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FRED BALLERINI
BIOLOGICAL AND HORTICULTURAL SERVICES

October 27, 2023

To: Lorenzo Ferlinghetti
P.O. Box 614
Bolinás Ca. 94924

RE: **Biological Resource Review for Test Well Permit**
APN 418-121-049
39350 Highway 1
Big Sur, CA 93920

Dear Mr. Ferlinghetti,

Per your request, on September 25, 2023, I visited the subject parcel located at the 39350 Highway 1 in Big Sur, to review the biological resources on the subject parcel in relation to a proposed Well Development. The purpose of this 8-page resource assessment is to document the findings of a biological survey conducted within the project area and to provide recommendations to minimize potential well development impacts to a less than significant level.

The Big Sur Coast Land Use Plan (LUP), the California Natural Diversity Data Base (CNDDB) maintained by the State of California Department of Fish and Wildlife (DFW), the United States Fish and Wildlife Service (USFWS) Information for Planning and Consultation (IPaC) Resource List and the California Native Plant Society Rare Plant Rank database (CRPR) were utilized to determine known populations of Federal, State, and locally listed rare, threatened and endangered habitat, plant and wildlife species on or in the vicinity of the subject project site located in the Point Sur USGS 7.5 Quadrangle. In addition, personal observational history from past site visits of Bixby Canyon area were utilized for the site assessment.

Findings:

The 2.61-acre developed residential parcel lies within the lower Bixby Creek drainage corridor with a dominant Riparian natural plant community (*ESHA*) found throughout the parcel. The vegetation is characteristic of the coastal Santa Lucia Range river corridors with the river bank lined with white alder (*Alnus rhombifolia*) and arroyo willow trees (*Salix lasiolepis*) growing beneath coast redwoods and riparian hardwoods. Understory along the river bank includes native giant chain ferns (*Woodwardia fimbriata*), redwood sorrel (*Oxalis oregana*), common horsetail (*Equisetum arvense*), thimbleberry (*Rubus parviflorus*) and stinging nettle (*Urtica dioica*). Moving away from the river banks, the vegetation along the Bixby Canyon corridor is dominant with arroyo willow and coffeeberry (*Frangula californica*) with a thick bramble of mixed understory species such as cream bush (*Holodiscus discolor*), California blackberry (*Rubus ursinus*), poison oak (*Toxicodendron diversilobum*), California hedgenettle (*Stachys bullata*), western sword fern (*Polystichum munitum*) and diverse herbaceous species found throughout canyon floor growing in microhabitat species compositions directly correlated to varying sun and shade exposure. The dry canyon slopes outside the parcel transition to coastal scrub alliances to the north and mixed redwood and oak woodland to the south.

Historical use of the canyon stretches back thousands of years with the Ohlone (or Costanoan) tribelets found north of Point Sur that utilized and occupied the canyon. Big Sur pioneers began

arriving in the late 1800's and several developments in the canyon, including the Rainbow Lodge and the original Big Sur Post Office found along the west side of the Bixby Creek on Bixby Creek Road near where the Old Coast Road crosses Bixby Creek, predated the opening of Highway 1 in 1937. Within the subject parcel, a trout pond development was constructed in 1929 and portions of the concrete ponds remain on site along with other development features including structures from the early 1970's.

Entrance to the subject parcel is accessed from Bixby Creek Road along an existing dirt driveway into the parcel where thickets of arroyo willow, coffeeberry and riparian vegetation flank the entry drive along with a stand of coast redwoods found in pockets along the parcel.



Entry driveway (facing northeast) on parcel from Bixby Canyon Road.

The proposed well location is sited adjacent to the Bixby Creek watercourse, approximately 30-feet southwest from the river bank, along the northern boundary of the parcel in an area that shows signs of previous development of an old homestead site. Several large landscape-introduced Monterey cypress trees (*Hesperocyparis macrocarpa*) and Monterey pines (*Pinus radiata*) are found along the flat canyon terrace with several lower-hanging cypress limbs (<6" diameter) that will require pruning to accommodate the well installation equipment. Select pruning of lower limbs (up to 8' high) will also comply with local fire mandates to eliminate potential fire ladders. Monterey cypress and Monterey pine are California native tree species indigenous to the Monterey peninsula and have naturalized in Big Sur from ongoing landscape introductions, though their presence in Big Sur is outside their native ranges and in this setting they are considered an invasive species due to their ability to encroach, degrade and shade-out surrounding native sensitive habitat communities.

Understory vegetation in the shady, terraced well impact zone has been kept mowed as with other areas around the homestead portions of the parcel. Well equipment and machinery access will be isolated to the existing driveway and direct vegetation impacts from drilling and staging equipment are sited in fuel management areas containing marginal native habitat with California blackberry as the dominant ground cover species interspersed with California hedgenettle and mugwort (*Artemisia douglasiana*) found growing in a thatched matrix that is seasonally mowed. Highly invasive cape ivy

(*Delairea odorata*) is pervasive across the understory floor and expands into the lower canopy of surrounding shrubs and willows along the parcel and throughout the Bixby Canyon.



Low cypress limbs along driveway leading to drill site.



Staked drilling location in mowed blackberry bramble.



Staked (flagged) well location within dominant blackberry understory (September 25, 2023).

Quality riparian vegetation is found adjacent to the cleared well area in surrounding willow groves and along the banks of the Bixby Creek. *Riparian* natural communities are recognized as environmentally sensitive habitat (ESHA) under the provisions of the Big Sur Coast LUP (Ref. Policy 3.3.3.A.7) and recognized as “rare and worthy of consideration” by the California Department of Fish and Wildlife. No impacts are proposed within this plant community and recommendations are included below for daily biological site monitoring and habitat protection measures to ensure project impacts are restricted to the well development zone and remain less than significant to biological resources outside the proposed development area.

CDFW and USFWS published special status occurrence data within the project USGS quadrangle and surrounding quadrangles were evaluated for the parcel with each species assessed for the potential to occur on site. No special status floristic species were noted within the proposed impact zone and none are expected to occur due to the lack of plant diversity, habitat community and historical clearing and mowing regime that has occurred in the proposed well development area. Several special status wildlife species have the potential to exist on site and recommendations are included in the below section to provide biological monitoring and protection measures to ensure project impacts to sensitive biological resources are reduced to a less than significant level.

The parcel lies within the federally designated critical habitat range for the federally-threatened California red-legged frog (*Rana draytonii*) and federally-endangered foothill yellow-legged frog (*Rana boylei*). No visual sightings were noted but they are presumed to be present on site due to the suitable habitat conditions along the creek corridor.

The coast range newt (*Taricha torosa*), a CDFW-listed species of special concern, has the potential to occur within the development area. Pre-construction monitoring recommendations are included in the following section to reduce potential impacts to less than significant. The CDFW-listed Pacific lamprey (*Entosphenus tridentus*) have potential to occur in Bixby Creek and the federally-threatened steelhead (*Oncorhynchus mykiss irideus*) are documented occurring in the Bixby Creek waters. The augering location is sited 30-feet from the creek bank and no impacts to the creek or creek banks are proposed. Recommendations below include protocols for monitoring by the project biologist to ensure no direct or indirect impacts occur to water quality of aquatic resources.

Monarch butterflies (*Danaus plexippus*) are a federal candidate for listing and have potential to overwinter on site due to the existing tree canopies present and sheltered conditions on the subject and neighboring parcels. Butterfly overwintering roosting sites are recognized as Environmentally Sensitive Habitat Areas in the Big Sur Coast LUP. Any disturbance to roosting trees or loud activities near roosting sites can disrupt the overwintering butterflies and would be considered a significant impact. Recommendations are included in the below section to conduct pre-construction monitoring (and establish buffer zones if present) if augering actions are planned within the butterfly overwintering period (mid October to end of February).

The Monterey dusky footed woodrat (*Neotoma macrotis luciana*) is a CDFW species of special concern and is common to various shrub and forested vegetation types within the Big Sur region. Suitable habitat exists on the parcel though surveys noted no nests occurring within the proposed well development area and no impacts are anticipated with the proposed well installation.

Impacts and Recommendations:

The proposed well location has been coordinated and sited to avoid direct soil disturbance impacts to nearby sensitive riparian habitat, though well installation impacts will be in close proximity (approximately 30 feet) to the aquatic resources in the Bixby creek. The equipment staging shall be sited on the existing mowed area within the low-growing blackberry bramble. Augering rig ingress and egress access shall occur within the existing dirt driveway. The project proposes a shallow well installation augered on a point bar (alluvium deposition area on the inside bend of the Bixby Creek). The proposed low-impact, augering method shall be limited to the area necessary for the well development (Ref. LUP Policy 3.3.2.4) and executed using a truck-mounted 10" hollow stem auger with an estimated hole depth of 20-feet. Upon completion of the augering, a 20-foot casing (5" diameter) will be installed followed by backfilling using clean filter pack coarse sand. Stockpiled soils (estimated at 1-cubic yard) from augering tailings will be staged directly adjacent the excavated hole along the south side of the hole (away from the creek) then distributed on site in the non-riparian zone around the well head.

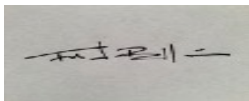
With the integration of the recommendations below, the project is consistent with regulations for development adjacent to environmentally sensitive riparian habitats (Ref. Big Sur Coast CIP Section 20.145.040.C.1.c) and the well development impact is reduced to a level at which the long term maintenance of the habitat is assured as no disruption/soil disturbance to riparian ESHA habitat is proposed. CIP policies (Ref. Section 20.145.040.C.1.d.) requires all development to be set back 150-feet from banks of perennial streams (Bixby Creek), though a reduction in the required setback is allowed if it is demonstrated in the biological assessment that a reduced setback is sufficient to protect existing riparian vegetation from the impacts of development. As previously discussed above, low-hanging (<8' high) Monterey cypress and Monterey pine tree limbs will require pruning to accommodate equipment access and vegetation impacts to the low-growing, seasonally-mowed blackberry bramble will be required for the well augering and soils staging. Estimated impacts to the blackberry understory area are restricted to the 10" auger hole footprint and a 5' x 5' soil staging area adjacent to the auger hole. The area is expected to self-regenerate with aggressive California blackberry and associated understory species that pervade the work zone. Under the guidance and

site monitoring of the biologist overseeing the daily operations of the installation, the project is expected to have an insignificant level of impact to sensitive resources found adjacent to the well area. The following measures are recommended to reduce potential biological impacts from the proposed well development to a less than significant level.

- a. Prior to mobilization, Monarch butterfly monitoring shall occur to determine the presence or absence of the butterflies potentially utilizing the trees for overwintering roosting habitat. If their presence exists within 300-feet of the development zone, the biologist will develop protocols for avoidance and safeguarding the populations. Monitoring results and, if required, avoidance safeguards shall be reported within 7-days prior to mobilization to the County of Monterey Housing and Community Development – Project Planner.
- b. Prior to well equipment mobilization, silt fencing and straw bales as specified on the Well Siting Map (attached) shall be installed under the supervision of the project biologist and photographic evidence submitted to HCD- Planning.
- c. To avoid impacts to potential California red-legged frogs (CRLF), Foothill yellow legged frogs (FYLF), and the coast range newt that may be present on site, the qualified project biologist shall provide 'contractor education' for all well equipment personnel involved with the project. Contractor education training shall take place prior to installation of habitat protection measures (see attached Well Siting Map for protection measure specifications). Additionally, a pre-construction survey by the qualified biologist shall take place the morning of angering equipment mobilization. The biologist shall submit a certification letter to the HCD-Planner to document the training and pre-construction survey results. If CRLF or FYLF are found and these individuals are likely to be killed or injured by work activities, work shall stop in that area until the frogs have moved on their own out of the work area and the USFWS has been contacted. If coast range newts are observed, the biologist shall relocate the newts outside the work zone into suitable habitat on site.
- d. During each morning prior to work activities of the well installation operation (anticipated to be a three-day project), the project biologist shall monitor the work zone for the potential presence of the CRLF, FYLF and coast range newt.
- e. To prevent inadvertent entrapment of CRLF, FYLF or newts during project activities, the augered, steep-walled hole will be covered at the close of each working day with plywood or similar materials. Prior to filling any excavated areas, the areas will be thoroughly monitored by the biologist for potentially trapped animals. CRLF and FYLF are most actively foraging and dispersing during dawn and dusk hours. As a result, all construction activities should cease one half hour before sunset and should not begin prior to one half hour after sunrise.
- f. The project biologist shall delineate and flag the excavated soils staging area adjacent (south) to the well location.
- g. Mobilization of excavation equipment into project location shall utilize egress and ingress routes through the existing driveway. Use of heavy equipment and parking/staging shall be restricted to areas within the designated well installation area as delineated by the project biologist and excluded from any riparian vegetated areas.
- h. After completion of the well installation and removal of habitat protection measures, the applicant shall provide the HCD-Planner with written certification by the qualified project biologist that all protections for natural vegetation and wildlife were complied with during the well installation activities. Failure for the contractor to avoid impacts to riparian habitat or riparian resources shall require notice to the HCD-Planner and the project will be assessed with mitigation restoration compliance actions for any corrective measures as needed and potential fines.

Please phone or email if you have any questions or require further analysis.

Sincerely,



Fred Ballerini
Consulting Biologist

Ferlinghetti Well Siting Map

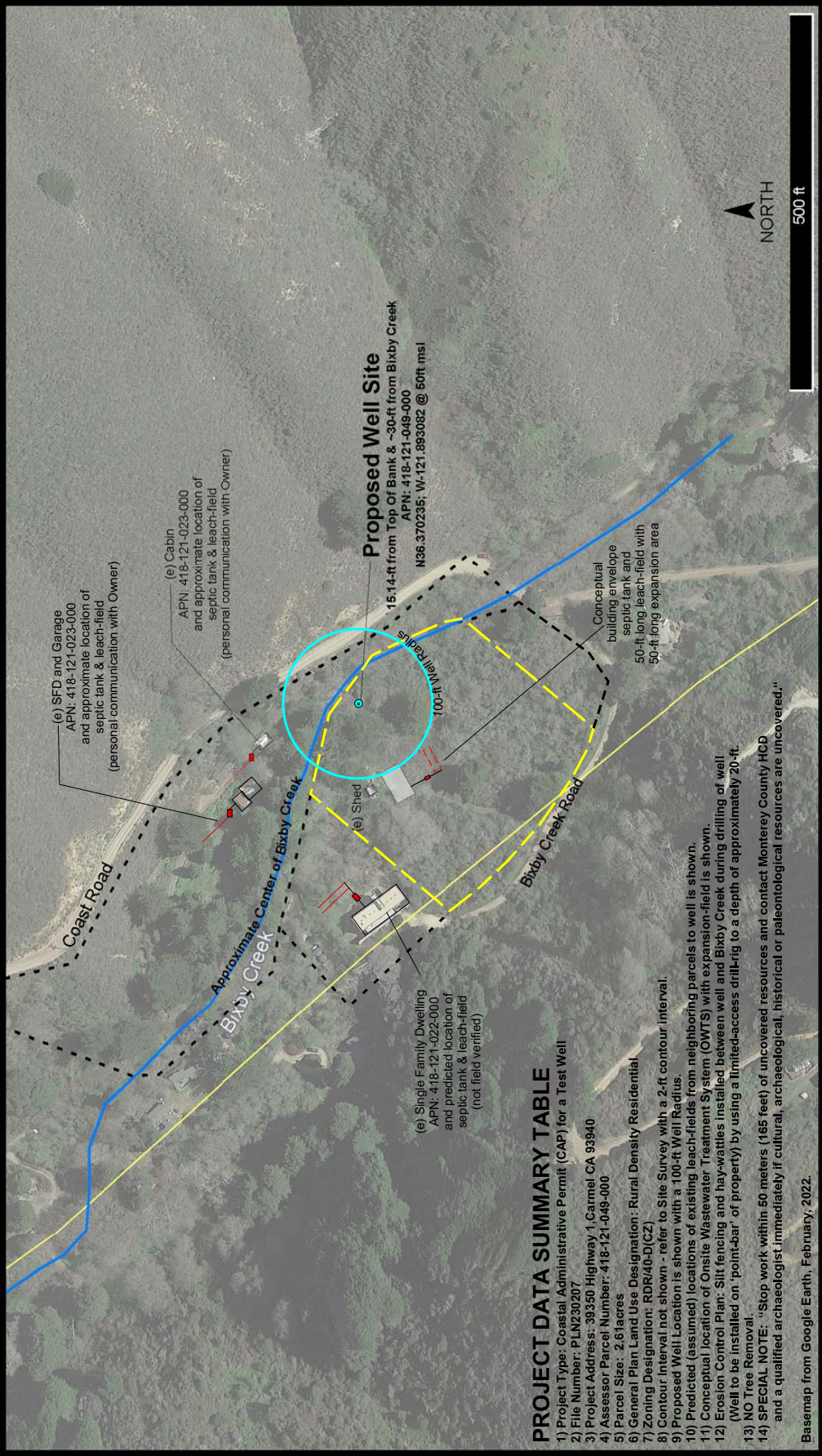


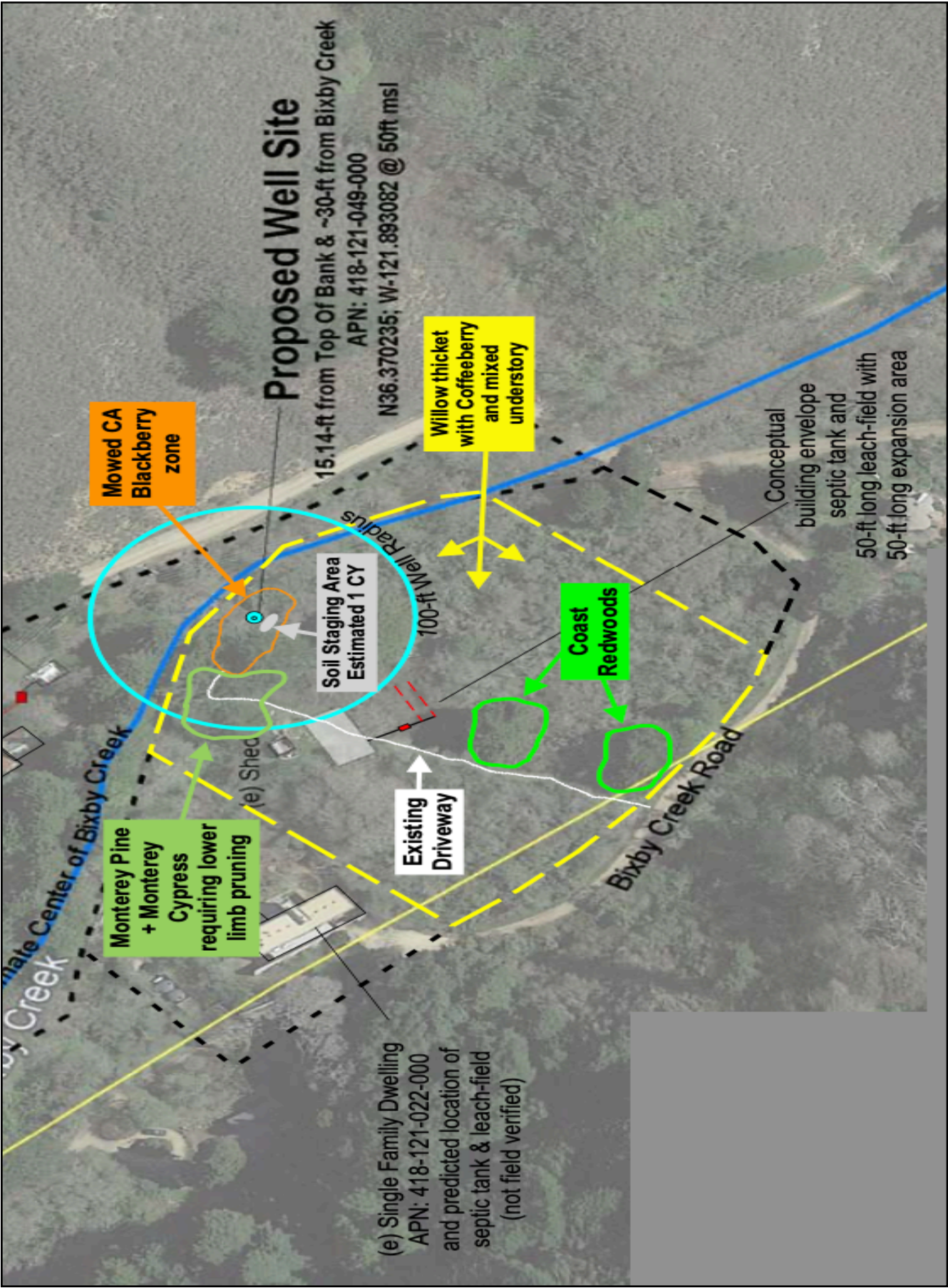
FIGURE
2

WELL SITING MAP
39350 Highway 1
BIG SUR, MONTEREY COUNTY, CALIFORNIA



AB 69623, Revised 7/2023
Ferlinghetti Well Siting Map

Ferlinghetti Well Siting Map with Vegetation Notes



Regional Map

