.563	Milled Slots	0.032

Annular Material

Depth from Surface Feet	to Feet	Fill	Description
0	50		Neat cement
50	200		Peagravel

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

Name Wilkinson Enterprises Inc., DBA Wilkinson Well and Pump
Person, Firm or Corporation

P O Box 3218 Address Half Moon Bay City CA State 94019 Zip

Signed James M. Wilkinson C-57 Licensed Water Well Contractor Date Signed 3/7/18

511063 C-57 License Number

DWR 188 REV. 1/2006

IF ADDITIONAL SPACE IS NEEDED, USE NEXT CONSECUTIVELY NUMBERED FORM

PLN2019-00025

ATTACHMENT E

*The free Adobe Reader may be used to view and complete this form. However, software must be purchased to complete, save, and reuse a saved form.

File Original with DWR

State of California

Well Completion Report

Refer to Instruction Pamphlet

No. e0360489

Page 1 of 1

Owner's Well Number 3

Date Work Began 12/18/2017 Date Work Ended 12/22/2017

Local Permit Agency San Mateo County Environmental Health

Permit Number 17-1112 Permit Date 7/10/17

DWR Use Only – Do Not Fill In

State Well Number/Site Number

Latitude N Longitude W

APN/TRS/Other

Geologic Log

Orientation ◉ Vertical ○ Horizontal ○ Angle Specify

Drilling Method Direct Rotary Drilling Fluid Polymer mud

Depth from Surface Feet	to Feet	Description Describe material, grain size, color, etc
0	250	100% grey clay
250	300	10% gravel, 90% baked clay

Total Depth of Boring 300 Feet

Total Depth of Completed Well 300 Feet

Well Owner

Name John Franklin & Raymond Angwin

Mailing Address 401 Atlantic Avenue #1201

City Virginia Beach State VA Zip 23451

Well Location

Address APN's 066-330-130, 066-330-150

City County of San Mateo County San Mateo

Latitude ___ ___ ___ N Longitude ___ ___ ___ W
Deg. Min. Sec. Deg. Min. Sec.

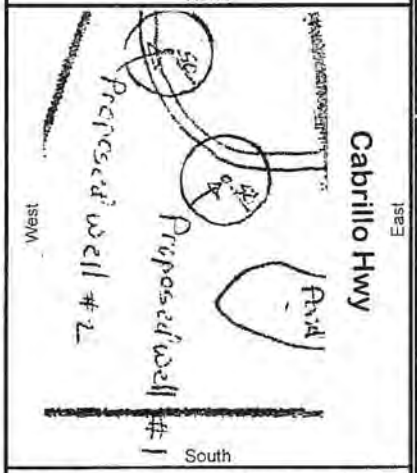
Datum ___ Decimal Lat. ___ Decimal Long. ___

APN Book 066 Page 330 Parcel 130 &150

Township ___ Range ___ Section ___

Location Sketch

(Sketch must be drawn by hand after form is printed.)



Illustrate or describe distance of well from roads, buildings, fences, rivers, etc. and attach a map. Use additional paper if necessary. Please be accurate and complete.

Activity

◉ New Well
○ Modification/Repair
○ Deepen
○ Other
○ Destroy
Describe procedures and materials under "GEOLOGIC LOG"

Planned Uses

◉ Water Supply
☑ Domestic ☐ Public
☐ Irrigation ☐ Industrial
○ Cathodic Protection
○ Dewatering
○ Heat Exchange
○ Injection
○ Monitoring
○ Remediation
○ Sparging
○ Test Well
○ Vapor Extraction
○ Other

Water Level and Yield of Completed Well

Depth to first water 250 (Feet below surface)

Depth to Static Water Level 24 (Feet) Date Measured 02/15/2018

Estimated Yield * 1/2 (GPM) Test Type Constant Rate

Test Length 6.0 (Hours) Total Drawdown 280 (Feet)

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

Casings

Depth from Surface Feet	to Feet	Borehole Diameter (Inches)	Type	Material	Wall Thickness (Inches)	Outside Diameter (Inches)	Screen Type	Slot Size if Any (Inches)
0	100	12	Blank	PVC SDR 21	.265	5.563		
100	300	7 7/8	Screen	PVC SDR 21	.265	5.563	Milled Slots	0.032

Annular Material

Depth from Surface Feet	to Feet	Fill	Description
0	50		Neat cement
50	300		Peagravel

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

Name Wilkinson Enterprises Inc., DBA Wilkinson Well and Pump
Person, Firm or Corporation

P O Box 3218 Half Moon Bay CA 94019
Address City State Zip

Signed James Wilkinson 3/7/18 511063
C-57 Licensed Water Well Contractor Date Signed C-57 License Number

DWR 188 REV. 1/2006

IF ADDITIONAL SPACE IS NEEDED, USE NEXT CONSECUTIVELY NUMBERED FORM

PLN2019-00025

Garcia and Associates (GANDA)
1512 Franklin Street, Suite 100
Oakland, CA 94612
Phone: (510) 891-0024
Fax: (510) 891-0027

To: James Wilkinson, Wilkinson Well and Pump

From: Serah E. Timm, GANDA Archaeologist

Date: January 31, 2019

RE: Archaeological Study of PLN2014-00421 / APN 066330130 & 066330150, San Mateo County, California.

Introduction

This memo presents the findings of a supplemental cultural resources assessment conducted for the existing overland access route and new proposed well drilling site (Project Area) as of January, 2019 for the Wilkinson Well and Pump Company Project (Project) located on Assessor Parcel Numbers (APN) 066330130 and 066330150, south of the city of Half Moon Bay. The Project is situated in the Tunitas Creek area, along the Pacific Ocean coastline and west of Cabrillo Highway 1, in unincorporated San Mateo County, California (Attachment A). Because the new proposed drilling site is located within the Project Area previously assessed in 2015 (Appendix 1), this review includes a review of the records search results and findings from a pedestrian survey previously conducted for this Project in 2015, a review of the results of a previous records search conducted for the San Mateo County Planning and Building Division, and historic map research. Additionally, this memo includes recommendations for avoidance of the Ocean Shore Railroad (OSRR), a historic-era resource identified within the Project Area.

Records Search Methods and Results

A new records search was not conducted for this supplemental revision, as little development has occurred since the time of the initial cultural resources assessment which would have prompted new surveys or studies of the Project Area. Instead, a review of the previous records search results yielded sufficient information to assess the cultural sensitivity and recommendations for the new proposed well drilling site. On February 5, 2015 GANDA Archaeologist Robin Fies conducted a records search at the Northwest Information Center (NWIC) of the California Historical Resources Information System (CHRIS) at Sonoma State University in Rohnert Park, California (NWIC File No. 14-1005). The NWIC is a repository of all cultural resources site records, previously conducted cultural resources investigations, and historic information concerning cultural resources for 18 counties, including San Mateo County. The records search was conducted to compile information regarding the locations of previously recorded archaeological sites and previously conducted studies within a 0.25-mile radius of the Project Area. Additionally, the results of a records search previously conducted for the San Mateo County Planning and Building Division (NWIC File No. 14-0839) were reviewed. Subsequently, this information was used to assess the archaeological sensitivity of the Project Area. The following sources were consulted during the records search:

- NWIC base map: United States Geological Survey (USGS) 7.5-minute series topographic quadrangle for San Gregorio (1997).

- Previous cultural resources investigations, archaeological field studies, and cultural resources site records in order to identify previously recorded archaeological sites located within a 0.25-mile radius of the project area.
- California Office of Historic Preservation (OHP) resources, including the *California Inventory of Historic Resources* (1976), and the *OHP Historic Properties Directory* for Half Moon Bay, San Mateo County (2012), which combines cultural resources listed as California Points of Historic Interest, listed as California Historical Landmarks, and listed in or determined eligible for listing in the National Register of Historic Places (NRHP) or the California Register of Historical Resources (CRHR).

Records Search Results

The records searches indicated that there are no previously recorded cultural resources located within the Project Area or within a 0.25-mile radius of the Project Area. Approximately five percent of the Project Area has been subject to archaeological survey; the survey encompassed the easternmost edge of the Project Area in the vicinity of Cabrillo Highway 1 and did not result in the identification of cultural resources within the Project Area (Leach-Palm et al. 2007). Additionally, four cultural resources investigations (Cartier 1988; Clark 2000, 2002, and 2008) have been conducted within 0.25 mile of the Project Area.

Field Survey Methods and Results

A new survey was not conducted for this supplemental review as the new proposed well drilling location is within the area previously surveyed by GANDA archaeologist Kruger Frank on February 12, 2015. At that time, an intensive pedestrian survey was conducted to identify both prehistoric and historic-era archaeological resources within the Project Area. The area surveyed consisted of a 100-foot radius around the previously proposed well location, a 200-foot-long by 100-foot-wide overland access route leading to the well location (which encompasses the 2019 proposed well location), and a 25-foot buffer on each side of the existing paved road within the parcel boundary (Attachment B). Two- to four-meter survey transects were used to completely cover the survey area. The Project Area was identified in the field via a combination of field maps and shape files loaded onto a Trimble GXT sub-meter accurate hand-held Global Position System (GPS) data logger. Overview photos were taken of the project area and the historic resource with an Olympus Tough digital camera (Attachment C).

The Project Area is located on top of a flat coastal bluff overlooking the Pacific Ocean and is visibly disturbed along the existing paved access road. However, the ground surface appears to be less disturbed to the west of the access road leading to the 2019 proposed well location. The vegetation consists of coastal prairie comprised of thick, low-lying grasses and sedges with sparse shrubs and bushes. Pine and cypress trees are present along the east side of the existing road. At the time of the survey, the overall ground **v**isibility varied between 0 to 60 percent, being obscured by vegetation. Multiple rodent burrows and bare patches of ground were thoroughly inspected for cultural resources. Exposed soil consisted of a dark brown, fine-grained sandy loam, with small chert gravels.

Ocean Shore Railroad

The survey resulted in the identification of the historic-era OSRR grade/cut through the Project Area. The railroad grade is evidenced by an earthen berm located partially within the Project Area and extending to the north and south of the surveyed area, outside of the parcel boundary. The grade/cut is approximately 100 feet long (north-south) by 10 feet wide (east-west) and measures 1 to 3 feet in height. No historic-era archaeological materials were observed in association with the grade; however, the railroad route is more than 45 years old (depicted on the USGS Santa Cruz 1902 topographic map) and is therefore considered a historic-era resource. The segment of

the OSRR within the Project Area has not been previously recorded or evaluated for its potential eligibility for listing in the California Register of Historic Places (CRHR).

The OSRR was in operation intermittently from 1908 until 1920, the track running along the coastline from San Francisco to Tunitas Glen. The railroad folded due to financial problems and the only remnants of the railroad are scars of abandoned road cuts and grades. The former track was completely dismantled within the vicinity of the Project. The OSRR is recognized by the County of San Mateo to have been influential in the development of the coastline and is listed as a historic resource within the San Mateo County Coastal Zone (San Mateo County 1980:47).

Recommendations

Based on the previous records search results and findings of the pedestrian survey, no prehistoric archaeological resources were identified within the Project Area. In the event that prehistoric materials such as flaked-stone tools (e.g. projectile points, knives, choppers) or obsidian, chert, basalt, or quartzite toolmaking debris; bone tools; culturally darkened soil (e.g. midden soil often containing heat-affected rock, ash and charcoal, shellfish remains, faunal bones, and cultural materials); and stone milling equipment (e.g. mortars, pestles, handstones) are encountered, all excavations should be halted within 100 feet of the discovery, the planning department must be notified, and an archaeologist retained to examine the finds and assess their potential significance.

Inadvertent Discovery of Human Remains

Section 7050.5 of the California Health and Safety Code (CHSC) states that it is a misdemeanor to knowingly disturb a human burial. In keeping with the provisions provided in 7050.5 CHSC and Public Resource Code 5097.98, in the event that human remains are encountered (or are suspected) during Project implementation, all work must stop within 100 feet of the discovery and the following protocol be followed: immediately contact the San Mateo County coroner who will determine if the remains appear to be those of a Native American. Secure the location, but do not touch or remove the remains and associated artifacts, and do not remove associated spoils or pick through them. Record the location, keep notes of all communications and events, and treat the find as confidential and do not publicly disclose the location.

As a result of this investigation, one historic-era resource was identified within the Project Area: the OSRR grade. This resource has not been previously recorded or evaluated for potential eligibility for listing in the CRHR. For the purposes of this review, the OSRR segment is considered eligible of the CRHR and should therefore be avoided during Project implementation. Because the newly proposed well location, where ground disturbance will occur, is east of the OSRR, the crew can feasibly access the well location without crossing the OSRR alignment, ensuring avoidance of any potential impacts to the resource. With these avoidance measures in place, and by following the protocol for protection and reporting in the event of the discovery of heritage resources and human remains, this Project will not impact cultural resources within the Project Area.

Attachments

Attachment A: Project Location Map

Attachment B: Survey Location Map and Aerial Map

Attachment C: Survey Photographs

Bibliography

California Office of Historic Preservation (OHP)

1976 *California Inventory of Historic Resources.* California Department of Parks and Recreation, Sacramento.

2012 *Historic Properties Directory* for Half Moon Bay, San Mateo County. California Department of Parks and Recreation, Sacramento, California.

Cartier, R.

1988 Cultural Resources Evaluation for a Parcel on Cabrillo Highway near Tunitas Beach in the County of San Mateo. On file at the Northwest Information Center, Sonoma State University, Rohnert Park, California (S-010518).

Clark, M. R.

2000 *An Archaeological Reconnaissance of Five Potential Well Sites on the Deeney Property, 22325 South Cabrillo Highway, Half Moon Bay, San Mateo County, California.* PAR Environmental Services, Inc. On file at the Northwest Information Center, Sonoma State University, Rohnert Park, California (S-022936).

2002 *An Archaeological Reconnaissance of the Waddell Property, 21960 South Cabrillo Highway, Tunitas, San Mateo County, California.* On file at the Northwest Information Center, Sonoma State University, Rohnert Park, California. (S-025149).

2008 Archaeological Monitoring at the Waddell Property and Prehistoric Site CA-SMA-366 at 300 Tunitas Creek Road, San Mateo County, California. On file at the Northwest Information Center, Sonoma State University, Rohnert Park, California (S-034496).

Hammerle, E. A.

2015 *Archaeological Study of PLN2014-00421 / APN: 066330130 & 066330150, San Mateo County, California.* Prepared by GANDA for Wilkinson Well and Pump.

Leach-Palm, L., P. Mikkelsen, J. King, P. Brandy, L. Hartman, and B. Larson

2007 *Cultural Resources Inventory of Caltrans District 4 Rural Conventional Highways in Alameda, Marin, Napa, San Mateo, Santa Clara, and Sonoma Counties.* On file at the Northwest Information Center, Sonoma State University, Rohnert Park, California (S-033511).

San Mateo County Historic Resources Advisory Board

1984 *San Mateo County…. Its History and Heritage*.

San Mateo County Department of Environmental Planning, Planning Division, Coast Side

1980 Cultural Resources of San Mateo County, California. Redwood City, CA.

Attachment A: Project Location Map

USGS 7.5' Quad:
San Gregorio (1997)

Legal Description:
T6S, R5W Sections 33, 34

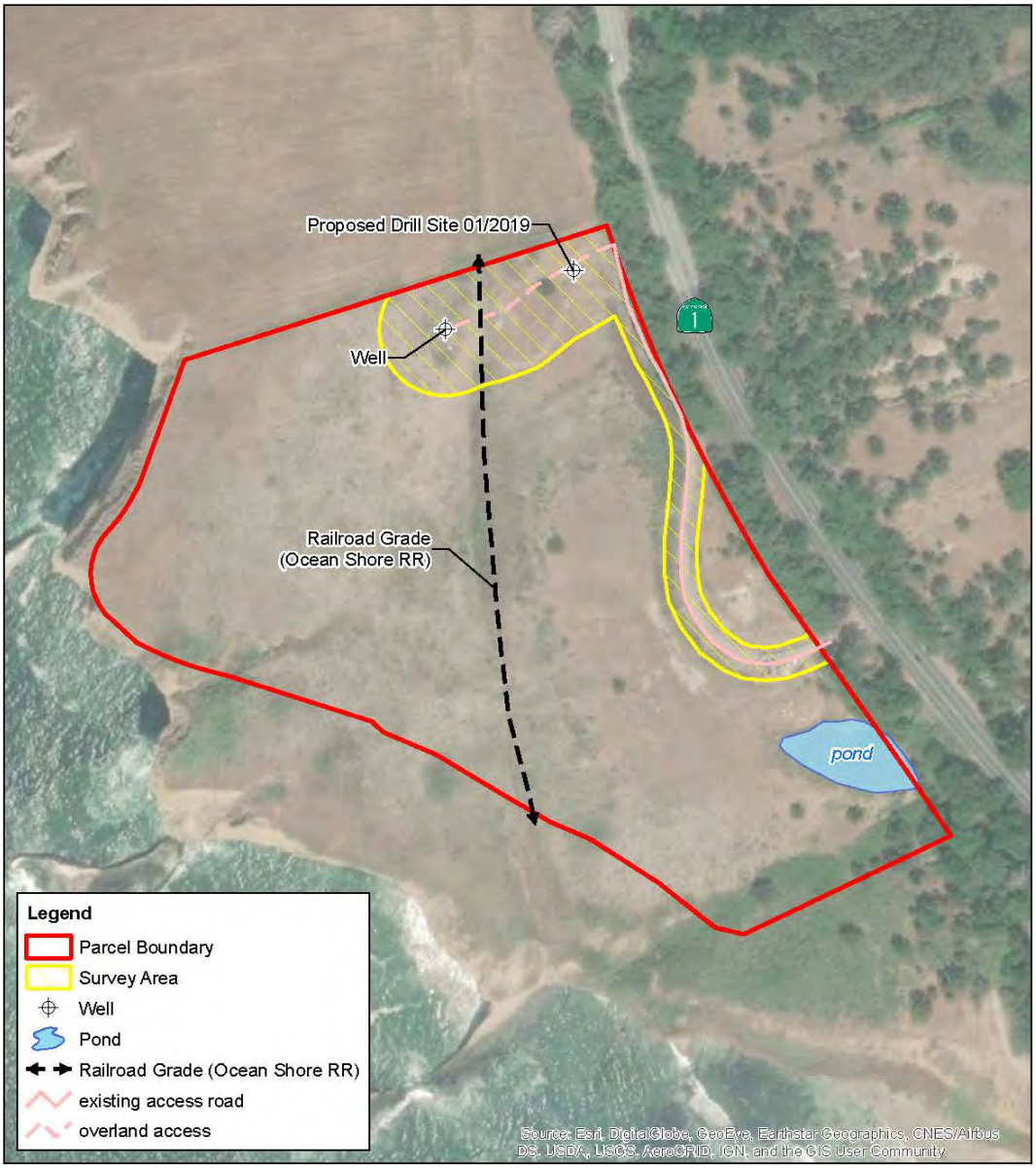
Scale 1:24,000
1 Inch = 2,000 Feet

Project Location
Wilkinson Well and Pump
San Mateo County

0 250 500 Meters
0 1,000 2,000 Feet

N

Attachment B: Survey Location Map and Aerial Map


Proposed Drill Site 01/2019
Well
1
Railroad Grade
(Ocean Shore RR)
pond
Legend
Parcel Boundary
Survey Area
Well
Pond
Railroad Grade (Ocean Shore RR)
existing access road
overland access
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community
Project Location
Scale 1:2,400
1 Inch = 200 Feet
Survey Coverage Map
Wilkinson Well and Pump
San Mateo County
0 25 50
Meters
0 100 200
Feet
N

Attachment C: Survey Photographs

Photo 1: Overview of survey area on both sides of the main access road, view west.

Photo 2: Overview of pond and berm on the south side of main access road, view southwest.

Photo 3: Overview of overland access route and the 2019 proposed well (arrow), view west.

Photo 4: Overview of abandoned railroad grade (arrow), view south.

Photo 5: Overview of new proposed well (yellow arrow) and railroad grade (black arrow), view east.

Appendix 1: GANDA Archaeological Study, February 20, 2015

Garcia and Associates (GANDA)
1512 Franklin Street, Suite 100
Oakland, CA 94612
Phone: (510) 891-0024
Fax: (510) 891-0027

To: James Wilkinson, Wilkinson Well and Pump

From: Esme A. Hammerle, GANDA Archaeologist

Date: February 20, 2015

RE: Archaeological Study of PLN2014-00421 / APN: 066330130 & 066330150, San Mateo County, California.

Introduction

This memo presents the findings of a cultural resources investigation conducted for the proposed well drilling and overland access route (project area) for the Wilkinson Well and Pump Company project located on Assessor Parcel Number (APN) 066330130 & 066330150, south of the City of Half Moon Bay. The project area is situated in the Tunitas Creek area, east of the Pacific Ocean coastline and west of Cabrillo Highway 1, in unincorporated San Mateo County, California (Attachment A). This investigation included a records search at the Northwest Information Center (NWIC) of the California Historical Resources Information System (CHRIS) at Sonoma State University, Rohnert Park (File No. 14-1005), a review of the records search conducted for the San Mateo County Planning and Building Division (File No. 14-0839), historic map research, and a pedestrian survey of the project area. This memo includes recommendations regarding avoidance of the Ocean Shore Railroad (OSRR), a historic-period resource identified within the project area.

Records Search Methods and Results

On February 5, 2015, GANDA archaeologist Robin Fies conducted a records search at the NWIC. The NWIC is a repository of all cultural resources site records, previously conducted cultural resources investigations, and historic information concerning cultural resources for 16 counties, including San Mateo County. The records search compiled information regarding the locations of previously recorded archaeological sites and previously conducted studies within a 0.25-mile radius of the project area. In addition, this information was used to assess the archaeological sensitivity of the project area. The following sources were consulted:

- NWIC base map: United States Geological Survey (USGS) 7.5-minute series topographic quadrangle for San Gregorio (1997).
- Survey reports from previous cultural resources investigations and cultural resources site records to identify previously recorded archaeological sites located within a 0.25-mile radius of the project area.
- California Office of Historic Preservation (OHP) resources, including the *California Inventory of Historic Resources* (1976) and the *OHP Historic Properties Directory* for Half Moon Bay, San Mateo County (2012). The latter combines cultural resources listed as California Points of Historic Interest, resources listed as California Historical Landmarks, and resources listed in or determined eligible for listing in the National Register of Historic Places (NRHP) or the California Register of Historical Resources (CRHR).

Records Search Results

The records search indicated that there are no previously recorded cultural resources located within the project area, or within a 0.25-mile radius of the project area. Approximately 5 percent of the project area has been subject to an archaeological survey (S-033511), which encompassed the eastern-most edge of the project area in the vicinity of Cabrillo Highway 1, and did not result in the identification of cultural resources within the project area (Leach-Palm et al. 2007). Four other cultural resources investigations (S-022936, S-010518, S-034496, and S-025149) have been completed within a 0.25-mile radius of the project area.

Field Survey Methods and Results

GANDA archaeologist Kruger Frank conducted an intensive level pedestrian survey of the project area on February 12, 2015. The project area was surveyed for both prehistoric and historic-era archaeological resources. The project area was identified in the field through the use of a combination of field maps and shape files that were loaded onto a Trimble GXT sub-meter accurate hand-held Global Position System (GPS) data logger. The proposed well location was previously marked in the field with a wooden stake and yellow caution tape. The area surveyed consisted of a 100-foot radius around the proposed well location, a 200-foot-long by 100-foot-wide overland access route leading to the well location, and 25-foot survey on both sides of the existing paved road within the parcel boundary (Attachment B). K. Frank used 2- to 4-meter survey transects to completely cover the project area. Overview photos were taken of the project area and the historic resource with an Olympus Tough digital camera (Attachment C).

The project area is located on top of a flat coastal bluff facing the Pacific Ocean and is clearly disturbed along the existing paved access road, but the ground surface appears to be less disturbed west of the access road leading to the proposed well location. The vegetation consists of a coastal prairie that is comprised of thick low-lying grasses and sedges with sparse shrubs and bushes. Pine and cypress trees were noted along the east side of the existing road. The overall ground **v**isibility was between 0 to 60 percent, due to the vegetation. Multiple rodent burrows and bare patches of ground were thoroughly inspected for resources. The soil comprised of dark brown fine sandy loam, with small chert pebbles and gravels.

OSRR

The survey resulted in the identification of the historic-era Ocean Shore Railroad (OSRR) grade/cut through the project area. The railroad grade is an earthen berm that is located partially within the project and extends to the north and south of the surveyed area, outside of the parcel boundary. The berm is approximately 100 feet long (north–south) by 10 feet wide (east–west) and is 1 to 3 feet in height. Though no historic archaeological materials were observed in the cut, the railroad route (depicted on the USGS Santa Cruz 1902 topographic map) is more than 45 years old, and is considered a historic-period resource which has not be previously recorded within the project area or evaluated for its potential eligibility for listing in the California Register of Places.

The OSRR operated intermittently through the project area from 1908 until 1920, with trains running from San Francisco to Tunitas Glen along the coastline. The railroad went out of business due to financial problems and the only remnants are scars of abandoned road cuts. The OSRR is recognized by the County of San Mateo to have been influential in the development of the coastline and is listed as a historic resource within the San Mateo County Coastal Zone (San Mateo County 1980: 47).

Recommendations

Based on the records search results and the surface survey, no prehistoric archaeological resources were identified within the project area. In the event that prehistoric materials such as flaked-stone tools (e.g. projectile points, knives, choppers) or obsidian, chert, basalt, or quartzite tool-making debris; bone tools; culturally darkened soil (e.g. midden soil often contains heat-affected rock, ash and charcoal, shellfish remains, faunal bones, and cultural materials); and stone milling equipment (e.g. mortars, pestles, handstones) are encountered, all excavations should be halted, the planning department must be notified, and an archaeologist retained to examine the finds assess the potential significance.

As a result of this investigation, one historic-era period resource was identified and recorded within the project area: the OSRR grade. This resource has not been evaluated for its potential eligibility for listing in the CRHR and should, therefore, be avoided during project implementation. The well location where ground disturbance will occur is west of the OSRR. In order to entirely avoid the OSRR, the crew will access the proposed well location by crossing the OSRR alignment 130 feet south of the property line, at a level area where there is no evidence of the remnants of the OSRR grade. In addition, the project proponent will place a fiberglass bridge comprised of four sheets, each measuring 4 by 8 feet, over the OSRR alignment, ensuring avoidance of any potential impacts to the resource. With the OSRR avoidance measures in place, this project will not result in impacts to cultural resources within the project area.

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2007 *Cultural Resources Inventory of Caltrans District 4 Rural Conventional Highways in Alameda, Marin, Napa, San Mateo, Santa Clara, and Sonoma Counties*. On file at the Northwest Information Center, Sonoma State University, Rohnert Park, California. (S-033511).

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1984 *San Mateo County…. Its History and Heritage*.

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1980 *Cultural Resources of San Mateo County, California*. Redwood City, CA.

Attachment A: Project Location Map

USGS 7.5' Quad:
San Gregorio (1997)

Legal Description:
T6S, R5W Sections 33, 34

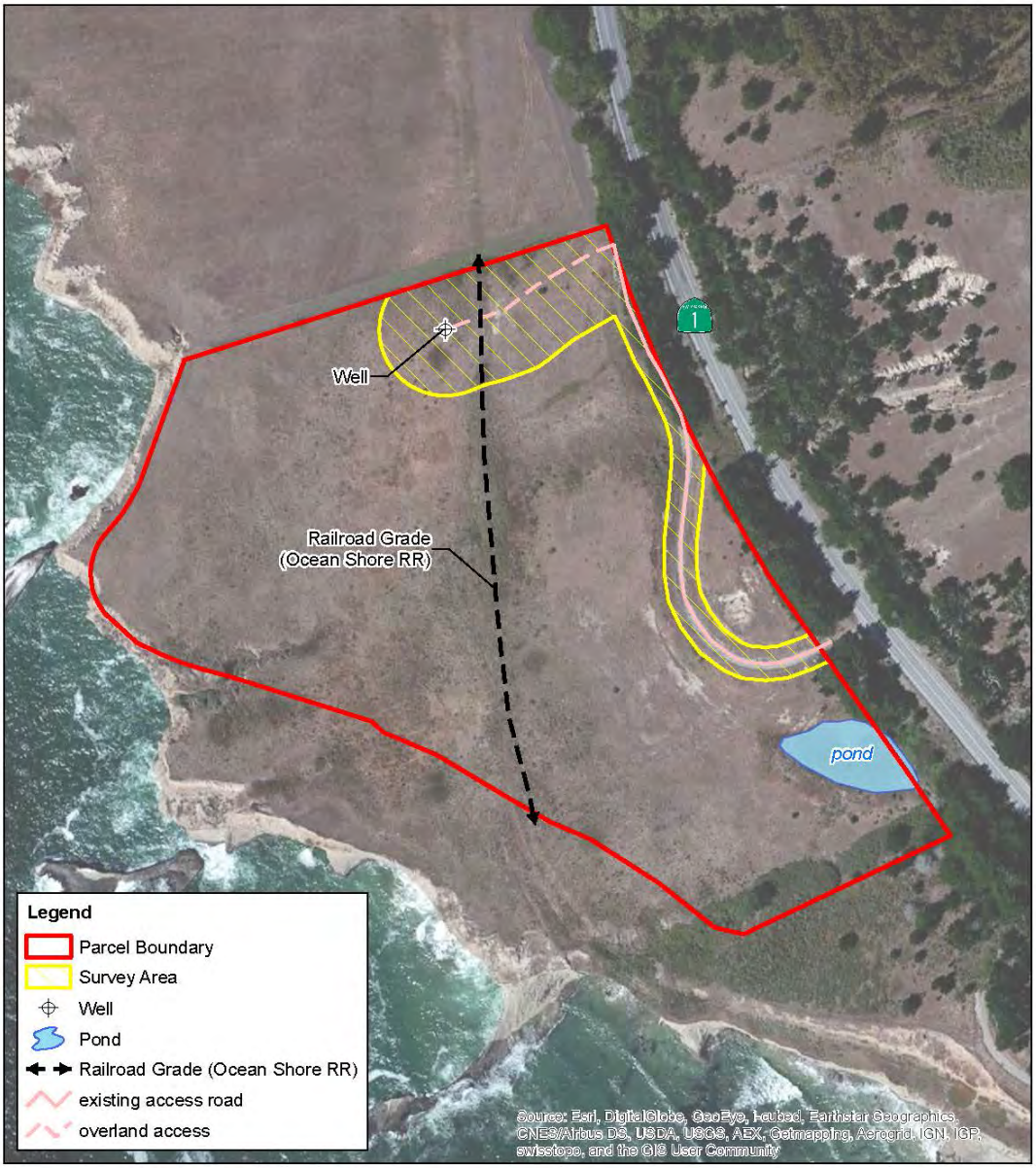
Scale 1:24,000
1 Inch = 2,000 Feet

Project Location
Wilkinson Well and Pump
San Mateo County

0 250 500 Meters
0 1,000 2,000 Feet

N

Attachment B: Survey Location Map and Aerial Map


Well
Railroad Grade
(Ocean Shore RR)
1
pond
Legend
Parcel Boundary
Survey Area
Well
Pond
Railroad Grade (Ocean Shore RR)
existing access road
overland access
Source: Esri, DigitalGlobe, GeoEye, i-cubed, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community
Project Location
Scale 1:2,400
1 Inch = 200 Feet
Survey Coverage Map
Wilkinson Well and Pump
San Mateo County
0 25 50
Meters
0 100 200
Feet
N

Attachment C: Survey Photos

Figure 1: Overview of survey area on both sides of the main access road, facing west.

Figure 2: Overview of pond and berm on the south side of main access road, facing southwest.

Figure 3: Overview of proposed well location (arrow) from main access road, facing north.

Figure 4: Overview of proposed well location (yellow flag) and view of overland access route, facing east.

Figure 5: Overview of overland access route and view of proposed well (arrow), facing west.

Figure 6: Overview of proposed well and view of abandoned railroad grade (arrow), facing south.

Figure 7: Overview of proposed well (red arrow) and railroad grade (black arrow), facing east.

COUNTY OF SAN MATEO
PLANNING AND BUILDING DEPARTMENT

DATE: May 24, 2017

TO: Planning Commission

FROM: Planning Staff

SUBJECT: EXECUTIVE SUMMARY: Consideration of an Initial Study and Mitigated Negative Declaration pursuant to the California Environmental Quality Act, an Architectural Review Exemption pursuant to Sections 154, 227-229.1, 260, and 261 of the California Streets and Highways Code, and a Coastal Development Permit and Planned Agricultural District Permit pursuant to Sections 6328.4 and 6363 of the San Mateo County Zoning Regulations respectively, to drill a domestic water well to serve a future single-family dwelling on a vacant parcel located in the unincorporated San Gregorio area of San Mateo County. The project is located within the Cabrillo Highway State Scenic Corridor and is appealable to the California Coastal Commission.

County File Number: PLN 2016-00445

PROPOSAL

The applicant proposes to drill a domestic water well to serve a future single-family residence. The proposed well location is approximately 105 feet from the front property line. An alternative well location approximately 180 feet from the front property line is also proposed if the initial location does not yield sufficient water to serve a single-family residence. The two locations are both accessible from an existing road on the property, thus not requiring grading or significant vegetation removal. No electricity is proposed for the well at this time. A domestic water well was drilled in the northern portion of the property, approved in 2015 (Planning Case No. PLN 2014-00421), but did not yield sufficient water for future residential development.

RECOMMENDATION

That the Planning Commission adopt the Initial Study and Mitigated Negative Declaration and approve the Architectural Review Exemption, Coastal Development Permit and Planned Agricultural District Permit, County File Number PLN 2016-00445, by making the required findings and conditions of approval as listed in Attachment A.

SUMMARY

The subject parcel is accessed from and located on the west side of Highway 1 (Cabrillo Highway), approximately 0.5-miles north of the intersection of Cabrillo Highway and Tunitas Creek Road. The unimproved parcel is gently-sloped with coastal scrub and other vegetation extending west from Cabrillo Highway to a steep coastal bluff. There is a linear drainage channel and freshwater pond located on the parcel. Neighboring parcels are largely undeveloped. However, single-family residential development and farming activities are present sporadically to the north, south and east of the subject parcel.

The project complies with all applicable General Plan policies regarding Rural Land Use, Soil Resources, Vegetative, Water, Fish and Wildlife Resources, and Historical and Archaeological Resources. The project was reviewed and found to be in compliance with all applicable Local Coastal Program policies regarding Locating and Planning New Development, Agriculture, Sensitive Habitats, Visual Resources, and Shoreline Access. Due to the topography and existing vegetation on the parcel, the project is exempt from Architectural Review. The project meets all applicable zoning regulations, specifically setbacks. Since the project is considered ancillary to residential development, a Planned Agricultural District (PAD) Permit is required. Under the substantive criteria for the issuance of a PAD Permit, the project is in compliance with all applicable policies as it requires minimal site disturbance, does not require any grading or vegetation removal, and aims to provide an adequate and potable well water source to the property.

CM:pac - CJMBB0195_WPU.DOCX

COUNTY OF SAN MATEO
PLANNING AND BUILDING DEPARTMENT

DATE: May 24, 2017

TO: Planning Commission

FROM: Planning Staff

SUBJECT: Consideration of an Initial Study and Mitigated Negative Declaration pursuant to the California Environmental Quality Act, an Architectural Review Exemption pursuant to Sections 154, 227-229.1, 260, and 261 of the California Streets and Highways Code, and a Coastal Development Permit and Planned Agricultural District Permit pursuant to Sections 6328.4 and 6363 of the San Mateo County Zoning Regulations respectively, to drill a domestic water well to serve a future single-family dwelling on a vacant parcel located in the unincorporated San Gregorio area of San Mateo County. The project is located within the Cabrillo Highway State Scenic Corridor and is appealable to the California Coastal Commission.

County File Number: PLN 2016-00445

PROPOSAL

The applicant proposes to drill a domestic water well to serve a future single-family residence. The proposed well location is approximately 105 feet from the front property line. An alternative well location approximately 180 feet from the front property line is also proposed if the initial location does not yield sufficient water to serve a single-family residence. The two locations are both accessible from an existing road on the property, thus not requiring grading or significant vegetation removal. No electricity is proposed for the well at this time. A domestic water well was drilled in the northern portion of the property, approved in 2015 (Planning Case No. PLN 2014-00421), but did not yield sufficient water for future residential development.

RECOMMENDATION

That the Planning Commission adopt the Initial Study and Mitigated Negative Declaration and approve the Architectural Review Exemption, Coastal Development Permit and Planned Agricultural District Permit, County File Number PLN 2016-00445, by making the required findings and conditions of approval as listed in Attachment A.

BACKGROUND

Report Prepared By: Carmelisa Morales, Project Planner, 650/363-1873

Applicant: Wilkinson Enterprises, Inc.

Owner: John Franklin and Raymond Angwin

Location: South Cabrillo Highway, Unincorporated San Gregorio

APN(s): 066-330-130 and 066-330-150

Size: 26.79 acres (combined)

Existing Zoning: PAD/CD (Planned Agricultural District/Coastal Development)

General Plan Designation: Agriculture/Rural

Local Coastal Plan Designation: Agriculture

Sphere-of-Influence: None

Williamson Act: Not Contracted

Existing Land Use: Undeveloped

Parcel Legality: The subject parcel was part of the 8,905 acre Rancho Canada de Verde y Arroyo de la Purisima property recorded in May and June 1860 (18 RSM – PG 17). The subject parcels were subsequently certified as one legal parcel pursuant to Certificate of Compliance, Type A, recorded on September 20, 1995 (Planning Case No. COC95-0006).

Water Supply: Not applicable. There is no domestic water service available in this area. The proposed project will be utilized to supply domestic water to a future single-family residence on the subject parcel.

Sewage Disposal: Not applicable. There is no municipal sewer service available in this area. Any future development would require installation of an on-site septic system.

Flood Zone: Zone X (areas of minimal flooding), FEMA Panel No. 06081C0360E, effective October 16, 2012

Environmental Evaluation: An Initial Study and Mitigated Negative Declaration was prepared and circulated, with review and comment period running from March 8, 2017 to March 28, 2017.

Setting: The subject parcel is accessed from and located on the west side of Highway 1 (Cabrillo Highway), less than 1-mile south of Martin's Beach and approximately 0.5 miles north of the intersection of Cabrillo Highway and Tunitas Creek Road. The parcel is on a gently-sloped marine terrace extending west from Cabrillo Highway to a steep coastal bluff. The parcel is unimproved with coastal scrub and other vegetation. There is a narrow, linear drainage channel extending along the south property line to

the coastal bluff which drains off-site hillside areas east of Cabrillo Highway and south of the property. A freshwater pond, typically collecting rain run-off, is located on the southeastern portion of the parcel, and is connected to a drainage channel located east across Cabrillo Highway. Neighboring parcels are largely undeveloped. However, there are single-family residential development and farming activities present sporadically to the north, south, and east of the subject parcel.

Chronology:

Date		Action
July 22, 2015	-	Planning Commission certified the Initial Study and Mitigated Negative Declaration and approved the Architectural Review Exemption, Planned Agricultural District Permit, and Coastal Development Permit (Planning Case No. PLN 2014-00421) to drill a domestic water well on the subject parcel.
November 6, 2015	-	Domestic water well was drilled, but did not yield sufficient water to supply a future single-family residence.
October 14, 2016	-	Application for an Architectural Review Exemption, Planned Agricultural District Permit, and Coastal Development Permit, County File No. PLN 2016-00445 (current proposal), to drill a new domestic well was submitted.
January 9, 2017	-	Agricultural Advisory Committee reviewed and recommended approval of the project.
January 26, 2017	-	Application deemed complete.
March 8 – 28, 2017	-	Posting period for Initial Study and Mitigated Negative Declaration.
May 24, 2017	-	Planning Commission public hearing date.

DISCUSSION

A. KEY ISSUES

1. Conformance with the General Plan

Staff has reviewed the proposed project and found that it complies with all applicable County General Plan policies, specifically:

a. Vegetative, Water, Fish and Wildlife Resources Policies

Policy 1.28 (*Regulate Development to Protect Sensitive Habitats*) regulates land uses and development activities adjacent to sensitive

habitats in order to protect rare, endangered and unique plants and animals from reduction in their range or degradation of their environment and protect and maintain the biological productivity of important plant and animal habitats. The General Plan defines a sensitive habitat in Policy 1.8 (*Definition of Sensitive Habitats*) as any area where the vegetative, water, fish and wildlife resources provide especially valuable and rare plant and animal habitats that can be easily disturbed or degraded.

A habitat assessment was completed by Garcia and Associates (GANDA) for the proposed project and found that there are occurrences for three special status wildlife species within 2 miles of the project area and critical habitat for one special status wildlife species (see Attachment D). The assessment concluded that the project area has suitable habitat for the California red-legged frog (CRLF), the San Francisco garter snake (SFGS), and the saltmarsh common yellowthroat (SCY). All three species have a high potential to occur within the project area. The CRLF would likely occur in the pond and drainage area on the project parcel. These areas have a hydrological potential to hold sufficient water for CRLF egg-laying and tadpole metamorphosis (assuming there is normal, sufficient rainfall to create ponded water for the required 11 to 20 weeks metamorphosing period) during the breeding season (typically December to April). The adjacent riparian area and upland grasslands can provide sufficient refugia for the CRLF with the presence of rocky crevices and rodent burrows. A designated CRLF Critical Habitat also lies approximately 400 feet southwest of the project area. The project area contains suitable habitat for the SFGS such as densely vegetated freshwater ponds for hunting its preferred prey (CRLF), upland grassy hillsides for sunning, and rodent burrows for hibernating. As for the SCY, the suitable habitat within and around the project area includes densely vegetated ponds and nearby creeks with emergent cattail and willow vegetation cover for foraging and nesting.

The habitat assessment also found that there are occurrences for five special status plant species within 2 miles of the project area. The assessment concluded that the project has suitable habitat for the Coastal marsh milk-vetch and Choris' popcornflower and have the moderate potential to occur within the project area. The suitable habitat for both species occurs within the vicinity of freshwater ponds and seasonal drainage where moisture is retained in the soil.

The mitigation measures recommended in the Initial Study (IS)/Mitigated Negative Declaration (MND) were included as conditions of approval in Attachment A to ensure impacts to these species are mitigated. The mitigation measures were revised to incorporate comments on the IS/MND received from the California Coastal Commission and Committee for Green Foothills. These

measures will require that the applicant determine if any of these species are present within or near the project area and implement and maintain avoidance measures if necessary.

b. Soil Resources

Policy 2.17 (*Regulate Development to Minimize Soil Erosion and Sedimentation*) regulates development to minimize soil erosion and sedimentation including, but not limited to, minimizing removal of vegetative cover. Since both proposed well locations will utilize an existing road for access and be located on relatively flat area, significant vegetation removal is not expected. However, the hydrologic conditions report prepared by Balance Hydrologics, Inc., states that the installation and yield testing of a domestic well may include the use of drilling mud or foam and bring groundwater to the ground surface (see Attachment E). Erosion and sediment control measures were recommended in the Initial Study/Mitigated Negative Declaration and are included as conditions of approval in Attachment A to minimize any impacts to the pond located south of the proposed well locations.

Further, Policy 2.21 (*Protect Productive Soil Resources Against Soil Conversion*) regulates land uses of productive soil resources and encourages appropriate management practices to protect against soil conversion. Although the subject parcel does not contain prime soils, the proposed project area is identified as having lands suitable for agriculture. While the proposed project will convert a small area of the subject parcel for the proposed well, there is no expectation that the proposed well would result in damage to the capability of the surrounding soil. Given the small portion of agricultural lands proposed for conversion compared to the overall parcel size, the amount of conversion is considered minor as the majority of the parcel remains available for agricultural uses.

c. Visual Quality

Policy 4.15 (*Appearance of New Development*) regulates development to promote and enhance good design, site relationships and other aesthetic considerations. In addition, Policy 4.22 (*Scenic Corridors*), aims to protect and enhance the visual quality of scenic corridors by managing the location and appearance of structural development.

The subject parcel lies entirely within the Cabrillo Highway State Scenic Corridor. An unpaved road provides access directly from Cabrillo Highway and to the proposed well locations. No improvements to the road are necessary or required to access the well locations. The first well location is proposed to be 105 feet west from Cabrillo Highway and the second well location, which will be drilled if

the first well location does not yield sufficient water for residential development, will be located 180 linear feet west from Cabrillo Highway. The project site is covered with coastal scrub and other vegetation. The eastern property line of the subject parcel is lined with Cypress trees which screens the parcel from Cabrillo Highway. The completed well will be approximately 1-foot above natural grade and include a 4-foot by 4 foot cement pad. There is no electricity for the well proposed at this time. Due to the downward slope of the parcel from Cabrillo Highway, the existing vegetation on the parcel, and the potential location of the completed well, it would not be visible from public viewpoints.

d. Historical and Archaeological Resources

Policy 5.20 (*Site Survey*) and Policy 5.21 (*Site Treatment*) encourage the protection and preservation of archaeological sites, require a determination to be made on whether or not sites for new development contain archaeological/paleontological resources, and prior to approval of development for these sites, require mitigation measures be incorporated into the project for handling resources in the event that they are discovered.

A cultural resources report prepared by GANDA was submitted for a well location approved in 2015 under a separate permit. A letter prepared by GANDA verified that the two proposed well locations for this project were included in the analysis from the 2015 report. The report stated that one historic era period resource was identified and recorded within the project area: the Ocean Shore Railroad (OSRR) grade, an earthen berm approximately 100 feet long, 10 feet wide, and 1 to 3 feet in height. Although access to the well location tested in 2015 was west of the railroad grade which required mitigation measures to avoid potential impact, access to the currently proposed well locations are approximately 150 feet east of the railroad grade with access available from the existing unpaved road on the project parcel. Although no impact to the OSRR grade is expected, mitigation measures were recommended as part of the analysis in the Initial Study/Mitigated Negative Declaration and included as Conditions of Approval in Attachment A in the event that these resources are discovered.

e. Rural Land Use

Policy 9.23 *(Land Use Compatibility in Rural Lands)* encourages compatibility of land uses in order to promote the health, safety and economy, and the maintenance of scenic and harmonious nature of the rural lands. Further, Policy 9.30 *(Development Standards to Minimize Land Use Conflicts with Agriculture)* aims to avoid locating non-agricultural activities on soils with agricultural capability and locate

non-agricultural activities in areas of agricultural parcels which cause the least disturbance to feasible agricultural activities.

The subject parcel has a General Plan land use designation of "Agriculture." The proposed well will be located on soils identified as suitable for agriculture. Given that there is no municipal water service available for the project parcel, a water well would provide water to the property for both agricultural and domestic purposes, if proposed. Review and approval from the Environmental Health Division would also be required. The estimated temporary impact area of the proposed project would be 0.349 acres and the estimated permanent impact area would be 0.018 acres of the 26.79 acre property. Due to the minor permanent disturbance area, the property would be available for agricultural activities should they be pursued in the future. The existing road on the property would provide easy access to the proposed well and may prompt future development to be proposed in the same vicinity.

2. Conformance with Architectural Review Exemption

The project parcel is located within the Cabrillo Highway State Scenic Corridor. A field inspection of this property determined that the proposed well will be minimal in size and does not result in significant vegetation removal. As discussed in Section A.1.c above, the resulting well, if determined that it will yield sufficient water for a single family residence, will be approximately 1-foot above grade and include a 4-foot by 4 foot cement pad. The project would not be visible from Cabrillo Highway and therefore is exempt from the Architectural Review requirement.

3. Conformance with the Local Coastal Program (LCP)

Staff has reviewed the proposed project and found it to be in compliance with all applicable Local Coastal Program (LCP) Policies, specifically:

a. Locating and Planning New Development Component

Policy 1.25 (*Protection of Archaeological/Paleontological Resources*) discusses the protection of archaeological resources on sites proposed for development. As discussed in Section A.1 above, an archaeological reconnaissance was performed on the project site and no archaeological or paleontological resources were found. However, the archaeologist stated that one historic era period resource, the OSRR grade, was identified and recorded within the project area. The archaeologist included recommendations on how to protect the potential historic resource and instructions on what to do in the event that resources are found during the well drilling activity. These recommendations were included in the Initial Study/

Mitigated Negative Declaration and as Conditions of Approval in Attachment A.

b. Agriculture Component

Policy 5.22 (*Protection of Agricultural Water Supplies*) requires the preservation of agricultural water supplies and that there be a water source for all non-agricultural uses. The policy also requires that adequate and sufficient water supplies needed for agricultural production and sensitive habitat protection in the watershed are not diminished.

As discussed in Section A.1 above, a habitat assessment was completed by GANDA for the project and found that there are occurrences for three special status wildlife species and five special status plant species within 2 miles of the project area, and critical habitat for one special status wildlife species near the project area (see Attachment D). The project biologist has recommended mitigation measures to ensure sensitive habitats are protected such as restricted timing of construction, pre-construction surveys and plant surveys required for construction during avian nesting season and blooming seasons, and implementation of erosion control measures. These mitigation measures are included as conditions of approval in Attachment A of this report. In addition, the proposed well locations are over 700 feet from the coastal bluff area. There is no development or observed sensitive habitats between the proposed well locations and the coastal bluff area. Therefore, as conditioned, the proposed project is not expected to impact sensitive habitats in the watershed.

The applicant also provided an existing hydrologic conditions report prepared by Mark Woyshner of Balance Hydrologic, Inc., which found that a well that utilizes standard best management practices to control drilling fluids, considered pumping at a rate typical for a single-family residence, and location, will not pose any significant impacts to agricultural water resources in the area (see Attachment E). Special care is recommended for the first proposed location to prevent drilling muds, foam, and turbid water from entering the nearby pond. Mitigation measures were recommended in the Initial Study/Mitigated Negative Declaration and included as Conditions of Approval in Attachment A to mitigate any potential impacts.

c. Sensitive Habitats Component

Policy 7.3 (*Protection of Sensitive Habitats*) prohibits any land use or development which would have significant adverse impacts on sensitive habitat areas. This policy also regulates development in areas adjacent to sensitive habitats and requires development to be

sited and designed as to prevent impacts that could significantly degrade the sensitive habitats.

As discussed in Section A.1 and the Agricultural Component Section above, a habitat assessment was completed by GANDA for the proposed project and found that there are occurrences for three special status wildlife species and three special status plant species within 2 miles of the project area and critical habitat for one special status wildlife species near the project area (see Attachment D). As these species have a potential to occur within or near the project area, mitigation measures were recommended in the Initial Study/Mitigated Negative Declaration and included as conditions of approval in Attachment A to mitigate any potential impacts.

d. Visual Resources Component

Policy 8.5 (*Location of Development*) requires new development to be located on a portion of a parcel where development is least visible from State and County Scenic Roads, least likely to significantly impact views from public viewpoints, and is consistent with all other LCP requirements which best preserves the visual and open space qualities of the parcel. Policy 8.31 (*Regulation of Scenic Corridors in Rural Areas*) and Policy 8.33 (*Exemptions*) also apply special regulations for the Cabrillo Highway State Scenic Corridor to protect the visual quality and natural settings of rural scenic areas and require a minimum setback of 100 feet from the right-of-way line, and greater where possible, or a 50-foot setback when sufficient screening is provided to shield the structure from public view. If the structure is visible from the roadway due to localized terrain and vegetative cover, it may be exempt.

As discussed in the sections above, the proposed project does not require significant vegetation removal or grading and will be screened by existing trees and vegetation. The first proposed well location is approximately 105 feet from the front property line and the second proposed well location, if the first location does not yield sufficient water for residential development, is approximately 180 feet. Given the topography, existing vegetation, finished height, and location of the proposed well, it will not be visible from Cabrillo Highway or any other public viewpoints. The proposed well is also compliant with all other applicable regulations of the Local Coastal Program. Any future development proposed on the property will be subject to review and issuance of separate Architectural Review, CD, and PAD Permits. Furthermore, as discussed in Section A.2, the proposed project is exempt from Architectural Review as it cannot be seen from Cabrillo Highway or any other public viewpoint.

e. Shoreline Access Component

Policy 10.30 (*Requirement of Minimum Access as a Condition of Granting Development Permits*) requires the provision of shoreline access for any private or public development between the sea and the nearest public road. The policy bases the responsibility and requirements of the property owner for the provision of this access on the size and type of development, the benefit to the developer, the priority given to the type of development under the Coastal Act, and the impact of the development, particularly the burden the proposed development would place on the public right of access to and use of the shoreline.

The project parcel is located between the sea and the first public road and currently does not have dedicated public access. The proposed project is considered small non-agricultural development and therefore requires the following: retention of existing public access as defined in LCP Policies 10.5 (*Definition of Established Shoreline Access*) and 10.6 (*Definition of Private Shoreline Access*), the posting of hazardous and environmentally sensitive areas, and pay an in-lieu fee of a minimal sum not to exceed 5% of the project cost to contribute to the provision of public access elsewhere along the County shoreline. The proposed project sites are not in an area included in the assessment of access trails and shoreline destinations in Table 10.1 of the Local Coastal Program. As the proposed project is located entirely on the subject parcel, it does not impact the public's ability to access and use the designated access points located in the vicinity of the project parcel (i.e., Tunitas Creek State Beach to the south of the project site (see Attachment B)).

4. Conformance with the Planned Agricultural District (PAD) Regulations

a. Setbacks and Height Requirements

	PAD Development Standards	**Proposed (Location 1/ Location 2)**
Minimum Lot Size	N/A	26.79 acres
Minimum Front Setback	50 ft. or 100 ft.[1]	105 ft./180 ft.
Minimum Left Side Setback	20 ft.	>20 ft./ >20 ft.
Minimum Right Side Setback	20 ft.	>20 ft./ >20 ft.
Minimum Rear Setback	20 ft.	>20 ft./ >20 ft.
Maximum Building Height	36 ft.	N/A

[1] *Pursuant to LCP Policy 8.31.e, a minimum setback of 100 feet from the right-of-way line is required. A 50-foot setback is permitted when sufficient screening is provided to shield the structure from public view.*

b. PAD Permit Requirements

The subject parcel does not contain prime soils, but is identified as having lands suitable for agriculture. The parcel is undeveloped with the exception of an existing access road. There are currently no agricultural related activities on the property. Section 6353.B of the PAD regulations states that single-family residences are allowed on lands suitable for agriculture and other lands upon issuance of a PAD Permit. Since the proposed well will be certified as domestic, the project is considered ancillary to residential development, and therefore a PAD Permit is required. In order to approve and issue a PAD Permit, the project must comply with the substantive criteria for the issuance of a PAD Permit, as delineated in Section 6355 of the SMC Zoning Regulations.

As proposed and conditioned, the proposed project complies with the following applicable policies:

General Criteria

(1) *The encroachment of all development upon land which is suitable for agricultural use shall be minimized.*

As discussed previously, the proposed well would result in minimal site disturbance and convert only a small portion of the 26.79-acre parcel. The remaining portion of the parcel would be open to future agricultural activities.

(2) *All development permitted on a site shall be clustered.*

The parcel is currently undeveloped with the exception of an existing access road. Aside from the domestic water well which is considered ancillary to residential development, no other development is proposed at this time. If the applicant pursues future development on the property, the development will be evaluated for conformance with the requirement to cluster development.

(3) *Every project shall conform to the Development Review Criteria contained in Chapter 20A.2 of the San Mateo County Ordinance.*

The proposed project has been reviewed under and found to be in compliance with the Development Review Criteria within Chapter 20A.2 of the SMC Zoning Regulations. Specifically, the project complies with Sections 6324.1 (*Environmental Quality Criteria*), 6324.4 (*Water Resources Criteria*), and 6324.5 (*Cultural Resources Criteria*) which respectively address the potential for environmental impacts to cultural and water

resources. As discussed in the sections above, the proposed project will not introduce noxious odors, chemical agents, or long-term noise and is conditioned to mitigate any significant adverse environmental impact upon primary wildlife or marine resources. The proposed project is also conditioned to include site preparation procedures and construction phasing to control, reduce erosion, exposure of soils, and discharge of solid and liquid waste that may contaminate water resources, and procedures for the discovery of cultural resources.

The proposed project also complies with Section 6325.1 (*Primary Scenic Resources Areas Criteria*) which requires public views within and from Scenic Corridors to be protected and for development to not significantly obscure these viewpoints. As discussed in the sections above, the project would not be seen from Cabrillo Highway or any other public viewpoints.

Water Supply Criteria

(1) *The existing availability of an adequate and potable well water source shall be demonstrated for all non-agricultural uses.*

There is no known water source currently on the project parcel. The proposed project seeks to determine if any on-site domestic water source is available to service the property. While the proposal seeks certification of the well as a potable water source, there is no development proposal at this time. Any domestic water that may be found may serve both domestic and agricultural purposes.

(2) *Adequate and sufficient water supplies needed for agricultural production and sensitive habitat protection in the watershed are not diminished*.

As discussed in the section above, no known water source is currently on the parcel. Although the proposed project aims to find an on-site domestic water source for a future single-family residence, the domestic water found may also serve agricultural purposes.

As discussed in Section 3.b above, the project biologist has recommended mitigation measures to ensure sensitive habitat protection. These mitigation measures are included as conditions of approval in Attachment A of this report. In addition, the proposed well locations are over 700 feet from the coastal bluff area. There is no development or observed sensitive habitats between the proposed well locations and the coastal bluff area that may be impacted. Therefore, the proposed

project is not expected to impact sensitive habitats in the watershed.

Criteria for the Conversion of Lands Suitable for Agriculture and Other Land

The subject parcel does not contain prime soils, but is identified as having lands suitable for agriculture. Section 6355.F (*Criteria for the Conversion of Lands Suitable for Agriculture and Other Land*) of the San Mateo County Zoning Regulations states that the conversion of lands suitable for agriculture is not allowed unless all of the following criteria are met:

(1) *All agriculturally unsuitable lands on the parcel have been developed or were determined to be undevelopable.*

The subject parcel consists entirely of soils that have been deemed "lands suitable for agriculture." However, the proposed well will convert only a small portion of the subject parcel, thus leaving the majority of the 26.79-acre parcel available for agricultural activities. As discussed in the sections above, the proposed well has a minimal footprint and the overall area of disturbance is limited which will allow the large remainder of the property to be available for future agricultural activities.

(2) *The continued or renewed agricultural use of the soils is not capable of being accomplished in a successful manner within a reasonable period of time, and the productivity of adjacent agricultural lands will not be diminished.*

As discussed, the proposed well would convert only a small portion of the parcel which would leave the majority of the parcel available for future agricultural uses.

(3) *Clearly defined buffer areas are developed between agricultural and non-agricultural uses.*

As previously discussed, the subject parcel is undeveloped and there are no agricultural activities currently present on-site. Due to the limited scope of the proposed project and the undeveloped state of the subject parcel, clearly defined buffer areas are not required and do not need to be established. Any future development would be subject to review under this section to ensure conversion of agricultural lands is minimized and buffer areas are established.

(4) *The productivity of any adjacent agricultural lands is not diminished, including the ability of the land to sustain dry farming or animal grazing.*

Neighboring parcels are largely undeveloped. Given the distance between the proposed well location and the nearest agricultural uses, no impact is expected on the productivity of adjacent agricultural lands.

(5) *Public service and facility expansions and permitted uses do not impair agricultural viability, either through increased assessment costs or degraded air and water quality*.

The proposed well will not require public service or facility expansions. The proposed well is completely located on the subject parcel and does not limit the agricultural viability of the parcel. A preliminary review by the County's Environmental Health Division found that the proposed plans are in compliance with current health standards, and thus, pose no threat to water quality. Lastly, the proposed project does not include aspects that would result in degraded air quality.

B. ENVIRONMENTAL REVIEW

An Initial Study (IS) and Mitigated Negative Declaration (MND) have been prepared and circulated for this project in compliance with the California Environmental Quality Act (CEQA) (see Attachment G). The public comment period began on March 8, 2017 and ended on March 28, 2017. Mitigation measures from the IS/MND have been included as conditions of approval in Attachment A. As of the publication of this report, staff received comments from the California Coastal Commission and the Committee for Green Foothills during the 20-day public review period (see Attachments H and I). Response letters were submitted by the applicant and project biologist (see Attachments K and L). Below is a summary of the comments with staff's response:

California Coastal Commission (CCC)

CCC Comment 1: Prior to approval of a Coastal Development (CD) Permit or PAD Permit for a single-family residence on the subject parcel, the CCC recommends that an analysis be submitted to address the following: any conversion of agricultural land to a non-agricultural use, agricultural viability or production, existing biological conditions including sensitive habitat areas in the project vicinity, potential impact on coastal resources, adequate water supply to serve a single-family residence, surface stream flow impacts from the use of the well, impact on wells located on adjacent land, and all other analyses required to comply with all other applicable LCP policies.

Staff's Response: As discussed in the sections above, any future development proposed on the property will be subject to review and issuance of all applicable permits, including but not limited to CD and PAD Permits. All permits would require analysis of all applicable LCP policies prior to obtaining approval.

CCC Comment 2: The CCC recommends Mitigation Measure 1 be revised to allow construction outside of the breeding season (November through March) and that the project plans show all sensitive habitat areas to be protected during work activities for the proposed project.

Staff's Response: The project biologist, Jane Anfinson of Garcia and Associates (GANDA), submitted a response letter in which she recommended that construction be allowed after the rainy season ends (approximately May 1st) and when the ground is dry enough to support equipment at the work area. Mitigation Measure 1 (Condition No. 4 in Attachment A) has been revised to allow construction only during the dry season (approximately May 1 to September 30) and only when the ground is dry enough to support equipment at the work area. The following best management practices to prevent spoils from entering the nearby pond and creek that are downslope from the drilling impact areas were also recommended by the project arborist and included as a Mitigation Measure 1 in the Initial Study and Mitigated Negative Declaration and as a Condition of Approval in Attachment A:

1. Install straw wattles or other natural biodegradable erosion control measures that do not contain plastic monofilament netting along the perimeter of the project area (i.e., along the existing dirt road and on the perimeters of the 50-foot radius of temporary impact around the drill sites).

2. Construction vehicles may only park and travel on the existing dirt road and within the 50-foot radius of temporary impact around the drill sites.

3. No construction work is allowed if there is a greater than 20% chance of precipitation.

4. Spoil piles must be covered each day and prior to rain events.

CCC Comment 3: The CCC recommends that the special status species listed in Table 1 of the habitat assessment be assumed as present in the project area unless surveys are conducted during the species blooming season at which time occurrence of the species within the proposed project site can be confirmed (see Attachment D).

Staff's Response: The habitat assessment prepared by the project biologist stated that ruderal vegetation typical of disturbed, well-drained upland coastal habitats was observed within the project area (see Attachment D). The area of temporary and permanent impact is limited to the existing road, the two proposed well locations, and a 50-foot radius around each well location. The response letter submitted by the project biologist stated that there is potential for remnants of true

Coastal Prairie grassland complex and suitable habitat in the surrounding vicinity of the lowland pond for special-status plant species (see Attachment L). The project biologist agrees with the CCC's recommendation to have a qualified biologist conduct a blooming season plant survey in late May or early July to encompass the variability of bloom time triggered by weather variability. This survey will be the most accurate assessment of the presence of these species. This requirement has been included as Condition No.5 in Attachment A.

CCC Comment 4: The CCC recommends that the project plans should show all sensitive habitat areas to be protected during work activities for the proposed project.

Staff's Response: Staff has requested that the applicant revise the project plan or submit a map showing the sensitive habitat areas on the project parcel. Attachment M in this report is an Impact Area Map prepared by the project biologist, Jane Anfinson, showing all sensitive habitat areas within the project parcel. Conditions Nos. 4 and 5 in Attachment A have been revised to reference the Impact Area Map when implementing mitigation measures to protect the species identified as having the potential to occur within or near the project area.

Committee for Green Foothills (CGF)

CGF Comment 1: CGF would like to confirm that the existing road on the property was formally abandoned by Caltrans as several sources indicate that this road is an old section of Highway 1 (Cabrillo Highway).

Staff's Response: A record of survey prepared by Andrew J. Wilkinson, recorded on May 7, 2003, shows both the old and new roadways of Highway 1 immediately north of Tunitas Creek Road (see Attachment J). The old roadway of Highway 1, labeled "Record Centerline Former San Mateo County Right Of Way," includes the existing road on the project parcel. The roadway of Highway 1 on the Assessor's Parcel Map (see Attachment B) for this property matches the new roadway in the record of survey. Based on these official maps, it can be inferred that Caltrans has abandoned the existing road on the project parcel.

CGF Comment 2: Given that an on-site domestic well is a prerequisite for development of a single family residence in the PAD, CGF recommends that the IS/MND should more thoroughly analyze the impacts of conversion of a portion of the property to non-agricultural use.

Staff's Response: There is no other development proposed with this application aside from the two proposed wells. If future development is proposed on this property, the proposal will be subject to approval of all applicable permits including CD and PAD permits. At that time, if future non-agricultural development is proposed, the proposal must comply with all applicable regulations which will include the analysis of impacts of conversion to non-agricultural use.

CGF Comment 3: CGF recommends that Mitigation Measure 1 of the IS/MND be revised to require that any construction within 500 feet of a wetland shall be scheduled during the driest time of the year, typically August 1 through October 15, to minimize potential impacts to California red-legged frog and San Francisco garter snake. CGF also recommends that the Mitigation Measure 1.b of the IS/MND be revised to require the exclusion fence along the access road to the construction work site.

Staff's Response: As recommended by the project biologist in her response letter (see Attachment K), Mitigation Measure 1 (Condition No.4 in Attachment A) has been revised to allow construction only during the dry season (approximately May 1 to September 30) and when the ground is dry enough to support equipment at the work area. Mitigation Measure 1 has also been revised to require a frog and snake fence to be installed and maintained around the construction work site and along the road to the entrance of the property.

CGF Comment 4: CGF recommends that Mitigation Measure 1 be revised to require the frog and snake fence to run along not only around the construction work site, but also along the access road leading to the construction work site.

Staff's Response: Staff considered this recommendation and revised Mitigation Measure 1 to require the frog and snake fence be installed and maintained around the worksite and along the access road all the way to the entrance of the property.

CGF Comment 5: CGF recommends that the habitat assessment be updated to include surveys done during the blooming season of the Coastal marsh milk-vetch and Choris' popcorn flower to determine whether either of these protected species are within the proposed project area. CGF also recommends that the habitat assessment be updated to include analysis of Coastal Prairie grassland as it is likely to occur in the proposed project area. Mitigation Measure 2.a should be revised accordingly as impacts to plant species do not only occur during blooming seasons.

Staff's Response: As discussed in CCC Comment 3 above, the project biologist recommends a blooming season plant survey be conducted in late May or early July by a qualified biologist as it will encompass the variability of bloom time triggered by weather variability for these species. If these species are discovered, the applicant will be required to consult a qualified biologist to recommend mitigation measures to avoid any potential impacts. This requirement has been included as Condition No.5 in Attachment A.

The project biologist stated in her response letter that with the installation and monitoring of avoidance measures restricting construction impacts to along the existing road and within the 50-foot radius of temporary impact around the drill sites, it is highly unlikely that Coastal Prairie grassland will be impacted by construction activity.

CGF Comment 6: CGF recommends that a new mitigation measure be added to specify timing of construction to protect native or migratory wildlife species during their nesting season.

Staff's Response: Staff considered this recommendation and consulted the project biologist, Jane Anfinson of Garcia and Associates, to recommend a mitigation measure for the protection of native and migratory wildlife species during their nesting season. The project biologist recommended a pre-construction survey (within 48 hours of start of construction) be conducted by a qualified biologist during avian nesting season that will capture data regarding nesting birds within the temporary impact area and the surrounding vicinity. If nesting birds are discovered, the following mitigation measures are required to determine whether the construction activities will disturb the nest and to minimize the impact of construction:

1. Determine and mark a suitable buffer within which no construction activity or access may occur.

2. During construction, a qualified biologist must monitor the nest and observe if there is any disturbance due to construction activity.

3. If it is determined that the construction activity is disrupting nesting activities, construction must be suspended until nestlings have fledged.

These mitigation measures are included in Condition No. 22 in Attachment A.

CGF Comment 7: CGF states that there are several sea caves that traverse the property based on aerial photographs in the California Coastal Records Project. CGF is inquiring if the proposed well locations are within the projected underground extent of the sea caves.

Staff's Response: Staff consulted the applicant for more information on the sea caves along the coastal bluff area of the property. The applicant states in his response letter that sea caves with greater than average depths could be found in the limestone formations of San Mateo County with the nearest limestone formations beginning 10 miles south of the proposed well locations (see Attachment K). The limestone anticline trend has become rather shallow at Davenport, California where limestone mining for commercial concrete has been going on for several years. The applicant states that sea caves with salt water were not encountered on-site. The alluvial deposits drilled for the first well (approved under the 2015 permit as discussed in the Chronology Section above) would not support sea caves that may reach the proposed well locations because they lack the limestone required to cement the ground together.

C. REVIEW BY THE AGRICULTURAL ADVISORY COMMITTEE

The Agricultural Advisory Committee (AAC) reviewed and recommended approval of this project at their January 9, 2017 public meeting.

D. REVIEW BY THE CALIFORNIA COASTAL COMMISSION

The California Coastal Commission (CCC) did not forward a response to staff's referral for this project. As discussed in Section B above, a comment letter was provided by the CCC for the Initial Study and Mitigated Negative Declaration for this project. The CCC has been notified of the Planning Commission's review of this project. In addition, as the final decision on the CDP is appealable to the CCC, they will be duly notified of the County's final decision, which will initiate their appeal period.

E. OTHER REVIEWING AGENCIES

Building Inspection Section
Environmental Health Division

ATTACHMENTS

A. Recommended Findings and Conditions of Approval
B. Vicinity Map
C. Project Plan
D. Habitat Assessment prepared by Jane Anfinson of Garcia and Associates, dated December 1, 2016
E. Existing Hydrologic Conditions Report prepared by Mark Woyshner of Balance Hydrologics, Inc., dated November 7, 2016
F. Mitigation Measures Letter from James M. Wilkinson of Wilkinson Enterprises, Inc., dated December 7, 2016.
G. Initial Study and Mitigated Negative Declaration
H. Comment Letter from Renee Ananda of California Coastal Commission, dated March 28, 2017
I. Comment Letter from Lennie Roberts of Committee for Green Foothills, dated March 20, 2017
J. Record of Survey titled "Northerly Line of Waddell," recorded May 7, 2003
K. Response Letter from Wilkinson Enterprises Inc., dated April 17, 2017
L. Response Letter from Jane Anfinson of Garcia and Associates, dated April 17, 2017
M. Impact Area Map prepared by Jane Anfinson of Garcia and Associates

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Attachment A

County of San Mateo
Planning and Building Department

RECOMMENDED FINDINGS AND CONDITIONS OF APPROVAL

Permit or Project File Number: PLN 2016-00421 Hearing Date: May 24, 2017

Prepared By: Carmelisa Morales
Project Planner

For Adoption By: Planning Commission

RECOMMENDED FINDINGS

Regarding the Mitigated Negative Declaration, Find:

1. That the Planning Commission does hereby find that this Mitigated Negative Declaration reflects the independent judgment of San Mateo County.

2. That the Mitigated Negative Declaration is complete, correct and adequate and prepared in accordance with the California Environmental Quality Act and applicable State and County guidelines.

3. That, on the basis of the Initial Study, comments received hereto, and testimony presented and considered at the public hearing, there is no substantial evidence that the project, if subject to the mitigation measures contained in the Mitigated Negative Declaration, will have a significant effect on the environment. The Initial Study and Mitigated Negative Declaration identify potential significant impacts to biological resources, cultural resources, geology and soils, climate change, hydrology and water quality, and noise. The mitigation measures contained in the Mitigated Negative Declaration have been included as conditions of approval in this attachment. As proposed and mitigate, the project would not result in any significant environmental impacts.

4. That the mitigation measures in the Mitigated Negative Declaration and agreed to by the owner and placed as conditions on the project have been incorporated into the Mitigation Monitoring and Reporting Plan in conformance with the California Public Resources Code Section 21081.6.

Regarding the Architectural Review Exemption, Find:

5. That the site evaluation, including a field visit of the property by Planning staff and photos submitted with the application, verifies that the proposed project will not be visible from Highway 1 (Cabrillo Highway). Although the project parcel is located within the Cabrillo Highway State Scenic Corridor, the proposed project will be minimal in size and will not result in significant vegetation removal. Given the

topography, existing vegetation, finished height, and location of the proposed well, it will not be visible from Cabrillo Highway or any other public viewpoints.

Regarding the Coastal Development Permit, Find:

6. That the project, as described in the application and accompanying materials required by Section 6328.7, and as conditioned in accordance with Section 6328.14, conforms to the plans, policies, requirements and standards of the San Mateo County Local Coastal Program as described in the staff report to the Planning Commission dated May 24, 2017.

7. That the project conforms to the findings required by policies of the San Mateo County Local Coastal Program. Specifically, in regard to the Agriculture and Visual Resources Components, that the domestic well is conditionally permitted with the issuance of a Planned Agricultural District permit, that the project has been proposed to be located in an area that has been defined as "Lands Suitable for Agriculture," and that the proposed project converts only a small portion of the parcel leaving the remaining undisturbed area available for agricultural uses. In addition, the project will not be visible from scenic roadways or corridors, does not result in a significant change to natural landforms, and is mitigated to prevent potential impacts to coastal resources and sensitive habitats.

Regarding the Planned Agricultural Permit, Find:

General Criteria

8. That the encroachment of all development upon land, which is suitable for agricultural use, is minimized. The proposed well results in only minimal site disturbance and converts only a small portion of the project parcel. The remaining portion of the parcel will be available for future agricultural activities.

9. That the project conforms to the Development Review Criteria contained in Chapter 20A.2 of the San Mateo County Ordinance Code. The project complies with Section 6324.1 and Section 6324.4, which respectively address the potential for environmental impacts and water resources, as the project will not introduce noxious odors, chemical agents, or long-term noise and is conditioned to mitigate any significant adverse environmental impacts upon primary wildlife or marine resources. The project also complies with Section 6325.1, which addresses primary scenic resources areas. While the project is located within the scenic corridor, the impact to scenic public views is minimal as the project is minor in nature and the existing topography and vegetation screen the project from public viewpoints.

Water Supply Criteria

10. That the existing availability of potable and adequate on-site well water source for all non-agricultural uses is demonstrated. The project parcel currently does not have an on-site well water source for either agricultural or domestic purposes.

The well is being proposed to determine if any on-site domestic water source exists on the parcel.

11. That adequate and sufficient water supplies needed for agricultural production and sensitive habitat protection in the watershed are not diminished. Per the submitted hydrologist report, the proposed well is located an adequate distance from the nearest existing well as to not impact its production. Further, there is no expectation that the proposed well will result in significant groundwater depletion or interfere with groundwater recharge.

Criteria for the Conversion of Lands Suitable for Agriculture and Other Lands

12. That all agriculturally unsuitable lands on the parcel have been developed or determined to be undeveloped. The proposed well locations have been identified as the most likely area to find water on the parcel after the first well drilled in 2015 did not yield sufficient water to support a single family residence. The proposed well has a minimal footprint and the overall area of disturbance is limited which allows the large remainder of the parcel to remain available for future agricultural activities.

13. That the continued or renewed agricultural use of the soils is not capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, social, and technological factors. The proposed well will convert only a small portion of the parcel leaving the majority of the parcel available for agriculture uses.

14. That the productivity of any adjacent agricultural lands is not diminished, including the ability of the land to sustain dry farming or animal grazing. Given the distance between the proposed well locations and the nearest agricultural uses, no impact is expected on the productivity of adjacent agricultural lands.

15. That the public service, facility expansions, and permitted uses do not impair agricultural viability, either through increased assessment costs or degraded air and water quality. The proposed well does not require public service or facility expansions. The proposed well is completely located on the subject parcel and does not limit the agricultural viability of the parcel, considering the small portion of the parcel to be converted. The Environmental Health Division has preliminarily reviewed the proposed plans and found it to be in compliance with current health standards, thereby assuring there is no threat to water quality.

RECOMMENDED CONDITIONS OF APPROVAL

Current Planning Section

1. The approval applies only to the proposal as described in this report and materials submitted for review and approval by the Planning Commission on May 24, 2017.

The Community Development Director may approve minor revisions or modifications to the project if they are found to be consistent with the intent of and in substantial conformance with this approval.

2. This permit shall be valid for one (1) year from the date of approval in which time a well permit shall be issued. Any extension of this permit shall require submittal of an application for permit extension and payment of applicable extension fees sixty (60) days prior to the expiration date.

3. The Department of Fish and Game (DFG) has determined that this project is not exempt from the DFG California Environmental Quality Act filing fees per Fish and Game Section 711.4. The applicant shall pay to the San Mateo County Recorder's Office the most current DFG filing fee plus the applicable recording fee at the time of filing of the Notice of Determination by the San Mateo County Planning and Building Department staff within ten (10) business days of the approval.

4. **Mitigation Measure 1:** Construction shall only be within the dry season (approximately May 1 to September 30) and only when the ground is dry enough to support equipment at the work area. The applicant shall reference the Impact Area Map prepared by the project biologist to implement and maintain the following measures during construction to prevent spoils from entering the nearby pond and creek that are downslope from the drilling impact areas and to protect the California red-legged frog, the San Francisco garter snake, and the saltmarsh common yellowthroat which have a high potential to occur within the project area:

   a. Install straw wattles or other natural biodegradable erosion control measures that do not contain plastic monofilament netting along the perimeter of the project area (i.e., along the existing dirt road and on the perimeters of the 50-foot radius of temporary impact around the drill sites).

   b. Construction vehicles may only park and travel on the existing dirt road and within the 50-foot radius of temporary impact around the drill sites.

   c. No construction work is allowed if there is a greater than 20% chance of precipitation.

   d. Spoil piles must be covered each day and prior to rain events.

   e. A frog and snake fence will be installed and maintained around the construction work site and along the road to the entrance of the property. The fence will be 3 feet high and 10 feet away from the proposed well locations.

5. **Mitigation Measure 2:** To protect the Coastal marsh milk-vetch, Choris' popcornflower, and any other special status and protected species which have a potential to occur within the project area, a blooming season plant survey shall be conducted by a qualified biologist in late May or early July to encompass the

variability of bloom time triggered by weather variability. If the Coastal marsh milk-vetch, Choris' popcornflower, or any other special status or protected species are determined to be present, the applicant shall consult a qualified biologist to recommend avoidance measures such as fencing, alteration of the planned impact area, and restricted access. The applicant shall also reference the Impact Area Map prepared by the project biologist for implementation and management of mitigation measures used.

6. **Mitigation Measure 3:** In the event that prehistoric materials such as flaked-stone tools (e.g., projectile points, knives, choppers), obsidian, chert, basalt, or quartzite debris, bone tools, culturally darkened soil (e.g., midden soil often contains heat-affected rock, ash and charcoal, shellfish remains, faunal bones, and cultural materials), and stone milling equipment (e.g., mortars, pestles, handstones) are encountered, all excavations should be halted immediately, the San Mateo County Planning Department must be notified, and an archaeologist must be retained to examine the finds and assess the potential significance.

7. **Mitigation Measure 4:** A discovery of a paleontological specimen during any phase of the project shall result in a work stoppage in the vicinity of the find until it can be evaluated by a professional paleontologist. Should loss or damage be detected, additional protective measures or further action (e.g., resource removal), as determined by a professional paleontologist, shall be implemented to mitigate the impact.

8. **Mitigation Measure 5:** Use existing roads to the maximum extent feasible to avoid additional surface disturbance.

9. **Mitigation Measure 6:** During all phases of the project, keep equipment and vehicles within the limits of the previously disturbed areas of the project site.

10. **Mitigation Measure 7:** The property owner, applicant, and contractors must be prepared to carry out the requirements of California State law with regard to the discovery of human remains during construction, whether historic or prehistoric. In the event that any human remains are encountered during site disturbance, all ground-disturbing work shall cease immediately and the County coroner shall be notified immediately. If the coroner determines the remains to be Native American, the Native American Heritage Commission shall be contacted within 24 hours. A qualified archaeologist, in consultation with the Native American Heritage Commission, shall recommend subsequent measures for disposition of the remains.

11. **Mitigation Measure 8:** Upon the start of excavation activities and through to the completion of the project, the applicant shall be responsible for ensuring that dust control measures are implemented as needed. The intent shall be to mitigate excessive dust generation resulting from any and all excavation and earth-moving operations.

12. **Mitigation Measure 9:** Implement best management practices (BMPs) for erosion and sediment control during all phases of building to include pre- and post-construction activities.

13. **Mitigation Measure 10:** Prior to the beginning of any construction or grading activities, the applicant shall implement the approved erosion and sediment control plan if applicable. Erosion control measure deficiencies, as they occur, shall be immediately corrected. The goal is to prevent sediment and other pollutants from leaving the project site and to protect all exposed earth surfaces from erosive forces. Said plan shall adhere to the San Mateo Countywide Stormwater Pollution Prevention Program "General Construction and Site Supervision Guidelines," including:

    a. Stabilizing all denuded areas and maintaining erosion control measures continuously between October 1 and April 30. Stabilizing shall include both proactive measures, such as the placement of hay bales or coir netting, and passive measures, such as revegetating disturbed areas with plants propagated from seed collected in the immediate area.

    b. Storing, handling, and disposing of construction materials and wastes properly, so as to prevent their contact with stormwater.

    c. Controlling and preventing the discharge of all potential pollutants, including pavement cutting wastes, paints, concrete, petroleum products, chemicals, wash water or sediments, and non-stormwater discharges to storm drains and watercourses.

    d. Using sediment controls or filtration to remove sediment when dewatering the site and obtaining all necessary permits.

    e. Avoiding cleaning, fueling, or maintaining vehicles on-site, except in a designated area where wash water is contained and treated.

    f. Delineating with field markers clearing limits, easements, setbacks, sensitive or critical areas, buffer zones, trees, and drainage courses.

    g. Protecting adjacent properties and undisturbed areas from construction impacts using vegetative buffer strips, sediment barriers or filters, dikes, mulching, or other measures as appropriate.

    h. Performing clearing and earth-moving activities only during dry weather.

    i. Limiting and timing application of pesticides and fertilizers to prevent polluted runoff.

    j. Limiting construction access routes and stabilizing designated access points.

k. Avoiding tracking dirt or other materials off-site; cleaning off-site paved areas and sidewalks using dry sweeping methods.

l. The contractor shall train and provide instructions to all employees and subcontractors regarding the construction best management practices.

m. The approved erosion and sediment control plan shall be implemented prior to the beginning of construction.

14. **Mitigation Measure 11:** The applicant shall implement erosion control measures prior to the beginning of construction operations. Such activities shall not commence until the associated building permit for the project has been issued if applicable.

15. **Mitigation Measure 12:** Construction equipment shall comply with the County's Energy Efficiency Climate Action Plan (EECAP) for construction vehicle idling as applicable considering the sensitive nature of the project area. Specifically, Bay Area Air Quality Management District Best Management Practices for Mitigating Criteria Air Pollutants and Precursors:

a. All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be two times per day.

b. All haul trucks transporting soil, sand, or other loose material off-site shall be covered.

c. All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day.

d. All vehicle speeds on unpaved roads shall be limited to 15 miles per hour.

e. Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations). Clear signage shall be provided for construction workers at all access points.

f. All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be check by a certified visible emissions evaluator.

g. Post a publicly visible sign with the telephone number and person to contact at the Lead Agency regarding dust complaints. This person shall respond and take corrective action with 48 hours. The Air District's phone number shall also be visible to ensure compliance with applicable regulations

16. **Mitigation Measure 13:** To ensure drilling mud and foam do not enter into the pond located south from the proposed well sites; silt fencing and straw waddles are required to be installed around the second well location.

17. **Mitigation Measure 14:** A hose to direct discharge away from or downstream from the pond is required to be installed during yield testing.

18. **Mitigation Measure 15:** Noise levels produced by proposed construction activities shall comply with the San Mateo County Noise Ordinance contained in Chapter 4.88 (*Noise Regulations*) of the County Ordinance Code. Construction activities shall be limited to the hours of 7:00 a.m. to 6:00 p.m., Monday through Friday, and 9:00 a.m. to 5:00 p.m. on Saturdays. Construction operations shall be prohibited on Sundays and any national holidays.

19. There shall be no removal of any significant vegetation that screens the view of the structure from Cabrillo Highway. Removal of any such vegetation shall be permitted only by the Planning Commission as part of an application for Architectural Review.

20. If any portion of a new structure is visible from Cabrillo Highway after substantiation by the applicant that it will not be visible, the applicant shall be required to submit an application for Architectural Review for the review and approval by the Planning Commission.

21. The approval of this project does not include the energization of the well. No extension of electric service is allowed as part of this permit.

22. If construction activity will be during avian nesting season, a pre-construction survey shall be conducted by a qualified biologist within 48-hours from the start of construction to capture data regarding nesting birds within the temporary impact area and the surrounding vicinity. If nesting birds are discovered, the following mitigation measures are required to determine whether the construction activities will disturb the nest(s) and to minimize impact of construction:

    a. Determine and mark a suitable buffer within which no construction activity or access may occur.

    b. During construction, a qualified biologist must monitor the nest and observe if there is any disturbance due to construction activity.

    c. If it is determined that construction activity is disrupting nesting activities, construction shall be suspended until nestlings have fledged.

23. The applicant shall notify the Current Planning Section when the work approved under this permit is completed and prior to issuance of the appropriate Environmental Health Division permits.

Environmental Health Division

24. Upon obtaining approval of the planning permits required for this project to drill a domestic water well, the applicant shall obtain a well installation permit from the Environmental Health (EH) Division for the construction of the well. The subject well shall be tested to meet quantity and quality health standards.

25. In the event that either the first or second well drilled does not meet the requisite water quality and quantity standards for domestic water use, the applicant shall properly abandon the well to the satisfaction of the EH Division. This shall have occurred prior to or concurrent with the EH Division's final certification of the well that does meet their standards, or if determined that one or both do not.

26. Upon obtaining approval of the planning permits required for this project to drill a domestic water well, the applicant shall obtain a well abandonment permit from the EH Division for the well approved under Planning Permit Case Number PLN 2014-00421 that was drilled in November 2015.

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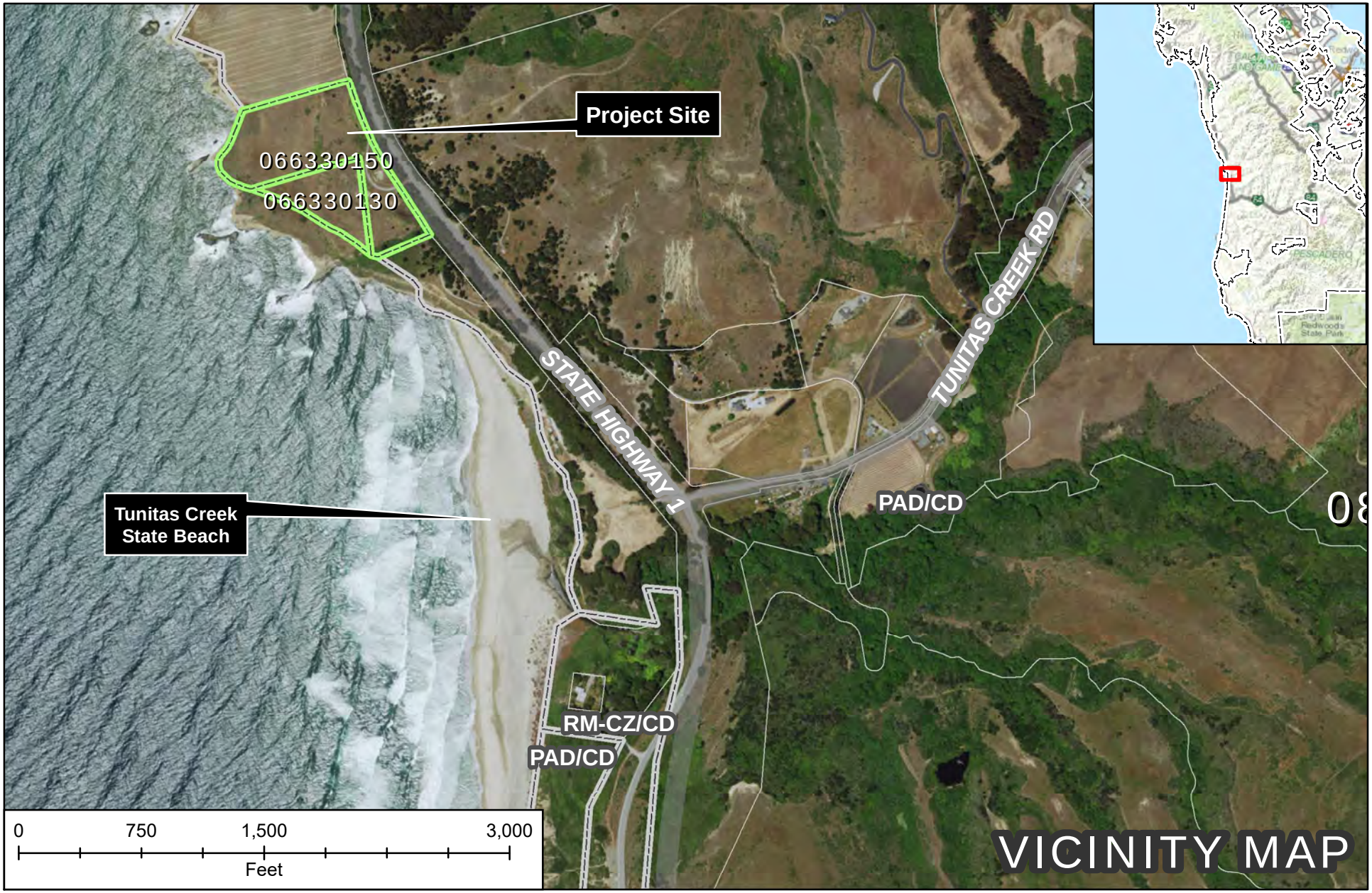
Attachment B



Attachment C

APNs 066-330-130 &
066-330-150

Location: Cabrillo Hwy, Half Moon Bay

Wilkinson Enterprises, Inc.
P.O. Box 3218
Half Moon Bay, CA 94019
P: 650-726-4212
F: 650-728-8586

Scale 1"=200'

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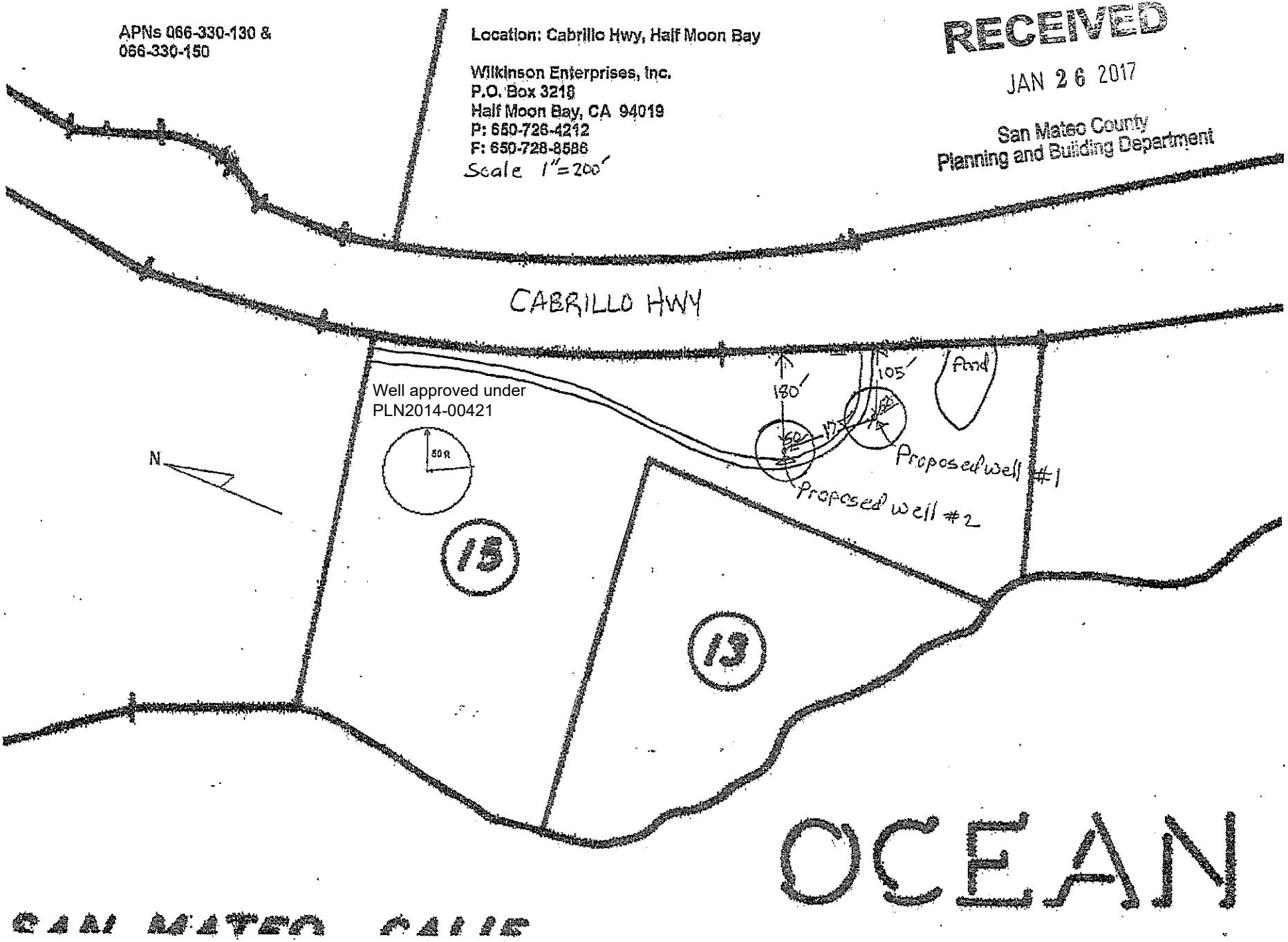
JAN 26 2017
San Mateo County
Planning and Building Department



Habitat Assessment

Garcia and Associates
Natural and Cultural Resources Consultants
1512 Franklin St., Ste. 100
Oakland, CA 94612
Phone: (510) 891-0024; Fax: (510) 891-0027

To: Ellen Crane, Wilkinson Well & Pump Company

From: Jane Anfinson

Date: December 1, 2016

RE: Wilkinson Well and Pump Company Habitat Assessment, San Mateo County, CA

Introduction

This memo presents the findings of a habitat assessment and biological review conducted for the proposed well drilling and access route (project area) for the Wilkinson Well and Pump Company project located on Assessor Parcel Number (APN) 066330130 & 066330150, south of the City of Half Moon Bay. The project area (an estimated 16.75 acres) is situated in the Tunitas Creek area, east of the Pacific Ocean coastline and west of Cabrillo Highway 1, in unincorporated San Mateo County, California (Figures 1, 2). Wilkinson Well and Pump Company plans to drill for wells at two sites (Figure 2 and Photos 1 and 2), with estimated temporary impact area of 0.349 acres in total and estimated permanent impact area of 0.018 acres in total. Garcia and Associates (GANDA) conducted an assessment to identify potential biological constraints and identify the dominant plant communities, sensitive plants, wildlife, and habitats within the project area.

Methods:

GANDA reviewed available environmental resources information to identify potential biological constraints within the project area. The following sources were evaluated:

- California Department of Fish and Wildlife (CDFW) Natural Diversity Database (CNDDB) (November 2016);
- California Native Plant Society (CNPS) Rare Plant Inventory (November 2016)

- U.S. Fish and Wildlife Service (USFWS) Critical Habitat GIS Layers (September 2016);
- U. S. Geological Survey (USGS) 7.5-minute Quadrangle Maps: Half Moon Bay (1991), San Gregorio (1991), Pigeon Point (1956); and
- USFWS National Wetlands Inventory (NWI) (Version 2, October 2016).

Desktop resources also included Google maps and Google street view. GANDA biologist J. Anfinson conducted the field review on November 22 and November 28, 2016.

Results:

Land cover types: Land cover in the assessment area includes a majority of ruderal grassland, which was historically coastal scrub that has been recently disturbed, likely by grazing or other agricultural activities. Native coyote brush (*Baccharis pilularis)* remains, but the area is currently dominated by non-native species such as hemlock (*Conium* spp.), star-thistle (*Centaurea* spp.), Bermudagrass (*Cynodon* spp.), mustard (*Brassica* spp.), and wild radish (*Raphanus* spp.). A grove of cypress (*Cupressus* spp.*)* trees borders the eastern edge of the project area adjacent to California State Highway 1 (CA-1). A freshwater pond (Photo 3) with the NWI classification PUBHh (indicating palustrine, unconsolidated bottom, permanently flooded, impounded with emergent wetland vegetation [cattails]) lies on the southern portion of the project area. An unnamed drainage (Photo 3) with the NWI classification PSSA (indicating palustrine, scrub-shrub, temporarily flooded) borders the southern edge of the project area, with willow (*Salix* spp.) dominating the cover. The drainage is not culverted under CA-1, and is mapped in the NWI as connected to the unnamed drainage directly east across CA-1.

The planned well excavations are located in uplands northwest of the pond and drainage within the project area (Figure 2). The land cover types within a 50-foot radius of planned well excavations includes the ruderal grassland and cypress trees. Within these areas were numerous small mammal burrows with openings approximately 1-2 inches in diameter.

Special Status Species: The CNDDB lists occurrences for three special status wildlife species, critical habitat for one special status wildlife species, and occurrences for two special status plant species within 2 miles of the project area. Three plant species were identified from other sources (e.g., USFWS, CNPS) (Table 1).

Wildlife: Suitable habitat for California red-legged frog, San Francisco garter snake, and saltmarsh common yellowthroat was found in the project area.

- There is high potential for California red-legged frog (*Rana draytonii*) (CRLF) to occur in the project area. The pond and drainage have hydrological potential to hold sufficient water for CRLF egg-laying during the breeding season and tadpole metamorphosis, assuming there is normal, sufficient rainfall during

the breeding season (typically December-April) that creates ponded water for the required metamorphosing period (11-20 weeks). The adjacent riparian area and upland grasslands can provide sufficient refugia for the frogs with the presence of rocky crevices and rodent burrows. Further, designated CRLF Critical Habitat, lies approximately 400 feet southwest of the project area.

- There is high potential for San Francisco garter snake (*Thamnophis sirtalis tetrataenia*) to occur in the project area, including the impact areas surrounding planned well sites 1 and 2. The project area contains suitable habitat attributes for the species such as the densely vegetated freshwater pond for hunting its preferred prey, CRLF; upland grassy hillsides for sunning; and rodent burrows for hibernating.
- There is high potential for saltmarsh common yellowthroat (*Geothlypis trichas sinuosa*) to occur in the project area, which contains suitable habitat features such as the densely vegetated pond and nearby creek with emergent cattail and willow vegetation cover for foraging and nesting.

Plants: Suitable habitat for Coastal marsh milk-vetch and Choris' popcornflower was found in the project area.

- Coastal marsh milk-vetch (*Astragalus pycnostachhyus* var. *pycnostachhyus*) suitable habitat occurs in the vicinity of the freshwater pond and seasonal drainage, where moisture is retained in the soil.
- Choris' popcornflower (*Plagiobothrys chorisianus* var. *chorisianus*) suitable habitat occurs in the vicinity of the freshwater pond and seasonal drainage, where moisture is retained in the soil.

Table 1 summarizes the biological constraints identified within the project area.

TABLE 1
Special-Status Species and Habitats

Wildlife	Plants	Plant Habitat/ Blooming Season	Habitat Requirements	Special Status*	Potential to Occur in the Project Area
Species 1: Saltmarsh common yellowthroat (*Geothlypis trichas sinuosa*)			Resident of the San Francisco Bay region, in fresh and salt water marshes. Requires thick, continuous cover down to water surface for foraging, tall grasses, tule patches, willows for nesting	SOC	High potential to occur. Suitable habitat in pond emergent vegetation and stream riparian vegetation in assessment area.
Species 2: California red-legged frog (*Rana draytonii*)			Inhabits lowlands and foothills in or near permanent ponds and slow-moving perennial streams, generally below 4,000 feet. Requires 11-20 weeks of permanent water for larval development. Must have access to upland aestivation habitat.	FT SOC	High potential to occur. Suitable habitat in freshwater pond, seasonal stream, riparian area, and upland grassland with rocky crevice and small mammal burrow refugia.
Species 3: San Francisco garter snake (*Thamnophis sirtalis tetraenia*)			Vicinity of freshwater marshes, ponds and slow-moving streams in San Mateo County & extreme northern Santa Cruz County. Prefers dense cover & water depths of at least one foot. Upland areas near water are also very important.	FE, SE, FP	High potential to occur. Suitable habitat in freshwater pond and upland grassy hillsides with small mammal burrow refugia.
	Species 4: Coastal marsh milk-vetch (*Astragalus pycnostachhyus* var. *pycnostachhyus*)	June-October	Coastal dunes, marshes and swamps, coastal scrub. Mesic sites in dunes or along streams or coastal salt marshes. 0-155 m	1B.1	Moderate potential to occur. Suitable habitat in vicinity of freshwater pond and seasonal stream, where moisture is retained in the soil.
	Species 5: Kellogg's horkelia (*Horkelia cuneata* var. *sericea*)	April-September	Closed-cone coniferous forest, coastal scrub, coastal dunes, chaparral. Old dunes, coastal sandhills; openings. 5-215 m.	1B.1	Low potential to occur. Coastal scrub plant community has been degraded to include majority of ruderal plant cover.

Wildlife	Plants	Plant Habitat/ Blooming Season	Habitat Requirements	Special Status*	Potential to Occur in the Project Area
	Species 6: Perennial goldfields (*Lasthenia californica* ssp. *macrantha*)	January-November	Coastal bluff scrub, coastal dunes, coastal scrub. 5-185 m	1B.2	Low potential to occur. Coastal scrub plant community has been degraded to include majority of ruderal plant cover.
	Species 7: Marsh microseris (*Microseris paludosa*)	April-July	Closed-cone coniferous forest, cismontane woodland, coastal scrub, valley and foothill grassland. 5-300 m.	1B.2	Low potential to occur. Coastal scrub plant community has been degraded to include majority of ruderal plant cover.
	Species 8: Choris' popcornflower (*Plagiobothrys chorisianus* var. *chorisianus*)	March-June	Chaparral, coastal scrub, coastal prairie. Mesic sites. 15-160m	1B.2	Moderate potential to occur. Suitable habitat in vicinity of freshwater pond and seasonal stream, where moisture is retained in the soil.

- *F = Federal; S = State; T = Threatened; E = Endangered; R = Rare; FP = Fully Protected; C=Candidate

- SOC = California Dept. of Fish and Wildlife Species of Concern
- FP = California Dept. of Fish and Wildlife Fully Protected

- California Native Plant Society designations:
- 1A Species presumed extinct in California
- 1B Plants rare, threatened or endangered in California and elsewhere.
- 2 Plants rare threatened or endangered in California, but more common elsewhere.

- California Native Plant Society threat categories:
- .1 Seriously endangered in California.
- .2 Fairly endangered in California.

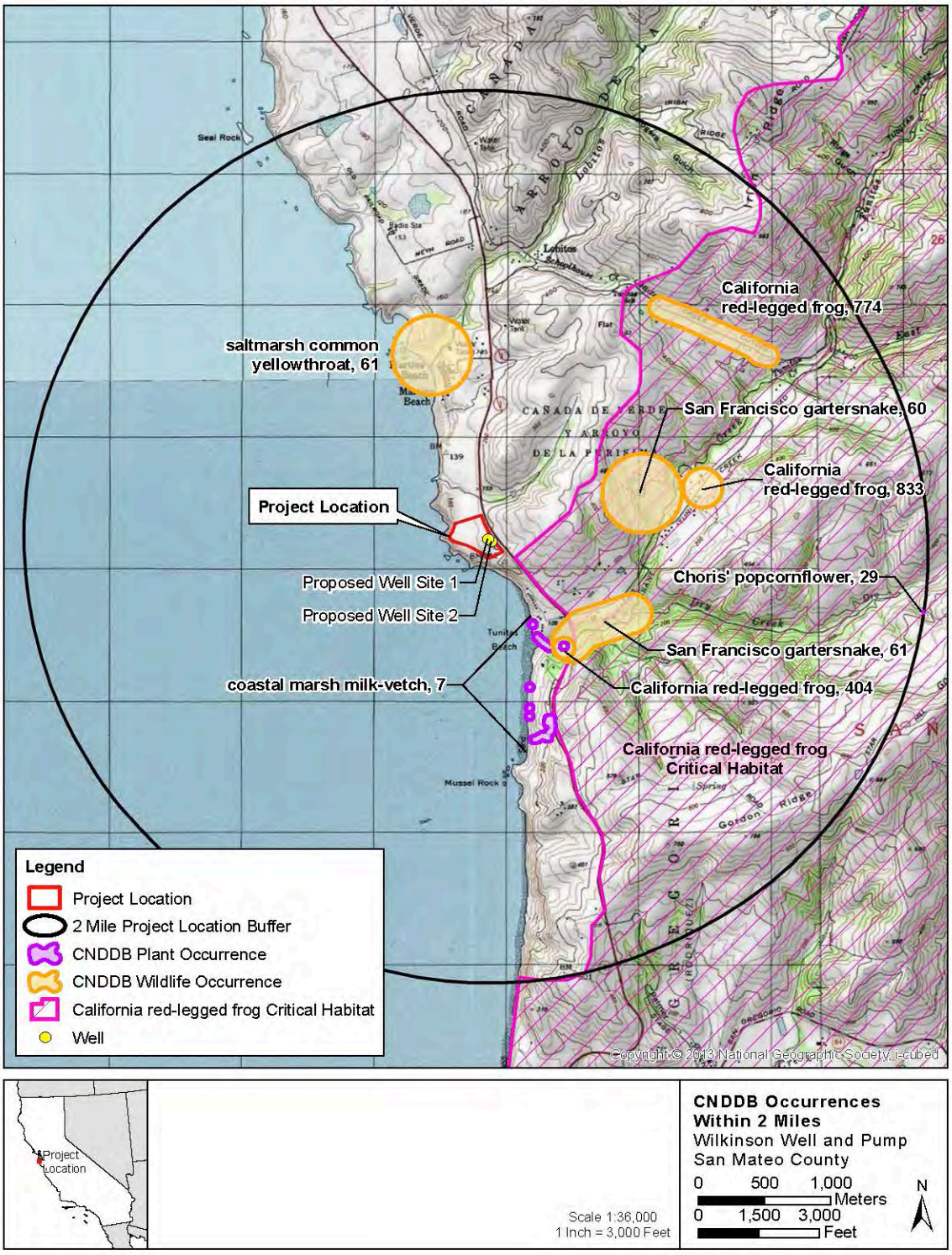


Figure 1. CNDDB special–status species occurrences and critical habitat within 2.0 miles of the project location.

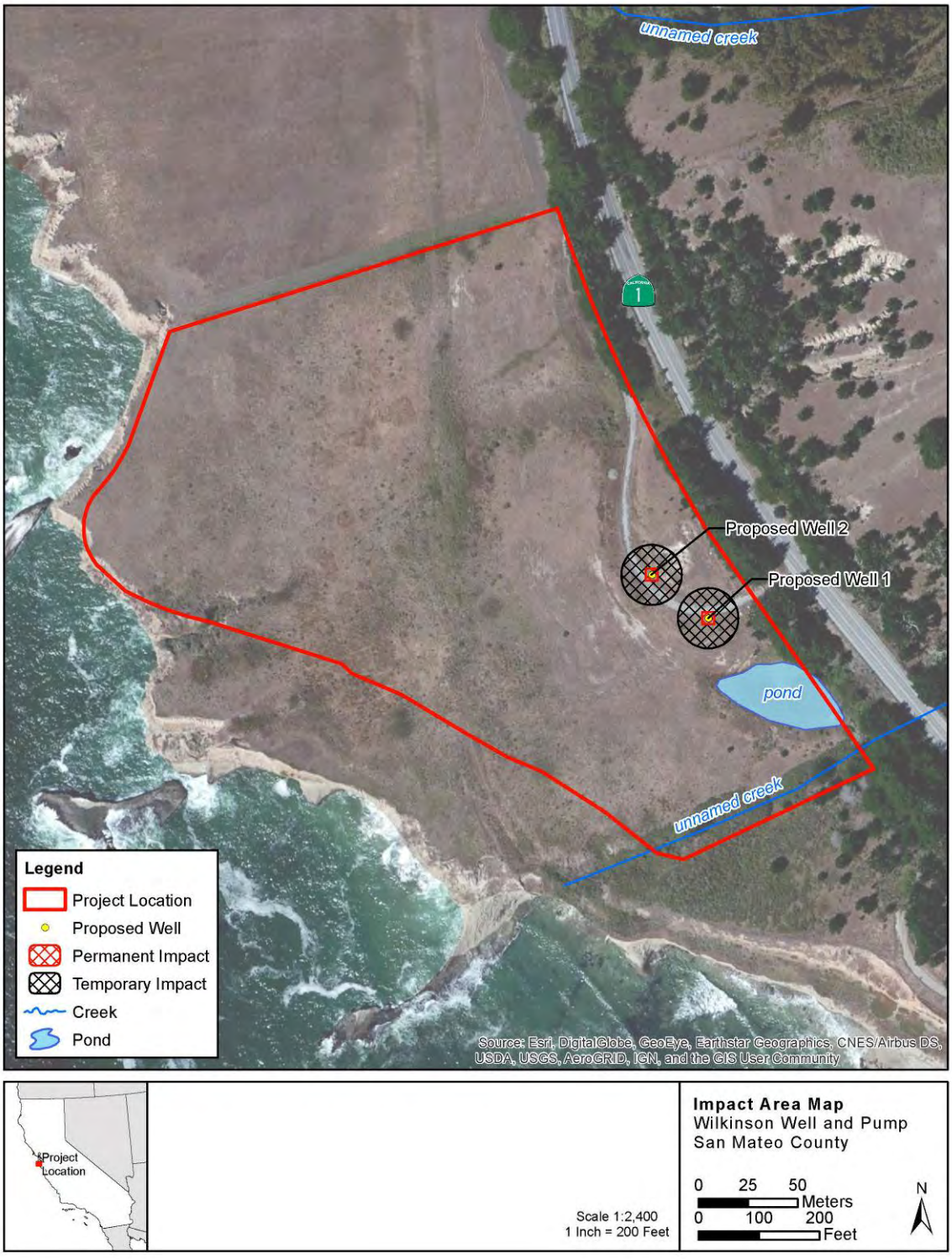


Figure 2. Project area showing proposed well sites, areas of temporary impact, and permanent impact; and wetland and waterway features within the project area.

Photo 1. Stake marking proposed well site 1 (in yellow circle). Facing west.

Photo 2. Stake marking proposed well site 2. Facing west.

Photo 3. Pond downslope from proposed well site 1. Facing south.

Photo 4. Seasonal drainage that borders the project area on the south side. Facing west.

Balance Hydrologics, Inc.®

800 Bancroft Way • Suite 101 • Berkeley, CA 94710-2227 • (510) 704-1000
www.balancehydro.com • email: office@balancehydro.com
Berkeley • Santa Cruz • Truckee

November 7, 2016

Mr. James Wilkinson
Wilkinson Well and Pump
890 Sonora Avenue,
Half Moon Bay, CA 94019

RE: Existing hydrologic conditions report for well permit application PLN2016-00445 for APN 066-330-130/150

Dear Jim:

The San Mateo County Planning and Building Department (County) prepared and certified a CEQA Initial Study and Mitigated Negative Declaration, Architectural Review Exemption, Coastal Development Permit, and Planned Agricultural Permit to drill a domestic water well to serve a future single-family dwelling (Case No. PLN2014-00421) for a vacant parcel located west of Highway 1 approximately 0.5 miles north of Tunitas Creek Road in the unincorporated San Gregorio area of coastal San Mateo County (APN 066-330-130/150). As requested in a letter from the County dated December 18, 2014, the applicant submitted a hydrologic existing conditions report (Balance Hydrologics, February 11, 2015) to assist County staff with the completion of the initial study. The County subsequently issued permit number 15-1985 on September 14, 2015 for one water-well site. Wilkinson Well and Pump then completed a well on November 6, 2015 (DWR No. e0327650 attached), which proved to have insufficient yield for the proposed project.

Wilkinson Well and Pump has submitted another application to drill a proposed well at a different location on the property (Case No. PLN2016-00445). The application proposes to install one well at one of two potential sites. The County has requested a revision of the hydrology report to include analysis for the new well and back-up well locations. This letter report responds to that request by the County.

Hydrologic Setting

The project site is located in the Mediterranean climate zone typical of central coastal California, characterized by dry, mild summers and moist, cool, almost frostless winters. Mean annual rainfall is 26.68 inches at the long-term weather station at Half Moon Bay airport, located 11.5 miles north of the site (**Table 1**). Influenced by marine air, onshore wind, and frequent summer fog or overcast conditions, the region is generally protected from hot inland weather. Due to its close proximity to the ocean, humidity is rather high and evaporation is low. The site is located in California Irrigation Management Information System (CIMIS) Reference Evapotranspiration (ETo) Zone 1: Coastal Plains Heavy Fog Belt (Snider, 1999). With an estimated mean annual ETo of 33 inches[1], this zone has the lowest annual evapotranspiration in California. It is well suited for growing brussels sprouts, artichokes, and flowers. During the mid-20th century, flax and peas were grown widely in this part of the county.

The 24-acre project parcel is located approximately 4,000 feet south from the Lobitos Creek and 2,000 feet north from Tunitas Creek on a gently-sloping marine terrace extending west from Cabrillo Highway

[1] Considering its location at the coastal bluff, ETo at the project parcel is likely lower than that reported for Zone 1.

to a steep coastal bluff (**Figure 1**). The site is predominantly covered with grass, forbs, and occasional juncus patches and blackberry thickets. Ground elevation is highest at 215 feet above sea level (asl) near the entrance of the property at Cabrillo Highway and slopes approximately 16 percent across the east portion of the property to a north-south trending 150-foot contour (**Figure 2**). This contour defines a break in the slope where the ground surface is generally level across the west portion of the property.[2] Topography across the west portion of the property is accentuated by a broad hollow in the marine terrace that drains to a centrally located draw in the coastal bluff. Though no discrete stream channel is present within the hollow, there is a short gully at the top of the draw. Surface water from most of the property drains to this hollow and draw, as well as drainage from a portion of the adjoining parcel to the north (APN 066-330-240). The project parcel is outside of the 0.2 percent annual chance 100-year flood area, as identified on the Flood Insurance Rate Map for the area (FEMA, 2012).

The 140-foot contour traces inside the margin of the hollow and extends to the precipice of the bluff, while near the mouth of the draw the bluff elevation is about 130 feet asl. The bluff is remarkably steep, dropping nearly vertical to a tidally inundated, wave-beaten, rocky coast featuring bedrock stumps close to shore. A small portion of marine terrace between the hollow and the bluff at the northwest portion of the property is reasonably preserved at the 150-foot contour, matching this elevation contour east of the hollow, where the slope steepens eastward. This slope continues uphill onto the adjoining parcel east of Cabrillo Highway (APN 066-330-160), up to a marine terrace higher in elevation, found above about 370 feet asl.

A notable hydrologic feature on the property is a well-defined narrow, linear drainage channel (gully) extending along the south property line to the coastal bluff, which primarily drains off-site hillside areas east of Cabrillo Highway and south of the property, as well as the southeast corner of the property. It is the largest drainage channel on the property. There is a small, shallow 'cattle pond' on the property near the upper portion of this gully with a retaining berm at 192 feet asl (**Figure 3**). This pond is apparently dredged to bedrock, which outcrops along the north portion of the pond, just below the paved road at the entrance of the property from Cabrillo Highway.[3] The pond contained the only surface water present on the property during our site reconnaissance on January 27, 2015. The specific conductance[4] of the water was 345 micromhos/cm at 13.5 degrees Celsius (451 umhos/cm at 25 ^{o}C), which was not an unexpected value for springs, seeps and ponds in the region; specific conductance values of between 350 and 550 micromhos/cm were reported in a comprehensive sampling of all seeps and spring on Gordon Ridge, about 1 to 1.5 miles to the southeast (Hecht and others, 2004).

Geology of the region is described in the U.S. Geological Survey open file report 98-137 by Brabb and others (1998). Pliocene and upper Miocene marine sedimentary rock, the Purisima Formation is present throughout the region south Montara Mountain, and locally divided into five members: Tunitas Sandstone

[2] An abandoned railroad track is called out in the 1961 soil survey sheet number 17, crossing the property approximately along the 150-foot contour.
[3] The paved access road to the property which arcs northward from an elevation of 210 feet asl and parallels Cabrillo Highway a short distance is said to be old Highway 1.
[4] Specific conductance (SC) was measured with a YSI field meter, which measures the ability of the water to conduct electricity and is a widely used index for salinity or total dissolved solids (TDS). The basic unit is "mho/cm", also known as 1 Siemen (1 S/cm). Rainwater has very low specific conductance (nearly zero), and as water passes over and through the ground, salts are dissolved, thereby increasing the specific conductance. The SC of the ocean is around 53,000 micromhos/cm. Higher specific conductance indicates transmittal through salt-bearing geologic formations or longer residence times in the ground. SC is temperature dependent and is normalized to 25 degrees Celsius.

Member (Tptu), Lobitos Mudstone Member (Tpl), San Gregorio Sandstone Member (Tpsg), Pomponio Mudstone Member (Tpp), and Tahana Member (Tpt). Tunitas Sandstone, the youngest member, is mapped across site and adjoining parcels (**Figure 4**). It dips 7 degrees at the coastal bluff towards a northwest-southeast striking syncline mapped just off shore. Lobitos Mudstone underlies Tunitas Sandstone and outcrops east of the property beyond the adjoining parcels, at Tunitas Creek and in the Martins Beach area. Likewise, San Gregorio Sandstone underlies Lobitos Mudstone and outcrops further to the northeast.

The Tunitas Sandstone is described as greenish−gray to light−gray, pale−orange, or greenish−brown, very fine− to medium−grained sandstone with clay matrix. Concretions generally less than 30 cm across are present locally, which appear as muddy nodules on site. Tunitas Sandstone is reported to range in thickness from 250 to 400 feet. Tunitas Sandstone type material extended to 170 feet below ground surface on one well log from the uphill parcels to the east; other logs noted it to at least 200 feet in thickness (the depth of the well) (**Table 2**). At the dry well completed on site in 2015 (DWR No. e0327650 attached), Tunitas Sandstone was found apparently to a depth of 280 feet, and underlain by Lobitos Mudstone to a depth of 600 feet, the bottom of the borehole. At the bluff on site, it appears to extend at least about 100 feet to the ocean (**Figure 5**). On lithologic logs of wells east of the project site, Tunitas Sandstone type material was described as firm grey sandstone, and underlying Lobitos Mudstone member as firm grey shale. The 100-foot vertical cliff face for the bluff depicts the firmness of the sandstone. Bedrock fracturing of the Tunitas Sandstone member exposure at the bluff appeared quite light and not noted in the well logs reviewed.

Water quality in the vicinity of the project parcel generally has elevated dissolved solids (**Figure 6**). Iron and manganese can also be elevated. Salinity can be an issue in all three members of the Purisima Formation. A few miles to the southeast, specific conductance values of about 2,600 to 3,500 micromos/cm at 25C were reported in 9 seeps and springs emanating from the San Gregorio Member on Gordon Ridge about 1.5 miles to the southeast; such values are about double the allowable salt concentrations in public water supplies, and would call for treatment prior to use.[5] Wells a mile or two further south in the Old Stage Road area have water with high salinities. The most recent regional assessment (Zatkin and Hecht, 2009) notes that potable groundwater should not be taken for granted in this immediate area:

> *"Groundwater in the [San Gregorio Creek watershed] tends to have higher salinities than is typical of the Santa Cruz Mountains streams. Pockets of groundwater naturally too salty for agricultural and most habitat uses are distributed throughout the watershed,* ***most noticeably beneath the northern ridges in the western part of the watershed****."* *(emphasis added)*

Pleistocene marine terrace deposits unconformably overlay Tunitas Sandstone on the project parcel and are continuous with the adjoining parcel to the north. These deposits are a southern-most fragment of the larger Half Moon Bay Terrace groundwater basin (No. 2-22), as classified by California Department of Water Resources in Bulletin 118 (2003 update). The poorly consolidated and poorly indurated well− to poorly−sorted sand and gravel deposits appear to be 30 to 40 feet thick across the west portion of the property, and thin southeastward to outcrops of Tunitas Sandstone member near Cabrillo Highway

[5] San Mateo County will permit a well meeting its requirements for yield and required setbacks, recognizing that well water quality is usually amenable to treatment.

(**Figure 5**). At the well completed on site in 2015, it was found to be 30 feet deep. The terrace deposits also appear coarser at depth, at its contact with Tunitas Sandstone.

Soils across most of the project parcel are classified as Watsonville sandy loan, gently-sloping to sloping eroded[6], which formed on the marine terrace, while soils on the eastern-most, steeper portion of the property are hillside soils, classified as Tierra sandy loam, moderately steep, eroded[7] (NRCS, 1961). Both soil types are reported to have a hydrologic group rating "D", with a very slow infiltration potential and a very high runoff potential. Reported surface soil permeability is rapid to moderately rapid, but subsurface permeability is very slow. The Watsonville sandy loam soils are classified with a slight to moderate erosion hazard, while the Terra sandy loam, a high erosion hazard. The recharge and water-holding properties of the surficial soils found on site are summarized in **Table 3**. Soils at the bluff are classified as terrace escarpments.

Aquifer parameters and drawdown analysis

Transmissivity (T) is a common aquifer coefficient that characterizes how easily water moves through the aquifer (a measure of permeability), and can be used to quantify groundwater flow, drawdown, and zone of influence and capture of a well. Transmissivity can be initially estimated with a relationship to Specific Capacity (Cs)[8] then commonly refined with dynamic data from a 'pump test' or aquifer test. Specific capacity (Cs) is well function describing the quantity of water that a well can produce per unit drawdown of water level in the well. It is the pumping rate divided by the water level drawdown in the well, in gallons per minute per foot drawdown. To estimate Cs and T of the bedrock in the vicinity the project parcel, we acquired well completion reports from the California Department of Water Resources (**Figure 5**), on which drillers air-lift tests and pumping tests are recorded, and we also acquired pump-test reports from County Environmental Health files. Results of the canvas are summarized in **Table 2** and grouped for wells completed in the Tunitas Sandstone, and well completed in Lobitos Mudstone. Hydraulic conductivity (K) for the formation can be estimated by dividing T by the aquifer thickness (b), which is the well depth minus the depth to static water level. Based hydraulic conductivity, the Tunitas Sandstone is roughly four times more permeable than the Lobitos Mudstone; sample variability, though, is similar.

When a well is pumped it introduces a stress to the aquifer and lowers hydraulic pressures and water levels in the vicinity of the well. With continued pumping, this effect propagates outward from the well, which can be conceptually represented as a "cone of depression" or "area of influence". The area of influence of a pumped well can be roughly estimated using the Cooper-Jacob (1946) distance-drawdown equation, which is an approximation of the Theis (1935) analytical model. Based on the estimates of aquifer transmissivity from **Table 2** and using a nominal storage coefficient for a shallow fractured bedrock aquifer, we estimated the radius of influence for the proposed well for two cases (**Table 4**):

- Case 1, a maximum daily demand of 6.75 gallons per minute (gpm) sustained for 24 hours. This is the average yield of wells completed in Tunitas Sandstone from **Table 2**; and,

[6] http://casoilresource.lawr.ucdavis.edu/soil_web/ssurgo.php?action=explain_component&mukey=456551&cokey=11146646
[7] http://casoilresource.lawr.ucdavis.edu/soil_web/ssurgo.php?action=explain_component&mukey=456523&cokey=11146536
[8] To estimate aquifer transmissivity (T) with Cs see Appendix 16.D of Driscoll (1983) or p. 128 of DWR Bulletin No. 118-2 (June 1974).

- Case 2, an average dry-season demand for a single-family dwelling of 0.75 acre-feet from April through September (or 0.46 gpm of continuous pumping), based on Monterey Peninsula Water Management District estimates for well source and pumping impact assessments, in absence of coastal San Mateo County estimates.[9]

For a horizontal surface, the estimated radius of influence for the maximum daily demand is about 60 feet, while for the dry-season demand, it is about 500 feet. A 1-foot drawdown effect from dry-season pumping is estimated at about 75 feet from the well. The proposed project well site is currently staked 75 feet from the north property line at latitude N 37° 21' 55.0" and longitude W 122° 24' 20.1", and elevation 145 feet asl (**Figures 2 and 7**).[10] The closest well to the proposed project well is about 2,200 feet uphill to the east (**Figure 5**), 4.4 times further than the estimated extent any influence by dry-season pumping, and 29 times the estimated 1-foot drawdown effect.[11]

Under conditions of a groundwater gradient, such as in mountainous areas as seen at the site, the capture zone of the well is skewed upgradient. As a guideline for groundwater management, the theoretical capture area can be estimated with uniform flow equations, adapted from Todd (1980) (**Table 5**). For the maximum daily demand, the estimated capture area is 61 feet downgradient and 96 feet perpendicular to the proposed well. For the dry-season demand, downgradient and perpendicular capture area is much less, suggesting that the primary source of groundwater to the well for seasonal pumping is from the upgradient (eastward) direction.

Analysis of potential hydrologic and water-quality impacts

The following nine CEQA Initial Study questions were previously sent to us from Ms. Angela Chavez, the County Project Planner assigned to Case No. PLN2014-00421.

9.a. *Would the Project violate any water quality standards or waste discharge requirements (consider water quality parameters such as temperature, dissolved oxygen, turbidity and other typical stormwater pollutants (e.g., heavy metals, pathogens, petroleum derivatives, synthetic organics, sediment, nutrients, oxygen-demanding substances, and trash))?*

No impact. The installation and yield testing of a domestic well can include the use of drilling mud or foam, and bringing groundwater to the ground surface. Potentially turbid fluids are typically contained in a pit within the immediate vicinity of the borehole and/or allowed to spread onsite to infiltrate into the soil, assisted by the installation of straw waddle and /or silt fence. The proposed well sites are located on the uphill fringe of a gently sloping marine terrace, over 500 feet from a drainage draw at the coastal bluff. The marine terrace is densely covered with grasses and reported to have rapid surface permeability, though subsoil permeability is very slow. Expected yield from the well could be as high as 6 or 7 gpm. Groundwater pumped to the ground surface would likely not flow at this pumping rate to the draw at the coastal bluff after a period of pumping typical for yield testing the well, but perhaps at most trickle down

[9] For most parcels in the unincorporated areas of the MPWMD, the District will accept up to 0.5 acre-feet per year (AFY) as the estimated annual demand for a typical single-family dwelling with standard outdoor landscaping. We applied a 'safety factor' of 3 to account for large residences on large parcels with extensive landscaping, gardening, or non-standard uses.
[10] Datum WGS84
[11] In practice, area-of-influence calculations are generally applied for guidance in groundwater management with the caveat of having quantitatively low resolution as a predictive tool, particularly in fractured-bedrock aquifers. The resolution to a unit of 1-foot would seem reasonable for the conditions at the site.

the rock face of the bluff to the wave-beaten rocky coast without erosion and increasing turbidity. Well site #1 may likely require silt fencing and straw waddle to contain drilling mud and foam from potentially entering the on-site pond located south from the well site, and during yield testing, a hose to direct discharge away from or downstream from the pond.

9.b. *Would the Project significantly deplete groundwater supplies or interfere significantly with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?*

No impact. County set-back regulations for a new domestic well is 50 feet from the property line and 50 feet from an existing well. The location of the proposed project well sites are approximately 100 feet from the property line and 2,000 feet from the nearest existing well (DWR Well No. e0174995). In addition, the estimated area of influence and potential capture zone for the proposed well is significantly less than the distance to the nearest well.

9.c. *Would the Project significantly alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner that would result in significant erosion or siltation on- or off-site?*

No impact. See 9.a.

9.d. *Would the Project significantly alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or significantly increase the rate or amount of surface runoff in a manner that would result in flooding on- or off-site?*

No impact. See 9.a.

9.e. *Would the Project create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide significant additional sources of polluted runoff?*

No impact. There is no existing or planned stormwater drainage systems (see 9.a.)

9.f. *Would the Project significantly degrade surface or ground-water water quality?*

No impact. The proposed project well sites are located 500 feet from the coast at an elevation of 200 feet above sea level. Wells in the vicinity are 150 to 300 feet deep (a depth also proposed for the project well) with maximum yields as high as 6 to 7 gpm. Area-of-influence and potential capture-zone estimates for the proposed well suggests a limited local capture area for a maximum daily demand and for potential seasonal pumping rates, with the primary source of groundwater flow to the well from the regional upgradient (east) direction. Very few wells are in the vicinity, all over 2,000 feet from the proposed project well. Under these conditions, groundwater quality would not degrade from sea-water intrusion.

Groundwater in the region can naturally have elevated dissolved solids, including iron and manganese. Assuming the water quality of groundwater pumped from the proposed project well is suitable for domestic purposes, then its use would generally not lead to significantly saltier water percolating to

shallow groundwater from the septic system. Widespread irrigation of groundwater with elevated dissolved solids may lead to salt accumulations in the soil.

Surface-water quality would also not degrade (see 9.a).

9.g. *Would the Project result in increased impervious surfaces and associated increased runoff?*

No impact. The Project does not increase the area impervious surface.

17.b. *Would the Project require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?*

No impact. Not applicable. Public water and sewer service is not available at the project parcel and the Project does not propose new connections.

17.d. *Would the Project have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?*

No impact. Not applicable. The Project is to develop a local groundwater source for domestic needs on an undeveloped parcel; no other development proposed at this time.

Conclusions

Existing conditions at the project site support the proposed project to install a water well for domestic use, assuming standard 'best management practices' to control drilling fluids are applied. Special care may be required at proposed site #1 to contain drilling muds, foam and turbid water from entering the nearby cattle pond on site. We analyzed potential impacts for pumping the well at a rate typical for a single-family dwelling in unincorporated rural coastal areas of central California and found no significant impacts. A reasonable practical analog to this use of the proposed project well would be the success of pumping other domestic well in the vicinity located west of Cabrillo Highway. We found no record of water-quality or well-yield failure in the County Environment Health records for the well in the Martins Beach area.

Closure

As with all subsurface analyses, we note that the values presented are estimates, based on conditions actually encountered in boreholes or wells. It should be recognized that interpretation and evaluation of subsurface conditions is a difficult and inexact art. Balance Hydrologics has drawn on conventional published data sources for this evaluation, and has not independently verified mapping or findings by agencies and other established sources. This report was prepared for the client's exclusive use on this particular project and in general accordance with the accepted standard of practice existing in Northern California at the time the investigation was performed. No other warranties, expressed or implied, are made.

If there are any follow-up questions regarding the above assessment or if there is a need to conduct more detailed analyses please give a call.

Sincerely,

BALANCE HYDROLOGICS, INC.

Mark Woyshner, M.Sc.Eng.
Senior Consultant and Director

Original February 11, 2015 report reviewed by Barry Hecht, CHg
Enclosures: 5 tables, 7 figures, and well drillers report no. e0327650

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Table 1. Mean monthly rainfall and evapotranspiration
APN 066-330-130, -150, San Mateo County, California

Month	Rainfall [1] (inches)	Reference Evapotranspiration [2] (inches)
October	1.59	2.48
November	3.08	1.20
December	4.66	0.62
January	5.36	0.93
February	4.53	1.40
March	3.81	2.48
April	1.89	3.30
May	0.77	4.03
June	0.28	4.50
July	0.12	4.65
August	0.21	4.03
September	0.38	3.30
Annual	26.68	32.92

Notes:

1. NOAA NCDC Station 43714 at Half Moon Bay, CA, 1948 - 2010.

2. CIMIS reference evapotranspiration ETo Zone 1 (Snider, 1999), variability between stations is as high as 0.02 inches per day.

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Table 2: Summary of information on acquired well completion reports and estimated aquifer transmissivity in the vicinity of the Angwin Property, APN 066-330-130, -150, San Mateo County, California.

Well completion report number [1]	APN	Approximate map length and heading from proposed well site [2]	Approximate ground elevation [2] (ft)	Depth of well (ft)	Screened interval (ft)	Depth of first water from well log or static water level from pump test report (ft)	Air-lift rate (gpm)	Pump test rate [3] (gpm)	Drawdown [4] (ft)	Aquifer thickness [5] b (ft)	Specific capacity, Cs [6] (gpm per ft drawdown)	Estimated transmissivity [7] T=Cs*1500 (gpd/ft)	Hydraulic conductivity K=T/b (gpd/ft^2)	Hydraulic conductivity K (cm/sec)	Mapped bedrock [8] (Figure 2)	Aquifer description reported on well completion report
Wells completed in the Tunitas sandstone member of the Purisima Formation (Tptu)																
e0174995	066-330-160	2,200 ft; 76.83 degrees	394	200	80 to 200	100	8	--	100	100	0.080	120	1.2	5.7E-05	Tptu	Firm grey sandstone
813234	066-330-040	2,300 ft; 44.51 degrees	261	155	95 to 155	54	10	6	57.5	101	0.17	261	2.6	1.2E-04	Tptu	Firm grey fine sandstone
?	066-330-160	2,400 ft; 87.66 degrees	409	175	?	109.2	?	7.5	6.67	66	~~1.13~~	--	--	--	Tptu	?
e0174997	066-330-160	3,200 ft; 72.25 degrees	446	200	100 to 200	140	15	--	60	60	0.250	375	6.25	2.9E-04	Tptu	Firm grey sandstone with small hard and soft layers
		Average well depth =		*183*		*Average well yield =*		*6.75*		*Average Tptu =*	*0.17*	*252*	*3.3*	*1.58E-04*		
Wells completed in the Lobitos mudstone member of the Purisima Formation (Tpl)																
774584	066-330-170	2,500 ft; 65.50 degrees	386	300	200 to 300	69	3 to 5	5.6	22.4	231	0.25	375	1.6	7.7E-05	Tptu, Tpl	Grey fine sandstone; firm grey shale below 170 ft
31706	066-330-190	4,250 ft; 356.79 degrees	123	130	80 to 130	40	--	2.5	80	90	0.031	46.9	0.52	2.5E-05	Tpl	Blue clay and shale mix
59982	066-330-090	4,250 ft; 4.49 degrees	180	220	20 to 220	80	--	5	100	140	0.050	75.0	0.54	2.5E-05	Tpl	Blue clay and shale mix
774583	066-330-020	4,400 ft; 37.29 degrees	363	250	90 to 250	84.3	3	5.2	117	166	0.044	66.7	0.40	1.9E-05	Tpl	Firm grey shale
902492	066-330-030	4,900 ft; 34.39 degrees	458	240	100 to 220	140	3	--	100	100	0.030	45.0	0.45	2.1E-05	Tpl	Firm grey shale with small med-hard layers
317863	066-330-030	4,900 ft; 80.75 degrees	185	200	30 to 190	0 (flowing)	0.75	--	180	200	~~0.0042~~	--	--	--	Tpl	Black clay and shale
799768	066-330-210	5,000 ft; 37.23 degrees	436	320	60 to 320	42.4	3	3.1	15.6	278	0.20	298	1.1	5.1E-05	Tpl, Tpsg	Firm grey shale with med-hard layers
		Average well depth =		*237*		*Average well yield =*		*4.3*		*Average Tpl =*	*0.10*	*151*	*0.77*	*3.62E-05*		

Notes:

1. Well completion reports (also called well logs) were acquired from California Department of Water Resources under an agency study request.
2. Well elevation and its length and heading from the proposed well was acquired from Google Earth (datum WGS84).
3. Pump test reports acquired from San Mateo County Environmental Health.
4. Total drawdown as reported in pump test report, otherwise estimated as the difference between the well depth and first water reported in the well completion report.
5. Aquifer thickness, b = well depth - static water level
6. Specific capacity is the pumping rate divided by the drawdown during pumping (Cs=Q/s). The air-lift rate from the well log was used if a pump test was not performed. Highest and lowest values considered outliers and not averaged.
7. To estimate aquifer transmissivity (T) with Cs see Appendix 16.D of Driscoll (1983) or p. 128 of DWR Bulletin No. 118-2 (June 1974).
8. Based on USGS Open-File Report 98-137 (Brabb and others, 1998).

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Table 3. Recharge and water-holding properties of surficial soils, APN 066-330-130, -150, San Mateo County, California

Map Symbol	Soil Series[1]	Parent Material	Taxonomy (order, subgroup, family)	Hydrologic Soil Group	Erosion Hazard	Depth Zone (inches)	USCS[2]	Attenberg Limits Liquid	Attenberg Limits Plastic	Permeability (inches/hour)	Available Water Capacity[3] Per Inch *(in./in. of soil)*	Available Water Capacity[3] Profile *(total, in)*	Remarks
WsB2, WsC2	Watsonville sandy loam, gently sloping, eroded	Marine terrace deposits	Mollisols	D (very slow infiltration, very high runoff potential)	Slight to moderate	0 to 9	CL	29	7	0.4			Found across most of the project parcel.
			Xeric Argialbolls			12 to 21	CH	58	34	0.004			
			Fine, montmorillonitic, thermic			54 to 64	CL	34	16	0.1	*Total*	*6.0*	
TmD2	Tierra sandy loam, moderately steep, eroded	Tunitas Sandstone Member of the Purisma Fm.	Alfisols	D (very slow infiltration, very high runoff potential)	High	7 to 13	CL	27	8	0.5			Found on the eastern-most, steeper portion of the property.
			Mollic Palexeralfs			30 to 41	CH	53	36	0.005			
			Fine, montmorillonitic, thermic			50 to 60	CL	38	22	0.1	*Total*	*6.75*	

Notes

1) Information taken from the USDA soil survey for the area (1969). This soil survey generally does not distinguish areas smaller than about 20 to 40 acres.

2) USCS = Unified Soils Classification System, commonly used in geotechnical or soil-foundation investigations, and in routine engineering geologic logging.

3) Available Water Capacity = Held water available for use by most plants, usually defined as the difference between the amount of soil water at field capacity (one day of drainage after a rain or recharge event) and the amount at the wilting point.

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Table 4. Potential radius of influence for the proposed well on APN 066-330-130, -150
San Mateo County, California.

Case A. Maximum daily demand

Given:	Transmissivity, T	252	gpd/ft	average of wells completed in Tptu (Table 1)
	Storativity, S	0.02	fractured bedrock norm	
	Pumping rate, Q	6.75	gpm	average of wells completed in Tptu (Table 1)
	Pumping duration, t	1.0	days	24 hours

Find: drawdown, s(r,t):

Distance from well			Drawdown	
r (ft)	u=(1.87*r^2*S)/(T*t)	W(u)	s max (ft)	= (264*Q/T) * W(u)
0.21	6.4E-06	4.94	34.9	radius of well casing
5	3.7E-03	2.18	15.4	
10	1.5E-02	1.58	11.2	
30	1.3E-01	0.62	4.4	
60	5.3E-01	0.02	0.1	
75	8.3E-01	-0.17	0.0	
150	3.3E+00	-0.77	0.0	
500	3.7E+01	-1.82	0.0	ocean
1,000	1.5E+02	-2.42	0.0	
2,000	5.9E+02	-3.02	0.0	nearest well (no. e0174995)

Case B. Average dry-season demand

Given:	Transmissivity, T	252	gpd/ft	average of wells completed in Tptu (Table 1)
	Storativity, S	0.02	fractured bedrock norm	
	Pumping rate, Q	0.46	gpm	0.75 acre-feet (April - Sept)
	Pumping duration, t	184	days	May through October

Find: drawdown, s(r,t):

Distance from well			Drawdown	
r (ft)	u=(1.87*r^2*S)/(T*t)	W(u)	s max (ft)	= (264*Q/T) * W(u)
0.21	3.5E-08	7.20	3.5	radius of well casing
5	2.0E-05	4.44	2.2	
10	8.1E-05	3.84	1.9	
30	7.3E-04	2.89	1.4	
60	2.9E-03	2.29	1.1	
75	4.5E-03	2.09	1.0	
150	1.8E-02	1.49	0.7	
500	2.0E-01	0.44	0.2	ocean
1000	8.1E-01	-0.16	0.0	
2000	3.2E+00	-0.76	0.0	nearest well (no. e0174995)

Method:

Theoretical drawdown was calculated using Cooper and Jacob modified nonequilibrium Theis equation (Driscoll, F.G., 1986, Groundwater and Wells, 2nd Ed., p. 219).

The modified nonequilibrium equation is valid for values of u less than about 0.05, otherwise values are approximate.

Theis' nonequilibrium equation is based on the following assumptions:

a) The water-bearing formation is uniform in character and the hydraulic conductivity is the same in all directions.
b) The formation is uniform in thickness and infinite in areal extent.
c) The formation receives no recharge from any source.
d) The pumped well penetrates, and receives water from, the full thickness of the water-bearing formation.
e) The water removed from storage is discharged instantaneously when the head is lowered.
f) The pumping well is 100 percent efficient.
g) All water removed from the well comes from aquifer storage.
f) Laminar flow exists throughout the well and aquifer.
i) The water table or potentiometric surface has no slope.

Notes:

1. The modified nonequilibrium equation is valid for values of u less than about 0.05, otherwise values are approximate.
2. Transmissivity (T) estimated from specific capacity (see Table 1).

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Table 5. Potential dimensions of groundwater capture from the proposed well at APN 066-330-130, -150 including influences by regional groundwater flow gradient, San Mateo County, California

Case A. Maximum daily demand		
Well and aquifer specifications:		
Pumping rate, Q	9720	gpd (average well yield from Table 1)
Aquifer transmissivity, T	252	gpd/ft (average of wells completed in Tptu from Table 1)
Regional ground-water gradient, i	0.1	ground between proposed well and well no. e0174995
Calculate capture zone dimensions:		
Stagnation point downgradient distance, $x_o = Q/(2\pi Ti)$	61	feet
Width at well perpendicular to regional ground-water flow, $w_o = Q/(2Ti)$	193	feet
Upgradient width perpendicular to regional ground-water flow, $w = Q/(Ti)$	386	feet
Case B. Average dry-season demand		
Well and aquifer specifications:		
Pumping rate, Q	669	gpd (dry-season daily average from Table 2)
Aquifer transmissivity, T	252	gpd/ft (average of wells completed in Tptu from Table 1)
Regional ground-water gradient, i	0.1	ground between proposed well and well no. e0174995
Calculate capture zone dimensions:		
Stagnation point downgradient distance, $x_o = Q/(2\pi Ti)$	4	feet
Width at well perpendicular to regional ground-water flow, $w_o = Q/(2Ti)$	13	feet
Upgradient width perpendicular to regional ground-water flow, $w = Q/(Ti)$	27	feet

Notes:

1. Uniform flow equations for determining area of contribution to a pumping well adapted from Todd (1980).

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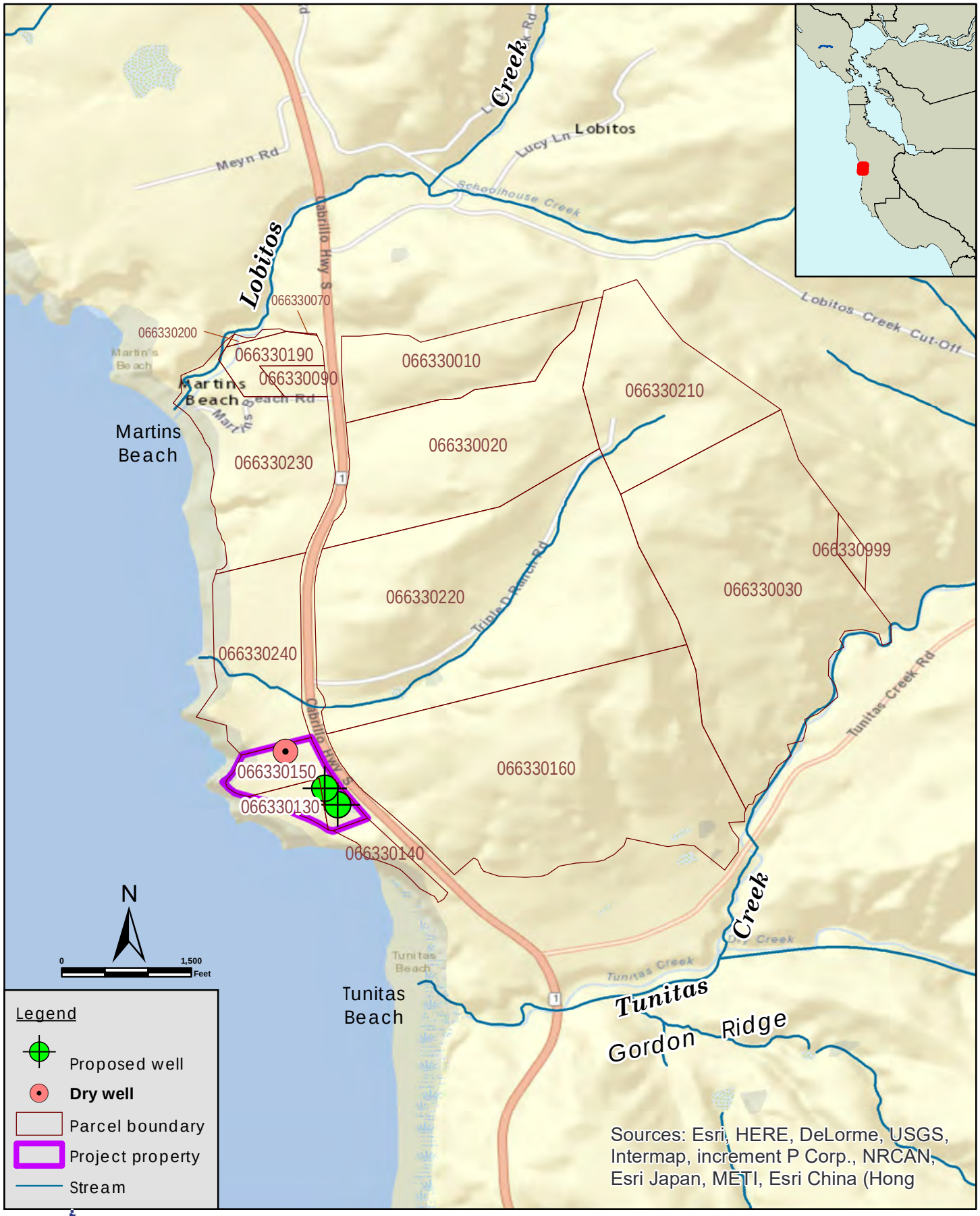

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Figure 1. Location of proposed project and adjacent parcels, San Mateo County, California

214164 location.mxd

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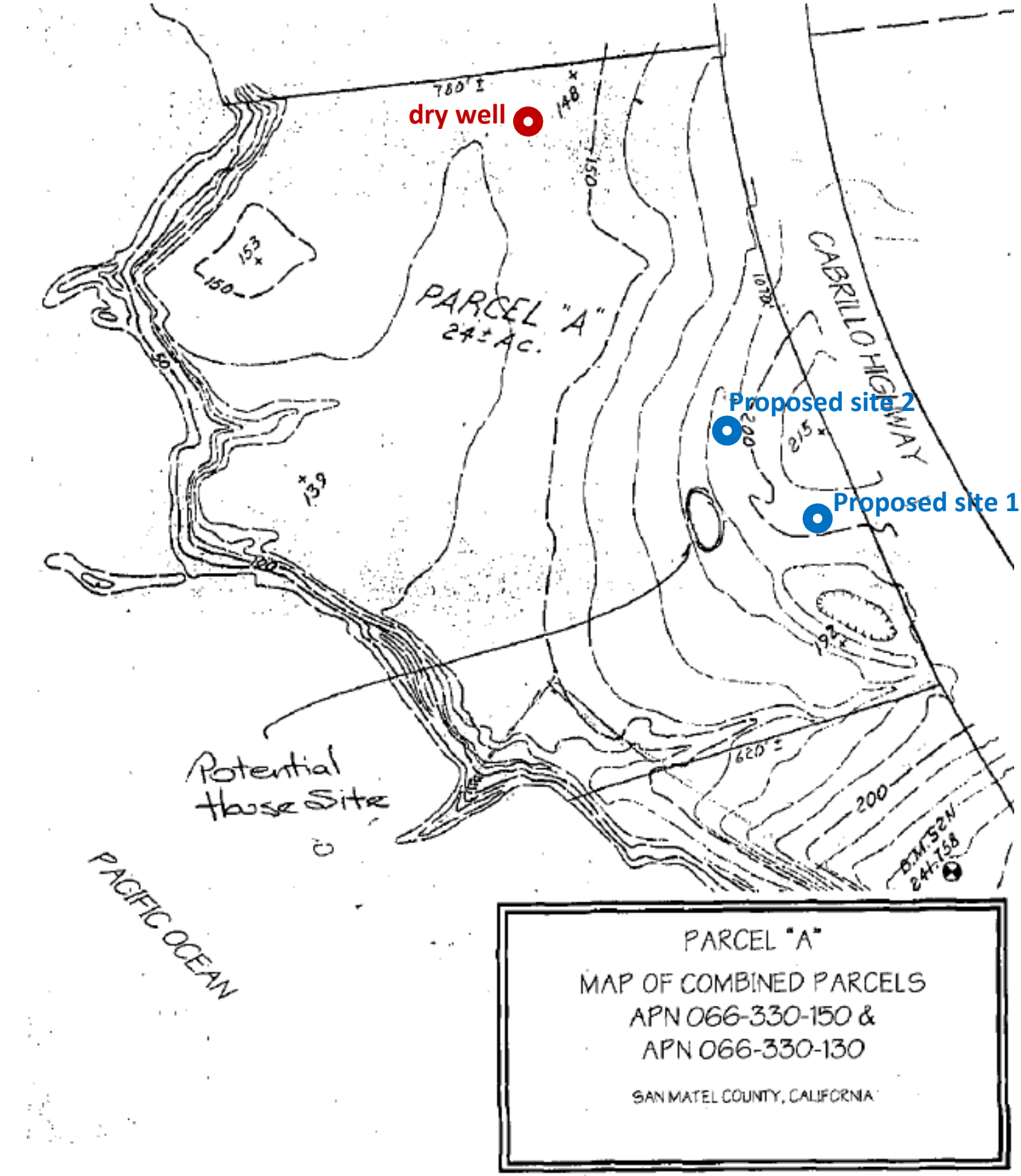

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Figure 2. Site topography, APN 066-330-130, -150, San Mateo County, California. Map source: 1995 well drilling permit application filed at San Mateo County Environmental Health. Potential house site indicated on map may not be current.

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View to the southwest.

View to the south.

Figure 3. Small 'cattle pond' at APN 066-330-130/150, San Mateo County, California. Pond located at the southeast corner of the property with a retaining berm at 192 feet above sea level. The pond drains to the channel along the south property line.

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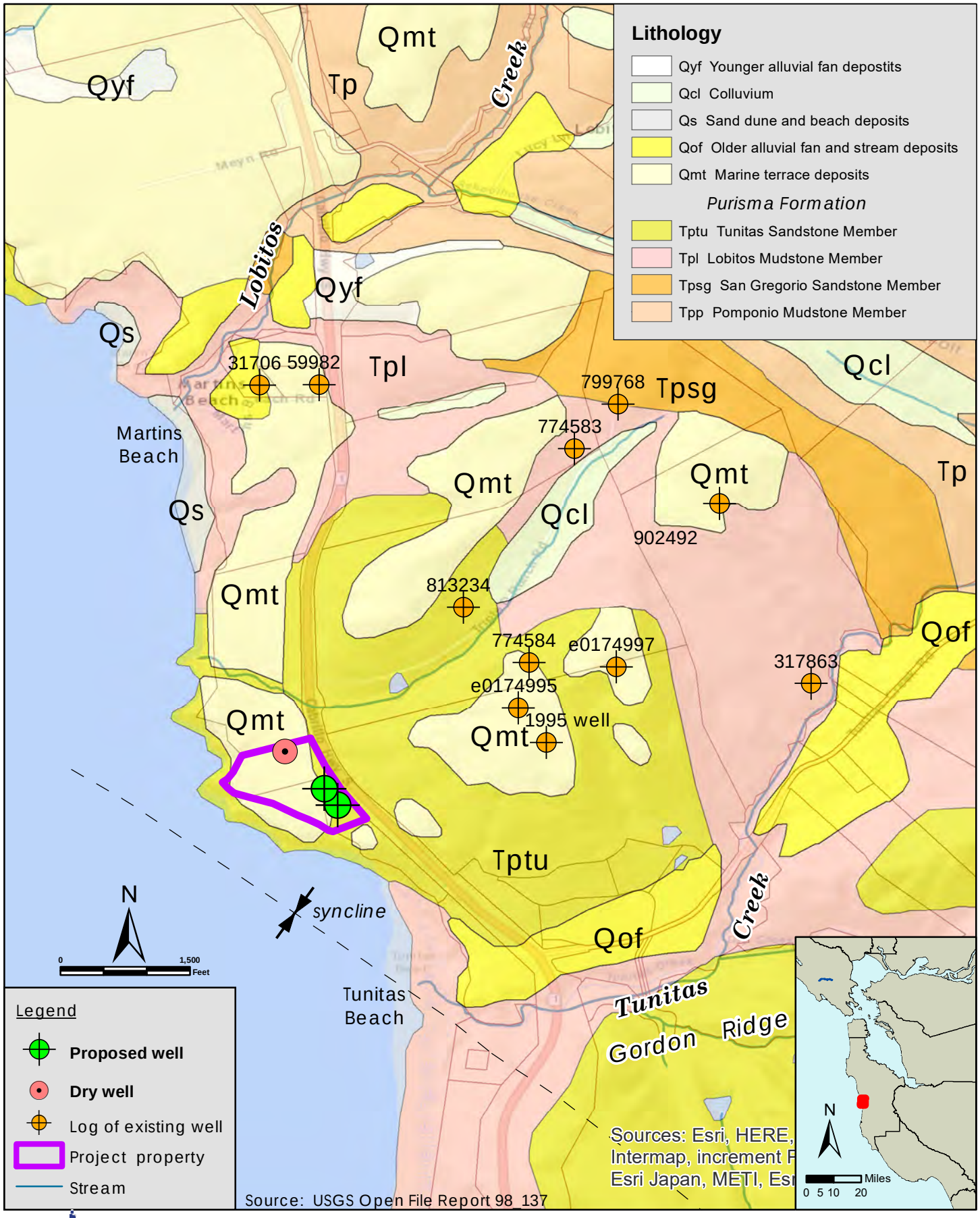

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Figure **4**. Geology and existing wells in the vicinity of APN 066-330-130, -150, San Mateo County, California

214164 location.mxd

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Tunitas Sandstone (Tptu) and overlying marine terrace deposits (Qmt) at the ocean on the west portion of the property. The Tunitas Sansstone appeared hard, poorly fractured, and peppered with mudstone concretion nodules. Groundwater seeps were not observed. The marine terrace is about 30 feet thick here.

Tunitas Sandstone (Tptu) outcropping at the southwest portion of the property near the pond not far from the entrance of the property from Cabrillo Highway. The rock was soft and easily impacted with a the pick end of a hammer.

Figure 5. Bedrock exposures at APN 066-330-130/150, San Mateo County, California. Tunitas Sandstone Member of the Purisima Formation (Tptu) is greenish−gray to light−gray, pale−orange, or greenish−brown, very fine− to medium−grained sandstone with clay matrix. Concretions generally less than 30 cm across are present locally (Brabb and others, 1998).

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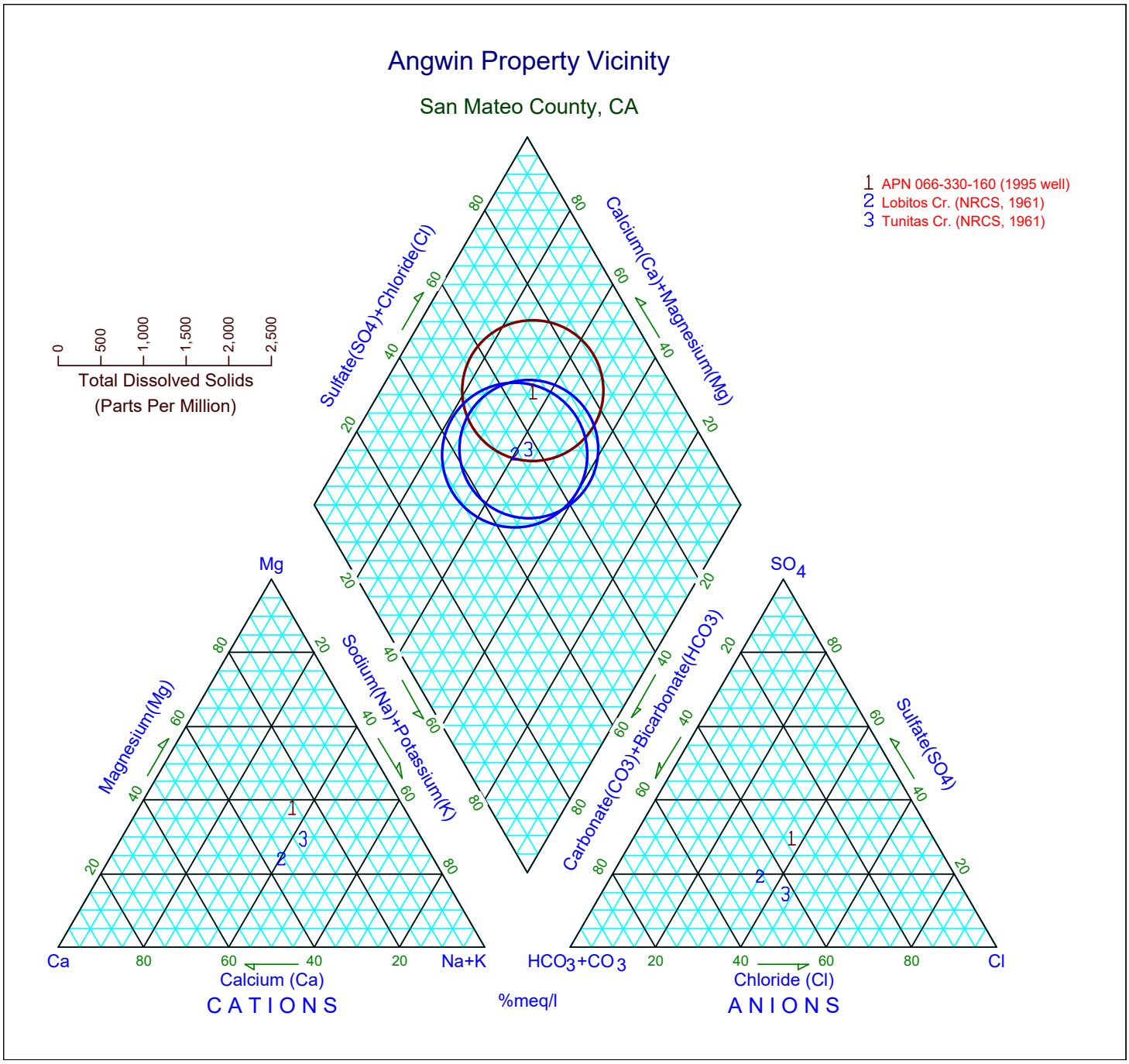

This diagram shows cations in the ternary graph on the left and anions on the right graph. The diamond graph in the center illustrates both cations and anions. Hardness dominated water plots to the left and top of the diamond graph, soft monovalent-salt dominated water to the right, and soft alkaline water towards the bottom. The radius of circle around the plotted points represents the concentration of dissolved solids, calibrated to the scale shown.

Figure 6. Piper diagram illustrating ionic signatures of water samples collected in the vicinity of APN 066-330-130/150.
Data source: San Mateo County Environmental Health and Table 14 of the soils survey (NRCS, 1961).

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Proposed well site #2. Located east of the property access road beyond the drainage area to the existing pond approximately 100 feet from the property line 37° 21.850' N 122° 24.257' W Datum WGS84.

Proposed well site #1. Located south of the property access raod above the existing pond approximately 75 feet from the property line 37° 21.829' N 122° 24.231' W Datum WGS84.

Figure 7. Proposed well locations at APN 066-330-130/150, San Mateo County, California.

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Attachment E

*The free Adobe Reader may be used to view and complete this form. However, software must be purchased to complete, save, and reuse a saved form.

File Original with DWR

State of California

Well Completion Report

Refer to Instruction Pamphlet

No. e0327650

Page 1 of 1

Owner's Well Number 1

Date Work Began 10/22/2015 Date Work Ended 11/6/2015

Local Permit Agency San Mateo County Environmental

Permit Number 15-1985 Permit Date 9/14/15

DWR Use Only – Do Not Fill In

State Well Number/Site Number

N W

Latitude Longitude

APN/TRS/Other

Geologic Log

Orientation ◉ Vertical ○ Horizontal ○ Angle Specify

Drilling Method Direct Rotary Drilling Fluid Polymer mud

Depth from Surface Feet	to Feet	Description Describe material, grain size, color, etc
0	30	Brown color soil 100%
30	90	Grey clay 90%, grey sand 10%
90	155	Grey clay 70%, grey sandstone 30%
155	280	Sandstone 30%, grey clay 70%
280	600	Grey clay 100%

Total Depth of Boring 600 Feet

Total Depth of Completed Well 600 Feet

Well Owner

Name John Franklin & Raymond Angwin

Mailing Address 401 Atlantic Avenue #1201

City Virginia Beach State VA Zip 23451

Well Location

Address APN's 066-330-130, 066-330-150

City County of San Mateo County San Mateo

Latitude Deg. Min. Sec. N Longitude Deg. Min. Sec. W

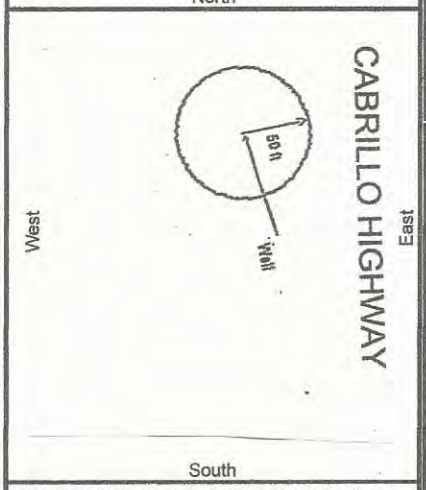
Datum Decimal Lat. Decimal Long.

APN Book 066 Page 330 Parcel 130

Township Range Section

Location Sketch

(Sketch must be drawn by hand after form is printed.)



Illustrate or describe distance of well from roads, buildings, fences, rivers, etc. and attach a map. Use additional paper if necessary. Please be accurate and complete.

Activity

◉ New Well
○ Modification/Repair
○ Deepen
○ Other
○ Destroy
Describe procedures and materials under "GEOLOGIC LOG"

Planned Uses

◉ Water Supply
☑ Domestic ☐ Public
☐ Irrigation ☐ Industrial
○ Cathodic Protection
○ Dewatering
○ Heat Exchange
○ Injection
○ Monitoring
○ Remediation
○ Sparging
○ Test Well
○ Vapor Extraction
○ Other

Water Level and Yield of Completed Well

Depth to first water 10 (Feet below surface)

Depth to Static Water Level 590 (Feet) Date Measured 11/12/2015

Estimated Yield * 0 (GPM) Test Type Constant Rate

Test Length 2.0 (Hours) Total Drawdown 90 (Feet)

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

Casings

Depth from Surface Feet	to Feet	Borehole Diameter (Inches)	Type	Material	Wall Thickness (Inches)	Outside Diameter (Inches)	Screen Type	Slot Size if Any (Inches)
0	100	12	Blank	PVC SDR 21	.265	5.563		
100	600	7 7/8	Screen	PVC SDR 21	.265	5.565	Milled Slots	0.032

Annular Material

Depth from Surface Feet	to Feet	Fill	Description
0	50	Cement	11 Sack sand slurry
50	600	Sand	#3 Sand

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

Name Wilkinson Enterprises Inc., DBA Wilkinson Well and Pump
Person, Firm or Corporation

P O Box 3218 Address, Half Moon Bay City, CA State, 94019 Zip

Signed James M. Wilkinson C-57 Licensed Water Well Contractor

11/3/16 Date Signed

511063 C-57 License Number

DWR 188 REV. 1/2006

IF ADDITIONAL SPACE IS NEEDED, USE NEXT CONSECUTIVELY NUMBERED FORM

COUNTY OF SAN MATEO - PLANNING AND BUILDING DEPARTMENT

ATTACHMENT F

Attachment F

PO Box 3218
Half Moon Bay, CA 94019
O (650) 728-WELL (9355)
F (650) 728-8586
info@wilkinsonwells.com
CA license # 511063

Wilkinson Well and Pump
Water it's our speciality!

December 7, 2016

Carmelisa Morales
San Mateo County Planning and Building
455 County Center
Redwood City, CA 94063

Re: Mitigation Measures PLN2016-00445

Dear Ms. Morales,

Item 1) Regarding the mitigation measures for wildlife species mentioned in item #1 of the biology report prepared by Garcia and Associates dated December 1, 2016. Wilkinson Enterprises will perform work during the Winter/Spring to avoid nesting season for these species.

Items 2 & 3) Regarding the mitigation measures for wildlife species mentioned in items #2 and 3 of the biology report prepared by Garcia and Associates date December 1, 2016. Wilkinson Enterprises will install a frog and snake fence around the work site. The fence will be 3' high and 10' away from the work site.

Items 4 & 8) Regarding the mitigation measures for plant species mentioned in items #4 and 8 of the biology report prepared by Garcia and Associates dated December 1, 2016. Wilkinson Enterprises will perform work during the Winter/Spring before growth for these plant species.

Best Regards,

James M. Wilkinson

James M. Wilkinson, President

COUNTY OF SAN MATEO - PLANNING AND BUILDING DEPARTMENT

ATTACHMENT G

COUNTY OF SAN MATEO, PLANNING AND BUILDING DEPARTMENT

NOTICE OF INTENT TO ADOPT
MITIGATED NEGATIVE DECLARATION

A notice, pursuant to the California Environmental Quality Act of 1970, as amended (Public Resources Code 21,000, et seq.), that the following project: *Domestic Well*, when adopted and implemented, will not have a significant impact on the environment.

FILE NO.: PLN 2016-00445

OWNER: Raymond and Ted Angwin

APPLICANT: Wilkinson Enterprises, Inc.

ASSESSOR'S PARCEL NOS.: 066-330-130 and 066-330-150

LOCATION: Undeveloped Parcel, Cabrillo Highway

PROJECT DESCRIPTION

Drilling of a domestic water well to serve a future single-family dwelling on a vacant parcel. The proposed well location is approximately 105 feet from the front property line and approximately 100 feet north of the intermittent pond located on the parcel. A second location approximately 180 feet from the front property line and 175 feet from the primary well location is also proposed if the primary location is unsuccessful. An existing road on the parcel will be used to access both locations. No grading and only minor vegetation removal will be required. The parcel is located within the Cabrillo Highway State Scenic Corridor.

FINDINGS AND BASIS FOR A NEGATIVE DECLARATION

The Current Planning Section has reviewed the initial study for the project and, based upon substantial evidence in the record, finds that:

1. The project will not adversely affect water or air quality or increase noise levels substantially.

2. The project will not have adverse impacts on the flora or fauna of the area.

3. The project will not degrade the aesthetic quality of the area.

4. The project will not have adverse impacts on traffic or land use.

5. In addition, the project will not:

    a. Create impacts which have the potential to degrade the quality of the environment.

b. Create impacts which achieve short-term to the disadvantage of long-term environmental goals.

c. Create impacts for a project which are individually limited, but cumulatively considerable.

d. Create environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly.

The County of San Mateo has, therefore, determined that the environmental impact of the project is insignificant.

MITIGATION MEASURES included in the project to avoid potentially significant effects:

Mitigation Measure 1: The applicant shall implement the following measures during construction to protect the California red-legged frog, the San Francisco garter snake, and the saltmarsh common yellowthroat which have a high potential to occur within the project area:

a. Construction will only be performed during the Winter and/or Spring to avoid nesting seasons for the California red-legged frog and the San Francisco garter snake.

b. A frog and snake fence will be installed around the construction work site. The fence will be 3 feet high and 10 feet away from the proposed well locations.

Mitigation Measure 2: The applicant shall implement the following measure during construction to protect the Coastal marsh milk-vetch and Choris' popcornflower which have a moderate potential to occur within the project area:

a. Construction will only be performed during the Winter and/or Spring to avoid the blooming seasons of the Coastal marsh milk-vetch (June to October) and Choris' popcornflower (March to June).

Mitigation Measure 3: In the event that prehistoric materials such as flaked-stone tools (e.g., projectile points, knives, choppers), obsidian, chert, basalt, or quartzite debris, bone tools, culturally darkened soil (e.g., midden soil often contains heat-affected rock, ash and charcoal, shellfish remains, faunal bones, and cultural materials), and stone milling equipment (e.g., mortars, pestles, handstones) are encountered, all excavations should be halted immediately, the San Mateo County Planning Department must be notified, and an archaeologist must be retained to examine the finds and assess the potential significance.

Mitigation Measure 4: A discovery of a paleontological specimen during any phase of the project shall result in a work stoppage in the vicinity of the find until it can be evaluated by a professional paleontologist. Should loss or damage be detected, additional protective measures or further action (e.g., resource removal), as determined by a professional paleontologist, shall be implemented to mitigate the impact.

Mitigation Measure 5: Use existing roads to the maximum extent feasible to avoid additional surface disturbance.

Mitigation Measure 6: During all phases of the project, keep equipment and vehicles within the limits of the previously disturbed areas of the project site.

Mitigation Measure 7: The property owner, applicant, and contractors must be prepared to carry out the requirements of California State law with regard to the discovery of human remains during construction, whether historic or prehistoric. In the event that any human remains are

encountered during site disturbance, all ground-disturbing work shall cease immediately and the County coroner shall be notified immediately. If the coroner determines the remains to be Native American, the Native American Heritage Commission shall be contacted within 24 hours. A qualified archaeologist, in consultation with the Native American Heritage Commission, shall recommend subsequent measures for disposition of the remains.

Mitigation Measure 8: Upon the start of excavation activities and through to the completion of the project, the applicant shall be responsible for ensuring that dust control measures are implemented as needed. The intent shall be to mitigate excessive dust generation resulting from any and all excavation and earth-moving operations.

Mitigation Measure 9: Implement best management practices (BMPs) for erosion and sediment control during all phases of building to include pre- and post-construction activities.

Mitigation Measure 10: Prior to the beginning of any construction or grading activities, the applicant shall implement the approved erosion and sediment control plan if applicable. Erosion control measure deficiencies, as they occur, shall be immediately corrected. The goal is to prevent sediment and other pollutants from leaving the project site and to protect all exposed earth surfaces from erosive forces. Said plan shall adhere to the San Mateo Countywide Stormwater Pollution Prevention Program "General Construction and Site Supervision Guidelines," including:

a. Stabilizing all denuded areas and maintaining erosion control measures continuously between October 1 and April 30. Stabilizing shall include both proactive measures, such as the placement of hay bales or coir netting, and passive measures, such as revegetating disturbed areas with plants propagated from seed collected in the immediate area.

b. Storing, handling, and disposing of construction materials and wastes properly, so as to prevent their contact with stormwater.

c. Controlling and preventing the discharge of all potential pollutants, including pavement cutting wastes, paints, concrete, petroleum products, chemicals, wash water or sediments, and non-stormwater discharges to storm drains and watercourses.

d. Using sediment controls or filtration to remove sediment when dewatering the site and obtaining all necessary permits.

e. Avoiding cleaning, fueling, or maintaining vehicles on-site, except in a designated area where wash water is contained and treated.

f. Delineating with field markers clearing limits, easements, setbacks, sensitive or critical areas, buffer zones, trees, and drainage courses.

g. Protecting adjacent properties and undisturbed areas from construction impacts using vegetative buffer strips, sediment barriers or filters, dikes, mulching, or other measures as appropriate.

h. Performing clearing and earth-moving activities only during dry weather.

i. Limiting and timing application of pesticides and fertilizers to prevent polluted runoff.

j. Limiting construction access routes and stabilizing designated access points.

k. Avoiding tracking dirt or other materials off-site; cleaning off-site paved areas and sidewalks using dry sweeping methods.

l. The contractor shall train and provide instructions to all employees and subcontractors regarding the construction best management practices.

m. The approved erosion and sediment control plan shall be implemented prior to the beginning of construction.

Mitigation Measure 11: The applicant shall implement erosion control measures prior to the beginning of construction operations. Such activities shall not commence until the associated building permit for the project has been issued if applicable.

Mitigation Measure 12: Construction equipment shall comply with the County's Energy Efficiency Climate Action Plan (EECAP) for construction vehicle idling as applicable considering the sensitive nature of the project area. Specifically, Bay Area Air Quality Management District Best Management Practices for Mitigating Criteria Air Pollutants and Precursors:

a. All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be two times per day.

b. All haul trucks transporting soil, sand, or other loose material off-site shall be covered.

c. All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day.

d. All vehicle speeds on unpaved roads shall be limited to 15 miles per hour.

e. Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations). Clear signage shall be provided for construction workers at all access points.

f. All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be check by a certified visible emissions evaluator.

g. Post a publicly visible sign with the telephone number and person to contact at the Lead Agency regarding dust complaints. This person shall respond and take corrective action with 48 hours. The Air District's phone number shall also be visible to ensure compliance with applicable regulations

Mitigation Measure 13: To ensure drilling mud and foam do not enter into the pond located south from the proposed well sites; silt fencing and straw waddles are required to be installed around the second well location.

Mitigation Measure 14: A hose to direct discharge away from or downstream from the pond is required to be installed during yield testing.

Mitigation Measure 15: Noise levels produced by proposed construction activities shall comply with the San Mateo County Noise Ordinance contained in Chapter 4.88 (*Noise Regulations*) of the County Ordinance Code. Construction activities shall be limited to the hours of 7:00 a.m. to 6:00 p.m., Monday through Friday, and 9:00 a.m. to 5:00 p.m. on Saturdays. Construction operations shall be prohibited on Sundays and any national holidays.

RESPONSIBLE AGENCY CONSULTATION

None

INITIAL STUDY

The San Mateo County Current Planning Section has reviewed the Environmental Evaluation of this project and has found that the probable environmental impacts are insignificant. A copy of the initial study is attached.

REVIEW PERIOD: March 8, 2017 – March 28, 2017

All comments regarding the correctness, completeness, or adequacy of this Negative Declaration must be received by the County Planning and Building Department, 455 County Center, Second Floor, Redwood City, no later than **5:00 p.m., March 28, 2017**.

CONTACT PERSON

Carmelisa Morales
Project Planner, 650/363-1873
cjmorales@smcgov.org

Carmelisa Morales, Project Planner

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(2/2015)

County of San Mateo
Planning and Building Department

INITIAL STUDY
ENVIRONMENTAL EVALUATION CHECKLIST
(To Be Completed by Planning Department)

1. **Project Title:** Domestic Well

2. **County File Number:** PLN 2016-00445

3. **Lead Agency Name and Address:** County of San Mateo, 455 County Center, 2nd Floor, Redwood City, CA 94063

4. **Contact Person and Phone Number:** Carmelisa Morales, 650/363-1873, cjmorales@smcgov.org

5. **Project Location:** Undeveloped Parcel, Cabrillo Highway

6. **Assessor's Parcel Numbers and Size of Parcel:** 066-330-130 and 066-330-150

7. **Project Sponsor's Name and Address:** Wilkinson Enterprises, Inc., P.O Box 3218, Half Moon Bay, CA 94019

8. **General Plan Designation:** Agriculture Rural

9. **Zoning:** Planned Agricultural District/Coastal Development District

10. **Description of the Project:** Drilling of a domestic water well to serve a future single-family dwelling on a vacant parcel. The proposed well location is approximately 105 feet from the front property line and approximately 100 feet north of the intermittent pond located on the parcel. A second location, approximately 180 feet from the front property line and 175 feet from the primary well location, is also proposed if the primary location is unsuccessful. An existing road on the parcel will be used to access both locations. No grading and only minor vegetation removal will be required. The parcel is located within the Cabrillo Highway State Scenic Corridor.

11. **Surrounding Land Uses and Setting:** The parcel is accessed from and located on the west side of Highway 1 (Cabrillo Highway). The parcel is bordered by a Pacific Ocean bluff top on its left and is located less than one mile south of Martin's Beach and approximately 0.5 miles north of the intersection of Cabrillo Highway and Tunitas Creek Road. The parcel is unimproved with coastal scrub, cypress trees, grassland, and other vegetation. There is an asphalt road that starts from the entrance at Highway 1 and runs through the eastern portion of the parcel. An intermittent pond filled by a rain water culvert on Highway 1 is located on the southeastern portion of the parcel. A natural drainage borders the southern property boundary line and runs from Highway 1 to the coastal bluff area. Neighboring parcels are largely undeveloped. However, there are farming activities and single-family residential development present sporadically to the north, south, and east of the parcel.

12. **Other Public Agencies Whose Approval is Required:** None.

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" or "Significant Unless Mitigated" as indicated by the checklist on the following pages.

	Aesthetics	X	Climate Change		Population/Housing
	Agricultural and Forest Resources		Hazards and Hazardous Materials		Public Services
	Air Quality	X	Hydrology/Water Quality		Recreation
X	Biological Resources		Land Use/Planning		Transportation/Traffic
X	Cultural Resources		Mineral Resources		Utilities/Service Systems
X	Geology/Soils	X	Noise		Mandatory Findings of Significance

EVALUATION OF ENVIRONMENTAL IMPACTS

1. A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources a lead agency cites. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).

2. All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.

3. Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.

4. "Negative Declaration: Less Than Significant with Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact." The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level (mitigation measures from "Earlier Analyses," as described in 5. below, may be cross-referenced).

5. Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration (Section 15063(c)(3)(D)). In this case, a brief discussion should identify the following:

a. Earlier Analysis Used. Identify and state where they are available for review.

b. Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.

c. Mitigation Measures. For effects that are "Less Than Significant with Mitigation Measures Incorporated," describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.

6. Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.

7. Supporting Information Sources. Sources used or individuals contacted should be cited in the discussion.

1. **AESTHETICS**. Would the project:				
	Potentially Significant Impacts	***Significant Unless Mitigated***	***Less Than Significant Impact***	***No Impact***
1.a. Have a significant adverse effect on a scenic vista, views from existing residential areas, public lands, water bodies, or roads?				X
Discussion: The project parcel is entirely within the Cabrillo Highway State Scenic Corridor. An unpaved driveway and road provides access directly from Cabrillo Highway and to the proposed well locations. No improvements to the driveway or road are necessary or required to access the well locations. The first well location is 105 feet west from Cabrillo Highway. The second well location, which will be drilled if the first well location is determined to be inadequate to provide domestic water supply, is located 180 linear feet west from Cabrillo Highway. The project site is covered with coastal scrub, grassland, and other vegetation. The eastern property line of the subject parcel is lined with Cypress trees which screens the parcel from Cabrillo Highway. The completed well will be approximately 1 foot above natural grade and due to the downward slope of the parcel from Cabrillo Highway and the existing vegetation on the parcel, it would not have a significant adverse effect on a scenic vista and/or public views from existing roads. **Source:** Project Plans, Project Location.				
1.b. Significantly damage or destroy scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?				X

Discussion: No grading beyond the drilling of the well is proposed. The project site is relatively flat with an existing unpaved road providing access to the proposed well locations. Although the project parcel is entirely within the Cabrillo Highway State Scenic Corridor, there are no rock outcroppings that will be disturbed and no historical buildings on the parcel. **Source:** Project Plans, Project Location.				
1.c. Significantly degrade the existing visual character or quality of the site and its surroundings, including significant change in topography or ground surface relief features, and/or development on a ridgeline?				X
Discussion: As discussed previously, the proposed well would not significantly degrade the existing visual character or quality of the site and surroundings due to the topography of the parcel and downward slope from Cabrillo Highway. The parcel is covered with coastal scrub and grassland and would remain undisturbed aside from the minor disturbance for the proposed well. **Source:** Project Plans, Project Location.				
1.d. Create a new source of significant light or glare that would adversely affect day or nighttime views in the area?				X
Discussion: There are no new sources of significant light or glare proposed in this project. The finished well will be approximately 1 foot above natural grade, but will be screened by surrounding vegetation and the topography of the parcel. **Source:** Project Plans.				
1.e. Be adjacent to a designated Scenic Highway or within a State or County Scenic Corridor?			X	
Discussion: The project parcel is located within the Cabrillo Highway State Scenic Corridor. However, as discussed previously, the proposed well is not visible from the scenic roadway due to existing vegetation and topography of the parcel. **Source:** Project Plans, Project Location.				
1.f. If within a Design Review District, conflict with applicable General Plan or Zoning Ordinance provisions?				X
Discussion: The project parcel is not within a Design Review District. **Source:** Project Location.				
1.g. Visually intrude into an area having natural scenic qualities?				X
Discussion: As discussed previously, the proposed project will be shielded from public views due to existing topography and vegetation on the parcel. Please refer to discussions under Section 1.a,				

1.b, and 1.c above.

Source: Project Plans, Project Location.

2. AGRICULTURAL AND FOREST RESOURCES. In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the State's inventory of forestland, including the Forest and Range Assessment Project and the Forest Legacy Assessment Project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:

		Potentially Significant Impacts	*Significant Unless Mitigated*	*Less Than Significant Impact*	*No Impact*
2.a.	For lands outside the Coastal Zone, convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland) as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?				X

Discussion: The project parcel is located within the Coastal Zone.

Source: San Mateo County Geographic Information System, San Mateo County Local Coastal Program.

2.b.	Conflict with existing zoning for agricultural use, an existing Open Space Easement, or a Williamson Act contract?				X

Discussion: The project parcel is located within the Planned Agriculture District (PAD) Zoning District. There is no municipal water service available in the project area. Individual water wells are drilled to provide water to properties without an available municipal water service. In the PAD Zoning District, single-family residences are allowed on lands suitable for agriculture and other lands upon issuance of a PAD Permit. Since the proposed well will be certified as domestic, the project is considered ancillary to residential development, and therefore requires a PAD Permit. The parcel is not encumbered by an Open Space Easement or Williamson Act contract.

Source: San Mateo County Zoning Regulations, San Mateo County General Plan, San Mateo County Williamson Act Contracts.

2.c. Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forestland to non-forest use?				X
Discussion: The subject parcel is not located in an area identified as forestland (land that can support 10% native tree cover of any species, including hardwoods, under natural conditions, and that allows for management of one or more forest resources including timber, aesthetics, fish and wildlife, biodiversity, water quality, recreation, and other public benefits). The subject parcel is not mapped as Farmland (mapped as "Grassland"). The proposed project will not convert forestland to non-forest use or Farmland to non-agricultural use. If water is found on the project site and a well is established, future development may be proposed on the parcel. However, any future development would be subject to the issuance of separate Planned Agriculture District and Coastal Development Permits which would require additional review of the future impact of projects proposed. **Source:** Project Plans, California Department of Conservation San Mateo County Important Farmland 2014 Map, California Public Resources Code Section 12220(g) *Forest Land*.				
2.d. For lands within the Coastal Zone, convert or divide lands identified as Class I or Class II Agriculture Soils and Class III Soils rated good or very good for artichokes or Brussels sprouts?				X
Discussion: The project site does not consist of soils identified as Class I, II, or Class III Soils rated good or very good for artichoke or Brussel sprouts. **Source:** Project Plans, Natural Resources Conservation Service Web Soil Survey, San Mateo County Geographic Information System.				
2.e. Result in damage to soil capability or loss of agricultural land?			X	
Discussion: The project site is located on soils classified with a Storie Index of Grade 2 - Good (Tierra sandy loam, moderately steep, eroded). While the project will convert a small area of the parcel to accommodate the proposed well, there is no expectation that the well would result in damage to the capability of the soil. As discussed previously, a small portion of agricultural lands will be converted, but based on the overall parcel size, the amount of conversion is not significant. The majority of the parcel remains available for agricultural uses. If residential development is not pursued on the property, any water found could also be utilized for agricultural uses. **Source:** Project Plans, Natural Resources Conservation Service Web Soil Survey - California Revised Storie Index.				
2.f. Conflict with existing zoning for, or cause rezoning of, forestland (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government				X

	Code Section 51104(g))? *Note to reader: This question seeks to address the economic impact of converting forestland to a non-timber harvesting use.*				
Discussion: The project parcel has not been identified as forestland or timberland. The proposed project does not conflict with zoning or require rezoning of the parcel for this project. **Source:** Project Plans, San Mateo County Zoning Regulations.					

3.	**AIR QUALITY**. Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:				
		Potentially Significant Impacts	***Significant Unless Mitigated***	***Less Than Significant Impact***	***No Impact***
3.a.	Conflict with or obstruct implementation of the applicable air quality plan?			X	
Discussion: The proposed project does not include any conflict with or obstruct implementation of the Bay Area 2010 Clean Air Plan (CAP), an air quality plan for San Mateo County developed by the Bay Area Air Quality Management District (BAAQMD). Once drilled, the project will not impact the air quality standards set forth for the region by the BAAQMD, as the well will not generate any air emissions. Construction vehicles are also required to meet California Air Resources Board regulations to reduce air pollution (e.g., limits on idling). During project construction, air emissions will be generated from construction equipment and construction worker vehicles. However, any such construction-related emissions would be temporary and localized. **Source:** Project Plans, Bay Area Air Quality Management District.					
3.b.	Violate any air quality standard or contribute significantly to an existing or projected air quality violation?				X
Discussion: There are no known air quality violations in this area. The proposed project seeks to test for a well and install a well if water is discovered. No other development is proposed at this time. Therefore, the proposed project will not violate any construction-related air quality standards or contribute significantly to an air quality violation. **Source:** Project Plans, Bay Area Air Quality Management District.					
3.c.	Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable Federal or State ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?			X	

Discussion: As of December 2012, San Mateo County is a non-attainment area for PM-2.5. On January 9, 2013, EPA issued a final rule to determine that the Bay Area attains the 24-hour PM-2.5 national standard. However, the Bay Area will continue to be designated as "non-attainment" for the national 24-hour PM-2.5 standard until the BAAQMD submits a "re-designation request" and a "maintenance plan" to EPA and the proposed re-designation is approved by the EPA. A temporary increase in the project area is anticipated during construction since these PM-2.5 particles are a typical vehicle emission. The temporary nature of the proposed construction and California Air Resources Board vehicle regulations reduce the potential effects to a less than significant impact. **Source:** Bay Area Air Quality Management District.				
3.d. Expose sensitive receptors to significant pollutant concentrations, as defined by BAAQMD?				X
Discussion: Construction necessary to excavate for the proposed well is temporary in nature and completely located on the subject parcel. There are no identified sensitive receptors within 1,000 feet of the project area (e.g. schools, day care centers, nursing homes, etc.). There is no mapped State or Federal protected species located within the project area. **Source:** Project Plans, Google Maps (2017).				
3.e. Create objectionable odors affecting a significant number of people?			X	
Discussion: The proposed project would not create objectionable odors. The proposed project has the potential to generate odors associated with construction activities. However, any such odors will be temporary and are expected to be minimal. **Source:** Project Plans.				
3.f. Generate pollutants (hydrocarbon, thermal odor, dust or smoke particulates, radiation, etc.) that will violate existing standards of air quality on-site or in the surrounding area?			X	
Discussion: Construction of the well is expected to generate a temporary increase in dust, motor vehicle and diesel particulate matter in the area. This temporary increase is not expected to violate existing standards of on-site air quality given the required vehicle emission standards required by the State of California for vehicle operations. **Source:** Project Plans.				

4.	**BIOLOGICAL RESOURCES.** Would the project:				
		Potentially Significant Impacts	***Significant Unless Mitigated***	***Less Than Significant Impact***	***No Impact***
4.a.	Have a significant adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?		X		

Discussion: A habitat assessment was completed by Garcia and Associates (GANDA) for the project and found that there are occurrences for three special status wildlife species within 2 miles of the project area and critical habitat for one special status wildlife species. The assessment concluded that the project area has suitable habitat for the California red-legged frog (CRLF), the San Francisco garter snake (SFGS), and the saltmarsh common yellowthroat (SCY). All three species have a high potential to occur within the project area. The CRLF would likely occur in the pond and drainage area on the project parcel. These areas have a hydrological potential to hold sufficient water for CRLF egg-laying and tadpole metamorphosis (assuming there is normal, sufficient rainfall to create ponded water for the required 11 to 20 weeks metamorphosing period) during the breeding season (typically December to April). The adjacent riparian area and upland grasslands can provide sufficient refugia for the CRLF with the presence of rocky crevices and rodent burrows. A designated CRLF Critical Habitat also lies approximately 400 feet southwest of the project area. The project area contains suitable habitat for the SFGS such as densely vegetated freshwater ponds for hunting its preferred prey (CRLF), upland grassy hillsides for sunning, and rodent burrows for hibernating. As for the SCY, the suitable habitat within and around the project area includes densely vegetated ponds and nearby creeks with emergent cattail and willow vegetation cover for foraging and nesting. The following measure is provided to ensure impacts to these species discussed above are mitigated.

Mitigation Measure 1: The applicant shall implement the following measures during construction to protect the California red-legged frog, the San Francisco garter snake, and the saltmarsh common yellowthroat which have a high potential to occur within the project area:

a. Construction will only be performed during the Winter and/or Spring to avoid nesting seasons for the California red-legged frog and the San Francisco garter snake.

b. A frog and snake fence will be installed around the construction work site. The fence will be 3 feet high and 10 feet away from the proposed well locations.

Source: Project Plans, California Natural Diversity Database, Wilkinson Well and Pump Company Habitat Assessment, San Mateo County, CA by Garcia and Associates (December 1, 2016), Mitigation Measures PLN 2016-00445 Letter by Wilkinson Enterprises, Inc. (December 7, 2016).

4.b.	Have a significant adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?		X		

Discussion: A habitat assessment was completed by Garcia and Associates (GANDA) for the project and found that there are occurrences for two special status plant species and three plant species within 2 miles of the project area. The assessment concluded that the project has suitable habitat for the Coastal marsh milk-vetch and Choris' popcornflower and have the moderate potential to occur within the project area. The suitable habitat for both species occurs within the vicinity of freshwater ponds and seasonal drainage where moisture is retained in the soil. The following measure is provided to ensure impacts to these species discussed above are mitigated.

Mitigation Measure 2: The applicant shall implement the following measure during construction to protect the Coastal marsh milk-vetch and Choris' popcornflower which have a moderate potential to occur within the project area:

a. Construction will only be performed during the Winter and/or Spring to avoid the blooming seasons of the Coastal marsh milk-vetch (June to October) and Choris' popcornflower (March to June).

Source: Project Plans, California Natural Diversity Database, California Native Plant Society, Wilkinson Well and Pump Company Habitat Assessment, San Mateo County, CA, by Garcia and Associates (December 1, 2016), Mitigation Measures PLN 2016-00445 Letter by Wilkinson Enterprises, Inc. (December 7, 2016).

4.c.	Have a significant adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?				X

Discussion: There are no wetlands located within the project area.

Source: Project Plans, Project Location.

4.d.	Interfere significantly with the movement of any native resident or migratory fish or wildlife species or with established native resident migratory wildlife corridors, or impede the use of native wildlife nursery sites?			X	

Discussion: The project is not expected to pose a significant threat to native or migratory wildlife species as it is located in the grassland and cypress tree area northwest of the pond and drainage on the subject parcel. Please refer to Section 4.a above for discussion on the wildlife species with the potential to occur within the project area and the mitigation measures recommended.

Source: Project Plans, Wilkinson Well and Pump Company Habitat Assessment, San Mateo County, CA, by Garcia and Associates (December 1, 2016), Mitigation Measures PLN 2016-00445 Letter by Wilkinson Enterprises, Inc. (December 7, 2016).

4.e.	Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance (including the County Heritage and Significant Tree Ordinances)?				X

Discussion: The project does not involve the removal of any trees.

Source: Project Plans.

4.f.	Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Conservation Community Plan, other approved local, regional, or State habitat conservation plan?				X

Discussion: There are no known Habitat Conservation Plans, Natural Conservation Community Plans, or other approved local, regional, or State habitat conservation plans that cover the project parcel.

Source: California Department of Fish and Wildlife, California Regional Conservation Plans Map, San Mateo County General Plan.

4.g.	Be located inside or within 200 feet of a marine or wildlife reserve?				X

Discussion: The project parcel is not located inside or within 200 feet of a marine or wildlife reserve.

Source: Project Location, San Mateo County Geographic Information System.

4.h.	Result in loss of oak woodlands or other non-timber woodlands?				X

Discussion: The project parcel is not located in such an area. No tree removal is proposed.

Source: Project Plans, Project Location.

5.	**CULTURAL RESOURCES**. Would the project:				
		Potentially Significant Impacts	***Significant Unless Mitigated***	***Less Than Significant Impact***	***No Impact***
5.a.	Cause a significant adverse change in the significance of a historical resource as defined in CEQA Section 15064.5?			X	

Discussion: A cultural resources report prepared by Garcia and Associates (GANDA) was submitted for the well location approved in 2015 under a separate permit. A letter prepared by GANDA verified that the two proposed well locations for this project were included in the analysis from the 2015 report. The report stated that one historic era period resource was identified and recorded within the project area: the Ocean Shore Railroad (OSRR) grade, an earthen berm approximately 100 feet long, 10 feet wide, and 1 to 3 feet in height. Although access to the well site tested in 2015 was west of the railroad grade which required mitigation measures to avoid potential impact, access to the currently proposed well sites are approximately 150 feet east with access available from the existing unpaved road on the project parcel. Therefore, there would be no impact to the OSRR grade and no mitigation measures are recommended.

Source: Project Location, Archaeological Study by Garcia and Associates (February 20, 2015), Verification of the Proposed Well Locations for PLN 2014-00421/APN: 066330130 and 066330150 by Garcia and Associates (October 31, 2016).

5.b.	Cause a significant adverse change in the significance of an archaeological resource pursuant to CEQA Section 15064.5?		X		

Discussion: The cultural resources report prepared by GANDA did not identify any prehistoric archaeological resources within the project area and surrounding vicinity. The following mitigation measure was provided by the archaeologist in the event prehistoric materials are discovered within or near the project area:

Mitigation Measure 3: In the event that prehistoric materials such as flaked-stone tools (e.g., projectile points, knives, choppers), obsidian, chert, basalt, or quartzite debris, bone tools, culturally darkened soil (e.g., midden soil often contains heat-affected rock, ash and charcoal, shellfish remains, faunal bones, and cultural materials), and stone milling equipment (e.g., mortars, pestles, handstones) are encountered, all excavations should be halted immediately, the San Mateo County Planning Department must be notified, and an archaeologist must be retained to examine the finds and assess the potential significance.

Source: Project Plans, Project Location, Garcia and Associates, Archaeological Study (dated February 20, 2015).

5.c.	Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?		X		

Discussion: There are no mapped unique paleontological resources or geological features in this area. The first proposed well location consists of Qt (marine terrace deposits) which is commonly found within the coastal area of the County. The second proposed well location consists of Tps (sedimentary rocks) which is also commonly found in the coastal and rural areas of the County. The following mitigation measures are being included to mitigate any potential impacts from construction activities.

Mitigation Measure 4: A discovery of a paleontological specimen during any phase of the project shall result in a work stoppage in the vicinity of the find until it can be evaluated by a professional paleontologist. Should loss or damage be detected, additional protective measures or further action (e.g., resource removal), as determined by a professional paleontologist, shall be implemented to mitigate the impact.

Mitigation Measure 5: Use existing roads to the maximum extent feasible to avoid additional surface disturbance.

Mitigation Measure 6: During all phases of the project, keep equipment and vehicles within the limits of the previously disturbed areas of the project site.

Source: U.S. Geological Survey Geologic Map of the San Francisco Bay Region (2006).

5.d.	Disturb any human remains, including those interred outside of formal cemeteries?		X		

Discussion: There are no known human remains in the developed/disturbed area. Mitigation Measure 7 is included to reduce any potential significant project impact to human remains to a less than significant level.

Mitigation Measure 7: The property owner, applicant, and contractors must be prepared to carry out the requirements of California State law with regard to the discovery of human remains during construction, whether historic or prehistoric. In the event that any human remains are encountered during site disturbance, all ground-disturbing work shall cease immediately and the County coroner shall be notified immediately. If the coroner determines the remains to be Native American, the Native American Heritage Commission shall be contacted within 24 hours. A qualified archaeologist, in consultation with the Native American Heritage Commission, shall recommend subsequent measures for disposition of the remains.

Source: Project Plans, Project Location, California State Law.

6. **GEOLOGY AND SOILS.** Would the project:				
	Potentially Significant Impacts	***Significant Unless Mitigated***	***Less Than Significant Impact***	***No Impact***
6.a. Expose people or structures to potential significant adverse effects, including the risk of loss, injury, or death involving the following, or create a situation that results in:				
i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other significant evidence of a known fault? *Note: Refer to Division of Mines and Geology Special Publication 42 and the County Geotechnical Hazards Synthesis Map.*				X
Discussion: The project site is located within a region of California characterized by active faulting. No known active faults cross the project site, nor is the project site within a current Earthquake Fault Zone, pursuant to the Alquist-Priolo Earthquake Fault Zoning Maps. Potential for ground rupture, or other similar effect, at the project site is highly unlikely. **Source:** California Geological Survey - Alquist-Priolo Earthquake Fault Zones Regulatory Map.				
ii. Strong seismic ground shaking?			X	
Discussion: The project parcel is located within an area designated as susceptible to very strong earthquake shaking. At this time, no habitable structures are proposed for the project site and therefore the project poses little risk to health and safety. Any future development of structures will be subject to submittal and review of a soils report and geotechnical investigation. **Source:** San Mateo County Earthquake Shaking San Andreas Fault Map.				
iii. Seismic-related ground failure, including liquefaction and differential settling?				X
Discussion: The project parcel is located in an area identified as having low probability for earthquake liquefaction. No habitable structures are proposed. **Source:** San Mateo County Earthquake Liquefaction San Andreas Fault - Peninsula Map.				
iv. Landslides?				X
Discussion: The project area consists of areas of Flatlands and areas of Few Landslides. No habitable structures are proposed. **Source:** San Mateo County Existing Landslides Map.				

v. Coastal cliff/bluff instability or erosion? *Note to reader: This question is looking at instability under current conditions. Future, potential instability is looked at in Section 7 (Climate Change).*			X	

Discussion: The western boundary of the project parcel consists entirely of coastal bluff. The project site is currently undeveloped except for an unpaved access road. While the proposed project does not include any habitable structures, the proposed well would constitute infrastructure. The proposed well is located approximately 300 linear feet from the bluff top. Due to its distance, the well is not expected to be impacted by bluff erosion.

Source: Project Location.

6.b. Result in significant soil erosion or the loss of topsoil?		X		

Discussion: Minor ground disturbance is required for drilling of the well. The following mitigation measures are included to minimize erosion and sediment impacts in the event that such occurs:

Mitigation Measure 8: Upon the start of excavation activities and through to the completion of the project, the applicant shall be responsible for ensuring that dust control measures are implemented as needed. The intent shall be to mitigate excessive dust generation resulting from any and all excavation and earth-moving operations.

Mitigation Measure 9: Implement best management practices (BMPs) for erosion and sediment control during all phases of building to include pre- and post-construction activities.

Mitigation Measure 10: Prior to the beginning of any construction or grading activities, the applicant shall implement the approved erosion and sediment control plan if applicable. Erosion control measure deficiencies, as they occur, shall be immediately corrected. The goal is to prevent sediment and other pollutants from leaving the project site and to protect all exposed earth surfaces from erosive forces. Said plan shall adhere to the San Mateo Countywide Stormwater Pollution Prevention Program "General Construction and Site Supervision Guidelines," including:

a. Stabilizing all denuded areas and maintaining erosion control measures continuously between October 1 and April 30. Stabilizing shall include both proactive measures, such as the placement of hay bales or coir netting, and passive measures, such as revegetating disturbed areas with plants propagated from seed collected in the immediate area.

b. Storing, handling, and disposing of construction materials and wastes properly, so as to prevent their contact with stormwater.

c. Controlling and preventing the discharge of all potential pollutants, including pavement cutting wastes, paints, concrete, petroleum products, chemicals, wash water or sediments, and non-stormwater discharges to storm drains and watercourses.

d. Using sediment controls or filtration to remove sediment when dewatering the site and obtaining all necessary permits.

e. Avoiding cleaning, fueling, or maintaining vehicles on-site, except in a designated area where wash water is contained and treated.

f. Delineating with field markers clearing limits, easements, setbacks, sensitive or critical areas, buffer zones, trees, and drainage courses.

g. Protecting adjacent properties and undisturbed areas from construction impacts using

vegetative buffer strips, sediment barriers or filters, dikes, mulching, or other measures as appropriate.

h. Performing clearing and earth-moving activities only during dry weather.

i. Limiting and timing application of pesticides and fertilizers to prevent polluted runoff.

j. Limiting construction access routes and stabilizing designated access points.

k. Avoiding tracking dirt or other materials off-site; cleaning off-site paved areas and sidewalks using dry sweeping methods.

l. The contractor shall train and provide instructions to all employees and subcontractors regarding the construction best management practices.

m. The approved erosion and sediment control plan shall be implemented prior to the beginning of construction.

Mitigation Measure 11: The applicant shall implement erosion control measures prior to the beginning of construction operations. Such activities shall not commence until the associated building permit for the project has been issued if applicable.

Source: Project Plans.

6.c. Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, severe erosion, liquefaction or collapse?				X

Discussion: The project site is not identified as containing a geological unit or soil that is presently unstable. Please refer to the discussion under 6.a.v. above.

Source: Project Plans.

6.d. Be located on expansive soil, as noted in the 2010 California Building Code, creating significant risks to life or property?				X

Discussion: There are no known expansive soils on the project site.

Source: Project Plans.

6.e. Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?				X

Discussion: The project does not include development that requires the installation of a septic system or other alternative wastewater disposal system. However, there is no indication that the property would not be able to support these types of systems.

Source: Project Plans.

7.	**CLIMATE CHANGE.** Would the project:				
		Potentially Significant Impacts	***Significant Unless Mitigated***	***Less Than Significant Impact***	***No Impact***
7.a.	Generate greenhouse gas (GHG) emissions (including methane), either directly or indirectly, that may have a significant impact on the environment?		X		

Discussion: Vehicular traffic onto the subject parcel for the drilling of the domestic well will cause a minor temporary increase in greenhouse gasses. Vehicles are subject to California Air Resources Board emission standards. Although the project scope is not likely to significantly generate greenhouse gasses, the following mitigation measure is recommended:

Mitigation Measure 12: Construction equipment shall comply with the County's Energy Efficiency Climate Action Plan (EECAP) for construction vehicle idling as applicable considering the sensitive nature of the project area. Specifically, Bay Area Air Quality Management District Best Management Practices for Mitigating Criteria Air Pollutants and Precursors:

a. All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be two times per day.

b. All haul trucks transporting soil, sand, or other loose material off-site shall be covered.

c. All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day.

d. All vehicle speeds on unpaved roads shall be limited to 15 miles per hour.

e. Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations). Clear signage shall be provided for construction workers at all access points.

f. All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be check by a certified visible emissions evaluator.

g. Post a publicly visible sign with the telephone number and person to contact at the Lead Agency regarding dust complaints. This person shall respond and take corrective action with 48 hours. The Air District's phone number shall also be visible to ensure compliance with applicable regulations.

Source: California Air Resources Board, San Mateo County Energy Efficiency Climate Action Plan.

7.b. Conflict with an applicable plan (including a local climate action plan), policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?			X	
Discussion: The project does not conflict with the San Mateo County Energy Efficiency Climate Action Plan provided that the mitigation measure outlined in Section 7.a above is implemented. **Source:** San Mateo County Energy Efficiency Climate Action Plan.				
7.c. Result in the loss of forestland or conversion of forestland to non-forest use, such that it would release significant amounts of GHG emissions, or significantly reduce GHG sequestering?				X
Discussion: There is no forestland in the project area. **Source:** Project Location.				
7.d. Expose new or existing structures and/or infrastructure (e.g., leach fields) to accelerated coastal cliff/bluff erosion due to rising sea levels?			X	
Discussion: The western boundary of the project parcel consists entirely of coastal bluff. The project parcel is currently undeveloped except for an unpaved access road. While the proposed project does not include any habitable structures, the proposed well would constitute infrastructure. The well is located approximately 300 linear feet from the bluff top. Due to its distance from the coastal bluff area, the well is not expected to be impacted by bluff erosion. The bluff itself is at a sufficient height in this location to accommodate the projected 1.4 meter sea level rise. While sea rise modeling does show that the parcel is subject to further erosion, the proposed well is located outside of this area. **Source:** Project Location, California Flood Risk: Sea Level Rise San Gregorio Quadrangle Map, Pacific Institute, 2009.				
7.e. Expose people or structures to a significant risk of loss, injury or death involving sea level rise?				X
Discussion: See discussion under Section 7.d above. Habitable structures are also not proposed. **Source:** Project Plans.				

7.f.	Place structures within an anticipated 100-year flood hazard area as mapped on a Federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?				X
Discussion: The project is not located in such an area. The project site is located within Flood Zone X (area of minimal flood hazard, usually depicted on FIRMs as above the 500-year flood level). **Source:** Federal Emergency Management Agency Flood Insurance Rate Map 06081C0360E, Effective October 16, 2012.					
7.g.	Place within an anticipated 100-year flood hazard area structures that would impede or redirect flood flows?				X
Discussion: The project is not located in such an area. No structures are proposed. **Source:** Project Plans, Federal Emergency Management Agency Flood Insurance Rate Map 06081C0360E, Effective October 16, 2012.					

8.	**HAZARDS AND HAZARDOUS MATERIALS.** Would the project:				
		Potentially Significant Impacts	***Significant Unless Mitigated***	***Less Than Significant Impact***	***No Impact***
8.a.	Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials (e.g., pesticides, herbicides, other toxic substances, or radioactive material)?				X
Discussion: No transport of hazardous materials is proposed for this project. **Source:** Project Plans.					
8.b.	Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?				X
Discussion: The use of hazardous materials is not proposed for this project. **Source:** Project Plans.					

8.c. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?				X
Discussion: The emission of hazardous materials, substances, or waste is not proposed for this project. The project site is also not located within one-quarter mile of an existing or proposed school. **Source:** Project Plans, Project Location.				
8.d. Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?				X
Discussion: The project site is not located in such an area. **Source:** California Department of Toxic Substances Control.				
8.e. For a project located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, result in a safety hazard for people residing or working in the project area?				X
Discussion: The project is not located in such an area. **Source:** Project Location.				
8.f. For a project within the vicinity of a private airstrip, result in a safety hazard for people residing or working in the project area?				X
Discussion: The project is not located in such an area. **Source:** Project Location.				
8.g. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?				X
Discussion: The proposed project is located completely on a privately owned parcel. All improvements are located within the boundaries of the subject parcel. The proposed project would not impede, change, or close any roadways that could be used for emergency purposes. All roads would remain unchanged. The drilling of the domestic well would not impact public safety. **Source:** Project Plans, Project Location, Google Maps.				

8.h.	Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?				X
Discussion: The project is not located within a fire hazard severity zone. No habitable structures are proposed. **Source:** Cal-Fire Fire Hazard Severity Zones Maps.					
8.i.	Place housing within an existing 100-year flood hazard area as mapped on a Federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?				X
Discussion: The project parcel is not located in such an area. No housing is proposed. **Source:** Project Plans, Federal Emergency Management Agency Flood Insurance Rate Map 06081C0360E, Effective October 16, 2012.					
8.j.	Place within an existing 100-year flood hazard area structures that would impede or redirect flood flows?				X
Discussion: The project site is located in Flood Zone X, an area of minimal flood hazard. The project would not place structures within a 100-year flood hazard area as the project site is not located within a flood hazard zone that will be inundated by a 100-year flood. **Source:** Federal Emergency Management Agency Flood Insurance Rate Map 06081C0360E, Effective October 16, 2012.					
8.k.	Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?				X
Discussion: The project site is not located within an area that would be impacted by the failure of a levee or dam. **Source:** San Mateo County General Plan Hazards Map.					
8.l.	Inundation by seiche, tsunami, or mudflow?				X
Discussion: The project is not located in such an area. **Source:** San Mateo County General Plan Hazards Map.					

9. HYDROLOGY AND WATER QUALITY. Would the project:				
	Potentially Significant Impacts	***Significant Unless Mitigated***	***Less Than Significant Impact***	***No Impact***
9.a. Violate any water quality standards or waste discharge requirements (consider water quality parameters such as temperature, dissolved oxygen, turbidity and other typical stormwater pollutants (e.g., heavy metals, pathogens, petroleum derivatives, synthetic organics, sediment, nutrients, oxygen-demanding substances, and trash))?		X		

Discussion: A hydrologic conditions report, prepared by Mark Woyshner of Balance Hydrologics, Inc., was submitted as part of the permit application. The report addresses three critical areas: the hydrological setting which describes the existing conditions on the parcel, potential drawdown for a well in the project area based on local aquifer information, and analysis of the impacts to hydrology and water quality in the project area. The report states that the gentle sloping marine terrace of the parcel is densely covered with grasses and is reported to have rapid surface permeability, though subsoil permeability is very slow. The installation and yield testing of a domestic well can include the use of drilling mud or foam, and bringing groundwater to the ground surface. Groundwater pumped to the ground surface would likely trickle down the rock face of the coastal bluff without erosion and increasing turbidity. The report concluded that the proposed project poses no impacts to these areas of consideration. Given the existing site conditions, the limited nature of the project scope, and the required installation of sediment and erosion control measures (Mitigation Measure 10), there are no expected significant impacts. As a recommendation by Woyshner, Mitigation Measures 13 and 14 are included to minimize any impacts to the pond located south of the proposed well locations:

Mitigation Measure 13: To ensure drilling mud and foam do not enter into the pond located south from the proposed well sites; silt fencing and straw waddles are required to be installed around the second well location.

Mitigation Measure 14: A hose to direct discharge away from or downstream from the pond is required to be installed during yield testing.

Source: Project Plans, Existing Hydrologic Conditions Report for Well Permit Application PLN 2016-00445 for APN 066-330-130-150, Mark Woyshner of Balance Hydrologics, Inc. (November 7, 2016).

9.b. Significantly deplete groundwater supplies or interfere significantly with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?				X

Discussion: The project plans show that the first proposed well is located 105 feet from the front property line. The submitted hydrologist report states that the two proposed well sites are approximately 2,000 feet from the nearest existing well. Given that the hydrologist's estimated area of influence and potential capture zone for the proposed well sites are significantly less than the distance to the nearest well, the proposed well sites are not expected to result in significant groundwater depletion or interfere with groundwater recharge.

Source: Project Plans; Existing Hydrologic Conditions Report for Well Permit Application PLN 2016-00445 for APN 066-330-130-150 by Mark Woyshner of Balance Hydrologics, Inc. (November 7, 2016).

9.c.	Significantly alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner that would result in significant erosion or siltation on- or off-site?		X		

Discussion: The project does not involve grading or site improvements that would alter the existing drainage pattern of the site. The standard area for a finished well is normally less than 10 sq. ft. in area so there is no expectation that the well would result in any change to the drainage pattern of the site or result in erosion on- or off-site. There is a natural drainage that occurs on the south eastern portion of the parcel which is not proposed for alteration. An intermittent pond is also located in this area with its water draining to a natural drainage channel. Mitigation Measures 13 and 14 are included under Section 9.a above to mitigate any potential impacts to the pond and natural drainage.

Source: Project Plans, Existing Hydrologic Conditions Report for Well Permit Application PLN 2016-00445 for APN 066-330-130-150 by Mark Woyshner of Balance Hydrologics, Inc. (November 7, 2016).

9.d.	Significantly alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or significantly increase the rate or amount of surface runoff in a manner that would result in flooding on- or off-site?				X

Discussion: The project would not significantly alter the existing drainage pattern of the site or significantly increase the rate or amount of surface runoff that would result in flooding on- or off-site. See Section 9.c. above.

Source: Project Plans, Existing Hydrologic Conditions Report for Well Permit Application PLN 2016-00445 for APN 066-330-130-150 by Mark Woyshner of Balance Hydrologics, Inc. (November 7, 2016).

9.e. Create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide significant additional sources of polluted runoff?				X
Discussion: There are no existing or planned stormwater drainage systems at the time of this application. See discussion in Section 9.c above. **Source:** Project Plans, Existing Hydrologic Conditions Report for Well Permit Application PLN 2016-00445 for APN 066-330-130-150 by Mark Woyshner of Balance Hydrologics, Inc. (November 7, 2016).				
9.f. Significantly degrade surface or ground-water water quality?			X	
Discussion: No degradation of surface or groundwater water quality is expected to be associated with the proposed project. As discussed previously, the area of influence and potential capture zone estimates for the proposed wells indicate a limited and minimal local capture area for the maximum daily demand of single-family residences. Given that the proposed well locations are over 2,000 feet away from nearby wells, approximately 500 feet from the coast at an elevation of 200 feet above sea level, and the groundwater flowing from an up gradient easterly direction, there is no expected impact to groundwater from salt water intrusion. **Source:** Project Plans, Existing Hydrologic Conditions Report for Well Permit Application PLN 2016-00445 for APN 066-330-130-150 by Mark Woyshner of Balance Hydrologics, Inc. (November 7, 2016).				
9.g. Result in increased impervious surfaces and associated increased runoff?				X
Discussion: The project would not result in increased impervious surfaces and associated increased runoff. See discussion in Section 9.c above. **Source:** Project Plans, Existing Hydrologic Conditions Report for Well Permit Application PLN 2016-00445 for APN 066-330-130-150 by Mark Woyshner of Balance Hydrologics, Inc. (November 7, 2016).				

10. LAND USE AND PLANNING. Would the project:				
	Potentially Significant Impacts	***Significant Unless Mitigated***	***Less Than Significant Impact***	***No Impact***
10.a. Physically divide an established community?				X
Discussion: There is no land division or development proposed that would physically divide an established community. **Source:** Project Plans.				

10.b. Conflict with any applicable land use plan, policy or regulation of an agency with jurisdiction over the project (including, but not limited to, the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?				X
Discussion: The project does not conflict with any applicable land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect. As mitigated and conditioned, the project is compliant with applicable land use regulations. **Source:** Project Plans, San Mateo County General Plan, San Mateo County Zoning Regulations.				
10.c. Conflict with any applicable habitat conservation plan or natural community conservation plan?				X
Discussion: No known conservation plan within project area. **Source:** Project Location, San Mateo County General Plan.				
10.d. Result in the congregating of more than 50 people on a regular basis?				X
Discussion: The proposed project does not propose a use that would result in the congregation of more than 50 people on a regular basis. **Source:** Project Plans.				
10.e. Result in the introduction of activities not currently found within the community?				X
Discussion: The proposed project does not introduce a use that is not currently found within the community. **Source:** Project Plans.				
10.f. Serve to encourage off-site development of presently undeveloped areas or increase development intensity of already developed areas (examples include the introduction of new or expanded public utilities, new industry, commercial facilities or recreation activities)?				X
Discussion: The proposed project improvements would serve only the subject property. These improvements are completely within the boundaries of the subject parcel and do not intend to encourage off-site development of presently undeveloped areas or increase development intensity of already developed areas. **Source:** Project Plans.				

10.g. Create a significant new demand for housing?				X
Discussion: None proposed. **Source:** Project Plans.				

11. MINERAL RESOURCES. Would the project:				
	Potentially Significant Impacts	***Significant Unless Mitigated***	***Less Than Significant Impact***	***No Impact***
11.a. Result in the loss of availability of a known mineral resource that would be of value to the region or the residents of the State?				X
Discussion: None proposed. **Source:** Project Plans.				
11.b. Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?				X
Discussion: None proposed. **Source:** Project Plans.				

12. NOISE. Would the project result in:				
	Potentially Significant Impacts	***Significant Unless Mitigated***	***Less Than Significant Impact***	***No Impact***
12.a. Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?		X		

Discussion: The well is not expected to generate a significant amount of noise. However, construction activities associated with the project could generate noise levels above standards set forth in the County Noise Ordinance. Mitigation Measure 15 is included to ensure that noise generated during construction is reduced to a less than significant level.

Mitigation Measure 15: Noise levels produced by proposed construction activities shall comply with the San Mateo County Noise Ordinance contained in Chapter 4.88 (*Noise Regulations*) of the County Ordinance Code. Construction activities shall be limited to the hours of 7:00 a.m. to 6:00 p.m., Monday through Friday, and 9:00 a.m. to 5:00 p.m. on Saturdays. Construction operations shall be prohibited on Sundays and any national holidays.

Source: Project Plans, San Mateo County Noise Ordinance.

12.b. Exposure of persons to or generation of excessive ground-borne vibration or ground-borne noise levels?				X

Discussion: None proposed.

Source: Project Plans.

12.c. A significant permanent increase in ambient noise levels in the project vicinity above levels existing without the project?				X

Discussion: None proposed.

Source: Project Plans.

12.d. A significant temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?			X	

Discussion: A temporary increase in ambient noise levels during the construction phase of the project is expected. However, due to the project scope, this exposure is minimal and will not exceed the County Noise Ordinance for construction-related activities.

Source: Project Plans, San Mateo County Noise Ordinance.

12.e. For a project located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, exposure to people residing or working in the project area to excessive noise levels?				X

Discussion: The project is not located in such an area.

Source: Project Plans, Project Location.

12.f. For a project within the vicinity of a private airstrip, exposure to people residing or working in the project area to excessive noise levels?				X
Discussion: The project is not located within the vicinity of a private airstrip. **Source:** Project Location.				

13. POPULATION AND HOUSING. Would the project:				
	Potentially Significant Impacts	***Significant Unless Mitigated***	***Less Than Significant Impact***	***No Impact***
13.a. Induce significant population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?				X
Discussion: The proposed project is completely within the subject parcel and involves improvements to serve it. The proposed project is not expected to induce direct or indirect significant population growth. **Source:** Project Plans.				
13.b. Displace existing housing **(including low- or moderate-income housing)**, in an area that is substantially deficient in housing, necessitating the construction of replacement housing elsewhere?				X
Discussion: None proposed or expected. **Source:** Project Plans.				

14.	**PUBLIC SERVICES**. Would the project result in significant adverse physical impacts associated with the provision of new or physically altered government facilities, the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
		Potentially Significant Impacts	***Significant Unless Mitigated***	***Less Than Significant Impact***	***No Impact***
14.a.	Fire protection?				X
14.b.	Police protection?				X
14.c.	Schools?				X
14.d.	Parks?				X
14.e.	Other public facilities or utilities (e.g., hospitals, or electrical/natural gas supply systems)?				X

Discussion: The proposed project involves the drilling of a domestic well. There would be no impact to public services.

Source: Project Plans.

15.	**RECREATION**. Would the project:				
		Potentially Significant Impacts	***Significant Unless Mitigated***	***Less Than Significant Impact***	***No Impact***
15.a.	Increase the use of existing neighborhood or regional parks or other recreational facilities such that significant physical deterioration of the facility would occur or be accelerated?				X

Discussion: The proposed well would be entirely located on the subject privately owned parcel. There is no expected increase in the use of the existing neighborhood, regional parks, or other recreational facilities that would result in physical deterioration of any such facility as a result of completion of the proposed project.

Source: Project Plans.

15.b. Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?				X
Discussion: No recreational facilities or expansion of recreational facilities are proposed. **Source:** Project Plans.				

16. TRANSPORTATION/TRAFFIC. Would the project:				
	Potentially Significant Impacts	***Significant Unless Mitigated***	***Less Than Significant Impact***	***No Impact***
16.a. Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including, but not limited to, intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?				X
Discussion: The proposed project would occur completely on the subject privately owned parcel. The project does not involve a level of development that would conflict with an applicable plan, ordinance, or policy that establishes measures of effectiveness for the performance of the circulation system. **Source:** Project Location.				
16.b. Conflict with an applicable congestion management program, including, but not limited to, level of service standards and travel demand measures, or other standards established by the County congestion management agency for designated roads or highways?				X
Discussion: The proposed project does not involve a level of development that may conflict with an applicable congestion management program. See discussion under Section 16.a above. **Source:** Project Location.				

16.c. Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in significant safety risks?				X
Discussion: None proposed. **Source:** Project Plans, Project Location.				
16.d. Significantly increase hazards to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?				X
Discussion: No development proposed that would significantly increase hazards to design features or incompatible uses. **Source:** Project Plans, Project Location.				
16.e. Result in inadequate emergency access?				X
Discussion: The proposed project does not include improvements to any existing roads on the property. The project site can be accessed without alterations to the existing conditions. The proposed project also does not include any habitable structures that would require emergency access. **Source:** Project Plans.				
16.f. Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?				X
Discussion: None proposed. See discussion under Section 16.a above. **Source:** Project Plans, Project Location.				
16.g. Cause noticeable increase in pedestrian traffic or a change in pedestrian patterns?				X
Discussion: The proposed project does not result in changes outside of the parcel boundaries. There is no expectation of an increase to or change in the pedestrian patterns in the surrounding area. **Source:** Project Plans.				

16.h. Result in inadequate parking capacity?				X

Discussion: The proposed project does not require permanent parking and would, therefore, not result in inadequate parking capacity. The 26.79 acre parcel can adequately accommodate the temporary vehicle parking for the proposed well drilling project.

Source: Project Plans, San Mateo County Zoning Regulations.

17. UTILITIES AND SERVICE SYSTEMS. Would the project:

	Potentially Significant Impacts	*Significant Unless Mitigated*	*Less Than Significant Impact*	*No Impact*
17.a. Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?				X

Discussion: The proposed project does not require wastewater treatment measures to be installed as part of the project.

Source: Project Plans.

17.b. Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?			X	

Discussion: Since there is no municipal water service available in the project area, the proposed project seeks to install a new domestic water source by drilling the proposed well. The County's Environmental Health Division has preliminarily reviewed the project and provided conditional approval for the project. In addition, as discussed in Section 9 above, an existing hydrologic conditions report was submitted for the project area. The report determined that the proposed well sites pose no risk to the existing water sources. Therefore, the proposed work is not expected to result in any significant environmental impacts.

Source: Project Plans, Project Location, Existing Hydrologic Conditions Report for Well Permit Application PLN 2016-00445 for APN 066-330-130-150 by Mark Woyshner of Balance Hydrologics, Inc. (November 7, 2016).

17.c. Require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?				X

Discussion: The proposed project does not require the installation of stormwater drainage facilities based on the project scope.

Source: Project Plans.

17.d. Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?				X
Discussion: Confirmation of a potable water source is necessary to determine the level of development the parcel can or cannot support. The proposed project does not include any additional development at this time. Any future development would be evaluated to ensure that there is sufficient water supplies to serve it. **Source:** Project Plans.				
17.e. Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?				X
Discussion: There is no impact because the project site is not served by a municipal wastewater treatment provider. **Source:** Project Plans, Project Location.				
17.f. Be served by a landfill with insufficient permitted capacity to accommodate the project's solid waste disposal needs?				X
Discussion: The proposed project would not result in development which requires municipal trash pick-up service. **Source:** Project Plans.				
17.g. Comply with Federal, State, and local statutes and regulations related to solid waste?				X
Discussion: The proposed project does not result in the creation of solid waste. While municipal solid waste service exists in the area, the proposed well sites are not expected to result in waste production that would trigger compliance with Federal, State, and/or local statutes and regulations. **Source:** Project Plans, Project Location.				
17.h. Be sited, oriented, and/or designed to minimize energy consumption, including transportation energy; incorporate water conservation and solid waste reduction measures; and incorporate solar or other alternative energy sources?				X
Discussion: The proposed well would not require electricity at this time. If water is found, the well would be capped until development entitlements are secured. **Source:** Project Plans.				

17.i. Generate any demands that will cause a public facility or utility to reach or exceed its capacity?				X

Discussion: The proposed project would not generate any demands of this kind. See discussion of utility usage in Sections 17.a - h above.

Source: Project Plans.

18. MANDATORY FINDINGS OF SIGNIFICANCE.				
	Potentially Significant Impacts	***Significant Unless Mitigated***	***Less Than Significant Impact***	***No Impact***
18.a. Does the project have the potential to degrade the quality of the environment, significantly reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?			X	

Discussion: Three wildlife species, the California red-legged frog, San Francisco garter snake, and saltmarsh common yellowthroat, and two plant species, the Coastal marsh milk-vetch and Choris' popcornflower, were listed as species that have potential to occur within or around the project area. See discussion and Mitigation Measures 1 and 2 in Section 4.a and 4.b above. The project would not degrade the quality of the environment, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major period of California history or prehistory.

Source: Project Plans, California Natural Diversity Database, California Native Plant Society, Wilkinson Well and Pump Company Habitat Assessment, San Mateo County, CA, by Garcia and Associates, Mitigation Measures PLN 2016-00445 Letter by Wilkinson Enterprises, Inc.

18.b. Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)			X	

Discussion: The project parcel is currently unimproved aside from an unpaved access road. The proposed project involves the drilling of a domestic water well. Future development could have the potential to result in cumulative impacts depending on the type and scope of the project. However, any future development on the parcel would be subject to a separate environmental analysis and issuance of separate Planning and Building permits where the cumulative impacts at that time would be evaluated. Given the domestic water well application, the assumed future development would likely be a single-family residence. This type of development is present within the vicinity of the project parcel and is a use consistent with the County Zoning Regulations (with issuance of a permit). However, there is no indication that, if planned appropriately the resulting project would result in cumulative impacts.

Source: Project Plans.

18.c. Does the project have environmental effects which will cause significant adverse effects on human beings, either directly or indirectly?				X

Discussion: The proposed project does not have environmental effects which will cause significant adverse effects on human beings, either directly or indirectly. See discussion in Section 18.b above about potential future development.

Source: Project Plans, Project Location.

RESPONSIBLE AGENCIES. Check what agency has permit authority or other approval for the project.

AGENCY	YES	NO	TYPE OF APPROVAL
U.S. Army Corps of Engineers (CE)		X	
State Water Resources Control Board		X	
Regional Water Quality Control Board		X	
State Department of Public Health		X	
San Francisco Bay Conservation and Development Commission (BCDC)		X	
U.S. Environmental Protection Agency (EPA)		X	
County Airport Land Use Commission (ALUC)		X	
CalTrans		X	
Bay Area Air Quality Management District		X	
U.S. Fish and Wildlife Service		X	
Coastal Commission	X		
City		X	

AGENCY	YES	NO	TYPE OF APPROVAL
Sewer/Water District:		X	
Other: San Mateo County Division of Environmental Health	X		

MITIGATION MEASURES

	Yes	No
Mitigation measures have been proposed in project application.		X
Other mitigation measures are needed.	X	

The following measures are included in the project plans or proposals pursuant to Section 15070(b)(1) of the State CEQA Guidelines:

Mitigation Measure 1: The applicant shall implement the following measures during construction to protect the California red-legged frog, the San Francisco garter snake, and the saltmarsh common yellowthroat which have a high potential to occur within the project area:

a. Construction will only be performed during the Winter and/or Spring to avoid nesting seasons for the California red-legged frog and the San Francisco garter snake.

b. A frog and snake fence will be installed around the construction work site. The fence will be 3 feet high and 10 feet away from the proposed well locations.

Mitigation Measure 2: The applicant shall implement the following measure during construction to protect the Coastal marsh milk-vetch and Choris' popcornflower which have a moderate potential to occur within the project area:

a. Construction will only be performed during the Winter and/or Spring to avoid the blooming seasons of the Coastal marsh milk-vetch (June to October) and Choris' popcornflower (March to June).

Mitigation Measure 3: In the event that prehistoric materials such as flaked-stone tools (e.g., projectile points, knives, choppers), obsidian, chert, basalt, or quartzite debris, bone tools, culturally darkened soil (e.g., midden soil often contains heat-affected rock, ash and charcoal, shellfish remains, faunal bones, and cultural materials), and stone milling equipment (e.g., mortars, pestles, handstones) are encountered, all excavations should be halted immediately, the San Mateo County Planning Department must be notified, and an archaeologist must be retained to examine the finds and assess the potential significance.

Mitigation Measure 4: A discovery of a paleontological specimen during any phase of the project shall result in a work stoppage in the vicinity of the find until it can be evaluated by a professional paleontologist. Should loss or damage be detected, additional protective measures or further action (e.g., resource removal), as determined by a professional paleontologist, shall be implemented to mitigate the impact.

Mitigation Measure 5: Use existing roads to the maximum extent feasible to avoid additional surface disturbance.

Mitigation Measure 6: During all phases of the project, keep equipment and vehicles within the limits of the previously disturbed areas of the project site.

Mitigation Measure 7: The property owner, applicant, and contractors must be prepared to carry out the requirements of California State law with regard to the discovery of human remains during construction, whether historic or prehistoric. In the event that any human remains are encountered during site disturbance, all ground-disturbing work shall cease immediately and the County coroner shall be notified immediately. If the coroner determines the remains to be Native American, the Native American Heritage Commission shall be contacted within 24 hours. A qualified archaeologist, in consultation with the Native American Heritage Commission, shall recommend subsequent measures for disposition of the remains.

Mitigation Measure 8: Upon the start of excavation activities and through to the completion of the project, the applicant shall be responsible for ensuring that dust control measures are implemented as needed. The intent shall be to mitigate excessive dust generation resulting from any and all excavation and earth-moving operations.

Mitigation Measure 9: Implement best management practices (BMPs) for erosion and sediment control during all phases of building to include pre- and post-construction activities.

Mitigation Measure 10: Prior to the beginning of any construction or grading activities, the applicant shall implement the approved erosion and sediment control plan if applicable. Erosion control measure deficiencies, as they occur, shall be immediately corrected. The goal is to prevent sediment and other pollutants from leaving the project site and to protect all exposed earth surfaces from erosive forces. Said plan shall adhere to the San Mateo Countywide Stormwater Pollution Prevention Program "General Construction and Site Supervision Guidelines," including:

a. Stabilizing all denuded areas and maintaining erosion control measures continuously between October 1 and April 30. Stabilizing shall include both proactive measures, such as the placement of hay bales or coir netting, and passive measures, such as revegetating disturbed areas with plants propagated from seed collected in the immediate area.

b. Storing, handling, and disposing of construction materials and wastes properly, so as to prevent their contact with stormwater.

c. Controlling and preventing the discharge of all potential pollutants, including pavement cutting wastes, paints, concrete, petroleum products, chemicals, wash water or sediments, and non-stormwater discharges to storm drains and watercourses.

d. Using sediment controls or filtration to remove sediment when dewatering the site and obtaining all necessary permits.

e. Avoiding cleaning, fueling, or maintaining vehicles on-site, except in a designated area where wash water is contained and treated.

f. Delineating with field markers clearing limits, easements, setbacks, sensitive or critical areas, buffer zones, trees, and drainage courses.

g. Protecting adjacent properties and undisturbed areas from construction impacts using vegetative buffer strips, sediment barriers or filters, dikes, mulching, or other measures as appropriate.

h. Performing clearing and earth-moving activities only during dry weather.

i. Limiting and timing application of pesticides and fertilizers to prevent polluted runoff.

j. Limiting construction access routes and stabilizing designated access points.

k. Avoiding tracking dirt or other materials off-site; cleaning off-site paved areas and sidewalks using dry sweeping methods.

l. The contractor shall train and provide instructions to all employees and subcontractors

regarding the construction best management practices.

m. The approved erosion and sediment control plan shall be implemented prior to the beginning of construction.

Mitigation Measure 11: The applicant shall implement erosion control measures prior to the beginning of construction operations. Such activities shall not commence until the associated building permit for the project has been issued if applicable.

Mitigation Measure 12: Construction equipment shall comply with the County's Energy Efficiency Climate Action Plan (EECAP) for construction vehicle idling as applicable considering the sensitive nature of the project area. Specifically, Bay Area Air Quality Management District Best Management Practices for Mitigating Criteria Air Pollutants and Precursors:

a. All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be two times per day.

b. All haul trucks transporting soil, sand, or other loose material off-site shall be covered.

c. All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day.

d. All vehicle speeds on unpaved roads shall be limited to 15 miles per hour.

e. Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations). Clear signage shall be provided for construction workers at all access points.

f. All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be check by a certified visible emissions evaluator.

g. Post a publicly visible sign with the telephone number and person to contact at the Lead Agency regarding dust complaints. This person shall respond and take corrective action with 48 hours. The Air District's phone number shall also be visible to ensure compliance with applicable regulations

Mitigation Measure 13: To ensure drilling mud and foam do not enter into the pond located south from the proposed well sites; silt fencing and straw waddles are required to be installed around the second well location.

Mitigation Measure 14: A hose to direct discharge away from or downstream from the pond is required to be installed during yield testing.

Mitigation Measure 15: Noise levels produced by proposed construction activities shall comply with the San Mateo County Noise Ordinance contained in Chapter 4.88 (*Noise Regulations*) of the County Ordinance Code. Construction activities shall be limited to the hours of 7:00 a.m. to 6:00 p.m., Monday through Friday, and 9:00 a.m. to 5:00 p.m. on Saturdays. Construction operations shall be prohibited on Sundays and any national holidays.

DETERMINATION (to be completed by the Lead Agency).

On the basis of this initial evaluation:

_____ I find the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared by the Planning Department.

X I find that although the proposed project could have a significant effect on the environment, there WILL NOT be a significant effect in this case because of the mitigation measures in the discussion have been included as part of the proposed project. A NEGATIVE DECLARATION will be prepared.

_____ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

(Signature)

March 8, 2017 — Date

Project Planner — (Title)

CJM:jlh – CJMBB0079_WJQ.DOCX

Attachment H

STATE OF CALIFORNIA—NATURAL RESOURCES AGENCY
EDMUND G. BROWN JR., GOVERNOR

CALIFORNIA COASTAL COMMISSION
NORTH CENTRAL COAST DISTRICT OFFICE
45 FREMONT STREET, SUITE 2000
SAN FRANCISCO, CA 94105
PHONE: (415) 904-5260
FAX: (415) 904-5400
WEB: WWW.COASTAL.CA.GOV

March 28, 2017

Carmelisa Morales, Project Planner
455 County Center, 2nd Floor
Redwood City, CA 94063

RE: Notice of Intent to Adopt Mitigated Negative Declaration for PLN 2016-00445

Dear Ms. Morales:

Thank you for forwarding the Notice of Intent to Adopt a Negative Declaration for PLN 2016-00445 dated March 8, 20017, received in our San Francisco office on March 10, 2017. The proposed project site is located on a vacant parcel adjacent to Cabrillo Highway in unincorporated San Mateo County (APNs: 066-330-130 and 066-330-150). The applicant has prepared an Initial Study/Mitigated Negative Declaration (IS/MND) for a domestic well to serve a future, single-family residence on the parcel. The proposed location for the well is approximately 105 feet from the front property line and approximately 100 feet north of an intermittent pond located on the parcel. The applicant has also identified an alternative location for a well, should the first proposed site turn out to be unsuccessful. The proposed alternative location is approximately 180 feet from the front property line and approximately 175 feet northeast of the first well location. We previously (in December 2014 and June 2015) reviewed and commented on an IS/MND for a proposed domestic well at a different location on this parcel, as described in County Project Referral PLN 2014-00421. The applicant is now pursuing alternative well locations because the previous location turned-up dry.

The area is zoned as Planned Agricultural District (PAD). The applicant is requesting a Coastal Development Permit (CDP) to construct a domestic well on the undeveloped parcel to serve a future single-family residence. The purpose of the PAD is to preserve and foster existing and potential agricultural operations in San Mateo County in order to keep the maximum amount of prime agricultural land and all other lands suitable for agriculture in agricultural production. The IS/MND finds that the proposed domestic well will not result in an impact on agricultural resources. We remind the County and the Applicant that any subsequent CDP or PAD permit application for construction of a single-family residence on this parcel will need to be accompanied by an analysis of any conversion of agricultural land to a non-agricultural use. The County analysis should confirm the amount of water that will be available from the proposed well to support a single-family residence. The analysis must demonstrate that the use of the proposed well will not impair surface stream flows, agricultural viability or production, or sensitive habitat areas in the project vicinity, or result in an impact on wells located on adjacent land.

Critical Habitat for California red-legged frog (CRLF) occurs within approximately 400 feet of the proposed project area. The project area has suitable habitat for CRLF, San Francisco garter snake (SFGS), and saltmarsh common yellowthroat. The IS/ND identifies significant impacts to biological resources (unless mitigated) and includes measures to mitigate potential impacts. Mitigation Measure 1 states construction will be performed to avoid nesting season for CRLF and SFGS. This measure should be modified to provide for the protection of these species by requiring construction outside of the breeding season (November through March). The biological report identifies suitable habitat located within the vicinity of the pond for special status plant species. Field reviews were conducted on November 22 and 28, 2016. The applicant should assume the presence of the special status species listed in Table 1 of the biological report, unless surveys are conducted during the species blooming season at which time occurrence of the species within the proposed project site can be confirmed. Project plans should show all sensitive habitat areas to be protected during work activities for the proposed project. The proposed project is for a well for a future single-family dwelling. Any future development of the site will require re-assessment of the site and its biological conditions as part of the evaluation of impacts to coastal resources. Any proposed development must comply with all other applicable San Mateo County Local Coastal Program policies; including, but not limited to, those for the protection of biological, agricultural, and scenic resources.

Please feel free to contact me if you have questions regarding our comments. I can be contacted via telephone at (415) 904-5292 or e-mail at renee.ananda@coastal.ca.gov.

Sincerely,

Renée Ananda

Renée Ananda
Coastal Program Analyst
North Central Coast District

COMMITTEE FOR GREEN FOOTHILLS

March 20, 2017

Carmelisa Morales, Project Planner
San Mateo County Planning
455 County Center, Second Floor
Redwood City, CA 94063

Re: File No: PLN2016-00445: Initial Study and Negative Declaration for the proposed drilling of one domestic water well at one of two potential sites to serve a single family residence on a vacant 26.74-acre parcel.

Dear Carmelisa,

Thank you for the opportunity to comment on the above-referenced project. On behalf of Committee for Green Foothills (CGF), I have the following comments.

The subject property is located west of Highway One between Lobitos Creek and Tunitas Creek, and is within the Cabrillo Highway State Scenic Corridor. A Negative Declaration was issued for a previous application to drill a domestic water well at a different location on the property (File # PLN2016-00445). This well was drilled to a depth of 600 feet, and was completed on November 6, 2015, but did not yield sufficient water for the proposed project. This Initial Study/Mitigated Negative Declaration (IS/MND) is for one additional well on the same property, although two well locations are proposed.

CGF's specific comments:

Initial Study, Item 6 Assessor's Parcel Numbers and Size of Parcel, page 1: Answer only lists the APNs. Please include the size of the parcel(s).

Initial Study, Item 12, Other public agencies whose approval is required, page 1: The answer is "None". In fact, the San Mateo County Department of Environmental Health must issue a permit for drilling and completion of the well. The project is also appealable to the California Coastal Commission, and should be so noted.

Item 1 Aesthetics, page 3: The subject property is described as including an unpaved driveway and road that provides access directly from Cabrillo Highway. This statement is inconsistent with Item 11 Surrounding Land Uses and Setting on page 1, which states: "There is an asphalt road that starts from the entrance at Highway 1 and runs through the eastern portion of the parcel." Several sources indicate that this segment of asphalt road is an old section of Highway 1 that was abandoned upon improving and straightening the highway. Did Caltrans formally abandon this old ROW? An excellent aerial photograph of the subject parcel can be found at the California Coastal Records Project:

3921 E. Bayshore Road
Palo Alto, CA 94303
650.968.7243 PHONE
650.968.8431 FAX
info@GreenFoothills.org
www.GreenFoothills.org

http://www.californiacoastline.org/cgi-bin/image.cgi?image=201306919&mode=big&lastmode=sequential&flags=0&year=current

The topography and proximity of the proposed well sites, particularly Site 1, to the existing agricultural pond is clearly evident in this aerial view.

Item 2.c Agricultural and Forest Resources, page 6: Discussion of whether the project could result in the conversion of Farmland to non-agricultural uses acknowledges that if sufficient water is found by drilling the proposed well(s), future development may be proposed on the parcel. However, the IS/MND defers analysis of any potential impacts of future development to the future. Given that an onsite domestic well is a prerequisite for development of a single family residence in the Planned Agricultural District, the IS/MND should more thoroughly analyze the impacts of conversion of a portion of the property to non-agricultural use.

Item 4.a Biological Resources, page 9: This question acknowledges that the proposed project could have a significant adverse impact on three special status wildlife species: California red-legged frog (CRLF), San Francisco garter snake (SFGS), and saltmarsh common yellowthroat (SCY). Discussion notes that the agricultural pond has hydrological potential to support egg-laying and tadpole metamorphosis (which typically occurs from December to April). The adjacent riparian area and upland south and west facing grasslands also provide refugia for CRLF and SFGS. SFGS also have been noted basking on edges of berms and asphalt surfaced trails and roads. Mitigation Measure 1.a., which limits construction of the proposed well only during the Winter and/or Spring "to avoid nesting seasons" for the CRLF and SFGS is not appropriate. There is no "nesting season" for either the CRLF or SFGS, inasmuch as these particular species do not engage in "nesting". Other proposed projects such as POST's Pillar Point Bluff Erosion control and Trail Project required that any construction within 500 feet of a wetland shall be scheduled during the driest time of the year, typically August 1 through October 15, to minimize the potential impacts to CRLF and SFGS. Mitigation Measure #1.b., which requires a frog and snake fence "around the construction work site" should be revised to require the exclusion fence along the access road to the construction work site.

Item 4.b. Biological Resources, page 10: This question acknowledges that the proposed project could have a significant adverse impact on two special status plant species: Coastal marsh milk-vetch and Choris' popcorn flower. Mitigation Measure 2.a. states that construction will only be performed during Winter and/or Spring to "avoid the blooming seasons of these two plants". Impacts to plants do not occur only during blooming season. An updated Biological Survey should be done during the blooming season to determine whether either of these protected species are within the proposed construction area. The project site is also likely to support Coastal Prairie grassland. Coastal prairie is a rare and especially valuable native grassland habitat that supports several rare and endangered species. The importance of coastal prairie habitat is widely recognized by CA Fish and

Wildlife and the California Native Plant Society. As such, coastal prairie is a sensitive habitat as defined in the San Mateo County Local Coastal Program Land Use Plan Policy 7.1. The property immediately to the east of the project site (APN 066-330-160) supports extensive areas of Coastal Prairie grassland, as detailed in the Coastal Commission Staff Report: for Permit Amendment, Appeal No. A-2-SMC-04-009-A1 (Keith and Cindy Waddell): https://documents.coastal.ca.gov/reports/2006/2/F12a-2-2006.pdf.

Item 4.d Biological Resources, pages 10 and 11: There is insufficient evidence to conclude that the project is not expected to pose a significant threat to native or migratory wildlife species "as it is located in the grassland and cypress tree area" of the property. If the project occurs during nesting season of avian species dependent upon grasslands or mature cypress trees, there is a potential for the project to have a significant impact upon those species. A new Mitigation Measure should specify that the timing of the project must avoid avian nesting season.

Item 9.b Hydrology and Water Quality, page 22: Mitigation Measure 13 incorrectly references the second well site for special protection from drilling mud and foam that could potentially enter the agricultural pond, which is a short distance (distance not quantified in the IS/MND, but likely not more than 100 feet – see above-cited California Coastal Records photograph) downslope from the first well site. This Mitigation Measure reference should be the first well site.

The California Coastal Records Project aerial photographs of this property show several sea caves that traverse the property. Are the proposed well sites located within the projected underground extent of these sea caves?

Thank you again for the opportunity to comment.

Sincerely,

Lennie Roberts, Legislative Advocate

SURVEYOR'S STATEMENT

This map correctly represents a survey made by me or under my direction in conformance with the requirements of the Professional Land Surveyor's Act at the request of Keith Waddell in May 2002.

PROFESSIONAL LAND SURVEYOR
ANDREW J. WILKINSON
7440
Exp. 3-31-06
STATE OF CALIFORNIA

ANDREW J. WILKINSON
LS 7440
LICENSE EXPIRES 3-31-06

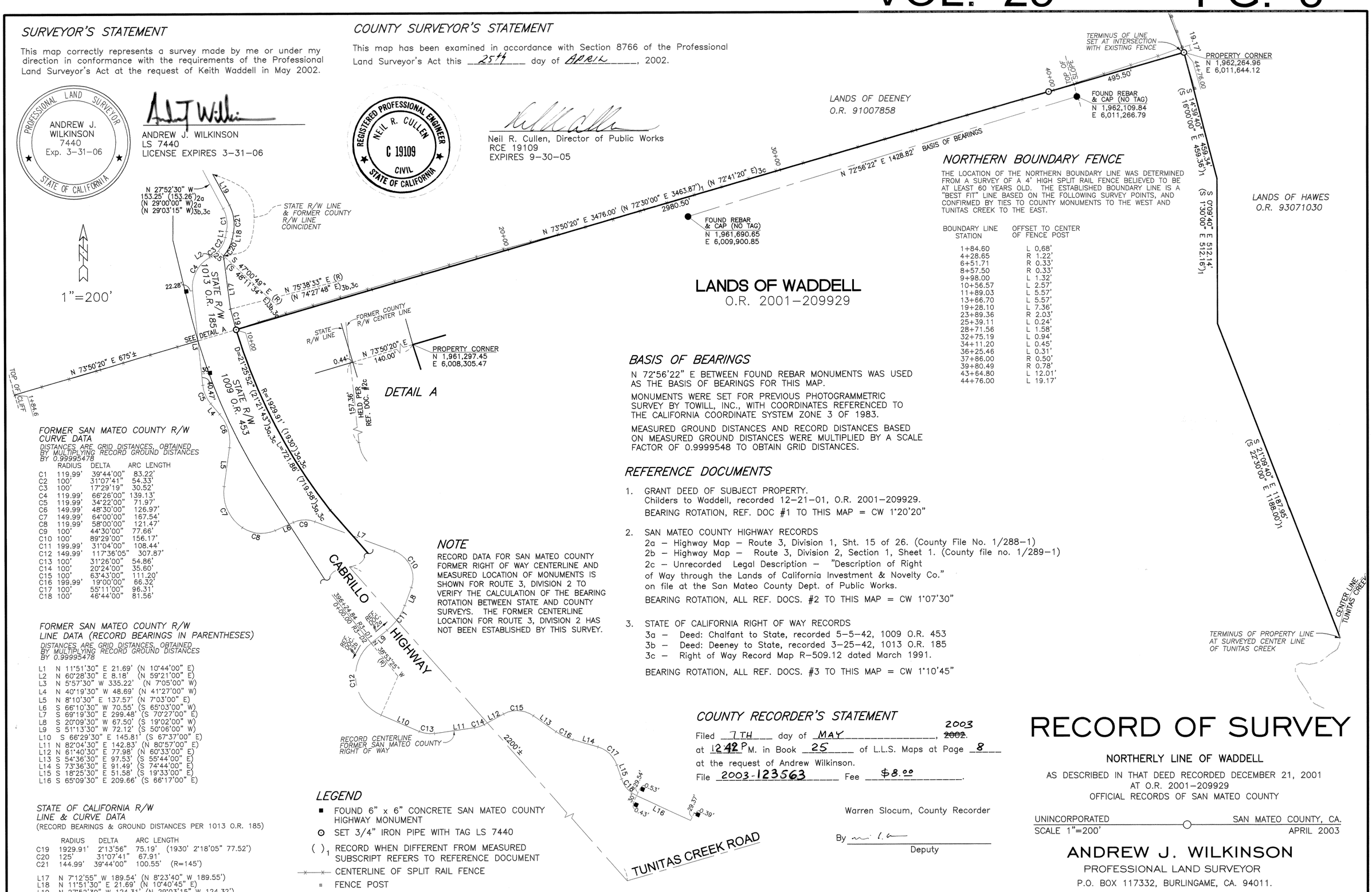
COUNTY SURVEYOR'S STATEMENT

This map has been examined in accordance with Section 8766 of the Professional Land Surveyor's Act this 25th day of APRIL, 2002.

REGISTERED PROFESSIONAL ENGINEER
NEIL R. CULLEN
C 19109
CIVIL
STATE OF CALIFORNIA

Neil R. Cullen, Director of Public Works
RCE 19109
EXPIRES 9-30-05

1"=200'



NORTHERN BOUNDARY FENCE

THE LOCATION OF THE NORTHERN BOUNDARY LINE WAS DETERMINED FROM A SURVEY OF A 4' HIGH SPLIT RAIL FENCE BELIEVED TO BE AT LEAST 60 YEARS OLD. THE ESTABLISHED BOUNDARY LINE IS A "BEST FIT" LINE BASED ON THE FOLLOWING SURVEY POINTS, AND CONFIRMED BY TIES TO COUNTY MONUMENTS TO THE WEST AND TUNITAS CREEK TO THE EAST.

BOUNDARY LINE STATION	OFFSET TO CENTER OF FENCE POST
1+84.60	L 0.68'
4+28.65	R 1.22'
6+51.71	R 0.33'
8+57.50	R 0.33'
9+98.00	L 1.32'
10+56.57	L 2.57'
11+89.03	L 5.57'
13+66.70	L 5.57'
19+28.10	L 7.36'
23+89.36	R 2.03'
25+39.11	L 0.24'
28+71.56	L 1.58'
32+75.19	L 0.94'
34+11.20	L 0.45'
36+25.46	L 0.31'
37+86.00	R 0.50'
39+80.49	R 0.78'
43+64.80	L 12.01'
44+76.00	L 19.17'

BASIS OF BEARINGS

N 72°56'22" E BETWEEN FOUND REBAR MONUMENTS WAS USED AS THE BASIS OF BEARINGS FOR THIS MAP.

MONUMENTS WERE SET FOR PREVIOUS PHOTOGRAMMETRIC SURVEY BY TOWILL, INC., WITH COORDINATES REFERENCED TO THE CALIFORNIA COORDINATE SYSTEM ZONE 3 OF 1983.

MEASURED GROUND DISTANCES AND RECORD DISTANCES BASED ON MEASURED GROUND DISTANCES WERE MULTIPLIED BY A SCALE FACTOR OF 0.9999548 TO OBTAIN GRID DISTANCES.

REFERENCE DOCUMENTS

1. GRANT DEED OF SUBJECT PROPERTY.
   Childers to Waddell, recorded 12-21-01, O.R. 2001-209929.
   BEARING ROTATION, REF. DOC #1 TO THIS MAP = CW 1°20'20"

2. SAN MATEO COUNTY HIGHWAY RECORDS
   2a - Highway Map - Route 3, Division 1, Sht. 15 of 26. (County File No. 1/288-1)
   2b - Highway Map - Route 3, Division 2, Section 1, Sheet 1. (County file no. 1/289-1)
   2c - Unrecorded Legal Description - "Description of Right of Way through the Lands of California Investment & Novelty Co." on file at the San Mateo County Dept. of Public Works.
   BEARING ROTATION, ALL REF. DOCS. #2 TO THIS MAP = CW 1°07'30"

3. STATE OF CALIFORNIA RIGHT OF WAY RECORDS
   3a - Deed: Chalfant to State, recorded 5-5-42, 1009 O.R. 453
   3b - Deed: Deeney to State, recorded 3-25-42, 1013 O.R. 185
   3c - Right of Way Record Map R-509.12 dated March 1991.
   BEARING ROTATION, ALL REF. DOCS. #3 TO THIS MAP = CW 1°10'45"

NOTE

RECORD DATA FOR SAN MATEO COUNTY FORMER RIGHT OF WAY CENTERLINE AND MEASURED LOCATION OF MONUMENTS IS SHOWN FOR ROUTE 3, DIVISION 2 TO VERIFY THE CALCULATION OF THE BEARING ROTATION BETWEEN STATE AND COUNTY SURVEYS. THE FORMER CENTERLINE LOCATION FOR ROUTE 3, DIVISION 2 HAS NOT BEEN ESTABLISHED BY THIS SURVEY.

FORMER SAN MATEO COUNTY R/W CURVE DATA

DISTANCES ARE GRID DISTANCES, OBTAINED BY MULTIPLYING RECORD GROUND DISTANCES BY 0.99995478

	RADIUS	DELTA	ARC LENGTH
C1	119.99'	39°44'00"	83.22'
C2	100'	31°07'41"	54.33'
C3	100'	17°29'19"	30.52'
C4	119.99'	66°26'00"	139.13'
C5	119.99'	34°22'00"	71.97'
C6	149.99'	48°30'00"	126.97'
C7	149.99'	64°00'00"	167.54'
C8	119.99'	58°00'00"	121.47'
C9	100'	44°30'00"	77.66'
C10	100'	89°29'00"	156.17'
C11	199.99'	31°04'00"	108.44'
C12	149.99'	117°36'05"	307.87'
C13	100'	31°26'00"	54.86'
C14	100'	20°24'00"	35.60'
C15	100'	63°43'00"	111.20'
C16	199.99'	19°00'00"	66.32'
C17	100'	55°11'00"	96.31'
C18	100'	46°44'00"	81.56'

FORMER SAN MATEO COUNTY R/W LINE DATA (RECORD BEARINGS IN PARENTHESES)

DISTANCES ARE GRID DISTANCES, OBTAINED BY MULTIPLYING RECORD GROUND DISTANCES BY 0.99995478

L1	N 11°51'30" E 21.69' (N 10°44'00" E)
L2	N 60°28'30" E 8.18' (N 59°21'00" E)
L3	N 5°57'30" W 335.22' (N 7°05'00" W)
L4	N 40°19'30" W 48.69' (N 41°27'00" W)
L5	N 8°10'30" E 137.57' (N 7°03'00" E)
L6	S 66°10'30" W 70.55' (S 65°03'00" W)
L7	S 69°19'30" E 299.48' (S 70°27'00" E)
L8	S 20°09'30" W 67.50' (S 19°02'00" W)
L9	S 51°13'30" W 72.12' (S 50°06'00" W)
L10	S 66°29'30" E 145.81' (S 67°37'00" E)
L11	N 82°04'30" E 142.83' (N 80°57'00" E)
L12	N 61°40'30" E 77.98' (N 60°33'00" E)
L13	S 54°36'30" E 97.53' (S 55°44'00" E)
L14	S 73°36'30" E 91.49' (S 74°44'00" E)
L15	S 18°25'30" E 51.58' (S 19°33'00" E)
L16	S 65°09'30" E 209.66' (S 66°17'00" E)

STATE OF CALIFORNIA R/W LINE & CURVE DATA

(RECORD BEARINGS & GROUND DISTANCES PER 1013 O.R. 185)

	RADIUS	DELTA	ARC LENGTH	
C19	1929.91'	2°13'56"	75.19'	(1930' 2°18'05" 77.52')
C20	125'	31°07'41"	67.91'	
C21	144.99'	39°44'00"	100.55'	(R=145')

L17	N 7°12'55" W 189.54' (N 8°23'40" W 189.55')
L18	N 11°51'30" E 21.69' (N 10°40'45" E)
L19	N 27°52'30" W 124.31' (N 29°03'15" W 124.32')

LEGEND

- ■ FOUND 6" x 6" CONCRETE SAN MATEO COUNTY HIGHWAY MONUMENT
- ⊙ SET 3/4" IRON PIPE WITH TAG LS 7440
- ( )1 RECORD WHEN DIFFERENT FROM MEASURED SUBSCRIPT REFERS TO REFERENCE DOCUMENT
- -x-x- CENTERLINE OF SPLIT RAIL FENCE
- x FENCE POST

COUNTY RECORDER'S STATEMENT

Filed 7TH day of MAY, 2003 ~~2002~~.
at 12:42 P M. in Book 25 of L.L.S. Maps at Page 8
at the request of Andrew Wilkinson.
File 2003-123563 Fee $8.00.

Warren Slocum, County Recorder

By _____
Deputy

RECORD OF SURVEY

NORTHERLY LINE OF WADDELL

AS DESCRIBED IN THAT DEED RECORDED DECEMBER 21, 2001
AT O.R. 2001-209929
OFFICIAL RECORDS OF SAN MATEO COUNTY

UNINCORPORATED — SAN MATEO COUNTY, CA.
SCALE 1"=200' — APRIL 2003

ANDREW J. WILKINSON
PROFESSIONAL LAND SURVEYOR
P.O. BOX 117332, BURLINGAME, CA. 94011.

L 1263 JOB #0013 SHEET ONE OF ONE

Wilkinson Enterprises Inc.
P.O. Box 2318
Half Moon Bay, CA 94019
(650) 726-4212
CA Cont. # 511063

April 17, 2017

Carmelisa Morales
Planning and Building Department
County of San Mateo
(650) 363-1873 - planning.smcgov.org

Dear Ms. Morales,

We are in receipt of your letter of April 12, 2017 and we will respond to items #1, 3, 4 and 7 of your letter. Jane Anfinson of GANDA will address items #1, 2, 5 and 6 of the letter, and will submit those responses to you via email.

Item #1: Our client only has a limited time option to drill the well on this property. Several extensions have been given. The owners of the property are pushing to complete the drilling rather than to continue to extend the time option. Our client may lose his option if the delays continue. We plan to perform our work outside of the California red-legged frog breeding season (November-March) as requested.

Item #3: Current study suggests the only sensitive habitat near the drilling sites shown is the manmade seasonal pond that catches the winter rainfall. The pond's sidewall is nearing failure because of the water flow exceeding the capacity of the spillway and lack of maintenance. The shoulder of the road is the drilling site. This area was degraded and altered years ago with the construction of the roadway on the property. The drilling impact on this shoulder of the road will be a permanent 4x4 foot cement well pad and a temporary 6x10 foot pit to collect the well cuttings while the well drilling is in progress. The temporary pit will protect the manmade seasonal pond during the drilling process from any runoff. Non-monofilament straw wattle will be placed between the drill site and the pond for additional protection while drilling the well(s). If a bloom period survey for sensitive plant species and native coastal prairie is required and those species are detected, similar impact minimization measures will be taken to protect specimens.

Item #4: The frog and snake fence around the worksite will be extended up the access road to the gateway of the property to enhance the protection of the work site as you suggested.

Item #7: Sea caves that would extend an extensive distance from the ocean could be found in the limestone formations of the county. The nearest limestone formations on the coast side begin 10 miles south of the proposed wells. This limestone anticline trend becomes rather shallow in Davenport where the mining of limestone to make commercial concrete continued for many years. To my knowledge, no

sea caves with salt water were ever encountered. The fresh water table however, was encountered on this site. Of note: the alluvial deposits we drilled on the first well on this site would not support sea caves that would reach to the new proposed drill sites because it lacks the limestone that cements the ground together.

Sincerely,

James M. Wilkinson, President
Wilkinson Well & Pump
P.O. Box 3218
Half Moon Bay, CA 94019
(650) 722-3248
(650) 728-8586 f

Carmelisa J. Morales

From: Jane Anfinson <janfinson@garciaandassociates.com>
Sent: Tuesday, April 18, 2017 9:41 AM
To: Carmelisa J. Morales
Cc: Ellen Crane
Subject: RE: Mitigation Measures PLN 2016-000445

Hi Carmelisa,

Please see my responses below.

Let me know if there is anything else needed.

Thanks, Jane

From: Carmelisa J. Morales [mailto:cjmorales@smcgov.org]
Sent: Tuesday, April 18, 2017 9:07 AM
To: Jane Anfinson <janfinson@garciaandassociates.com>
Cc: Ellen Crane <ellen@wilkinsonwells.com>
Subject: Re: Mitigation Measures PLN 2016-000445

Hi Jane,

Thank you for your responses. I have a few questions listed below by question #.

For #1, I revised the mitigation measure to include those best management practices you recommended. Construction will only be allowed during the dry season (approx. May 1st to Sept 30th) and when the ground is dry enough to support equipment at the work area. Great!

For #2, do you recommend a survey be done during the blooming season or is there an alternative? This may be similar to #1 in which you give a specific time for construction and recommend measures if the species are discovered. A blooming period survey is the most accurate assessment of a species' presence. Because of their protected status, we recommend that a survey occur during the blooming season of the two protected species with high potential to occur in the vicinity of the project (Coastal marsh milk-vetch and Choris' popcornflower): late May-early July to encompass the variability of bloom time triggered by weather variability.

If either species is determined to be present, avoidance measures such as fencing, alteration of the planned impact area, and restricted access are recommended.

For #3, Figure 1 on your habitat assessment shows the special status and critical habitats are not within the property. Your response for #2 states there is suitable habitats within the project area. Would you be able to provide a zoomed in map to show this area so that it is clearly marked? Or would you be able to work with the applicant so that they can add it to their project plans? We are able to work with the applicant.

For #5, will Coastal Prairie grassland be impacted by construction for this project? With the application of avoidance measures restricting construction impacts to along the existing dirt road and on the perimeters of

the 50-foot radius of temporary impact around the drill sites, it is highly unlikely that Coastal prairie grassland will be impacted by the activity.

Thanks,

Carmelisa Morales
Planning and Building Department
County of San Mateo
650-363-1873 | planning.smcgov.org

From: Jane Anfinson <janfinson@garciaandassociates.com>
Sent: Monday, April 17, 2017 11:49:58 AM
To: Carmelisa J. Morales
Cc: Ellen Crane
Subject: Mitigation Measures PLN 2016-000445

Hi Ms. Morales,

Wilkinson Wells (James Wilkinson) asked me to respond to the items raised by agencies regarding Wilkinson Wells' plan to drill on the property referred to in Mitigation Measures PLN 2016-000445. Wilkinson Wells will be sending you a separate letter responding further to item 1, and responding to items 3, 4, and 7.

1. CCC recommends revising Mitigation Measure 1 to limiting construction to outside of the breeding season (November through March). CGF recommends revising Mitigation Measure 1 to limit construction only to the driest time of the year (typically August 1 through October 15). Are you ok with revising this condition to only allow construction from August to October?

   We recommend that construction be allowed after the rainy season ends (approximately May 1) and the ground is dry enough to support equipment at the work area. We recommend the following best management practices to prevent spoils from entering the nearby pond and creek that are downslope of the drilling impact areas:

- Install straw wattles or other natural biodegradable erosion control measures that do not contain plastic monofilament netting, on the perimeter of the project area (i.e., along the existing dirt road and on the perimeters of the 50-foot radius of temporary impact around the drill sites)
- Have construction vehicles travel and park only on the existing dirt road and within the 50-foot radius of temporary impact around the drill sites,
- Call off work if there is greater than 20% chance of precipitation,
- Cover spoils piles at end of each day and prior to rain events.

2. CCC recommends all special status species listed in Table 1 should be assumed as present unless surveys are conducted during the species blooming season to confirm when/if the species are observed in the project area. This would narrow the window of installation significantly. CGF recommends the habitat assessment be updated to determine whether the Coastal marsh milk-vetch and Choris' popcorn flower species are within the proposed construction area. This would require a survey be done during the blooming season.

   The area of temporary and permanent impact is limited to the existing dirt road, the two chosen well drill sites, and a 50-foot radius around each drill site. As discussed in the biological review, within this impact area the plant community observed included ruderal vegetation typical of disturbed, well-drained upland coastal habitats. Within the larger project area there is potential for remnants of true coastal prairie grassland complex (see bullet 5 below), and there is suitable habitat in the vicinity of the lowland pond for special-status plant

species. If a blooming season plant survey is required, this could be executed in June by a qualified biologist, prior to construction. A botanical survey timed in June would occur within the blooming periods of all of the special-status plant species identified in the habitat assessment, including Coastal marsh milk-vetch and Choris' popcorn flower.

3. CCC recommends that the project plans should show all sensitive habitat areas to be protected during work activities for the proposed project. The project plan would need to be revised to show this. *(J. Wilkinson to address)*
4. CGF recommends the frog and snake fence run not only around the construction work site, but also along the access road leading to the construction work site. *(J. Wilkinson to address)*
5. CGF states that the project area likely supports Coastal Prairie grassland, a sensitive habitat as defined in the Local Coastal Program.

   See response to item #2.

6. CGF states that there is insufficient evidence to conclude that the project is not expected to pose a significant threat to native or migratory wildlife species. CGF recommends a mitigation measure be avoid avian nesting season.

   We recommend a pre-construction survey (within 48 hours of start of construction) during avian nesting season be conducted by a qualified biologist. This survey will capture data regarding nesting birds within the temporary impact area and the surrounding vicinity. If nesting birds are discovered, the following steps will be taken to determine whether the construction activities will disturb the nest, and to minimize construction impact:

- Determine and mark a suitable buffer within which no construction activity or access may occur
- A qualified biologist will monitor the nest during construction for disturbance to the nest
- If it is determined that construction activities are disrupting nesting activities, suspend construction activities until nestlings have fledged.

7. CGF is concerned about the sea caves that traverse the property. Are the proposed well sites located within the projected underground extent of these sea caves? If no, please provide justification. *(J. Wilkinson will address)*

Please let me know if you have any questions.

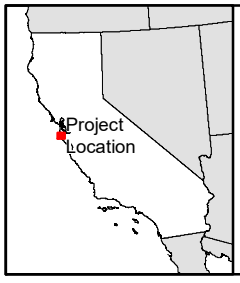
Thanks, Jane

Jane O. Anfinson

Wildlife Biologist/Regulatory Specialist
Garcia and Associates
1512 Franklin Street, Suite 100
Oakland, CA 94612

510-891-0024 (office)
415-261-7856 (cell)

Attachment M



Scale 1:2,400
1 Inch = 200 Feet

Impact Area Map
Wilkinson Well and Pump
San Mateo County

0 25 50 Meters
0 100 200 Feet

N