COUNTY OF SAN MATEO PLANNING AND BUILDING DEPARTMENT

DATE: May 27, 2020

TO: Planning Commission

FROM: Planning Staff

SUBJECT: EXECUTIVE SUMMARY: Consideration of, a Coastal Development

Permit pursuant to Sections 6328.4 and 6353 of San Mateo County Zoning Regulations and an Architectural Review Exemption pursuant to Sections 154, 227-229.1, 260, and 261 of the California Streets and Highways Code to test drill for one permanent domestic well as a water source to offset existing surface-water withdrawals from California State

Park's water diversion on Little Butano Creek. The project is not

appealable to the Coastal Commission.

County File Number: PLN 2020-00033

PROPOSAL

The proposed project is located within Butano State Park approximately 4.5 miles south of Pescadero, just off Cloverdale Road in unincorporated San Mateo County. San Mateo Resource Conservation District (RCD), the applicant, has a partnership with California State Parks, the landowner, to design the project and obtain required permits. RCD obtained funding from the California Wildlife Conservation Board for the proposed well and is the applicant on behalf of State Parks. Butano State Park currently relies on surface-water from Little Butano Creek to supply all water-related infrastructure and park user demand. The proposed well will improve water security for the park's domestic water system by providing an additional source of water, particularly during drought conditions. The project site/disturbed area will be re-seeded with a native seed mix to re-establish the vegetation. The well hole will be abandoned if the well is not viable.

The project parcel is situated within the Stage Road/Pescadero Road/Cloverdale Road County Scenic Corridor. The 2,400 sq. ft., undeveloped project site is located approximately 700 feet west of the park entrance kiosk. Little Butano Creek flows/runs southwesterly through the parcel approximately 158 feet south of the proposed well site. The proposed well will be drilled in an open, grassy, area. Coastal scrub occurs in the vicinity and includes coyote brush, California coffeeberry, California blackberry, and poison oak. Grassland species, which include native yellow lupine, and non-native wild oat, soft chess, and Harding grass, also occur at the well site and its vicinity. The area

immediately to the east of the project site is vegetated with a dense stand of mature trees, species include oak, Douglas fir, and redwood.

Proposed activities include the construction of a 25 sq. ft. concrete pad (approximately six inches thick), wellhead, drilling to a depth of 250 feet below ground surface (bgs), and installation of 80 feet of screened casing from a depth of 160 feet to 240 feet below ground surface. The applicant completed an exploratory well bore in 2018 to test for viable drinking water sites. The groundwater exploration yielded positive results for a productive well. All construction activities will occur entirely within the existing exploratory well footprint (60 feet by 40 feet) to accommodate the drilling equipment. Other equipment to be used include drill rig, backhoe, 40-foot support trailer, and crew trucks.

RECOMMENDATION

Approve the Coastal Development Permit and Architectural Review Exemption, County File Number PLN 2020-00033, by making the required findings and conditions of approval provided in Attachment A of the staff report.

SUMMARY

The proposed project was reviewed for consistency with the Local Coastal Program (LCP) and General Plan policies, specifically with respect to Vegetative, Water, Fish, and Wildlife Resources, Soil Resources, Visual Quality, Historical and Archaeological Resources, and Park and Recreation Resources. The proposed project is consistent with all applicable LCP policies as contained in the Locating and Planning New Development, Agriculture, Sensitive Habitats, Visual Resources, and Recreation/Visitor-serving Facilities components of the LCP. The proposed project is exempt from Architectural Review since it is not visible from Cloverdale Road and does not include significant removal of vegetation. The proposed project meets all applicable zoning regulations. There is prime soil on the site however currently no agricultural-related activities occur on the property. Consistent with LCP Policy 5.2, although located within the PAD and containing prime soil, the project site is an exception to the agriculture land use designation because it is on land that was created as a State Park prior to certification of the LCP in 1982. The project will improve water security for the park's domestic water system by providing an additional source of water.

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COUNTY OF SAN MATEO PLANNING AND BUILDING DEPARTMENT

DATE: May 27, 2020

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SUBJECT: Consideration of, a Coastal Development Permit pursuant to Sections

6328.4 and 6353 of San Mateo County Zoning Regulations and an Architectural Review Exemption pursuant to Sections 154, 227-229.1, 260, and 261 of the California Streets and Highways Code to test drill for one permanent domestic well as a water source to offset existing surfacewater withdrawals from California State Park's water diversion on Little Butano Creek. The project is not appealable to the Coastal Commission.

County File Number: PLN 2020-00033

PROPOSAL

The proposed project is located within Butano State Park approximately 4.5 miles south of Pescadero, just off Cloverdale Road in unincorporated San Mateo County. See Attachment B. San Mateo Resource Conservation District (RCD), the applicant, has a partnership with California State Parks, the landowner, to design the project and obtain required permits. RCD obtained funding from the California Wildlife Conservation Board for the proposed well and is the project applicant on behalf of State Parks. Butano State Park currently relies on surface-water from Little Butano Creek to supply all water-related infrastructure and park user demand. The proposed well will improve water security for the park's domestic water system by providing an additional source of water, particularly during drought conditions.

The project parcel is situated within the Stage Road/Pescadero Road/Cloverdale Road County Scenic Corridor. The 2,400 sq. ft., undeveloped project site is located approximately 700 feet west of the park entrance kiosk. Little Butano Creek flows/runs southwesterly through the parcel approximately 158 feet south of the proposed well site. The proposed well will be drilled in an open grassy area. Coastal scrub occurs in the vicinity and includes coyote brush, California coffeeberry, California blackberry, and poison oak. Grassland species, which include native yellow lupine, and non-native wild oat, soft chess, and Harding grass, also occur at the well site and its vicinity. The area immediately to the east of the project site is vegetated with a dense stand of mature trees, species include oak, Douglas fir, and redwood. See Attachment C.

Proposed development activities include the construction of a 25 sq. ft. concrete pad¹ (approximately six inches thick), wellhead, drilling to a depth of 250 feet below ground surface (bgs), and installation of 80 feet of screened casing from a depth of 160 feet to 240 feet below ground surface. The applicant completed an exploratory well bore in 2018 to test for viable drinking water sites. The groundwater exploration yielded positive results for a productive well. All construction activities will occur entirely within the existing exploratory well footprint (60 feet by 40 feet) to accommodate the drilling equipment. Other equipment to be used include a drill rig, backhoe, 40-foot support trailer, and crew trucks. The project site/disturbed area will be re-seeded with a native seed mix to re-establish the vegetation upon completion of drilling. The well hole will be properly abandoned to the satisfaction of Environmental Health Services (EHS) if the well is not viable.

RECOMMENDATION

Approve the Coastal Development Permit and Architectural Review Exemption, County File Number PLN 2020-00033, by making the required findings and conditions of approval provided in Attachment A of the staff report.

BACKGROUND

Report Prepared By: Renée Ananda, Project Planner

Applicant: Andrew Hall, San Mateo Resource Conservation District

Owner: California State Parks

Location: Butano State Park, 1500 Cloverdale Road approximately 4.5 miles south of

Pescadero.

APN(s): 089-090-030

Size: 252 acres

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

General Plan Designation: Public Recreation_Recreation

Local Coastal Plan Designation: PAD/CD

Sphere-of-Influence: Pescadero

Williamson Act: Not under a Williamson Contract

¹ Subsequent to filing of the Notice of Exemption the concrete pad was reduced in size from 400 sq. ft. to 25 sq. ft.

Existing Land Use: Recreation

Water Supply: Butano State Park Water System - California

Sewage Disposal: Septic System

Flood Zone: Zone D, Areas of Possible but Undetermined Flood Hazard, FEMA Panel

No. 06081C0455E, effective October 16, 2012.

Environmental Evaluation: Proposed project is categorically exempt from the California Environmental Quality Act (CEQA) pursuant to CEQA Guidelines, Class 3, Section 15303 (Construction of New Small Facilities) and Class 4, Section 15304 (Minor Alterations to Land). The applicant prepared and filed a Notice of Exemption with the San Mateo County Clerk on October 23, 2019 as required by CEQA.

Setting: The parcel comprises 252 acres of the Butano State Park (APN 089-090-030), which includes both undeveloped forest land and development in the form of cabins, campsites, bathrooms, trails, and paved/gravel roads for recreational use. Coastal scrub occurs in the vicinity and includes coyote brush, California coffeeberry, California blackberry, and poison oak. Grassland species, which include native yellow lupine, and non-native wild oat, soft chess, and Harding grass, also occur at the well site and its vicinity. The area immediately to the east of the project site is vegetated with a dense stand of mature trees, species include oak, Douglas fir, and redwood.

Chronology:

<u>Date</u> <u>Action</u>

October 23, 2019 - CEQA Notice of Exemption filed with San Mateo County

Clerk.

March 27, 2020 - Application PLN 2020-00033 deemed complete.

May 27, 2020 - Planning Commission public hearing.

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. <u>Vegetative, Water, Fish and Wildlife Resources Policies</u>

General Plan Policy 1.8 (*Definition of Sensitive Habitats*) defines a sensitive habitat 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. 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 proposed well site is within Butano State Park, which was created in 1957 to protect California's coast redwoods from logging. The natural communities that occur within the park include redwood/Douglas fir forest (with old-growth and second-growth redwood trees), oak woodland (with coast live oak and interior live oak), alder woodland (riparian), vernal wetland, coastal grassland, and chaparral (with knob cone pines, scrub oaks, manzanitas and chinquapins). Coastal scrub occurs in the vicinity and includes coyote brush, California coffeeberry, California blackberry, and poison oak. Grassland species, which include native yellow lupine, and non-native wild oat, soft chess, and Harding grass, also occur at the well site and its vicinity. The dense vegetation that occurs to the east of the project site comprises oak, Douglas fir, and redwood trees. Little Butano Creek a perennial stream flows through the park and is located 158 feet from the project site. Species historically associated with this creek are trout, crayfish, and threatened red-legged frogs.

The proposed well location is in the vicinity of an exploratory hole that was drilled in November 2018 to evaluate conditions for a potential well. The exploratory preliminary results on water quality and production indicate that groundwater in the vicinity of the hole is suitable for further exploration. The proposed project entails the installation of a test well to find a groundwater source that will augment the existing surface-water supply for domestic use. The proposed well would improve water reliability at the park with the objective to limit surface water withdrawals from Little Butano Creek and to ensure the availability of water and habitat to sustain fish and wildlife that rely on the creek.

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. It would not create or contribute runoff water to the creek. Fluids from

the drill hole during drilling will flow from the well onto the site and into the adjacent open grassy area to the west. Ground water will also be discharged into this open area during well development and pump testing. The disturbed project site will be revegetated with native species to ensure re-establishment of the removed vegetation. 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. It is a goal to reduce the reliance on the withdrawals from the creek. A groundwater source such as the proposed well will allow for more available water in the creek to sustain steelhead and Coho salmon. The proposal will ensure the protection of creek habitat consistent with General Plan policies for the protection of vegetative, water, fish, and wildlife resources, consistent with Policy 1.28.

b. Soil Resources

Policy 2.1 (Protect and Preserve Soil as a Resource) provides for the protection of soil as a resource to sustain healthy plant, animal, and human life, which ensures that good quality soil remains available within San Mateo County. Policies 2.2 (Minimize Soil Erosion), 2.3 (Prevention of Soil Contamination), and 2.4 (Protection of Productive Soil Resources) all provide for the protection of soil resources. Respectively they require the use of conservation practices to minimize erosion, and the appropriate use, storage, and disposal of toxic substances. The General Plan's soil resources policies, overall, require that soil productivity be protected from abuse, misuse, and degradation. Policy 2.5 (Minimize Depletion of Productive Soil Resources in Agricultural Areas) is to ensure that management practices in agricultural areas are applied to minimize depletion of productive soils. 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. 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.

The project site contains Class 2, Prime Agricultural soil. No significant vegetation removal would be necessary to clear an 800 sq. ft. (80 feet by 10 feet) area to establish the route to the well location. The applicant will drill the site to a depth of 250 feet below ground surface (bgs) and install 80 feet of screened casing from a depth of 160 feet to 240 feet below ground surface. The hydrologic conditions report (Attachment D) prepared by Balance Hydrologics, Inc., dated

January 25, 2019, states that the drilling method should be mud rotary (direct or reverse mud rotary).

Erosion and sediment control measures, including straw wattles, silt fencing, temporary erosion control rolls to cover staging areas, measures as specified in the project plans, will contain any drilling mud and prevent sediment from moving towards Little Butano Creek located 158 feet south of the proposed well location. The proposed project would result in the conversion of prime soil to a non-agricultural use, however, it would be a small area of the subject parcel. 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 most of the prime soil on the parcel remains available for agricultural uses if ever a consideration, although the designated land use is recreational. The well will not pose any significant impacts to agricultural water resources as it will keep water in the creek. It will not conflict with agricultural activities, including water diversions for agricultural production, in the surrounding area or the watershed. The proposed project will result in very minimal if any soil erosion; and involves no removal of major vegetation, therefore it is consistent with Policies 2.17 and 2.21.

c. <u>Visual Quality</u>

Policies 4.1 (Protection of Visual Quality), 4.3 (Protection of Vegetation), and 4.4 (Protection of Appearance of Rural and Urban Development), provide for the protection of visual resources. These policies among others protect scenic resources and the natural visual quality of San Mateo County; as well as promote aesthetically pleasing development in rural areas. Policy 4.15 (Appearance of New Development) regulates development to promote and enhance good design, site relationships and other aesthetic considerations. 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. Policy 4.26 (Earthwork Operations) requires that grading or earth-moving operations be kept to a minimum; and that where grading is necessary, ensure that graded areas blend with the natural landform. Policy 4.29 (Trees and Vegetation) provides for the preservation of trees and natural vegetation (except where required for development that is approved) and requires replacement of trees and vegetation with native plant materials where possible. Policy 4.29 also requires that large native trees be afforded special protection. Policy 4.58 (Tree and Vegetation Removal) allows for the

removal of trees and natural vegetation when done in accordance with existing regulations.

The parcel abuts Cloverdale Road to the west-southwest and existing Butano State Park Road provides access off Cloverdale Road to the Park. The site for the proposed well is located on the western portion of the subject parcel which lies within the Stage Road/Pescadero Road/Cloverdale Road County Scenic Corridor. The proposed access route will extend from the fire road to the well site. The project site is in an open grassy area with some coastal scrub. There is a dense stand of oak, Douglas fir, and redwood trees immediately to the east. The completed well will be approximately two feet above natural grade and includes a 25 sq. ft. concrete pad that slopes away from the casing. There is no electricity for the well proposed at this time. The well will not have a significant effect on the scenic corridor due to the well location distance of more than 100 feet from Cloverdale Road, the type of existing vegetation adjacent to well site, and the minimal visibility of from the park's access road. The proposed project is therefore consistent with General Plan policies for the protection of visual resources, particularly Policy 4.22 as the visual quality of the area will be protected.

d. <u>Historical and Archaeological Resources</u>

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. Staff recommends a condition of approval to require that specific protocols be followed in the event that historical or archaeological resources are encountered during project activities. All excavations shall 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. Park and Recreation Resources

Objective and goals for park and recreation resources are as provided in Policies 6.1 and 6.2 of the General Plan. Policy 6.1 (*Equitable and Balanced System of Facilities*) requires the provision of a balanced and equitable system of park and recreation facilities throughout the County. Consider needs that are identified and/or changing and the potential for impacts to the environment, service, competing land uses,

fiscal and organizational constraints. Policy 6.2 (*Meet Recreational Need*) specifies that County residents' park and recreation needs be met in a manner that enhances the physical, mental, and spiritual quality of life of San Mateo County. Policy 6.4 (*Environmental Compatibility*) calls for the protection and enhancement of environmental quality when developing park and recreation facilities. The County must mitigate environmental impacts (including adverse effects on adjacent, privately-owned areas) that result from the development of park and recreational facilities. Policy 6.5 (*Access to Park and Recreation Facilities*) requires that appropriate access and conveniences be provided for all members of the pubic who use these park and recreation facilities. Policy 6.5 also requires the County to encourage the public to access to the park and recreation system using transportation other than private automobiles, where feasible.

Butano State Park provides a variety of recreational opportunities for the public, featuring 40 miles of hiking trails for day-use hiking and guided nature walks, campfire programs (during summer weekends), over-night drive-in campsites, walk-in campsites, and a backcountry trail camp with eight campsites. Park facilities include restrooms with running water provided in the main campground and drinking water in the campground and the day-use areas.

The proposed well location is in the vicinity of an exploratory hole that was drilled in November 2019 to evaluate conditions for a potential well. The exploratory preliminary results on water quality and production indicate that groundwater in the vicinity of the hole is suitable for further exploration. The proposed project would install a test well to find a groundwater source that will augment the existing surface water supply for domestic use. The proposed well would improve water reliability at the park with the objective to limit surfacewater withdrawals from Little Butano Creek. Having the capability to augment the water source in the park will benefit park visitors by ensuring a continued source for drinking water. The project will supplement accessibility for the public and ensures the availability of an enhanced, physical, mental, and spiritual quality life-experience within Butano State Park, a natural environmental setting. The proposed project is, therefore, consistent with Policies 6.1, 6.2, 6.4, and 6.5.

2. Architectural Review

The Western portion of the parcel is located within the Stage Road/Pescadero Road/Cloverdale Road County Scenic Corridor. The parcel abuts Cloverdale Road to the west-southwest and existing Butano State Park Road provides access off Cloverdale Road to the Park. As

discussed in Section A.1.d above, the completed well will be approximately two feet above grade and includes 5 feet by 5 feet cement pad. The proposed well will be minimal in height above ground and does not result in significant vegetation removal. The project would not be visible from Cloverdale Road 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 comply with all applicable Local Coastal Program (LCP) Policies, specifically:

a. <u>Locating and Planning New Development Component</u>

Policy 1.25 (*Protection of Archaeological/Paleontological Resources*) discusses the protection of archaeological resources on sites proposed for development. Staff recommends a condition of approval to that specific protocols be followed in the event historical or archaeological resources are encountered during project activities. All excavations shall 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.

b. Agriculture Component

Policy 5.1 (*Definition of Prime Agricultural Lands*) defines prime agricultural land as all land that qualifies for rating as Class I or Class II in the U.S. Department of Agriculture Soil Conservation Service Land Use Capability and land with an 80-100 rating in the Storie Index Rating. Policy 5.2 (*Designation of Prime Agricultural Lands*) designates any parcel that contains prime agricultural lands as Agriculture on the LCP land use map, with certain exceptions, which include State Park lands existing as of the date of certification of the LCP in 1982. 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 enough water supplies needed for agricultural production and sensitive habitat protection in the watershed are not diminished.

The project site contains prime agricultural land, as defined by Policy 5.1. Butano State Park was created in 1957, well before the 1982 certification of the LCP, to protect California's coast redwoods from logging. Consistent with Policy 5.2, the park is therefore not designated as Agriculture. The proposed project, however, would result in the conversion of a small area of the subject parcel from prime

soil to a non-agricultural use, as mentioned above. There is no expectation that the proposed well will result in damage to the agricultural capability of the surrounding soil, if such a use is considered in the future. Given the small portion of agricultural lands proposed for conversion compared to the overall parcel size, the amount of conversion is considered minor as most of the prime soil on the parcel remains available for agricultural uses. The well will not pose any significant impacts to agricultural water resources as it will keep water in the creek. It will not conflict with agricultural activities, including water diversions for agricultural production, in the surrounding area or the watershed. The proposed project is consistent with the policies of the LCP with respect to agriculture.

c. Sensitive Habitats Component

Policy 7.1 (*Definitions*) provides that all perennial and intermittent streams and their tributaries are defined as sensitive habitat. 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.

Butano Creek is a perennial stream and the largest tributary to Pescadero Creek in the Pescadero-Butano Watershed, as such it meets the LCP definition of a sensitive habitat. A portion of the creek flows southwesterly through the park 158 feet to the south of the project site. A search of the California Natural Diversity Database on the County Planning Geographic Information System shows sensitive species occur to the east, outside of the project area. The applicant's biologist conducted a site review in September 2019 and found that no sensitive species occur at the project site.

The intent of having a domestic well is to have a source of water during drought years and to be able to substitute groundwater as the source of the Park's water system. The well would provide groundwater as an offset to existing surface-water withdrawals from the State Park's diversion on Little Butano Creek. The proposed well would not expand current uses at the park. Furthermore, the applicant indicates this project would be funded in conjunction with a water efficiency and resiliency project that seeks to keep more water in the creek and to change the timing and amount of diversion with a goal to reduce the Park's impacts to sensitive species and riparian habitat. A groundwater source such as the proposed well will allow for more water in the creek to sustain steelhead and Coho salmon. The

proposed well will ensure the protection of creek habitat consistent with General Plan policies for the protection of vegetative, water, fish, and wildlife resources.

The project also includes Best Management Practices (BMPs) to control potential erosion and sedimentation to Little Butano Creek. The erosion and sediment control measures, including straw wattles, silt fencing, temporary erosion control rolls to cover staging areas, and other measures as specified in the project plans, will contain any drilling mud and prevent sediment from moving towards Little Butano Creek located 158 feet south of the proposed well location. The proposed project will not result in impacts to sensitive habitat, therefore it is in conformity with Policy 7.3 for the protection of sensitive habitat areas.

d. Visual Resources Component

Policy 8.5 (Location of Development) requires that new development 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 8.6 (Streams, Wetlands, and Estuaries) requires that development be set back from the edge of streams and other natural waterways with enough distance to preserve the visual character of the waterway. This policy also prohibits structural development which will adversely affect the visual quality of perennial streams and associated riparian habitat (except for those permitted by Sensitive Habitats Component Policies). Policy 8.30 (Designation of County Scenic Roads and Corridors) designates specific areas in the County as scenic corridors. Policy 8.31 (Regulation of Scenic Corridors in Rural Areas) and Policy 8.33 (Exemptions) apply special regulations for scenic corridors to protect the visual quality and natural settings of rural scenic areas and to 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.

The parcel abuts Cloverdale Road to the west and an existing fire road provides access off Cloverdale Road to the Park. The site for the proposed well is located on the western portion of the subject parcel which lies within the Stage Road/Pescadero Road/Cloverdale Road County Scenic Corridor as designated by Policy 8.30. As discussed in the sections above, the proposed project site is an open grassy area with some coastal scrub. It does not require significant vegetation

removal or grading. The site abuts a stand of tall trees to east. The well will be approximately two feet above natural grade and includes a 25 sq. ft. concrete pad (approximately six inches thick) that slopes away from the casing. There is no electricity for the well proposed at this time. Due to the parcels distance greater than 100 feet from Cloverdale Road, the type of existing vegetation on the parcel, and the potential location of the completed well, it will not have a significant effect on the scenic corridor. The proposed well is also compliant with all other applicable regulations of the Local Coastal Program. The proposed project is exempt from Architectural Review as it cannot be seen from Cloverdale Road and is minimally visible from the Butano Park Road, the entrance road to the park. Future development proposed on the parcel within the scenic corridor would be subject to review and issuance of separate Architectural Review and Coastal Development Permit. The proposed project is consistent with LCP policies for the protection of visual resources.

e. Recreation/Visitor-Serving Facilities

The LCP provides for recreational and visitor-serving facilities and uses in the Coastal Zone. Policy 11.3 (Definition of Public Recreation Facilities) provides the definition of public recreation facilities as lands and facilities serving primarily a recreation function which are operated by public agencies. Such facilities include parks, recreation areas, wild areas, and trails. Policy 11.4 (Recreation and Visitor-Serving Facilities Permitted in the Coastal Zone) allows for the permitting of recreation facilities designed to enhance coastal recreation opportunities for the public and that do not substantially alter the natural environment. Policy 11.24 (Priorities for the Expenditure of Public Funds) has established priorities for the expenditure of public funds on public recreation and visitor-serving facilities, based on the level of existing development and need that include necessary visitorserving facilities such as rest areas, public restrooms, drinking water, and campgrounds, within existing public recreation areas be maintained.

The proposed project is located within Butano State Park, a public recreation facility, as defined under Policy 11.3. The proposed well, although not a stand-alone recreational facility, will enhance opportunities for the public's recreational experience in the park which adds to the diverse range of recreation in the Coastal Zone. The proposed project would provide a water source that assists with retaining and contributing to a positive recreational experience for the public. An available source of water during drought conditions would be a benefit to the public safety within this recreational facility. The well would not result in a substantial alteration of the natural

environment. The proposed project is consistent with the LCP's policies that promote public recreation in the Coastal Zone.

4. Conformance with Planned Agricultural District (PAD) Regulations

A PAD permit is not required because the proposed project will occur on State Park property. Under the doctrine of intergovernmental immunity, State Parks is not required to obtain local zoning permits beyond those required by the California Coastal Act.

B. ENVIRONMENTAL REVIEW

The proposed project is categorically exempt from the California Environmental Quality Act (CEQA) pursuant to CEQA Guidelines, Class 3, Section 15303 (Construction of New Small Facilities) and Class 4, Section 15304 (Minor Alterations to Land). The applicant prepared and filed a Notice of Exemption (Attachment E) with the San Mateo County Clerk on October 23, 2019 in compliance with CEQA.

C. <u>REVIEWING AGENCIES</u>

San Mateo County Environmental Health Department San Mateo County Building Department, Geotechnical Unit California Coastal Commission Pescadero Municipal Advisory Council

ATTACHMENTS

- A. Recommended Findings and Conditions of Approval
- B. Vicinity/Location Map and Aerial Photo
- C. Project Detail and site photo
- D. Summary of Drilling Activities near Cloverdale Road at Butano State Park, San Mateo County, California, November 2018. Prepared by Gustavo Porras and Barry Hecht of Balance Hydrologics, Inc., dated January 25, 2019
- E. Notice of Exemption

RTA:cmc - RTAEE0182_WCU.DOCX

County of San Mateo Planning and Building Department

RECOMMENDED FINDINGS AND CONDITIONS OF APPROVAL

Permit or Project File Number: PLN 2020-00033 Hearing Date: May 27, 2020

Prepared By: Renée T. Ananda For Adoption By: Planning Commission

Project Planner

RECOMMENDED FINDINGS

Regarding the Architectural Review Exemption, Find:

1. That the project site is located on the western portion of the parcel and is within the Stage Road/Cloverdale Road/Pescadero Road County 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 Cloverdale Road.

Regarding the Coastal Development Permit Find:

- 2. That the project site is within Butano State Park which was created in 1957 prior to certification of the Local Coastal Program (LCP) to protect redwood trees.
- 3. That although the project parcel is located within the Planned Agriculture District the park is an exception to the agriculture land use designation, as specified in Policy 5.2 of the LCP.
- 4. 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. Specifically, regarding the Sensitive Habitats, Agriculture, and Visual Resources policies.

RECOMMENDED CONDITIONS OF APPROVAL

Current Planning Section

 This approval applies only to the proposal as described in this report and materials submitted for review and approval by the Planning Commission on May 27, 2020. 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 at least 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, upon written approval from the Community Development Director.
- 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 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 submit an Erosion and Sediment Control Plan for review and approval of the Community Development Director. 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, 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.
- I. The contractor shall train and provide instructions to all employees and subcontractors 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. During drilling, fluids from the drill hole will flow from the well onto the site and on to the adjacent open area to the west of the site. If mud is used for drilling, it will recirculate into the hole after cuttings are removed.
 - b. Upon completion of the well, the mud will be thinned and discharged on site into the adjacent open area to the west.
 - c. Soil and drill cuttings (sand and silt) displaced from the drill hole during drilling will be contained in the drilling area and used to grade the site upon completion of the well.
 - d. Straw wattle and silt fences shall be used by the contractor when necessary to contain solids on site.
 - e. During the well development and pump testing, groundwater will be discharged into the adjacent open area for natural infiltration.
 - f. Additional BMPs shall be installed according to the California Stormwater Quality Association (CASQA) BMP handbook:

- (1) Temporary soil stabilization BMPs will include temporary cover and rolled erosion control products to cover the bare soil of staging areas.
- (2) Temporary sediment control BMPs include silt fences and fiber rolls to be placed along the perimeter of temporary stockpiles.
- (3) Waste Management and materials pollution control BMPs include stockpile management and concrete waste management.
- (4) Wind erosion control measures such as watering and covering stockpile shall be implemented for dust control.
- 7. A pre-construction survey (within 48 hours of start of construction) of the trees in the area immediately adjacent to the project site during avian nesting season shall be conducted by a qualified biologist. 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.
- 8. 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.
- 9. 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.
- 10. Use existing roads to the maximum extent feasible to avoid additional surface disturbance.

- 11. During all phases of the project, keep equipment and vehicles within the limits of the previously disturbed areas of the project site.
- 12. 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.
- 13. 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).
- 14. There shall be no removal of any significant vegetation that screens the view of the structure from Cloverdale Road. Removal of any such vegetation shall be permitted only by the Planning Commission as part of a subsequent application for Architectural Review.
- 15. If any portion of a new structure is visible from Cloverdale Road 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.
- 16. 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

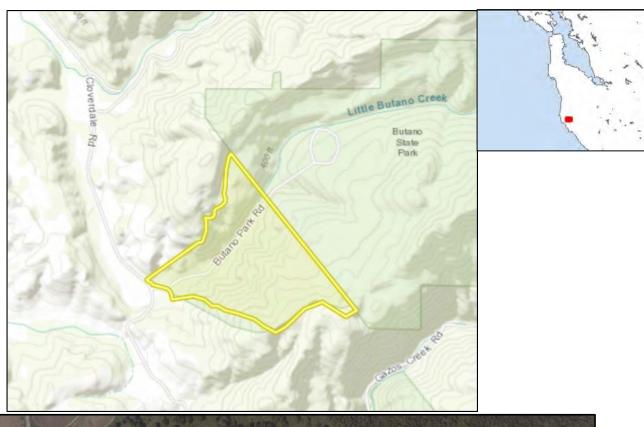
- 17. Well drilling is to be permitted through Environmental Health Services (EHS). Upon obtaining approval of the planning permits required for this project to drill a domestic water well, the applicant shall obtain a well installation permit from the EHS for the construction of the well. The subject well shall be tested to meet quantity and quality health standards.
- 18. If the 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 EHS. This shall have occurred prior to or concurrent with the

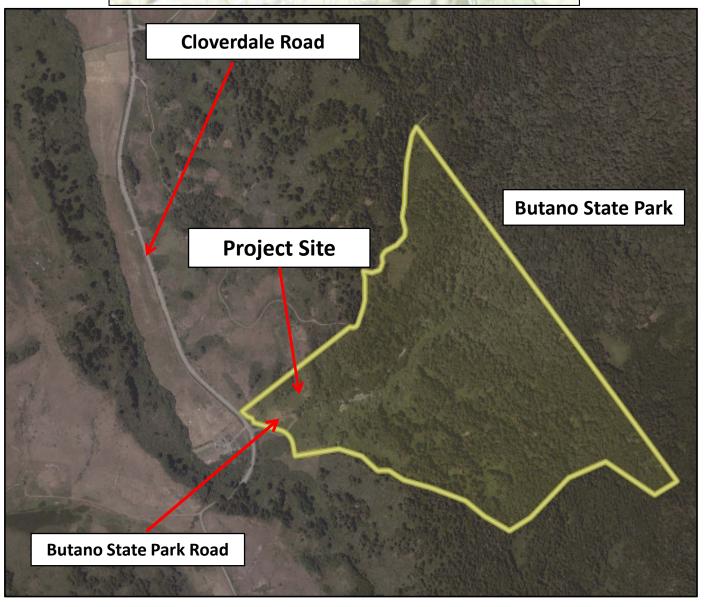
EHS' final certification of the well that does meet their standards, or if determined that one or both do not.

19. Final approval of the end use of the well to be permitted through State Regional Water Quality Control Board Division of Drinking Water.

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COUNTY OF SAN MATEO - PLANNING AND BUILDING DEPARTMENT **ATTACHMENT**

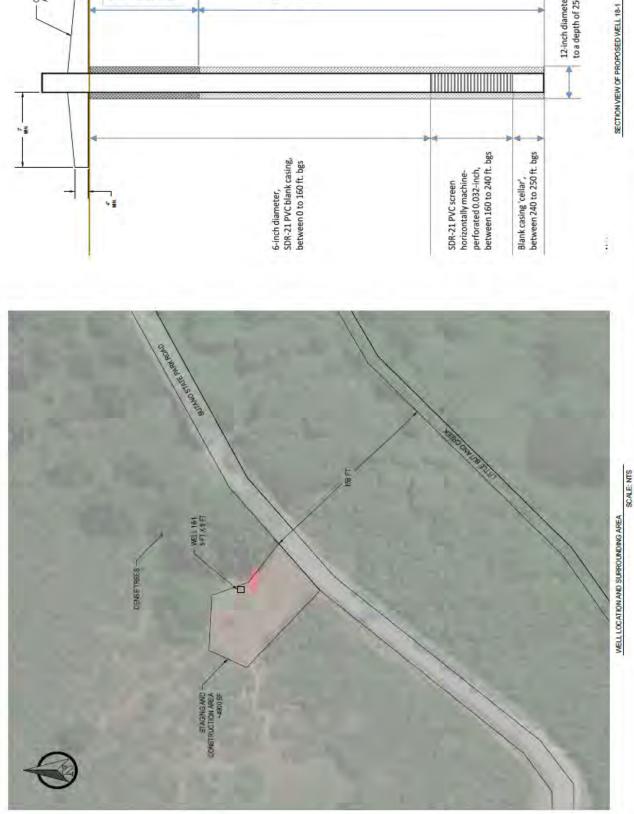




COUNTY OF SAN MATEO - PLANNING AND BUILDING DEPARTMENT ATTACHMENT







Not to scale Gravel pack shall be 8 x 16 gradation as available from Silica Resources or equivalent, from 50 ft to 250 ft bgs. per San Mateo County EHD standards (Californ a Water Well Standards Bulletins 74-81 and 74-90), to a depth of 50 ft (minimum). Cement based sealing material for - CONCRETE WELL PAD SHALL SLOPE AWAY FROM WELL CASING sanitary surface seal, 12-inch diameter bore to a depth of 250 feet

Project Detail

SCALE: NTS

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THE DRILLING CONTRACTOR WILL FOLLOW THE BMPS BELOW WITH REGARDS TO WATER DISPLACEMENT AND SEDMENT CONTROL.

DURING DRILLING, FLUIDS FROM THE DRILL HOLE WALL FLOWFROM THE WELL ONTO THE ADJACENT OPEN AREA TO THE WEST OF THE SITE.

IF MUD IS USED FOR DRILLING, IT WALL RECIRCULATE INTO THE HOLE AFTER CUTTINGS ARE REMOVED. UPON COMPLETION OF THE WELL THE MUD WALL BE THINNED AND DISCHARGEDON SITE INTO THE ADJACENT OPEN AREA TO THE WEST.

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Best Management Practices

COUNTY OF SAN MATEO - PLANNING AND BUILDING DEPARTMENT ATTACHMENT



800 Bancroft Way • Suite 101 • Berkeley, CA 94710 • (510) 704-1000
224 Walnut Avenue • Suite E • Santa Cruz, CA 95060 • (831) 457-9900
PO Box 1077 • Truckee, CA 96160 • (530) 550-9776
www.balancehydro.com • email: office@balancehydro.com

January 25, 2019

Bryanna Whitney San Mateo County Resource Conservation District 80 Stone Pine Road #100 Half Moon Bay, California 94019

RE: Summary of drilling activities near Cloverdale Road at Butano State Park, San Mateo County, California, November 2018

Dear Ms. Whitney,

The follow letter outlines our field activities and results of the exploratory borehole drilling at Butano State Park from October 30 through November 6, 2018.

Background and **Purpose**

The San Mateo Resource Conservation District (RCD) has secured funds from the Wildlife Conservation Board Prop 1 Grant Program for the Butano State Park Water Storage and Efficiency Project. The purpose of the project is to improve water security at Butano State Park and to augment instream flow conditions for coho salmon and steelhead trout. As part of this Project, the RCD and State Parks are working on a plan to offset existing surface-water withdrawals from State Park's diversion on Little Butano Creek with groundwater. Following our hydrogeologic backgrounding, reconnaissance and site meetings with the RCD and State Parks, two potential water-well sites were staked. The RCD subsequently contracted Maggiora Brothers Drilling (Maggiora) to drill an exploratory hole at each site to evaluate if conditions are favorable to proceed with efforts to acquire a Coastal Development Permit and a Water-Well Drilling Permit from the County.

Well siting and permitting

The two potential well sites were located in the vicinity of the San Gregorio fault trace (**Figure 1**). The Purisima Formation lies west of the fault, and Santa Cruz Mudstone lies east of the fault. Generally known to produce low and salty well yields and problematic groundwater quality, the Santa Cruz Mudstone was previously drilled at two locations in the Park, with one location approximately 300 feet east of the Park kiosk at Little Butano Flat and the other at Goat Hill, approximately 0.65 miles east of the

Park kiosk. Both test wells produced "limited volume and poor quality, with high levels of dissolved inorganic salts that render it unfit for general human consumption (hydrology section of the Resource Description for Butano State Park, c. 1980)."

We selected two borehole sites west of the fault that targeted a faulted and tightly-folded outcrop¹ of the Purisima formation. The Purisima formation is a marine deposit locally consisting of fine— to medium—grained silty sandstone.² The target area is along the San Gregorio fault, an active fault potentially fracturing water-bearing rock units of the area.³ Relatively higher well yields are generally realized in fault-fractured rock, but potentially compromised by poorer water quality. Johnson and Hecht (1987) successfully completed and tested two potable-water supply wells for Cascade Ranch, located in similar terrane in the Whitehouse Creek watershed to the south.

A drilling permit (No. 18-0940) was issued to Maggiora by San Mateo County Environmental Health on June 29, 2018, valid for one year. The permit was to drill two test boreholes for subsurface exploration and destroy them after completion of the tests. Both boreholes were destroyed per the State well abandonment standards followed by San Mateo County.

Exploratory borehole drilling

Antecedent conditions: Drilling was conducted from October 30 through November 6, 2018. Water year 2018 was the first dry year following a wet year in 2017. Mean annual rain fall for the watershed ranges between 28 and 38 inches according to elevation (Saah, Nahn map 1988). Virtually no incident rainfall was observed during the first five weeks of WY2019 (commencing Oct. 1, 2018).

Drilling chronology and methods: Maggiora drilled Borehole 18-1 on October 30 through November 1, 2018 and Borehole 18-2 on November 2, 5 and 6, 2018 (**Figure 2**). Balance Hydrologics (Balance) observed the drilling and testing of both boreholes, and collected, characterized and logged drill cuttings samples. Per conditions of the drilling permit, Maggiora destroyed the two boreholes per County code after testing and did not complete the boreholes as water wells.

The two boreholes were drilled using an air-rotary rig. The air-rotary method of drilling lifts drill cuttings and any encountered water from the bottom of the borehole to the surface with high-volume air circulation. Air-rotary drilling allows for logging of lithology with depth, and the identification of the geologic horizons and where water is present. It is also possible to estimate water-quality parameters (such as specific conductance and temperature) and to estimate flow rates for a given water-bearing zones. Sometimes, the drilling process requires that foam or water are added to the drilling operations in

¹ Note the variety of strikes and dips in the vicinity of the text holes.

² These rocks range in age from late Miocene to late Pliocene (~3 to 7 million years) and were mostly deposited in inner sublittoral water depths of a in a gradually shrinking shallow sea. The Purisima Formation overlies Santa Cruz Mudstone, finer grained sediments deposited in a deeper sea.

³ The San Gregorio fault is a major structural feature along the coast dividing the Butano Ridge and Pigeon Point blocks. It connects with the Seal Cove fault to the north and extend southward to Año Nuevo and across Monterey Bay to the west of the Monterey Peninsula, where it is called the Palo Colorado fault southward from Garrapata Creek. The Seal Cove fault extends northward from Moss Beach and connects with the San Andreas fault near Bolinas Lagoon in Marin County.

order to assist the transport of cuttings to the surface. Adding foam or muds makes is more difficult to relate flow, water quality, or rock texture to the depth of drilling.

Maggiora used an 8 ¾ -inch bit and an Ingersoll Rand TH-60/HR2.5 air-rotary drill rig. The drill-rig operator was Jose Fernandez, with whom our staff has worked many times. A log of drilling activities is presented as Table 1. Gustavo Porras, Balance field geologist, was on site during drilling to monitor drilling rate and conditions, lithology of the cuttings and flow rate, specific conductance and temperature of water encountered during drilling. The driller carried out 'air-lift' tests at apparent water-bearing zones and at the final depth of the borehole. During the air-lift test, groundwater is lifted out of the borehole with compressed air, then discharged away from the borehole. The flow rate and specific conductance of groundwater discharging from the borehole were measured frequently. Depth-to-water measurements were also taken at various times whenever drilling ceased. Geologic and hydrologic observation are presented in the attached geologic logs for Borehole 18-1 and Borehole 18-2.

Borehole 18-1

Borehole 18-1 was drilled to a depth of 200 feet below ground surface (bgs). Underlying a silty clay soil layer of approximately 10 feet, alluvial deposits of gravels with silts and clays were encountered down to a depth of 40 feet bgs. Some water was present in these deposits. Below 40 feet, we encountered a zone composed of dark, gray green unconsolidated conglomerate with shale clasts in a fine sandy matrix that extended down to 100 feet bgs with no indications of groundwater. From a depth of 100 to 120 feet bgs, groundwater was encountered in gravels of up to ¾-inch diameter. However, after a 1-hour air-lift test at this depth, the gravel deposit did not yield appreciable water. Underlying this, another zone composed of gray green shale clasts and gravels within a fine-grained matrix was penetrated down to 155 feet bgs, with evidence of water at a depth of 140 feet. From 155 feet to a final borehole depth of 200 feet, we encountered gravels of mixed lithology and varying size modalities. After a 35-minute air-lift, the measured flow rate had stabilized at 7.6 gallons per minute (gpm) with a specific conductance of 1,600 µmhos@25°C. On subsequent days following the completion of drilling on November 1, 2017, the static groundwater level was 20 feet bgs (see Table 1). The borehole also caved in to a depth of 85 feet bgs.

On November 2 while opening a hole with a torch in metal conductor casing to allow later removal, the driller dropped a hot piece of metal down the hole. This ignited natural gas which had accumulated in the borehole causing a small gas explosion to vent upwards through casing making a loud boom. There were no injuries or damages. Such pocket gas occurrences are not uncommon in this region. Effects on water quality, if any, should be anticipated by the well engineers, with mitigation likely to include venting. Interestingly, accumulation of enough gas (likely methane) to enable sudden ignition suggests that the

⁴ Specific conductance measures the ability of water to conduct electricity and is a widely used index for salinity or total dissolved solids (TDS). Rainwater, for example, has very low specific conductance. As water passes over and through the ground, minerals are dissolved into the water, thereby increasing the specific conductance of groundwater. Higher specific conductance indicates transmittal through saltier geologic formations or longer residence times in the ground. Specific conductance and temperature of water is measured in the field with a YSI Pro30 hand-held field meter.

shaley aquifer does have some permeability, or at least enough to convey sufficient gas to the borehole after only two days of open hole.

Borehole 18-2

Borehole 18-2 was drilled to a depth of 300 feet bgs. Underlying a gravelly soil layer of approximately 10 feet, alluvial deposits of gravelly clays were encountered down to a depth of 35 feet bgs. Below 40 feet, a greenish gray mudstone with varying amounts of gravels and thin sandstone layers was encountered down to 300 feet bgs. We found no indications of water.

Hydrogeological interpretation: We interpret the stratigraphy to reflect at least two highly-separated aquifers in each borehole. An upper late- or post-Pleistocene unconsolidated zone down to about 30 or 40 feet contains oxidized sediments, which are probably marine terrace deposits (c.f., Weber and Allwardt, 1999?) and interpenetrating colluvium or slope deposits from the east, both recharged primarily from groundwater. The degree of connection with the alluvium and channel of Little Butano Creek is uncertain, as the Little Butano Creek Valley west of the Cloverdale Road area is known to be formerly the lower portion of the Gazos Creek Valley, displaced northward along the San Gregorio fault. Continuous monitoring or pump tests under a traditional well source water evaluation can simply and clearly answer the question of whether the shallow zone may prove to be "groundwater under the influence of surface water" in the jurisdictional parlance of the State Water Resources Control. It contains water with lower specific conductance, and is probably recharge directly by rain, in large part. It is questionable whether there is sufficient water in this depth zone, and whether it would feed a well built with the requisite 50-foot well seal.

The other aquifer, or aquifers, is composed of highly reduced mudstones and sandy shales with rounded gravels. It is probably a single unit of substantially greater age. The water within it has specific conductance values exceeding 1000 micromhos/cm and is likely recharged from the Purisima and Santa Cruz Mudstone semiconsolidated mudrocks and shales uphill and downhill from the two boreholes. If potable water is to be extracted from this zone, it is most likely come from a discernibly sandier zone at depths of about 155 to 175 feet, which is where drilling could proceed once again without adding water. The separation of the two 'aquifers' is likely complete, based on the specific conductance.

Conclusions and Recommendations

At Borehole 18-1, we identified water-bearing gravels from 155 to 200 feet bgs with a specific conductance of 1,600 μmhos@25°C. The drinking-water standard, California Title 22 maximum contaminant level (MCL) for specific conductance is 1,600 μmhos@25°C. Without treatment, higher specific conductance levels would not be acceptable for a potable water source to a public water system. However, the specific conductance of groundwater from a shallow well at borehole 18-1 will likely decline as the well is pumped and draws in 'fresher' groundwater. As an example, the recently drilled well at Root Down Farm, located immediately to the west at 2601 Cloverdale Road (see **Figure 2**), was competed to a depth of 120 feet on August 19, 2015 (DWR log no. e0282579). On October 12, 2017, we measured the specific conductance of their well water with a YSI field meter at 2,770 μmhos@25°C. The growers informed us at that time that they had not been using the well much but using it some with

pumping from Little Butano Creek. The specific conductance of Little Butano Creek at their diversion was 358 μmhos@25°C. On October 31, 2018, after a year of use, we measured the specific conductance of their well water at 568 μmhos@25°C.

Observed yields from Borehole 18-1 were not especially high but suitable to complete a well. We note that the State Water Resources Control Board (SWRCB) would require a minimum 8-hour pumping test to permit an alluvial well as a water source to a public water system. The capacity of the new source well to the public water system shall be "the pump discharge rate determined by a completed test". However, based on our experience with water-well exploration in similar terrain, we recommend conducting a 72-hour pumping test to evaluate initial limits and boundaries to the aquifer supplying the well. Results of a 72-hour pumping test would better advise planning efforts for the well.

The exploratory drilling results summarized in this report support additional effort to seek a Coastal Development Permit and Well Drilling Permit from the County to complete a water well at borehole site 18-1. Given that the borehole is prone to collapsing (caving in), the drilling method should be mud rotary (direct or reverse mud rotary). We recommend drilling to a depth of 250 feet bgs and installing 80 feet screened casing from a depth of 160 feet to 240 feet, as illustrated in the schematic of the proposed well (**Figure 3**).

Water Quality

Measurements of specific conductance and temperature were made frequently during drilling, allowing us to identify that overall salinity gradually increases with depth in this terrane. The target water at site 18-1 is roughly at the acceptable water-quality limit for unrestricted use. Temporary exceedances are allowed to a maximum of 2200 micromhos per centimeter, normalized to the standard 25degC, such that it is likely that long-term use of the well for community water supply may be sustainable.

It was not feasible to assess collect and submit valid samples of groundwater from borehole 18-1 because (a) considerable water was used in drilling from sources in Watsonville and elsewhere, and (b) the borehole collapsed before being flushed, as required. A sample meeting the requirements of Title 22 will need to be collected and tested before this source can be used for water supply. Waters from a similar Purisima aquifer at Cascade Ranch do not show elevated levels of general minerals, trace metals, or physical parameters (such as turbidity).

Limitations

The content of this report was prepared in general accordance with the accepted standard of practice in surface-water and ground-water hydrology existing in Northern California for projects of similar scale at the time the investigations were performed. No other warranties, expressed or implied, are made. As is customary, readers should recognize that interpretation and evaluation of subsurface conditions and physical factors affecting the hydrologic context of any site is a difficult and inexact art. We note that

⁵ Title 22, Chapter 16. California Waterworks Standards, Article 2. Permit Requirements, §64554. New and Existing Source Capacity, Section (g).

many factors affect local and regional ground-water levels. Judgments leading to conclusions and recommendations are generally and customarily made with an incomplete knowledge of the conditions present. More extensive or extended studies, including additional and more complete aquifer tests, can reduce the inherent uncertainties associated with such studies. Concepts, findings and interpretations contained in this report were intended for the exclusive use of San Mateo County Resource Conservation District for the envisioned substitution of groundwater as the source of the Park's water system, and under the conditions presently prevailing except where noted otherwise. Their use beyond the boundaries of the site could lead to environmental or structural damage, and/or to noncompliance with water-quality policies, regulations or permits.

Closing Recommendations

- 1. An assessment of groundwater as a source of community water supply at Butano State Park was made by advancing two geotechnical exploratory borings at seemingly-favorable locations between the entry kiosk and Cloverdale Road. Conceptually, a groundwater source for the Park's supply would make it possible to cease diverting from the Little Butano Creek, leaving more water in the creek to sustain steelhead and coho. Geotechnical borings were used because the funding is available for only 12 months, not long enough to obtain the coastal development permits to support that traditional investigation.
- 2. Careful airlift testing at one borehole indicated potential yields of 7.6 gallons per minute, likely more than enough to meet projected water demand. Our experience is that airlift yields often are somewhat greater than sustainable or safe yields. No evidence of potential production was found in the second borehole; it should be considered 'dry'.
- 3. The water demand analysis is under way by the project designers at at SRT Engineers.
- 4. Existing water quality encountered in the boreholes approached allowable salinity limited (measured as specific conductance). We believe that salinity will gradually decrease as the stale water in the alluvial groundwater aquifer will freshen in response to greater use and recharge. Conformance with Title 22 standards for general minerals, general physical, and trace elements could not be assessed, the Borehole 1 collapsed before a sample could be collected for laboratory analysis. Based on thorough analysis of wells inform a similar aquifer system at Cascade Ranch (now known as Costanoa), concentrations of ions and water properties exceeding Title 22 is not anticipated but must be established at the Litrtle Butano site. 5. Work should continue in tandem with the analyses underway at SRT Engineers to meet standards for a water-purveyance permit of a suitable classification.
- 6. Temperature of water planned to be diverted from the aquifers is even cooler than that in Little Butano Creek, and would not be harmful to native fish species, even though release of these waters to the stream is not presently proposed. A rupture in the plumbing is not likely to be a temperature concern.
- 7. There is evidence of combustible gas in borehole 18-1. Measures should be taken during well design to accommodate potential safety and water quality effects.

Closing

Thank you again for the opportunity to assist with the pilot drilling and preliminary source-water analysis.

Do not hesitate to contact us -- and of course Mark -- if you or the SRT team have questions related to the work, results, or recommendations presented herein.

Sincerely,

BALANCE HYDROLOGICS, Inc.

Gustavo Porras

Hydrologist/Field Geologist

Barry Hech, CHg, CEG

Geomorphologist/Hydrogeologist

Reviewed by: Mark Woyshner, MScEng

References

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Weber, G.E., and Allwardt, A.O., The Geology from Santa Cruz to Point Año Nuevo – The San Gregorio fault zone and Pleistocene marine terraces, 32 p.

Enclosures

Figure 1. Geology and area of potential well sites Figure 2. Location of borehole sites with setbacks

Figure 3. Schematic of proposed well

Table 1. Log of drilling activities

San Mateo County Environmental Health Drilling Permit 18-0940 Geologic log of borehole 18-1 Geologic log of borehole 18-2

It is strongly suggested that this report be printed in color to allow for geologic units be well differentiated.

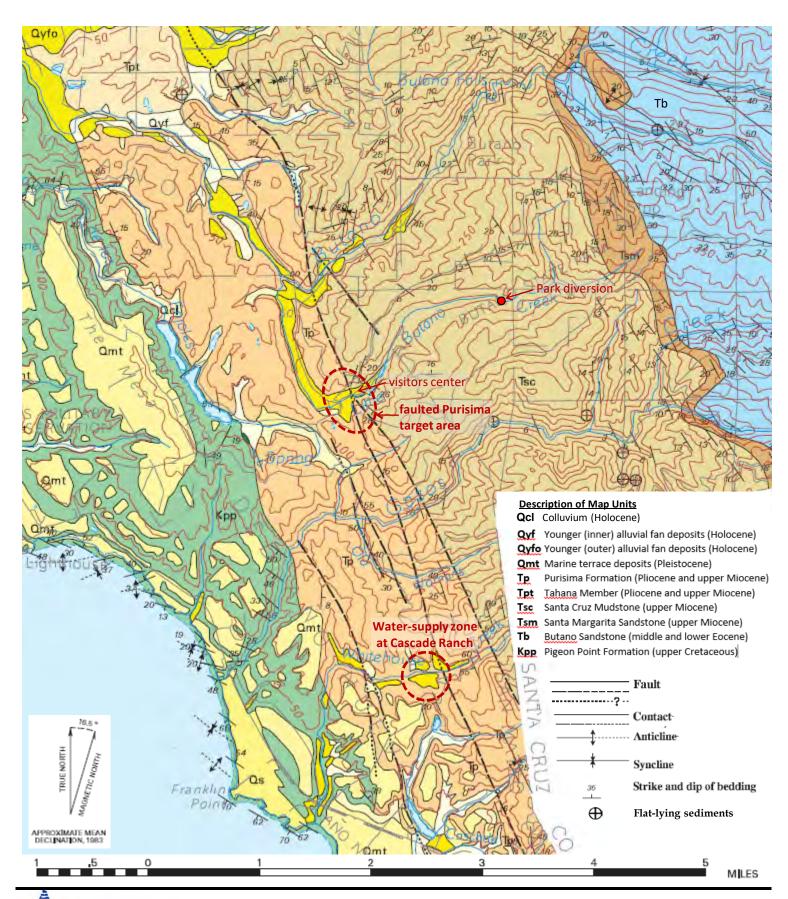




Figure 1. Geology and area of potential well sites, Butano State Park, Balance
Hydrologics, Inc.

San Mateo County, CA. The target aquifers within the Little Butano Creek
watershed is the faulted undifferentiated Purisima formation. Geology source: Brabb and
others, 1998, USGS Open File Report 98-137, itself a compilation of many prior reports

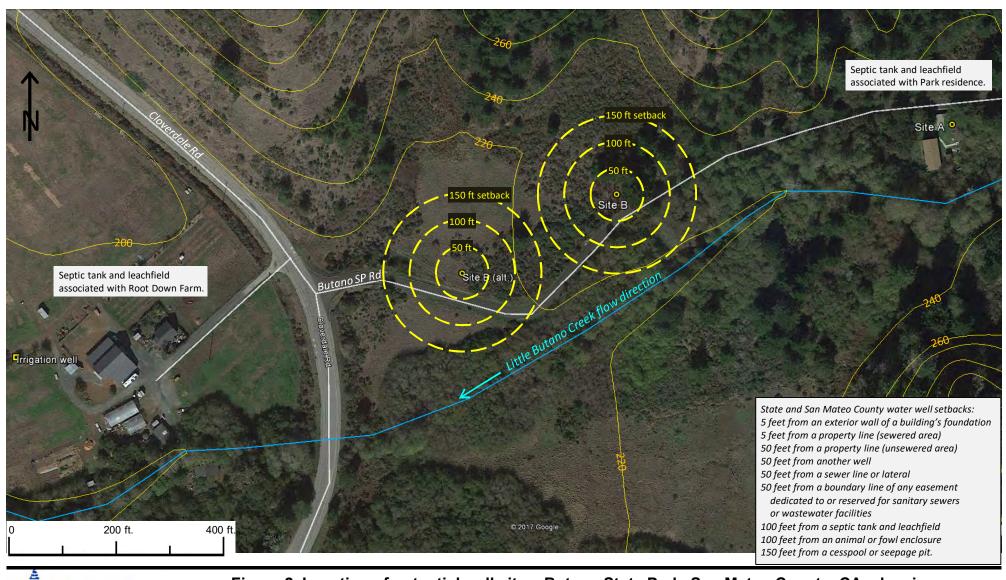
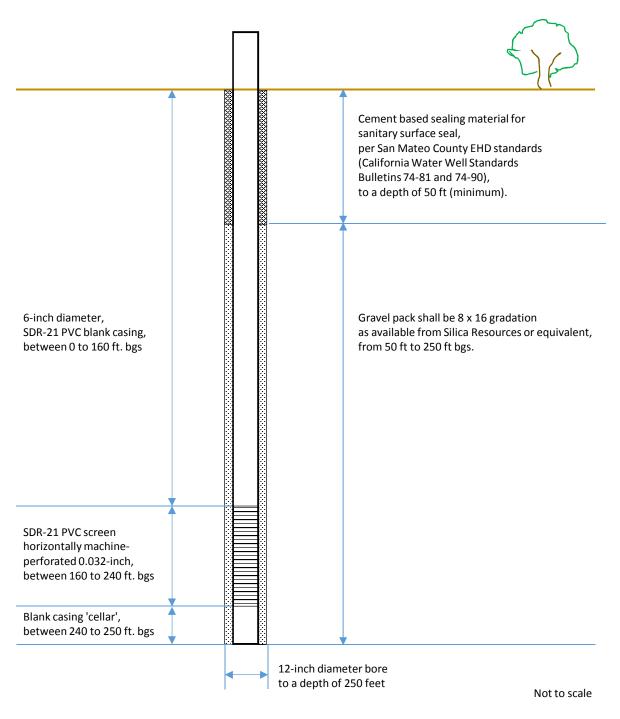




Figure 2. Location of potential well sites, Butano State Park, San Mateo County, CA, showing required setbacks. Address: 1500 Cloverdale Rd, Pescadero, CA 94060. Contour interval: 20 ft. Site B is proposed for drilling. Site B (alternate) is proposed as a backup site, potetially to be drilled if Site B is abandonded. Buried powerline is along north side of Butano State Park Rd. Title 22 Water Works Standards requires a 50-ft radius control zone around a source well to a public water system.



Notes:

- 1) Casing and screen shall be solvent welded, and centered within the borehole using centralizers.
- 2) Tentative design. Actual depths will be selected based on lithology and geophysical log.



Figure 3. Schematic of proposed Well No. 1Butano State Park, 1500 Cloverdale Rd, Pescadero, CA 94060

Table 1. Log of drilling activities Butano State Park, Pescadero, California

Date	Activity
Tuesday, October 30, 2018	Drill BH 18-1: drilled down to 40 feet bgs. Potentially cave-in at bottom of hole.
Wednesday, October 31, 2018	Drill BH 18-1: drilled down to 80 feet bgs. Conductor casing installed down to 25 feet bgs to be removed when borehole is abandoned.
Thursday, November 1, 2018	Drill BH 18-1: drilled down to total depth of 200 feet. Air-lift test at 120 feet for 45 minutes, No water flow. Air-lift test at depth of 200 ft for 45 minutes. Flow measured is 7.6 gpm. Water is routed to field to the north, no water reaches creek.
Friday, November 2, 2018	While opening a hole with a torch in metal conductor casing to allow later removal, driller dropped a hot piece of metal down the hole. This ignited natural gas in borehole causing a small gas explosion to vent upwards through casing making a loud boom. There were no injuries or damages. Moved rig to BH 18-2 location and drilled down to 20 feet bgs and then installed conductor casing 8 feet long.
Saturday, November 3, 2018	
Sunday, November 4, 2018	
Monday, November 5, 2018	Maggiora drills BH 18-2 down to 110 feet bgs.
Tuesday, November 6, 2018	Drill BH 18-2: down to total depth of 300 feet. Air-lift test at 200 feet for 15 minutes, No water flow. Air-lift test at 300 feet for 20 minutes, No water flow. At 13:40 the depth to water measured at BH 18-1 is 10.37 feet. At 17:00 BH 18-1 depth was sounded to 85 feet.

Note: Gustavo Porras was field geologist

ORDINANCE: CHAPTER 4.68

ENVIRONMENTAL HEALTH MATEO COUNTY









PERMIT 18-0940

Protecting Our Health and Environment
P/E: 4666 WELL DRILLING PERMIT

TEST BORE

FACILITY:

1500 CLOVERDALE RD PESCADERO

OWNER:

CALIFORNIA STATE PARKS **303 BIG TREES PARK FELTON**

SR0023558

APN: 089090030

CONTRACTOR:

MAGGIORA BROS DRILLING

TERMS & CONDITIONS:

- 1. All setback distances are the responsibility of the property owner.
- 2. Environmental Health will require wells that are in violation to be destroyed by the property owner at their own expense.

DATE ISSUED: 06/29/2018

EXPIRATION DATE: 6/29/2019

ALLISON FANG

ENVIRONMENTAL HEALTH SPECIALIST

To schedule an inspection call (650) 339-5635. Two (2) working days advance notice is required.

THIS PERMIT IS NONTRANSFERABLE AND MUST BE POSTED ON-SITE IN A CONSPICUOUS PLACE



Geologic log of borehole 18-1, Butano State Park, Pescadero, CA

Borehole Owner:			Borehole geologist:	Gustavo Porras	St. Park
California Stat	e Parks		Drilling company:	Maggiora Bros. Drilling, Inc.	Bound
303 Big Trees	Park, Felton, CA 95	018	Driller:	Jose Fernandez	Bound
Well location:	1500 Cloverdale	Road	Drilling rig:	Air-rotary rig	N Contains Road
	Pescadero, CA	94060	Drilling equipment:	Star 50K	erdal.
APN:		089-090-030	Depth of borehole:	200 feet	N Bar
Latitude, Longitu	de (WGS84):	37°12'4.31"N, 122°20'32.35"W	Diameter of borehole:	8 % inches	1
Ground surface e	elevation (WGS84):	224 feet	Drilling permit:	18-0940	1 /5
Start drilling date	1	October 30, 2018	Reviewed by	Barry Hecht, CHg50	Little
End drilling date:		November 1, 2018			Butano Creek

Depth feet	Lithology	Hydrology	Remarks
	Dark brown silty clay (CL-CH) Greenish brown silty clay (CL-CH) with some sub-rounded gravels Gray brown silty gravel up to 2 inches in diameter, sub-rounded to angular (GM) Dark gray green conglomerate with	12 ft.: First water, ~3gpm; 347 μmhos@25°C 20 ft.: Static water level on 11/6/18 25 to 40 ft.: ~3gpm; 556 μmhos@25°C	30 ft.; Rig chatter
	shale clasts in a fine sandy matrix, clasts are sub-angular to sub-rounded. Discrete, narrow indurated shale layer at depth of 70 feet.		50 ft.: Adding water to bring cuttings up to surface. Specific conductance of added water i 433 µmhos@25°C. 85 - 90 ft.: Approximate location of collapsed material in borehole. Borehole's collapsed depi was sounded on November 6, 2018.
	Brownish gray gravels with mixed lithology, up to %-inch in diameter, sub-angular to sub-rounded	120 ft.: After one hour air-lift test no water encountered	
	Gray green gravels up to ¾-inch in diameter with primarily shale clasts; sub-angular to sub-rounded	140 ft.: ~3gpm; 1284 µmhos@25°C [▽]	125 ft.: Adding water (433 µmhos@25°C) to bring cuttings up to surface 140 ft.: Stopped adding water
	Brownish gray gravels of mixed lithology: ~80% shale or mudstone, 5% volcanics with phenocrysts and voids and 15% unknown. Down from 170 feet, poorly sorted gravels with two size modalities, 0.2 and 2-5 mm, sub-angular to sub-rounded. Matrix ranges from coarse silt to clay.	155 ft.: ~3gpm; 1400 μmhos@25°C 185ft.: ~3-5 gpm; 1392 μmhos@25°C	155 ft,: No added water is needed to bring cuttings to surface
	0.00	200 ft.: ~3-5 gpm; 1409 μmhos@25°C 200 ft.: After 35 minute air-lift, measured flow rate 7.6 gpm, 1598 μmhos@25°C	



100 110

Geologic log of borehole 18-2, Butano State Park, Pescadero, CA

Borehole Owner: California State Parks 303 Big Trees Park, Felton, CA 95018		Borehole geologist: Drilling company: Driller:	Gustavo Porras Maggiora Bros. Drilling, Inc. Jose Fernandez	Park Boundary Borehole 18-2
Well location: 1500 Cloverda	le Road	Drilling rig:	Air-rotary rig	N Borehole 18-2
Pescadero, CA	94060	Drilling equipment:	Star 50K	e rate
APN:	089-090-030	Depth of borehole:	300 feet	N Ris Road Bulleto Butter
Latitude, Longitude (WGS84):	37°12'3.01"N, 122°20'35.88"W	Diameter of borehole:	8 3/4 inches	autoli .
Ground surface elevation (WGS84)	219 feet	Drilling permit:	18-0940	
Start drilling date:	November 2, 2018	Reviewed by:	Barry Hecht, CHg50	Little
End drilling date:	November 6, 2018		10.000	Butano Creek 1 mile

Depth feet Lithology Hydrology Remarks

Reddish brown sandy silty gravel,		
sub-rounded Brown gravelly clay	12 ft.; First water, < 1 gpm	
	Control of the second	30-300 ft.: Added water to bring cuttings up to
Yellowish to greenish gray mudstone and fine gravels. Gravel clasts are shale and sandstone, Very angular to sub-angular. matrix is mud/silt	35 to 300 ft.; No native water	surface. Specific conductance of added water i 1050 μmhos@25°C
Greenish gray silty mudstone. Medium to fine gravel clasts are shale and sandstone, sub-angular, matrix is mud/silt.		
Greenish gray silty mudstone with fine gravels with multiple distinctly harder ~1-foot sandstone beds (drill chatter). Gravel clasts are shale and sandstone, sub-angular to sub-rounded, matrix is mud/silt drying to numerous expansive cracks		
Gradational transition to distinctly sandier zone, sets up like mortar		
Greenish gray silty mudstone with fine gravels. Gravel clasts are shale and andstone, sub-angular to sub-rounded, few cherty or granitic (?) clasts, matrix is mud/silt		
	300 ft.: After 45 minute air-lift, no native	

COUNTY OF SAN MATEO - PLANNING AND BUILDING DEPARTMENT ATTACHMENT



80 STONE PINE ROAD, SUITE 100 HALF MOON BAY, CA 94019

SANMATEORCD.ORG

CERTIFICATE OF DETERMINATION OF EXEMPTION/EXCLUSION FROM ENVIRONMENTAL REVIEW

Project Title: Butano State Park Streamflow Enhancement Project

Project Location: The project site is located in Butano State Park approximately 4.5 miles south

of the town of Pescadero, CA. This project will involve drilling of a domestic well which will occupy a 40 ft. by 60 ft. pad (area of impact) approximately 700 ft. west of the park entrance kiosk. Geographic coordinates of the project

are 37.20116 N, -122.3422 W.

Assessor's Parcel Numbers: 089-090-030

City and County: Unincorporated, San Mateo County

Description of Nature and Purpose of Project:

The San Mateo Resources Conservation District (RCD), in partnership with California State Parks (CSP) is proposing to install a new permanent domestic well at Butano State Park. The RCD has applied for funding for this project through the Wildlife Conservation Board Proposition 1 grant.

Currently, Butano State Park relies on surface water from Little Butano Creek to supply all water related infrastructure and user demand. This project would allow for increased water security, especially in years of drought, by adding an additional water source. To ensure this project will not impact stream flow in Little Butano Creek, the RCD worked with Balance Hydrologics and SRT Consultants (project engineers) to produce a study that reviewed the geology and ground water characteristics at the site. Based on the study findings, the proximity of the proposed domestic well will not impact creek flows in Little Butano Creek. This project does not include the pumping or filtration infrastructure associated with well development, only the drilling and casing of the well hole. If the well is not viable the hole will be filled and abandoned.

Name of Person, Board, Commission or Department Proposing to Carry Out Project:

San Mateo Resource Conservation District Jarrad Fisher

80 Stone Pine Road, Suite 100 Half Moon Bay, CA 94019 OCT 23 2019

COUNTY CLERK RECORDER

MARK GLUNOTI, Jounty Clerk
By RESZ DE LA VEG

EXEMPT STATUS:

X Categorical Exemption, Class 3 [CEQA State Guidelines, Sections 15303, 15304]

REMARKS: See next page.

Contact Person: Jarrad Fisher Telephone: (650) 712-7765x114

Jarrad Fisher, Senior Project Manager

Date of Determination:	I do hereby certify that the above determination has been made pursuant to State and Local requirements.
ce:	

REMARKS:

The project will improve water security and for Butano State Parks domestic water system. The following provides a brief description of the project, and an explanation for why the project qualifies for a Categorical Exemption from CEQA under Class 33 (15303, 15304).

Project Description

This project will install a new permanent well at Butano State Park. The RCD and Balance Hydrologics, in partnership with Maggioras Bros Drilling, completed an exploratory well bore at Butano State Park in 2018 to test for viable drinking water sites. The ground water exploration yielded positive results for a productive well.

All construction activities would occur entirely within the existing exploratory well footprint (0.1 acres) including the access route, staging area and drill pad footprint a 20 ft. x 20 ft. pad around the well hole.

Prior to the start of drilling, a pad will be constructed that is 60 ft. x 40 ft. to accommodate drilling equipment. Vehicles will include, drill rig, backhoe, 40-foot support trailer and crew trucks. If mud is needed during drilling, then a 30-ft. shaker with mud tank will be used. The drilling contractor will provide all road signs during drilling to instruct visitors to the park away from the drilling site.

Vegetation at the well consists of yellow bush lupine (*Lupinus arboreus*), a native species that can grow in disturbed areas. Coastal scrub species in the vicinity include coyote brush (*Baccharis pilularis*), California coffeeberry (*Rhamnus californica*), California blackberry (*Rubus ursinus*), and poison oak (*Toxicodendron diversilobum*). Non-native grasses in the area include wild oat (*Avena* spp), soft chess (*Bromus hordeaceus*) and Harding grass (*Phalaris aquatica*). Vegetation in the 60x40ft construction area will be removed as needed for construction of the well. The disturbed area will be seeded with the appropriate seed mix to ensure vegetation reestablishes.

Class 3: (CEQA State Guidelines, Section 15303)

Class 3 consists of construction and location of limited numbers of new, small facilities or structures; installation of small new equipment and facilities in small structures; and the conversion of existing small structures from one use to another where only minor modifications are made in the exterior of the structure. The numbers of structures described in this section are the maximum allowable on any legal parcel. Examples of this exemption include, but are not limited to:

- (a) One single-family residence, or a second dwelling unit in a residential zone. In urbanized areas, up to three single-family residences may be constructed or converted under this exemption.
- (b) A duplex or similar multi-family residential structure, totaling no more than four dwelling units. In urbanized areas, this exemption applies to apartments, duplexes and similar structures designed for not more than six dwelling units.
- (c) A store, motel, office, restaurant or similar structure not involving the use of significant amounts of hazardous substances, and not exceeding 2500 square feet in floor area. In urbanized areas, the exemption also applies to up to four such commercial buildings not exceeding 10,000 square feet in floor area on sites zoned for such use if not involving the use of significant amounts of hazardous substances where all necessary public services and facilities are available and the surrounding area is not environmentally sensitive.
- (d) Water main, sewage, electrical, gas, and other utility extensions, including street improvements, of reasonable length to serve such construction.
- (e) Accessory (appurtenant) structures including garages, carports, patios, swimming pools, and fences.

(f) An accessory steam sterilization unit for the treatment of medical waste at a facility occupied by a medical waste generator, provided that the unit is installed and operated in accordance with the Medical Waste Management Act (Section 117600, et seq., of the Health and Safety Code) and accepts no offsite waste.

This project is consistent with example (d). The project will construct a new small facility in the form of a domestic drinking water well. The permanet area of impact for the well installation will be a 20×20 foot pad encompasing the well bore location and will include an acess road that is approximately $80 \text{ ft. long } \times 10 \text{ ft. wide.}$

Class 4 (CEQA State Guidelines, Section 15304)

Class 4 consists of minor public or private alterations in the condition of land, water, and/or vegetation which do not involve removal of healthy, mature, scenic trees except for forestry or agricultural purposes. Examples include, but are not limited to:

- (a) Grading on land with a slope of less than 10 percent, except that grading shall not be exempt in a waterway, in any wetland, in an officially designated (by federal, state, or local government action) scenic area, or in officially mapped areas of severe geologic hazard such as an Alquist- Priolo Earthquake Fault Zone or within an official Seismic Hazard Zone, as delineated by the State Geologist.
- (b) New gardening or landscaping, including the replacement of existing conventional landscaping with water efficient or fire resistant landscaping.
- (c) Filling of earth into previously excavated land with material compatible with the natural features of the site;
- (d) Minor alterations in land, water, and vegetation on existing officially designated wildlife management areas or fish production facilities which result in improvement of habitat for fish and wildlife resources or greater fish production;
- (e) Minor temporary use of land having negligible or no permanent effects on the environment, including carnivals, sales of Christmas trees, etc;
- (f) Minor trenching and backfilling where the surface is restored;
- (g) Maintenance dredging where the spoil is deposited in a spoil area authorized by all applicable state and federal regulatory agencies;
- (h) The creation of bicycle lanes on existing rights-of-way.
- (i) Fuel management activities within 30 feet of structures to reduce the volume of flammable vegetation, provided that the activities will not result in the taking of endangered, rare, or threatened plant or animal species or significant erosion and sedimentation of surface waters. This exemption shall apply to fuel management activities within 100 feet of a structure if the public agency having fire protection responsibility for the area has determined that 100 feet of fuel clearance is required due to extra hazardous fire conditions.

This project is consistent with example (a) and (d) of Class 4. Grading for the project will take place on land with a slope of less than 10 percent, and will not take place in a waterway, wetland, officially designated scenic area, or in an officially mapped area of severe geologic hazard. The project consists of the construction and location of limited numbers of new, small facilities or structures and minor public or private alterations in the condition of land, waer and/or vegetation which does not include the removal of healty, mature, scenic trees.

