COUNTY OF SAN MATEO
PLANNING AND BUILDING DEPARTMENT

DATE: September 11, 2024

TO: Planning Commission

FROM: Planning Staff

SUBJECT: Consideration of a Coastal Development Permit pursuant to Section 6328.4 of the San Mateo County Zoning Regulations and an Architectural Review Permit Exemption pursuant to State of California Streets and Highways Code, to allow for the drilling of one agricultural groundwater well. This project is appealable to the California Coastal Commission.

County File Number: PLN2023-00087 (KimKen Trust)

PROPOSAL

The applicant is proposing to construct a new agricultural groundwater well to support livestock operations on the subject property. The proposed well will serve as the primary agricultural water source. The new well will be integrated into existing groundwater equipment and infrastructure. The proposed well will be located on a flat, open portion of the property several hundred feet from the existing structures, septic system, and Lobitos Creek. The project parcel is located within the Cabrillo Highway State Scenic Corridor.

RECOMMENDATION

That the Planning Commission approve the Coastal Development Permit and Architectural Review Permit Exemption, County File Number PLN2023-00087, subject to the findings and conditions of approval listed in Attachment A.

BACKGROUND

Report Prepared By: Angela Chavez, Project Planner, achavez@smcgov.org

Applicant: Chuck Reichel, Water Solutions, Inc.

Owner: KimKen Trust

Public Notification: Ten (10) day advanced notification for the hearing was mailed to property owners within 300 feet of the project parcel and a notice for the Planning Commission hearing was posted in the San Mateo County Times.

Location: 22495 Cabrillo Hwy S, unincorporated Half Moon Bay

APN: 066-330-190

Size: 9.8 acres

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

General Plan Designation: Agriculture

Local Coastal Plan Designation: Agriculture

Williamson Act: This parcel is not a Williamson Act contracted parcel.

Existing Land Use: The subject property is currently developed with a single-family residence and is also utilized for livestock grazing.

Water Supply: The property currently has a dual use (domestic/agricultural) well, a spring source located on the east side of Cabrillo Highway, and a diversion from Lobitos Creek. The existing dual use well is currently underperforming but will remain onsite to serve the residence. The proposed well will serve as the primary agricultural water source. While the spring source was legally established in 1976 and preliminary tests confirmed it could be a potable source and has been utilized as such, it was never formally confirmed at that time. Therefore, the Environmental Health Division has included conditions of approval to confirm that it conforms to potable standards.

Sewage Disposal: The site is improved with an on-site septic system which serves the residence on the parcel.

Flood Zone: Flood Zone X (Areas of Minimal Flooding), FEMA Panel No. 06081C0268F, effective date August 2, 2017.

Environmental Evaluation: This project is categorically exempt under Section 15302, Class 2 of the California Environmental Quality Act Guidelines related to the replacement of an existing structure or facility located on the same site and having substantially the same purpose and capacity as the structure replaced.

Setting: The subject parcel is located within the unincorporated San Gregorio area; west of Cabrillo Highway and north of Martins Beach Rd. Lobitos Creek runs along the west (rear) property line. The existing single-family residence is located in the eastern portion of the parcel, and the rear of the property is relatively flat and maintains large areas of open space. Additionally, the parcel is located within the Cabrillo Highway State Scenic Corridor.

Chronology:

Date		Action
March 13, 2023	-	Application submitted.
January 3, 2024	-	Project deemed complete.
May 2, 2024	-	Updated Scope of Work submitted by applicant.
September 11, 2024	-	Planning Commission public hearing.

DISCUSSION

A. KEY ISSUES

1. Conformance with the General Plan

Staff has reviewed the project for conformance with the General Plan and has determined that the project is in conformance with all relevant policies. The applicable policies with specific discussion are detailed below:

Vegetative, Water, Fish, and Wildlife Resources

Policy 1.23 (*Regulate Development to Protect Vegetative, Water, Fish and Wildlife Resources*) and Policy 1.27 (*Protect Fish and Wildlife Resources*) seek to regulate land uses and development activities to prevent, and/or mitigate to the extent possible, significant adverse impacts on vegetative, water, fish and wildlife resources.

The project proposes a new agricultural well to support ongoing agricultural uses. As part of the application, a hydrogeological study completed by Geoconsultants, Inc., dated June 10, 2022, was submitted. The study identified that the site named ETS-1, showed the greatest potential for water production. The proposed well site is located approximately 235 feet from Lobitos Creek and 135 feet from the edge of the Lobitos Creek ravine. The site is currently utilized for grazing and has an existing fenced area that separates the grazing area from the riparian corridor. The proposed well is located within that fenced area. Therefore, the project is adequately buffered from the creek and any potential riparian corridors.

Soil Resources

Policy 2.20 (*Regulate Location and Design of Development in Areas with Productive Soil Resources*) calls for the regulation of the location and design of development in a manner which is most protective of productive soil resources. The proposed well site area is identified as having prime soils. However, given the small area impacted by the construction of the well it is not expected to adversely impact the agricultural grazing activities present on the site. Agricultural wells are commonly located amongst farmed areas and this proposal is consistent with that pattern. This policy further encourages measures such as clustering structures in order to protect productive soil resources. Given that both the proposed well location is within the fenced and previously disturbed areas it complies with the clustering objective. The sites also comply with the setbacks required by the zoning district and locational criteria defined by the Environmental Health Division.

Visual Quality

Policy 4.15 (*Appearance of New Development*) and Policy 4.22 (*Scenic Corridors*) seek to regulate development to promote good design, site relationships, and to protect and enhance the visual quality of development within designated scenic corridors.

The project parcel is located to the west of and accessed from Cabrillo Highway. The parcel is entirely within the Cabrillo Highway State Scenic Corridor. However, the proposed well site will not be visible from the corridor due to distance, the presence of mature vegetation, and the presence of existing development. The proposed well site results in only minimal above ground development, is over 700 feet from Cabrillo Highway, the area has existing mature vegetation, and the presence of structures located between the proposed well site and the roadway all provide screening for the development.

Rural Land Use

Policy 9.23 (*Land Use Compatibility in Rural Lands*) and Policy 9.30 (*Development Standards to Minimize Land Use Conflicts with Agriculture*) encourage compatibility of land uses in order to promote the health, safety, and economy of rural lands, seek to maintain the scenic and harmonious nature of rural lands, and seek to cluster development so that large parcels can be retained for the protection and use of vegetative, visual, agricultural, and other resources.

No development other than the agricultural well is proposed. The location and the small footprint of the well (approximately 10 square feet) will not displace or remove any coastal resources. The proposed well is in the existing grazing pasture and avoids any potential sensitive habitats present on the parcel.

Water Supply

Policy 10.15 (*Water Suppliers in Rural Areas*) and Policy 10.20 (*Well Location and Construction*) encourage the use of wells and require wells to be located an adequate distance away from the normal watercourse of a stream in order to minimize impacts upon downstream surface water supplies.

There is no municipal water service available for the project location. The existing development present on the site is served by a well, private spring, and diversion from Lobitos Creek. The County's Environmental Health Division is the agency responsible for the review of the construction, operation, and sets guidelines for capacity and potability of water wells. Current standards for wells that will be utilized as a potable water source (where water could be consumed by humans) require that the well be capable of producing 2.5 gallons of water per minute, or 150 gallons per hour. The Environmental Health Division has confirmed that the existing well has failed, producing less than 100 gallons of water per day with a high salt content, which is neither suitable for the raising of livestock nor human consumption. The proposed well is estimated to yield 3-5 gallons of water per minute (GPM), or 4,320 – 7,200 gallons per day (GPM x 1,440 minutes/day). The owner estimates a maximum daily water demand of 1,600 gallons of water. The existing well in combination with the spring and proposed well, would be compliant with the required quantity production standards for domestic and agricultural use.

Furthermore, the new well meets the minimum locational standards of the Environmental Health Division as the subject well is located over 235 feet from any nearby creek, where 100 feet is the minimum required. Therefore, the proposed use of the well is not expected to adversely impact any surface water supplies in the area.

2. Conformance with Local Coastal Program (LCP) Policies

Staff has reviewed the project and found it to be compliant with the policies of the Local Coastal Program. The applicable policies with specific discussion are detailed below:

Locating and Planning New Development

Policy 1.1 (*Coastal Development Permits*) and Policy 1.2 (*Definition of Development*) require the issuance of a Coastal Development Permit (CDP) for all development in the Coastal Zone, with the definition of development including changes in the intensity of water use. Policy 1.8 (*Land Uses and Development Densities in Rural Areas*) allows new development in rural areas when it is demonstrated that coastal resources will not be adversely impacted or that the ability to keep prime agricultural land in agricultural production is not diminished.

As previously discussed, the small footprint of the well will not displace or remove any coastal resources and will not diminish the existing agricultural operations on site. Visual impacts are avoided by the presence of existing development and vegetative screening from Cabrillo Highway. Furthermore, impacts to water resources and sensitive habitats are prevented given the location of the project relative to any nearby creeks or waterways and minimal proposed ground disturbance needed to implement the project.

Agriculture

Policy 5.5 (*Permitted Uses on Prime Agricultural Lands Designated as Agriculture*) seek to permit agriculturally related development on prime agricultural lands, specifically allowing water wells as non-residential development customarily considered accessory to agricultural uses.

The parcel supports a large portion of Class II prime agricultural soils in the rear half of the parcel. The proposed well site was selected based on the findings of hydrogeologic study completed for the property. The study determined that the specified location provided the greatest potential for water production. As previously discussed, the location and the small footprint of the well would not disrupt the continuity of the surrounding farmland and would not diminish the existing agricultural operations on the property. Furthermore, as the well will serve as the primary water source for the agricultural operations on the property, the well would ensure the productivity and/or viability of the agricultural land by ensuring a proper water source.

Sensitive Habitats Component

Policy 7.1 (*Definition of Sensitive Habitats*) defines sensitive habitats as "habitats containing or supporting rare and endangered species as defined by the State Fish and Game Commission". This habitat includes riparian corridors and wetlands. Policy 7.11 (*Establishment of Buffer Zones*) requires a 50-foot buffer zone from the limit of riparian vegetation.

As previously discussed, Lobitos Creek does run through a rear portion of the project parcel and would qualify as sensitive habitat. However, given the grazing activity present on the site, the area adjacent to the creek has been fenced which provides a clear delineation between any habitat and agricultural lands. The proposed well site is not located in close proximity to any creek or waterway and complies with both the required 50-feet buffer required by this policy and 100-feet of distance required by the Environmental Health Division. See Section A.1., above for additional discussion.

Visual Resources

Policy 8.5 (*Location of Development*) requires new development to be located on a portion of the parcel where development would be least visible from scenic roadways and least likely to significantly impact views from public viewpoints.

As previously discussed, the project will not result in visual impacts from public viewpoints as the completed well will have a low profile, be located over 700 feet from Cabrillo Highway, and is screened from public viewpoints by existing mature vegetation and structures. See Section A.1 for additional discussion.

Shoreline Access

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 nearest public road. In addition, the policy devises that the access requirements be based on: (1) the size and type of development, (2) the benefit to the developer, (3) the priority given to the type of development under the Coastal Act, and (4) 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 does not currently have dedicated public access. However, the proposed project site has other parcels between it and the sea and therefore cannot provide beach/shoreline access. As the proposed project is entirely located 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., Martin's Beach to the south of the project site). In addition, given that the proposed project is minor in nature, it does not meet the threshold for small to medium projects (i.e., single-family residences, minor land divisions, barns over 5,000 sq. ft., etc.) which require the offering or granting of a vertical and/or lateral access. As a result, the requirement for dedicated public access does not apply to this project.

3. Conformance with Architectural Review Exemption

This project is found to be exempt from the Architectural Review requirement. A field inspection of this property determined that the proposed well will be minimal in size and located in an area that does not result in the significant removal of vegetation and is not visible from Cabrillo Highway.

B. ENVIRONMENTAL REVIEW

This project is categorically exempt under Section 15302, Class 2 of the California Environmental Quality Act Guidelines related to the replacement of an existing structure or facility located on the same site and having substantially the same purpose and capacity as the structure replaced.

C. REVIEWING AGENCIES

California Coastal Commission
San Mateo County Environmental Health Division

ATTACHMENTS

A. Recommended Findings and Conditions of Approval
B. Location Map
C. Project Plans
D. Scope of Work

Attachment A

County of San Mateo
Planning and Building Department

RECOMMENDED FINDINGS AND CONDITIONS OF APPROVAL

Permit or Project File Number: PLN2023-00087 Hearing Date: September 11, 2024

Prepared By: Angela Chavez, Project Planner For Adoption By: Planning Commission

RECOMMENDED FINDINGS

For the Environmental Review, Find:

1. That the project is exempt from environmental review, pursuant to Section 15302, Class 2 of the California Environmental Quality Act Guidelines related to the replacement of an existing structure or facility located on the same site and having substantially the same purpose and capacity as the structure replaced as the proposed well will replace an underperforming well and will continue to serve the agricultural needs of the property.

For the Coastal Development Permit, Find:

2. That the project, as described in the application and accompanying materials required by Zoning Regulations Section 6328.7 and as conditioned in accordance with Section 6328.14, conforms with the plans, policies, requirements and standards of the San Mateo County Local Coastal Program (LCP), specifically in regard to Locating and Planning New Development, Agriculture, Sensitive Habitats, and Visual Resources Components of the LCP. The project will not result in any adverse significant impacts on coastal resources as the project will not introduce any new land use and given the small footprint of the well, will not disrupt the continuity of the surrounding farmland or diminish the existing agricultural operations on the property. Visual impacts are minimized due to the project's location relative to existing development and vegetative screening from Cabrillo Highway. Furthermore, impacts to water resources and sensitive habitats are avoided given the project's distance from nearby creeks or waterways.

3. That the project conforms to the public access and public recreation policies of Chapter 3 of the Coastal Act of 1976 (commencing with Section 30200 of the 14 Public Resources Code) given that the location and small nature of the proposed project will not impact coastal access and recreation opportunities.

RECOMMENDED CONDITIONS OF APPROVAL

Current Planning Section

1. This approval applies only to the proposal, documents, and plans as described in this report and approved by the Planning Commission on September 11, 2024. Minor modifications to the project may be approved by the Director of Planning and Building if they are consistent with the intent of, and in substantial conformance with, this approval.

2. The Coastal Development Permit shall be valid for one (1) year from the date of final approval, in which time a valid building permit shall be issued, and a completed inspection (to the satisfaction of the Building Inspector) shall have occurred within 180 days of its issuance. Any extension of these permits shall require submittal of an application for permit extension and payment of applicable extension fees sixty (60) days prior to the expiration date.

3. This approval does not allow the removal of any trees. Removal of any tree with a circumference of 55 inches or greater, as measured at 4.5 feet above the ground, shall require additional review by the Director of Planning and Building prior to removal.

4. All new utilities shall be installed underground from the nearest existing pole. No new poles are permitted to be installed.

5. The property owner, or designee, shall adhere to the San Mateo Countywide Stormwater Pollution Prevention Program "General Construction and Site Supervision Guidelines," including, but not limited to, the following:

    a. Delineation with field markers of clearing limits, easements, setbacks, sensitive or critical areas, buffer zones, trees, and drainage courses within the vicinity of areas to be disturbed by construction and/or grading.

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

    c. Performing clearing and earthmoving activities only during dry weather.

    d. Stabilization of all denuded areas and maintenance of erosion control measures continuously between October 1 and April 30.

    e. Storage, handling, and disposal of construction materials and wastes properly, so as to prevent their contact with stormwater.

f. Control and prevention of 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.

g. Use of sediment controls or filtration to remove sediment when dewatering site and obtain all necessary permits.

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

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

j. Limiting construction access routes and stabilization of designated access points.

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

l. Training and providing instruction to all employees and subcontractors regarding the Watershed Protection Maintenance Standards and construction Best Management Practices.

m. Additional Best Management Practices in addition to those shown on the plans may be required by the Building Inspector to maintain effective stormwater management during construction activities. Any water leaving the site shall be clear and running slowly at all times.

n. Failure to install or maintain these measures will result in stoppage of construction until the corrections have been made and fees paid for staff enforcement time.

6. 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 County Ordinance Code Section 4.88.360).

Environmental Health Services

7. A well drilling permit is required. The applicant shall submit an application, appropriate fees, and materials (i.e. CDP approval letter, geotechnical/hydrological report, site plan, and planned use or destruction of the existing well) directly to Environmental Health for review and approval. Application and fees can be found on the website at https://www.smchealth.org/landuse.

8. The applicant shall comply with all Environmental Health Division requirements to certify the spring as a potable water source.

COUNTY OF SAN MATEO - PLANNING AND BUILDING DEPARTMENT

ATTACHMENT B

San Mateo County

Location Map

0.14 0 0.07 0.14 Miles

WGS_1984_Web_Mercator_Auxiliary_Sphere

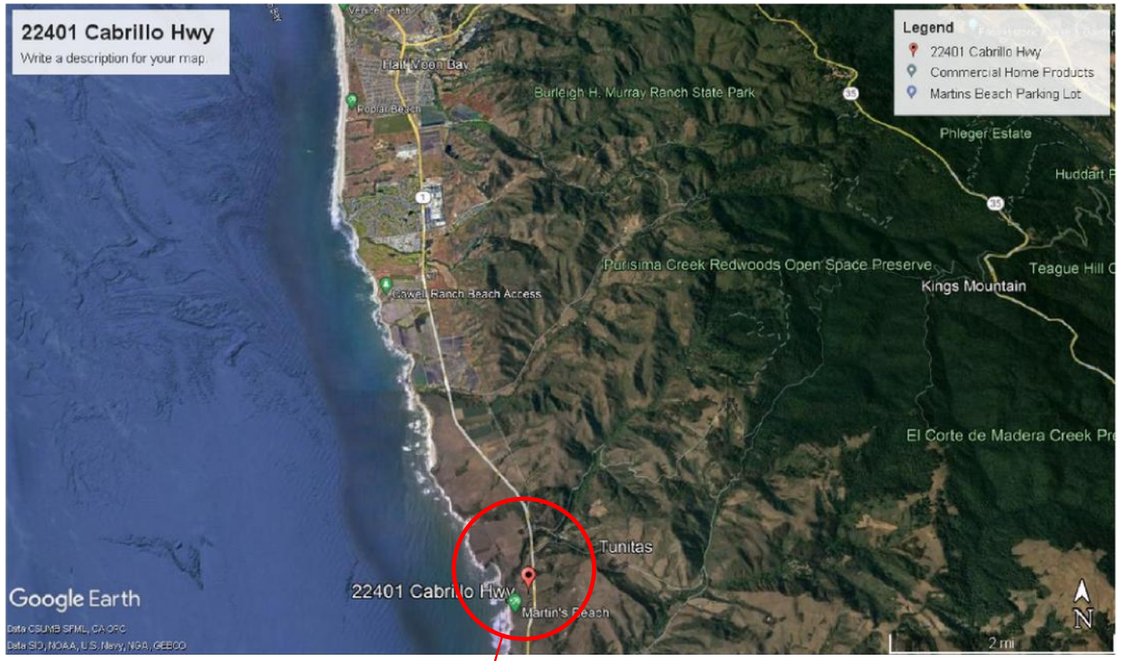
1: 4,514

This map is a user generated static output from an Internet mapping site and is for reference only. Data layers that appear on this map may or may not be accurate, current, or otherwise reliable.

THIS MAP IS NOT TO BE USED FOR NAVIGATION

COUNTY OF SAN MATEO - PLANNING AND BUILDING DEPARTMENT

ATTACHMENT C



HALF MOON BAY AND LOCAL
SAN MATEO COUNTY

22495 CABRILLO HWY

22495 CABRILLO HWY
HALF MOON BAY, CALIFORNIA
LOCATION MAPS

DOCUMENT LIST

SHEET #1 TITLE PAGE
SHEET #2 OVERVIEW OF PROPERTY
SHEET #3 SITE PLAN
SHEET #4 SITE IMAGES
SHEET #5 WELL DETAILS

NO.	DESCRIPTION	ENGR INIT	BY COUNT	DATE APPROVED

DATE: 05/11/2022
SCALE: AS SHOWN
DRAWN BY: E. REYNOLDS
DESIGNED BY: C. REICHEL
CHECKED BY: C. REICHEL

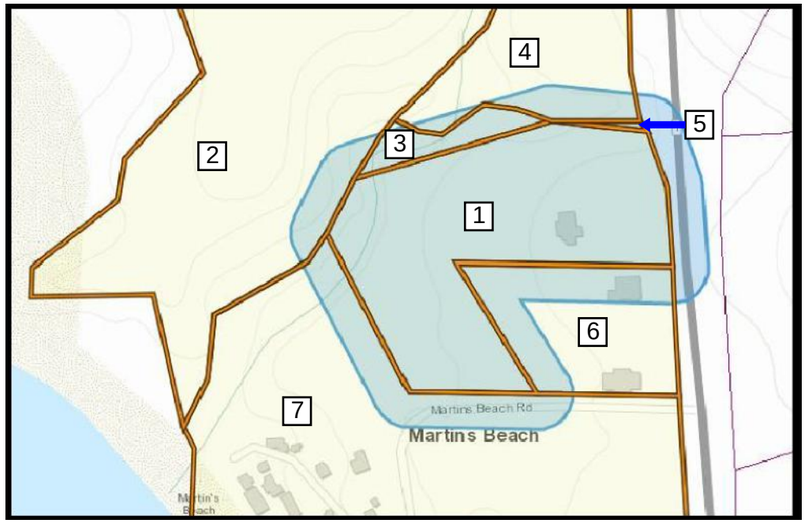
355 Princeton Avenue
Half Moon Bay, CA 94019
(650) 204-9596

WATER SOLUTIONS

KimKen TRUST
22495 CABRILLO HWY, HALF MOON BAY, CA
TITLE PAGE

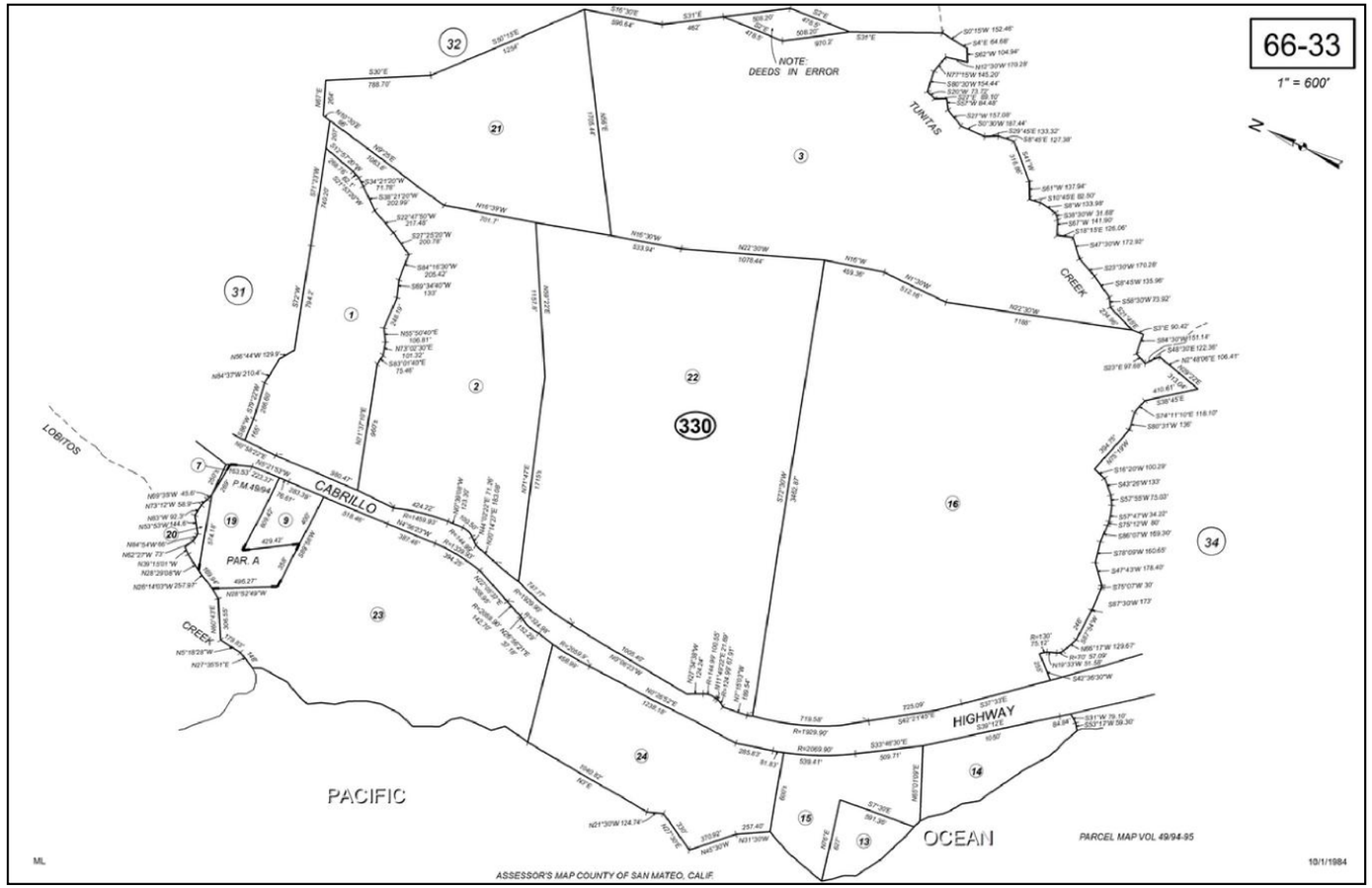
PROJECT NO.
DRAWING
SHEET

SHEET 1 OF 5



Parcel	APN	Owner's Name	Address
1	066-330-190	KimKen Trust Attn: Lori Burmeister	333 Omaha Street, Suite 5 Rapid City, SD 57701
2	066-310-220	Seahawk Ranch Corporation	22495 Cabrillo Highway Half Moon Bay, CA 94019
3	066-330-200	Western General Corporation Attn: Amber Hicks	2510 North Pines Road, Suite 308 Spokane Valley, WA 99206
4	066-310-020	Lobitos Land Company Attn: Dawn Worthen	1104 Country Hills Drive, Suite 760 Ogden, UT 84403
5	066-330-070	Seahawk Ranch Corporation	22495 Cabrillo Highway Half Moon Bay, CA 94019
6	066-330-090	Seahawk Ranch Partners LLC	22495 Cabrillo Highway Half Moon Bay, CA 94019
7	066-330-230	Martins Beach 1 LLC	1760 The Alameda, Suite 300 San Jose, CA 95126

22495 CABRILLO ADJACENT PROPERTY MAP



NO.	DESCRIPTION	ENGR INIT	BY COUNT	DATE APPROVED

DATE: 05/11/2022
SCALE: AS SHOWN
DRAWN BY: E. REYNOLDS
DESIGNED BY: C. REICHEL
CHECKED BY: C. REICHEL

355 Princeton Avenue
Half Moon Bay, CA 94019
(650) 204-9596

WATER SOLUTIONS
Engineering Quality Water

KimKen TRUST
22495 HAKF MOON BAY, CA
OVERVIEW

PROJECT NO.
DRAWING
SHEET

SHEET 1 OF 5

SITE PLAN

22401-22495 Cabrillo Hwy S
Half Moon Bay, CA 94019
Parcel ID: 066-330-090
066-330-190
Lot area: 13.96 Acres
Plot Size: 11"x17"

NO.	DESCRIPTION	ENGR INIT	BY COMNT	DATE APPROVED

DATE: 05/11/2022
SCALE: AS SHOWN
DRAWN BY: E. REYNOLDS
DESIGNED BY: C. REICHEL
CHECKED BY: C. REICHEL

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355 Princeton Avenue
Half Moon Bay, CA 94019
(650) 204-9596

WATER SOLUTIONS
engineering Quality Water

KimKen TRUST
22495 HAKF MOON BAY, CA
SITE PLAN

PROJECT NO.	DRAWING	SHEET

SHEET 1 OF 5

NO.	DESCRIPTION	ENGR INIT	BY COUNT	DATE APPROVED

DATE: 05/11/2022
SCALE: AS SHOWN
DRAWN BY: E. REYNOLDS
DESIGNED BY: C. REICHEL
CHECKED BY: C. REICHEL

355 Princeton Avenue
Half Moon Bay, CA 94019
(650) 204-9596

WATER SOLUTIONS
Engineering Quality Water

KimKen TRUST
22495 HALF MOON BAY, CA

IMAGES

PROJECT NO.
DRAWING
SHEET

SHEET 1 OF 5

COUNTY OF SAN MATEO - PLANNING AND BUILDING DEPARTMENT

ATTACHMENT D

WATER SOLUTIONS
Engineering Quality Water

Date: May 2, 2024
Subject: Scope of Work – Well Drilling Permit

Job Site: 22495 Cabrillo Highway
Half Moon Bay, CA, 94019

APN: 066-330-190

Water Use: Agriculture
Topic: Scope of Work

To: San Mateo County Planning Department

Water Solutions has prepared the following Scope of Work in connection with our application for a permit for the drilling of a new groundwater well for agricultural purposes located on the property noted above.

Should you have any questions regarding this document and the project, please do not hesitate to contact us.

Contact Information

Applicant (on behalf of Property/Well Owner)
Chuck Reichel, Project Manager
Glenn Reynolds, Principal
Water Solutions, Inc.
355 Princeton Ave
Half Moon Bay, CA 94019
P: (650) 204-9596
C: (408) 623-9407
Email: creichel@h2osolutions.com

Property/Well Owner
KimKen Trust
333 Omaha Street, Suite 5
Rapid City, SD 57701
Attn: Lori Burmeister
P: (605) 399-4133
Email: Lori.Burmeister@bankwest-sd.bank

Well Drilling Contractor
Pitcher Services, LLC
218 Demeter Street
East Palo Alto, CA 93303
Attn: Terry Shewchuk
P: (650) 328-8910
Email: tshewchuk@pitcherservicesllc.com

WATER SOLUTIONS
Engineering Quality Water

Scope of Work

This project entails the drilling of a new groundwater well for agricultural purposes. The methods used, well depth, and the coordinates of the well location are listed below.

Drilling Methods & Construction

- Drilling/Boring Method: Air/Mud Rotary
- Drilling/Boring Depth: 250 feet
- Boring Diameter: 12 inches
- Casing Diameter: 5 inches

Well Location/Coordinates

The coordinates for the new well are below.

- N37° 22.6443', W122° 24.4019'

Contingent Well Locations

Listed below, in order of priority, are contingent (alternate) well locations. These locations shall only be considered for drilling should the primary location above prove to be unproductive during drilling and development of the well.

- Alt #1: N37° 22.640', W122° 24.404'
- Alt #2: N37° 22.598', W122° 24.405'

Locations for the new well, alternate well locations, and the location of the existing well are shown on Sheet 4 of the Site Plans.

Specific Intended Use of New Well Water

The property owner has stated that the intended purpose for the water from the new well is for agricultural purposes, specifically, for providing water for livestock grazing on the property.

Existing Sources of Domestic Water

Water for domestic use on the property primarily comes from a spring source. Supplemental water sources include a diversion from Lobitos Creek and an existing well. The existing well produces <100 gallons per day of high-salinity water. The water is treated in order to make it usable for domestic purposes.

After the completion of the new well, the existing well shall remain in operation and continue to provide supplemental water for domestic use, along with the spring and creek diversion..

Hydrogeologic Study – Land Subsidence

In May 2022, Geoconsultants, Inc. (San Jose, CA) performed a hydrogeologic study for groundwater development at 22495 Cabrillo Highway. The focus of the study was to assess subsurface hydrogeologic conditions and estimate the potential of groundwater at selected sites around the property. In brief, the findings of their electrotelluric sounding study concluded that each of the five selected well sites showed a potential for development of a small diameter irrigation well, with one site having the greatest potential. The study indicates that the potential water bearing lenses are less than three meters thick and are not subject to dewatering compaction which precludes any ground subsidence. Furthermore, the aquifer for the property is in the unconsolidated to semi-consolidated alluvial materials and marine terrace deposits overlying the Lobitos Mudstone Member bedrock unit of the Purisima Formation. The San

Gregorio Sandstone Member may underlie the terrace deposits which may contain a thin saturated section of ground water stored above the underlying bedrock. As such, the potential for subsidence is geologically rare to non-existent. Geoconsultants' full report has been included in the California Coastal Commission Development application packet and is submitted along with this application and Scope of Work.

Interference with Neighboring Wells

Well construction data from the San Mateo Plain Groundwater Basin Assessment Project (https://smcmaps.maps.arcgis.com/apps/webappviewer/index.html?id=8621d563c0634d6caec1145aebfdedb1) shows that the nearest well to the existing well on the property is approximately 4,600 feet away.

To assess the impact on the neighboring wells, Geoconsultants and WSI used the same Ground Water Assessment formulas and tables for fractured bedrock the California State Water Board uses to evaluate new public supply well permits.

Equation

Porous Media Aquifers

$$R_T = \sqrt{\frac{QT}{\pi\eta H}}$$

Fractured Rock Aquifers

$$R_T = 1.5 \times \sqrt{\frac{QT}{\pi\eta H}}$$

R_T = Radius (in feet) of zone for Time of Travel T
T = Time of Travel (years) (2, 5, or 10 years)
Q = Pumping capacity of well (in ft3/year) (ft3/year = gpm x 70,267)
π = 3.1416
η = Aquifer effective porosity (default = 0.2)
H = Well screened interval (in feet) (10' min.)

Fractured Rock Aquifer (Increase size of zones by 50%)

Zone	TOT (years)	Equation	Use one or the other		Minimum	Value
			Calculated Radius	Table 3 Radius		
A	2	$709\sqrt{Q_{gpm}/H_{ft}}$		1228	600	1228
B5	5	$1122\sqrt{Q_{gpm}/H_{ft}}$		1943	1,000	1943
B10	10	$1586\sqrt{Q_{gpm}/H_{ft}}$		2747	1,500	2747

FRACTURED ROCK AQUIFERS
TABLE 3

Q	H (feet) (default minimum)	Radius Zone A (feet)	Radius Zone B5 (feet)	Radius Zone B10 (feet)
< 10 gpm	10	900	1,500	2,250
10 to 20 gpm	10	1,003	1,587	2,250
21 to 30 gpm	10	1,228	1,943	2,747
31 to 40 gpm	10	1,418	2,244	3,172
41 to 50 gpm	10	1,585	2,509	3,546
51 to 60 gpm	10	1,737	2,748	3,885
61 to 70 gpm	10	1,876	2,968	4,196
71 to 80 gpm	10	2,005	3,173	4,486
81 to 90 gpm	10	2,127	3,366	4,758
91 to 100 gpm	10	2,242	3,548	5,015

"Q" for each well is expected to be < 5 GPM with a screen height of 10 feet. Using the data from the top row of Table 3, the 2-, 5-, and 10-year safety zones are 900, 1500, and 2250 feet respectively. Accordingly, the influence on the neighboring wells should be relatively small due to the low transmissivity.

Estimated Well Production/Yield

Adequately evaluating the water-yielding potential of a well requires test drilling to a target depth. During the test drilling, down-hole geophysical logs, such as resistivity, spontaneous potential and gamma ray shall be completed to confirm the subsurface materials and depth of water-bearing zones and shall assist in the evaluation of anticipated water quantity and quality. Without test drilling, it is extremely difficult to estimate a well's potential yield. However, WSI's experience using electrotelluric sounding methods such as those used by Geoconsultants who performed the hydrogeologic study, it is anticipated that the well shall have a yield of 3 – 5 gallons of water per minute (GPM). Based on this assumption, the maximum annual yield for the well is calculated by the following formula:

GPM x 1,440 min/day x 365 days

Therefore, it is assumed that the maximum annual yield for the well is:

Annual Yield: 1,576,800 – 2,628,000 gal. (4.84 – 8.06-acre feet)*

**1 acre foot = 326,000 gallons*

Estimated Water Consumption (CA Executive Order N-7-22)
Agricultural use shall be for providing water for the existing grazing livestock. The owner estimates a daily watering need to be 1,600 gallons of water.

Maximum Daily Water Demand: 1,600 gal

Applied to a full calendar year, the annual production of the well is calculated by multiplying the daily production by 365.

1,600 x 365 = 584,000 gallons

Converting to acre-feet …

584,000 ÷ 326,000 = 1.8 acre-feet

It is Water Solutions' opinion that production from the new well shall remain below the 2 acre-feet limitation established in CA Executive Order N-7-22.

Sustainable Yield Evaluation
If a well's production exceeds expectations, a hydrogeologic aquifer study will be performed to determine the well's sustainable yield and the aquifer's recharge rate. To perform such a test, the well drilling and installation must be completed. WSI's protocol calls for a 7-day continuous pump test. During the test, a high-precision data logging system will be used to collect data and monitor field conditions. At the conclusion of the active pumping phase of the test, the natural well recovery will be monitored to establish both the recharge rate and transmissivity impressions of the well. Collected data will then be processed using a proprietary computer software model. Test results will then be analyzed to further the development of the well and pumping equipment.

Schedule of Work

Work is scheduled to begin in the Summer of 2024. The project is expected to run for two (2) continuous weeks.

Site Map Description

Sheet 1: Title Page
- Aerial Views and location of property
- Drawing list

Sheet 2: Topographical Overview of Property
- Adjacent properties
- Assessor's Map (County of San Mateo, CA; #66-33)

Sheet 3: Site Plan
- Property dimensions
- Setbacks
- Well location

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- Site elevations. Areas with a slope of 35% or greater have been hatched (none)
- Existing home and site improvements
- Vicinity Map

Sheet 4: Job Site Images

- Images of well location
- Aerial view showing new, existing, and alternate well locations, and distance to septic

Sheet 5: Well Construction/Elevation

- Well construction drawing

Respectfully,

Chuck Reichel
Project Manager
Water Solutions, Inc.