COAST RIDGE ECOLOGY LLC
BIOLOGICAL SURVEYS • MONITORING • PERMITTING • RESEARCH

September 1, 2022

Camille Leung
Planning and Building Department
455 County Center, Second Floor
Redwood City, CA 94063

Subject: *Clarification on the Status of Arroyo Willow, Concave Topography and Hydric Soils Within Riparian Corridors and Wetlands*

Dear Ms. Leung:

This letter is in response to a request for clarification on the status of Arroyo Willow (*Salix lasiolepis*), concave topography, and hydric soils in regards to the property at 779 San Carlos Avenue (APN 047-105-020) in the unincorporated El Granada area of San Mateo County. I have conducted assessments and mapping of Riparian Corridors and Wetlands within San Mateo County since 1995, in accordance with the US Army Corps of Engineers 1987 Manual for conducting Wetland Delineations[1], and with the standards in the San Mateo County Mid-Coast Local Coastal Program (LCP)[2].

Ms. Roberts, on behalf of Green Foothills, states in her email (to Camille Leung, County Planner on August 8, 2022):

"Due to the presence of Arroyo Willow in the lower area of the subject property [(APN 047-105-020)], the area described as "Riparian" by Coast [Ridge] Ecology is also a wetland, per CCC determination for Dispute Resolution 2-9-1994-EDD (Ralston, single family residence on a 20,000 sq. ft. parcel at the end of Hermosa Avenue, unincorporated Miramar, San Mateo County)".

This is not an accurate statement in regard to the biology of Arroyo Willow, nor is it accurate in regard to policies 7.7 and 7.14 in the San Mateo County LCP (2013). Arroyo willow **is** listed as a riparian corridor species under the Section 7.7 Definition of Riparian Corridors but **is not** listed as a wetland species under section 7.14 Definition of Wetland in the LCP. See text cited below from the San Mateo County Mid-Coast LCP.

The LCP states the following for Definition of Riparian Corridors and Definition of Wetlands:

RIPARIAN CORRIDORS
7.7 Definition of Riparian Corridors
Define riparian corridors by the "limit of riparian vegetation" (i.e., a line determined by the association of plant and animal species normally found near streams, lakes and other bodies of freshwater: red alder, jaumea, pickleweed, big leaf maple, narrow-leaf cattail, ***arroyo willow****, broadleaf cattail, horsetail,*

[1] https://www.lrh.usace.army.mil/Portals/38/docs/USACE%2087%20Wetland%20Delineation%20Manual.pdf

[2] https://www.smcgov.org/media/73646/download?attachment

creek dogwood, black cottonwood, and box elder). Such a corridor must contain at least a 50% cover of some combination of the plants listed.

WETLANDS

7.14 Definition of Wetland
Define wetland as an area where the water table is at, near, or above the land surface long enough to bring about the formation of hydric soils or to support the growth of plants which normally are found to grow in water or wet ground. Such wetlands can include mudflats (barren of vegetation), marshes, and swamps. Such wetlands can be either fresh or saltwater, along streams (riparian), in tidally influenced areas (near the ocean and usually below extreme high water of spring tides), marginal to lakes, ponds, and man-made impoundments. Wetlands do not include areas which in normal rainfall years are permanently submerged (streams, lakes, ponds and impoundments), nor marine or estuarine areas below extreme low water of spring tides, nor vernally wet areas where the soils are not hydric.

In San Mateo County, wetlands typically contain the following plants: cordgrass, pickleweed, jaumea, frankenia, marsh mint, tule, bullrush, narrow-leaf cattail, broadleaf cattail, pacific silverweed, salt rush, and bog rush. To qualify, a wetland must contain at least a 50% cover of some combination of these plants, unless it is a mudflat.

A riparian corridor is essentially a streamside forest dominated by woody vegetation, and the multiple tree species listed under section 7.7 (Definition of Riparian Corridors) illustrates this (i.e., red alder, big leaf maple, arroyo willow, creek dogwood, black cottonwood, and box elder). Alternatively, no tree species (or other woody vegetation) are listed under section 7.14 (Definition of Wetlands).

The Montecito Riparian Corridor, which is located to the north of the Lacasia property (APN-105-020), is a forested riparian feature associated with an intermittent creek. There is a defined creek channel within the approximate center of the corridor that has an approximate channel width of 5 feet and is incised approximately 5 feet (channel bank height), (CRE, 2020). The Montecito Riparian Corridor is densely forested with mature arroyo willow forest vegetation (over 50% cover) throughout most of its length and width. The surrounding topography consists of uplands that slope down to the creek, including the adjacent uplands where Mr. Lacasia's property is located at 779 San Carlos Avenue. This is evident from previous field surveys by Coast Range Biological in 2004, by Coast Ridge Ecology in 2013 and 2020 (attached), and from Google Earth imagery.

Arroyo willow is a tree/shrub that is more often growing in riparian areas that are not wetlands, but it has plasticity to tolerate saturated conditions, and is sometimes found growing on the edge of wetlands and partially within wetlands. <u>This is also true for other riparian trees such as red alder, coast dogwood, and black cottonwood, among others</u>. Arroyo willow is often found in wide swaths (thickets) because it can tolerate drier conditions where the water table is lower and there is no soil saturation, such as riparian corridors and uplands, and this is essentially consistent with what defines a 'riparian' species. Alternatively, all of the plants listed as examples for the 50% cover requirement in Policy 7.14 Definition of Wetlands are species that occur in freshwater marsh and saltmarsh habitats, and primarily grow in saturated soil conditions (e.g., cordgrass, pickleweed, jaumea, frankenia, marsh mint, tule, bullrush, narrow-

leaf cattail, broadleaf cattail, pacific silverweed, salt rush, and bog rush), which suggests that areas that would fall under the category of wetlands would have wetland hydrology, hydric soils, and/or OBL (obligate) wetland plant species.

If Arroyo Willow is determined to be a wetland species, then other trees/shrubs listed as riparian under section 7.7 would also qualify as wetland, because they also can tolerate saturated soils as well as riparian and upland areas (i.e., red alder, box elder, creek dogwood). If Arroyo Willow is determined to be a 'wetland', then the Definition of Riparian in policy 7.7 would no longer apply, as many - if not all - riparian plants and areas previously defined as riparian would now meet the definition of wetland and be lumped under policy 7.14 as Wetlands. This would not make sense either biologically nor from a regulatory perspective and would constitute a major policy shift that would create unnecessary confusion in designating what constitutes a Wetland versus a Riparian Corridor in the Coastal Zone.

The policies as stated in the San Mateo County LCP, provide a defensible definition that allows wetland scientists to differentiate between riparian corridors, wetlands, and uplands for informing land use decisions. Changing the status of a riparian corridor species (Arroyo Willow) under section 7.7, to a wetland species under section 7.14 is not supported by the science or by the policies as stated in the San Mateo County LCP.

In the letter dated June 13, 2021, from Lennie Roberts with Green Foothills to Lisa Grote (County Zoning Officer, Ms. Roberts states:

"*Due to the Arroyo willow, spreading rush and slough sedge, any future development of this parcel must comply with the LCP-required wetland 100-foot buffer zone; this setback may be reduced to no less than 50 feet only where no alternative site or design is possible, and adequacy of the alternative setback to protect wetland resources is conclusively demonstrated to the satisfaction of the County and CA Fish and Wildlife, per LCP Policy 7.18.*"

There is some overlap in plant species composition between wetlands and riparian areas, which is why some of the plants listed under section 7.7 Definition of Riparian Corridors are also listed under section 7.14 Definition of Wetlands (e.g., jaumea and narrowleaf cattail). What is more important in determining a Wetland versus a Riparian Corridor is <u>the dominant vegetation (over 50% cover), and the hydrology of the feature</u>. Calling out the presence of one individual plant as evidence of a site being a 'wetland' or a 'riparian' area' is not logical or consistent with the definition of Riparian Corridors and Wetlands in sections 7.7 and 7.14.

<u>Hydric Soils and Topography</u>

The definition of 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*" (USDA Soil Conservation Service, 1994).

Because of the slope of the property at 779 San Carlos Avenue, it's highly unlikely for hydric soils to be present because water has to pool or pond (continuous saturation, flooding or inundation) for a minimum of 14 days (for most soils) for hydric soil indicators to develop. Saturated streambeds and lakebeds may have hydric soils, but these features are not considered as wetlands, as streams and lakes (up to the water's edge/ Ordinary High Water Line) are considered Waters of the State and/or Waters of the US, depending on whether they

drain into a navigable waterway[3]. The streambed associated with the Montecito Riparian Corridor has a defined channel, and this channel would likely be considered Waters of the State and Waters of the US. This channel is over 150 feet from Mr. Lacasia's property boundary (CRE, 2020).

I conducted a site visit to Mr. Lacasia's property on August 31st, 2022. The property includes an upland area on the east side (Photo 1), and a portion of the Montecito Riparian Corridor on the western side. The eastern portion of the property is dominated by upland vegetation (i.e., coyote brush, poison oak, pampas grass, iceplant and French broom). To the west of the property near the lower, western property line boundary, the topography flattens out with more hummocky ground, and the vegetation on site is still consistent with section 7.7 definition of a Riparian Corridor (Photo 2). No standing water was observed in this area. This area has over 50% cover Arroyo Willow, and understory plant species identified in this area during the field visit are listed below. No obligate wetland plant species were observed, including slough sedge (*Carex obnupta*). In addition, spreading rush (*Juncus patens*) a facultative species, was not observed.

California blackberry (*Rubus ursinus*), co-dominant
twinberry (*Lonicera involucrata*), co-dominant
poison oak (*Toxicodendron diversilobum*)
thimbleberry (*Rubus parviflora*)
creek dogwood (*Cornus sericea*)
pink-flowering current (*Ribes sanguineum var. glutinosum*)
horsetail (*Equisetum sp*.)

Also, within the western area of the property, is a large, active San Francisco dusky-footed woodrat (*Neotoma fuscipes annectens*) midden (i.e., nest structure), (Photo 3). This species is a California species of special concern. SF dusky-footed woodrat middens are frequently found in uplands and riparian areas but are not present in wetland areas where the nests would be seasonally flooded. This nest is well protected from any potential impact from development, as the nest is within the riparian corridor that would be protected, and more than 60 feet from the project area.

It should be noted that most riparian areas will have at least some overlap with wetland habitats in species composition, as riparian areas can have flat topography, and even have some concave topography within them, just as wetland areas may have some component of riparian vegetation and convex topography along edges and within the interior in the form of small islands. To parse out small areas of a few square feet in size within the overall habitat feature would create regulatory confusion, as several buffer zones and setbacks would then be applied to a single habitat feature. The definition of what constitutes Riparian Corridor versus Wetland as described in the San Mateo County LCP Sections 7.7 and 7.14, should be adhered to as written, to maintain consistency in how these features are regulated for all landowners within the Local Coastal Program Area.

[3] U.S. Army Corps of Engineers, July 2012. Informational Brochure "What are the Limits of the Corps Jurisdiction", New England District 696 Virginia Road, Concord, MA 01742-2751 website www.nae.usace.army.mil https://www.nae.usace.army.mil/Portals/74/docs/regulatory/JurisdictionalLimits/Jurisdictional_Limits_Brochure.pdf

It is my professional opinion that the riparian corridor on Mr. Lacasia's property, and within adjacent areas, meets the definition of Riparian Corridor, under section 7.7 Definition of Riparian Corridors.

If you have any questions or concerns, please don't hesitate to contact me.

Sincerely,

Patrick Kobernus
Principal Biologist

References

CRE 2020. Letter from CRE to Rod Lacasia, *Assessment of Riparian Boundary on the Lacasia Property (APN 047-105-020) in El Granada*, *California*. August 13, 2020.

USDA Natural Resources Conservation Service 1994. Definition of Hydric Soils. https://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/use/hydric/?cid=nrcs142p2_053961

Green Foothills, Letter dated June 13, 2021, To: Lisa Grote, Zoning Hearing Officer; From: Lennie Roberts, Green Foothills. Re: June 17, 2021, Zoning Hearing Officer Agenda, Item #2: PLN2020-00448 Coastal Development Permit and Certificate of Compliance (Type B) to legalize a 7,070 sq. ft. parcel at 779 San Carlos Avenue, El Granada; Owner/Applicant: Rodrigo Lacasia Barrios.

Photo 1. Eastern portion of property, near San Carlos Avenue. Photo date: August 31, 2022. Coyote brush, iceplant and pampas grass shown in photo.

Photo 2. Understory vegetation near western property boundary (fence in background is neighbor's property to the west). Photo date: August 31, 2022.

Photo 3. Area near western property boundary. Large, active SFDF woodrat midden in center of photo. Photo date: August 31, 2022.