SAN GERONIMO GOLF COURSE CLUBHOUSE PARCEL

Environmental Constraints Analysis

Prepared for:

Marin County Fire Department

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SAN GERONIMO VALLEY GOLF COURSE CLUBHOUSE PARCEL

Environmental Constraints Analysis

Introduction and Scope of the Analysis

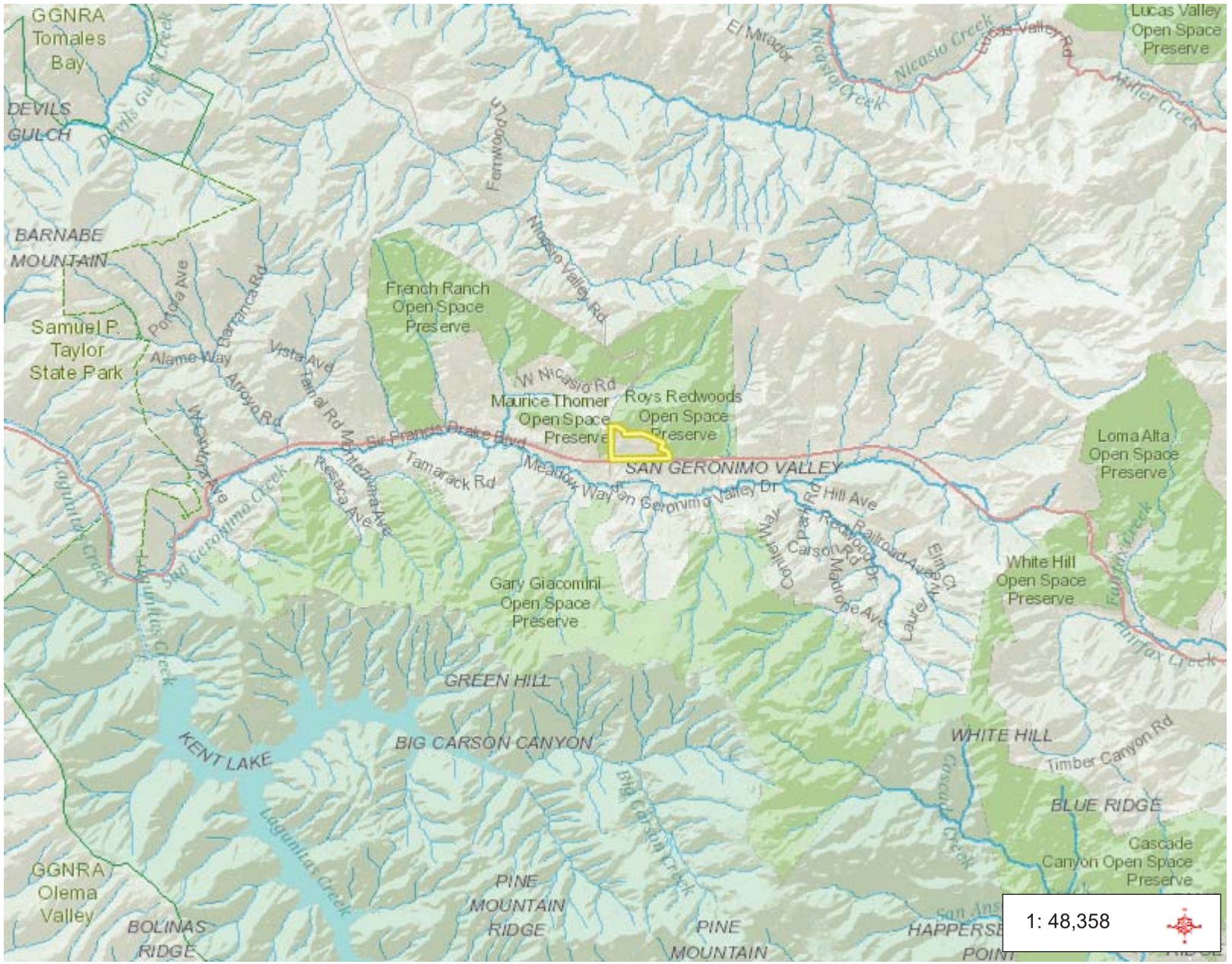
This report presents the result of an environmental constraints analysis for the San Geronimo Valley Golf Course Clubhouse Parcel (APN #172-371-04; "the Clubhouse Parcel"), located at the intersection of Sir Francis Drake Boulevard and Nicasio Valley Road in the unincorporated San Geronimo Valley area (Figure 1, Project Location), which Marin County is considering purchasing (purchase of the Clubhouse Parcel is sometimes referred to as the "Project" in this report). The analysis focuses on environmental topics that have the potential to limit, constrain, or prevent the County's future use or development of the property, should the purchase go through. This report is not prepared pursuant to the California Environmental Quality Act (CEQA), but could serve as the basis for a future CEQA document.

The report was prepared in accordance with the scope of work contained in Sicular Environmental Consulting's proposal, dated July 1, 2021, and contains analysis of the following environmental topics:

- Biological resources within and close to the Clubhouse Parcel, including threatened, endangered, and other special status species, sensitive habitats, and sensitive plant communities. In particular, the report examines the potential for future use or development of the Clubhouse Parcel to impact the salmonid fishery in San Geronimo Creek.
- Hydrology and water quality, including flood and inundation hazards present within the Clubhouse Parcel, and the potential for future use or development to pollute surface waters, deplete groundwater resources, or alter stream flows.
- Geologic and soils constraints, including the presence of geologic hazards and problematic soils that could render the site unsuitable for development.
- Any hazards and hazardous materials, including toxic contamination from past uses, that are known to be present.
- Cultural resources, including the presence or potential presence of sensitive archaeological resources within the Clubhouse Parcel, and the historical significance of the existing clubhouse building and the former golf course.
- Planning constraints posed by the Clubhouse Parcel's Marin Countywide Plan land use designation, other Countywide Plan policies, and site zoning.
- Aesthetic (visual) resources constraints, including the potential to impact important aesthetic resources or block publicly accessible scenic views.

Marin Map

Figure 1: Project Location



Legend

Parcel Boundary

Notes

8,059.7 0 4,029.85 8,059.7 Feet

NAD_1983_HARN_StatePlane_California_III_FIPS_0403_Feet

The findings of the environmental constraints analysis are presented below. Attached to the report are the technical memoranda prepared by team members presenting the methods, findings, and conclusions for each topical inquiry.

Site Description

The Clubhouse Parcel encompasses 21.83 acres[1] within the San Geronimo Valley in central Marin County, located at the northeast corner of the intersection of Sir Francis Drake Boulevard and Nicasio Valley Road (Figure 2, Project Site, and Figure 3, Aerial Photo). The Clubhouse Parcel is one of several parcels that made up the former San Geronimo Valley National Golf Course, and contains the 16,000 square foot clubhouse building, along with access roads, a parking lot, and trails. The Clubhouse Parcel is bordered on the north and east by Roy's Redwoods Open Space Preserve, which is administered by Marin County Parks; on the west by Nicasio Valley Road, and, across the road, another former golf course parcel, open space, and a residence; and on the south by Sir Francis Drake Boulevard, and, across the road, another former golf course parcel. San Geronimo Creek, a perennial tributary to Lagunitas Creek, runs roughly east to west about 650 feet south of the southern parcel boundary.

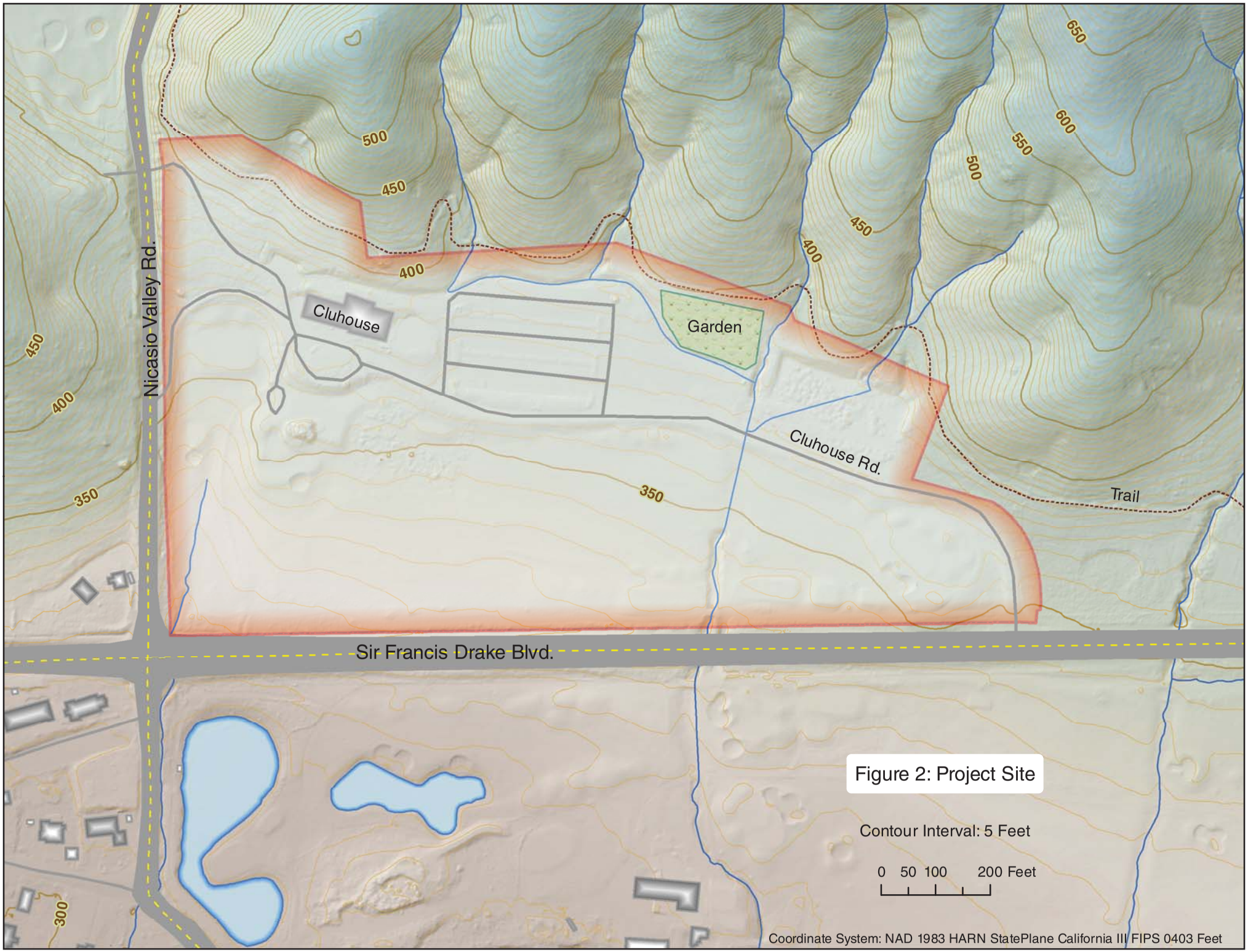
The Clubhouse Parcel slopes downward from north to south, with elevation ranging from about 440 feet above mean sea level (msl) in the northwest corner, to about 320 feet msl in the southwest corner (Figure 2). Average slope is about 13 percent,[2] but the parcel is steeper toward the north, and flatter in the south. Several ephemeral streams drain the hillslope north of the Clubhouse Parcel, flow onto the property, then are channeled into the existing drainage system (see Appendix D, Hydrology and Water Quality). Another ephemeral stream runs roughly parallel to Nicasio Valley Road in the southwestern portion of the site.

In addition to the former golf course clubhouse, the Clubhouse Parcel includes three of the former fairways located in the southern, flatter portion of the site, landscaped areas around the clubhouse, the golf course's parking lot and public access road from Sir Francis Drake Boulevard, a service road with access from Nicasio Valley Road, and golf cart trails. The trails connect to other former golf course parcels via a tunnel beneath Sir Francis Drake Boulevard, and an overpass over Nicasio Valley Road.

Current uses of the property include a community garden, located above the access road in the northern part of the site (Figures 2 and 3), and use of the clubhouse building as office space by Marin County Fire. The site, other than the clubhouse building, is open to the public for recreational use, including use of the parking lot. A regional trail within Roy's Redwoods Open Space Preserve roughly parallels the northern parcel boundary, passing onto and off of the Clubhouse Parcel several times. The parking lot serves as an informal trailhead.

[1] Parcel area according to Assessor's Parcel Map.

[2] Average slope as stated in MarinMap, Marin County's web-based GIS program, which is available at https://www.marinmap.org/dnn/


Nicasio Valley Rd.
Cluhouse
Garden
Cluhouse Rd.
Trail
Sir Francis Drake Blvd.
650
600
550
500
450
400
350
300
Figure 2: Project Site
Contour Interval: 5 Feet
0 50 100 200 Feet
Coordinate System: NAD 1983 HARN StatePlane California III FIPS 0403 Feet

Marin Map

Figure 3: Project Site, Aerial Photo

Legend

Parcel Boundary

Notes

Image date: 2018

400.0 0 200.00 400.0 Feet

NAD_1983_HARN_StatePlane_California_III_FIPS_0403_Feet

Current Proposal and Approach to the Environmental Constraints Analysis

The County is considering purchase of the Clubhouse Parcel for unspecified use. This analysis considers the environmental constraints to future use of the property, which is assumed to include, potentially, some combination of use of existing facilities, demolition or alteration of the existing clubhouse building, and construction of new structures, such as public facilities, and related infrastructure. While this report does not constitute a formal environmental review pursuant to CEQA, the analysis generally follows the State CEQA Guidelines Appendix G checklist questions for the environmental topics considered. In general, a constraint is identified where the County's future use of the Clubhouse Parcel could result in a significant impact under CEQA that would not be readily avoided or reduced using common, feasible mitigation measures.

Findings

Summary of Findings

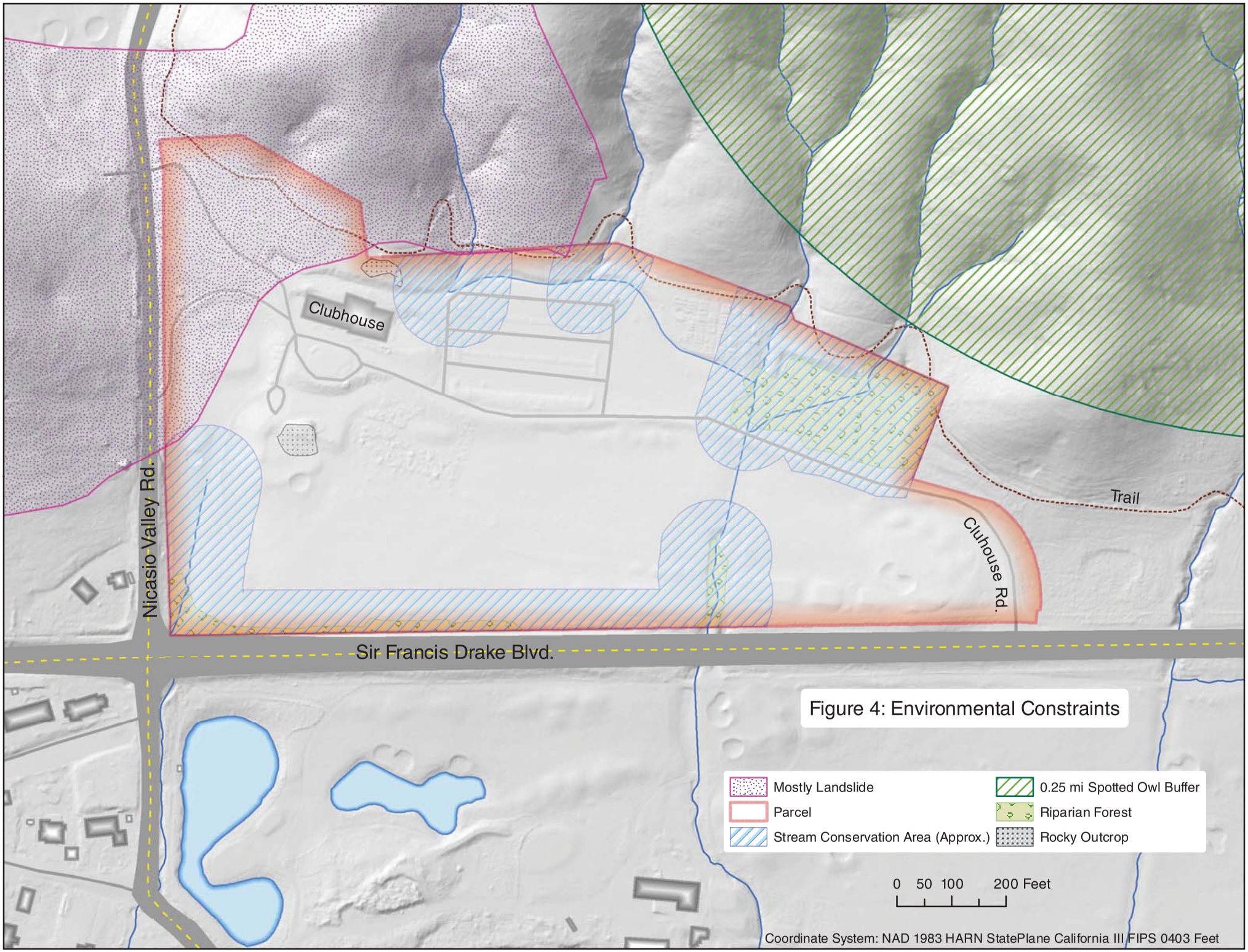
Each of the environmental topics covered by this constraints analysis is discussed below. Memos providing additional detail on several of the environmental topics are included in the appendices.

The identified constraints are shown in Figure 4. To summarize, the main constraints to future use and development of the Clubhouse Parcel are the ephemeral stream channels, wetlands, riparian forest, and associated Stream Conservations Areas and Wetland Conservation Areas (SCAs and WCAs), as defined in the Marin Countywide Plan. Any future development, including site grading, vegetation removal, alterations to the existing clubhouse building, and new construction, should avoid encroachment into the SCAs and WCAs. Figure 4 shows the approximate extent of areas likely to be deemed SCAs and WCAs. Exact extent and location should be determined through additional site study.

Another constraint is posed by potentially unstable soils in the northwest corner of the parcel and to the north of the parcel boundary (shown as areas of "mostly landslide" in Figure 4). While future development of these areas is likely feasible, it may require extensive geotechnical evaluation and engineering.

The rocky outcrop located south of the clubhouse building, shown in Figure 4, may be considered a unique geological feature and an important aesthetic resource. Future development should avoid disturbing the rocky outcrop itself, should be setback a suitable distance, and should avoid blocking scenic views from the top of the rock.

Other environmental constraints are more general, and can generally be avoided or accommodated through compliance with federal, State, and County laws, regulations, and policies, particularly County Development Code and Countywide Plan provisions for protection of natural resources.


Clubhouse
Nicasio Valley Rd.
Sir Francis Drake Blvd.
Trail
Cluhouse Rd.
Figure 4: Environmental Constraints
Mostly Landslide
Parcel
Stream Conservation Area (Approx.)
0.25 mi Spotted Owl Buffer
Riparian Forest
Rocky Outcrop
0 50 100 200 Feet
Coordinate System: NAD 1983 HARN StatePlane California III FIPS 0403 Feet

Biological Resources (other than fisheries)

Environmental Science Associates (ESA) conducted the analysis of biological resources (other than fisheries). Their memo containing their methods, findings, conclusions, and citations is included as Appendix A, and summarized below.

ESA characterized the Clubhouse Parcel as developed/disturbed lands, including the former clubhouse, parking lot, and roads and trails; landscape trees and ornamental plantings in the parking lot, surrounding the clubhouse and in spots around the former golf course; oak savanna and mixed oak woodlands on the slope north of the clubhouse; and riparian forest to the east of the clubhouse. A wet, likely perennial roadside ditch runs parallel to Sir Francis Drake Boulevard, full of willows (*Salix* spp.) and blackberry (*Rubus armeniacus*). In addition, the site features non-native grassland turf on the former golf course, rocky outcrops on the slope uphill, sand pits, and small areas of scrub vegetation, such as coyote brush (*Baccharis pilularis*). Figure 1 in Appendix A shows natural communities within the Clubhouse Parcel. A list of plants identified during the botanical survey is included as an attachment to Appendix A.

ESA found no rare plants within the Clubhouse Parcel during their reconnaissance survey, and concluded that previously developed areas of the parcel, including the clubhouse building, its surroundings, and turf areas, do not have potential to support rare plants. ESA recommended, however, that a botanical survey for early- and mid-season blooming rare plants should be conducted for any development that would affect the oak savanna, oak woodland, or riparian habitats in the northern part of the site (see Figure 1 in Appendix A), as their site survey was conducted during the late-season blooming period. The Clubhouse Parcel contains many native trees, including in the relatively undisturbed woodland areas in the northern part of the parcel, and planted trees within the developed areas. Any tree removal on the site associated with future development may need to adhere to Countywide Plan Policy BIO-1.3 Protect Woodlands, Forests, and Tree Resources.

The parcel does not provide habitat for federal or state-listed wildlife species, but other special-status wildlife species may occur on the site, including nesting birds and bats. As required by Marin County Development Code Section 22.20.040 (F), prior to tree removal, a bat survey may be required in suitable bat habitat, followed by a bat-safe two-stage removal process if bats were present or highly likely. The same process should be applied to structure removal, and should be added as a mitigation measure in a CEQA review, if the County proposed in the future to demolish the clubhouse. The Project area contains a large number of trees and shrubs, as well as herbaceous vegetation, suitable for nesting migratory birds. Potential impacts to nesting birds from any future site development would be affected by the timing of construction, vegetation removal, or grading activities. If activities were to occur during bird nesting season, approximately February 1 to August 15, protective measures should be implemented to avoid potential impacts to active bird nests. These measures would include pre-construction surveys and avoidance of identified nesting sites with a suitable buffer until young have fledged, as required by Marin County Development Code Sec. 22.20.040(G).

An active northern spotted owl (*Strix occidentalis caurina*) nest and activity center is located northeast of the study area in Roy's Redwoods. The northern spotted owl is a federal and State-listed threatened species. This nest is located about ¼-mile from the northern

boundary of the Clubhouse Parcel. ¼ mile is the distance regulatory agencies recommend for avoiding disturbance of nesting northern spotted owls. In addition, the nest is located on the opposite side of the ridge north of the Clubhouse Parcel, providing an additional sound barrier from any potential disturbance resulting from activity within the site. Thus, the presence of the northern spotted owl activity center would not be likely to pose a constraint to future development or use of the site. The portion of the ¼ mile buffer area around the nest that is closest to the Clubhouse Parcel is shown in Figure 4.

Riparian habitat, a sensitive natural community, is present in the eastern part of the site; site development should avoid this area with an appropriate buffer zone. Several drainages and an aquatic basin were identified that may be federal or state-jurisdictional waters, and a jurisdictional determination is recommended for any future development of the site that may affect these aquatic areas. These areas should be avoided with appropriate buffers in accordance with federal, State, and County requirements, particularly the SCA and WCA areas defined in the Marin Countywide Plan. Any disturbance of streams or wetland features, for example, for development of additional access from Sir Francis Drake Boulevard, may require obtaining permits, including potentially compensation for loss of wetlands, from the California Department of Fish and Wildlife, Regional Water Quality Control Board, and the Army Corps of Engineers. Riparian habitat, waterways, and approximate extent of SCA and WCA buffers are shown in Figure 4.

Fisheries

Mike Podlech, Aquatic Ecologist, conducted the evaluation of the potential for future use or development of the Clubhouse Parcel to impact fisheries resources. His full report is included as Appendix B, and is summarized below.[3]

San Geronimo Creek, which runs roughly 650 feet south of the Clubhouse Parcel, supports central California coast (CCC) coho salmon (*Oncorhynchus kisutch*), a federal and State-listed endangered species, and CCC steelhead (*O. mykiss*), a federal-listed threatened species. Coho salmon and steelhead are anadromous fishes, rearing at least partially in freshwater, migrating to the ocean as smolts, maturing to adulthood in the ocean, and then migrating back into freshwater streams to spawn. The Marin Municipal Water District (MMWD) conducts an extensive monitoring program of salmonid populations within the Lagunitas Creek watershed, including mainstem San Geronimo Creek, and the Salmon Protection and Watershed Network (SPAWN) monitors populations within tributaries of San Geronimo Creek. Coho salmon and steelhead populations in the watershed have fluctuated widely since 1970 and are significantly reduced from anecdotal reports of large historic populations. Lagunitas Creek and San Geronimo Creek have been designated core areas for the recovery of CCC coho salmon. The San Geronimo Valley Salmonid Enhancement Plan provides recommendations for habitat improvements throughout the watershed. Most recently, SPAWN and its partners remediated a long-standing fish passage barrier at Roy's Pool, located at the downstream end of the former golf course.

A reconnaissance-level field assessment of the Clubhouse Parcel and adjacent portions of the former golf course was conducted on July 19, 2021 to identify existing waterways that may support fisheries and other aquatic resources, or that drain toward waterways that support such species. The two

[3] See citations in Appendix B.

ephemeral drainages present on the Clubhouse Parcel do not provide fisheries habitat. As noted in the Biological Resources discussion, above, the seasonal drainages themselves will need to be avoided and protected through setbacks, consistent with the Marin Countywide Plan's requirements for SCAs and WCAs (Figure 4).

Indirect impacts to fisheries resources in San Gregorio Creek could potentially occur during future site development and operation of newly constructed facilities, from delivery of water quality pollutants (e.g., sediment, hydraulic or petroleum fluids, etc.) to the ephemeral drainages, and from there to San Gregorio Creek. Such impacts are commonly mitigated with standard best management practices and stormwater pollution prevention measures (discussed further under Hydrology and Water Quality), including adherence to the SCA and WCA setback requirements.

Hydrology and Water Quality

The Hydrology and Water Quality analysis was conducted by Justin Taplin of Sutro Science. The full report is included as Appendix C, and summarized below.

The Clubhouse Parcel contains two unnamed watercourses (Figure 2). Both watercourses are classified by the United States Geological Survey (USGS) as ephemeral.[4] The watercourses drain the site in a southerly direction before joining stormwater roadside drainage ditches and conveyance systems. They cross beneath Sir Francis Drake Boulevard and flow southward across another former golf course parcel toward San Geronimo Creek. The eastern and western watercourses ultimately flow into San Geronimo Creek upstream and downstream, respectively, of the "Roy's Pools Fish Passage and Floodplain Restoration Project," located just upstream of San Geronimo Valley Drive. Additionally, the former clubhouse building and paved areas of the parcel (parking area and access roads) collect stormwater via storm drains and storm runoff is conveyed to the drainage feature on the eastern side of the parcel. Each of the watercourses, as well as on- and off-site stormwater conveyance, is described in detail in Appendix C.

The Clubhouse Parcel is located within Flood Zone X, as mapped by the Federal Emergency Management Agency (FEMA) (Figure 3 in Appendix C). Zone X includes areas outside of the 100-year flood hazard area with minimal chance of flooding. The Clubhouse Parcel is not located in an area at risk of flooding due to dam failure, seiche, or tsunami.

Development of the Clubhouse Parcel is feasible without substantial constraints related to degradation of surface or groundwater quality, hydromodification of on-site or downgradient surface water features, or flood-related issues. Any future development would be required to comply with National Pollutant Discharge Elimination System (NPDES) regulations, including coverage under the State Construction General Permit. Stormwater controls would be set forward in a detailed Stormwater Pollution Prevention Plan, and any development would be required to comply with construction and post-construction pollution prevention requirements of the Marin County Stormwater Pollution Prevention Program (MCSTOPPP). In addition, any future development would be required to comply with the SCA and WCA setbacks required by the Marin Countywide Plan (Figure 4). Compliance with these regulations and policies would prevent the discharge of pollutants to surface waters or groundwater and minimize or eliminate the potential for degradation of surface water or groundwater quality resulting from any future development of the Clubhouse Parcel.

[4] See citations in Appendix C.

Although no substantial hydrologic or water quality constraints to development have been identified, implementing the following recommendations as part of future development would facilitate environmental review and permitting, and may further reduce or avoid potential adverse effects, or potentially result in water resource benefits to the watershed:

- As part of development planning, prepare a site hydrologic or drainage study (study) with engineering design recommendations that achieve post-development hydrology similar to pre-development hydrology in terms of peak stormwater runoff for design storms. The study should include specific design recommendations that are consistent with MCSTOPPP requirements and that achieve performance standards of peak stormwater discharge rates and volumes discharged from the Project site remaining at or below existing conditions.
- Any proposed stormwater management system should be designed with sizing and capacity to safely convey the calculated peak discharges associated with the 100-year/24-hour design storm.
- Any proposed development plan should be designed to accommodate 100-foot stream setbacks for the ephemeral channels on the subject parcel to avoid hydrologic or water quality degradation of downgradient receiving waters.
- Any proposed development plan should include, if feasible, enhancement of the wetland areas and natural swales in the southwest corner of the parcel, and incorporate such features as Low-Impact Design stormwater treatment and retention. Enhancement and use of such features could potentially improve the biological value of aquatic habitat, increase habitat availability, and improve stormwater quality, representing a potential benefit of development.

Geology and Soils

The Geology and Soils constraints analysis was conducted by Peter Hudson, PG, of Sutro Science, based on published geologic and soils mapping, literature review,[5] and a site reconnaissance. His full report is included as Appendix D, and summarized below.

The Clubhouse Parcel is underlain by shallow bedrock, which is overlain by varying thicknesses of unconsolidated compacted alluvium. The parcel slopes gradually to the southwest and most of the site is not susceptible to landsliding or slumping. However, the steeper slopes north of the parcel and those in the uppermost northwest corner of the site could present a geotechnical challenge if grading encroached into the base (toe) of these slopes; see the area mapped as “mostly landslide” in Figure 4. This could possibly lead to immediate or future slope failure. If avoidance of these slopes during future development is not possible, a geotechnical engineering remedy would be required to stabilize the slope to accommodate any grading that is proposed at or near the base of the slope.

No active faults have been identified in the San Geronimo Valley, and the potential for surface fault rupture on the Clubhouse Parcel is remote. The site is likely, however, to experience ground shaking from a major regional earthquake within the next 30 years. Structural damage and injury during an earthquake are inherent risks in seismically active regions such as Marin County. The clubhouse building was not

[5] See citations in Appendix D.

evaluated for seismic safety.[6] Ground shaking could cause structural damage to the building, potentially injuring inhabitants. Any future development, including renovation of the existing clubhouse building, would be subject to County and State building codes, which have been developed to address projected structural response to ground shaking. The resulting seismic design criteria required for new construction and renovation ensure that the risk of structural damage or collapse is greatly reduced or eliminated.

Portions of the Clubhouse Parcel are mapped as a moderate liquefaction hazard. Future development would require a comprehensive geotechnical evaluation prior to construction, which would identify specific locations of any liquefaction hazards and, if present, would recommend standard, industry-accepted geotechnical engineering strategies that would either remove and replace the liquefiable soils or incorporate geotechnical design elements that would minimize or eliminate adverse effects of soil failure. Similarly, there is potential to encounter expansive soils within the Clubhouse Parcel. Prior to development, the required geotechnical assessment would sample and test representative soil to determine expansivity. If expansive soils are identified, standard geotechnical recommendations would be provided to reduce or eliminate potential long term adverse effects of expansive soils.

The potential is very low for fossil remains to be present within the Franciscan mélange rock types present within the Clubhouse Parcel, or within the overlying alluvium. Though outcrops of Franciscan mélange are prevalent throughout the San Geronimo Valley, the outcropping bedrock on the Clubhouse Parcel, particularly the outcrop located just south of the clubhouse building, could be considered a unique geological feature. This outcropping was incorporated into the landscaping of the original golf course clubhouse and may be considered a local landmark. Destruction of this outcrop could therefore constitute a significant impact under CEQA, and the outcrop and a suitable buffer area around it should be avoided during any future site development. The outcrop is shown in Figure 4.

There is an existing, operating septic system serving the clubhouse building. If future development requires an expanded or upgraded system, the County would require compliance with current County septic disposal regulations.

Some of the soils within the Clubhouse Parcel are identified by the USDA Natural Resources Conservation Service as meeting the physical and chemical criteria for Prime Farmland and Farmland of Statewide Importance. The California Department of Conservation's Farmland Mapping and Monitoring Program, however, does not identify any important farmland within the site. Any future development would not, therefore, convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to non-agricultural use.

Hazards and Hazardous Materials

The analysis of constraints related to hazards and hazardous materials was conducted by Peter Hudson, PG, of Sutro Science. The analysis, which is included in full in Appendix E and summarized below, is based on database searches[7] and focuses on past or present activities or conditions on the Clubhouse

[6] A seismic evaluation of the clubhouse building was completed as part of due diligence investigations for a previous sale of the property: Rutherford + Chekene, 2017. Structural Observation Report: San Geronimo Golf Course, San Geronimo, California. In: Nova Partners, Inc., 2017. San Geronimo Golf Course Site Observations Report. Prepared for Marin County Parks Department, October 26, 2017.

[7] See citations in Appendix E.

Parcel or on neighboring properties that were historically or are currently involved in hazardous materials storage, past inadvertent discharge of hazardous materials to the environment, or conditions that may lead to future soil and groundwater contamination. A substantial constraint to future development would involve unremediated subsurface soil or groundwater contamination or an existing condition that represents an imminent release of hazardous materials or petroleum fuels such that development would not be feasible, or, if determined feasible, would require extensive soil and groundwater clean-up prior to development. Wildfire is also discussed because a substantial constraint would exist if development on the Clubhouse Parcel were to expose people or structures to significant additional risk during a wildland fire event.

There is no record of past or current use or storage of hazardous materials or petroleum fuels within the Clubhouse Parcel, and no reports documenting historic hazardous material releases, leaking underground storage tanks, or other conditions that required soil or groundwater remediation. The closest documented site with a recognized environmental condition was a leaking underground petroleum storage tank that was located on the golf course parcel south of the Clubhouse Parcel. That site is about 500 feet south and downgradient of the southern boundary of the Clubhouse Parcel. There is no evidence that this case, nor any of the other four leaking underground tank cases within a 2-mile radius, impacted the Clubhouse Parcel historically, or that they pose a risk of contamination in the future. All five of these sites have been remediated. Based on this analysis, hazardous materials use and/or storage, or residual soil and groundwater contamination caused by leaking underground tanks or other sources, would not be a constraint to future development of the Clubhouse Parcel.

The Clubhouse Parcel is located in the mapped wildland-urban interface (WUI) and there is a moderate to high risk of wildland fire. The potential for wildland fire, however, does not necessarily constrain future development. New or renovated structures would be constructed to current County and State fire codes and would be required to maintain at least 100 feet of defensible space, which would hinder the progress of a wildland fire to a greater degree than a property that is undeveloped.

Archaeological Resources

PaleoWest, LLC (PaleoWest) completed the archaeological resources constraints analysis. The full analysis, which is included as Appendix F and summarized below, focuses on archaeological resources issues that may preclude or restrict the County's future use of the property.

PaleoWest performed a record search at the California Historical Resources Information System, Northwest Information Center (NWIC) at Sonoma State University. The records search included the Clubhouse Parcel and the area within a half-mile radius. Results of the NWIC search indicated that 26 previous cultural resources studies have been conducted within a half-mile radius of the Clubhouse Parcel, though no cultural resource investigations have previously been undertaken within the parcel itself. Five archaeological resources have been documented within the record search area. Although none of these previously recorded resources are within the Clubhouse Parcel, several prehistoric and historic-era sites have been documented in the immediately vicinity along San Geronimo Creek. PaleoWest conducted an intensive-level pedestrian survey of the Clubhouse Parcel on July 22, 2021. No prehistoric or historic archaeological sites were identified during this survey.

Despite the negative results of the records search and field survey, PaleoWest considers the Clubhouse Parcel to be moderately sensitive for containing buried archaeological resources because of the parcel's

proximity to San Geronimo Creek and the prehistoric and historic-era archaeological deposits that have been discovered nearby. Any future development should therefore include requirements for standard responses in the event of accidental discovery of archaeological or historical resources or human remains, as required by Marin County Development Code Sec. 22.20.040(D).

Signed into law in September 2014, California Assembly Bill 52 (AB 52) created a new class of resources – Tribal cultural resources – for consideration under CEQA. Under AB 52, a project that has potential to cause a substantial adverse change to a Tribal cultural resource constitutes a significant effect on the environment. Tribal cultural resources may include sites, features, places, cultural landscapes, sacred places, or objects with cultural value to a California Native American Tribe that are listed or determined to be eligible for listing in the California Register of Historical Resources (CRHR), included in a local register of historical resources, or determined by the lead CEQA agency to be significant and eligible for listing in the CRHR. AB 52 requires that the CEQA lead agency consult with Tribes that have requested consultation for projects that may affect Tribal cultural resources. No Tribal cultural resources have been identified within the Clubhouse parcel. The County, must, however, initiate Tribal consultation with interested Native American Tribes upon commencement of environmental review undertaken pursuant to CEQA.

Historic Resources

As the clubhouse building and the golf course itself were constructed more than 45 years ago, there is the potential that they could be eligible for listing in the California Register of Historical Resources (CRHR), and therefore considered historic resources under CEQA, potentially constraining future development of the Clubhouse Parcel. Brad Brewster, Architectural Historian and Preservation Planner with Brewster Historic Preservation, prepared a Historic Resources Evaluation (HRE) of the Clubhouse Parcel, to determine whether historic resources are present. His full report is included as Appendix G and summarized below.

The HRE provides an architectural description of the clubhouse and the portion of the former golf course that lies within the Clubhouse Parcel; a brief history of the San Geronimo Valley and the development of the former golf course, and an evaluation of potential historic significance of the clubhouse and golf course under the criteria provided by the CRHR. Methodologies used to prepare the report included a records search, a pedestrian site survey to photograph and record the property, as well as historical research completed at the San Geronimo Valley Historical Society, the Anne T. Kent California Room of the Marin County Free Library, the County of Marin, and online.[8]

The HRE finds that no previously recorded historic resources are present within the Clubhouse Parcel, though there are several nearby within the San Geronimo Valley. The HRE concludes that neither the clubhouse building, nor the golf course itself, meet any of the criteria for listing in the CRHR, and that neither can be considered an historic resource. As no historic resources are present within the Clubhouse Parcel, historic resources do not constrain future use or development.

[8] See citations in Appendix G.

Land Use and Planning

The Clubhouse Parcel is located in unincorporated Marin County, and is subject to the County's land use plans, policies, and regulations. This section of the report examines constraints to future use and development of the clubhouse parcel imposed by the site's Countywide Plan (CWP) land use designation and zoning, the potential to cause an environmental impact due to conflict with other land use plans, policies, or regulations adopted for the purpose of avoiding or mitigating an environmental effect, and the potential to divide an existing community.

The Clubhouse Parcel is within the CWP's Inland-Rural Corridor. The land use designation is RC: Recreational Commercial. As described in the Community Development chapter of the CWP's Built Environment Element, "The Recreational Commercial land use category is established to provide for resorts, lodging facilities, restaurants, and privately owned recreational facilities, such as golf courses and recreational boat marinas." Map 7.10 in the CWP shows that Floor Area Ratios for the RC designation in the San Geronimo Valley are between .005 and .01: the designation allows only low-density development. Consistency with the site's land use designation would be a function of the nature and size of any proposed future development. The Clubhouse Parcel is not in the Coastal Zone, it is not within a CWP Ridge and Upland Greenbelt, and it is not listed in the CWP Housing Element's site inventory. As discussed above, however, portions of the Clubhouse Parcel are within WCA and SCA areas, and any future development will likely be subject to the setback requirements established in CWP Policies BIO-3.1 and BIO-4.1. Approximate extent of WCA and SCA setbacks is shown in Figure 4.

The parcel's zoning is RCR – Resort and Commercial Recreation, one of the zoning categories listed as consistent with the R-C designation. As stated in Development Code Sec. 22.12.020(H), "[t]he RCR zoning district is intended to create and protect resort facilities in pleasing and harmonious surroundings with emphasis on public access to recreational areas within and adjacent to developed areas." Setbacks in this district are determined through the Master Plan, Precise Development Plan, or Design Review process. Building heights are limited to 30 feet for primary structures and 15 feet for accessory structures. Principally permitted uses include community gardens, small and medium wind energy conversion systems (WECS), adult day programs, affordable housing, accessory retail uses, bars and drinking places, restaurants, bed and breakfast inns, hotels and motels, and service stations. Dwellings, other than affordable housing, are not permitted. There are a number of conditionally permitted uses in the RCR zoning district, including recreational, entertainment, and cultural facilities, cemeteries and mortuaries, commercial solar facilities, public utility facilities, and public safety facilities. The nature and design of any future development would dictate its consistency with existing zoning.

The Clubhouse Parcel is within the San Geronimo Community Plan (SGCP) area. The SGCP was adopted by the County Board of Supervisors in 1997, when the golf course was still operating. On page IV-12, the SGCP describes the former golf course as follows: "The golf course is 157 acres of developed recreational land including clubhouse and restaurant facilities. The course represents an important visual and recreational resource in the Valley. The golf course use should be retained with no major expansion of the facilities. Future uses should be limited to those which support the primary use as a golf course. The SGCP includes Objective CD-7.0: "to maintain existing recreational facilities, and provide recreational opportunities for all residents in the valley;" and Policy CD-7.3, San Geronimo Valley Golf Course: "major changes in the use of the San Geronimo Golf Course should be evaluated by a master plan which could address traffic and other impacts as well as the rural character of the Valley." These objectives and policies that specifically pertain to the now defunct golf course are out of date.

Because most of the land uses adjoining the Clubhouse Parcel are currently open space (including Roy's Redwoods Open Space Preserve to the north and east, other former golf course parcels to the west and south), any future development would not have the potential to physically divide an established community.

Other planning-related CEQA issues include agricultural, forestry and mineral resources; population and housing, recreation, utilities, and public services. As previously discussed, the Clubhouse Parcel is not agricultural land, and future use or development of the site would not have the potential to convert agricultural land to a non-agricultural use. Nor would it conflict with existing agricultural zoning or with a Williamson Act contract. Similarly, the Clubhouse Parcel is not forested land and is not zoned for timber production. Neither is it zoned for mineral resource extraction or identified by the California Geological survey as a mineral resource zone. There is currently no housing within the Clubhouse Parcel, so future development would not have the potential to displace existing housing. Other effects on housing, such as demand for new housing, would be dependent on proposed future use. There are abundant recreational opportunities within and nearby the Clubhouse Parcel, and future use or development would be unlikely to adversely affect existing recreational facilities or increase the demand for new facilities. The Clubhouse Parcel is served with public utilities, including water (Marin Municipal Water District), electricity, telephone, and internet service. Whether these would be sufficient would be dependent upon the nature and extent of future use or development. The area is served by Marin County Fire Department, which has a station in Woodacre, approximately 1.5 miles from the Clubhouse Parcel, and by the Marin County Sheriff's Department for law enforcement. It is within the Lagunitas Elementary School District and the Tamalpais Union High School District. The capacity of these public services and facilities to accommodate future use or development would be dependent on the size and nature of the future use.

In general, there would likely not be substantial planning constraints for future use or development of the Clubhouse parcel, providing that it is consistent with the existing CWP land use designation and zoning; adheres to the setback requirements for SCAs and WCAs; complies with other CWP policies and County regulations adopted for environmental protection such as low-impact development and other stormwater requirements (see Hydrology and Water Quality discussion); complies with noise ordinance restrictions on noisy activities; and complies with Development Code requirements for native tree, nesting bird, and bat protection (see Biological Resources discussion) and accidental discovery provisions for archaeological and historical artifacts and human remains (see Archaeological Resources discussion). Other planning constraints would need to be evaluated based on the proposed use.

Aesthetics

This section considers whether potential impacts on aesthetic, or visual, resources could constrain future development of the Clubhouse Parcel.

The principal scenic resource within the Clubhouse Parcel is the open space, relatively undeveloped character of much of the site itself. Since the former fairways of the golf course are no longer maintained, they are reverting to a more naturalistic state. The dry summer grasses and scattered landscape trees, many of which are native, blend with the less disturbed portions of the site itself, and with the undeveloped hillsides of Roy's Redwoods Open Space Preserve to the north and upslope of the Clubhouse Parcel. A prominent rocky outcrop occurs just south of the clubhouse building, and may be

considered a distinct scenic resource. A less prominent outcrop occurs just north of the clubhouse building, but is smaller and a less distinctive feature. The clubhouse building, as described in the Historic Resources Evaluation (Appendix G), has little architectural value or distinction, and does not qualify as an historic building.

Damage to scenic resources within the viewshed of a designated State scenic highway may be considered a significant impact under CEQA. There are no designated State scenic highways within the San Geronimo Valley.

Portions of the Clubhouse Parcel are visible from publicly accessible vantage points, including from Sir Francis Drake Boulevard and Nicasio Valley Road. As shown in Figures 5 and 6, however, vegetation growing within and adjacent to the roadside drainage ditch that parallels Sir Francis Drake Boulevard obscures views of the site from the south. Neither are there clear views of the Clubhouse Parcel from San Geronimo Valley Drive or from the residential streets of Woodacre. The clearest views of the site are from Nicasio Valley Road to the west of the site (Figure 7), from locations within the site itself, much of which is publicly accessible, and from the trail that runs along the northern boundary (Figure 8). The aesthetic value of the site itself from these vantage points, however, is low, as most of the site lacks intact natural vegetation communities, natural stream channels, or other natural features, and the former golf course fairways, golfcart trails, and landscaping, are unremarkable visually. Of more interest visually, and of greater aesthetic value, are the undeveloped hillside above the Clubhouse Parcel, the wooded valley bottom to the south, and the ridge across the valley. These features are visible from portions of the Clubhouse Parcel, including from the top of the rocky outcrop, as shown in Figure 9.

Impacts to scenic vistas from publicly accessible vantage points within the Clubhouse Parcel could occur with future development, if new structures were to block or substantially obscure vistas, particularly from the rocky outcrop, the community garden, and the trail along the northern boundary. The mature landscape trees along the margins of the former fairways provide screening within the site; it is likely that any future development, particularly within the former fairways outside the immediate viewshed of the rocky outcrop, would not result in a significant aesthetic impact. Siting of any proposed future structures should take into account their impact on publicly accessible views. In addition, any future development should be designed with low-impact lighting and exterior materials, to avoid creating a new source of light or glare.

Other Environmental Topics

Other CEQA environmental topics include air quality, noise, energy, greenhouse gas emissions, and traffic. The potential for a significant impact, and therefore a constraint, would be dependent upon the nature and scale of a proposed future use or development.

Figure 5: View looking north from intersection of Sir Francis Drake Boulevard and Nicasio Valley Road

Figure 6: View looking northeast from Sir Francis Drake Boulevard

Figure 7: View looking east from Nicasio Valley Road (source: Google Maps)

Figure 8: View looking west from trail on parcel boundary

Figure 9: View looking southwest from top of the rocky outcrop

APPENDICES

A. Biological Resources

B. Fisheries

C. Hydrology and Water Quality

D. Geology and Soils

E. Hazards and Hazardous Materials

F. Archaeological Resources

G. Historic Resources

Appendix A

ESA

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memorandum

date	August 20, 2021
to	Dan Sicular
from	Liza Ryan and Joe Sanders, ESA
subject	5800 Sir Francis Drake Blvd. (San Geronimo) Biological Constraints

Introduction

This memorandum analyzes biological resources constraints in order to provide an environmental due-diligence assessment for a portion of the former San Geronimo golf course (APN #172-371-04) in Marin County, California. The purpose of this constraints-level analysis is to document information on existing biological resources within and in the vicinity of the study area, as well as provide information on potential biological and regulatory constraints associated with potential future development within the study area. This memorandum summarizes findings of the June 22, 2021 reconnaissance and botanical survey, biological database search results, analysis of constraints, applicable regulations and regulatory approvals.

To summarize survey findings, the parcel does not provide habitat for federal or state-listed plant or wildlife species, and no rare plants were recorded. Portions of the San Geronimo golf course that were previously developed (i.e., the clubhouse and surroundings) and turf areas do not have potential for rare plants. Special-status wildlife species may occur on the site, including nesting birds and bats. A northern spotted owl nest is located ¼ mile to the north, and salmonid species are present in San Geronimo Creek; however, these species do not present a constraint to site use. Riparian habitat, a sensitive natural community, is present in the eastern part of the site. Several drainages and a basin were identified (see Figure 1) that may be federal or state-jurisdictional, and a jurisdictional determination is recommended for any future development of the site. A botanical survey for early- and mid-season blooming rare plants would be recommended for redevelopment in oak savanna, oak woodland, or riparian habitats.

Proposed Project

Marin County is considering purchase of the property at 5800 Sir Francis Drake Blvd. in Woodacre, California, for use by the Marin County Fire Department. The approximately 22-acre parcel was formerly used as a part of the San Geronimo Valley National Golf Course, and includes the clubhouse for the golf course, with a parking lot and ornamental plantings. A portion of the site is currently used as a community garden. See Figure 1 for the present location of the clubhouse (developed area) and surrounding habitat.

Biological Resources

ESA evaluated biological resources constraints within the study area, focusing on identifying the presence or potential presence of sensitive biological resources regulated by federal or State resource agencies, and the presence of habitat for special-status species that should be considered during CEQA review.

The information and analysis presented in this section is focused on special-status species,[1] wildlife habitats, vegetation communities, and potentially jurisdictional waters of the United States (U.S.) and/or of the state that occur or have the potential to occur within the project site. The results of the assessment presented in this section are based upon literature review and database queries as well as a reconnaissance-level survey conducted within the project site. Data sources reviewed for this evaluation included the following:

- Google Earth aerial photographs of the property (Google Earth, 2021);
- U.S. Fish and Wildlife Service (USFWS) Federal Endangered and Threatened Species that may occur in the proposed project location or may be affected by the proposed project (USFWS, 2021a) (see **Attachment A**);
- California Department of Fish and Wildlife (CDFW) California Natural Diversity Database (CNDDB) (v 5.2.14) list of special-status species occurrences within the San Geronimo and three surrounding USGS 7.5-minute topographic quadrangles (San Rafael, Bolinas, and San Francisco North) (CDFW, 2021) (see Attachment A);
- California Native Plant Society (CNPS) Inventory of Rare and Endangered Plants (v8-03 0.39) known to occur within the San Geronimo and three surrounding USGS 7.5-minute topographic quadrangles (CNPS, 2021) (see Attachment A);
- National Wetlands Inventory (USFWS, 2021b).

Environmental Setting

The site consists of developed/disturbed lands, including the former clubhouse and parking lot; landscape trees and ornamental plantings in the parking lot, surrounding the clubhouse and in spots around the former golf course; oak savanna and mixed oak woodlands on the slope north of the clubhouse; and riparian forest to the east of the clubhouse. This riparian forest, primarily non-native acacia trees, contained a natural basin that was dry during the June 22, 2021 but pools water at other times of the year. Downstream of the basin, the channel was culverted underneath Sir Francis Drake Boulevard. A wet, likely perennial roadside ditch ran parallel to this road, full of willows (*Salix* spp.) and blackberry (*Rubus armeniacus).* In addition, the site featured non-native grassland turf on the former golf course, rocky outcrops on the slope uphill, sand pits, and small areas of scrub vegetation, such as coyote brush (*Baccharis pilularis*). Figure 1 shows natural communities in the study area. A list of plants identified during the botanical survey is included as Attachment B.

Biological Resource Constraints

Sensitive Natural Communities: A sensitive natural community is a biological community that is regionally rare, provides important habitat opportunities for wildlife, is structurally complex, or is in other ways of special concern to local, state, or federal agencies. Most sensitive natural communities are given special consideration

[1] Species that are protected pursuant to Federal or State endangered species laws, or have been designated as Species of Special Concern by the CDFW, or species that are not included on any agency listing but meet the definition of rare, endangered or threatened species of the CEQA Guidelines section 15380(b), are collectively referred to as "special-status species."

because they perform important ecological functions, such as maintaining water quality and providing essential habitat for plants and wildlife. Some plant communities support a unique or diverse assemblage of plant species and therefore are considered sensitive from a botanical standpoint. Appendix G of the State CEQA *Guidelines* identifies substantial adverse effects on such communities as a potentially significant impact. Sensitive natural communities in the study area are limited to riparian habitat described above.

Aquatic Resources: Aquatic resources include features that may be subject to Federal regulation under Section 404 of the Clean Water Act (CWA) as well as state of California regulation under the Porter-Cologne Water Quality Control Act, State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State (State Wetlands Procedures), and California Fish and Game Code (FGC) Section 1602.

Four intermittent or ephemeral streams enter the parcel from the north (see Figure 1). These isolated streams are likely not jurisdictional under the CWA but may be jurisdictional to the State of California under Porter-Cologne and Fish and Game Code.

Streams in the east of the study area flowed into a basin beneath a riparian forest, which is likely wet much of the year. Downstream of the basin, the drainage was partly culverted and flows beneath Sir Francis Drake Blvd. to a connection with San Geronimo Creek. A stream in a small riparian area in the south of the study area joined with a roadside ditch parallel to Sir Francis Drake Blvd; this drainage was similarly culverted beneath the road toward San Geronimo Creek. The National Wetlands Inventory map for this area (USFWS, 2021b) shows three culverted streams, two from the roadside, and one through the ponded area described above. These streams are likely to be jurisdictional and considered waters of the U.S. and of the State, under both U.S. and State of California regulations. Impacts to these waterways would likely require permits from the U.S. Army Corps of Engineers, the San Francisco Regional Water Quality Control Board, and CDFW.

Special–status Plants: Special-status plants known to occur in the vicinity of the study area are listed in Attachment A. Of these observations, North Coast semaphore grass (*Pleuropogon hooverianus*), Napa false indigo (*Amorpha californica* var. *napensis*), and congested-headed hayfield tarplant (*Hemizonia congesta* ssp. *congesta*) have been observed in the vicinity of the study area and have potential to occur in grassland or woodland habitat. However, no special-status plants were observed during the site survey, which was timed to coincide with blooming times for late-blooming plants, including the three species above. No rare plants are expected within portions of the site identified as developed, turf, and "landscape trees." Early- or mid-season blooming rare plants may be present in oak savanna or woodland habitat areas. If development were planned in these areas, a botanical survey should be conducted for early season plants. A full list of plant species identified during the June 22, 2021 survey is included as Attachment B.

Special-status Wildlife: Pallid bat (*Antrozous pallidus*) has been recorded in the vicinity of the study area, and other bat species also have potential to roost in large trees or disused buildings on the property. As required by Marin County Development Code Section 22.20.040 (F), prior to tree removal, a bat survey would be required in suitable bat habitat, followed by a bat-safe two-stage removal process if bats were present or highly likely,. The same process should be applied to structure removal.

An active northern spotted owl (*Strix occidentalis caurina*) nest and activity center is located northeast of the study area in Roy's Redwoods (USFWS, 2021a). The northern spotted owl is is a federal and state-listed threatened species. This nest is located ¼-mile from the study area, the distance regulatory agencies recommend to avoid disturbance to nesting northern spotted owls. In addition, the nest is located on the opposite side of the

ridge from the study area, providing an additional sound barrier from any potential disturbance resulting from activity in the study area. Thus, the presence of the northern spotted owl activity center would not be likely to pose a constraint to construction on or use of the site. San Pablo song sparrow (*Melospiza melodia samuelis*), a California species of special concern, has been recorded in the vicinity, and has potential to occur along waterways in the study area. This species and other migratory birds are protected during nesting season (see below).

Foothill yellow-legged frog (*Rana boylii*) occur in Nicasio Creek, a tributary of Lagunitas Creek to the north of the study area (CDFW, 2021). Drainages in the study area do not provide habitat for this species, which prefers rocky headwater streams. Similarly, due to the absence of pond and perennial stream habitat, neither California red-legged frog (*Rana draytonii*) nor California giant salamander (*Dicamptodon ensatus*) are expected on the site. Because all waters exiting the study area are culverted and provide poor quality habitat, these species have low potential to be present.

San Geronimo Creek hosts extant runs of steelhead (*Oncorhynchus mykiss irideus*) and Coho salmon (*Oncorhynchus kisutch*). The study area does not contain aquatic habitat that supports salmonids.

Nesting Birds: The Project area contains a large number of trees and shrubs, as well as herbaceous vegetation, suitable for nesting migratory birds. Potential impacts to nesting birds would be affected by the timing of construction activities. If activities occur during bird nesting season, approximately February 1 to August 15, protective measures would need to implemented to avoid potential impacts to active bird nests. These measures would include pre-construction surveys and avoidance of identified nesting sites with a suitable buffer until young have fledged, as required by Marin County Development Code Sec. 22.20.040(G).

Wildlife Movement Corridors: The golf course property is a large area of open space and likely serves as a wildlife corridor for terrestrial species such as deer. Large-scale construction in the study area could impact wildlife movement, but the impact would be of limited duration and projects would likely allow for wildlife passage around the project. Thus, construction would be unlikely to have a substantial impact on wildlife movement corridors.

Laws & Regulations Applicable to Study Area

Federal Endangered Species Act

Federal ESA protects listed fish and wildlife species from harm or "take," which is defined as, "…harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, collect, or attempt to engage in any such conduct." Take can also include habitat modification or degradation that indirectly results in death or injury to a listed wildlife species. The USFWS has jurisdiction over federally listed threatened and endangered species, and the National Marine Fisheries Service has jurisdiction over federally listed, threatened, and endangered marine and anadromous fish such as salmon and steelhead. Permits may be required for impacts to protected animal species under Sections 7 or 10 of the Endangered Species Act.

As discussed above, any future use of the study area, including construction, is not likely to substantially impact the habitat of special-status wildlife. Presence of species listed under the Federal Endangered Species Act (ESA) would require coordination with the U.S. Fish & Wildlife Service. Under ESA Section 7, consultation with USFWS and potential issuance of an incidental take permit may be required; Section 7 consultation would be required should there be another federal permit (such as a Clean Water Act permit) or funding required for the

project. If no other federal permit were required, take of a listed species could still occur using an ESA Section 10 incidental take permit; however, a Section 10 permit also requires submittal of a Habitat Conservation Plan and a finding from the USFWS that the permittee has "to the maximum extent practicable, minimized and mitigated the impacts of the taking" amongst other findings. (16 U.S.C. § 1539(a)(2)(B).) The Section 10 process is more complicated and time-consuming than the Section 7 process; thus, having a federal nexus for Section 7 consultation would be preferable. The nexus for Section 7 consultation is normally triggered by the Section 404 permit, but could also be triggered by Federal funding.

Federal Migratory Bird Treaty Act

The federal MBTA (16 United States Code [U.S.C.] § 703) prohibits the pursuit, hunting, take, capture, or killing of migratory birds in the United States, including nests and eggs of migratory birds during the breeding season. Nesting bird surveys would be required under MBTA, California Fish & Game Code and Marin County Development Code (Sec. 22.20.040(G)) in the event of vegetation removal during nesting season. Clean Water Act/Porter-Cologne Water Quality Control Act

Areas meeting the regulatory definition of "Waters of the United States" (Waters of the U.S.) are subject to the jurisdiction of the USACE under provisions of Section 404 of the Clean Water Act, and Section 10 of the Rivers and Harbors Act. These waters may include all waters used for interstate commerce; tidal and interstate waters; intrastate lakes, rivers, streams, mudflats, sandflats, playa lakes, natural ponds, impoundments or tributaries of Waters of the U.S.; territorial seas; and wetlands adjacent to Waters of the U.S. Impacts to jurisdictional Waters of the U.S. are regulated under Section 404 of the Clean Water Act, for which the USACE and the U.S. Environmental Protection Agency (USEPA) have enforcement responsibility. The water quality-related aspects of the Clean Water Act have been delegated to the California Water Resources Control Board and the Regional Water Quality Control Boards (RWQCBs).

The San Francisco Bay RWQCB has primary authority for implementing Section 401 of the federal Clean Water Act and California's Porter-Cologne Water Quality Control Act, which pertains to waters of the State of California. These statutes regulate water quality conditions by establishing processes for developing and implementing planning, permitting, and enforcement authority for waste discharges to land and water. The San Francisco Bay Basin (Region 2) Water Quality Control Plan (Basin Plan) establishes beneficial uses for surface and groundwater resources and sets regulatory water quality objectives that are designed to protect those beneficial uses. The Basin Plan provides a program of actions designed to preserve and enhance water quality and to protect beneficial uses.

Wetlands and Waters. The study area contains streams and a basin that may be jurisdictional under the Clean Water Act and State of California regulations. Thus, any future development would likely require a jurisdictional determination and a Clean Water Act Section 404 permit from the U.S. Army Corps of Engineers, a California Fish and Game Code Section 1601 Streambed Alteration Agreement from the California Department of Fish and Wildlife, and/or a Clean Water Act Section 401 Water Quality Certification from the California Regional Water Quality Control Board.

Storm Water Permit. Any future construction would require compliance with the Statewide Construction General Permit regarding storm water discharges, and, in particular, would require preparation of a Storm Water Pollution Prevention Plan.

California Endangered Species Act and Fish & Game Code

CESA prohibits the take of any plant or animal listed or proposed for listing as rare, threatened, or endangered. Under CESA, take is defined as hunting, pursuing, catching, capturing, or killing, or attempting to do those things. In accordance with the CESA, the CDFW has jurisdiction over state-listed species (Fish & Game Code §2070). CDFW also maintains lists of Species of Special Concern, species vulnerable to extinction because of declining populations, limited ranges, and/or continuing threats. CDFW also regulates Fully Protected Animals. Most, but not all, Fully Protected Animals also have been listed as threatened or endangered species under the more recent State and federal endangered species laws and regulations. CDFW can authorize take of listed species, except Fully Protected Animals, under CESA Sections 2080.1 and 2081 and 2089.2-2098.26.

Permits may be required for impacts to protected animal species under Section 2081 of the California Endangered Species Act, and the California Fish and Game Code.

For any incidental take of species listed under the California Endangered Species Act, a Section 2081 permit would be required from the California Department of Fish & Wildlife (CDFW). The focus of CDFW's permit would be "full mitigation" of the impacts, ensuring that mitigation is "roughly proportional" to impacts, and ensuring that funding for mitigation is adequate. (Cal. Fish & Game Code §§ 2081(b), (c).) A Section 1602 permit may also be required for species using riparian or stream habitat (see below). The study area is not likely to substantially impact the habitat of any special-status wildlife.

CDFW implements many sections of the Fish & Game Code through the Section 1602 Lake and Streambed Alteration Agreement process, which regulates changes in non-tidal aquatic habitats and riparian corridors. Fish & Game Code section 1602 requires an entity to notify CDFW prior to commencing any activity that may impact a stream or streambed. A Lake and Streambed Alteration Agreement (LSAA) covers activities that would result in the modification of the bed, bank, or channel of a stream, river, or lake, including removal of vegetation from the floodplain or riparian zone. It governs both activities that modify the physical characteristics of the stream and activities that may affect fish and wildlife resources that use the stream or surrounding habitat (*i.e.,* riparian vegetation or wetlands). An LSAA may be required if future development were to modify one of the ephemeral streams within the study area.

California Native Plant Society/California Rare Plant Rank

CNPS is a statewide, non-governmental conservation organization working with CDFW and other organizations. CNPS has developed a ranking of plant species of concern in California. This list is the California Rare Plant Rank (CRPR). Vascular plants included on CNPS' CRPR list are ranked by degree of rarity. CNPS is not a regulatory agency and plants on the ranking have no regulatory protection under the FESA or CESA. However, adverse impacts to plants appearing as CRPR 1B or CRPR 2 are generally considered significant pursuant to the California Environmental Quality Act (CEQA) State CEQA *Guidelines*, Section 15380. No rare plants have been identified on the site to date; however, a botanical survey for early- and mid-season blooming plants should be conducted prior to any future development.

Marin Countywide Plan

The Marin Countywide Plan includes protections for native habitats and biodiversity, including protection of wetlands and riparian zones, sensitive natural communities, wildlife corridors and nursery areas, woodlands and forests. It also promotes control of invasive exotic plants, protection of ecotones (natural transitions between habitat types), stream channels, bird nesting habitat, and coordination with federal and state agencies. The site is

within the Marin Countywide Plan's Inland Rural Corridor, where open space use is promoted. Countywide Plan Policy 3.1 requires a minimum setback from wetlands of 100 feet for this site. If wetlands cannot be avoided, the County would require a 2:1 replacement ratio for on-site mitigation, and a minimum 3:1 replacement ratio for off-site mitigation. Countywide Plan Policy 4.1 requires a development setback on each side of the top of each streambank that is the greater of either (a) 50 feet landward from the outer edge of woody riparian vegetation associated with the stream or (b) 100 feet landward from the top of bank (Marin County, 2007). The streams shown on Figure 1 would be subject to these provisions.

Marin County Development Code

Tree Removal Permit

A Tree Removal Permit is required for removal of a "Heritage Tree" or more than two "Protected Trees" from a developed lot in a 12-month period, or any removal of "Protected Trees" on a vacant lot. Exemptions are provided for trees which are in poor health; a potential public health and safety hazard; a public nuisance; or a fire hazard, or are removed by a public agency. Most native tree species in Marin are protected as Heritage and Protected Trees, though the qualifying sizes differ by species of tree. Any tree removal on the site would need to adhere to these County requirements. In addition, tree removal during bird nesting or bat roosting season would need to adhere to protective measures for these species in the County Development Code (Sec. 22.20.040(F) and (G)) as well as any federal or state permits.

Conclusion/Summary

No rare plants were recorded on the parcel during the late-blooming period, and portions of the San Geronimo golf course that were previously developed (*i.e.*, the clubhouse and surroundings) and turf areas do not have potential for rare plants. However, a botanical survey for early- and mid-season blooming rare plants would be recommended for redevelopment in oak savanna, oak woodland, or riparian habitats. The parcel does not provide habitat for federal or state-listed wildlife species, but other special-status wildlife species may occur on the site, including nesting birds and bats. A northern spotted owl nest is located ¼ mile to the north, and salmonid species are present off-site in San Geronimo Creek; these occurrences do not present constraints to site development due to their distance from the site. Riparian habitat, a sensitive natural community, is present in the eastern part of the site; site development should avoid this area with an appropriate buffer zone. Several drainages and an aquatic basin were identified (see Figure 1) that may be federal or state-jurisdictional waters, and a jurisdictional determination is recommended for any future development of the site that may affect these aquatic areas. These areas should be avoided with appropriate buffers in accordance with federal, State, and County requirements.

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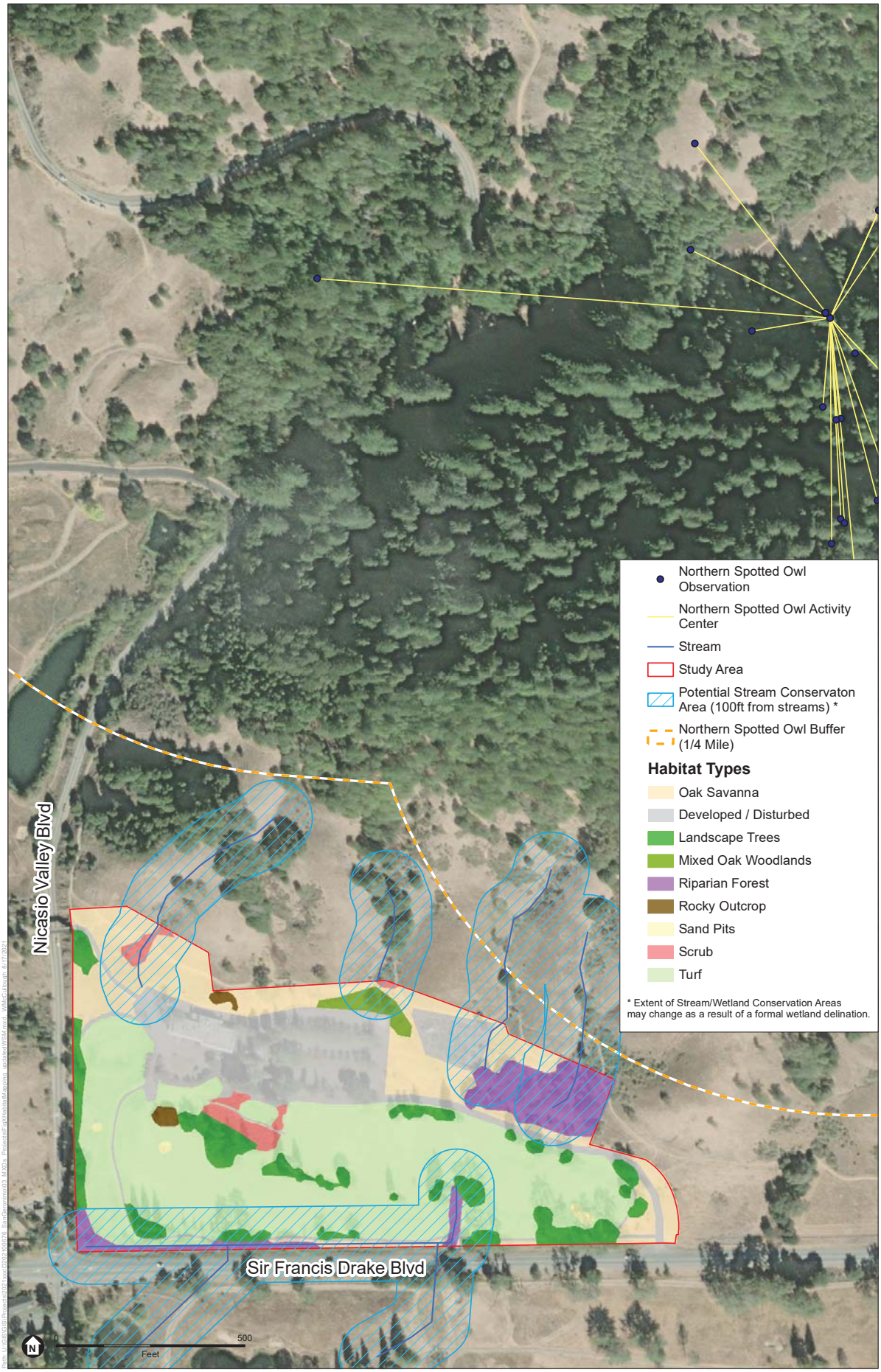

SOURCE: ESA, 2021

San Geronimo Biological Constraints Analysis

Figure 1
Biological Constraints Map

ESA

Photo 1. View north across former golf course to clubhouse and slope above

Photo 2. Ephemeral channel onsite draining south

Attachment A

Species Lists

Selected Elements by Element Code

California Department of Fish and Wildlife

California Natural Diversity Database

Query Criteria: Quad IS (San Rafael (3712285) OR Novato (3812215) OR San Geronimo (3812216) OR Bolinas (3712286))

Element Code	Species	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
AAAAH01020	***Dicamptodon ensatus*** California giant salamander	None	None	G3	S2S3	SSC
AAABH01022	***Rana draytonii*** California red-legged frog	Threatened	None	G2G3	S2S3	SSC
AAABH01050	***Rana boylii*** foothill yellow-legged frog	None	Endangered	G3	S3	SSC
ABNGA04010	***Ardea herodias*** great blue heron	None	None	G5	S4	
ABNGA04040	***Ardea alba*** great egret	None	None	G5	S4	
ABNGA06030	***Egretta thula*** snowy egret	None	None	G5	S4	
ABNKC06010	***Elanus leucurus*** white-tailed kite	None	None	G5	S3S4	FP
ABNME03041	***Laterallus jamaicensis coturniculus*** California black rail	None	Threatened	G3G4T1	S1	FP
ABNME05011	***Rallus obsoletus obsoletus*** California Ridgway's rail	Endangered	Endangered	G3T1	S1	FP
ABNNB03031	***Charadrius nivosus nivosus*** western snowy plover	Threatened	None	G3T3	S2	SSC
ABNSB10010	***Athene cunicularia*** burrowing owl	None	None	G4	S3	SSC
ABNUA01010	***Cypseloides niger*** black swift	None	None	G4	S2	SSC
ABPBX1201A	***Geothlypis trichas sinuosa*** saltmarsh common yellowthroat	None	None	G5T3	S3	SSC
ABPBXA301W	***Melospiza melodia samuelis*** San Pablo song sparrow	None	None	G5T2	S2	SSC
AFCHA02034	***Oncorhynchus kisutch pop. 4*** coho salmon - central California coast ESU	Endangered	Endangered	G5T2T3Q	S2	
AFCHA0209G	***Oncorhynchus mykiss irideus pop. 8*** steelhead - central California coast DPS	Threatened	None	G5T2T3Q	S2S3	
AFCHB03010	***Spirinchus thaleichthys*** longfin smelt	Candidate	Threatened	G5	S1	
AFCJB19022	***Lavinia symmetricus ssp. 2*** Tomales roach	None	None	G4T2T3	S2	SSC
AFCQN04010	***Eucyclogobius newberryi*** tidewater goby	Endangered	None	G3	S3	

Element Code	Species	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
AMACC05030	***Lasiurus cinereus*** hoary bat	None	None	G3G4	S4	
AMACC08010	***Corynorhinus townsendii*** Townsend's big-eared bat	None	None	G4	S2	SSC
AMACC10010	***Antrozous pallidus*** pallid bat	None	None	G4	S3	SSC
AMAFA01012	***Aplodontia rufa phaea*** Point Reyes mountain beaver	None	None	G5T2	S2	SSC
AMAFF02040	***Reithrodontomys raviventris*** salt-marsh harvest mouse	Endangered	Endangered	G1G2	S1S2	FP
AMAJF04010	***Taxidea taxus*** American badger	None	None	G5	S3	SSC
ARAAD02030	***Emys marmorata*** western pond turtle	None	None	G3G4	S3	SSC
CTT41100CA	***Coastal Terrace Prairie*** Coastal Terrace Prairie	None	None	G2	S2.1	
CTT42130CA	***Serpentine Bunchgrass*** Serpentine Bunchgrass	None	None	G2	S2.2	
CTT52110CA	***Northern Coastal Salt Marsh*** Northern Coastal Salt Marsh	None	None	G3	S3.2	
CTT52200CA	***Coastal Brackish Marsh*** Coastal Brackish Marsh	None	None	G2	S2.1	
ICMAL01220	***Caecidotea tomalensis*** Tomales isopod	None	None	G2	S2S3	
ICMAL05D80	***Stygobromus hyporheicus*** Hypoheic amphipod	None	None	G1	S1	
ICMAL27010	***Syncaris pacifica*** California freshwater shrimp	Endangered	Endangered	G2	S2	
IICOL02101	***Cicindela hirticollis gravida*** sandy beach tiger beetle	None	None	G5T2	S2	
IICOL5V010	***Hydrochara rickseckeri*** Ricksecker's water scavenger beetle	None	None	G2?	S2?	
IIHYM24250	***Bombus occidentalis*** western bumble bee	None	Candidate Endangered	G2G3	S1	
IIHYM24380	***Bombus caliginosus*** obscure bumble bee	None	None	G4?	S1S2	
IIHYM80010	***Trachusa gummifera*** San Francisco Bay Area leaf-cutter bee	None	None	G1	S1	
IILEE0G040	***Adela oplerella*** Opler's longhorn moth	None	None	G2	S2	
IILEPE2207	***Callophrys mossii marinensis*** Marin elfin butterfly	None	None	G4T1	S1	

Element Code	Species	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
IILEPP2012	***Danaus plexippus pop. 1*** monarch - California overwintering population	Candidate	None	G4T2T3	S2S3	
ILARA98030	***Talanites ubicki*** Ubick's gnaphosid spider	None	None	G1	S1	
ILARAU8040	***Calicina diminua*** Marin blind harvestman	None	None	G1	S1	
IMGASA4140	***Vespericola marinensis*** Marin hesperian	None	None	G2	S2	
IMGASJ7040	***Tryonia imitator*** mimic tryonia (=California brackishwater snail)	None	None	G2	S2	
IMGASJ9010	***Pomatiopsis binneyi*** robust walker	None	None	G1	S1	
NBMUS2P050	***Entosthodon kochii*** Koch's cord moss	None	None	G1	S1	1B.3
NBMUS2W0U0	***Fissidens pauperculus*** minute pocket moss	None	None	G3?	S2	1B.2
NBMUS4Q022	***Mielichhoferia elongata*** elongate copper moss	None	None	G5	S3S4	4.3
PDAST2E1G2	***Cirsium hydrophilum var. vaseyi*** Mt. Tamalpais thistle	None	None	G2T1	S1	1B.2
PDAST4M020	***Helianthella castanea*** Diablo helianthella	None	None	G2	S2	1B.2
PDAST4R065	***Hemizonia congesta ssp. congesta*** congested-headed hayfield tarplant	None	None	G5T2	S2	1B.2
PDAST4X020	***Holocarpha macradenia*** Santa Cruz tarplant	Threatened	Endangered	G1	S1	1B.1
PDAST5S063	***Lessingia micradenia var. micradenia*** Tamalpais lessingia	None	None	G2T2	S2	1B.2
PDAST6E050	***Stebbinsoseris decipiens*** Santa Cruz microseris	None	None	G2	S2	1B.2
PDAST6E0D0	***Microseris paludosa*** marsh microseris	None	None	G2	S2	1B.2
PDAST6X030	***Pentachaeta bellidiflora*** white-rayed pentachaeta	Endangered	Endangered	G1	S1	1B.1
PDBOR01070	***Amsinckia lunaris*** bent-flowered fiddleneck	None	None	G3	S3	1B.2
PDBOR0V0B0	***Plagiobothrys glaber*** hairless popcornflower	None	None	GX	SX	1A
PDBRA0K010	***Cardamine angulata*** seaside bittercress	None	None	G4G5	S3	2B.1
PDBRA2G050	***Streptanthus batrachopus*** Tamalpais jewelflower	None	None	G2	S2	1B.3

Element Code	Species	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
PDBRA2G0J2	***Streptanthus glandulosus ssp. pulchellus*** Mt. Tamalpais bristly jewelflower	None	None	G4T2	S2	1B.2
PDERI040J5	***Arctostaphylos montana ssp. montana*** Mt. Tamalpais manzanita	None	None	G3T3	S3	1B.3
PDERI041K0	***Arctostaphylos virgata*** Marin manzanita	None	None	G2	S2	1B.2
PDFAB08012	***Amorpha californica var. napensis*** Napa false indigo	None	None	G4T2	S2	1B.2
PDFAB0F7B2	***Astragalus pycnostachyus var. pycnostachyus*** coastal marsh milk-vetch	None	None	G2T2	S2	1B.2
PDFAB40040	***Trifolium amoenum*** two-fork clover	Endangered	None	G1	S1	1B.1
PDFAG051Q3	***Quercus parvula var. tamalpaisensis*** Tamalpais oak	None	None	G4T2	S2	1B.3
PDLIN01060	***Hesperolinon congestum*** Marin western flax	Threatened	Threatened	G1	S1	1B.1
PDMAL11012	***Sidalcea calycosa ssp. rhizomata*** Point Reyes checkerbloom	None	None	G5T2	S2	1B.2
PDMAL110A4	***Sidalcea hickmanii ssp. viridis*** Marin checkerbloom	None	None	G3TH	SH	1B.1
PDORO01010	***Kopsiopsis hookeri*** small groundcone	None	None	G4?	S1S2	2B.3
PDPGN04081	***Chorizanthe cuspidata var. cuspidata*** San Francisco Bay spineflower	None	None	G2T1	S1	1B.2
PDPGN083S1	***Eriogonum luteolum var. caninum*** Tiburon buckwheat	None	None	G5T2	S2	1B.2
PDPGN0L1C0	***Polygonum marinense*** Marin knotweed	None	None	G2Q	S2	3.1
PDPLM040B3	***Gilia capitata ssp. chamissonis*** blue coast gilia	None	None	G5T2	S2	1B.1
PDPLM040B9	***Gilia capitata ssp. tomentosa*** woolly-headed gilia	None	None	G5T2	S2	1B.1
PDPLM04130	***Gilia millefoliata*** dark-eyed gilia	None	None	G2	S2	1B.2
PDPLM0C0Z0	***Navarretia rosulata*** Marin County navarretia	None	None	G2	S2	1B.2
PDRHA04200	***Ceanothus masonii*** Mason's ceanothus	None	Rare	G1	S1	1B.2
PDRHA04440	***Ceanothus decornutus*** Nicasio ceanothus	None	None	G1	S1	1B.2
PDROS0W0E0	***Horkelia tenuiloba*** thin-lobed horkelia	None	None	G2	S2	1B.2

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PDSCR0D013	***Castilleja affinis var. neglecta*** Tiburon paintbrush	Endangered	Threatened	G4G5T1T2	S1S2	1B.2
PDSCR0H060	***Collinsia corymbosa*** round-headed Chinese-houses	None	None	G1	S1	1B.2
PDSCR0J0C3	***Chloropyron maritimum ssp. palustre*** Point Reyes salty bird's-beak	None	None	G4?T2	S2	1B.2
PDTHY03010	***Dirca occidentalis*** western leatherwood	None	None	G2	S2	1B.2
PMCYP037Y0	***Carex lyngbyei*** Lyngbye's sedge	None	None	G5	S3	2B.2
PMLIL0V0C0	***Fritillaria liliacea*** fragrant fritillary	None	None	G2	S2	1B.2
PMLIL0V0P1	***Fritillaria lanceolata var. tristulis*** Marin checker lily	None	None	G5T2	S2	1B.1
PMPOA07012	***Alopecurus aequalis var. sonomensis*** Sonoma alopecurus	Endangered	None	G5T1	S1	1B.1
PMPOA17070	***Calamagrostis crassiglumis*** Thurber's reed grass	None	None	G3Q	S2	2B.1
PMPOA4Y070	***Pleuropogon hooverianus*** North Coast semaphore grass	None	Threatened	G2	S2	1B.1

Record Count: 92

California Native Plant Society

Inventory of Rare and Endangered Plants of California

Search Results

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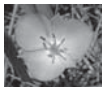
75 matches found. Click on scientific name for details

Search Criteria: Quad is one of [3712286,3712285,3812216,3812215]

Scientific Name | Common Name | Family | Lifeform | Blooming Period | Fed List | State List | Global Rank | State Rank | CA Rare Plant Rank | General Habitats | Micro Habitats | Lowest Elevation | Highest Elevation | CA Endemic | Date Added | Photo

Search:

▲ SCIENTIFIC NAME	COMMON NAME	FAMILY	LIFEFORM	BLOOMING PERIOD	FED LIST	STATE LIST	GLOBAL RANK	STATE RANK	CA RARE PLANT RANK	PHOTO
Alopecurus aequalis var. *sonomensis*	Sonoma alopecurus	Poaceae	perennial herb	May-Jul	FE	None	G5T1	S1	1B.1	No Photo Available
Amorpha californica var. *napensis*	Napa false indigo	Fabaceae	perennial deciduous shrub	Apr-Jul	None	None	G4T2	S2	1B.2	No Photo Available
Amsinckia lunaris	bent-flowered fiddleneck	Boraginaceae	annual herb	Mar-Jun	None	None	G3	S3	1B.2	No Photo Available
Arabis blepharophylla	coast rockcress	Brassicaceae	perennial herb	Feb-May	None	None	G4	S4	4.3	No Photo Available
Arctostaphylos montana ssp. *montana*	Mt. Tamalpais manzanita	Ericaceae	perennial evergreen shrub	Feb-Apr	None	None	G3T3	S3	1B.3	No Photo Available
Arctostaphylos virgata	Marin manzanita	Ericaceae	perennial evergreen shrub	Jan-Mar	None	None	G2	S2	1B.2	No Photo Available
Aspidotis carlotta-halliae	Carlotta Hall's lace fern	Pteridaceae	perennial rhizomatous herb	Jan-Dec	None	None	G3	S3	4.2	No Photo Available

▲ SCIENTIFIC NAME	COMMON NAME	FAMILY	LIFEFORM	BLOOMING PERIOD	FED LIST	STATE LIST	GLOBAL RANK	STATE RANK	CA RARE PLANT RANK	PHOTO
Astragalus breweri	Brewer's milk-vetch	Fabaceae	annual herb	Apr-Jun	None	None	G3	S3	4.2	No Photo Available
Astragalus pycnostachyus var. *pycnostachyus*	coastal marsh milk-vetch	Fabaceae	perennial herb	(Apr)Jun-Oct	None	None	G2T2	S2	1B.2	No Photo Available
Calamagrostis crassiglumis	Thurber's reed grass	Poaceae	perennial rhizomatous herb	May-Aug	None	None	G3Q	S2	2B.1	No Photo Available
Calamagrostis ophitidis	serpentine reed grass	Poaceae	perennial herb	Apr-Jul	None	None	G3	S3	4.3	No Photo Available
Calandrinia breweri	Brewer's calandrinia	Montiaceae	annual herb	(Jan)Mar-Jun	None	None	G4	S4	4.2	No Photo Available
Calochortus umbellatus	Oakland star-tulip	Liliaceae	perennial bulbiferous herb	Mar-May	None	None	G3?	S3?	4.2	No Photo Available
Calochortus uniflorus	pink star-tulip	Liliaceae	perennial bulbiferous herb	Apr-Jun	None	None	G4	S4	4.2	 © 2021 Scot Loring
Calystegia collina ssp. *oxyphylla*	Mt. Saint Helena morning-glory	Convolvulaceae	perennial rhizomatous herb	Apr-Jun	None	None	G4T3	S3	4.2	No Photo Available
Cardamine angulata	seaside bittercress	Brassicaceae	perennial herb	(Jan)Mar-Jul	None	None	G4G5	S3	2B.2	 © 2021 Scot Loring
Carex lyngbyei	Lyngbye's sedge	Cyperaceae	perennial rhizomatous herb	Apr-Aug	None	None	G5	S3	2B.2	No Photo Available
Castilleja affinis var. *neglecta*	Tiburon paintbrush	Orobanchaceae	perennial herb (hemiparasitic)	Apr-Jun	FE	CT	G4G5T1T2	S1S2	1B.2	No Photo Available
Castilleja ambigua var. *ambigua*	johnny-nip	Orobanchaceae	annual herb (hemiparasitic)	Mar-Aug	None	None	G4T4	S3S4	4.2	No Photo Available

▲ SCIENTIFIC NAME	COMMON NAME	FAMILY	LIFEFORM	BLOOMING PERIOD	FED LIST	STATE LIST	GLOBAL RANK	STATE RANK	CA RARE PLANT RANK	PHOTO
Ceanothus decornutus	Nicasio ceanothus	Rhamnaceae	perennial shrub	Mar-May	None	None	G1	S1	1B.2	No Photo Available
Ceanothus gloriosus var. *exaltatus*	glory brush	Rhamnaceae	perennial evergreen shrub	Mar-Jun(Aug)	None	None	G4T4	S4	4.3	No Photo Available
Ceanothus gloriosus var. *gloriosus*	Point Reyes ceanothus	Rhamnaceae	perennial evergreen shrub	Mar-May	None	None	G4T4	S4	4.3	No Photo Available
Ceanothus masonii	Mason's ceanothus	Rhamnaceae	perennial evergreen shrub	Mar-Apr	None	CR	G1	S1	1B.2	No Photo Available
Ceanothus pinetorum	Kern ceanothus	Rhamnaceae	perennial evergreen shrub	May-Jul	None	None	G3	S3	4.3	No Photo Available
Chloropyron maritimum ssp. *palustre*	Point Reyes salty bird's-beak	Orobanchaceae	annual herb (hemiparasitic)	Jun-Oct	None	None	G4?T2	S2	1B.2	No Photo Available
Chorizanthe cuspidata var. *cuspidata*	San Francisco Bay spineflower	Polygonaceae	annual herb	Apr-Jul(Aug)	None	None	G2T1	S1	1B.2	No Photo Available
Cirsium hydrophilum var. *vaseyi*	Mt. Tamalpais thistle	Asteraceae	perennial herb	May-Aug	None	None	G2T1	S1	1B.2	No Photo Available
Cistanthe maritima	seaside cistanthe	Montiaceae	annual herb	(Feb)Mar-Jun(Aug)	None	None	G3G4	S3	4.2	No Photo Available
Collinsia corymbosa	round-headed Chinese-houses	Plantaginaceae	annual herb	Apr-Jun	None	None	G1	S1	1B.2	No Photo Available
Cypripedium californicum	California lady's-slipper	Orchidaceae	perennial rhizomatous herb	Apr-Aug(Sep)	None	None	G4	S4	4.2	 © 2012 Barry Rice
Dichondra occidentalis	western dichondra	Convolvulaceae	perennial rhizomatous herb	(Jan)Mar-Jul	None	None	G3G4	S3S4	4.2	No Photo Available
Dirca occidentalis	western leatherwood	Thymelaeaceae	perennial deciduous shrub	Jan-Mar(Apr)	None	None	G2	S2	1B.2	No Photo Available

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Elymus californicus	California bottle-brush grass	Poaceae	perennial herb	May-Aug(Nov)	None	None	G4	S4	4.3	No Photo Available
Entosthodon kochii	Koch's cord moss	Funariaceae	moss		None	None	G1	S1	1B.3	No Photo Available
Eriogonum luteolum var. *caninum*	Tiburon buckwheat	Polygonaceae	annual herb	May-Sep	None	None	G5T2	S2	1B.2	No Photo Available
Erysimum franciscanum	San Francisco wallflower	Brassicaceae	perennial herb	Mar-Jun	None	None	G3	S3	4.2	No Photo Available
Fissidens pauperculus	minute pocket moss	Fissidentaceae	moss		None	None	G3?	S2	1B.2	No Photo Available
Fritillaria lanceolata var. *tristulis*	Marin checker lily	Liliaceae	perennial bulbiferous herb	Feb-May	None	None	G5T2	S2	1B.1	No Photo Available
Fritillaria liliacea	fragrant fritillary	Liliaceae	perennial bulbiferous herb	Feb-Apr	None	None	G2	S2	1B.2	No Photo Available
Gilia capitata ssp. *chamissonis*	blue coast gilia	Polemoniaceae	annual herb	Apr-Jul	None	None	G5T2	S2	1B.1	No Photo Available
Gilia capitata ssp. *tomentosa*	woolly-headed gilia	Polemoniaceae	annual herb	May-Jul	None	None	G5T2	S2	1B.1	No Photo Available
Gilia millefoliata	dark-eyed gilia	Polemoniaceae	annual herb	Apr-Jul	None	None	G2	S2	1B.2	No Photo Available
Grindelia hirsutula var. *maritima*	San Francisco gumplant	Asteraceae	perennial herb	Jun-Sep	None	None	G5T1Q	S1	3.2	No Photo Available
Helianthella castanea	Diablo helianthella	Asteraceae	perennial herb	Mar-Jun	None	None	G2	S2	1B.2	No Photo Available
Hemizonia congesta ssp. *congesta*	congested-headed hayfield tarplant	Asteraceae	annual herb	Apr-Nov	None	None	G5T2	S2	1B.2	No Photo Available

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Hesperolinon congestum	Marin western flax	Linaceae	annual herb	Apr-Jul	FT	CT	G1	S1	1B.1	No Photo Available
Holocarpha macradenia	Santa Cruz tarplant	Asteraceae	annual herb	Jun-Oct	FT	CE	G1	S1	1B.1	No Photo Available
Horkelia tenuiloba	thin-lobed horkelia	Rosaceae	perennial herb	May-Jul(Aug)	None	None	G2	S2	1B.2	No Photo Available
Hosackia gracilis	harlequin lotus	Fabaceae	perennial rhizomatous herb	Mar-Jul	None	None	G3G4	S3	4.2	No Photo Available
Iris longipetala	coast iris	Iridaceae	perennial rhizomatous herb	Mar-May(Jun)	None	None	G3	S3	4.2	No Photo Available
Juncus acutus ssp. *leopoldii*	southwestern spiny rush	Juncaceae	perennial rhizomatous herb	(Mar)May-Jun	None	None	G5T5	S4	4.2	No Photo Available
Kopsiopsis hookeri	small groundcone	Orobanchaceae	perennial rhizomatous herb (parasitic)	Apr-Aug	None	None	G4?	S1S2	2B.3	No Photo Available
Leptosiphon acicularis	bristly leptosiphon	Polemoniaceae	annual herb	Apr-Jul	None	None	G4?	S4?	4.2	No Photo Available
Leptosiphon grandiflorus	large-flowered leptosiphon	Polemoniaceae	annual herb	Apr-Aug	None	None	G3G4	S3S4	4.2	No Photo Available
Lessingia hololeuca	woolly-headed lessingia	Asteraceae	annual herb	Jun-Oct	None	None	G2G3	S2S3	3	No Photo Available
Lessingia micradenia var. *micradenia*	Tamalpais lessingia	Asteraceae	annual herb	(Jun)Jul-Oct	None	None	G2T2	S2	1B.2	No Photo Available
Microseris paludosa	marsh microseris	Asteraceae	perennial herb	Apr-Jun(Jul)	None	None	G2	S2	1B.2	No Photo Available
Mielichhoferia elongata	elongate copper moss	Mielichhoferiaceae	moss		None	None	G5	S3S4	4.3	No Photo Available

▲ SCIENTIFIC NAME	COMMON NAME	FAMILY	LIFEFORM	BLOOMING PERIOD	FED LIST	STATE LIST	GLOBAL RANK	STATE RANK	CA RARE PLANT RANK	PHOTO
Navarretia rosulata	Marin County navarretia	Polemoniaceae	annual herb	May-Jul	None	None	G2	S2	1B.2	No Photo Available
Pentachaeta bellidiflora	white-rayed pentachaeta	Asteraceae	annual herb	Mar-May	FE	CE	G1	S1	1B.1	No Photo Available
Perideridia gairdneri ssp. *gairdneri*	Gairdner's yampah	Apiaceae	perennial herb	Jun-Oct	None	None	G5T3T4	S3S4	4.2	No Photo Available
Plagiobothrys glaber	hairless popcornflower	Boraginaceae	annual herb	Mar-May	None	None	GX	SX	1A	No Photo Available
Pleuropogon hooverianus	North Coast semaphore grass	Poaceae	perennial rhizomatous herb	Apr-Jun	None	CT	G2	S2	1B.1	No Photo Available
Pleuropogon refractus	nodding semaphore grass	Poaceae	perennial rhizomatous herb	(Mar)Apr-Aug	None	None	G4	S4	4.2	No Photo Available
Polygonum marinense	Marin knotweed	Polygonaceae	annual herb	(Apr)May-Aug(Oct)	None	None	G2Q	S2	3.1	No Photo Available
Quercus parvula var. *tamalpaisensis*	Tamalpais oak	Fagaceae	perennial evergreen shrub	Mar-Apr	None	None	G4T2	S2	1B.3	No Photo Available
Ranunculus lobbii	Lobb's aquatic buttercup	Ranunculaceae	annual herb (aquatic)	Feb-May	None	None	G4	S3	4.2	No Photo Available
	d's owhead	Alismataceae	perennial rhizomatous herb (emergent)	May-Oct(Nov)	None	None	G3	S3	1B.2	No Photo Available
	Point Reyes checkerbloom	Malvaceae	perennial rhizomatous herb	Apr-Sep	None	None	G5T2	S2	1B.2	No Photo Available
Sidalcea hickmanii ssp. *viridis*	Marin checkerbloom	Malvaceae	perennial herb	May-Jun	None	None	G3TH	SH	1B.1	No Photo Available
Stebbinsoseris decipiens	Santa Cruz microseris	Asteraceae	annual herb	Apr-May	None	None	G2	S2	1B.2	No Photo Available

CONTACT US

Send questions and comments to rareplants@cnps.org.

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▲ SCIENTIFIC NAME	COMMON NAME	FAMILY	LIFEFORM	BLOOMING PERIOD	FED LIST	STATE LIST	GLOBAL RANK	STATE RANK	CA RARE PLANT RANK	PHOTO
Streptanthus batrachopus	Tamalpais jewelflower	Brassicaceae	annual herb	Apr-Jul	None	None	G2	S2	1B.3	No Photo Available
Streptanthus glandulosus ssp. *pulchellus*	Mt. Tamalpais bristly jewelflower	Brassicaceae	annual herb	May-Jul(Aug)	None	None	G4T2	S2	1B.2	No Photo Available
Toxicoscordion fontanum	marsh zigadenus	Melanthiaceae	perennial bulbiferous herb	Apr-Jul	None	None	G3	S3	4.2	No Photo Available
Trifolium amoenum	two-fork clover	Fabaceae	annual herb	Apr-Jun	FE	None	G1	S1	1B.1	No Photo Available

Showing 1 to 75 of 75 entries

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Sacramento Fish And Wildlife Office
Federal Building
2800 Cottage Way, Room W-2605
Sacramento, CA 95825-1846
Phone: (916) 414-6600 Fax: (916) 414-6713

In Reply Refer To:
Consultation Code: 08ESMF00-2021-SLI-2143
Event Code: 08ESMF00-2021-E-06212
Project Name: San Geronimo Bio Study

June 22, 2021

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, under the jurisdiction of the U.S. Fish and Wildlife Service (Service) that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the Service under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

Please follow the link below to see if your proposed project has the potential to affect other species or their habitats under the jurisdiction of the National Marine Fisheries Service:

http://www.nwr.noaa.gov/protected_species/species_list/species_lists.html

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to

utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects should follow the wind energy guidelines (http://www.fws.gov/windenergy/) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm; http://www.towerkill.com; and http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Sacramento Fish And Wildlife Office
Federal Building
2800 Cottage Way, Room W-2605
Sacramento, CA 95825-1846
(916) 414-6600

Project Summary

Consultation Code: 08ESMF00-2021-SLI-2143
Event Code: 08ESMF00-2021-E-06212
Project Name: San Geronimo Bio Study
Project Type: LAND - DISPOSAL / TRANSFER
Project Description: County land purchase
Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@38.01599515,-122.65906764499215,14z

Counties: Marin County, California

Endangered Species Act Species

There is a total of 10 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

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1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Birds

NAME	STATUS
California Least Tern *Sterna antillarum browni* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/8104	Endangered
Marbled Murrelet *Brachyramphus marmoratus* Population: U.S.A. (CA, OR, WA) There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/4467	Threatened
Northern Spotted Owl *Strix occidentalis caurina* There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/1123	Threatened

Reptiles

NAME	STATUS
Green Sea Turtle *Chelonia mydas* Population: East Pacific DPS No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/6199	Threatened

Amphibians

NAME	STATUS
California Red-legged Frog *Rana draytonii* There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/2891	Threatened

Fishes

NAME	STATUS
Delta Smelt *Hypomesus transpacificus* There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/321	Threatened
Tidewater Goby *Eucyclogobius newberryi* There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/57	Endangered

Crustaceans

NAME	STATUS
California Freshwater Shrimp *Syncaris pacifica* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/7903	Endangered

Flowering Plants

NAME	STATUS
Marin Dwarf-flax *Hesperolinon congestum* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/5363	Threatened
Tiburon Paintbrush *Castilleja affinis ssp. neglecta* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/2687	Endangered

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

Attachment B

Plant List

Scientific Name	Common Name	Family
Carduus pycnocephalus	Italian thistle	Asteraceae
Avena sp.	wild oat	Poaceae
Madia elegans	common madia	Asteraceae
Bromus diandrus	ripgut brome	Poaceae
Plantago erecta	California plantain	Plantaginaceae
Foeniculum vulgare	fennel	Apiaceae
Trifolium hirtum	rose clover	Fabaceae
Brachypodium distachyon	purple false brome	Poaceae
Vicia sp.	vetch	Fabaceae
Pinus radiata	Monterey pine	Pinaceae
Baccharis pilularis subsp. *consanguinea*	coyote brush	Asteraceae
Briza minor	little rattlesnake grass	Poaceae
Hirschfeldia incana	wild mustard	Brassicaceae
Cytisus scpiarus	scotch broom	Fabaceae
Epilobium sp.	willow herb	Onagraceae
Lactuca saligna	willowleaf lettuce	Asteraceae
Hypochaeris glabra	smooth cat's ears	Asteraceae
Sonchus asper	sow thistle	Asteraceae
Helminthotheca echioides	bristly ox-tongue	Asteraceae
Bromus hordeaceus	soft chess	Poaceae
Acmispon sp.	lotus	Fabaceae
Dipsacus sativus	teasel	Dipsacaceae
Phalaris aquatica	harding grass	Poaceae
Torilis arvensis	spreading hedge parsley	Apiaceae
Spergularia rubra	red sand spurry	Caryophyllaceae
Cynodon dactylon	Bermuda grass	Poaceae
Polygonum aviculare	prostrate knotweed	Polygonaceae
Festuca perennis	Italian rye grass	Poaceae
Polypogon viridis	waterbeard grass	Poaceae
Lotus corniculatus	bird's foot trefoil	Fabaceae
Erodium cicutarium	red stemmed filaree	Geraniaceae
Erodium botrys	broad leaf filaree	Geraniaceae
Stipa pulchra	purple needlegrass	Poaceae
Grindelia camporum	common gumplant	Asteraceae
Clarkia amoena subsp. *huntiana*	farewell to spring	Onagraceae
Madia gracilis	slender tarweed	Asteraceae
Monardella villosa	coyote mint	Lamiaceae
Lupinus sp.	lupine	Fabaceae
Chlorogalum pomeridianum subsp. *pomeridianum*	common soaproot	Agavaceae
Juncus effusus subsp. *pacificus*	Pacific rush	Juncaceae
Cyperus eragrostis	tall flatsedge	Cyperaceae
Calochortus luteus	yellow mariposa	Liliaceae
Quercus lobata	valley oak	Fagaceae
Hordeum murinum	foxtail barley	Poaceae
Heteromeles arbutifolia	toyon	Rosaceae
Quercus agrifolia	coast live oak	Fagaceae

Toxicodendron diversilobum	poison oak	Anacardiaceae
Erigeron canadensis	Canada horseweed	Asteraceae
Rumex acetosella	sheep sorrel	Polygonaceae
Pseudognaphalium californicum	Ladies' tobacco	Asteraceae
Aira caryophyllea	silver hairgrass	Poaceae
Eschscholzia californica	California poppy	Papaveraceae
Pentagramma triangularis	goldenback fern	Pteridaceae
Polypodium californicum	California polypody	Polypodiaceae
Dudleya cymosa subsp. *cymosa*	Canyon dudleya	Crassulaceae
Eriogonum nudum var. *auriculatum*	Naked buckwheat	Polygonaceae
Triteleia laxa	Ithuriel's spear	Themidaceae
Rumex dentatus	toothed dock	Polygonaceae
Rubus armeniacus	Himalayan blackberry	Rosaceae
Heterotheca sessiliflora subsp. *bolanderi*	Bolander's goldenaster	Asteraceae
Genista monspessulana	French broom	Fabaceae
Croton setiger	turkey-mullein	Euphorbiaceae
Vicia villosa	hairy vetch	Fabaceae
Feijoa sellowiana	pinnapple guava	Myrtaceae
Prunus sp.	prune	Rosaceae
Dactylis glomerata	ochard grass	Poaceae
Briza maxima	rattlesnake grass	Poaceae
Lavandula stoechas	French lavender	Lamiaceae
Lupinus bicolor	miniature lupine	Fabaceae
Umbellularia californica	California bay	Lauraceae
Aesculus californica	California buckeye	Sapindaceae
Anaphalis margaritacea	pearly everlasting	Asteraceae
Rubus ursinus	California blackberry	Rosaceae
Mentha pulegium	pennyroyal	Lamiaceae
Acacia dealbata	silver wattle	Fabaceae
Juncus balticus subsp. ater	Baltic rush	Juncaceae
Polypogon monspeliensis	rabbitsfoot grass	Poaceae
Hypochaeris radicata	rough cat's ear	Asteraceae
Lathyrus latifolius	sweet pea	Fabaceae
Prunus cerasifera	cherry plum	Rosaceae
Arbutus menziesii	Pacific madrone	Ericaceae
Salix lasiolepis	arroyo willow	Salicaceae
Pseudotsuga menziesii	Douglass fir	Pinaceae
Symphoricarpos mollis	creeping snowberry	Caprifoliaceae
Luzula comosa var. *comosa*	hairy wood rush	Juncaceae
Agrostis capillaris	colonial bentgrass	Poaceae
Matricaria discoidea	pineapple weed	Asteraceae
Raphanus sp.	wild radish	Brassicaceae
Cirsium vulgare	bull thistle	Asteraceae
Ceanothus thyrsiflorus var. *thyrsiflorus*	blue blossom	Rhamnaceae
Lactuca serriola	prickly lettuce	Asteraceae
Sequoia sempervirens	coast redwood	Cupressaceae
Pinus halepenis	Aleppo pine	Pinaceae

Holcus lanatus	velvet grass	Poaceae
Pseudognaphalium luteoalbum	Jersey cudweed	Asteraceae
Dittrichia graveolens	stinkwort	Asteraceae
Festuca myuros	rattail sixweeks grass	Poaceae
Bromus catharticus subsp. *catharticus*	rescue grass	Poaceae
Arctostaphylos sp.	horticultural manzanita	Ericaceae
Centaurea solstitialis	yellow star thistle	Asteraceae
Hedera helix	English ivy	Araliaceae
Wisteria sinensis	Chinese wisteria	Fabaceae
Calocedrus decurrens	Incense cedar	Cupressaceae
Hesperocyperus macrocarpa	Monterey cypress	Cupressaceae
Euphorbia peplus	petty purge	Euphorbiaceae
Agrostis sp.	agrostis	Poaceae
Elymus triticoides	creeping wildrye	Poaceae
Sisymbrium irio	London rocket	Brassicaceae
Convolvulus arvensis	field bindweek	Convolvulaceae
Rumex crispus	curly dock	Polygonaceae
Typha latifolia	broadleaf cattail	Typhaceae
Epilobium ciliatum	slender willow herb	Onagraceae
Epilobium brachycarpum	tall annual willow herb	Onagraceae
Rumex conglomeratus	clustered dock	Polygonaceae
Salix lasiandra	Pacific willow	Salicaceae
Conium maculatum	poison hemlock	Apiaceae
Cotoneaster lacteus	milkflower cotoneaster	Rosaceae
Cotoneaster pannosus	woolly cotoneaster	Rosaceae
Arrhenatherum elatius	tall oatgrass	Poaceae

Appendix B

Mike Podlech
Aquatic Ecologist
4474 Cortez Drive
Soquel, CA 95073
(831) 239-6750
mpodlech@sbcglobal.net

memorandum

date August 9, 2021

to Dan Sicular, Sicular Environmental Consulting

from Mike Podlech, Aquatic Ecologist

subject San Geronimo Golf Course Fisheries Constraints Analysis

Purpose of Memorandum

The former San Geronimo Golf Course is located in the San Geronimo Valley region of Marin County (County), California. The Trust for Public Land (TPL) purchased the 157-acre golf course in 2018 and opened it to public use. The County is considering the purchase of a 22-acre parcel (APN# 172-371-04), located on the former golf course north of Sir Francis Drake Boulevard and east of Nicasio Valley Road. For the purpose of this memorandum, the 22-acre parcel is the "project site." The County has retained Sicular Environmental Consulting to conduct a constraints analysis to determine what part of the parcel would be suitable for future use and development, focusing primarily on undeveloped former fairways located within the southwestern portion of the site. In support of the overall constraints analysis, this memorandum summarizes the results of a focused assessment of potential impacts of possible future project site development on fisheries resources.

Environmental Setting

The subject parcel is located in San Geronimo Valley in central Marin County, California. San Geronimo Creek bisects the valley and flows along the southern edge of the former golf course, approximately 650 feet south of the project site. San Geronimo Creek drains a 9.3 square mile sub-basin tributary to Lagunitas Creek. The majority of land within San Geronimo Valley is privately owned but Marin County Open Space District owns and manages about 2,240 acres of open space lands that account for about 37% of the watershed. The privately owned lands are residential properties with some agricultural grazing land and other agricultural uses, horse stables, and the former San Geronimo Valley National Golf Course (MMWD 2011).

San Geronimo Creek is known to support central California coast (CCC) coho salmon (*Oncorhynchus kisutch*), a federal and State-listed endangered species, and CCC steelhead (*O. mykiss*), a federal-listed threatened species. Coho salmon and steelhead are anadromous fishes, rearing at least partially in freshwater, migrating to the ocean as smolts, maturing to adulthood in the ocean, and then migrating back into freshwater streams to spawn. The Marin Municipal Water District (MMWD) conducts an extensive monitoring program of salmonid populations within the Lagunitas Creek watershed, including the mainstem San Geronimo Creek, and the Salmon Protection and Watershed Network (SPAWN) monitors populations within tributaries of San Geronimo Creek. Coho salmon and steelhead populations in the watershed have fluctuated widely since 1970 and are significantly reduced from anecdotal reports of large historic populations (Ettlinger 2019). Lagunitas Creek and San Geronimo Creek have been designated core areas for the recovery of CCC coho salmon (NMFS 2012). The *San Geronimo Valley Salmonid Enhancement Plan* (PCI 2010) provides recommendations for habitat improvements throughout the watershed. Most recently, SPAWN and its partners remediated a long-standing fish passage barrier at Roy's Pool, located at the downstream end of the former golf course.

Habitat Assessment

A reconnaissance-level field assessment of the subject parcel and adjacent portions of the golf course was conducted on July 19, 2021 to identify existing waterways that may support fisheries and other aquatic resources or drain toward waterways that support such species. During the assessment, the biological and physical conditions of drainage channels were recorded qualitatively. Photo documentation of significant and/or representative locations was collected and is presented at the end of this memorandum.

The subject parcel contains two seasonal watercourses that drain the project site in a southerly direction before crossing beneath Sir Francis Darke Boulevard and flowing toward San Geronimo Creek. The physical characteristics of the two drainages are described below.

Drainage 1

Drainage 1 originates in the western portion of the parcel (**Photo 1**) and flows in a southerly direction (**Photo 2**) parallel to Nicasio Valley Road for approximately 400 feet. The drainage was dry on the day of assessment. The upper reach of the drainage lacks physical features such as defined banks or evidence of periodic scour. The channel substrate consists entirely of soil supporting seasonal grasses and shrubs. No riparian vegetation is present within the reach adjacent to Nicasio Valley Road. This upper portion of Drainage 1 is best characterized as a broad 20-30 foot-wide ephemeral swale and does not provide habitat for fish or other aquatic organisms.

At Sir Francis Drake Boulevard, Drainage 1 joins a road drainage system that extends for approximately 800 feet in a westerly direction along the southern edge of the parcel. This road drainage reach consists of a more defined channel and supports a mixture of sparse riparian trees such as willows (*Salix* sp.) and non-native understory plants such as Himalayan blackberry (*Rubus armeniacus*), as well as a patch of dead cattails (*Typha* sp.) (**Photos 3** and **4**). The channel is approximately 10 feet wide and contains some coarse substrates (e.g., gravel). Based on its function as road drainage as well as the presence of some water-dependent vegetation, this reach likely supports seasonal hydrology. Nevertheless, this reach does not contain salmonid habitat.

At its confluence with the road drainage system at the intersection of Sir Francis Drake Boulevard and Nicasio Valley Road, Drainage 1 crosses beneath Sir Francis Drake Boulevard via a culvert, then continues as road drainage along the eastern side of Nicasio Valley Road, crosses beneath San Geronimo Valley Drive, and flows through a residential property toward its confluence with San Geronimo Creek.

Drainage 2

Drainage 2 originates in the hillside north of the parcel (**Photo 5**) and flows in a southerly direction, but is culverted beneath an existing access road and former fairway for approximately 250 feet. The culvert collects the drainage from several tributary ephemeral channels. The drainage daylights approximately 150 feet north of Sir Francis Drake Boulevard and is characterized by an approximately 35-foot wide, straightened channel covered in annual grasses and other upland vegetation (**Photo 6**). The channel lacks coarse substrates and is devoid of riparian vegetation. Based on existing channel characteristics, the hydrology of Drainage 2 appears to be ephemeral and does not provide habitat for fish.

Drainage 2 crosses beneath Sir Francis Drake Boulevard via a 48-inch concrete, at-grade culvert that appears to be in good condition (**Photo 7**). South of Sir Francis Drake Boulevard and the subject parcel, Drainage 2 extends for approximately 600 feet in a southerly direction across the former golf course toward its confluence with San Gregorio Creek. The majority of this reach consists of a seasonal swale through annual grassland, and lacks defined banks, coarse substrates, and riparian vegetation (**Photos 8** and **9**). Drainage 2 ultimately extends down a steep slope through the riparian corridor of San Gregorio Creek toward the confluence. This reach of Drainage 2 does not support fish habitat and the steep slope at the confluence precludes even seasonal use (e.g., velocity refuge) of the drainage by salmonids.

San Gregorio Creek at the confluence of Drainage 2 is deeply incised and supports a narrow but relatively dense riparian corridor. Streamflow on the day of the assessment was near-stagnant.

Conclusions and Recommendations

Two seasonal swales that appear to have been straightened and/or realigned currently drain the subject parcel. The two drainages cross separately beneath Sir Francis Drake Boulevard and flow through an adjacent golf course parcel toward San Gregorio Creek. None of the existing drainage channel reaches provide fisheries habitat.

The southwestern portion of the subject parcel (**Photo 10**) consists of gently sloping land covered in annual grasslands, scrubs, and a few scattered trees. This portion of the parcel appears to provide a suitable site for future development. However, from a fisheries perspective, the other portions of the parcel are similarly suitable, although the seasonal drainages themselves will need to be avoided and protected through setbacks. Policy Bio-4.1 of the Marin Countywide Plan designates Stream Conservation Areas (SCA) along perennial, intermittent, and ephemeral streams. For parcels located within the Inland-Rural corridor, Policy Bio-4.1 requires development setback on each side of the top of streambank that is the greater of either (a) 50 feet landward from the outer edge of woody riparian vegetation associated with the stream or (b) 100 feet landward from the top of bank. Given the lack of riparian vegetation along the two on-site ephemeral drainages, 100-foot stream setbacks will likely be required for any future development on the parcel.

The only indirect impact to existing fisheries resources in San Gregorio Creek that could potentially occur during construction and operation of any future structure is the offsite delivery of water quality pollutants (e.g., sediment, hydraulic or petroleum fluids, etc.). However, such impacts are commonly mitigated with standard best management practices and stormwater pollution prevention measures that would be required by the environmental review and permitting phases for project site development.

References

Ettlinger, E. 2019. Adult salmonid monitoring in the Lagunitas Creek watershed 2018-2019. Prepared by Marin Municipal Water District in collaboration with National Park Service, Point Reyes National Seashore and Salmon Protection and Watershed Network.

Marin Municipal Water District (MMWD). 2011. Lagunitas Creek Stewardship Plan.

National Marine Fisheries Service (NMFS). 2012. Final Recovery Plan for Central California Coast coho salmon (*Oncorhynchus kisutch*) Evolutionarily Significant Unit, NMFS, Southwest Region, Santa Rosa, CA.

Prunuske Chatham, Inc. (PCI). 2010. San Geronimo Valley Salmon Enhancement Plan. Prepared for Marin County Department of Public Works with assistance from Stillwater Sciences.

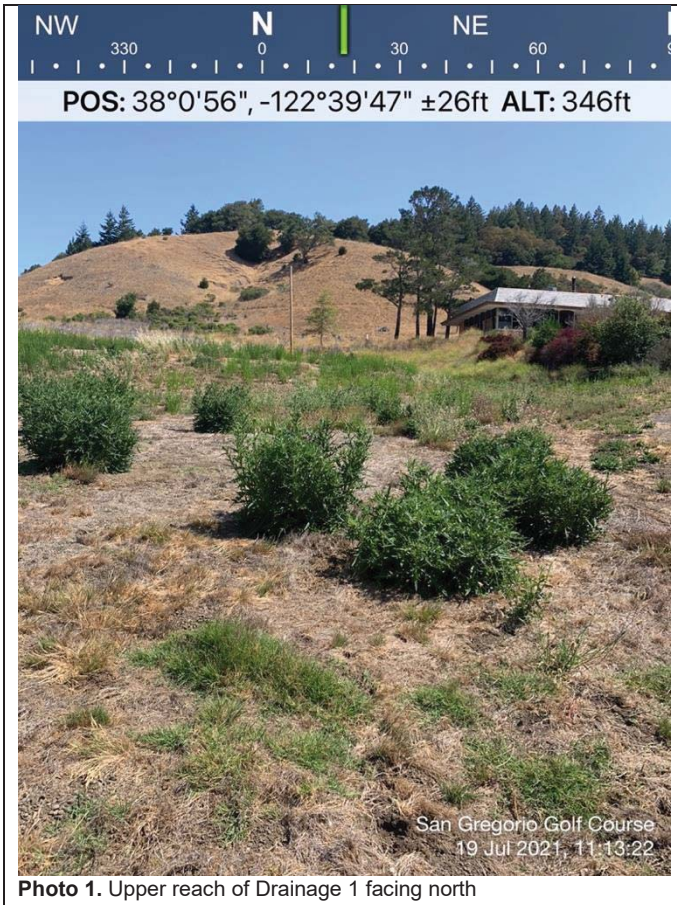

Photo 1. Upper reach of Drainage 1 facing north

Photo 2. Upper reach of Drainage 1 facing south

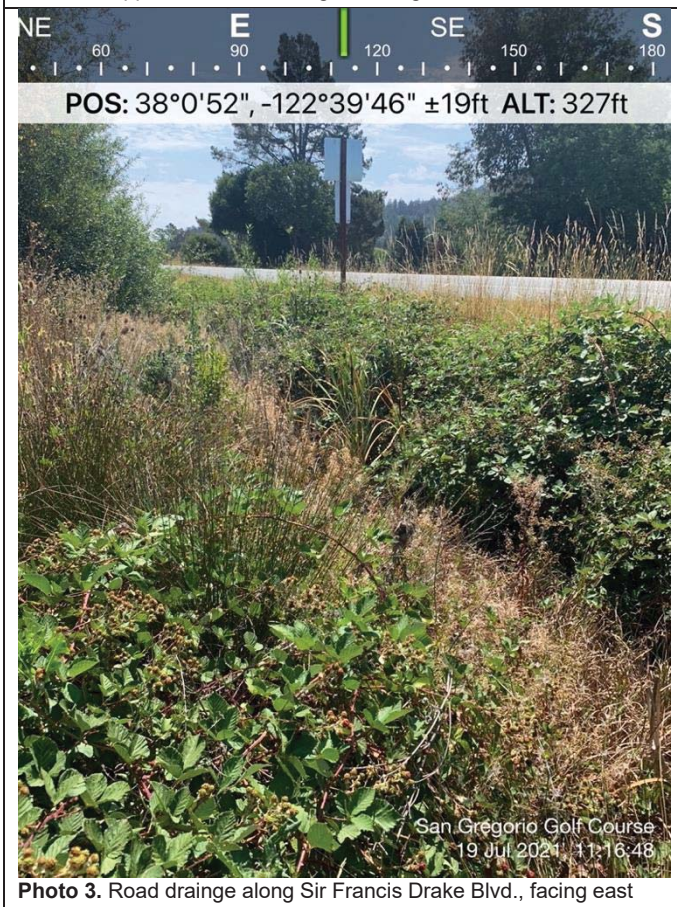

Photo 3. Road drainge along Sir Francis Drake Blvd., facing east

Photo 4. Road drainage along Sir Francis Drake Blvd., facing west.

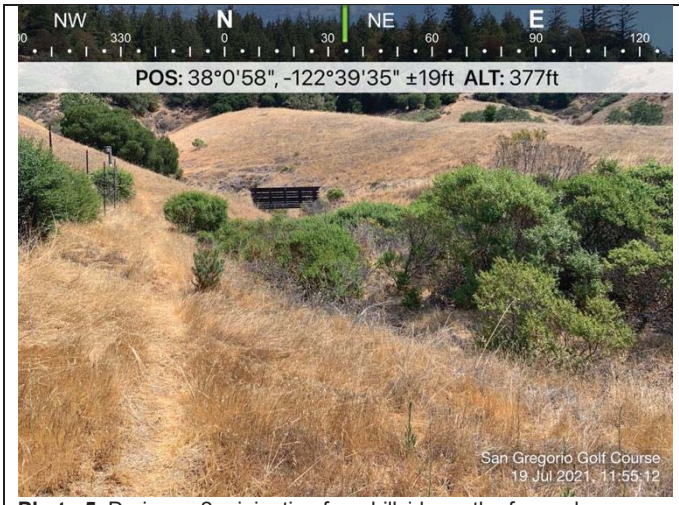

Photo 5. Drainage 2 originating from hillside north of parcel.

Photo 6. Drainage 2 north of Sir Francis Drake Blvd, facing south.

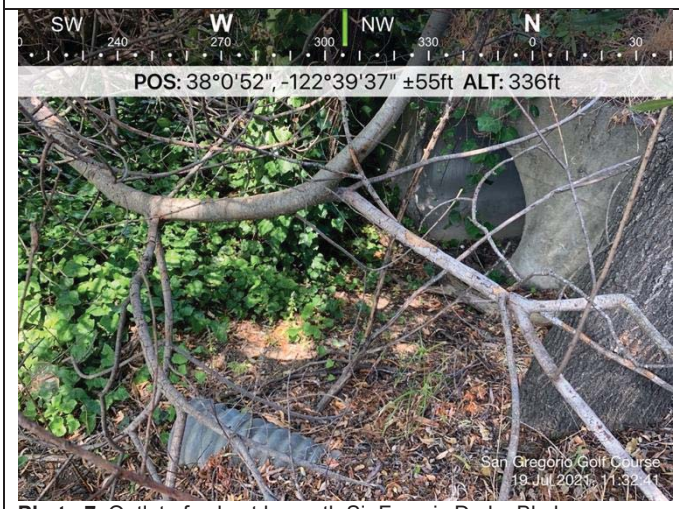

Photo 7. Outlet of culvert beneath Sir Francis Drake Blvd.

Photo 8. Drainage 2 approx. 150 ft south of Sir Francis Drake Blvd, facing south.

Photo 9. Drainage 2 approx. 250 ft south of Sir Francis Drake Blvd, facing south.

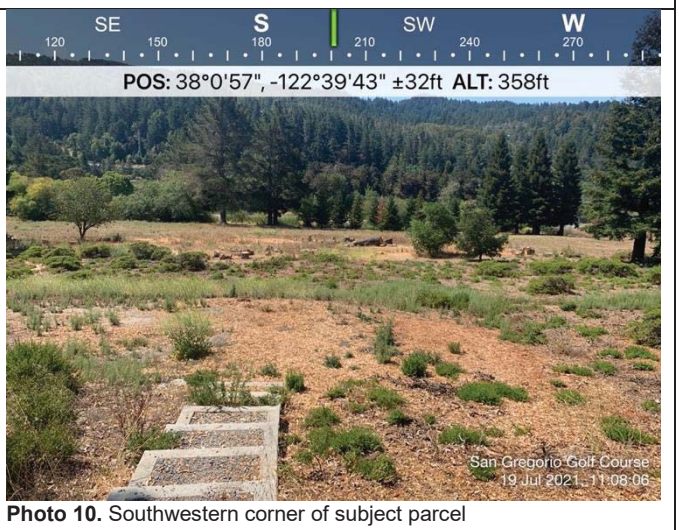

Photo 10. Southwestern corner of subject parcel

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415.717.6469
www.sutroscience.com

memorandum

date August 20, 2021

to Dan Sicular, Sicular Environmental Consulting

from Justin Taplin, MS
Peter Hudson, PG

subject San Geronimo Golf Course Hydrology and Water Quality Constraints Analysis

Sutro Science, LLC (Sutro) has prepared this memorandum to provide our opinion on potential hydrologic and water quality constraints related to future development of a 22-acre parcel (APN# 172-371-04) located on the former San Geronimo Golf Course. The analysis of hydrologic and water quality constraints focuses on the southwestern portion of the site comprising of the existing former golf course club house, parking facilities, access roads, and undeveloped former fairways. This assessment is based on review of publicly available data sources, maps, and reports. In addition, Sutro visited the Project site on August 2, 2021 and conducted a reconnaissance-level field assessment of surface water features and drainage characteristics of the subject parcel and adjacent portions of the former golf course south of Sir Francis Drake Boulevard. This memorandum summarizes existing site conditions, followed by our findings, conclusions, and recommendations as they pertain to potential hydrologic and water quality constraints related to future site development. The assessment includes consideration of regulatory requirements relevant to development of the subject parcel.

Existing Conditions

Hydrologic Setting

The subject parcel is located in San Geronimo Valley in central Marin County, California. San Geronimo Creek bisects the valley, traversing the valley floor, and flows westward along the southern edge of the former golf course, approximately 650 feet south of the subject parcel (**Figure 1**). San Geronimo Creek drains a 9.3 square mile sub-basin and is tributary to Lagunitas Creek, which flows northwest to Tomales Bay. San Geronimo Creek is the largest remaining undammed tributary to Lagunitas Creek and provides aquatic habitat for listed salmonid species; changes in peak flows or runoff characteristics from the subject parcel could therefore represent a constraint related to degradation of water quality or hydromodification. San Geronimo Creek along almost all of its length, is fairly straight and is deeply incised (6-feet or more), as are many of its tributaries as well as Lagunitas Creek along much of its length (RWQCB, 2014). These waterways have become incised as a result of historic land-use related changes. Intensive grazing (which can result in soil compaction and loss of vegetation) and historic logging of old-growth redwoods resulted in significant storm runoff increases. Ditching and draining the valley floor also increased creek flows, potentially exacerbating incision, by connecting naturally disconnected tributaries (RWQCB, 2014).

San Geronimo Valley Golf Course Clubhouse Parcel

Environmental Constraints Analysis

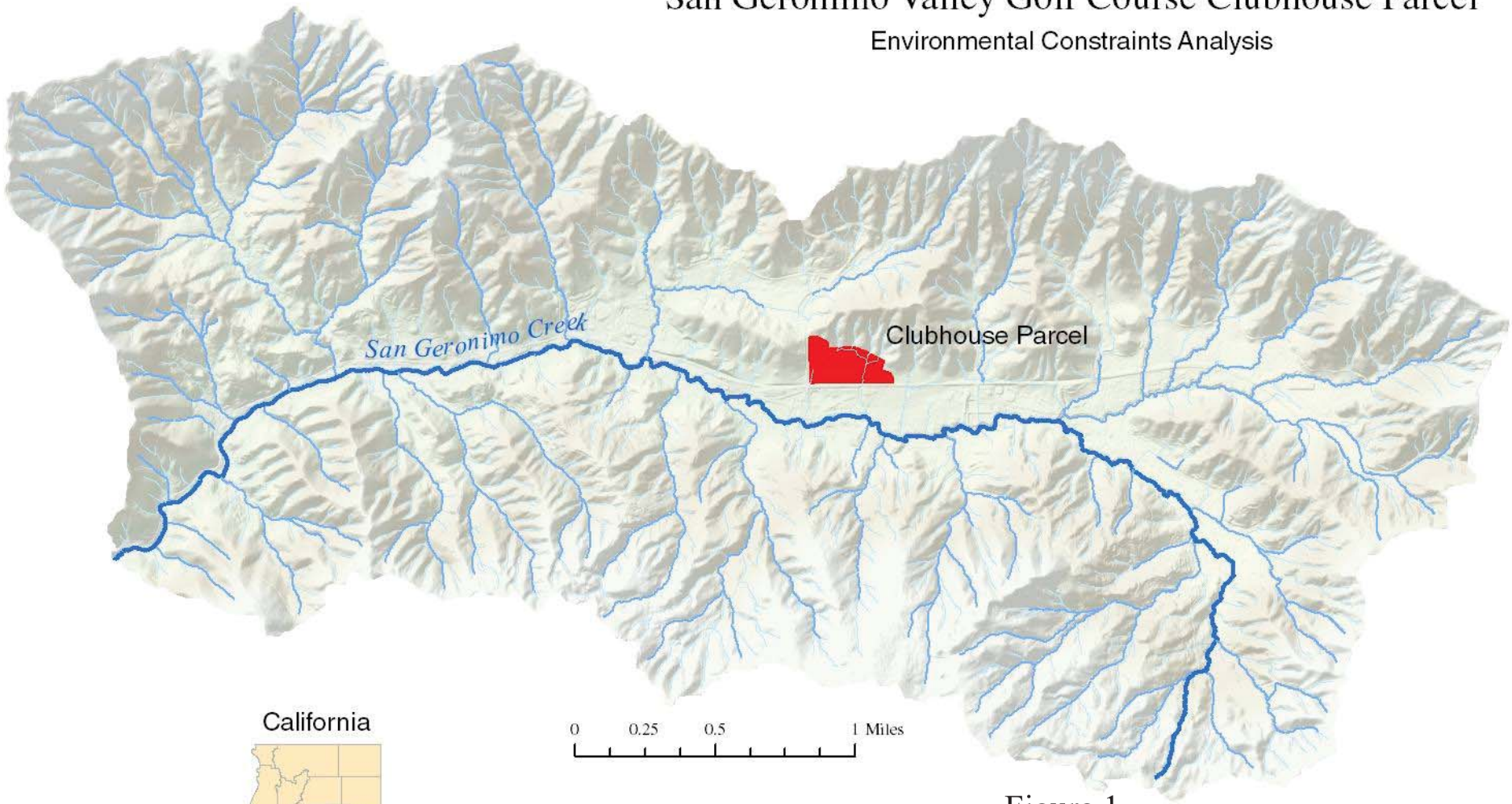

Figure 1

San Geronimo Watershed

Coordinate System: NAD 1983 HARN StatePlane California III FIPS 0403 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983 HARN

Although there is significant residential and commercial development in the San Geronimo Valley, most of the watershed remains in open space or ranch uses. Marin County Open Space District owns and manages about 2,240 acres of open space lands that account for about 37% of the watershed. The privately owned lands are residential properties with some agricultural grazing land and other agricultural uses, horse stables, and the former San Geronimo Valley National Golf Course (MMWD 2011). Total impervious surface area averages approximately 5 percent in the San Geronimo Creek watershed varying from about 2 percent within the watershed of the North Fork of San Geronimo Creek to about 9 percent in the Woodacre Creek watershed (RWQCB, 2014).

Site Drainage

The subject parcel contains two unnamed watercourses (**Figure 2**). Both watercourses are classified by the United States Geological Survey (USGS) as ephemeral[1]. The watercourses drain the project site in a southerly direction before joining stormwater roadside drainage ditches and conveyance systems and crossing beneath Sir Francis Darke Boulevard and flowing toward San Geronimo Creek. The eastern and western watercourses ultimately flow into San Geronimo Creek upstream and downstream, respectively, of the "Roy's Pools Fish Passage and Floodplain Restoration Project." Each of these watercourses as well as on- and off-site stormwater conveyance is described below moving west to east across the subject parcel. Additionally, the former club house and paved areas of the parcel (carpark and access roads) collect stormwater via storm drains and storm runoff is conveyed to the drainage features described below on the eastern side of the parcel.

The watercourse located on the western portion of the subject parcel flows in a southerly direction roughly parallel to Nicasio Valley Road for approximately 300 feet. The upper reach of the drainage lacks physical features such as defined banks or evidence of periodic scour. The channel substrate consists entirely of soil supporting seasonal grasses and shrubs. No riparian vegetation is present within the reach adjacent to Nicasio Valley Road. The upper portion of the watercourse is best characterized as a broad 20-30 foot-wide ephemeral swale that drains surface runoff from the adjacent gently sloping hillside and steeper slopes located immediately to the north. The watercourse upstream terminus is located approximately 75 feet from the western parcel boundary at the northern end and flows southwest to the corner of Nicasio Valley Road and Sir Francis Drake Boulevard where a topographic depression potentially supports some wetland features. At Sir Francis Drake Boulevard, the watercourse joins a road drainage system that extends for approximately 400 feet east along the southern edge of the parcel. This road drainage reach consists of a more defined open channel, approximately 10 feet wide, and supports riparian vegetation. The watercourse crosses beneath Sir Francis Drake Boulevard via a culvert, then continues in a roadside stormwater collection and conveyance ditch along the eastern side of Nicasio Valley Road, then crosses beneath San Geronimo Valley Drive, and flows through a residential property within a concrete lined channel toward its confluence with San Geronimo Creek. A freshwater pond with associated wetland[2] is located on the former golf course south of Sir Francis Drake Boulevard (**Figure 2**) immediately adjacent to the stormwater conveyance ditch that borders the eastern side of Nicasio Valley Road. The pond and wetland do not appear to be directly hydrologically connected (i.e., the pond does not receive flow from the drainage ditch or watercourse). The watercourse and roadside stormwater ditch were dry on the day of assessment.

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[1] Stream locations and classifications are based on the USGS National Hydrography Dataset (NHD). The USGS defines an ephemeral stream as "a stream or part of a stream that flows only in direct response to precipitation; it receives little or no water from springs, melting snow, or other sources; its channel is at all times above the water table." The USGS defines an intermittent stream as "a stream that flows only when it receives water from rainfall runoff or springs, or from some surface source such as melting snow" and a perennial stream as "a stream that normally has water in its channel at all times."

[2] Wetland classification based on MarinMap GIS dataset from U.S. Fish and Wildlife Service National Wetland Inventory (NWI).

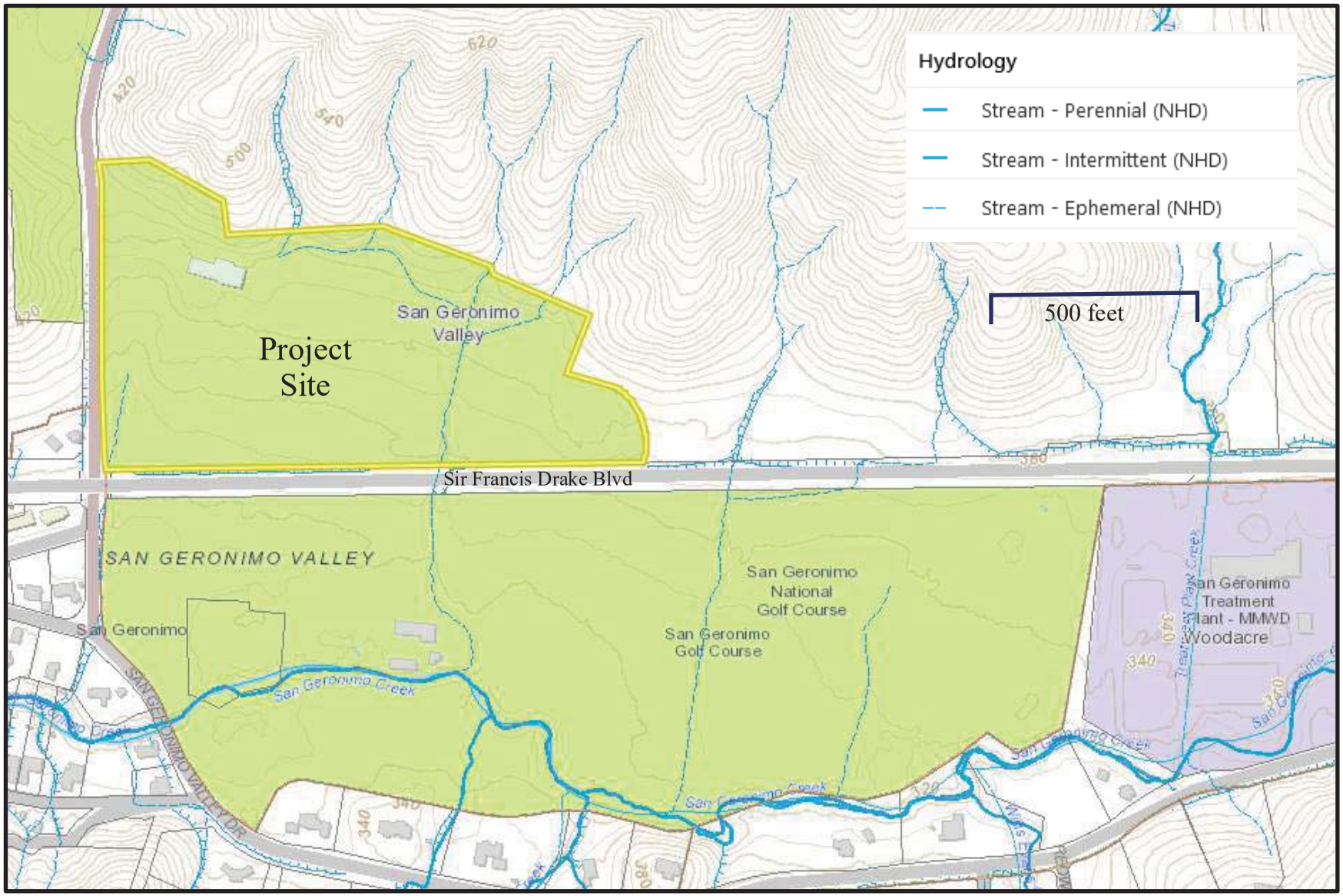

Figure 2: Site Hydrology

Source: MarinMap, National Hydrography Dataset

The watercourse on the eastern side of the subject parcel is a larger and more complex network of ephemeral channels draining steeper upgradient slopes to the north of the parcel (**Figure 2**). The watercourse originates in the hillside valleys north of the parcel and the channel network flows in a southerly direction onto the parcel, where flows join the on-site stormwater drains and ditches bordering the northern boundary of the carpark and ephemeral channels to the east of the community garden. Flows are then conveyed by culvert beneath an existing access road and the former fairway for approximately 250 feet. The drainage daylights approximately 150 feet north of Sir Francis Drake Boulevard into a defined straight channel approximately 35-foot wide covered in annual grasses and other upland vegetation (i.e., no defined riparian vegetation) and then crosses beneath Sir Francis Drake Boulevard via a 48-inch concrete, at-grade culvert. South of Sir Francis Drake Boulevard and the subject parcel, the channel extends for approximately 600 feet in a southerly direction across the former golf course toward its confluence with San Gregorio Creek via a seasonal swale. The swale is poorly defined seasonal grassland and lacks defined banks, coarse substrates, and riparian vegetation. The watercourse ultimately extends down a steep slope through the riparian corridor of San Geronimo Creek. At the confluence with the watercourse, San Geronimo Creek is deeply incised. The watercourse and stormwater conveyance channels and culverts were dry on the day of assessment. Streamflow in San Geronimo Creek on the day of the assessment was near-stagnant.

Flooding

The 100-Year floodplain denotes an area that has a one percent chance of being inundated during any 12-month period. Floodplain zones (Special Flood Hazard Areas [SFHA]) are determined by the Federal Emergency Management Agency (FEMA) and used to create Flood Insurance Rate Maps (FIRMs). These tools assist communities in mitigating flood hazards through land use planning. FEMA also outlines specific regulations, intended to be adopted by the local jurisdictions, for any construction, whether residential, commercial, or industrial within 100-year floodplains. The subject parcel site is located within Flood Zone X: areas with minimal chance of flooding and is not located within a 100-year flood hazard area (**Figure 3**). The nearest 100-year floodplain area is located approximately 520 feet to the south, downgradient from the subject parcel, and is associated with San Geronimo Creek[3]. The subject parcel is not located in an area at risk of flooding due to dam failure (Marin County, 2007).

Water Quality

The quality of surface water is primarily a function of land uses in a given area. Local land uses influence the quality of surface waters through point source discharges (i.e., discrete discharges from discharge pipes) and nonpoint source discharges (e.g., direct storm runoff from slopes). Surface water runoff is generated by precipitation that cannot be absorbed into the ground in the period following a storm. Pollutants and sediments are transported in watersheds by stormwater runoff that reaches streams, rivers, and storm drains. The amount of surface water runoff is a factor of precipitation, ground saturation, and available permeable or pervious ground surfaces. Permeability is a measure of how quickly water can penetrate a surface area.

Based on the existing conditions of the subject parcel and water quality issues identified for the watershed (described below), the primary stormwater pollutant relevant to development is sediment. The following assessment focuses on potential sources of sediment, with consideration given to other stormwater pollutants typically associated with development.

Development of the subject parcel would likely include earthwork activities (i.e., grading, excavation, and other soil-disturbing activities) and placement of engineered fill soils during construction phases. Stormwater runoff from construction activities is a common source of pollutants (mainly sediment) to receiving waters. Earthwork

[3] based on MarinMap GIS dataset from FEMA Flood Map 2017 Flood Hazard Zone classifications.

Figure 3

National Flood Hazard Layer FIRMette

FEMA

122°40'4"W 38°1'13"N

122°39'26"W 38°0'44"N

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

1:6,000

Basemap: USGS National Map: Orthoimagery: Data refreshed October, 2020

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS
- Without Base Flood Elevation (BFE) *Zone A, V, A99*
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD
- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*
- Area with Flood Risk due to Levee *Zone D*

OTHER AREAS
- NO SCREEN Area of Minimal Flood Hazard *Zone X*
- Effective LOMRs
- Area of Undetermined Flood Hazard *Zone D*

GENERAL STRUCTURES
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

OTHER FEATURES
- 20.2 Cross Sections with 1% Annual Chance
- 17.5 Water Surface Elevation
- Coastal Transect
- Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

MAP PANELS
- Digital Data Available
- No Digital Data Available
- Unmapped

N

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 8/29/2021 at 12:49 AM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

activities can loosen soils making them more susceptible to erosion from stormwater runoff and causing them to migrate to storm drains and drainage channels and to downgradient water bodies, such as San Geronimo Creek. Following completion of construction, the addition of impervious surfaces can decrease rainfall infiltration into soils and increase runoff flow rates and volumes. Increased runoff can erode slopes and surface water channels as well as increase the transport of sediment and other pollutants downgradient. Additionally, increased peak stormwater discharges can overwhelm stormwater conveyance systems and cause flooding on-site or downgradient. Increased sediment in San Geronimo Creek could degrade water quality, exceed water quality standards, and degrade aquatic habitat for salmonids.

The Water Quality Control Plan for the San Francisco Bay Basin (Basin Plan) designates beneficial uses for specific surface waters and establishes water quality objectives to ensure those designated beneficial uses do not become impaired (RWQCB, 2019). The beneficial uses designated for San Geronimo Creek include cold freshwater habitat (COLD), spawning, reproduction, and/or early development (SPWN), warm freshwater habitat (WARM), preservation of rare and endangered species (RARE), wildlife habitat (WILD), and water-contact and non-contact recreation (REC1 and REC2). Section 303(d) of the Clean Water Act requires states to develop lists of impaired waters – waters that do not meet water quality standards or successfully support designated beneficial uses, even after point sources of pollution have been outfitted with the minimum required levels of pollution control technology. In 1990, based on evidence of widespread erosion and concern regarding adverse impacts to fish habitat, the Water Board listed Lagunitas Creek as impaired by sedimentation, pathogen, and nutrients under Section 303(d) of the Clean Water Act. The land area identified as contributing to the water quality impairment applies to the entire land area and all channels draining into and including Lagunitas Creek, below Kent Lake and Nicasio Reservoir, which includes San Geronimo Creek and its tributaries (RWQCB, 2014).

The law requires jurisdictions to develop action plans, known as Total Maximum Daily Load allocation (TMDLs), to improve water quality for 303(d) listed waters. The TMDL is a tool that establishes the allowable loadings or other quantifiable parameters for a waterbody and thereby the basis for the States to establish water quality-based controls. The purpose of TMDLs is to ensure that beneficial uses are restored and that water quality objectives are achieved. A sediment TMDL has been established for Lagunitas Creek (RWQCB, 2014) due to the finding that anthropogenic watershed disturbances have accelerated the natural processes of erosion and sedimentation in the Lagunitas Creek and tributary water bodies. The largest human-caused sediment source is channel incision. San Geronimo Creek, which receives flows from the subject parcel drainages, is the primary sediment source to the State Park Reach[4] of Lagunitas Creek, and is subject to the TMDL.

[4] The State Park Reach begins upstream where San Geronimo Creek joins Lagunitas Creek and continues downstream through SP Taylor State Park.

Assessment of Hydrologic and Water Quality Constraints

Compliance with applicable federal, state, and local laws and regulations is assumed in the assessment of hydrologic and water quality constraints to development of the subject parcel. The regulatory requirements described below are mandatory and the application of the associated protective measures (such as Best Management Practices [BMPs]) are non-discretionary and are proven to minimize and/or avoid hydrologic or water quality adverse effects. Further, regulatory agencies with technical jurisdiction and authority for oversight would require adherence to regulatory requirements as a condition of development through the permit approval process and would continue to enforce applicable requirements throughout construction and post-construction phases.

Water Quality Constraints

It is assumed that development of the subject parcel would result in more than one acre of disturbance by construction activities. Therefore, any development would be required to comply with National Pollutant Discharge Elimination System (NPDES) regulations and obtain coverage under the State Construction General Permit (CGP)[5]. Under the requirements of the CGP, the permit applicant or their contractor(s) would implement stormwater controls referred to as construction BMPs, as set forth in a detailed Stormwater Pollution Prevention Plan (SWPPP). SWPPPs are a required component of the CGP and must be prepared by a California-certified Qualified SWPPP Developer (QSD) and implemented by a California-certified Qualified SWPPP Practitioner (QSP). In addition, the SWPPP would be required to include a visual monitoring program and a sediment monitoring plan as the site discharges directly to a water body included on the 303(d) list for sediment as defined in the TMDL. SWPPPs must describe the specific erosion control and stormwater quality BMPs needed to minimize pollutants in stormwater runoff and detail their placement and proper installation. The BMPs are designed to prevent pollutants from contacting stormwater and to keep all products of erosion (i.e., sediment) and stormwater pollutants from migrating offsite into receiving waters. Typical BMPs implemented at construction sites include placement of sediment barriers around storm drains, the use of fiber rolls or gravel barriers to detain small amounts of sediment from disturbed areas, and temporary or permanent stockpile covers to prevent rainfall from contacting the stockpiled material. In addition to erosion control BMPs, SWPPPs also include BMPs for preventing the discharge of other pollutants such as paint, solvents, concrete, and petroleum products to downstream waters. BMPs for these pollutants also include routine leak inspections of equipment, maintaining labelling and inspecting integrity of containers, and ensuring that construction materials are disposed of in accordance with manufacture's recommended disposal practices and applicable hazardous waste regulations.

Under the provisions of the CGP, the QSD is responsible for assessing the risk level of a site based on both sediment transport and receiving water risk and developing and implementing the SWPPP. Projects can be characterized as Risk Level 1, 2, or 3, and these risk levels determine the minimum BMPs and monitoring that must be implemented during construction. Under the direction of the QSD, the QSP is required to conduct routine inspections of all BMPs, conduct surface water sampling, when necessary, and report site conditions to the State Water Resources Control Board (SWRCB) using the Stormwater Multi-Application Reporting and Tracking System (SMARTS). Compliance with the CGP is required by law and has proven effective in protecting water quality at construction sites.

[5] NPDES General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities – Order no. 2009-0009-DWQ, NPDES No. CAS 000002100

Following the completion of construction (post-construction), any development on the parcel would be subject to compliance with the Phase II Stormwater NPDES Permit for small municipal separate storm sewer systems (MS4s) covering Marin's cities, towns and unincorporated areas. Provision E.12 of the MS4 Permit, the "Post-Construction Stormwater Management Program," is administered locally under the Marin County Stormwater Pollution Prevention Program (MCSTOPPP). Under MCSTOPPP post-construction requirements, any development project would be required to implement an approved Stormwater Control Plan consistent with the BASMAA post-construction manual (BASMAA, 2019), which specifies design guidance for stormwater treatment and control for projects in Marin. Any development would be required to include design features that incorporate stormwater management guidelines and incorporate measures such as limiting clearing, grading and soil compaction; minimizing the addition of impervious surfaces; reducing runoff and peak storm discharges by implementing Low Impact Design (LID) stormwater measures, such as dispersing runoff to landscaping, use of bio swales or wetlands for capturing pollutants, or using pervious pavements; conserving natural areas of the site as much as possible; and protecting slopes and channels against erosion. At a minimum, any development on the subject parcel would be required to adhere to MCSTOPPP provisions, which would require source controls of stormwater volumes and implementation of BMPs for stormwater quality management, including implementation of LID stormwater measures.

Additionally, if development of the parcel resulted in the addition of 5,000 square feet or more of impervious surface, the design of the development would be subject to the MCSTOPPP requirements for a "Regulated Project" and would therefore be subject to more stringent post-development stormwater requirements. MCSTOPPP post-construction requirements specify that site designs for Regulated Projects, or where otherwise required by the local agency, must minimize the area of new roofs and paving. Where feasible, it is required that pervious surfaces be used instead of paving so that runoff can infiltrate to the underlying soil. Remaining runoff from impervious areas must be captured and used or treated through bioretention methods. Regulated Projects must also incorporate pollutant source control BMPs into the site design consistent with the BASMAA post-construction manual Appendix A checklist (BASMAA, 2019).

The Marin Countywide Plan (CWP) (Marin County, 2007) states that "ephemeral channels are important for maintaining healthy watersheds. Perennial and intermittent streams provide more permanent aquatic habitat and serve as fish migration, spawning, and rearing habitat". To protect surface water resources, Policy Bio-4.1 designates Stream Conservation Areas (SCA). The subject parcel is located within the Marin Countywide Plan's Inland-Rural Corridor and is within an SCA, which applies along perennial, intermittent, and ephemeral streams. For parcels located within the Inland-Rural corridor, Policy Bio-4.1 requires development setback on each side of the top of streambank that is the greater of either (a) 50 feet landward from the outer edge of woody riparian vegetation associated with the stream or (b) 100 feet landward from the top of bank. Given the lack of riparian vegetation along the two on-site ephemeral drainages, 100-foot stream setbacks will likely be required for any future development on the parcel (Marin County, 2016).

Required compliance with the prescriptions set forth by the CGP, SWPPP, and the construction and post-construction requirements of MCSTOPPP, including application of BASMAA design guidelines, as well as implementation of associated BMPs, LID design features, and pollutant source controls, would prevent the discharge of pollutants to surface waters or groundwater and minimize or eliminate the potential for degradation of surface water or groundwater quality resulting from development of the subject parcel. Adherence to the CWP SCA requirements would allow for the protection of aquatic species in downgradient receiving waters by providing a 100-foot buffer from the parcels drainage channels and would ensure the direct discharge of sediment

or other pollutants off-site in stormwater runoff is avoided or minimized. Therefore, no substantial constraint related to water quality is identified related to development of the subject parcel.

Groundwater Supply and Groundwater Recharge

Pumping of groundwater can cause groundwater levels to decline in the area around the point of extraction, which could interfere with the operation of nearby wells, if present. It is assumed that development of the subject parcel would not include installation of groundwater wells or long-term groundwater extraction. Water service to any future development would be provided by the MMWD.

Project construction of utilities and foundations would involve subsurface excavation. If shallow groundwater were encountered during excavation activities, it would have to be pumped out of the construction trench to create a dry work area. If excavations intersect unanticipated shallow groundwater and dewatering activities are required, dewatering would be temporary, localized to sites of excavation, and would typically involve the extraction of low volumes of shallow groundwater from excavation trenches. Because of its short-term nature, construction dewatering would not be expected to affect local groundwater levels or volumes and would not represent a substantial constraint to development of the subject parcel.

Future development of the subject parcel would not add a substantial area of impervious surfaces such that regional groundwater recharge from rainfall infiltration into soils would be reduced. Under existing conditions, impervious surface area in the San Geronimo Creek watershed averages approximately 5 percent and is between 2 and 5 percent in the vicinity of the parcel. On the parcel, approximately 4 acres of the 21.83 acre site is currently paved (18 percent). Development of the subject parcel, where design of any development would be required to adhere to MCSTOPPP requirements for a Regulated Project, would utilize pervious materials and/or stormwater retention features as part of LID requirements. Adherence to such design requirements would ensure development does not markedly alter local drainage patterns or regional groundwater recharge. Additionally, the addition of the impervious surfaces would not substantially alter existing drainage patterns; runoff would continue to run off the site and infiltrate into downgradient soils and flow into San Geronimo Creek. Therefore, development of the subject parcel would not represent a substantial constraint related to groundwater recharge.

Hydromodification

As described under “Existing Conditions”, above, the majority of surface drainage from the subject parcel flows to two unnamed ephemeral watercourses located along the western edge and in the eastern portion of the parcel and then downgradient under Sir Francis Drake Boulevard to San Geronimo Creek. Adherence to the SCA 100-foot stream setback requirement would ensure development of the parcel would not involve the direct alteration of the two unnamed watercourses and would not result in substantially altered on-site drainage patterns; stormwater runoff during construction and following completion of any future development would continue to primarily flow into the stormwater collection and conveyance system and/or directly to the two unnamed channels. The following assessment focuses on hydrologic and water quality related constraints related to the addition of impervious surfaces.

Loss of watershed stormwater storage from the addition of impervious surfaces can be a primary impact of development because it can decrease rainfall infiltration into soils and increase runoff flow rates and volumes. Increased runoff can erode slopes and surface water channels as well as increase the transport of sediment and

other pollutants downgradient. Additionally, increased peak stormwater discharges can overwhelm stormwater conveyance systems and cause flooding on-site or downgradient.

Regulations governing development and stormwater recognize the relationship between land-use changes and runoff and typically prescribe requirements relating to storage capacity and drainage that either minimizes concentration (such as through infiltration) or that redistributes concentrated runoff in a manner that mimics pre-development runoff conditions and thus avoids erosion or flooding. Regulations also typically protect water quality and require treating stormwater runoff via physical or biological systems and minimizing disturbance areas. Table 1 summarizes the regulatory standards and criteria for stormwater management relevant to potential future development of the subject parcel.

Table 1. Regulatory Requirements and Design Criteria for Development

Regulatory Criteria	Design Parameter
MCSTOPPP / State MS4 Permit Section E.12.e.c.2.a, Flow Based Criteria	Retain and treat volume of runoff from 0.2 inch/hour storm
State MS4 Permit Section E.12, Hydromodification Criteria	Post-project peak runoff shall not exceed estimated pre-project flow rate for 2 year/24-hour storm 85th percentile storm volume capture
Marin County Culvert Design Criteria	Peak runoff capacity/stability 100 year/24-hour storm
Marin County Open Channel Design Criteria	Peak runoff capacity/stability 100 year/24-hour storm

Note: See also Marin County Code §23.18, Urban Runoff Pollution Prevention, and §24.04.520-627, Drainage Facilities

It is assumed for the purposes of this constraints assessment that any future development of the subject parcel would include the preparation of a hydrologic drainage study to quantify changes to runoff rates and volumes resulting from a specific proposed development design and that results of such a study would be incorporated into the engineering design for a stormwater management system that complies with regulatory requirements, including those required for a Regulated Project under MCSTOPPP. The resulting stormwater management system would likely include pervious paving, cisterns, bio swales, and/or detention areas to increase storage, treat runoff, and attenuate peak runoff rates in a manner that mimics pre-development hydrologic conditions at the subject parcel consistent with the applicable regulations.

Adherence to regulatory requirements, which would require source controls of stormwater volumes and implementation of BMPs for stormwater quality management, would ensure no substantial constraints to future development of the subject parcel related to erosion and/or siltation due to altered drainage patterns or hydromodification of on-site or downgradient watercourses.

Additionally, it is assumed any future development would include engineering design elements to ensure any proposed stormwater system has been designed with sizing and capacity to safely convey storm flows associated with 100-year storm and to ensure hillside, channel, and culvert stability for the 100-year/24-hour design storm. Implementation of such engineering design elements is required and is feasible to implement at the parcel; implementation would ensure no substantial constraints to future development of the subject parcel related to on-

or off-site flooding due to altered drainage patterns, exceeding stormwater conveyance infrastructure capacity, or the addition of impervious surfaces.

Flooding

The Project site is not located within the 100-year flood hazard zone designated by the FEMA, is not in a tsunami hazard inundation zone, and is not in an area subject to current or projected future coastal flooding. A seiche is caused by oscillation of the surface of a large enclosed or semi-enclosed body of water due to an earthquake or large wind event. The Project site is not located near a large enclosed or semi-enclosed body of water, and so is not subject to a seiche. The Project site is not located near levees or dams and would not be exposed to flooding from failure of one of these structures (Marin County, 2007). Therefore, development of the subject parcel would not represent a substantial constraint related to flooding or the release of pollutants due to inundation from floodwaters.

Conclusions and Recommendations

Development of the subject parcel is feasible without substantial constraints related to degradation of surface or groundwater quality, hydromodification of on-site or downgradient surface water features, or flood related issues. Required compliance with the CGP, SWPPP, and the construction and post-construction requirements of MCSTOPPP and CWP SCA stream setbacks, as well as implementation of required BMPs, LID design features, and pollutant source controls, would prevent the discharge of pollutants to surface waters or groundwater and minimize or eliminate the potential for degradation of surface water or groundwater quality resulting from development of the subject parcel, including as a result of hydromodification or altered drainage patterns. Compliance with such provisions is required by law. They are feasible to implement, and they are effective in protecting water quality and ensuring increases in stormwater runoff rates following development are avoided or minimized.

Although no substantial constraints to development have been identified for the subject parcel related to water resources, implementing the following recommendations as part of future development would further reduce potential adverse effects or potentially result in water resource benefits to the watershed:

- As part of development design planning, prepare a site hydrologic or drainage study (study) with engineering design recommendations that achieves post-development hydrology similar to pre-development hydrology in terms of peak stormwater runoff for design storms. The study should include specific design recommendations that are consistent with MCSTOPPP requirements and that achieve performance standards of peak stormwater discharge rates and volumes discharged from the Project site remaining at or below existing conditions.

- Any proposed stormwater management system should be designed with sizing and capacity to safely convey the calculated peak discharges associated with the 100-year/24-hour design storm.

- Any proposed development plan should be designed to accommodate 100-foot stream setbacks for the ephemeral channels on the subject parcel to avoid hydrologic or water quality degradation of downgradient receiving waters.

- Any proposed development plan should include, if feasible, enhancement of the wetland areas and natural swales in the southwest corner of the parcel as part of any development design, and incorporate such features as LID stormwater treatment and retention. Enhancement and use of such features could potentially improve the biological value of aquatic habitat, habitat availability, and improve stormwater quality as compared to existing conditions, representing a potential benefit of development.

References

Bay Area Stormwater Management Agencies Association (BASMAA), 2019. BASMAA Post-Construction Manual. Design Guidance for Stormwater Treatment and Control for Projects in Marin, Sonoma, Napa, and Solano Counties.

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Marin County, 2007. Marin Countywide Plan.

Marin Municipal Water District (MMWD). 2011. Lagunitas Creek Stewardship Plan.

California Regional Water Quality Control Board San Francisco Bay Region (RWQCB), 2019. San Francisco Bay Basin (Region 2) Water Quality Control Plan (Basin Plan).

RWQCB, 2014. Lagunitas Creek Watershed Fine Sediment Reduction and Habitat Enhancement Plan.

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Memorandum

Date August 25, 2021

To Dan Sicular, Sicular Environmental Consulting

From Peter Hudson, PG

Subject San Geronimo Golf Course Geological Constraints Analysis

Sutro Science, LLC (Sutro) has prepared this memorandum to evaluate the geological constraints associated with development of the 22-acre parcel (APN# 172-371-04) located on the former San Geronimo Golf Course (subject parcel *or* parcel). The analysis focuses on problematic soil conditions, slope instability, seismic ground shaking, liquefaction, and ground settlement. For the purposes of this analysis, a substantial constraint to future development would be a geologic, seismic, paleontological, or geologic resource[1] condition that would adversely affect most of the subject parcel and that would not have a standard, feasible geotechnical engineering mitigation or resource protection strategy or, if there was a feasible mitigation or strategy, the costs to implement it would be prohibitive.

The primary source of information for this analysis was MarinMaps[2] and its GIS dataset for geologic materials, landslides, faulting, soils, and seismic shaking. In addition, the analysis relied upon available, published geological reports prepared by the California Geological Survey (CGS) and U.S. Geological Survey (USGS)[3]. In addition, Sutro visited the subject parcel on August 2, 2021 and conducted a reconnaissance-level field assessment. This memorandum summarizes existing site conditions, followed by our assessment of constraints as they pertain to relevant geologic conditions and seismic hazards.

Existing Conditions

Geology

San Geronimo Valley is an east-west structural depression with a base elevation of about 340 feet above mean sea level (amsl) flanked on the north and south by hills and ridges with elevations approaching 1,100 feet amsl. The

[1] Geologic Resource refers to any unique geologic feature that would be directly or indirectly substantially altered or destroyed through project development.

[2] MarinMap, Geographic Information system for Marin County California. Accessible at https://www.marinmap.org/Html5Viewer/Index.html?viewer=smmdataviewer.

[3] California Geological Survey (formerly the California Department of Conservation, Division of Mines and Geology). Geology for Planning: Central and Southeast Marin County, California. DMG Open-File Report 76-2, 1976

uplands flanking the valley are underlain by Franciscan Formation mélange[4] mantled by colluvium[5] that, in some places, has failed as landslides and slumps. Quaternary-age[6] alluvium[7] covers the valley floor and is underlain by Franciscan mélange at varying depths. Although the alluvium deposits are on low to moderate slopes near the valley floor, it can be unstable and prone to slumping along stream banks[8].

The subject parcel ranges in elevation from a low of about 320 feet amsl in the southwest corner to 440 feet amsl in the uppermost northwest corner and slopes generally to the southwest at an average of about 13 percent.[9] Quaternary-age alluvium covers the subject parcel and much of the golf course property extending east along Sir Francis Drake Boulevard. Depths of alluvium are shallow as evidenced by areas of outcropping bedrock in the upper portions of the subject parcel and by soil borings drilled for the leaking underground tank investigation 500 feet south and adjacent to San Geronimo Creek, which encountered bedrock at 12 feet below ground surface.[10] While outcropping Franciscan bedrock is common in the San Geronimo Valley, the mélange outcrop below the current clubhouse facility was historically incorporated into the golf course landscape and can be considered a local landmark.

Soils

Overlying the alluvium are three primary developed soil horizons, as summarized in **Table 1**. Past development of the subject parcel as a golf course may have removed or altered the composition and thickness of these soils through the construction of engineered fills for foundations, excavation and placement of road base, or site grading. The parent material of these soils is the underlying Franciscan mélange bedrock, specifically the sandstone and shale. All but the Butcher-Cole complex is well-drained, meaning that surface water can infiltrate and be readily transmitted through the soil unit. The Butcher-Cole soils in the lower southeast corner of the subject parcel are poorly drained and are considered hydric, meaning that they formed under saturated conditions long enough to have developed anaerobic conditions near the surface.

The U.S Department of Agricultural (USDA), Natural Resource Conservation Service (NRCS) designates the Ballard gravelly loam (Unit 101) as a soil unit that meets the physical and chemical criteria of Prime Farmland[11]

[4] Mélange represents a disrupted assemblage of large and small masses of various hard rock materials such as sandstone, shale, greenstone, chert, and serpentine embedded in a fine-grained matrix of intensely sheared and crushed rock. This combination of disrupted rock masses and sheared matrix represents one or more ancient fault zones. The low strength of the fine-grained matrix of mélange is a major factor contributing to landsliding.

[5] Colluvium is any loose, heterogeneous and incoherent mass of soil material and/or rock fragments deposited by rain wash, sheetwash or slow downhill creep, usually collecting at the base of gentle slopes or hillsides.

[6] The Quaternary Period began 1.6 million years ago

[7] Quaternary-aged alluvium deposits are typically well compacted and unconsolidated mixtures of clay, silt, sand, and gravel.

[8] California Geological Survey (formerly the California Department of Conservation, Division of Mines and Geology). Geology for Planning: Central and Southeast Marin County, California. DMG Open-File Report 76-2, 1976

[9] MarinMap, Geographic Information system for Marin County California. Accessible at https://www.marinmap.org/Html5Viewer/Index.html?viewer=smmdataviewer.

[10] California Regional Water Quality Control Board – San Francisco Region (RWQCB). Case Closure Letter and Site Summary Form for San Geronimo Golf Course, 5800 Sir Francis Drake Blvd., San Geronimo, Marin County. UST Case No. 21-0121. Letter from Lawrence Kolb, RWQCB to Robert Pickett, Pro/Manager San Geronimo Golf Course, August 2, 2000.

[11] Prime farmland, as defined by the U.S. Department of Agriculture, is land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops and is available for these uses.

TABLE 1.
SOIL TYPES AT SUBJECT PARCEL

Soil Series/Soil	Map Unit Number/National Map Symbol	Parent Material	Drainage Class	Hydric?[A]
Ballard gravelly, loam 2 to 9 percent slopes	101/hf14	Alluvium derived from shale and sandstone	Well drained	No
Blucher-Cole complex, 2 to 5 percent slopes	105/hf18	Alluvium derived from shale and shale	Somewhat poorly drained	Yes
Tocaloma-Saurin association, extremely steep	163/hf34	Residuum weathered from sandstone and shale	Well- drained	No
Tocaloma-Saurin association, extremely steep	185/hf3v	Residuum weathered from sandstone and shale	Well-drained	No

Source: US Department of Agriculture, Natural Resources Conservation Service, *Custom Soil Resource Report for Marin County California, San Geronimo Golf Course*. Developed through USDA Web Soils Survey https://websoilsurvey.sc.egov.usda.gov/

(A) Hydric soil is a soil that formed under conditions of saturation, flooding or ponding long enough during the growing season to develop anaerobic conditions in the upper part.

and the Blucher-Cole complex (Unit 105) meets the physical and chemical criteria for Farmland of Statewide Importance. [12] The NRCS designation of soils that meet the criteria of either Prime Farmland or Farmland of Statewide Importance is one of the two criteria used by the California Department of Conservation (CDOC) to determine whether certain lands in California are shown as Prime Farmland and Farmland of Statewide Importance on the Important Farmland Maps, produced by the CDOC through its Farmland Mapping and Monitoring Program (FMMP)[13]. The other criterion is whether the land was used for irrigated agricultural production at some time during the four years prior to development of the Important Farmland Map. The best quality land is Prime Farmland and there are various other classifications,[14] which depend on land use, irrigation status, and location. The majority of the subject parcel is mapped under the FMMP as "Urban and Built-Up"[15] while a smaller portion, located primarily in the northern portion of the parcel, is categorized as "Other Land."[16] None of the subject parcel is mapped by the FMMP as Important Farmland.

[12] In some areas, land that does not meet the criteria for prime or unique farmland is considered to be "Farmland of Statewide Importance" for the production of food, feed, fiber, forage, and oilseed crops. The criteria for defining and delineating farmland of statewide importance are determined by the appropriate State agencies.

[13] The FMMP analyzes impacts on California agricultural resources and provide data to decision makers for planning for the future of California's agricultural land resources. California Department of Conservation, Farmland Mapping and Monitoring Program https://www.conservation.ca.gov/dlrp/fmmp/Pages/Program_Overview.aspx. Accessed September 1, 2021

[14] Other land classifications include Unique Farmland, Grazing Land, Vacant or Disturbed Land, Rural Residential Land and Non-Irrigated Farmland.

[15] Urban and Built-Up land is occupied by structures with a building density of at least 1 unit to 1.5 acres, or approximately 6 structures to a 10-acre parcel. Common examples include residential, industrial, commercial, institutional facilities, cemeteries, airports, golf courses, sanitary landfills, sewage treatment, and water control structures.

[16] "Other Land" is not included in any other mapping category. Common examples include low density rural developments; brush, timber, wetland, and riparian areas not suitable for livestock grazing; confined livestock, poultry or aquaculture facilities; strip mines, borrow pits; and water bodies smaller than forty acres. Vacant and nonagricultural land surrounded on all sides by urban development and greater than 40 acres is mapped as Other Land.

Soils on the subject parcel are considered to be low to moderately expansive exhibiting shrinking when desiccated and swelling when saturated.[17] Of the three soils identified, the more expansive soil is the poorly-drained Blucher-Cole complex, located in the southern portion of the parcel.[18]

Slope Stability

There is no evidence of slope instability exhibited as landslides or soil slumps on the subject parcel. Except for the uppermost northwest corner, mapping shows the parcel underlain by surficial deposits with a low risk of landslides.[19] The uppermost northwest corner of the parcel is shown to contain "mostly landslides".[20] A review of recent aerial photography completed for this assessment did not identify landsliding on the portion of the subject parcel identified as "mostly landslides" but did identify a shallow soil debris flow on the steeper slopes north of the property line. The MarinMap GIS dataset is consistent with the CGS reconnaissance and mapping of relative slope stability. The CGS assigns the former golf course (south of Sir Francis Drake Boulevard) including the southern portion of the subject parcel (i.e., areas developed with the club house, fairways and roads) to Zone 1, which is the most stable category.[21] Conditions in Zone 1 include resistant rock that is either exposed or is covered only by shallow colluvium or soil. Zone 1 slope stability areas can be on flat ridge tops or, as in the subject parcel, in valley bottoms underlain by weaker material such as the Franciscan mélange.[22] However, evidence of localized slope instability in Zone 1 was noted along the stream banks of San Geronimo Creek where bank undercutting could result in minor, localized failures in the form of small landslides or soil slumps.

The slopes north of the subject parcel property line and those in the uppermost (northwestern) corner are assigned Zones 3 and 4 by the CGS.[23] Slope stability in Zone 3 is defined as areas where the slope approaches the stability limits of the underlying materials. This zone also includes landslide deposits that are in relatively more stable positions. Zone 4 is the least stable category and includes landslide deposits in upslope areas whether presently active or not and where there is substantial evidence of downslope creep of surface materials. These areas should be considered unstable and subject to failure even in the absence of human activities or influences. Banks along San Geronimo Creek, south of the subject property, are mapped as Zone 4 features, as mentioned above. In general, the base of the slopes to the north align with the northern boundary line of the parcel and any previous instability on these slopes have not adversely affected the subject parcel.

Seismicity and Faulting

There are no active faults mapped within the San Geronimo Valley. The closest active fault zone to the subject parcel is the San Andreas Fault Zone, located 4 miles to the southwest. The absence of active faults means that there is no risk of surface fault rupture. Several pre-Quaternary faults have been identified and mapped in the vicinity of the San Geronimo Valley. Pre-Quaternary faults are those that show displacement before Quaternary time or before 1.6 million years ago. These faults are not considered active or having the capability to generate an

[17] MarinMap, Geographic Information system for Marin County California. Accessible at https://www.marinmap.org/Html5Viewer/Index.html?viewer=smmdataviewer.
[18] Ibid.
[19] Ibid.
[20] Ibid.
[21] California Geological Survey (formerly the California Department of Conservation, Division of Mines and Geology) Geology for Planning: Central and Southeast Marin County, California. DMG Open-File Report 76-2, 1976.
[22] Ibid.
[23] Ibid.

earthquake, but they are not necessarily inactive.[24] Generally, pre-Quaternary faulting does not present a seismic risk.

The San Andreas and other regional faults, including the San Gregorio, Hayward-Rodgers Creek, and Calaveras, faults could generate strong to violent ground shaking in San Geronimo Valley and at the subject parcel. GIS mapping includes the parcel in a zone described as "some ground shaking amplification" while the slopes to the north are considered areas of "least ground shaking amplification".[25] These categories indicate that, depending on the distance to the causative fault and magnitude of the earthquake, the underlying geologic materials would not excessively amplify the seismic waves because the parcel is underlain by bedrock; bedrock tends to attenuate seismic waves.

Excessive ground shaking could cause ground failure associated with liquefaction[26] or collapse and settlement. The subject parcel is categorized as a zone of moderate liquefaction potential.[27] Liquefaction may occur at the subject parcel during a major earthquake, but considering the shallow bedrock, overlying alluvium, and lack of near-surface saturated soils, it would likely be limited to localized saturated areas with predominantly granular sediments if present in the southwestern portion of the parcel. Soil settlement and collapse during an earthquake are less likely due to the compacted alluvium and shallow bedrock.

Septic Systems

The San Geronimo Valley is unlike most of Marin County in that sewage treatment services are not provided for valley residents or businesses. The ideal conditions for septic systems, namely deep permeable soils, do not exist in the valley.[28] While the deeply weathered and fractured sandstones and greenstone may be suitable for septic systems, the swelling clay of the Franciscan mélange can tend to impede flow of the effluent. On some slopes, the alluvial soils, which are products of the underlying mélange, contain swelling clays, which can limit the ability of a septic system to drain. There is an existing operating septic system on the subject parcel.

Paleontological Resources

Paleontological resources are the fossilized evidence of past life found in the geologic record and can include vertebrates (animals with backbones), invertebrates (e.g., starfish, clams, ammonites, and marine coral), and fossils of microscopic plants and animals (microfossils). The age and abundance of fossils depend on the location, topographic setting, and the particular geologic formation in which they are found. Fossils are preserved in sedimentary rocks, which are the most abundant rock type exposed at the earth's surface. The potential that fossil remains would be found in Franciscan mélange is low to remote because these ancient rocks have been tectonically altered and pervasively disrupted deep within ancient fault zones. The potential that fossil remains are present in the alluvium overlying the bedrock would be equally remote as these deposits are geologically too young.

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[24] Jennings C.W. and Bryant, A. 2010. Fault Activity Map of California. California Geologic Data Map Series. Map No. 6. California Geological Survey.

[25] MarinMap, Geographic Information system for Marin County California. Accessible at https://www.marinmap.org/Html5Viewer/Index.html?viewer=smmdataviewer.

[26] Liquefaction occurs when ground motion disrupts the pore pressures in saturated granular soils causing the soil to behave like a liquid and lose bearing strength.

[27] Ibid.

[28] California Geological Survey (formerly the California Department of Conservation, Division of Mines and Geology) Geology for Planning: Central and Southeast Marin County, California. DMG Open-File Report 76-2, 1976.

Conclusions

This analysis did not identify substantial geotechnical constraints to development of the subject parcel and the findings are summarized below.

- **Underlying Geological Materials.** The subject parcel is underlain by shallow bedrock, which is overlain by varying thicknesses of unconsolidated compacted alluvium, soils horizons, and possibly localized areas of old landslide debris in the northwest corner of the property. This analysis did not identify evidence of geologic materials presenting geotechnical challenges that could not be overcome by standard, industry-accepted geotechnical engineering design and practices that are regularly used to stabilize soils for roads and structural foundations.

- **Slope Stability.** The subject parcel slopes gradually to the southwest and is not susceptible to landsliding or slumping. However, the steeper slopes north of the parcel and those in the uppermost northwest corner could present a geotechnical challenge if grading from future development encroached into the base (toe) of these slopes, possibly leading to immediate or future slope failure. If avoidance of the slopes during future development is not possible, a geotechnical engineering remedy would be required to stabilize the slope to accommodate any grading that is proposed at or near the base of the slope.

- **Surface Fault Rupture.** The potential for surface fault rupture on the subject parcel is remote as there are no active faults identified in San Geronimo Valley.

- **Seismic Ground Shaking.** The subject parcel could likely experience ground shaking from a major regional earthquake within the next 30 years. Structural damage and injury during an earthquake are inherent risks in seismically active regions such as Marin County. Ground shaking could cause some structural damage and possibly injure those on the parcel. However, County and State building codes are developed to address projected structural response to ground shaking and the resulting seismic design criteria required for new constructions and renovations ensure that the risk of structural damage or collapse is greatly reduced or eliminated. All future construction on the subject parcel would be required to comply with the latest California Building Codes.

- **Liquefaction and Ground Failure.** The subject parcel has a moderate liquefaction hazard and given the underlying geology and elevation, there is a potential for liquefaction to occur. However, future development would require that a comprehensive geotechnical evaluation be performed prior to construction, which would identify liquefaction hazards and, if present, would recommend standard, industry-accepted geotechnical engineering strategies that would either remove and replace the liquefiable problematic soils or incorporate geotechnical design elements that would minimize or eliminate adverse effects of soil failure.

- **Expansive Soils.** There is a low to moderate potential to encounter expansive soils on the subject parcel. Prior to development, the required geotechnical assessment would sample and laboratory test representative soil to determine expansivity. If expansive soils are identified, standard geotechnical recommendations would be provided to reduce or eliminate potential long term adverse effects of expansive soils.

- **Paleontological Resources.** The potential is very low for fossil remains to be present in Franciscan mélange or the alluvium that overlies it.

- **Loss of Unique Geological Feature.** The outcropping bedrock located within the landscape area of the Golf Course clubhouse is considered a unique geological feature even though outcrops of Franciscan mélange are prevalent throughout the San Geronimo Valley. This outcropping was incorporated into the landscape of the original golf course clubhouse and has been a landmark in the valley since 1965. Therefore, this outcrop represents a constraint to development of the subject parcel and thus, must be preserved. An adequate exclusion buffer shall surround the exposed outcrop and this feature shall not be disturbed during road and foundation grading, landscaping, or building construction.

- **Septic Systems.** The Geronimo Valley is unique in that septic systems are required for residents and businesses, but the subsurface materials may not be conducive at a particular site, especially on the floor of the valley where groundwater may rise seasonally. The subject parcel is several feet above the valley floor on a slope underlain by unconsolidated alluvium and has an existing operating septic system that was approved by the County of Marin. It follows, therefore, that the soils are suitable to support a septic system and a leachfield. If future development requires an expanded or upgraded system, the County would require the applicant to comply with current County septic disposal regulations.

- **Loss of California Important Farmland.** The NRCS has determined that the soil units of Ballard gravelly loam and Blucher-Cole complex meet the physical and chemical criteria for Prime Farmland and Farmland of Statewide Importance, respectively. However, because the subject parcel is not, and has not been for many years, used for agriculture, none of the subject parcel meets the criteria for California's FMMP classification of Prime Farmland or Farmland of Statewide Importance. Most of the parcel is designated "Urban and Built-Up" land and the remainder is "Other" land, not agricultural land; thus, development of the subject parcel would not remove or convert California Important Farmland.

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Memorandum

Date August 20, 2021

To Dan Sicular, Sicular Environmental Consulting

From Peter Hudson, PG

Subject San Geronimo Golf Course Hazards and Hazardous Constraints Analysis

Sutro Science, LLC (Sutro) has prepared this memorandum to evaluate potential development constraints related to hazards and hazardous materials for the 22-acre parcel (APN# 172-371-04) located on the former San Geronimo Golf Course (subject parcel). The analysis focuses on past or present activities or conditions on the subject parcel or on neighboring properties that were historically or are currently involved in hazardous materials storage, past inadvertent discharge of hazardous materials (e.g., petroleum fuels through leaking underground tanks) to the environment, or conditions that may lead to future soil and groundwater contamination. A substantial constraint to future development would involve unremediated subsurface soil or groundwater contamination or an existing condition that represents an imminent release of hazardous materials or petroleum fuels such that development on the subject parcel would not be feasible or, if determined feasible, would require extensive soils and groundwater clean-up prior to development. Wildfire is also discussed because a substantial constraint would exist if development on the subject parcel exposed people or structures to significant additional risk during a wildland fire event.

The primary source of information for this analysis was the GeoTracker[1] website, which is maintained by the State Water Resources Control Board (SWRCB). GeoTracker provided information on properties in Geronimo Valley that have reported historical or current hazardous materials use or soil and groundwater contamination. MarinMaps[2] was used to obtain additional site data and provided information on potential fire risk in Geronimo Valley. In addition, Sutro visited the subject parcel on August 2, 2021 and conducted a reconnaissance-level field assessment. Sutro also reviewed a Phase I Environmental Site Assessment previously prepared for the former golf course parcels.[3] This memorandum summarizes existing site conditions, followed by our assessment of constraints as they pertain to potential hazards and hazardous materials.

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1 GeoTracker is the SWRCB's data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater. GeoTracker contains records for sites that require cleanup, such as Leaking Underground Storage Tank (LUST) Sites, Department of Defense Sites, and Cleanup Program Sites. GeoTracker also contains records for various unregulated projects as well as permitted facilities including: Irrigated Lands, Oil and Gas production, operating Permitted USTs, and Land Disposal Sites.

2 MarinMap, is a geographic information system for Marin California and is accessible at https://www.marinmap.org/Html5Viewer/Index.html?viewer=smmdataviewer.

3 Amicus Strategic Environmental Consulting, 2017. Phase I Environmental Site Assessment: San Geronimo Golf Course Project Property, 5800 Sir Francis Drake Boulevard, San Geronimo, California. Prepared for The Trust for Public Land. October 18, 2017.

Existing Conditions

San Geronimo Valley is in unincorporated Marin County and contains primarily residential properties with some small commercial establishments. Communities in the valley include Woodacre, San Geronimo Village, and Forest Knolls. The nearest school, San Geronimo Preschool, is located 400 southwest and across Sir Francis Drake Boulevard from the subject parcel. The closest airport (San Rafael Airport) is located 7.75 miles east. There are no commercial gasoline fueling stations in the Geronimo Valley and no large industrial operations except for the San Geronimo Water Treatment Plant, which is owned and operated by the Marin Municipal Water District. Geotracker did not identify properties that are currently storing bulk chemical or petroleum products. According to GeoTracker, there are five sites within a 2-mile radius of the subject parcel that have reported incidences of hazardous materials or petroleum releases to the environment. These sites are listed in **Table 1**, below.

TABLE 1
SITES WITH PAST SOIL OR GROUNDWATER CONTAMINATION
WITHIN 2 MILES OF SUBJECT PARCEL

Site Name	Case Status	Distance to Subject Parcel (Approximate Feet)	Address	Town/Community	Case/Site Type	Age of Case (years)
San Geronimo Golf Course [B]	Completed – Case Closed [A]	500 South	5800 Sir Francis Drake Boulevard	San Geronimo	LUST[C]	30
Pacific Bell	Completed – Case Closed	1500 Southeast	360 Geronimo Valley Drive	San Geronimo	LUST	34
San Geronimo Water Treatment Plant	Completed – Case Closed	2200 East-Southeast	330 Geronimo Valley Drive	San Geronimo	LUST	18
Woodacre Fire Station	Completed – Case Closed	7200 Southeast	33 Castle Rock Road	Woodacre	LUST	14
Forest Knolls Garage	Completed – Case Closed	6200 East	6700 Sir Francis Drake Boulevard	Forest Knolls	LUST	29

Source: GeoTracker: https://geotracker.waterboards.ca.gov/map/?CMD=runreport&myaddress=5800+Sir+francis+drake+boulevard#

A – If a case is determined to be *Completed – Case Closed*, it means that the source of the contamination was removed, the soil or groundwater contamination was delineated, the impacted soil and/or groundwater was properly disposed of or remediated onsite, and contaminant levels have been reduced to below regulatory agency action levels. Each case must be reviewed by a regulatory agency (e.g., SWRCB) and, in order for that case to be closed, that agency must make the determination that no further action is necessary.
B – Note that the address of this case is the same address as the subject parcel. The subject parcel was not the site of the leaking underground storage tank. The actual underground storage tank was located near the golf course maintenance building and equipment shed, located about 500 feet south of the subject parcel, across Sir Francis Drake Boulevard.
C – Leaking Underground Storage Tank

Information obtained from the SWRCB GeoTracker website shows that the reported contamination cases within a 2-miles radius of the subject parcel were a result of leaking underground storage tanks locally impacting soil and shallow groundwater contamination in proximity to the leaking tank. The leaking underground tank reported at 5800 Sir Francis Drake Boulevard was not on the subject parcel but was about 500 feet south, near the golf course maintenance building and equipment shed. That leaking underground storage tank site was investigated and

remediated to the satisfaction of the California Regional Water Quality Control Board – San Francisco Region[4] (RWQCB) and is considered by the RWQCB as a closed case with completed remediation. There have been no underground petroleum storage tanks on the subject parcel in the past nor are there any currently, and there were no physical indicators[5] of soils and groundwater contamination observed during the site reconnaissance (August 2, 2021). The other contaminated sites listed on **Table 1** are either downgradient or cross-gradient[6] and are too far away to impact past, current, or future development activities on the subject parcel. All reported hazardous materials sites listed on **Table 1** have been remediated and are considered closed cases by the RWQCB.

The subject parcel spans the edge of the Urban Wildland Interface (WUI)[7] and is in an area considered a moderate to high Fire Hazard Severity Zone with a high fire risk.[8]

Conclusions

Regarding the subject parcel, there is no evidence of past or current use or storage of hazardous materials and/or petroleum fuels, and no reports documenting historic hazardous material releases, leaking underground petroleum tanks, or required soil and groundwater remediation. The closest documented site with a recognized environmental condition (i.e., a leaking underground petroleum tank) was at the San Geronimo Golf Course but 500 feet south of the subject parcel in a downgradient groundwater flow direction. This leaking underground tank case and those within a 2-mile radius did not impact the subject parcel historically and would not in the future; these sites are considered remediated. Based on this analysis, hazardous materials use and/or storage or residual soil and groundwater contamination caused by leaking underground tanks or other sources would not be considered a constraint to future development of the subject parcel.

The subject parcel is located in a mapped WUI and there is a moderate to high risk of wildland fire. However, the potential for wildland fire does not constrain future development. New or renovated structures would be constructed to current County and State fire codes and would be required to maintain at least 100 feet of defensible space, which would hinder the progress of a wildland fire to a greater degree than a property that is undeveloped.

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[4] California Regional Water Quality Control Board – San Francisco Region (RWQCB). Case Closure Letter and Site Summary Form for San Geronimo Golf Course, 5800 Sir Francis Drake Blvd., San Geronimo, Marin County. UST Case No. 21-0121. Letter from Lawrence Kolb, RWQCB to Robert Pickett, Pro/Manager San Geronimo Golf Course, August 2, 2000.

[5] Physical indicators refer to obvious signs of past contamination such as distressed vegetation, evidence of old fuel tank systems, abandoned tanks, and covered soil piles.

[6] In this instance, down-gradient and cross gradient refer to both surface water flow and groundwater flow.

[7] Wildland Urban Interface, or "WUI" is not a designation of potential wildfire severity – it is a somewhat loosely defined description of an area where urban development meets undeveloped lands at risk of wildfires. The WUI is a zone of transition between undeveloped wildlands and human development, specifically the area where houses meet or intermingle with undeveloped wild vegetation. Communities in the WUI are generally at a greater risk of exposure to wildfires. In Marin, WUI is a political boundary and designation adopted by local and county jurisdictions based on input from fire agencies and GIS analysis to determine the communities and locations that meet this definition. In Marin, all structures in the WUI and/or State Responsibility Areas are required by law to maintain defensible space. Source: Marin County, Fire Safe Marin. Available at URL: marinhttps://www.firesafemarin.org/wui#:~:text=The%20Wildland%E2%80%93Urban%20Interface%20(WUI,intermingle%20with%20undeveloped%20wild%20vegetation.&text=In%20Marin%2C%20all%20structures%20in,law%20to%20maintain%20defensible%20space. Accessed August 2021.

[8] MarinMap, is a geographic information system for Marin California and is accessible at https://www.marinmap.org/Html5Viewer/Index.html?viewer=smmdataviewer.

Appendix A.
NWIC Records Search Files

Appendix A contains sensitive information and is kept in a confidential file.

Appendix B.
Survey Photographs

Photo 01: San Geronimo entrance sign; looking northwest.


Photo 02: Survey area overview from northeast corner; looking south southeast.

Photo 03: Overview of survey area from the north with fenced garden in foreground; looking south.

Photo 04: Overview of dense vegetation area, no survey; looking north.

Photo 05: Overview of northern fairway in project area; looking west.

Photo 06: Overview of southern fairway from green; looking west along southern boundary.

Photo 07: Overview of northwest portion of survey area from southwest corner; looking north.

Photo 08: Overview of southern edge of survey area and souther fairway from southwest portion of project area; looking east.

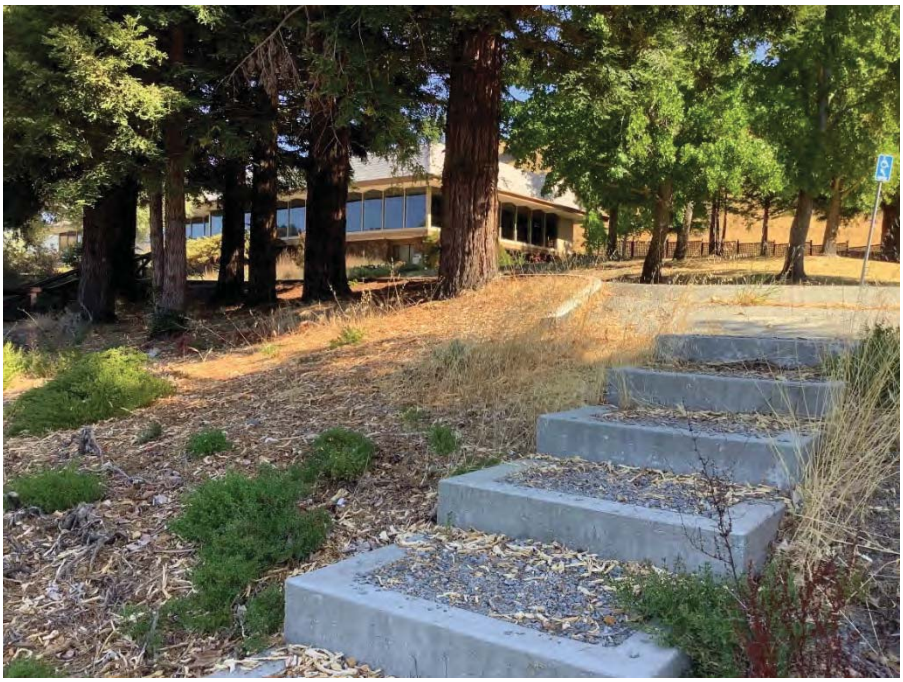


Photo 09: Steps down to golfing area with clubhouse in background; looking northwest.

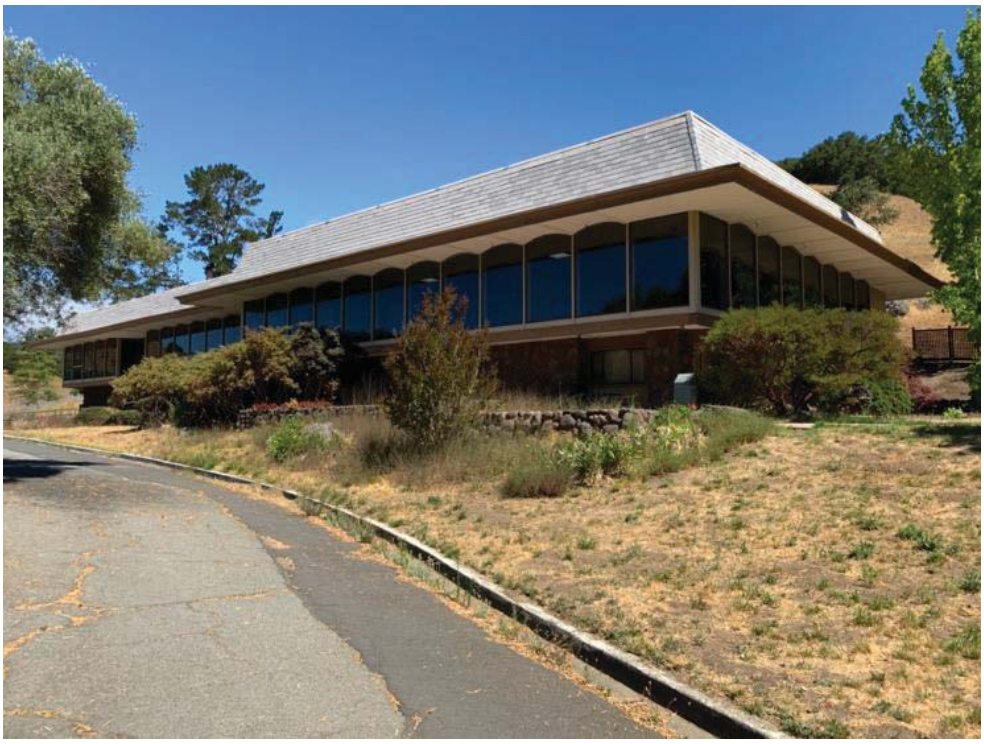
Photo 10: Overview of survey area from east end showing high grass and no visibility in off trail areas; looking east along northern/easter boundary.

Appendix G

HISTORIC RESOURCES EVALUATION REPORT

5800 Sir Francis Drake Boulevard
San Geronimo, California

Prepared for: **August 2021**
Sicular Environmental Consulting



Former San Geronimo National Golf Course Club House, July, 2021

Prepared by:

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HISTORIC RESOURCES EVALUATION

1. Introduction

This historic resources evaluation report provides a review of the potential historic significance of a commercial-recreational property at 5800 Sir Francis Drake Boulevard (Assessor's Parcel Number 172-371-04), in western Marin County, California, known as the former San Geronimo National Golf Course and associated club house. The property is on the north side of Sir Francis Drake Boulevard, accessed from Club House Road, and just east of Nicasio Valley Road in San Geronimo Valley. The two-story building has approximately 16,000 square feet of interior floor area on an approximately 22-acre parcel, including a surface level parking lot, a picnic area, and three holes/fairways within a former golf course links. The former golf course was completed in 1965, while the former club house was completed in 1966; both with various later alterations.

Marin County is considering purchasing the property from the current owner, the Trust for Public Land (TPL). Future use of the property could include use, alteration, or demolition of the existing club house, and/or new development.

As the proposed project would acquire and potentially alter a building and landscape constructed more than 45 years ago, which is the minimum age threshold for potential listing in the California Register of Historical Resources, the Marin County requires an historic resource evaluation of the property in support of potential-future environmental review under the California Environmental Quality Act (CEQA). This report is intended to address this requirement.

This report provides an architectural description of the club house and the portion of the former golf course that lies on the subject parcel, a brief history of the San Geronimo Valley and the development of the subject property, and an evaluation of its potential historic significance under the criteria provided by the California Register of Historical Resources. Methodologies used to prepare the report included a pedestrian site survey to photograph and record the property, as well as historical research completed at the San Geronimo Valley Historical Society, the Anne T. Kent California Room of the Marin County Free Library, the County of Marin, and numerous online sources.

This report was prepared by Brad Brewster, Architectural Historian and Preservation Planner with Brewster Historic Preservation, who meets the Secretary of the Interior's Professional Qualification Standards for architectural history. Mr. Brewster's professional resume is provided in **Appendix B**.

The subject property has not been previously surveyed or evaluated for its potential historical significance. There are three historic resources in San Geronimo Valley that have been recorded

by the California State Parks Office of Historic Preservation (OHP). These are; 1) the Roy House at 480 San Geronimo Valley Road, built in 1868, 2) the Lagunitas School, now the San Geronimo Valley Community Center, at 6300 Sir Francis Drake Boulevard, built in 1929, and 3) the San Geronimo Railroad Station/Community Church at 6100 Sir Francis Drake Boulevard, built in 1875.[1] The closest of these resources to the subject property is the San Geronimo Railroad Station/Community Church, located diagonally across Sir Francis Drake Boulevard at Nicasio Valley Road, about 175 feet southwest from the subject property. The other two historic resources are located between 0.25 mile south and 0.66 mile west from the subject property, respectively. The subject property is not located within or near a designated historic district.

2. Building and Property Description

The following provides an architectural description of the current elevations, ornamentation, finishes, and visible alterations of the club house, followed by a description of the former golf course which lies within the 22-acre subject property. The description is based on a pedestrian site survey which occurred on July 7, 2021. The site visit included photographs of the exterior and interior of the former club house, shown in **Figures 1 – 17**, beginning on page 6, and photographs of the exterior landscape including the former golf course, shown in **Figures 18 – 23,** beginning on page 14.

Former San Geronimo National Golf Course Club House

Initiated in 1965 and completed in 1966 with later alterations, the former San Geronimo National Golf Course club house is a two-story commercial/recreational building with approximately 16,000 square feet of interior space on an approximately 22-acre lot (APN# 172-371-04). The building has an irregular plan with flat and Mansard roof forms constructed of wood framing over a concrete slab foundation. The building is approximately 160 feet long, 60 feet wide, and 25 feet tall. Provided below are detailed descriptions of each elevation.

Exterior Description

The front (south) elevation of the club house is comprised of a two-story facade with a recessed entry located towards the center-left of the building. This main pedestrian entry consists of a single wood frame commercial door with fixed sidelights and transom windows above in a double-height, window-wall arrangement within vertical wood mullions. Other fenestration on this elevation consists of a secondary recessed entry near the center-right of the façade, comprised of an aluminum frame commercial door with smoked glass and a single fixed sidelight, as well as an aluminum frame sliding window on the far right of the façade within a recessed wall area clad in vertically-scored tongue and groove wood siding. The first floor is clad in randomly-sized lava rock which wraps around the north and south sides of the building. The second floor of the south elevation overhangs the first by about three feet. Aside from the double-height window-wall above the primary pedestrian entry, the second floor façade is comprised almost entirely of ribbon

[1] California State Parks Office of Historic Preservation (OHP), *Built Environment Resource Database (BERD), Marin County*, Accessed online at https://ohp.parks.ca.gov/?page_id=30338, July 12, 2021.

windows which extend the full width of this south-facing elevation. Other cladding found on this elevation includes vertically-scored tongue-and-groove wood siding. The windows are placed in fixed aluminum sashes and have slightly arched headers, except for the windows at the far outer ends of the building, which have flat headers. The underside of the wide, flat, and deeply projecting eaves are comprised of series of repeating arched forms rendered in stucco which echo the shape of the arched ribbon windows. The roof fascia is comprised of a flared metal gutter which wraps entirely around the south, east, and west facades. Behind the fascia lies a Mansard-shaped parapet roof clad in manufactured slate tiles. The flat portions of the roof, however, are clad in a rolled asphalt membrane. Located directly in front of this elevation is a concrete sidewalk as well as a series of lava rock-clad planters containing a limited amount of decorative landscaping. Located farther in front and to the south of this elevation lies a circular asphalt driveway which provides a vehicular pick-up and drop-off area for the former club house.

Similar to the south (front) elevation, the east (side) elevation of the club house building has a two-story façade, with a first floor clad in lava rock. The far-left side of this elevation contains two aluminum frame sliding windows within a recessed wall area clad in vertically-scored tongue-an-groove wood siding, as well as two wood framed pedestrian doors located nearer to the right side of this elevation. Similar to the front elevation, the second floor of this facade also overhangs the first, where a series of three decorative/false wood box-beam ends can be found appearing to support the second floor above. The second floor elevation consisting entirely of a row of ribbon windows with arched headers, except at the far outer ends, which have flat headers. Wide, flat, and deeply-projecting eaves with repeating arch forms, flared metal facia/gutters, and slate-clad Mansard roof can also be found on this elevation. A level and curvilinear lawn area with peripheral landscaping is located directly in front of this elevation. Located further to the east is a concrete sidewalk and steps leading to a large surface parking lot striped for approximately 150 cars. which once served the former golf course and club house.

The west (side) elevation of the club house also has a two-story façade, which is very similar to the east elevation in form and materials. However, a vehicular entrance can be found on the ground floor of this elevation which once served as an entry for golf cart storage and maintenance on the interior of the building. The vehicular entry door is an aluminum roll-up type within a metal frame. Other fenestration on this elevation includes a wood frame pedestrian door and wood louvered vent within a recessed wall area clad in vertically-scored tongue-and-groove wood siding. Similar to the east elevation, the second floor of the west elevation overhangs the first, and three decorative/false wood box-beam ends can be found appearing to support the second floor above. The second floor consists entirely of a row of ribbon windows with arched headers, except at the far outer ends, which have flat headers. The far left window has been infilled-with plywood. Wide, flat, and deeply-projecting eaves with repeating arch forms, a flared metal facia/gutter, and a slate-clad Mansard roof can also be found on this elevation. A concrete parking pad with a central drain, as well as an asphalt driveway/parking area, is located directly in front of this elevation.

The north (rear) elevation of the club house is a single-story façade due to the topography of the building site, which slopes downward from north to south. This elevation forms the second floor of the club house building, and is clad almost entirely in vertically-scored tongue-an-groove wood siding. Fenestration on this elevation is limited to a secondary pedestrian entry on the center-right portion of the façade, consisting of a wood frame commercial door with floor-to-ceiling sidelights

in fixed metal frames. Former windows to the right of this rear entrance have been infilled with vertically-scored tongue-an-groove wood siding. Other fenestration on this elevation includes a wood frame double-door on the left side of the building, as well as an employee-only secondary entry. Flat roof forms with wood facia boards as well as slate-clad Mansard roof forms can be found on this rear elevation. Beneath the shallow eave of the central Mansard roof lies a row of wood framed cabinets with sliding plexiglass doors which once stored the electrical cables used in charging the golf carts. A row of florescent lights, outlets, and associated electrical conduit is attached to the wall in this location. Located directly in front of this elevation is an asphalt driveway that once served as a golf cart parking and charging station. The driveway descends and curves around the eastern and western ends of the building, providing vehicular access that encircles the club house building.

Interior Description

The front door on the south elevation provides access to a vestibule/lobby with a double-height ceiling and a wide set of carpeted stairs leading to the second (main) level of the clubhouse. This level, which is approximately 8,600 square feet in size, consists of a former bar/lounge area with a lava rock and copper-clad fireplace, restrooms, a former pro shop, a former banquet hall/dining room, circulation areas, and a former commercial kitchen and storage rooms toward the rear. A set of concrete stairs off the kitchen leads to a mezzanine level which served as a storage room. Materials include wall-to-wall carpeting, vinyl tile, acoustical foam ceiling surfaces, painted drywall, wood soffits and trim, and wood framed partitions with multi-pane glass double doors separating the bar/lounge from the banquet hall/dining room. Restrooms have tiled floors, painted drywall and wallpaper surfaces, acoustical foam ceiling surfaces, and newer/replacement bathroom fixtures.

The first floor, which can be accessed either from the main floor or from the exterior in two locations, is approximately 7,400 square feet in size and contains locker rooms, bathroom/shower rooms, offices, circulation and storage areas, a mechanical and electrical room, and a large, former garage and maintenance room for golf carts, currently used for storage. Materials include wall-to-wall carpeting, acoustical foam ceiling surfaces, painted wallboard, wood frame solid and hollow core doors, and tiled shower rooms/bathrooms. The former golf cart garage has a concrete slab floor, painted wall and ceiling surfaces, and exposed wood posts and beams.

Architectural Style

Completed in 1966, the architectural style of club house can be generally described as Mid-Century Modern, exhibited by the flat, rectilinear building forms, the rows of ribbon windows on the south, east, and west elevations, the deeply projecting eaves, and the Mansard roof form, as well as the use of modern materials such as glass, concrete, and stucco. The use of other materials such as lava-rock cladding on the ground floor, vertically-scored tongue-an-groove wood siding on the second floor and portions of the first, manufactured slate tile cladding on the Mansard roof, and the use of decorative/false wood box-beam ends appearing to support the overhanging second floor are elements not typically found in Mid-Century Modern architecture, but may have been an attempt to soften the contemporary design by using other materials deemed more compatible to the building's

semi-rural location. As such, the building exhibits a more eclectic style of Mid-Century Modern architecture rather than one that is purely one style or another.

Alterations and Condition

Visible alterations to the former club house include some recessed wall areas on the ground floor in-filled with vertically-scored tongue-an-groove wood siding and aluminum sliding windows, as well as some windows on the second floor in-filled with similar siding. Some deterioration of the siding can be found on the north elevation, as well as on the decorative/false wood box-beam ends on the east elevation. The building is in overall good condition.

Former San Geronimo National Golf Course

Completed in 1965, the former San Geronimo National Golf Course was an 18-hole golf course located on three separate parcels. The subject property contained three holes and associated tees, greens, and fairways to the south and west of the club house. The remaining holes and associated tees, greens, and fairways are located outside of the subject property to the northwest across Nicasio Valley Road, as well as to the south across Sir Francis Drake Boulevard. The subject property also contains a series of former asphalt paths for golf carts, as well as a former picnic area with a wooden stage centered generally in front of and below the club house, accessed with wood steps leading down from the circular entrance driveway. Decorative landscaping found near the entry to the club house building include manzanita shrubs, olive, pine, and maple trees, as well as former lawn areas that are now brown and filled with weeds due to lack of water. Groupings of mature redwood trees are also located between former fairways. While the landforms of former golf course comprised of terraced tee-off greens and rolling fairways are visible, they are heavily overgrown with weeds, shrubs, and grasses due to a lack of water and overall maintenance over the last five years. Aside from these human-made terraced landforms, the landscape no longer appears as a golf course with manicured greens, tees, and fairways, but rather, has reverted to a more natural state that appears more similar to the surrounding undeveloped landscape. As such, the former golf course would be considered highly altered and in poor condition when compared to when the recreational facility was in operation between 1965 and 2017.

Exterior Photos

Figure 1. South and east elevations, view looking northwest

Figure 2. *South and west elevations, view looking northeast*

Figure 3. Panoramic view of south elevation, view looking north

Figure 4- 5. Detail views of primary entry on south elevation (left) and roof eave and overhang (right)

Figure 6. Detail view of southeast corner, ground floor, view looking northwest

Figure 7. East elevation, view looking west

Figure 8. West elevation, view looking east

Figure 9. Partial north elevation showing rear entrance, view looking south

Figure 10. Partial north elevation showing rear fire exit, view looking southwest

Interior Photos

Figure 11. Lava rock and copper clad fireplace in bar/lounge area, view looking southwest

Figure 12. Former bar/lounge area, view looking west

Figure 13. Former banquet hall/dining room, view looking southeast

Figure 14. Former pro shop with sales counter, view looking southwest

Figure 15. Former commercial kitchen, view looking west

Figure 16. Former locker room on first floor, view looking northeast

Figure 17. Former golf cart garage and maintenance room on first floor, view looking east

Exterior Landscape Photos

Figure 18. Circular driveway at club house entrance, view looking northwest

Figure 19. Former picnic area and stage, view looking south

Figure 20. Former golf course hole #1 golf cart parking area with club house in background, view looking north

Figure 22. Former golf course hole #1 tee-off stand and cart path, view looking west toward Nicasio Valley Road

Figure 22. Former golf course fairway, view looking south

Figure 23. Former San Geronimo National Golf Course sign near entry drive, view looking west

3. Historic Context

Brief History of San Geronimo Valley

Except where noted, the following history of San Geronimo Valley has been excerpted and summarized from information provided by the San Geronimo Valley Historical Society.[2]

The San Geronimo Valley was inhabited by the Coast Miwok Indians for as many as 5,000 years before Spanish settlers brought the mission system to the San Francisco Bay Area in the eighteenth century. With a population that has been estimated at between 3,000 and 5,000 individuals, the culturally unified Miwok lived in politically autonomous permanent villages dubbed *racherias* by the Spanish, as well as smaller seasonal settlements aligned with harvesting natural resources.

Prior to the fall of the mission system in the 1830s, San Geronimo Valley had been a ranching outpost of Mission San Rafael named *La Cañada de San Geronimo.* In the years before California joined the United States, the Valley was settled and grazed by Mexican soldier Rafael Cacho, who was in the area as early as 1839. In 1846 General Mariano Vallejo granted Rancho San Geronimo to Joseph W. Revere, a naval officer who was the grandson of Paul Revere. Much of the land in the Valley changed hands a number of times before arriving under the ownership of Adolph Mailliard, whose family owned Rancho San Geronimo until the early 1910s. Other ranch families included the Roys and Nunez's, as well as the Dicksons and Ottolinis.

North Pacific Coast rail service was established through the valley in 1875, with a stop at San Geronimo, around which a small settlement began to develop. San Geronimo was also reached by automobile along the original route of Sir Francis Drake Boulevard beginning in the 1910s.[3]

A group of developers under the name the Lagunitas Development Company then purchased from the Mailliard heirs what is now known as Woodacre, San Geronimo, Forest Knolls and Lagunitas. They created the names Woodacre and Forest Knolls in the process of subdividing the Valley. The area grew slowly and mostly consisted of summer homes until development picked up markedly following World War II. The Valley became more suburbanized at this point, and by the mid-1950s, Sir Francis Drake Boulevard was rerouted through a portion of the valley.

History of the Subject Property

The 22-acre subject property was once part of the larger 420-acre Roy Ranch, owned and operated by the Roy family since they had purchased it from Adolph Mailliard in 1868.[4] The Roy family used the property primarily for ranching and grazing of cattle and hogs. [5] After the end of World War II, pressure to develop the then-rural San Geronimo Valley began to increase as

[2] San Geronimo Historical Society, *A Brief History,* available online at https://www.sgvhistoricalsociety.org/brief-history-of-the-san-geronimo-valley, Accessed July 12, 2021.
[3] Owen Clapp, *Images of America – San Geronimo Valley*, Arcadia Publishing, 2015.
[4] Ibid.
[5] Personal Communication, Owen Clapp, San Geronimo Valley Historical Society, with Brad Brewster, July 10, 2021.

greater numbers of people moved to Marin County during this period, and as improvements to Sir Francis Drake Boulevard made the area more accessible by private automobile.

The Marin Countywide Plan, which was adopted by the Marin County Board of Supervisors in 1961, would have allowed for construction of 5,000 homes in the valley supporting a population of about 20,000 people.[6] It is within this context that the golf course was originally conceived as a private, members-only course to serve the many new residents who were anticipated to move into San Geronimo Valley in the coming years. Around this same timeframe of the early 1960s, the Roy family sold a portion of their land to the Lagunitas Development Company, while they continued their ranching operations on the property. In 1964, the Lagunitas Development Company sold a portion of their holdings comprised of approximately 146-acres to the San Geronimo National Golf Course, Inc. for purposes of developing and operating a semi-private, 18-hole golf course with a club house and other associated recreational amenities and support structures.

San Geronimo National Golf Course Inc. was formed by William W. Saunders, a Honolulu-based attorney, who owned and operated three other golf courses in the western United States, all with the word "National" in their title, including the Sonoma National Golf and Country Club, and the Colwood and Meriwether National golf courses in Portland, Oregon. Other directors of the San Geronimo National Golf Course Inc. were Rob Rosburg, a golf pro at the Meriwether National Golf Course, Robert J. Cardinal, an ex-San Francisco golf champion, Dr. Cecil A. Saunders, William Saunder's father, J, Stewart Harrison, a San Francisco Attorney, and Robert A. Leedy, a Portland Attorney.[7]

Plans for the golf course in the San Geronimo Valley were changed to become a semi-private club available to members, but also open the general public, in order to widen the pool of potential players and help to financially sustain the commercial venture. Private memberships would start at $200 per person, and monthly dues at $12, providing access to the swimming pool, tennis courts, locker room facilities, charging privileges, preferred starting times, and other benefits associated with private clubs. Non-members could pay $4 greens fees on weekdays and $6 fees on weekends to access the course.[8]

In June, 1965, the Marin County Board of Supervisors adopted Ordinance No. 1448 approving precise development plans for the golf course club house and site plan of the San Geronimo P-C Master Plan. The ordinance specifically approved the design of the "San Geronimo Golf and Country Club " with elevations, sections, and floor plans by Edward Hageman & Associates, dated May 21, 1965, as well as a grading plan and parking lot plan for the club by builder Dan Coleman & Associates.[9]

[6] West Marin Environmental Action Committee, *Parks for Everyone*, available online at https://www.eacmarin.org/sgvgolfcourse, Accessed July 23, 2021.
[7] "San Geronimo National Course, Sept. 15 Opener for New Links," *Daily Independent-Journal*, July 27, 1965.
[8] Ibid. It appears that the tennis courts were either never built or eliminated when the golf course was redesigned in the 1980s.
[9] "Legal Notices – Marin County Board of Supervisors Ordinance No. 1448," *Daily Independent-Journal*, June 28, 1965.

Hageman Associates, Inc. was a San Rafael-based building design firm headed by building designer Edward Hageman, Jr. Design credit of the club house, however, was given to Robert E. Eklund, Jr., who was a building designer on staff at Hageman Associates at the time (see discussion of architects and designers, below, as well as information in **Appendix A**). [10] [11]

Construction of the club house began in August, 1965, and was completed and fully operational by March, 1966. Construction of the 146-acre 18-hole golf course was initiated in early 1965 and opened to the public on September 21, 1965.[12] The golf course was designed by well-known and prolific golf course designer, Arthur Vernon Macan, Jr., (1882 – 1964) who did not live to see the completion of his last design (again, see discussion of architects and designers, below).

In 1972, the Marin County Board of Supervisors adopted a new Marin Countywide Plan that prevented massive urban development in San Geronimo Valley, preserving its mostly rural character. Located approximately 9 miles west from Highway 101 and some distance from Marin's concentrated population centers, the San Geronimo National Golf Course was deemed too far away by many potential users, and the sales of club memberships had reached a plateau. Ultimately, the golf course was unsuccessful in selling enough memberships to support the semi-private course and soon converted to an all-public course that remained the primary use of the property until it was listed for sale in 2017.[13] The entire 18-hole golf course including the club house was purchased by the non-profit organization the Trust for Public Land (TPL) in 2017, at which point the property ceased being used as a public course, although public access to and through the former course was maintained. In 2021, the Marin Open Space Trust purchased a conservation easement on the 22-acre portion of the former golf course from the TPL. That same year, the Marin County Fire Department began using the club house as office space for administrative uses.

Few physical changes occurred to the club house during its use from 1966 to 2017. In 1991, a minor interior remodel of the club house occurred and included new facia trim on the exterior.[14] In the mid-1990s, the public swimming pool which once existed immediately to the east of the club house was filled in and replaced with an oval-shaped lawn, and the concession stand and pool shop serving the swimming pool were removed.[15] The vestiges of the former concession stand and pool shop are evident in the southeast corner of the building which are recessed and in-filled with vertical tongue-and-groove wood siding and aluminum frame sliding windows. In 2006, various site improvements including landscaping, walkways, ramps, and an accessible entry were added, as well as a remodeling of the interior restrooms.[16]

[10] "Clubhouse Proposed for San Geronimo," *Daily Independent-Journal*, July 29, 1965.
[11] Edward Hageman & Associates, *San Geronimo Golf & Country Club; Clubhouse Building for San Geronimo National Golf Course,* plans and elevations, July 21, 1965.
[12] "New Golf Course is Now Open to the Public," *Daily Independent-Journal*, September 21, 1965.
[13] West Marin Environmental Action Committee, *Parks for Everyone*, available online at https://www.eacmarin.org/sgvgolfcourse, Accessed July 23, 2021.
[14] Craiker Associates, Architects and Planners, *Minor Interior Remodel for San Geronimo Golf & Country Club*, January 24, 1991.
[15] Nova Partners, *Building Observation Report San Geronimo Golf Course*, Exhibit C, County Provided Site Information, October 25, 2017.
[16] Huntsman Architectural Group, *Proposed Site Improvements, San Geronimo Valley Golf Course*, January 26, 2006.

In 2007, mechanical work on the interior and on the roof was completed.[17] Also see a discussion of building permits, below.

The original Macan design of the former San Geronimo National Golf Course was renovated in the 1980s with a new design by golf course architect Robert Muir Graves (1930 - 2003), who was also a prolific golf course designer throughout the west coast of the United States. In the early 2000s, three pedestrian and golf cart bridges were replaced, according to a review of available building permits. After the purchase in 2017, TPL ceased watering and maintaining the former golf course, which has begun to revert to a more natural landscape of grasses, scrub brush, and weeds similar to the surrounding environment.

Building Permits

A review of building permits available at the Building and Safety Division of the Marin County Community Development Agency identified 11 building permits that were issued for the subject property from 1997 to 2012 (see **Table 1, Building Permit Information**). Unfortunately, no building permits exist online or on microfiche that were issued between 1965, when the golf course and club house were built, and 1996.[18] As shown in **Table 1**, a number of minor alterations were made to the club house and nearby grounds between 1997 and 2012.

TABLE 1
BUILDING PERMIT INFORMATION

Date	Permit No.	Description/Builder/Cost (if identified)
3/18/1997	70307	Reroofing/Enterprise Roofing/no dollar amount identified
7/5/2001	88425	Install new pump shed/Rupert Velasquez/$8,050
7/31/2002	92782	Repair and replace damaged pedestrian bridge over Nicasio Valley Road/York Bridge Concepts/$175,000
9/12/2002	91323	Replace A/C pump & cooler/Ongaro and Sons/no dollar amount identified
1/29/2003	94886	Install new 200 amp meter main with distribution for irrigation pump/Greenwood Electric/no dollar amount identified
8/7/2003	97409	Add exhaust fan in golf cart room/Downing Heating and Air/no dollar amount
9/18/2006	111858	Accessible upgrades to parking, entry, and restrooms/Ranger Construction/$42,798
9/26/2006	111995	Replace two wooden bridges over Larsen Creek/York Bridge Concepts/$75,000
6/14/2007	115407	Upgrade existing golf cart wash area with new catch basin and 1,200 gallon sand/oil separator to outfall/Ranger Construction/no dollar amount identified
5/26/2011	130504	Replace 3 rooftop heating and air conditioning units/Fitzpatrick Heating Inc./ no dollar amount identified
10/11/2012	135800	Replace water heater/Gotelli Plumbing Co./$6,065

SOURCE: Marin County Community Development Agency, Building and Safety Division, *Building Permit History, 5800 Sir Francis Drake Blvd.,* July 26, 2021.

[17] Mtech, Mechanical Technologies Corp., *American Golf, 2nd Floor*, December 31, 2007 .
[18] Personal communication, Bridgette Choate, Building Permit Services Manager, Marin County Building and Safety Division, with Brad Brewster, July 26, 2021.

4. Architect/Designer/Builder

Edward Hageman, Jr., Building Designer

The former San Geronimo National Golf Course club house was designed in 1965 by Hageman & Associates, a San Rafael-based architectural design firm headed by building designer Edward Hageman, Jr. Born in San Francisco in 1916, Hageman began working as a building designer for developer Henry Doelger in the late 1940s, designing the facades of hundreds of new houses in San Francisco's Sunset District, as well as dozens of Modernistic houses in the Westlake Village neighborhood in Daly City. Hageman married Betty Virginia Warshauer in 1941, and the couple had two children.[19] In 1948, Hageman moved his family to San Anselmo and opened his own building design firm there in 1951 named Hageman & Associates, Inc. In 1952, he was joined by building designers C. Jay Thomas, and by Robert E. Eklund, Jr., in 1955 (see discussion of Eklund, below). At the end 1965 and just after the club house was designed in May of that year, the firm was renamed Hageman-Thomas-Eklund, Inc., and moved from San Anselmo to 255 West End Avenue in San Rafael.[20]

Aside from the San Geronimo National Golf Course club house, other design commissions the firm had in the mid-1960s included Goheen Plaza, a two-story office building at 131 Camino Alto in Mill Valley, the Hallmark Building, a two-story office building for Kunst Brothers Painting Contractors at 76 Belvedere Street in San Rafael, the L.C. Smith Building at 124 Belvedere Street in San Rafael, a remodeling of the West End Villa Restaurant in San Rafael, as well as the design of another two-story office building, the Lincoln-Paloma Building on Lincoln Avenue in San Rafael.[21]

The firm was active in the 1950s through the 1990s, and during his long career, Hageman designed hundreds of homes and dozens of commercial buildings in Marin County, and served on the Marin County Planning Commission, the State Board of Architectural Examiners, and the state Designers Qualifications Advisory Committee. He is noted for his design of the Richardson Bay Audubon house remodel in Tiburon, and the Whistlestop headquarters in San Rafael, a former railroad station. For many years he was a member of the Whistlestop board of directors. Hageman was named as the Marin Builders Association's Construction Industry Man of the Year in 1984. Hageman died in 2015 at the age of 99 in his home in San Anselmo.[22]

Robert E. Eklund, Jr., Building Designer

Robert E. Eklund, Jr., is credited with the design of the former San Geronimo National Golf Course club house while working as a building designer at Hageman & Associates, and just prior to becoming a full partner in the firm of Hageman-Thomas-Eklund, Inc. Eklund was born in Novato in 1934, and as described above, he began working at the firm of Hageman & Associates

[19] *Edward Hageman, Jr. Family Tree*, available online at Ancestry.com, Accessed July 26, 2021.
[20] "Two San Anselmo Firms Growing Into New Locations Elsewhere," Other People's Business column by Harry Craft, *Daily Independent-Journal*, November 24, 1965.
[21] Review various articles in the *Daily Independent-Journal* newspaper with the mention of Hageman & Associates, 1964-1965.
[22] "Edward Hageman, Longtime Marin Architect, Dies as 99," *Marin Independent-Journal,* June 8, 2015.

in 1952 as a building designer. Aside from the design of the club house in 1965, Eklund is also credited with designing a number of Modern style homes in Marin County in the mid-1960s, including the "Haydite Home," located in the Peacock Gap Golf Club neighborhood of San Rafael and constructed of Haydite Slump Block manufactured at the nearby McNear Brick Company, the Hildeburn Residence on Laurel Grove Avenue in Kentfield, the Lukes Residence on Fairhills Drive in San Rafael, and the Johnson Home in the Loch Lomond neighborhood of San Rafael.[23] In addition to being a partner in the firm of Hageman-Thomas-Eklund, Inc., he also served as the company's secretary-treasurer in the late 1960s. Eklund was married to Patricia (Pat) D. Winter, and the couple had one son, Richard Eklund, who was born in 1963. The couple divorced in 1974, and Eklund married Vicki L. Pedroli in 1975. Eklund died in Novato in 1999 at the relatively young age of 64.[24]

Arthur Vernon Macan, Jr., Golf Course Architect

The San Geronimo National Golf Course was originally designed by golf course architect Arthur Vernon Macan, Jr. (1882 – 1964), and later renovated by Robert Muir Graves (see discussion of Graves, below).[25] Macan was an Irish immigrant who moved to Canada, was a professional golfer early in his career, and designed dozens of golf courses primarily in British Columbia and the Pacific Northwest between 1913 and 1964; the San Geronimo National Golf Course being his last design, completed in 1965 one year after his death. Macan designed two other golf courses in California; the California Golf Club and the Contra Costa Golf Club, both completed in 1925. During his lifetime, Macan designed or renovated more courses than any other Northwest golf course architect. His designs were inspired by the old-fashion game played over the classic links throughout Great Britain and Ireland, and he always designed golf courses with the average golfer in mind.[26] It is unknown exactly how Macan came to be selected to design the San Geronimo National Golf Course, however, he designed the Colwood National Golf Course in Portland, Oregon, in 1928, which was one of three courses owned by San Geronimo National Golf Course, Inc. in the mid-1960s.

Robert Muir Graves, Golf Course Architect

Robert Muir Graves (1930 - 2003) was a golf course architect who graduated from UC Berkeley with a degree in landscape architecture, and is credited with designing or renovating approximately 80 golf courses throughout the western United States, including a renovation of the San Geronimo National Golf Course in the 1980s. His most well-known courses are the Sea Ranch Golf Links in Sea Ranch, California, his redesign of the Carmel Valley Country Club in

[23] Review various articles in the *Daily Independent-Journal* newspaper with the mention of Robert E. Eklund, Jr., 1964-1965.
[24] *Robert Eugene Eklund, Jr. Family Tree*, available at Ancestry.com, Accessed July 26, 2021. Pat Eklund, ex-wife of Robert Eklund, is currently the mayor of Novato.
[25] Nova Partners, *Building Observation Report San Geronimo Golf Course*, Exhibit C, County Provided Site Information, October 25, 2017.
[26] Nanaimo Golf Club, *A.V. Macan; Golf Course Architect for the Pacific Northwest*, available online at http://www.nanaimogolfclub.ca/getmedia/6c4dbe6d-7f1e-4198-9ab5-4ca9956803ac/AVMacan-2014.aspx, Accessed July 26, 2021.

Carmel, and his design of the Golf Club at Quail Lodge on the Monterey Peninsula.[27] It is unknown exactly how Graves came to be hired to renovate the San Geronimo National Golf Course, however, he designed the Sonoma National Golf Course in Napa Valley, which was one of the other golf courses owned by San Geronimo National Golf Course, Inc. at the time.

5. California Register Significance Evaluation

The following provides an evaluation of the subject property for its potential individual significance for listing in the California Register of Historical Resources (CRHR) by applying criteria A/1 through D/4.

Evaluation of Individual Significance

Criterion A/1 (Associations with Historic Events)

There is little information found as a result of this HRE to indicate that the former San Geronimo National Golf Course and associated club house have made a significant contribution to the broad patterns of local or regional history or the cultural heritage of California or the United States from an individual standpoint. Completed in 1966 as a two-story club house available to members of the former San Geronimo National Golf Course between this date and 2017, the building, along with the golf course, were constructed during a period of anticipated residential growth in San Geronimo Valley which would have resulted in thousands of new residents. Only a few years after construction of the facility, however, the Marin County Board of Supervisors adopted a new Countywide Plan that limited development in San Geronimo Valley and preserved its mostly rural character, but also eliminated many of the potential members and users of the golf club who would have lived in the immediate area. Located approximately 9 miles west from Highway 101 and some distance from Marin's concentrated population centers, the San Geronimo National Golf Course was deemed too far away by many, and membership slowly began to wane. Ultimately, the golf course was unsuccessful in selling enough memberships to support the semi-private course and soon converted to an all-public course that remained the primary use of the property until it was sold in 2017 to the Trust for Public Land. While the San Geronimo National Golf Course and associated club house was a locally well-known recreational facility that operated for over 50 years, the property would be considered a more typical reflection of planned or anticipated commercial/recreational growth in Marin County, rather than one that would be considered historically significant on an individual level. There is little information to indicate that the operation of a golf course and associated club house would be considered uniquely important in the commercial, economic, or recreational history of Marin County or the State of California. Finally, there is little mention of the San Geronimo National Golf Course or its associated club house in the written histories of the area provided by the San Geronimo Valley Historical Society, or in local newspapers, aside from the opening date of the golf course in September, 1965, and advertisements of various golf tournaments to be held at the club. For these

[27] Tee Times, *Golf Architects/Designers – Robert Muir Graves*, available online at http://teetimes.info/golf-architects-robert-muir-graves/, Accessed July 26, 2021.

reasons, the former San Geronimo National Golf Course and associated club house do not appear eligible for listing under Criterion A/1 as an individual resource.

Criterion B/2 (Associations with Important Persons)

There is little information found as a result of this HRE to indicate that the former San Geronimo National Golf Course and associated club house are directly linked with persons important to local or state history. The property is primarily associated with San Geronimo National Golf Course, Inc., which owned and operated the course for many years as a commercial/recreational facility. Originally comprised of a consortium of owners, the company is not associated with any one individual who would be considered important. Research revealed no other persons associated with the property who would be considered important either locally or on a State level. For these reasons, the subject property at San Geronimo Golf Course Club House does not appear eligible for listing under Criterion B/2 as an individual resource.

Criterion C/3 (Architecture and Design)

Club House

There is little information found as a result of this HRE to indicate that the former San Geronimo National Golf Course club house would be individually significant for its architecture, as expressed by intact stylistic features, forms, or construction methods. Designed in 1965 and completed in 1966, the architectural style of club house can be generally described as Mid-Century Modern, exhibited by the flat, rectilinear building forms, the rows of ribbon windows on the south, east, and west elevations, the deeply projecting eaves, and the Mansard roof form, as well as the use of modern materials such as glass, concrete, and stucco. The use of other materials such as lava-rock cladding on the ground floor, vertically-scored tongue-an-groove wood siding on the second floor and portions of the first, manufactured slate tile cladding on the Mansard roof, and the use of decorative/false wood box-beam ends appearing to support the overhanging second floor are elements not typically found in Mid-Century Modern architecture, but may have been an attempt to soften the contemporary design by using other materials deemed more compatible to the building's semi-rural location. As such, the building exhibits a more eclectic mix of Mid-Century Modern architecture rather than one that is pure-to-form. The design of the club house cannot be considered the *embodiment* of Mid-Century Modern architecture, nor would it be considered a particularly good example of an eclectic mixture of materials or styles. Little mention of the building was made in the press aside from its planned construction in 1965, along with a few advertisements of the building's availability for banquet rentals in later years (see **Appendix A**).

The club house was designed in mid-1965 by Hageman & Associates, Inc., a San Rafael-based building design firm founded by building designer Edward Hageman, Jr. (1916 – 2015), with design credit given to staff member Robert E. Eklund, Jr. (1930 – 1999) prior to his elevation to a full partner in the firm later that year. The firm was active in the 1950s through the 1990s, and during the period when the club house was designed in the mid-1960s, the firm had a number of other commissions for both commercial and residential designs, primarily in the San Rafael area. Research has revealed that design of the club house itself has not been identified as one of the firm's

signature commissions, such as the design of the Richardson Bay Audubon house remodel in Tiburon, or the Whistlestop headquarters in San Rafael. The work of Eklund is even less well known than that of Hageman's, and his work appears to have been focused primarily on residential designs in the growing neighborhoods around San Rafael. As such, it cannot be said that the design of the former San Geronimo National Golf Course club house was the signature work of a master designer. For these reasons, the former San Geronimo National Golf Course club house would not be considered individually eligible for listing under Criterion C/3 as an important work of architecture or significantly associated with a master designer.

Golf Course

The former San Geronimo National Golf Course was originally designed by well-known golf course architect Vernon Macan, Jr. (1882 – 1964) who did not live to see its opening in September, 1965. Macan designed dozens of golf courses in his long career, primarily in British Columbia and the Pacific Northwest, with a small handful of others in Northern California including the subject property. Macan's designs were inspired by the old-fashion game played over the classic links throughout Great Britain and Ireland, and he designed golf courses with the average golfer in mind. The former San Geronimo National Golf Course was renovated in the 1980s with a new design by golf course architect Robert Muir Graves (1930 - 2003), who was also a prolific golf course designer throughout the west coast of the United States. However, the former San Geronimo Golf Course is not mentioned among that designer's signature works, such as the Sea Ranch Golf Links in Sea Ranch, the Carmel Valley Country Club in Carmel, and the Golf Club at Quail Lodge on the Monterey Peninsula. Since the property was sold to TPL in 2017, the former tees, greens, and fairways have ceased being watered and maintained, and the property is reverting to a more natural landscape of grasses, weeds, and scrub brush. Aside from the visible human-made terraced landforms of a former golf course, the property no longer appears as an intact golf course landscape due to these changes, and no longer retains sufficient physical integrity to convey its associations with either well-known golf course designers Macan or Graves. For these reasons, the former San Geronimo Golf Course would not be considered individually eligible for listing under Criterion C/3 as a historic designed landscape by a master landscape architect or designer.

Criterion D/4 (Information Potential)

Criterion D/4 refers to a property's information and research potential in terms of its historic or prehistoric values. There is no information found as a result of this HRE to indicate that the subject property would yield information important to history or prehistory, or is an example of a particularly rare construction type.

6. Conclusion

Although the former San Geronimo National Golf Course and associated club house meet the minimum age threshold for potential eligibility, neither facility appears to be individually eligible for listing in the California Register of Historical Resources because they do not meet any of the criteria required for a finding of individual historic significance. As neither the former golf course landscape nor the club house building would meet the definition of a 'historical resource,' their

future use, development, or alteration would not be considered a significant environmental impact under the California Environmental Quality Act (CEQA) from a historic resources standpoint.

7. References

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"Legal Notices – Marin County Board of Supervisors Ordinance No. 1448," *Daily Independent-Journal*, June 28, 1965.

"San Geronimo National Course, Sept. 15 Opener for New Links," *Daily Independent-Journal*, July 27, 1965.

"Clubhouse Proposed for San Geronimo," *Daily Independent-Journal*, July 29, 1965.

"New Golf Course is Now Open to the Public," *Daily Independent-Journal*, September 21, 1965.

"Two San Anselmo Firms Growing Into New Locations Elsewhere," Other People's Business column by Harry Craft, *Daily Independent-Journal*, November 24, 1965.

"Edward Hageman, Longtime Marin Architect, Dies as 99," *Marin Independent-Journal,* June 8, 2015.

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Bridgette Choate, Building Permit Services Manager, Marin County Building and Safety Division, with Brad Brewster, July 26, 2021.

Owen Clapp, San Geronimo Valley Historical Society, with Brad Brewster, July 10, 2021.

Plans and Drawings

Edward Hageman & Associates, *San Geronimo Golf & Country Club; Clubhouse Building for San Geronimo National Golf Course,* plans, elevations, and sections, July 21, 1965.

Craiker Associates, Architects and Planners, *Minor Interior Remodel for San Geronimo Golf & Country Club*, January 24, 1991.

Huntsman Architectural Group, *Proposed Site Improvements, San Geronimo Valley Golf Course*, January 26, 2006.

Mtech, Mechanical Technologies Corp., *American Golf, 2nd Floor*, December 31, 2007.

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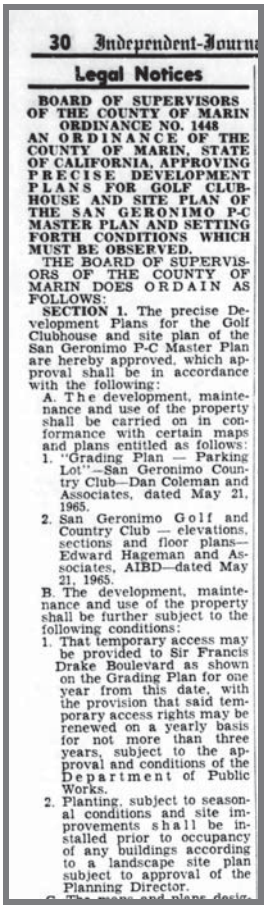
APPENDIX A

Historic Background – Newspaper Clippings



30 Independent-Journ

Legal Notices

BOARD OF SUPERVISORS OF THE COUNTY OF MARIN ORDINANCE NO. 1448

AN ORDINANCE OF THE COUNTY OF MARIN, STATE OF CALIFORNIA, APPROVING PRECISE DEVELOPMENT PLANS FOR GOLF CLUBHOUSE AND SITE PLAN OF THE SAN GERONIMO P-C MASTER PLAN AND SETTING FORTH CONDITIONS WHICH MUST BE OBSERVED.

THE BOARD OF SUPERVISORS OF THE COUNTY OF MARIN DOES ORDAIN AS FOLLOWS:

SECTION 1. The precise Development Plans for the Golf Clubhouse and site plan of the San Geronimo P-C Master Plan are hereby approved, which approval shall be in accordance with the following:

A. The development, maintenance and use of the property shall be carried on in conformance with certain maps and plans entitled as follows:

1. "Grading Plan — Parking Lot"—San Geronimo Country Club—Dan Coleman and Associates, dated May 21, 1965.
2. San Geronimo Golf and Country Club — elevations, sections and floor plans—Edward Hageman and Associates, AIBD—dated May 21, 1965.

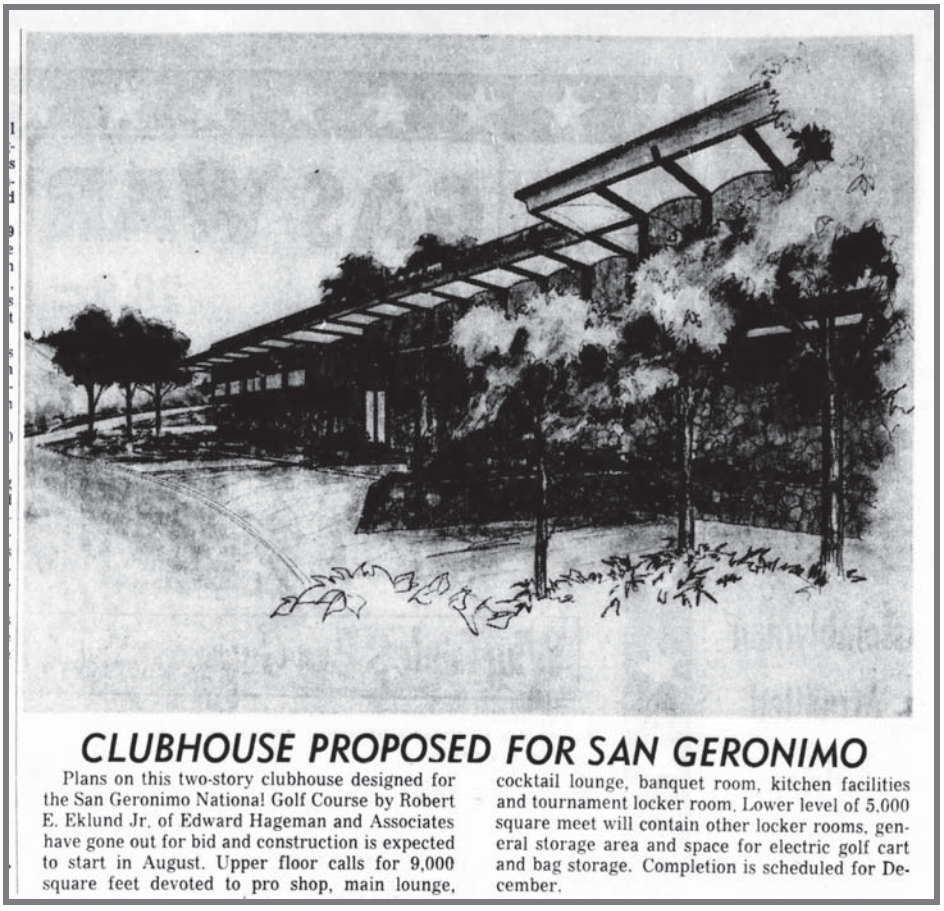
B. The development, maintenance and use of the property shall be further subject to the following conditions:

1. That temporary access may be provided to Sir Francis Drake Boulevard as shown on the Grading Plan for one year from this date, with the provision that said temporary access rights may be renewed on a yearly basis for not more than three years, subject to the approval and conditions of the Department of Public Works.
2. Planting, subject to seasonal conditions and site improvements shall be installed prior to occupancy of any buildings according to a landscape site plan subject to approval of the Planning Director.

Legal Notices - San Geronimo Golf Course Club House - Hageman & Assoc - June 28, 1965

Clipped By:

Jeffrey_A_Tayler
Wed, Jul 7, 2021



CLUBHOUSE PROPOSED FOR SAN GERONIMO

Plans on this two-story clubhouse designed for the San Geronimo National Golf Course by Robert E. Eklund Jr. of Edward Hageman and Associates have gone out for bid and construction is expected to start in August. Upper floor calls for 9,000 square feet devoted to pro shop, main lounge, cocktail lounge, banquet room, kitchen facilities and tournament locker room. Lower level of 5,000 square meet will contain other locker rooms, general storage area and space for electric golf cart and bag storage. Completion is scheduled for December.

Clubhouse Proposed for San Geronimo July 29, 1965

Clipped By:

Jeffrey_A_Tayler
Wed, Jul 7, 2021

Independent Journal Sports

Tues., July 27, 1965 17

BIRD'S EYE VIEW—This aerial photo shows the site of the San Geronimo National golf course. Sir Francis Drake Boulevard is shown from the right bottom going west toward the left top corner of the picture, and Nicasio Road intersects the boulevard in the middle of the photo. That open space in the middle of the picture, to the right of Sir Francis Drake Boulevard, is where the clubhouse will be built. Completion date for the course has been set at Sept. 15.
(I-J. American Helicopters photo by Bob Hax)

SAN GERONIMO NATIONAL COURSE

Sept. 15 Opener For New Links

By RALPH CHATOIAN

A group of men with big ideas and a lot of moxie is going to take over ownership of the San Geronimo golf course and it probably will be open for business in less than two months.

Heading the corporation which is expected to close out the deal this week with the Lagunitas Development Co. is William W. Saunders, an attorney from Honolulu who already in principal owner of three other courses—the Sonoma Golf and Country Club and the Colwood and Meriwether courses in Portland, Ore.

Saunders is heading a group that will form National Golf Courses Inc. which will do the managing for many courses throughout the nation, although it will not be the owner of all of them. All courses owned by the group will have "National" tacked on the end of the name, starting with San Geronimo National and the other three.

"I estimate we'll start managing quite a few courses, perhaps five new ones per year," said Saunders.

To purchase the golf course from Lagunitas Development Co., of which Stephen McKee is the principal owner, a corporation known as San Geronimo Golf Course Inc. is being formed by Saunders. Other directors in that group will be Bob Hosburg pro at the Meriwether course; Robert J. Cardinal ex-San Francisco golf champ; Dr. Cecil A. Saunders, William's father; J. Stewart Harrison, San Francisco attorney; Robert A. Leedy, Portland attorney, and Alexander C. Waterhouse of Honolulu, William Saunders' associate.

Saunders plans to have the 18-hole course at San Geronimo ready for play "about Sept. 15." Under his plans, it will be a semi-private club, open to membership, but also open for public play.

Prior to Saunders' stepping into the picture, the course was to be private, with membership running at $2,500 per person. But he plans to reduce this considerably.

"Membership will run in the neighborhood of $200," said Saunders, "and monthly dues will be probably $12, rather than $35 as planned in the old setup." This fee will include use of a swimming pool, tennis courts, locker room facilities, charging privileges, preferred starting times, handicap registration and other things associated with most private clubs.

But non-members can also use the course, with green fees expected to be $4 on weekdays and $6 on weekends. It will be the same cost for members and non-members.

"This will not be the club and course for the avid golfer," said Saunders. He explained that fully private clubs would be better for persons who play "a lot of golf." This type arrangement (semi-private) is for persons who play golf 50 times or less per year, said Saunders.

Expectations are for about 40 per cent club member play and 60 per cent open play. Getting first crack at membership are the 160 who had signed up to join the golf club when it was going to be fully private. It isn't going to be easy business to join the club, as 1,000 or so persons have already indicated interest in joining, said Saunders.

Although Sept. 15 is the proposed opening date for the course, construction work on the clubhouse probably will not get

See GOLF, page 18

Sept 15, 1965 Opener of SGNGC - Daily Independent Journal p.1

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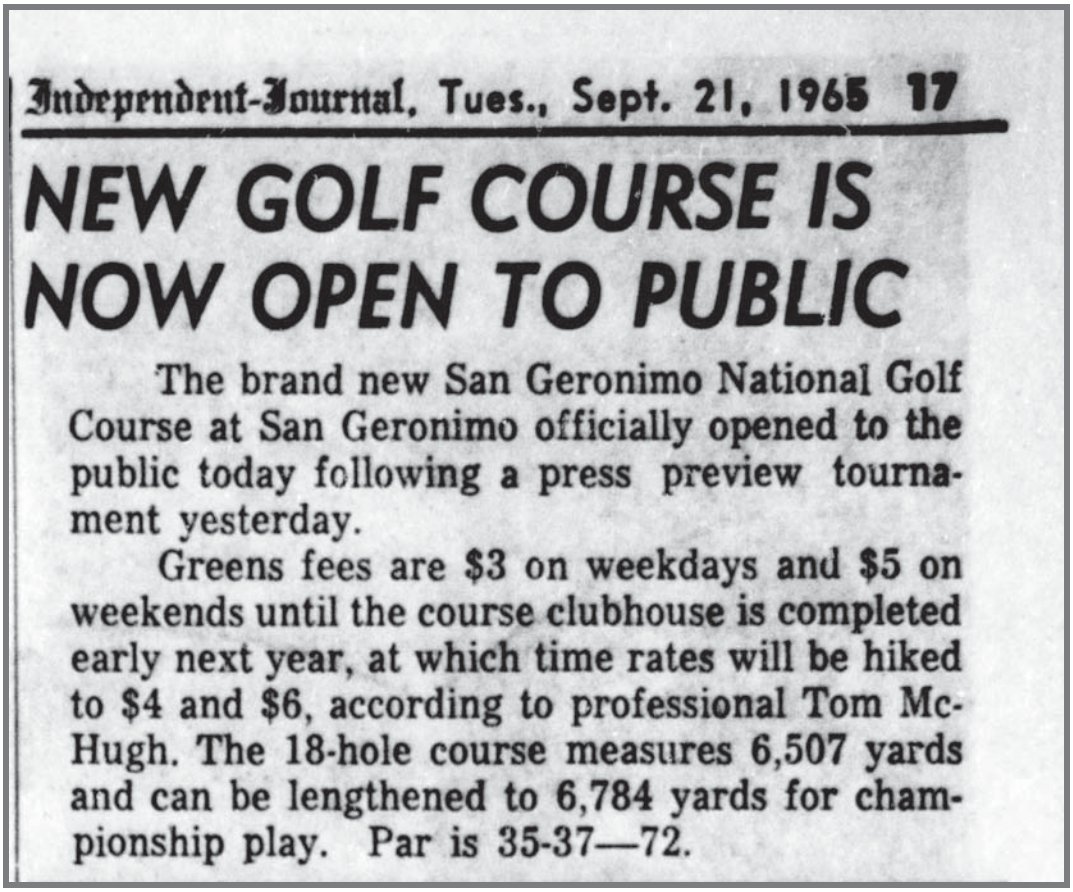
Jeffrey_A_Tayler
: ed, Jul 9, 2721



Independent-Journal, Tues., Sept. 21, 1965 17

NEW GOLF COURSE IS NOW OPEN TO PUBLIC

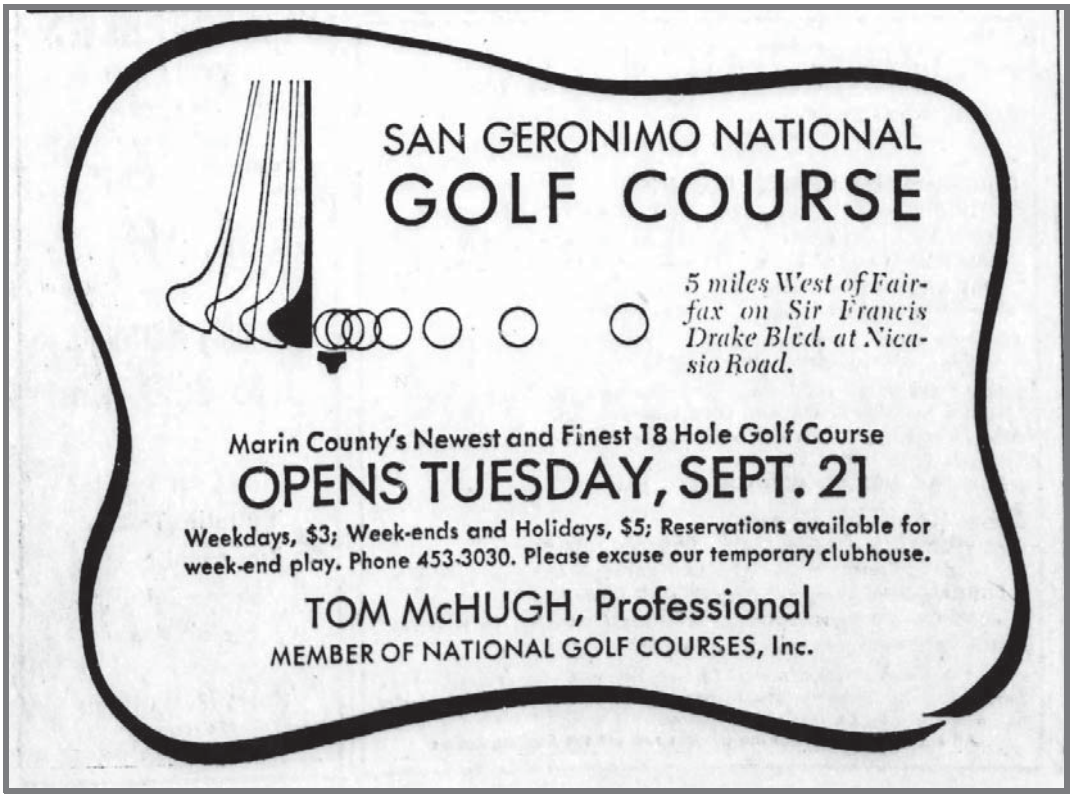
The brand new San Geronimo National Golf Course at San Geronimo officially opened to the public today following a press preview tournament yesterday.

Greens fees are $3 on weekdays and $5 on weekends until the course clubhouse is completed early next year, at which time rates will be hiked to $4 and $6, according to professional Tom McHugh. The 18-hole course measures 6,507 yards and can be lengthened to 6,784 yards for championship play. Par is 35-37—72.

New Golf Course is Now Open to Public - Sept. 21, 1965

Clipped 0yB

Jeffrey_A_Tayler
: ed, Jul w, 2729



San Geronimo National Golf Course - Advertisement Sept. 18, 1965

Clipped By:

Jeffrey_A_Tayler
Wed, Jul 7, 2021

San Geronimo National Golf Course - advertisement - Apr 27, 1966

Clipped By:

Jeffrey_A_Tayler
Wed, Jul 7, 2021

Group Dinner Dances Luncheons at new Clubhouse - Nov. 4, 1966

Daily Independent Journal (San Rafael, California) · 18 Mar 1966, Fri · Page 10

DINING OUT
AND
INNS
By HARRY CRAFT

Food Soon Will Be Available At San Geronimo Golf Course

Golfers and others should fare exceptionally well at the San Geronimo National Golf Course when food facilities are opened there next week.

National Golf Courses, Inc., has appointed none other than Don Caseldine as food and beverage manager for the San Geronimo clubhouse—and wherever Don goes his fans are sure to follow.

He will continue to maintain his present business, Catering by Don, and phoning that number will also reach him in regard to parties, banquets and group lunches and dinners at the San Geronimo clubhouse, which will be able to handle 200 in the banquet room and that many more in the dining room and lounge. There are few places in the country that can accommodate 400 hungry people, and this feature is bound to attract many groups.

Otherwise, food service at the clubhouse will involve breakfast and lunch seven days a week. The dining room will be open from 5:30 a.m. to 3 p.m.—and to 5 p.m. Saturdays and Sundays. Later on there will also be a snack bar. And in May when the weather is warmer, the dining room may remain open for dinners on Saturday and Sunday nights. All these facilities are open to the public, of course.

Don is not unknown in San Geronimo. Some of you remember that he opened the dining room at the Oak Tree Inn a number of years ago. And you will certainly recall his food service at McKee's, San Rafael, as well as his outside catering laurels.

It's not certain at this writing, but the clubhouse may start serving by next Wednesday.

MOST RECENTLY opene
restaurant in Marin appears
be a family hof brau and pizz
house in San Rafael known
The Round Table.

This is located at the nort
east corner of Fourth Street a
Tamalpais Avenue, just acro
the railroad tracks from
Petite Auberge. But if you expe
to find pizza dough twirling hi
in the air Italian style her
you'll have a long wait. The re
taurant makes it own dough b
shapes it by machine.

The names of its 15 varieti
of pizzas never appeared on a
Italian menu. They bear su
designations as "King Arthur
Supreme," Sir Launcelot's D
sire," "Pride of Camelot
"Morgan - la - Fey's Revenge
and so on. Idea behind the wh
thing is that pizzas were said
have been introduced to Engla
back in the days of King Arth
and Queen Guenevere by the
trepid Launcelot himself — a
though it could have be
Guenevere, who was thought
have been a Roman.

Methinks the early Camel
pizza formulae have a familia
ring, however, or at least t
ingredients do: Salami, chee
and tomato, anchovies, peppe
oni, olives, etc. Perhaps it
the way they're put togeth
that counts.

The Round Table is a fra
chised operation headquartere
in Palo Alto. I understand thes

KNIFE FORK &

Good Service Available at San Geronimo Golf Course - Mar 18, 1966

Clipped By:

Jeffrey_A_Tayler
Wed, Jul 7, 2021

RELEVENT PAGES FROM *IMAGES OF AMERICA – SAN GERONIMO VALLEY* (OWEN CLAPP, 2019)

This photograph from the Gardner family collection shows the Roy ranch in April 1950, before the golf course had been dreamed up and before Sir Francis Drake Boulevard was rerouted through the Roy property in the mid-1950s. (Courtesy Gardner family collection.)

The Roy House, as it is commonly known, was abandoned in the late 1970s but retained most of its original features and decorative finishes. All wood, including the siding and finish work, was milled from redwood trees on the Roy family's 420-acre property, which they purchased from Adolph Mailliard in 1868. This photograph was taken in 1973. (Courtesy Marin History Museum.)

These excellent aerial photographs show the San Geronimo National Golf Course under construction in September 1965. The above photograph shows the Roy house and barns at right and Roy's Redwoods at left center. The photograph below shows the west end of the course and Lagunitas School. The fairways are just partially completed at this point, and ponds are just being dug. (Both, courtesy Anne T. Kent California Room, Marin County Free Library.)

May 1964 represented the end of an era for the Roy ranch. This dramatic photograph shows a crane lowering the last silo on the ranch, which is being cleared to make way for the San Geronimo National Golf Course. Jess Miller, of Petaluma, purchased this silo for use on his farm. The silos were previously used to store green corn for the Ralph and Douglas Roy dairy herd. (Courtesy Anne T. Kent California Room, Marin County Free Library.)

APPENDIX B
Preparer's Qualifications

W. Brad Brewster

141 Pierce Street
San Francisco, CA 94117
(415) 519-0254
email: brad.brewster@brewsterpreservation.com

SUMMARY OF PROFESSIONAL EXPERIENCE

Brewster Historic Preservation, San Francisco, CA *January 2017 - Present*
Principal and Founder

- Consulting architectural historian and preservation planner, preparing historic architectural evaluations and multi-property surveys under CEQA and NEPA/Section 106 for public and private clients in the Bay Area.

Environmental Science Associates (ESA), San Francisco, CA *September 2004- August 2016*
Senior Architectural Historian, Manager

- ESA's Senior Architectural Historian and Manager within the Bay Area Cultural Resources Group
- Specializing in historic architectural resource surveys and evaluations under CEQA and NEPA/Section 106
- HABS/HAER documentation specialist
- Significant marketing goals and management responsibilities

Carey & Co. Inc., Architects, San Francisco, CA *February 2003 – September 2004*
Senior Project Manager, Preservation Planning

- Senior Project Manager for historic preservation products under CEQA and NEPA
- Specializing in historic building surveys and evaluations, as well as cultural resource sections under CEQA and NEPA/Section 106
- Experience with implementing mitigation measures, such as historic documentation (HABS/HAER) and public interpretation efforts
- Experience managing architects, architectural historians and materials conservators
- Significant marketing responsibilities

EIP Associates, San Francisco, CA *March 2001 - February 2003*
Senior Project Manager, Environmental Planning

- Senior Project Manager for environmental review documents under CEQA and NEPA
- Specializing in EIRs for large and complex urban in-fill projects in San Francisco and the Bay Area
- Experienced in managing large project teams with numerous subconsultants and accelerated schedules
- Specific expertise in historic-architectural resources
- Extensive marketing experience, including managing and writing proposals, attending interviews

EDAW, Inc. San Francisco, CA and Seattle, WA *July 1996 – January 2001*
Project Manager, Environmental Planning

- Managed numerous EIRs under CEQA for various municipalities and private developers, as well as EISs under NEPA for various federal agencies (DoD, BLM, FERC, etc.)
- Specializing in historic architectural resource surveys and management/treatment plans, Section 106 review
- Directly involved with proposal writing and other major marketing efforts

The Bentley Company, Moffett Field, CA *March 1993 – June 1994*
Environmental Planner

- Contract Planner for NASA Ames Research Center (now NASA Research Park) at the former Moffett Naval Air Station
- Co-author of the *Moffett Field Comprehensive Use Plan* to guide NASA development at Moffett Field

Brady and Associates (now LSA), Berkeley, CA *July 1992 – March 1993*
Environmental Planner

- Contributed significantly to numerous Initial Studies and EIRs for California cities and counties
- Wrote various general plan elements for California communities

EDUCATION

1994- 1996	Master of Urban Design and Planning, with Certificates in Urban Design and Historic Preservation, University of Washington, Seattle, WA
1987-1992	Bachelor of Science in City and Regional Planning California Polytechnic State University, San Luis Obispo, CA

AFFILIATIONS

California Preservation Foundation (CPF)
National Trust for Historic Preservation (NTHP)
Society of Architectural Historians (SAH)