Delineation of Waters of the United States

for

Pacific Gas and Electric Company's Fulton-Fitch Mountain Reconductoring Project, Sonoma County, California



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1.0 INTRODUCTION

Pacific Gas and Electric Company (PG&E) proposes to reconductor (replace existing conductors with new conductors) a section of the existing Fulton-Hopland 60 kilovolt (kV) Power Line and a section of the Geysers #12-Fulton 230 kV Transmission Line, located in eastern Sonoma County, California (see Attachment A: Site and Vicinity Map). The Fulton-Fitch Mountain Reconductoring Project (project) consists of replacing and removing existing poles, most of which are wood, with a combination of light-duty steel (LDS) or tubular steel poles (TSPs); setting and removing temporary wood poles for shoo-flies and guard structures at locations where conductor crosses public roads or other power lines and at pull and tension sites; establishing required access and construction work areas; and reconductoring the alignment, which entails replacing approximately 9.9 miles of existing conductors on the existing 60 kV power line and approximately 1.3 miles of existing conductor on the existing 230 kV transmission line with new conductors. None of the existing poles along the 230 kV portion of the project are proposed for replacement.

Reconductoring the existing Fulton-Hopland 60 kV Power Line will avoid impacts that would be expected to occur with development of a new power line route. PG&E has also incorporated a series of applicant-proposed measures to address potential project-related impacts.

The project's Draft Biological Resources Technical Report (Garcia and Associates (GANDA) 2012) (herein referred to as the "GANDA report") identified 70 wetlands/water features within the 60 kV portion of the survey area. TRC performed a supplemental field survey in March of 2015 and identified an additional eight water features along the 230 kV portion of the project. Of the 78 features, 11 wetlands and water features located along the 60 kV portion of the project are located close enough to project-related disturbance areas that there is potential for impacts. PG&E determined that the project could avoid impacts to nine of the 11 wetlands and water features with the use of full span bridges and plating to be placed outside of the top of the bank of the features such that no material or impacts occur within the bed, bank, or channel; the remaining two seasonal wetlands will be temporarily impacted by project-related construction and are evaluated as part of this document. All the water features identified along the 230 kV portion of the project will be avoided by project-related activities.

The purpose of this document is to present the results of a formal delineation for these two potentially jurisdictional wetlands. This document also discusses the nine other wetlands and water features located near project disturbance areas identified in the GANDA report; however, they were not formally delineated because the project will not impact them.

This report presents the results of TRC Solutions, Inc. (TRC) review of available literature, aerial photographs, soil surveys (Attachment B: Soils Map), and fieldwork within the survey area. The field survey was conducted according to the technical guidelines provided in the 1987 U.S. Army Corps of Engineers (Corps) Wetlands Delineation Manual and the Regional Supplement to the Corps Wetland Delineation Manual: Arid West Region (Version 2.0) to identify and delineate wetlands that may be subject to regulatory jurisdiction under Section 404 of the Clean Water Act (CWA). Detailed maps illustrating the 11 wetlands and water features located near project-related disturbance areas are provided in Attachment C. The acreages and coordinates for all features identified in the GANDA report are included in Attachment D. Contact information for the project proponent and the TRC project manager are included below.

1.1 CONTACT INFORMATION

Project Proponent

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1.2 JURISDICTIONAL OVERVIEW

The Corps administers and enforces Section 10 of the Rivers and Harbors Act of 1899 and Section 404 of the CWA. Under Section 10, a Corps permit is required for work or structures in, over, or under navigable "waters of the United States." Under Section 404 of the CWA, a Corps permit is required for the discharge of dredged and/or fill material into "waters of the United States."

Typical activities requiring Section 10 permits are:

- Construction of piers, wharves, bulkheads, dolphins, marinas, ramps, floats, intake structures, and cable or pipeline crossings over or under navigable or tidal waters.
- Dredging and excavation within navigable or tidal waters or any obstruction or alteration of any "navigable water of the U.S."

Typical activities requiring Section 404 permits are:

- Addition of fill material in "waters of the U.S." or adjacent wetlands for residential, commercial, or recreational developments.
- Construction of bridges, culverts, revetments, groins, breakwaters, levees, dams, dikes, and weirs in "waters of the U.S." or adjacent wetlands.

1.2.1 Waters of the United States

The term "waters of the United States" is defined in 33 Code of Federal Regulation (CFR) part 328 to include: (i) all navigable waters (including all waters subject to the ebb and flow of the tide), (ii) all interstate waters and wetlands, (iii) all other waters, such as interstate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation or destruction of which could affect interstate or foreign commerce, (iv) all impoundments of waters mentioned above, (v) all tributaries to waters mentioned above, (vi) the territorial seas, and (vii) all wetlands adjacent to waters mentioned above.

Wetlands are defined as "those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support and under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions" [33 CFR §328.3(b)]. Presently, to be a wetland, the feature must exhibit three wetland criteria: hydrophytic vegetation, hydric soils, and wetland hydrology existing under the "normal circumstances" for the site.

The lateral extent of non-tidal waters is determined by delineating the ordinary high-water mark (OHWM) [33 CFR §328.4(c)(1)]. The OHWM is defined by the Corps as "that line on shore established by the fluctuations of water and indicated by physical character of the soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas" [33 CFR §328.3(e)].

2.0 METHODS

2.1 JURISDICTIONAL DELINEATION

This delineation utilized the Corps' 1987 three-parameter (vegetation, hydrology, and soils) methodology to delineate jurisdictional waters of the U.S. The Arid West Supplement was also used in conjunction with the 1987 Corps Manual. Where differences in the two documents occur, the Arid West Supplement was given precedence over the Corps Manual. This methodology requires the collection of data on soils, vegetation, and hydrology at several locations to establish the jurisdictional boundary of wetlands. The 2012 National Wetlands Plant List for the Arid West region was used to determine the wetland indicator status for plant species identified during the field survey.

Prior to beginning the field delineation, TRC reviewed the GANDA report to identify the location of the mapped wetlands and water features within the project survey area. A formal wetland delineation was performed only for the two wetland features that cannot be avoided by project-related activities. Google Earth and shapefile data files provided by GANDA were used to incorporate the other nine wetlands and water features located near project disturbance areas, as identified in the GANDA report, onto the wetland delineation maps included in Attachment C. U.S. Geological Survey (USGS) 7.5-minute series quadrangle maps and Natural Resources Conservation Service (NRCS) soil mapping data for the project area were also reviewed to assist with the field survey.

The fieldwork for the delineation was conducted on November 2, 2012 by TRC biologists Julie Allison and Mike Farmer. The two previously identified wetland areas were assessed, and representative data points were collected to determine the extent of wetland boundaries. A complete list of plant species observed within the delineated wetlands is included as Attachment F

2.2 GPS DATA INTEGRATION

The wetland boundaries for the two features delineated by TRC were mapped with a Trimble GeoXT Global Positioning System (GPS) hand-held unit. This mapping-grade GPS unit is capable of real-time differential correction and sub-meter accuracy. The GPS data was downloaded from the unit and differentially corrected utilizing Trimble Pathfinder Office Software and appropriate base station data, and then converted to an ESRI shape file format. The data was exported to the Geographic Information System (GIS) software in the State Plane coordinate system (NAD 83) with units in U.S. survey feet. Within GIS and ArcGIS, data was edited as appropriate to represent field conditions, and acreages were calculated. Google Earth data files from GANDA were merged with TRC data to create a single wetland file with acreages for each feature. The figures included as Attachment C depict the results of the integrated dataset.

3.0 RESULTS

3.1 SITE LOCATION

The proposed project is located in eastern Sonoma County, California (Healdsburg and Sebastopol USGS 7.5-minute quadrangles). The project alignment runs from the community of Fulton, roughly north through the foothills of the Coastal Range, to the southeast side of the City of Healdsburg. The project has an elevation range of approximately 110 to 600 feet.

The project originates at the Fulton Substation in the community of Fulton. The alignment crosses Highway 101 in a northeasterly direction and runs along the west side of Lavell Road past its intersection with Noonan Ranch Road. The alignment continues north, crossing Deerwood Drive and Mark West Creek, across Old Redwood Highway. It parallels the east side of Faught Road, and then crosses Faught Road where it turns east, and parallels the north side of the road. The alignment turns north at an existing tubular steel pole east of Faught Road, within the south side of Sonoma County's Shiloh Regional Park. From there, the alignment passes through a vineyard and the regional park and crosses Dumps Road. The power line runs north through rangeland and woodlands, skirting more vineyards, and crosses Pool Creek, Chalk Hill Road, and Wright Creek. The power line continues north through Sonoma County's Foothill Regional Park and crosses Windsor Creek and Brooks Road. North of Brooks Road, the power line roughly parallels a ridgeline, crossing lands managed within the Sonoma County Open Space District, including Windsor Oaks Vineyards, and open rangeland. The project terminates on a ridge on the Minaglia Ranch, south of the Russian River and Baillhache Road in Healdsburg.

3.2 EXISTING CONDITIONS

GANDA biologists conducted a survey of existing vegetation, soils, and wetlands and water features located within a study area extending 250 feet on both sides of proposed access roads, work areas, and the project alignment between pole 1/6 on Faught Road and pole 9/5A on Minaglia Ranch. GANDA's survey area covered roughly 480 acres, much of which is comprised of intergrading woodland, grassland, and forest communities. The 230 kV portion of the project surveyed by TRC amounted to roughly 117 acres, of which nearly 90 percent is comprised of developed land such as residential developments, roadways, schools, urban parks, vineyards, and the Fulton Substation.

3.2.1 Vegetation

Vegetative cover within the survey area has been classified into 11 vegetation communities, described below.

Coast Live Oak Woodland and Coast Live Oak Forest

Coast live oak woodland and coast live oak forest are the most common vegetation communities in the survey area, with a combined areal extent of approximately 169 acres. TRC's March 2015 survey included an additional 2.28 acres of coast live oak woodland. The two vegetation types are differentiated by the density of their canopies: coast live oak woodland has an intermittent canopy with a grassy, open understory, while coast live oak forest has a more closed canopy and fewer openings that support herbaceous species. The canopy in both cases is dominated by coast live oak (*Quercus agrifolia*). Other tree species such as madrone (*Arbutus menziesii*), blue oak (*Q. douglasii*), Oregon oak (*Q. garryana* ssp. *garryana*), and

California bay (*Umbellularia californica*) are common; and occasionally California buckeye (*Aesculus californicus*) are present. Common woody plants in the understory include poison oak (*Toxicodendron diversilobum*) and hairy honeysuckle (*Lonicera hispidula* var. *vacillans*). Common herbaceous species growing in the openings between trees and at the woodland edge include slender wild oat (*Avena barbata*), rattlesnake grass (*Briza maxima*), wavy-leaf soaproot (*Chlorogalum pomeridianum*), hedgehog dogtail (*Cynosurus echinatus*), blue wildrye (*Elymus glaucus*), purple needlegrass (*Stipa pulchra*), and common hedge parsley (*Torilis arvensis*). Coast live oak woodland and coast live oak forest are the dominant community types in the foothills above the valley floor, where they intergrade with each other, Oregon oak woodland, and mixed north slope cismontane woodland.

<u>Grasslands</u>

Grasslands are the second most common community type in the survey area, comprising approximately 115 acres of the GANDA study area. The survey area evaluated by TRC in March 2015 included an additional 13.72 acres of grassland. These grasslands consist of areas dominated by low-growing grasses and herbs, with few trees and/or shrubs. Common species in the grasslands are Spanish lotus (*Acmispon americanus*), barbed goatgrass (*Aegilops triuncialis*), slender wild oat, purple false brome (*Brachypodium distachyon*), rattlesnake grass, ripgut brome (*Bromus diandrus*), soft chess (*B. hordeaceus*), sterile brome (*B. sterilis*), hedgehog dogtail, medusahead (*Elymus caput-medusae*), blue wildrye, stork's-bills (*Erodium botrys*), six weeks rattail fescue (*Festuca myuros*), rye grass (*F. perennis*), Harding grass (*Phalaris aquatica*), purple needlegrass, little hop clover (*Trifolium dubium*), and rose clover (*T. hirtum*). Some areas support non-dominant native wildflowers such as clarkias (*Clarkia* sp.), lupines (*Lupinus* sp.), and leptosiphon (*Leptosiphon* sp.).

Mixed North Slope Cismontane Woodland

Mixed north slope cismontane woodland is also common in the study area, comprising approximately 93 acres of the GANDA study area. Canopy openings are common and shrubs are common in the understory. The overstory of this woodland contains the same mixture of species as in coast live oak woodland; however, in the mixed north slope cismontane woodland, no single species regularly dominates the overstory. Common tree species include California buckeye, madrone, coast live oak, blue oak, garry oak, and California bay. California black oak (*Quercus kelloggii*) and grey pine (*Pinus sabiniana*) are also present, though in smaller quantities. Shrub species include common manzanita (*Arctostaphylos manzanita*), coyote brush (*Baccharis pilularis*), hoary honeysuckle (*Lonicera hispidula*), snowberry (*Symphoricarpos mollis*), and poison oak. The herbaceous layer in this mixed woodland is similar to that of the coast live oak woodland.

Oregon Oak Woodland

The Oregon oak woodland community comprises approximately 32 acres of the GANDA study area. This woodland type is dominated by well-spaced, medium-sized Oregon oak trees. Other trees such as California buckeye, madrone, coast live oak, and blue oak are scattered throughout the overstory. Common woody plants in the understory include poison oak, hairy honeysuckle, and snowberry. The herbaceous layer contains grasses and herbs also common to both coast live oak woodland and grasslands. This community type intergrades with coast live oak woodland and mixed north slope cismontane woodland.

Vineyard

Cultivated grape (*Vitis vinifera*) vineyards comprise approximately 32 acres of the GANDA study area. Approximately 10 acres of the vineyard habitat is currently fallow. An additional 21.56 acres of this habitat was mapped within the survey area as part of TRC's March 2015 field survey. An abandoned orchard and a small maintained orchard were included in this category. The vineyards are managed with even-aged grape vines and a mowed ruderal understory. Common understory species include wild oat, soft chess, ripgut brome, various types of filaree, black medic (*Medicago lupulina*), English plantain (*Plantago lanceolata*), little hop clover (*Trifolium dubium*), rose clover, and subterranean clover (*T. subterraneum*). Fallow vineyards are dominated by a thick, weedy coverage of wild oat, field mustard (*Brassica rapa*), common mallow (*Malva neglecta*), Harding grass, blessed milk thistle (*Silybum marianum*), scarlet clover (*Trifolium incarnatum*), and winter vetch (*Vicia villosa*).

Central Coast Live Oak Riparian Forest

Central Coast live oak riparian forest comprises approximately 22 acres of the GANDA study area. This community type is found exclusively in the corridors of larger perennial streams. In these settings, the canopy is dense, multi-storied, and tall, often up to 50 feet. Although coast live oak is the dominant tree in the dense overstory of these corridors, these riparian forests have a more evenly mixed canopy than upland coast live oak communities. This community includes broad-leaved and riparian trees such as big-leaf maple (*Acer macrophyllum*), California buckeye, Valley oak (*Quercus lobata*), interior live oak (*Q. wislizenii*), red willow (*Salix laevigata*), and arroyo willow (*Salix lasiolepis*). Common understory shrubs include blackberry (*R. armeniacus, Rubus ursinus*), snowberry, and poison oak. The streams contain a mix of hydrophytic herbs such as tall nutsedge (*Cyperus eragrostis*), dense willow-herb (*Epilobium densiflorum*), pennyroyal (*Mentha pulegium*), seep-spring monkeyflower (*Mimulus guttatus*), rabbit's foot grass (*Polypogon monspeliensis*) and, on rocks below ordinary high water, the moss *Scleropodium*.

Developed Areas

A small portion of the GANDA study area, approximately 6 acres, is developed as residential homes with driveways, yards, gardens, barns, tennis courts, small orchards, and similar non-natural environments. Conversely, 71.93 acres of developed land were mapped within the TRC survey area, accounting for just over 60 percent of the survey area. As mentioned above, developments along the 230 kV portion of the project include residential developments, roadways, schools, urban parks, and the Fulton Substation.

California Bay Forest

California bay forest covers approximately 2 acres of the GANDA study area. Although California bay can be found scattered throughout wooded vegetation communities in the survey area, it dominates the overstory in California bay forest. Coast live oak and madrone are present in the understory. A small patch of California-tea (*Rupertia physodes*) occurs at the edge of this forest type; while this species isn't listed as "rare," this is an unusual occurrence of a plant species that was found nowhere else in the survey area.

Blue Oak Woodland

Although blue oak is commonly scattered throughout other woodland types in the survey area, approximately 2 acres of blue oak woodland dominated by well-spaced, medium-sized blue oak trees occurs near the southern end of survey area. The understory consists of the same grasses and herbs discussed above under Grasslands.

Douglas'-fir Forest

Douglas'-fir (*Pseudotsuga menziesii*) forest comprises approximately 1.5 acres of the GANDA study area. This community was observed along a drainage, and up an adjacent slope, in the central portion of the study area. California bay and madrone occur in the sub-canopy.

Red Gum Stand

A small stand (less than an acre) dominated by tall red gum trees (*Eucalyptus camaldulensis*) was observed growing on a ridge in the central portion of the survey area.

Agricultural Land

A total of 5.24 acres of the survey area evaluated by TRC are used for grazing horses or cropland. The cropland was fallow during TRC's March 2015 survey.

3.2.2 **Soils**

The NRCS has mapped 20 soil types within the survey area (Attachment B). General characteristics associated with each soil type found within the survey area are described below. The two wetlands formally delineated occur within the Felta very gravelly loam soil series. Soil data indicates that the soils within the survey area are derived from a number of volcanic and sedimentary sources. No serpentine, serpentinite, or gabbro soils are present in the study area.

Table 1: Soil Types within the Study Area

Soil Type(s)	General Description
Arbuckle gravelly loam, 0 to 5	Very deep, well-drained soils that formed in alluvial
percent slopes	materials from mainly conglomerate and
	metasedimentary rocks.
Clear Lake clay, 0 to 2 percent	Very deep, poorly drained soils that formed in fine
slopes	textured alluvium derived from sandstone and shale.
Dibble Clay Loam, 2 to 9 percent	Moderately deep, well-drained soils that formed in
slopes	material weathered from shale and sandstone
Dibble Clay Loam, 9 to 15 percent	(sedimentary origin).
slopes	
Dibble Clay Loam, 15 to 30 percent	
slopes	
Dibble Clay Loam, 15 to 30 percent	
slopes, eroded	
Dibble Clay Loam, 30 to 50 percent slopes	
Dibble Clay Loam, 30 to 50 percent	
slopes, eroded	
Felta Very Gravelly Loam, 5 to 15	Well-drained soils formed in mixed gravelly alluvium from
percent slopes	mixed igneous rocks.
Felta Very Gravelly Loam, 15 to 30	- minou ignoodo roono.
percent slopes	
Felta Very Gravelly Loam, 30 to 50	
percent slopes	
Guenoc Gravelly Silt Loam, 30 to	Moderately deep, well-drained soils formed in material
75 percent slopes	weathered from basaltic (volcanic) rock.

Haire clay loam, 0 to 9 percent	Clayey, mixed, thermic soils. Moderately well-drained;
slopes	slow to rapid runoff; very slow permeability.
Laniger Loam, 30 to 50 percent	Well- to excessively-drained soils. Underlying bedrock is
slopes	rhyolite or rhyolitic tuff (igneous volcanic origin with high
·	silica content).
Positas Gravelly Loam, 9 to 15	Deep and very deep, moderately well-drained soils that
percent slopes	formed in alluvial material from mixed rock sources.
Riverwash	Alluvium from mixed sources.
Spreckles Loam, 2 to 9 percent	Well-drained soils with/derived from tuffaceous
slopes	sediments (volcanic origin).
Spreckles Loam, 9 to 15 percent	
slopes	
Spreckles Loam, 15 to 30 percent	
slopes	
Spreckles Loam, 15 to 30 percent	
slopes, eroded	
Spreckles Loam, 30 to 50 percent	
slopes	
Toomes Rocky Loam, 2 to 30	Very shallow and shallow, well- to somewhat
percent slopes	excessively-drained soils, formed in material weathered
Toomes Rocky Loam, 30 to 75	from tuff breccia, basalt and andesite (volcanic origin).
percent slopes	Trom tan procesa, pasan ana anacene (versame engin)
Yolo loam, 0 to 2 percent slopes	Well-drained, moderately permeable soils on uplands.
Yolo silt loam, 0 to 2 percent slopes	These gently undulating to undulating soils formed in
Yolo clay loam, 0 to 2 percent slopes	very gravelly loamy sediments.
slopes	very gravery loarry securiterits.
	Well-drained; slow to medium runoff; moderately slow
Zamora silty clay loam, 0 to 2	
percent slopes	permeability formed in alluvium from material weathered
	from mixed sedimentary rocks.

3.2.3 Wetlands and Water Features

Depending on characteristics such as topography, vegetation, soils, and hydrologic regime, delineated features are classified into a variety of types. The features documented in the GANDA report were classified into four types: seasonal watercourse, open water, seasonal wetland, and riparian woodland. The eight features mapped within the 230 kV portion of the project during TRC's March 2015 survey included four seasonal watercourses, three drainage ditches, and a riparian woodland (Mark West Creek). Table 2 summarizes the number of features and acreages mapped for each classification. A description of each feature type is provided below.

Table 2: Wetland and Water Features Mapped within the Survey Area

Wetland/Water Feature Type	Number of Occurrences	Total Area (Acres)	
Seasonal Watercourse	44	4.38	
Open Water	2	0.70	
Seasonal Wetland	16	1.32	
Riparian Woodland	13	27.87	

Wetland/Water Feature Type	Number of Occurrences	Total Area (Acres)	
Drainage Ditch	3	0.32	
Total	78	34.59	

Seasonal Watercourse

Watercourses were defined as areas with a defined bed, bank, and channel. Two types of seasonal watercourses were observed within the survey area: ephemeral channels and intermittent creeks. Ephemeral channels were defined as those seasonal drainages that flow for relatively brief periods after rainfall. Ephemeral channels are typically well defined, but contain variable substrates, including rocks or ruderal/non-native grassland. Intermittent creeks were defined as those seasonal drainages that contain flow derived from both rain water and ground water flow during the wet season; flow in intermittent creeks may extend into late spring or early summer. Intermittent creeks typically support some wetland or riparian vegetation within or surrounding the banks. For resource mapping purposes, the two drainage types were mapped together as seasonal watercourses.

Open Water

Open water was defined as ponds supporting unvegetated standing water. Open water within the GANDA study area consists of two man-made ponds located on private property. Generally, the depth of water in these ponds precludes establishment of emergent vegetation, however, both supported a thick surface cover of mosquito fern (*Azolla* sp.). The boundaries of these features were mapped up to the top of bank, as identified with aerial and topographic maps.

Seasonal Wetland

Seasonal wetlands were defined as depressions, ditches, swales, and other low lying areas that are inundated or support saturated soil conditions for a portion of the growing season, and which support wetland vegetation. Soil conditions of seasonal wetlands within the study area are generally dry in late summer through fall. These wetlands are usually supported by direct precipitation and/or overland flow during the wet season. The vegetation composition and structure of seasonal wetlands is highly variable depending on soil type, hydrology, and disturbance levels. Most of the seasonal wetlands mapped in the GANDA study area were dominated by annual species, but may include some perennial species depending on local hydrology. Common plants in seasonal wetlands within the study area include ryegrass, Harding grass, rushes (Juncus bufonius, J. effusus, J. occidentalis, J. patens, and J. xiphioides), curly dock (Rumex cripsus), hyssop, loosestrife (Lythrum hyssopifolia), pennyroval, ox-tongue (Helminthotheca echioides), wild hyacinth (Triteleia hyacinthina), and vernal sweet grass (Anthoxanthum odoratum). In many areas, regular disturbance by cattle has resulted in invasion of the seasonal wetlands by non-native species and invasive exotics from adjacent habitats. Ponding observed indicates that the potential exists for suitable conditions for seasonal wetland habitats to develop in these areas in the absence of regular disturbance.

Seasonal wetlands are widely distributed throughout the survey area and are found in both natural and man-made settings. In many locations, seasonal watercourses that expand into broad terraces and support characteristic seasonal wetland vegetation were mapped as seasonal wetlands based on the wetland community type. Additionally, seasonal wetlands have developed in topographical depressions adjacent to watercourses and open water in areas where overland storm water runoff accumulates prior to passing into the watercourse. Seasonal

wetlands are present within and adjacent to access roads and in the vicinity of several power poles.

Riparian Woodland

Riparian woodlands were defined as areas that support a tree canopy present in association with an intermittent creek. Riparian woodlands in the GANDA study area can be contiguous with upland oak woodland communities, or present as a thin band of tree canopy along small, seasonal watercourses. Although the composition of the vegetative community in some of the study area locations is primarily affiliated with upland communities, all canopy present along watercourses was identified as riparian woodland. The tree canopy of riparian woodlands is dominated by coast live oak, interior live oak, and/or valley oak, and includes riparian species such as arroyo willow and red willow, big-leaf maple, California buckeye, and California bay. Riparian woodlands are found along watercourses throughout the survey area.

Drainage Ditch

Drainage ditches were defined as man-made features created for the sole purpose of collecting and conveying surface water runoff associated with developed land. All three drainage ditches mapped within the survey area are located adjacent to the Fulton Substation. Two narrow ditches collect runoff from the substation and the adjacent vineyard and flow into a wider ditch that coveys flows south and east around the perimeter of the substation before flowing under Mark West Spring Road. The narrow ditches are relatively devoid of vegetation while the wider ditch supports a variety of wetland herbaceous species such as curly dock and spikerush (*Eleocharis* sp.).

3.3 FORMALLY DELINEATED FEATURES

The two features assessed as part of the formal wetland delineation are seasonal wetlands. The wetland determination forms that were used to help determine the limits of the wetland features are included in Attachment F and representative photographs are included in Attachment G.

Seasonal wetland SW1 is 0.13 acre in size and located a quarter-mile west of the power line, adjacent to Mount Weske Drive. An existing access road bisects the wetland and temporary impacts may occur during project construction. The wetland is fairly well-defined and supports a wetland plant community dominated by rushes, pennyroyal, tall nutsedge, and perennial ryegrass (*Lolium perenne*). The western edge of this feature connects with a seasonal watercourse that flows along the edge of the existing access road that was not included in the GANDA report because: 1) it is not within 250 feet of the power line; and 2) it is not crossed by a proposed access road. However, due to its proximity to the access road, this seasonal watercourse is being addressed in this report to help ensure avoidance during project planning and implementation.

Seasonal wetland SW3 is a very shallow, linear depression within the existing access road for pole 6/0. The wetland is 0.04 acre in size and may be temporarily impacted during construction by a proposed pull site/staging area. This is a very marginal wetland given its very discrete boundaries and marginal wetland plant community comprised of perennial ryegrass, quaking grass (*Briza media*), and widely scattered rushes.

4.0 CONCLUSIONS

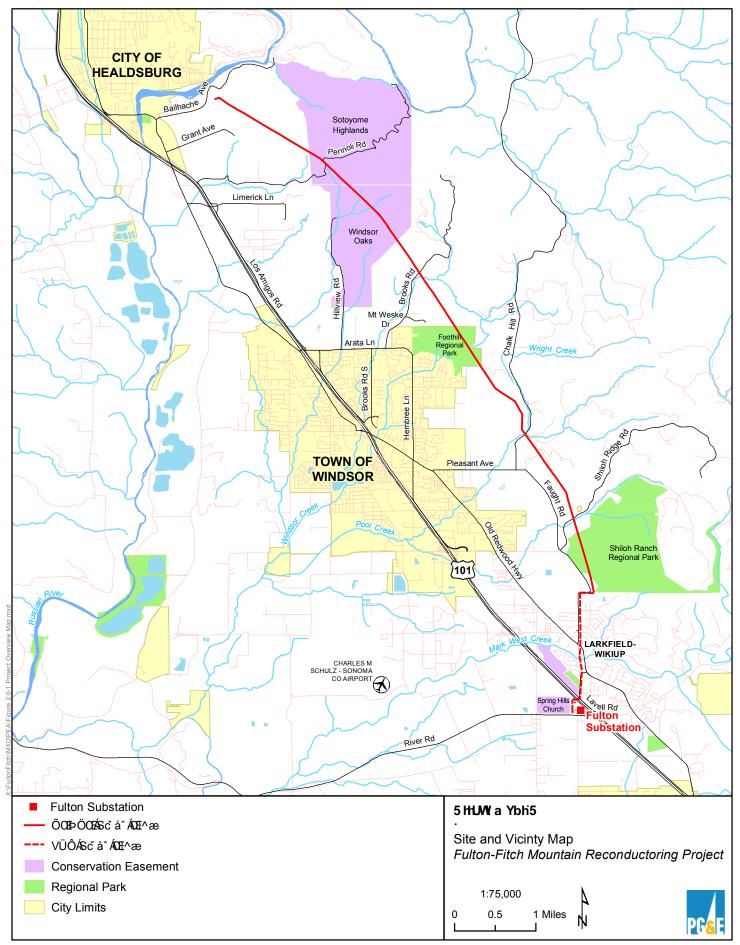
The two seasonal wetland features expected to be temporarily impacted by project-related construction are 0.13 acre and 0.04 acre in size. The two delineated wetlands along with the other nine features located near project-related disturbance areas are depicted on the graphics included as Attachment C. The acreages and coordinates for all 78 wetland and water features mapped within the survey area are listed in Attachment D.

To help expedite the permitting process with the Corps, the project proponent has determined that a Preliminary Jurisdictional Determination form will be submitted to the Corps as part of the application package. The form essentially grants jurisdiction of all wetlands and water features to the Corps for the project, and avoids any extensive jurisdictional analysis by the Corps. The use of a Preliminary Jurisdictional Determination form does not result in a legally binding determination regarding jurisdiction over any wetlands or water features, meaning the project proponent, land owner, or other affected party can request an official jurisdictional determination (i.e., Approved Jurisdictional Determination form) at any time in the future if necessary.

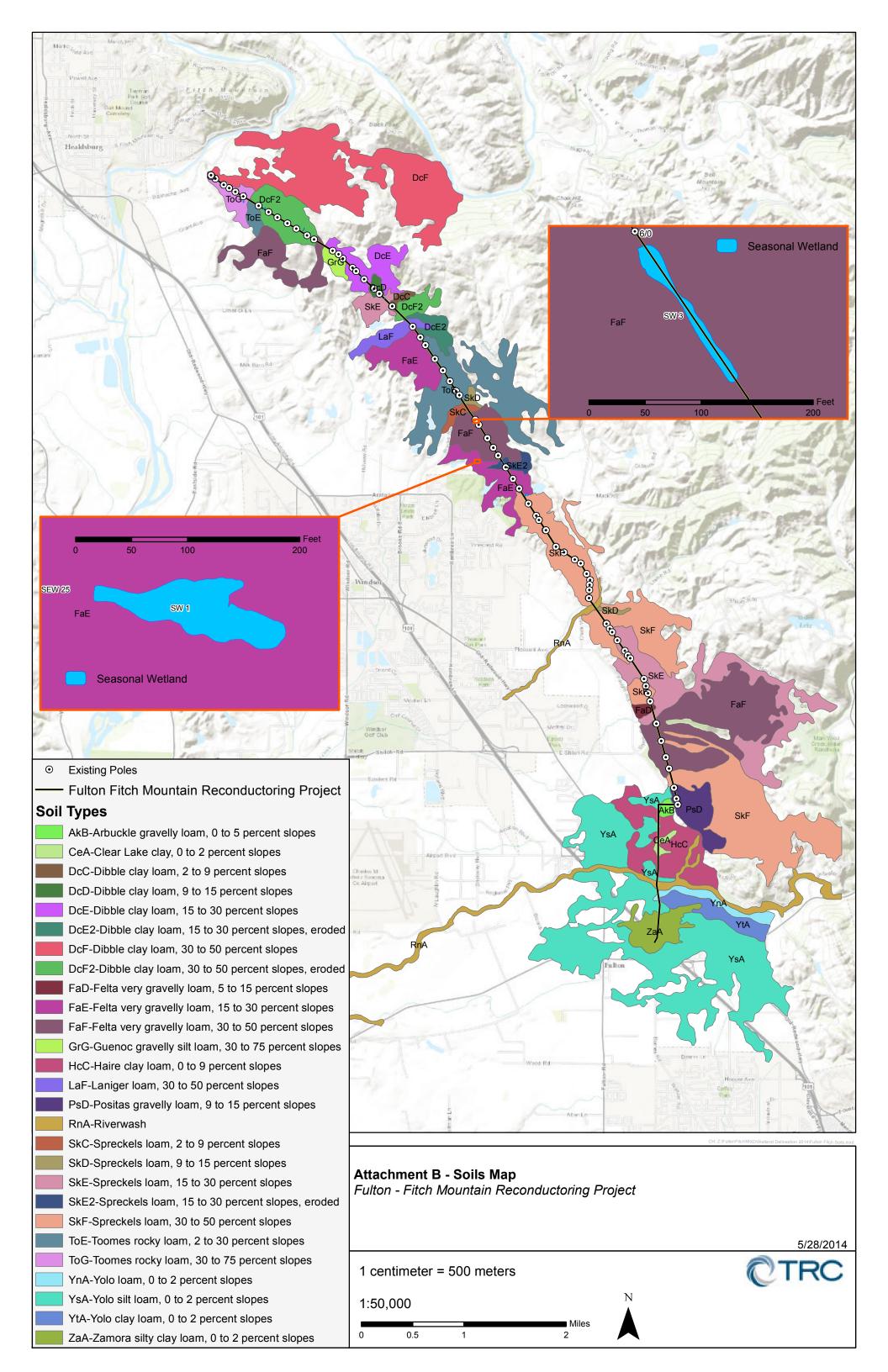
5.0 REFERENCES

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- Natural Resources Conservation Service, United States Department of Agriculture. Web Soil Survey for Sonoma County, California. Online: http://websoilsurvey.nrcs.usda.gov. Site accessed October 30, 2012.
- U.S. Army Corps of Engineers. 1987. *Corps of Engineers Wetlands Delineation Manual*. U.S. Army Corps of Engineers Waterways Experiment Station. Vicksburg, MS.
- _____. 2008. Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0), ed. J. S. Wakeley, R. W. Lichvar, and C. V. Noble. ERDC/EL TR-08-28. Vicksburg, MS: U.S. Army Engineer Research and Development Center.
- _____. 2012. North American Digital Flora: National Wetland Plant List, (Version 3.0), R. W. Lichvar and J. T. Kartesz, Engineer Research and Development Center. Cold Regions Research and Engineering Laboratory, Hanover, NH and BONAP, Chapel Hill, NC. Available online at http://wetland_plants.usace.army.mil.
- U.S. Fish and Wildlife Service. 2005. Santa Rosa Plain Conservation Strategy. Available online at http://www.fws.gov/sacramento/ES/Recovery-Planning/Santa-Rosa/es recovery santa-rosa-strategy.htm.
- U.S. Geological Survey. 1993. *Healdsburg, California* 7.5-minute series topographic quadrangle. U.S. Department of the Interior.

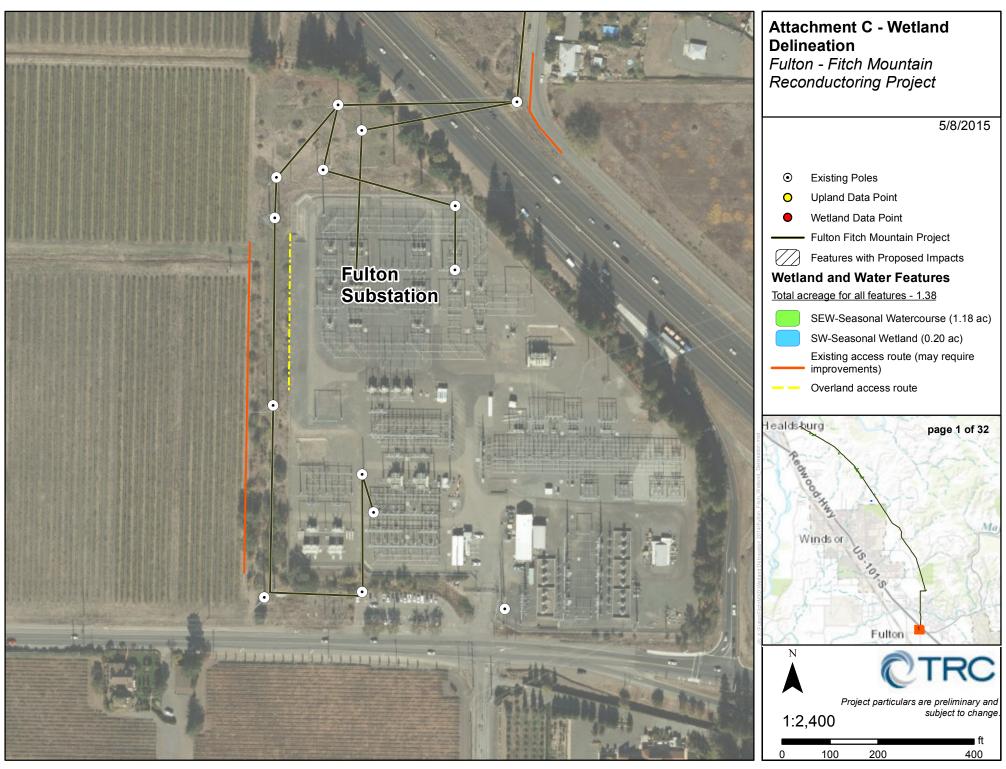
Attachment A: Site and Vicinity Map



Attachment B: Soils Map



Attachment C: Wetland Delineation Maps



Overland access routes are provided to establish a centerline for the survey corridor and are subject to change



Attachment C - Wetland Delineation

Fulton - Fitch Mountain Reconductoring Project

5/8/2015

- Existing Poles
- Upland Data Point
- Wetland Data Point

Fulton Fitch Mountain Project

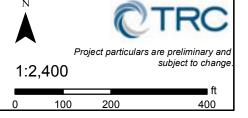
Features with Proposed Impacts

Wetland and Water Features

Total acreage for all features - 1.38

- SEW-Seasonal Watercourse (1.18 ac)
- SW-Seasonal Wetland (0.20 ac)
 - Existing access route (may require improvements)
- Overland access route







Overland access routes are provided to establish a centerline for the survey corridor and are subject to change



Overland access routes are provided to establish a centerline for the survey corridor and are subject to change



Attachment C - Wetland Delineation

Fulton - Fitch Mountain Reconductoring Project

5/8/2015

- Existing Poles
- Upland Data Point
- Wetland Data Point

- Fulton Fitch Mountain Project

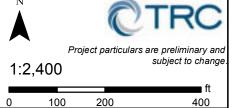
Features with Proposed Impacts

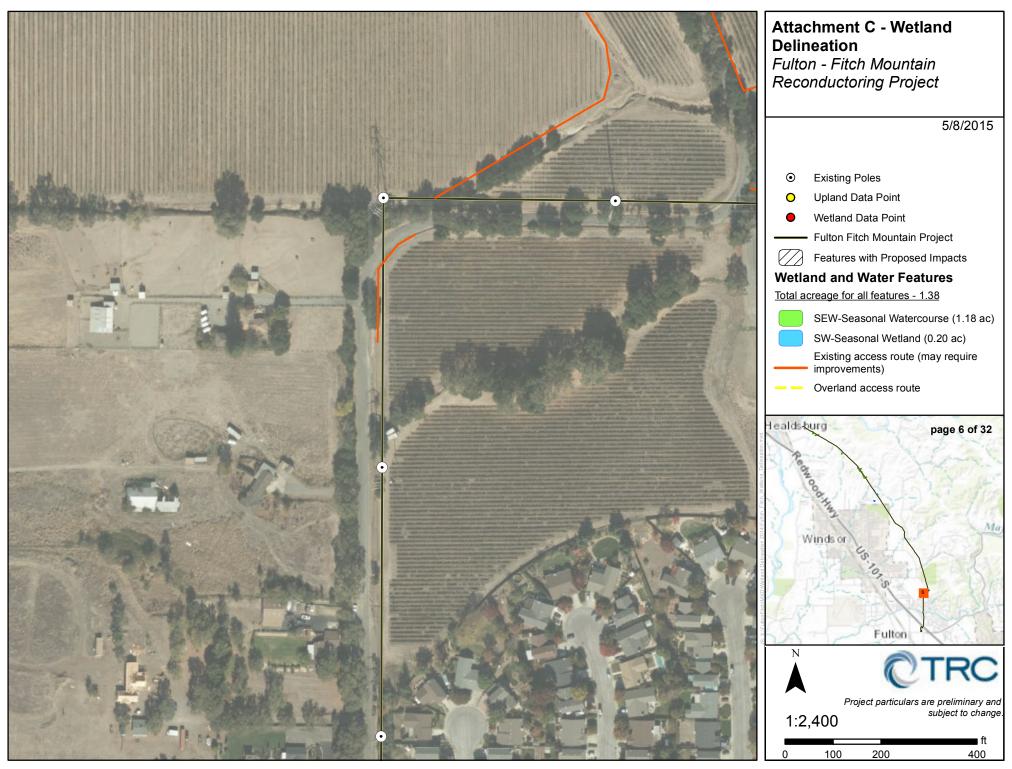
Wetland and Water Features

Total acreage for all features - 1.38

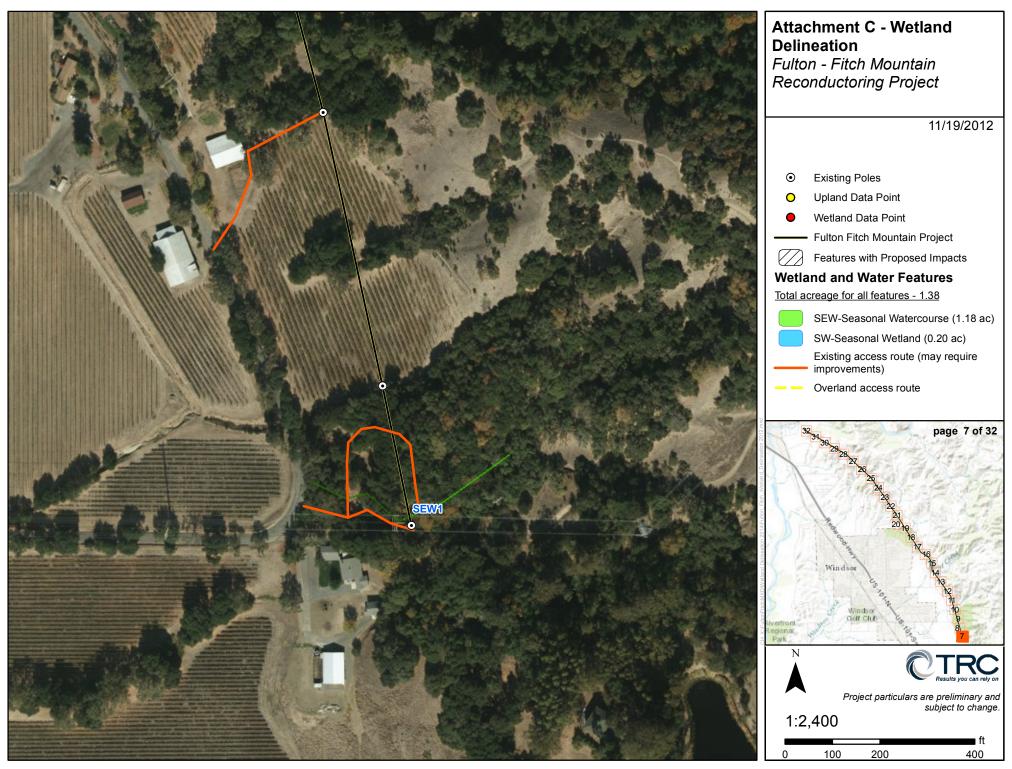
- SEW-Seasonal Watercourse (1.18 ac)
 - SW-Seasonal Wetland (0.20 ac)
 Existing access route (may require
- improvements)
- Overland access route



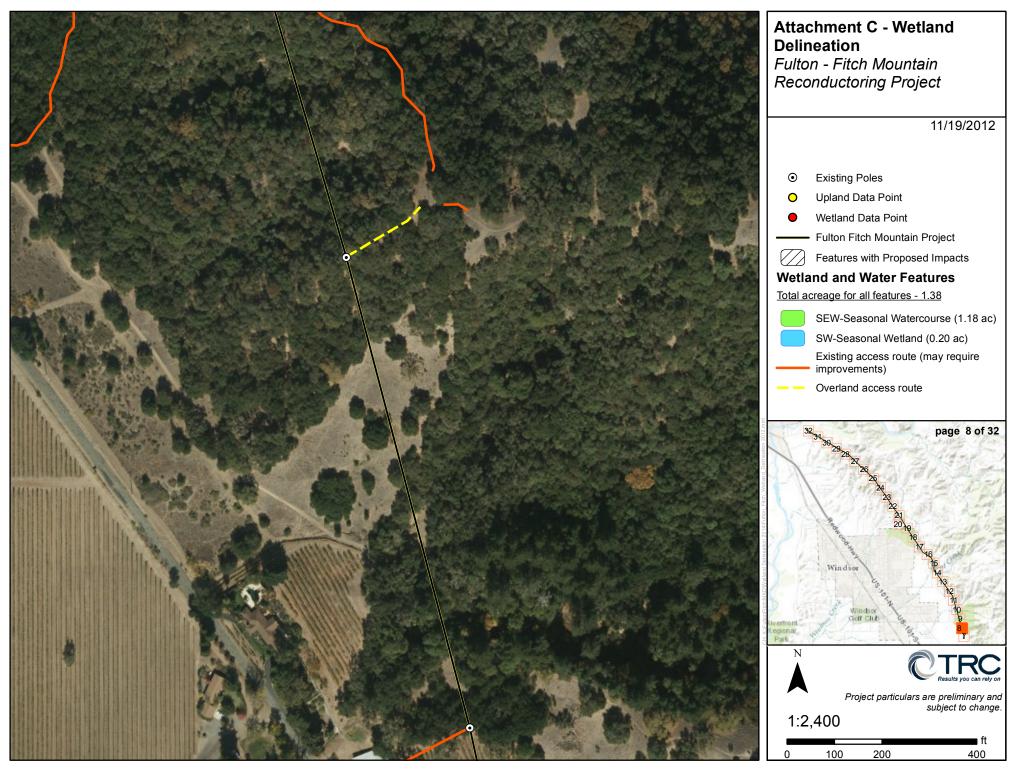




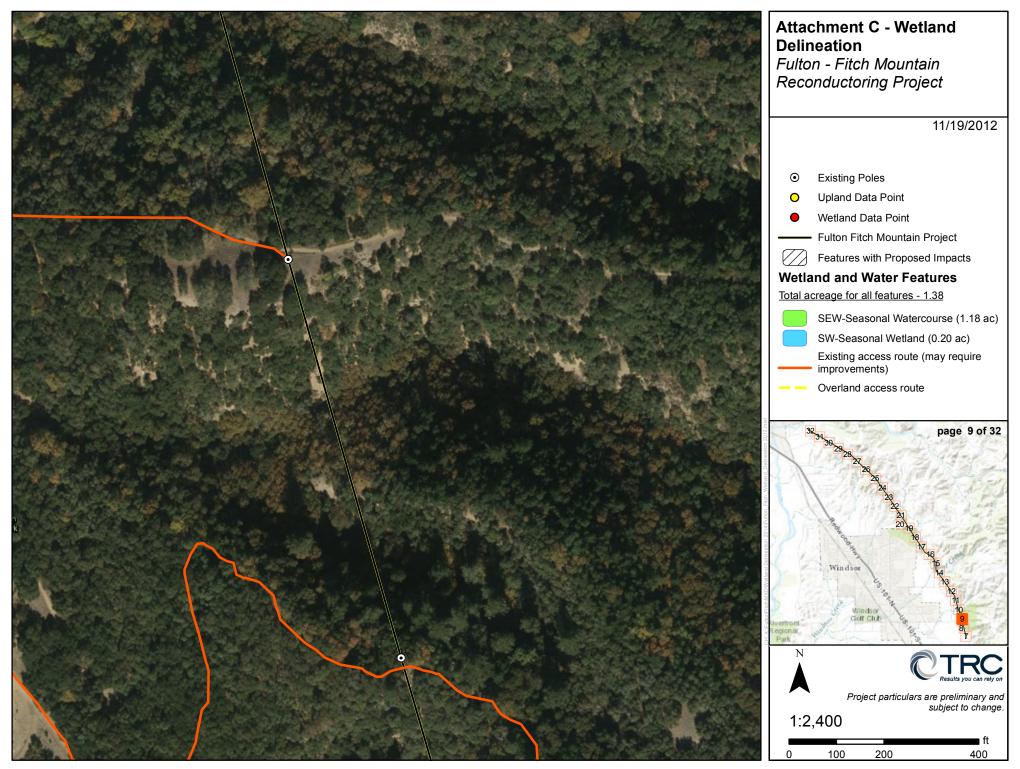
Overland access routes are provided to establish a centerline for the survey corridor and are subject to change



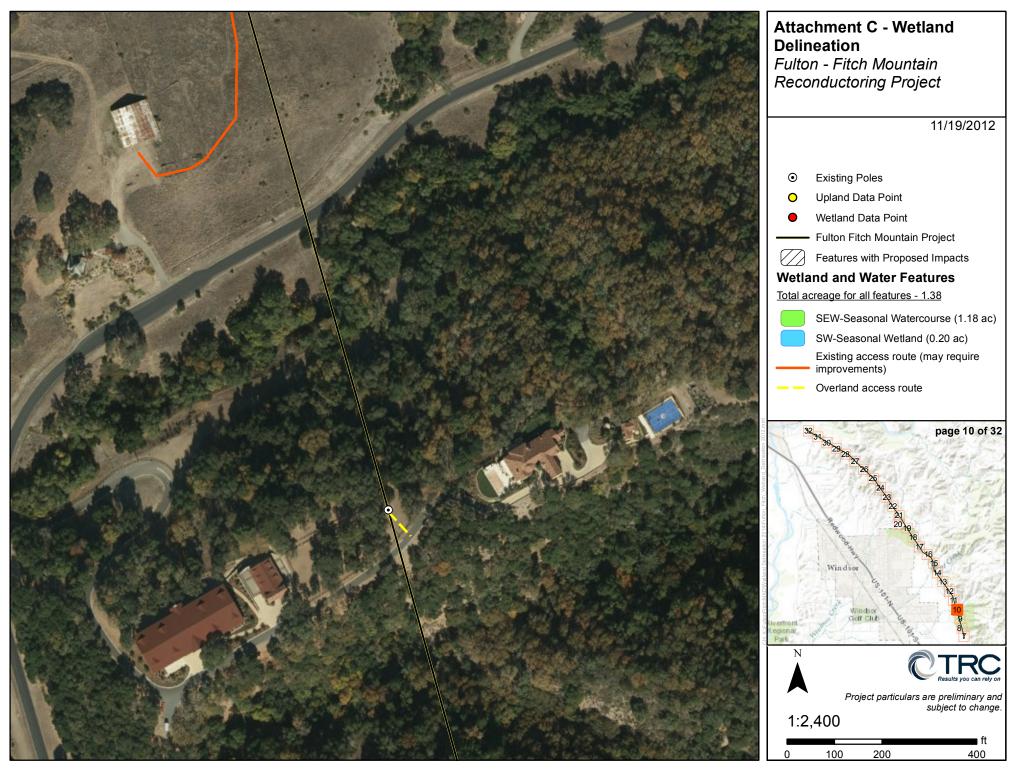
Overland access routes are provided to establish a centerline for the survey corridor and are subject to change



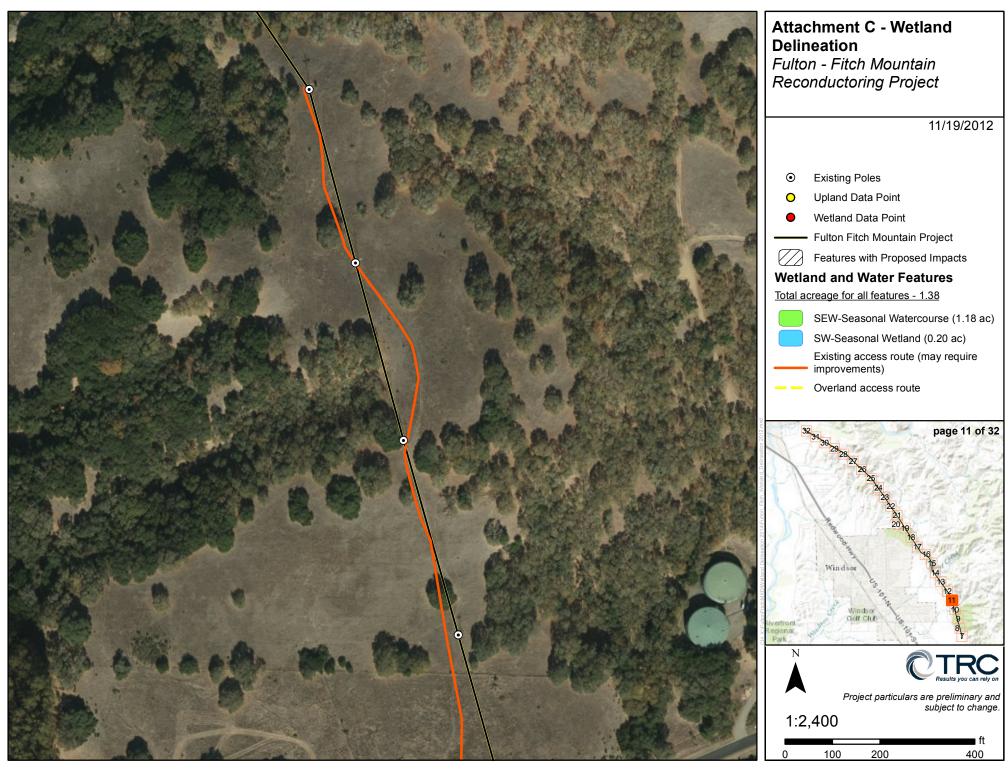
Overland access routes are provided to establish a centerline for the survey corridor and are subject to change



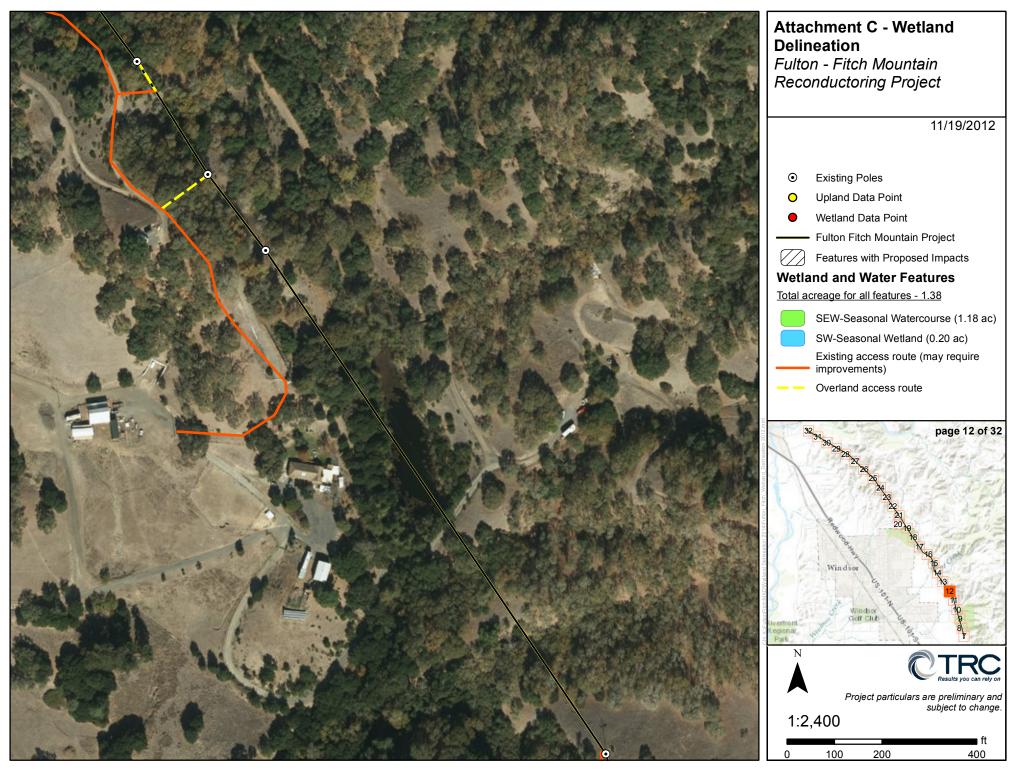
Overland access routes are provided to establish a centerline for the survey corridor and are subject to change



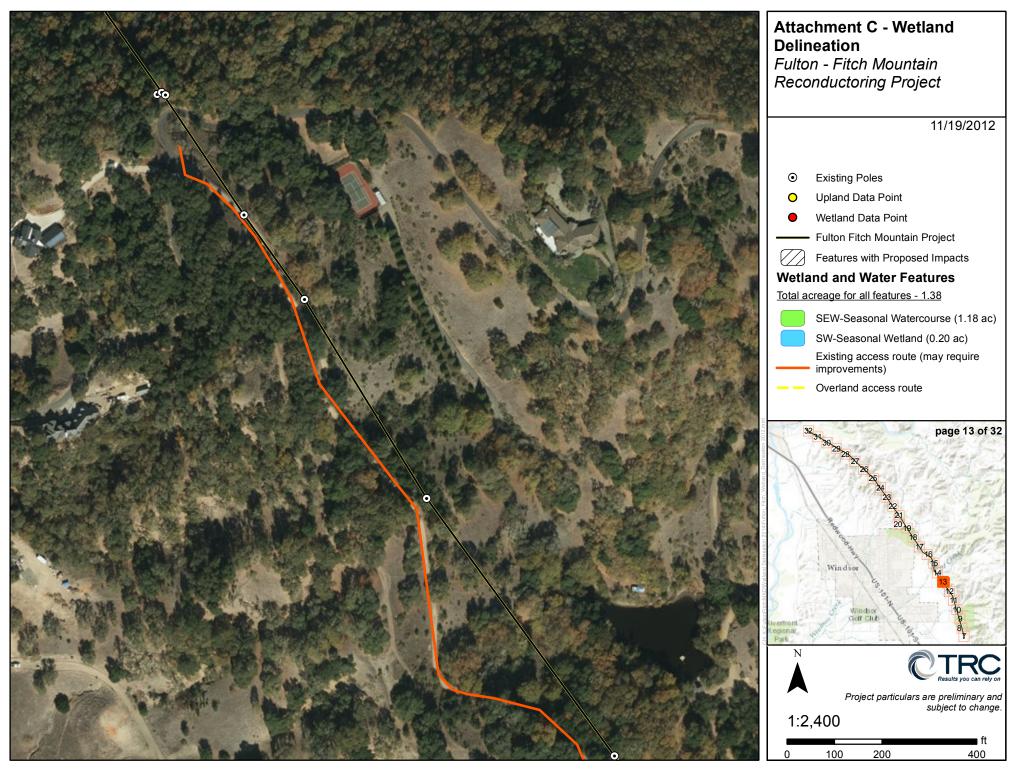
Overland access routes are provided to establish a centerline for the survey corridor and are subject to change



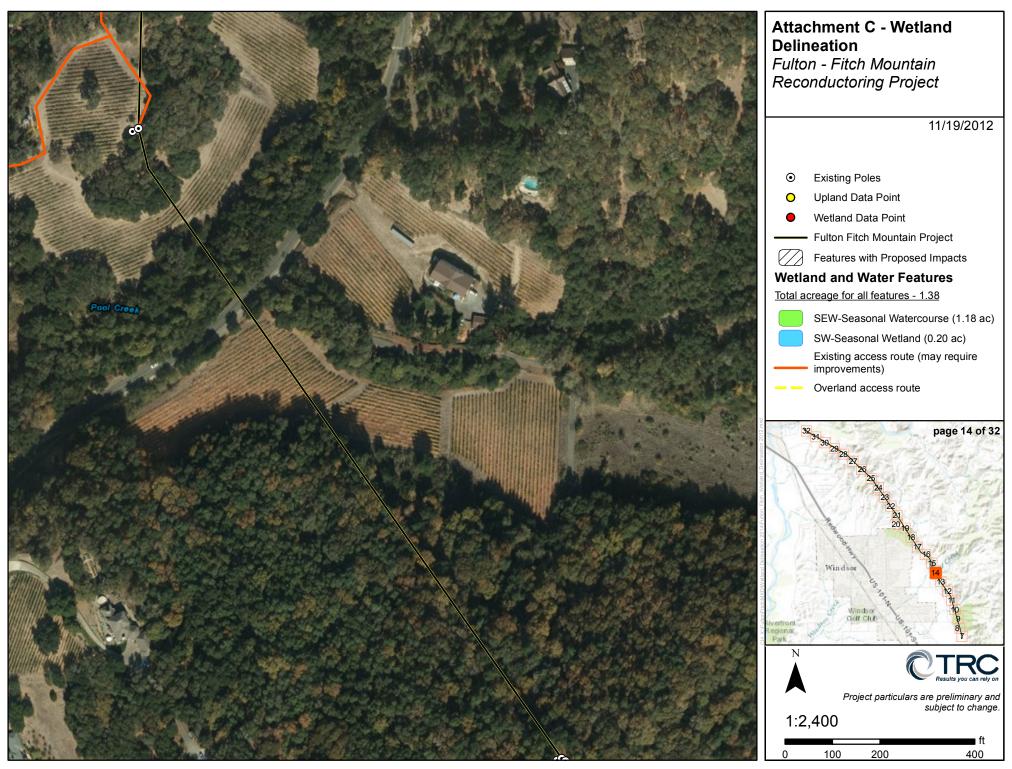
Overland access routes are provided to establish a centerline for the survey corridor and are subject to change



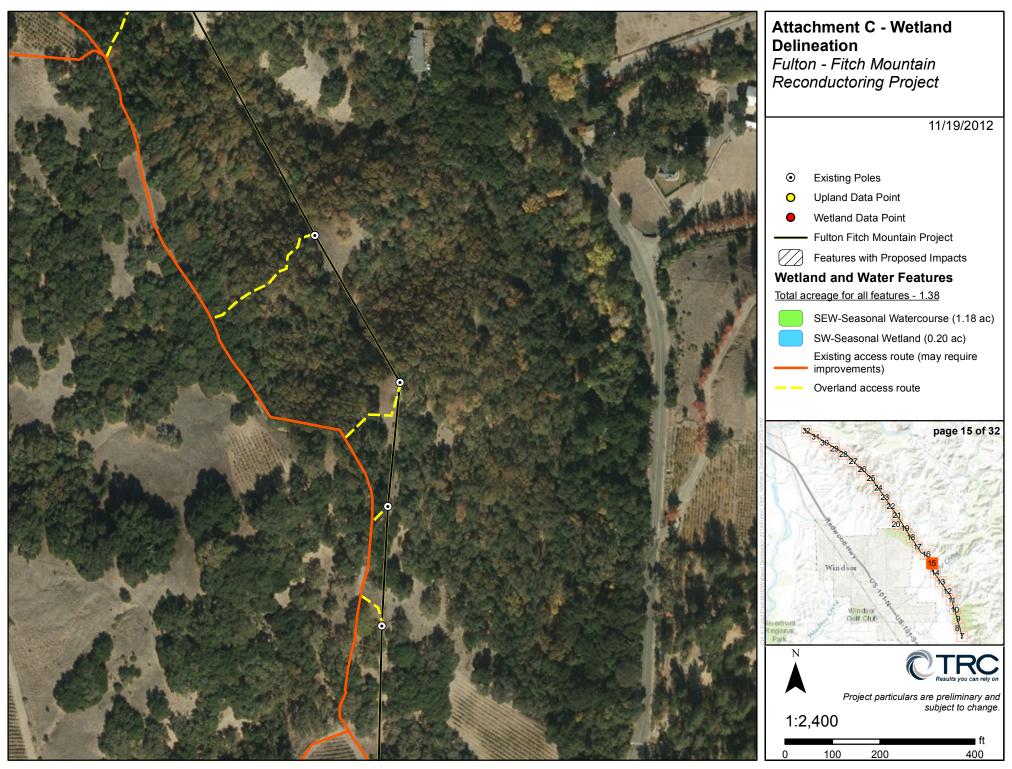
Overland access routes are provided to establish a centerline for the survey corridor and are subject to change



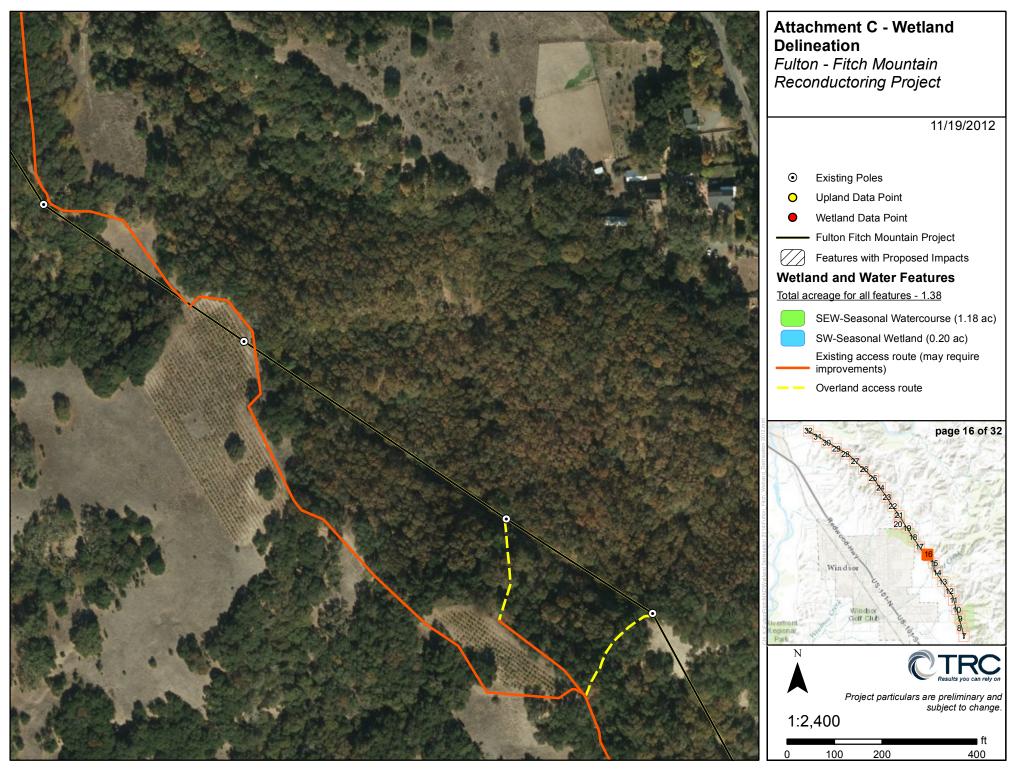
Overland access routes are provided to establish a centerline for the survey corridor and are subject to change



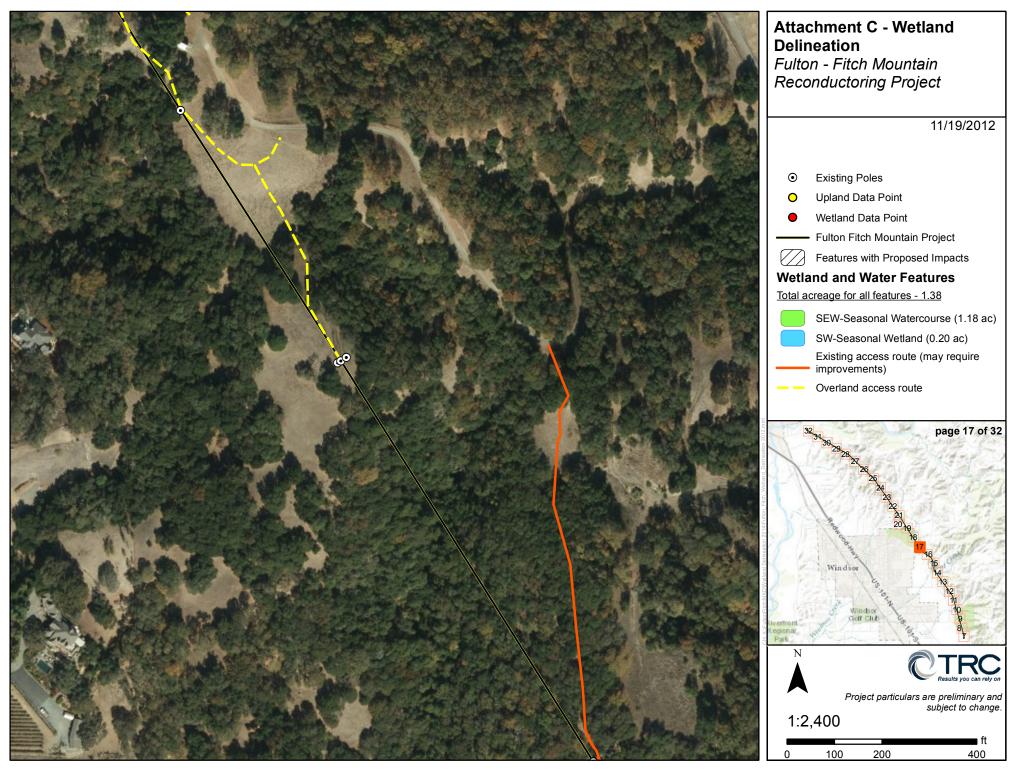
Overland access routes are provided to establish a centerline for the survey corridor and are subject to change



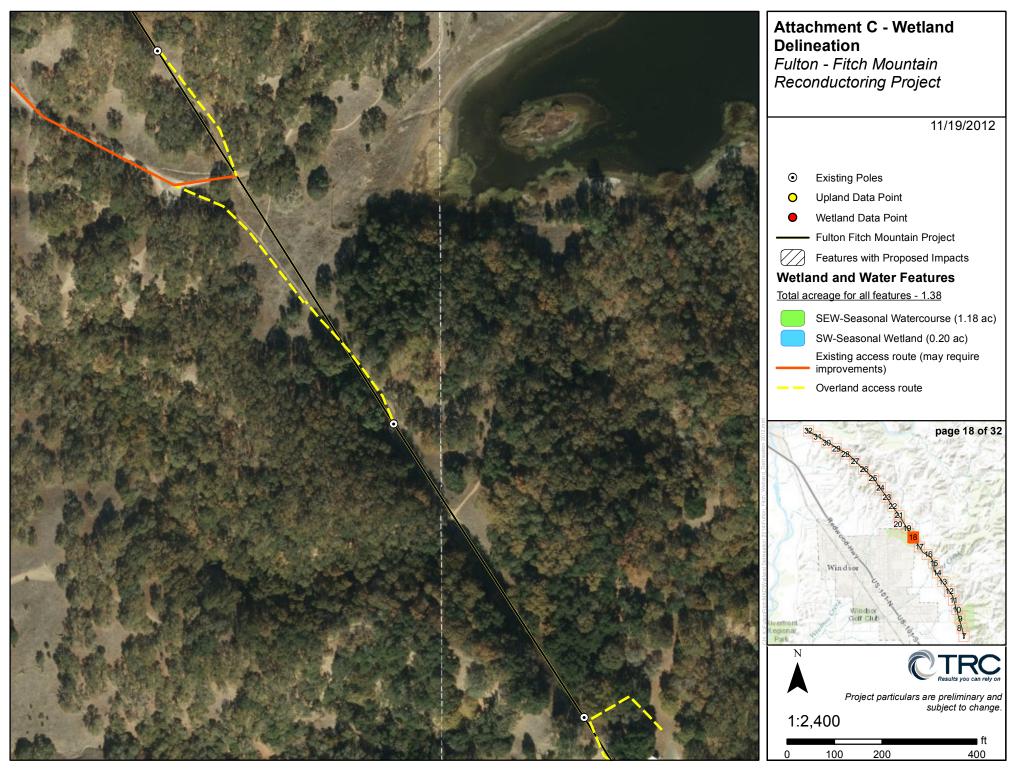
Overland access routes are provided to establish a centerline for the survey corridor and are subject to change



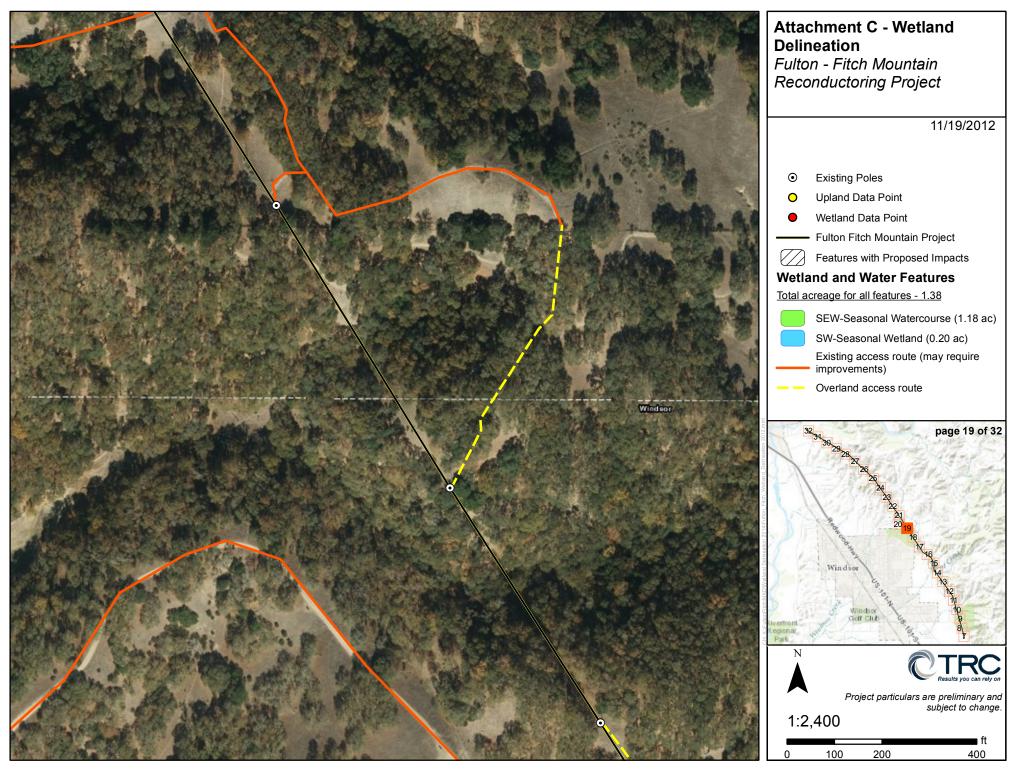
Overland access routes are provided to establish a centerline for the survey corridor and are subject to change



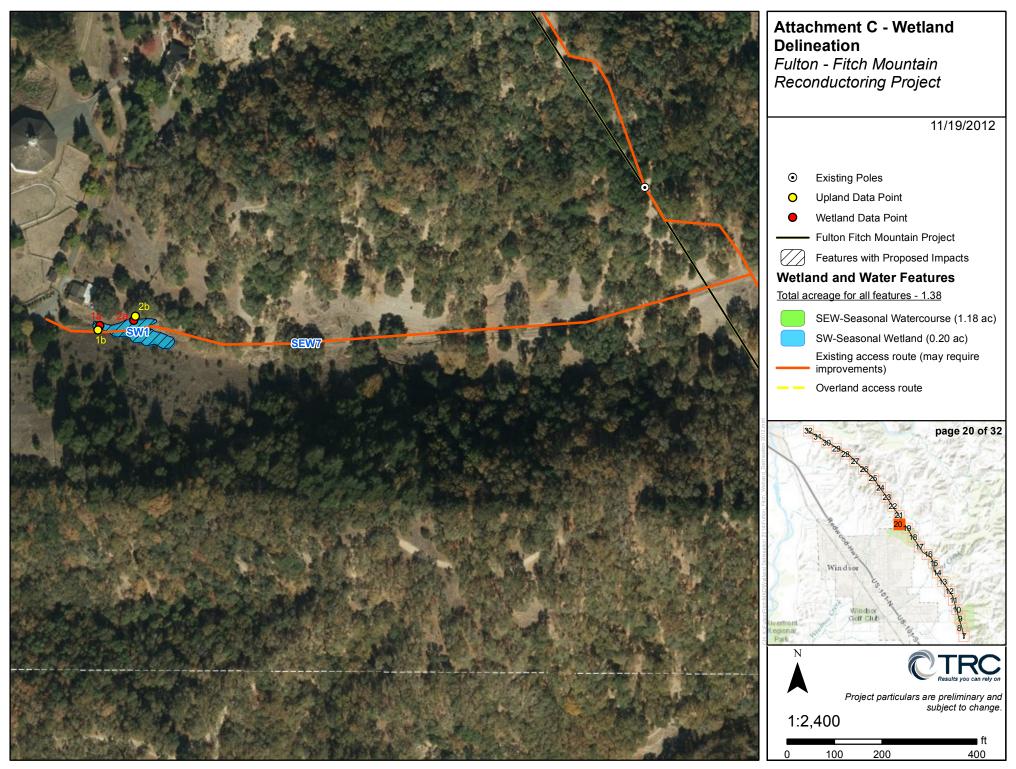
Overland access routes are provided to establish a centerline for the survey corridor and are subject to change



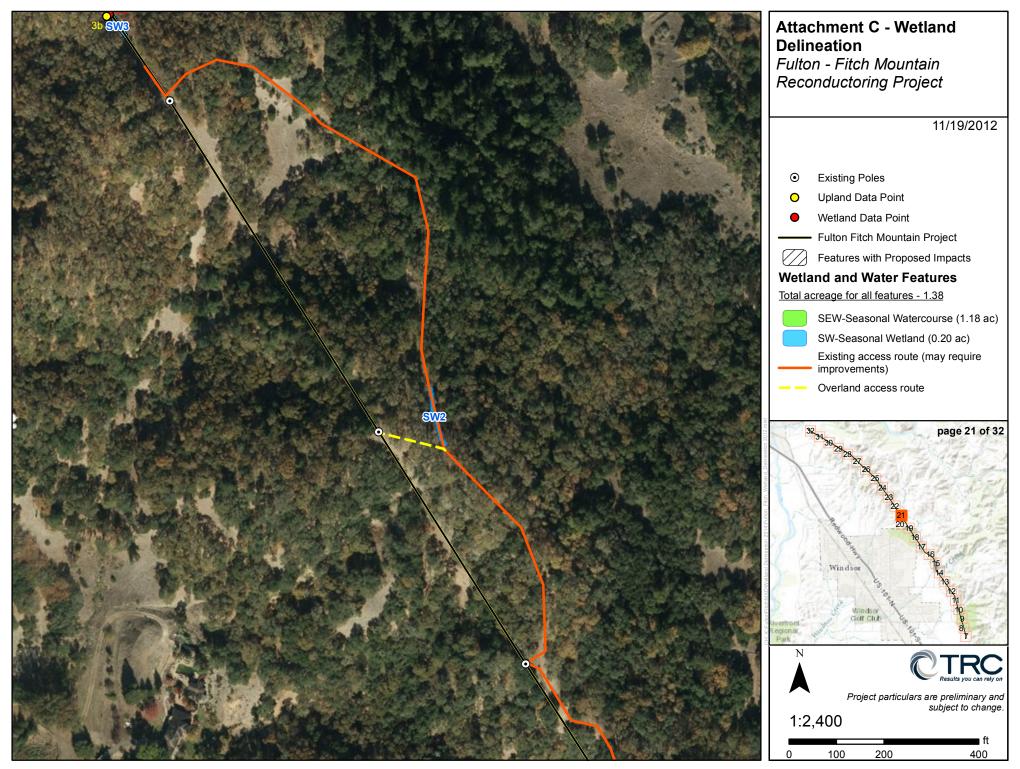
Overland access routes are provided to establish a centerline for the survey corridor and are subject to change



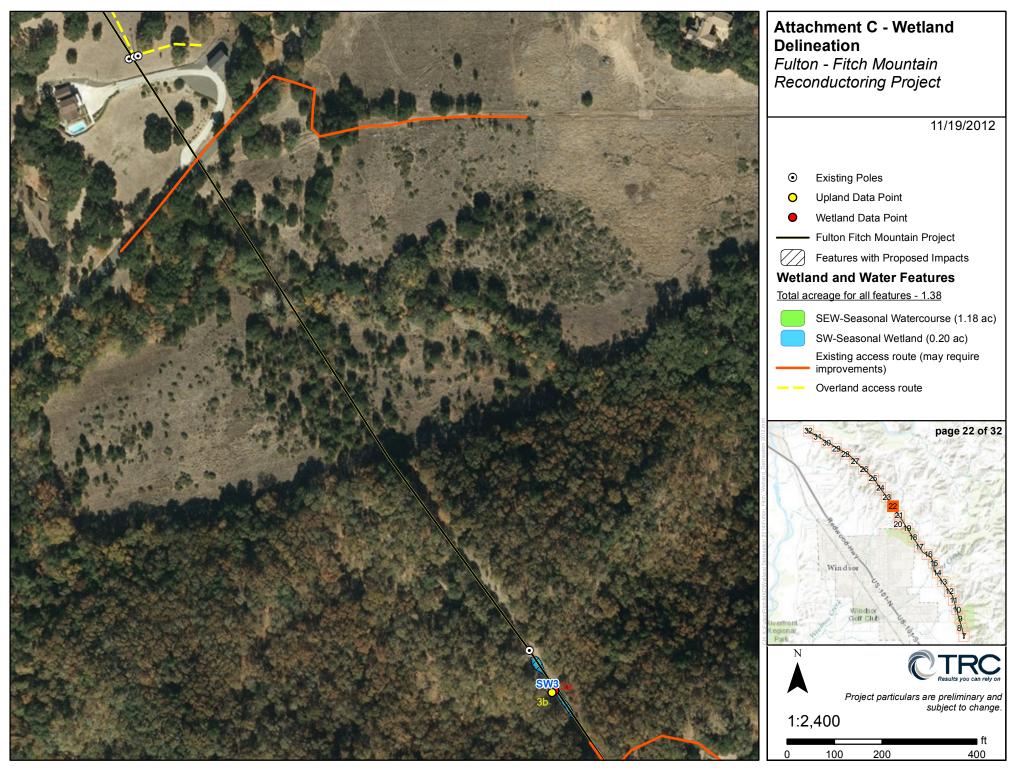
Overland access routes are provided to establish a centerline for the survey corridor and are subject to change



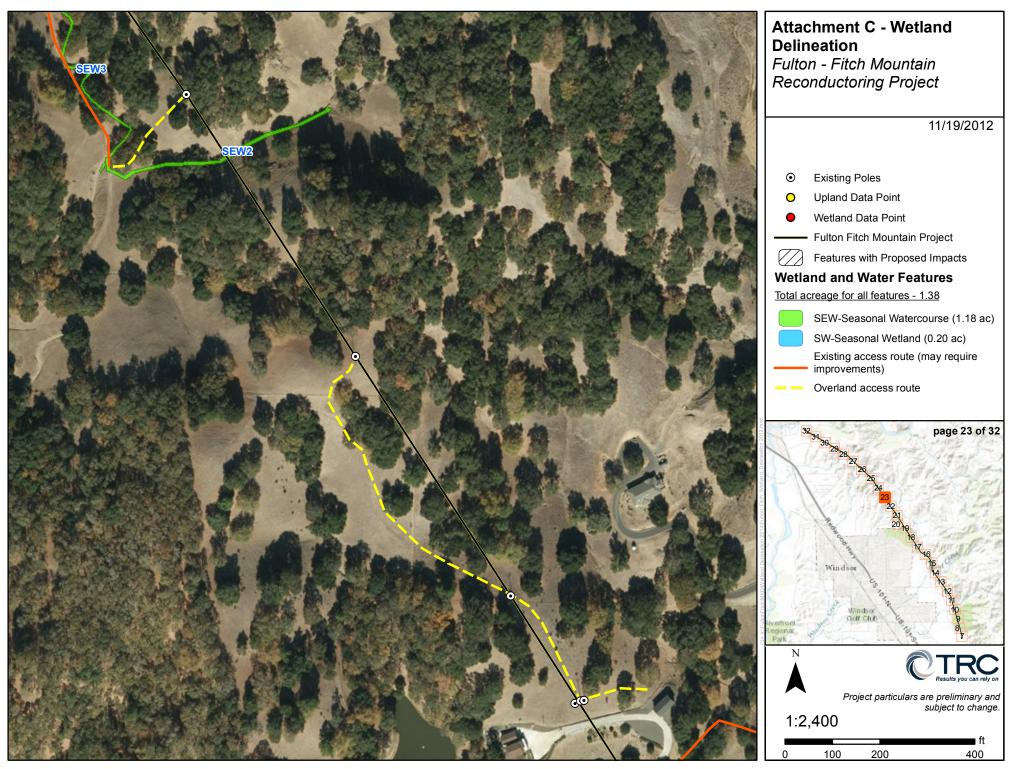
Overland access routes are provided to establish a centerline for the survey corridor and are subject to change



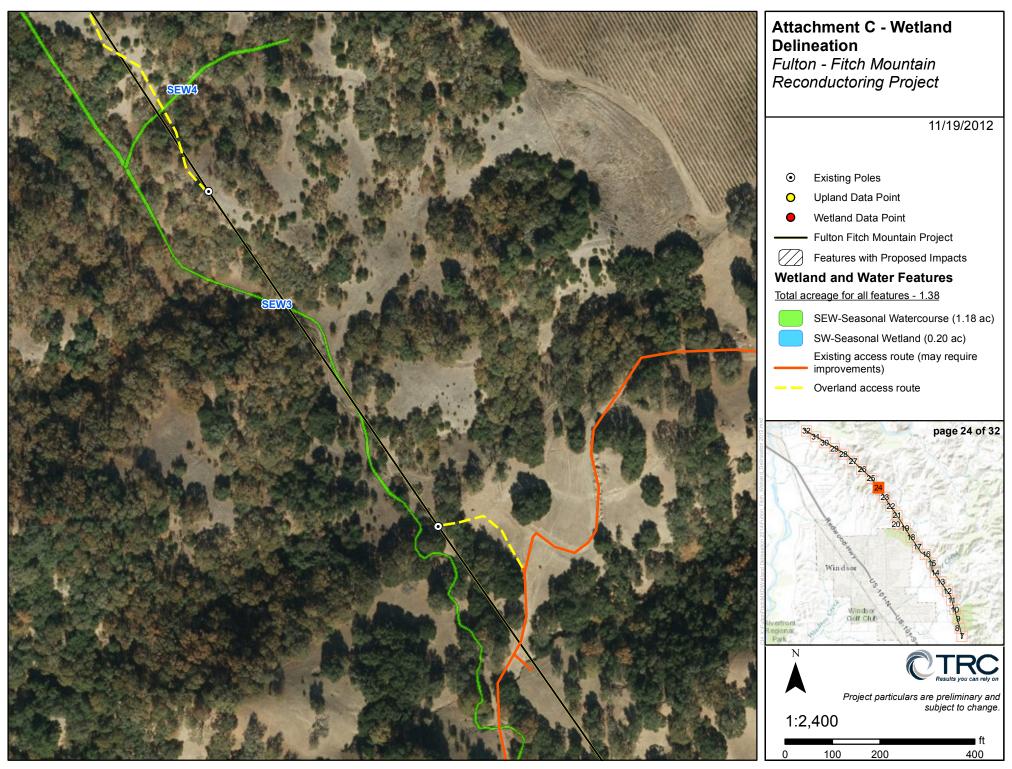
Overland access routes are provided to establish a centerline for the survey corridor and are subject to change



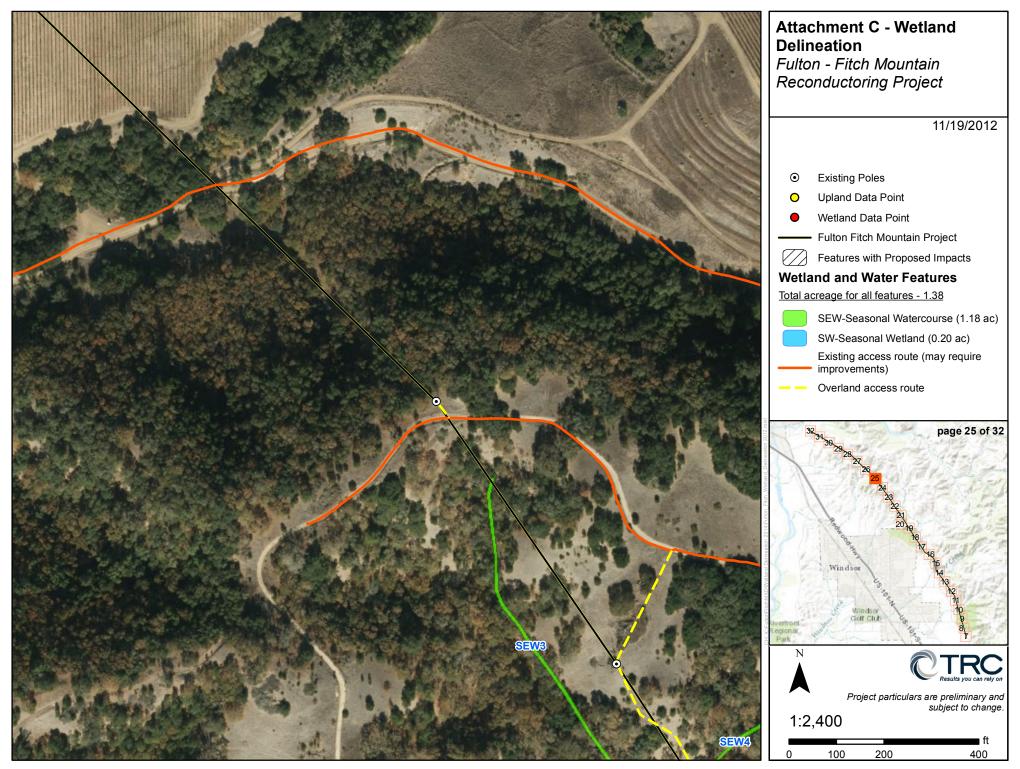
Overland access routes are provided to establish a centerline for the survey corridor and are subject to change



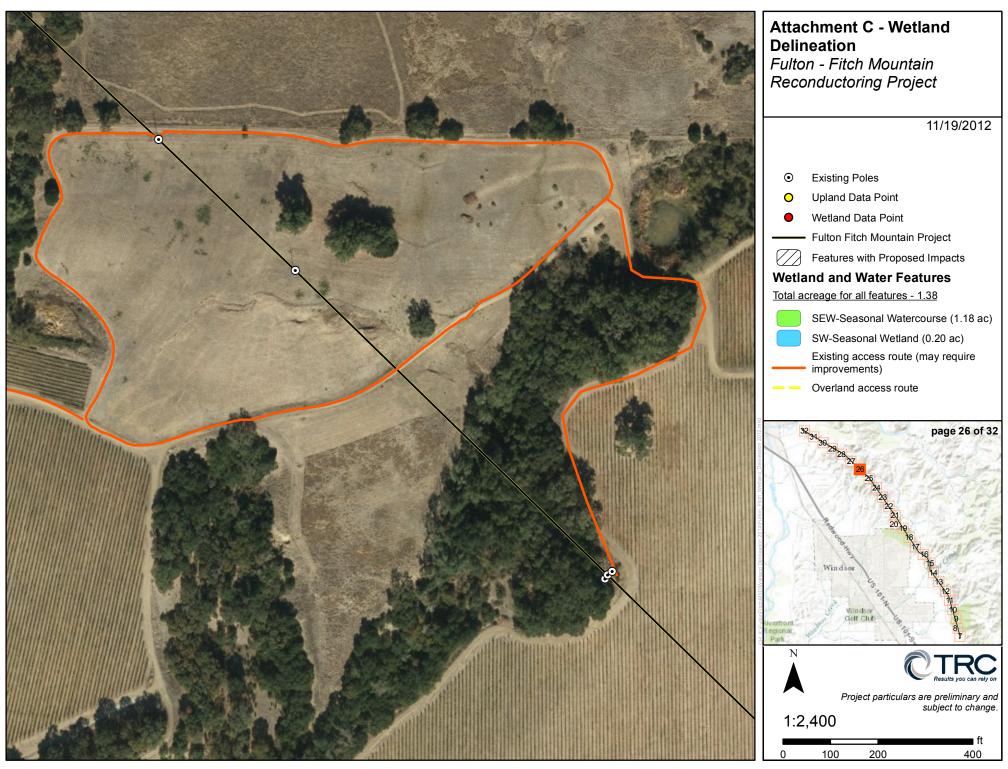
Overland access routes are provided to establish a centerline for the survey corridor and are subject to change



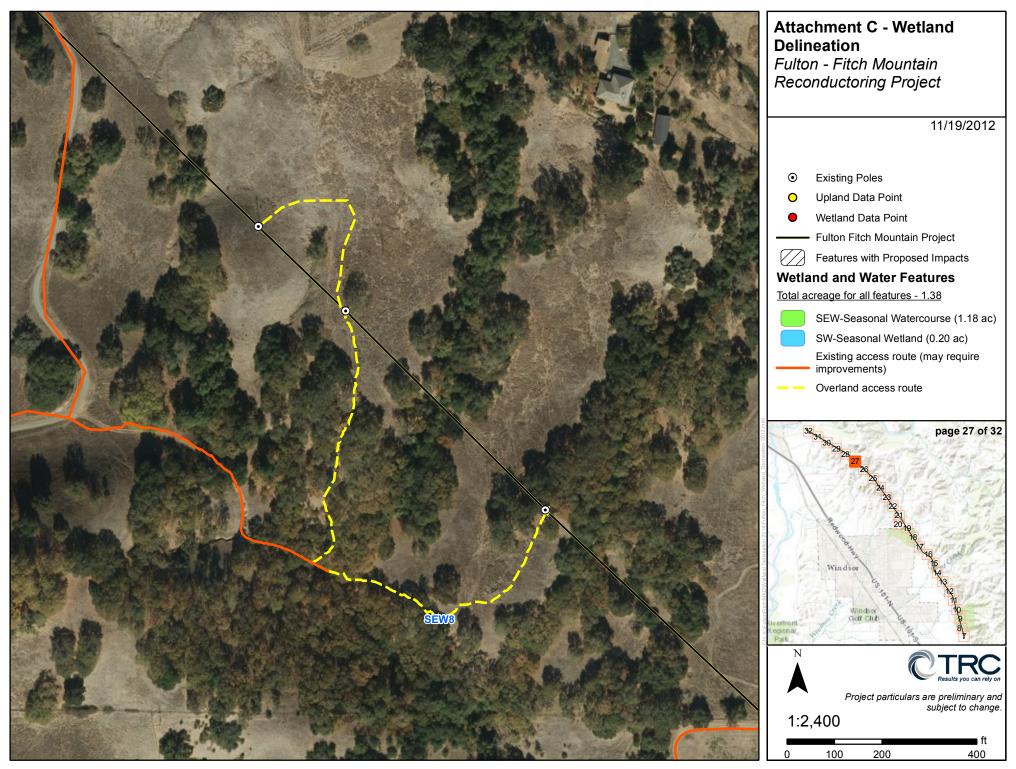
Overland access routes are provided to establish a centerline for the survey corridor and are subject to change



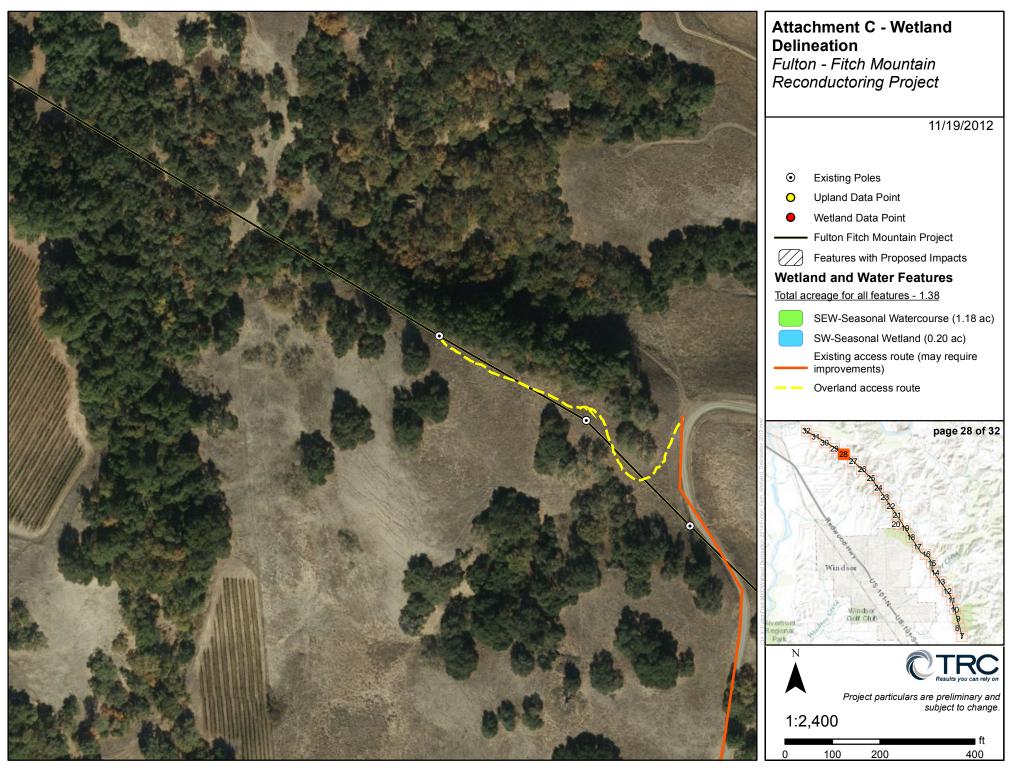
Overland access routes are provided to establish a centerline for the survey corridor and are subject to change



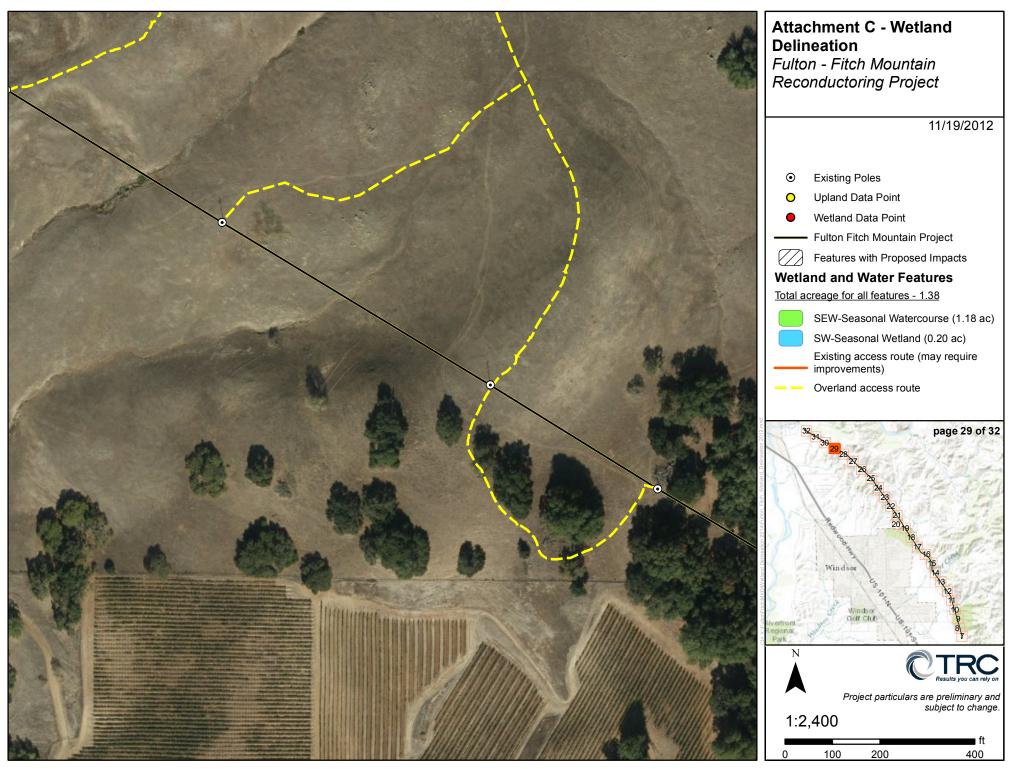
Overland access routes are provided to establish a centerline for the survey corridor and are subject to change



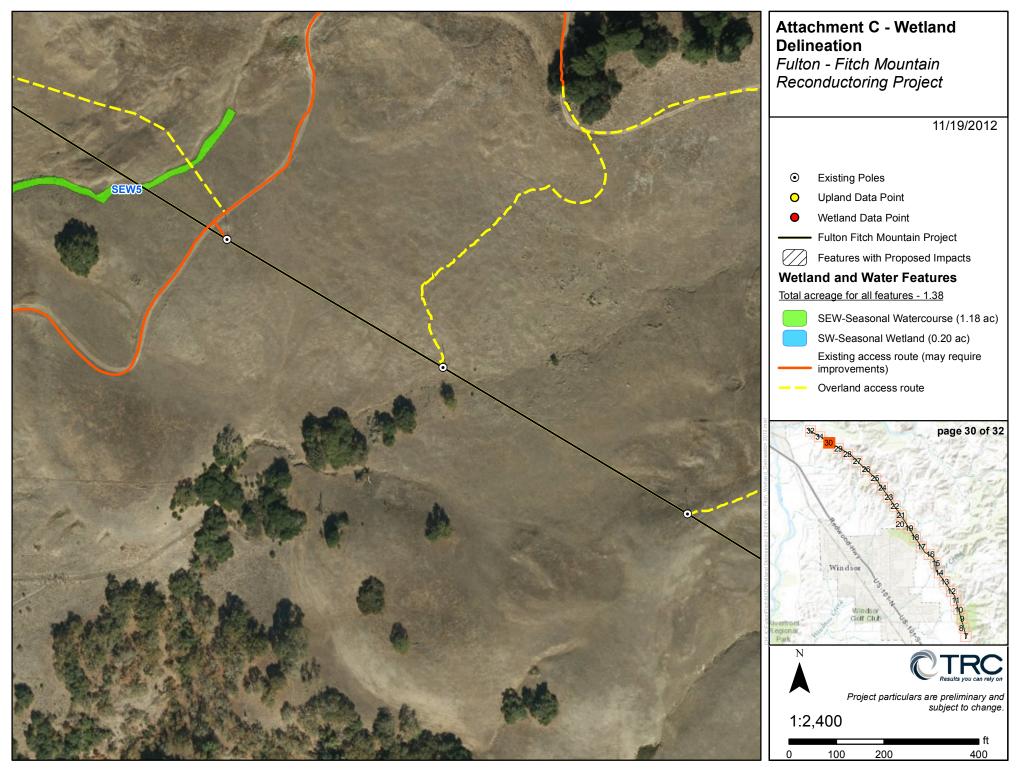
Overland access routes are provided to establish a centerline for the survey corridor and are subject to change



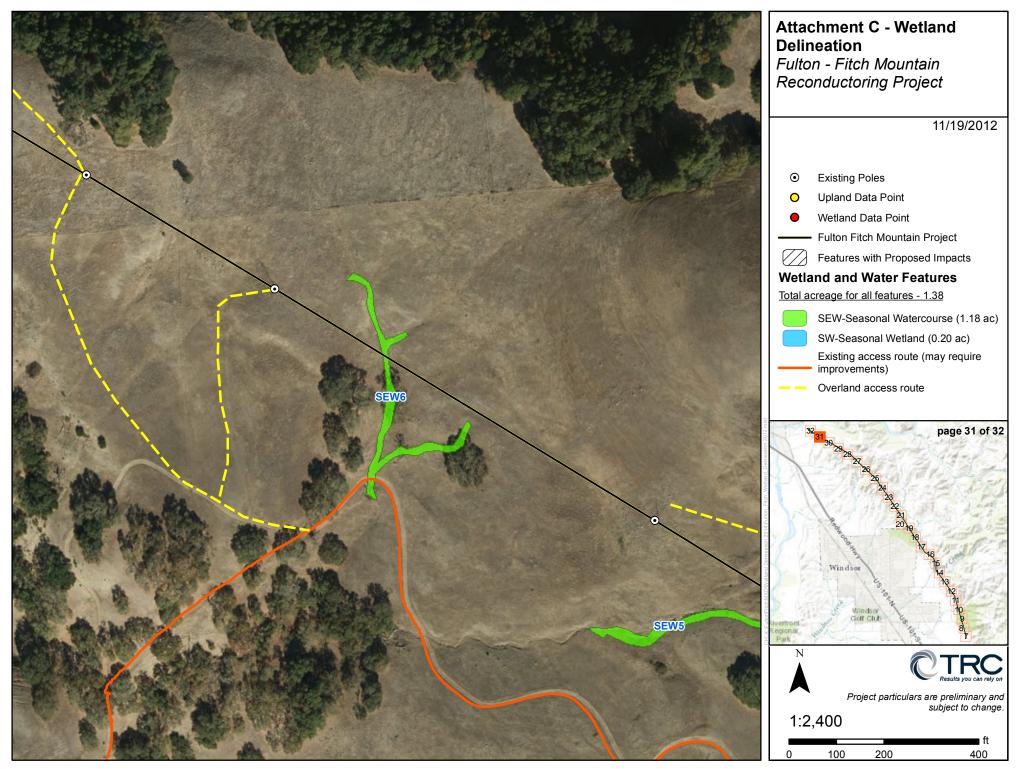
Overland access routes are provided to establish a centerline for the survey corridor and are subject to change



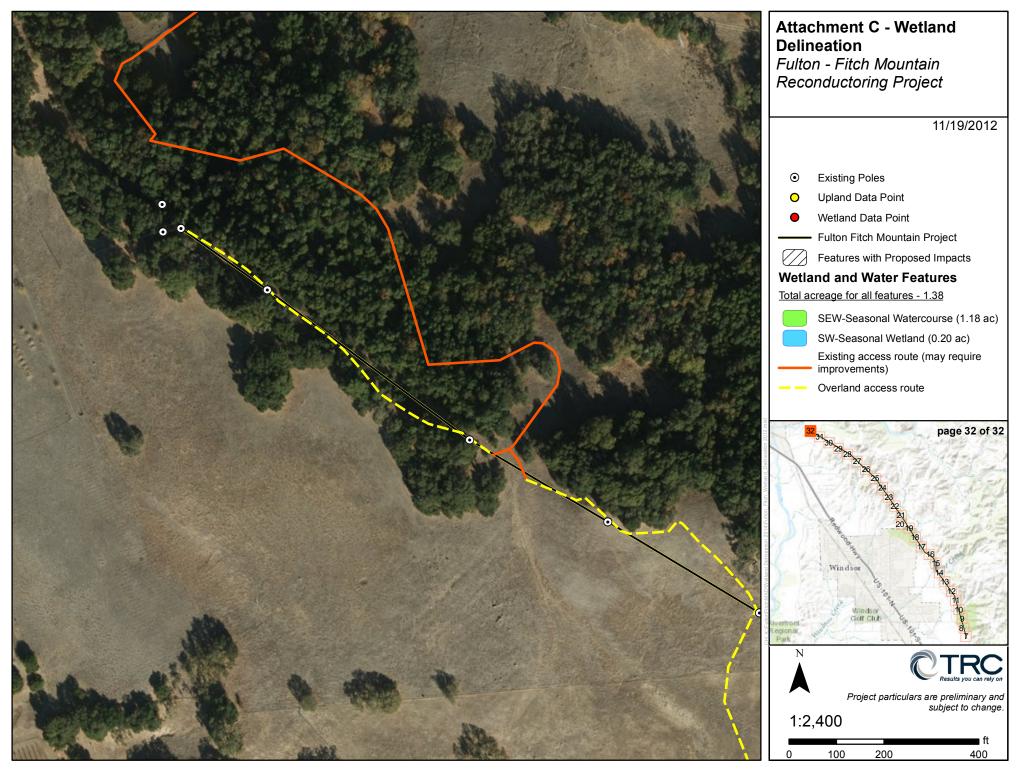
Overland access routes are provided to establish a centerline for the survey corridor and are subject to change



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Attachment D: Wetland and Water Feature Acreage and Coordinates Table

Wetland and Water Feature Acreages and Coordinates Table

			Included On Wetland		
Feature	Acreage	Impact	Delineation Map	Latitude	Longitude
OW1	0.44	none proposed	no	38.53805908	-122.764629
OW2	0.26	none proposed	no	38.54092695	-122.7663847
RIWO1	0.67	none proposed	no	38.52132401	-122.7579632
RIWO2	1.79	none proposed	no	38.52563988	-122.7592708
RIWO3	1.04	none proposed	no	38.52881028	-122.7608627
RIWO4	1.61	none proposed	no	38.53126965	-122.7607958
RIWO5	1.00	none proposed	no	38.54646512	-122.7716385
RIWO6	1.92	none proposed	no	38.54691651	-122.7726454
RIWO7	1.16	none proposed	no	38.55584794	-122.7804394
RIWO8	2.08	none proposed	no	38.57492422	-122.7959284
RIWO9	2.83	none proposed	no	38.58724262	-122.8076588
RIWO10	3.81	none proposed	no	38.5892273	-122.8097978
RIWO11	2.19	none proposed	no	38.59318158	-122.8150534
RIWO12	4.05	none proposed	no	38.59706209	-122.8209845
RIWO 13	3.76	none proposed	no	38.5067387	-122.7605035
SEW1	0.03	none proposed	yes	38.51868943	-122.756517
SEW2	0.09	none proposed	yes	38.57932324	-122.7996663
SEW3	0.42	none proposed	yes	38.58355364	-122.8038446
SEW4	0.08	none proposed	yes	38.58400487	-122.8031276
SEW5	0.30	none proposed	yes	38.60221367	-122.8333603
SEW6	0.27	none proposed	yes	38.60321102	-122.8352821
SEW7	0.00	none proposed	yes	38.56684212	-122.7922881
SEW8	0.00	none proposed	yes	38.59190876	-122.81506
SEW9	0.09	none proposed	no	38.51917006	-122.7571699
SEW 9A	0.48	none proposed	no	38.51855603	-122.7619325
SEW10	0.07	none proposed	no	38.51999826	-122.7571732
SEW11	0.06	none proposed	no	38.5221069	-122.7577442
SEW12	0.10	none proposed	no	38.53673966	-122.763389
SEW13	0.06	none proposed	no	38.54054001	-122.7667212
SEW14	0.05	none proposed	no	38.54100267	-122.7670547
SEW15	0.10	none proposed	no	38.55048149	-122.7733763
SEW16	0.04	none proposed	no	38.55132263	-122.7734822
SEW17	0.04	none proposed	no	38.55167527	-122.773904
SEW18	0.07	none proposed	no	38.55210917	-122.7739867
SEW19	0.04	none proposed	no	38.55283871	-122.7747616
SEW20	0.06	none proposed	no	38.55340452	-122.7762307
SEW21	0.07	none proposed	no	38.55362845	-122.7766712
SEW22	0.04	none proposed	no	38.56109641	-122.7845596
SEW23	0.11	none proposed	no	38.56377652	-122.7868861
SEW24	0.10	none proposed	no	38.56536132	-122.788112
SEW25	0.01	none proposed	no	38.5669458	-122.793994
SEW26	0.03	none proposed	no	38.56870736	-122.7914579
SEW27	0.13	none proposed	no	38.57138625	-122.7927436
SEW28	0.11	none proposed	no	38.57666258	-122.7965079

			Included On Wetland		
Feature	Acreage	Impact	Delineation Map	Latitude	Longitude
SEW29	0.05	none proposed	no	38.57861633	-122.7995479
SEW30	0.02	none proposed	no	38.57974527	-122.8003814
SEW31	0.02	none proposed	no	38.58472822	-122.8047863
SEW32	0.08	none proposed	no	38.58651163	-122.8062739
SEW33	0.10	none proposed	no	38.59253318	-122.8136029
SEW34	0.10	none proposed	no	38.59248306	-122.813783
SEW35	0.08	none proposed	no	38.59400387	-122.815907
SEW36	0.12	none proposed	no	38.5948743	-122.8171542
SEW37	0.04	none proposed	no	38.59517981	-122.8169975
SEW38	0.19	none proposed	no	38.59914554	-122.8258289
SEW39	0.22	none proposed	no	38.59983594	-122.8273006
SEW40	0.19	none proposed	no	38.60110712	-122.8301178
SEW 41	0.10	none proposed	no	38.51762471	-122.7592242
SEW 42	0.03	none proposed	no	38.51622755	-122.7608721
SEW 43	0.10	none proposed	no	38.49986892	-122.7622176
SW1	0.13	proposed	yes	38.56689241	-122.7935301
SW2	0.03	none proposed	yes	38.57021495	-122.7913769
SW3	0.04	proposed	yes	38.57270684	-122.7939208
SW4	0.28	none proposed	no	38.56218471	-122.7846048
SW5	0.01	none proposed	no	38.56670459	-122.7889823
SW6	0.03	none proposed	no	38.56685425	-122.7892824
SW7	0.09	none proposed	no	38.58985295	-122.8105458
SW8	0.01	none proposed	no	38.59050011	-122.8114916
SW9	0.15	none proposed	no	38.59290674	-122.8147642
SW10	0.07	none proposed	no	38.59962688	-122.8252346
SW11	0.02	none proposed	no	38.59971374	-122.8264041
SW12	0.02	none proposed	no	38.60064822	-122.8282722
SW13	0.17	none proposed	no	38.60244232	-122.8324387
SW14	0.11	none proposed	no	38.60338668	-122.8361901
SW15	0.13	none proposed	no	38.60444849	-122.8358364
SW16	0.05	none proposed	no	38.60418935	-122.8363734
D1	0.30	none proposed	no	38.49732882	-122.7619197
D2	0.01	none proposed	no	38.49868255	-122.7621509
D3	0.01	none proposed	no	38.49861094	-122.7624613

Attachment E: Plant Species Observed During Wetland Delineation

Attachment E Plant Species Observed During Wetland Delineation

Scientific Name	Common Name	Indicator Status*
Arctostaphylos sp.	Manzanita	FACU-UPL
Avena fatua	Wild Oats	UPL
Baccharis pilularis	Coyote brush	UPL
Briza media	Quaking grass	FAC
Bromus diandrus	Ripgut brome	UPL
Bromus hordeaceus	Soft chess	FACU
Cynodon dactylon	Bermuda grass	FACU
Cynosurus echinatus	Dogtail grass	UPL
Cyperus eragrostis	Tall nutsedge	FACW
Juncus spp.	Rushes	FACW-OBL
Juncus xiphioides	Iris-leaved rush	OBL
Lolium perenne	Perennial ryegrass	FAC
Mentha pulegium	Pennyroyal	OBL
Phalaris aquatica	Harding grass	FACU
Polypogon monspeliensis	Rabbit-foot grass	FACW
Quercus douglasii	Blue oak	UPL
Rubus armeniacus	Himalayan blackberry	FACU

^{*}Indicator status based on the Corps' 2012 National Wetland Plant List for the Arid West Region.



Attachment F: Wetland Determination Data Forms

Project/Site: Fulton-Fitch Reconductoring Project	City/	County: Windso	r/Sonoma	Sampling Date: 11/2/12
Applicant/Owner: Pacific Gas & Electric Company			State:CA	Sampling Point:1a
Investigator(s): Julie Allison and Mike Farmer	Sec	tion, Township, Ra	ange: <u>Section 6, Townsh</u>	nip 8N, Range 9W
Landform (hillslope, terrace, etc.): Terrace	Loc	al relief (concave,	convex, none): Concave	Slope (%):2
Subregion (LRR): <u>C – Mediterranean California</u>	Lat: <u>38</u> .566	6890°	Long: -122.793769°	Datum: WGS84
Soil Map Unit Name: FaE - Felta very gravelly loam,				ation:
Are climatic / hydrologic conditions on the site typical for	this time of year?			
Are Vegetation, Soil, or Hydrology	-			resent? Yes <u>√</u> No
Are Vegetation, Soil, or Hydrology			eeded, explain any answei	
SUMMARY OF FINDINGS – Attach site ma			-	
Hydrophytic Vegetation Present? Yes✓_	No			
1		Is the Sample		
Wetland Hydrology Present? Yes ✓		within a Wetla	na? Yes <u>v</u>	No
Remarks:			,,1.10	
Data point taken within seasonal wetland	d.			
VEGETATION – Use scientific names of pla	ante			
TODATION OSCIONATION NAMES OF PROPERTY.		minant Indicator	Dominance Test work	sheet:
Tree Stratum (Plot size:)		ecies? Status	Number of Dominant Sp	
1			That Are OBL, FACW, o	
2			Total Number of Domina	
3			Species Across All Strat	ta: <u>3</u> (B)
4			Percent of Dominant Sp	
Sapling/Shrub Stratum (Plot size:)	= T	otal Cover	That Are OBL, FACW, o	or FAC: <u>67</u> (A/B)
1.			Prevalence Index work	ksheet:
2	<u> </u>		Total % Cover of:	
3				x 1 =
4				x 2 = x 3 =
5				x 3 = x 4 =
Herb Stratum (Plot size: 3-foot radius)	=	otal Cover		x5=
1. Lolium perenne	40	Yes FAC	Column Totals:	(A) (B)
2. Mentha pulegium	30	Yes OBL		
3. Phalaris aquatica		Yes FACU		= B/A =
4. Cynodon dactylon		No FACU	Hydrophytic Vegetatio	
5			✓ Dominance Test is✓ Prevalence Index is	
6				otations ¹ (Provide supporting
7 8			data in Remarks	or on a separate sheet)
· ·		otal Cover	Problematic Hydrop	ohytic Vegetation¹ (Explain)
Woody Vine Stratum (Plot size:)		o.a. 0010.		
1			Indicators of hydric soil be present, unless distu	and wetland hydrology must
2				
	=T	otal Cover	Hydrophytic Vegetation	
% Bare Ground in Herb Stratum % Co	ver of Biotic Crust		Present? Yes	s√ No
Remarks:			······································	· -
		,		

SOIL Sampling Point: Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) Depth Matrix Redox Features Color (moist) % Color (moist) % Type¹ Loc² Texture (inches) 2 <u>C M</u> 5YR 3/1 90 5YR 4/6 gravelly loam texture ¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.
²Location: PL=Pore Lining, M=Matrix. Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Soils³: Histosol (A1) ___ Sandy Redox (S5) ___ 1 cm Muck (A9) (LRR C) ___ Histic Epipedon (A2) ___ Stripped Matrix (S6) ___ 2 cm Muck (A10) (LRR B) ___ Black Histic (A3) ___ Reduced Vertic (F18) Loamy Mucky Mineral (F1) ___ Hydrogen Sulfide (A4) __ Red Parent Material (TF2) Loamy Gleyed Matrix (F2) ___ Stratified Layers (A5) (LRR C) Depleted Matrix (F3) Other (Explain in Remarks) 1 cm Muck (A9) (LRR D) ✓ Redox Dark Surface (F6) ___ Depleted Below Dark Surface (A11) Depleted Dark Surface (F7) _ Thick Dark Surface (A12) 3Indicators of hydrophytic vegetation and Redox Depressions (F8) Sandy Mucky Mineral (S1) _ Vernal Pools (F9) wetland hydrology must be present, Sandy Gleyed Matrix (S4) unless disturbed or problematic. Restrictive Layer (if present): Type: _ Depth (inches): Hvdric Soil Present? Yes No Remarks: gravel occurs throughout soil pit. **HYDROLOGY** Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Secondary Indicators (2 or more required) ___ Surface Water (A1) ___ Salt Crust (B11) ___ Water Marks (B1) (Riverine) High Water Table (A2) Biotic Crust (B12) Sediment Deposits (B2) (Riverine) ___ Aquatic Invertebrates (B13) __ Drift Deposits (B3) (Riverine) __ Saturation (A3) ___ Water Marks (B1) (Nonriverine) ___ Hydrogen Sulfide Odor (C1) ✓ Drainage Patterns (B10) ___ Oxidized Rhizospheres along Living Roots (C3) ___ Dry-Season Water Table (C2) ___ Sediment Deposits (B2) (Nonriverine) ___ Crayfish Burrows (C8) Drift Deposits (B3) (Nonriverine) Presence of Reduced Iron (C4) Surface Soil Cracks (B6) Saturation Visible on Aerial Imagery (C9) Recent Iron Reduction in Tilled Soils (C6) Inundation Visible on Aerial Imagery (B7) Thin Muck Surface (C7) Shallow Aquitard (D3) Water-Stained Leaves (B9) Other (Explain in Remarks) √ FAC-Neutral Test (D5) Field Observations: Yes No ✓ Depth (inches): Surface Water Present? Water Table Present? Yes _____ No __ ✓ Depth (inches): _____ Saturation Present? Yes ____ No _✓ Depth (inches): ____ Wetland Hydrology Present? Yes ____ No _ (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Project/Site: Fulton-Fitch Reconductoring Project	(City/County	: Windsor	-/Sonoma	Sampling Date:	11/2/12
Applicant/Owner: Pacific Gas & Electric Company				State: <u>CA</u>	Sampling Point:	1 b
Investigator(s): Julie Allison and Mike Farmer	;	Section, To	wnship, Ra	nge: <u>Section 6, Towns</u> ł	nip 8N, Range 9W	
Landform (hillslope, terrace, etc.): Terrace		Local relief	(concave,	convex, none): Concave	Slope	(%): <u>2</u>
Subregion (LRR): <u>C – Mediterranean California</u>						
Soil Map Unit Name: FaE - Felta very gravelly loam, 15-				NWI classific		
Are climatic / hydrologic conditions on the site typical for this						
Are Vegetation, Soil, or Hydrology si	-			"Normal Circumstances" p		No
Are Vegetation, Soil, or Hydrology na				eeded, explain any answe	-	
SUMMARY OF FINDINGS – Attach site map s						ures, etc.
Hydrophytic Vegetation Present? Yes No		ls th	e Sampled	l Area		
Hydric Soil Present? Yes No	· - / -	}	in a Wetlar		No <u></u> ✓	
Wetland Hydrology Present? Yes No			· ·			
Remarks:						<u> </u>
Data point was taken upslope from data po	int 1a w	ithin acc	cess road	d.		
VEGETATION – Use scientific names of plant	s.					
· · · · · · · · · · · · · · · · · · ·	Absolute			Dominance Test work	sheet:	
	% Cover	Species?	<u>Status</u>	Number of Dominant S		
1	,			That Are OBL, FACW,	or FAC:0	(A)
2				Total Number of Domin		. (D)
3. 4.				Species Across All Stra		(B)
		= Total Co		Percent of Dominant Sp		· ///D/
Sapling/Shrub Stratum (Plot size:)				That Are OBL, FACW,	51 FAC	(٨١٥)
1				Prevalence Index wor		
2				Total % Cover of:		
3				OBL species		
4				FACW species		
5		= Total Co		FACU species		I
Herb Stratum (Plot size: 3-foot radius)		– Total Co	VCI	UPL species		I
1. Cynosurus echinatus	30	Yes	UPL	Column Totals:		
2. Phalaris aquatica	10	<u>No</u>	<u>FACU</u>	.		, ,
3. Briza media	5	<u>No</u>	<u>FAC</u>	Prevalence Index		
4. Cynodon dactylon		No_	<u>FACU</u>	Hydrophytic Vegetatio		
5. Bromus hordeaceus	5	No	<u>FACU</u>	Dominance Test is Prevalence Index is		·
6. <u>Unidentifiable grasses</u>	<u>45</u>	Yes	UPL	I —	s =5.0 ptations¹ (Provide su	nnorting
7					s or on a separate sh	
8		= Total Co		Problematic Hydro	phytic Vegetation ¹ (E	xplain)
Woody Vine Stratum (Plot size:)		- Total Co	VCI			
1				¹ Indicators of hydric soi be present, unless distu		
2				be present, unless distr	Tibed of problematic	•
		= Total Co	ver	Hydrophytic Vegetation		
% Bare Ground in Herb Stratum % Cover	of Biotic Cr	ust			s No_ <u>√</u>	
Remarks:				d		
Unidentifiable grasses consisted of short gr	asses in	st startir	ng to ger	minate and assum	ed to he Cynos	urus
echinatus given the abundance of this spec	-				•	
hydrophytic plant community within the plant		pı		,		

SOIL		Sampling Point:	1b
Profile Desc	cription: (Describe to the dept	h needed to document the indicator or confirm the absence of indicators.)	
Depth	Matrix	Redox Features	

Depth	Matrix		Color (m: -!-+)	x Features	1 - 2 -		Damanda
(inches)	Color (moist)		Color (moist)	% Type ¹		exture	Remarks
-12	5YR 3/2	<u>90 N/</u>	<u>'A</u>				gravelly loam texture
					·		
	•						
	• •			· —— ——	· 		
		· —— —					
vne: C=Co	ncentration, D=Dep	letion RM=Re	duced Matrix CS	S=Covered or Coate	ad Sand Grains	2 _{1.00}	ation: PL=Pore Lining, M=Matrix.
	ndicators: (Applic						for Problematic Hydric Soils ³ :
_ Histosol (Sandy Red	•			luck (A9) (LRR C)
- `	pedon (A2)		Stripped Ma	• •			luck (A10) (LRR B)
Black His			Loamy Muc				ed Vertic (F18)
-	Sulfide (A4)		Loamy Gley	•			arent Material (TF2)
	Layers (A5) (LRR C	3)	Depleted M		_	_	Explain in Remarks)
1 cm Mud	k (A9) (LRR D)		Redox Dark				
	Below Dark Surface	e (A11)		ark Surface (F7)			
	k Surface (A12)			ressions (F8)			of hydrophytic vegetation and
	ucky Mineral (S1)		Vernal Pool	s (F9)			hydrology must be present,
	eyed Matrix (S4) ayer (if present):					uniess di	sturbed or problematic.
Suicuve L	ayer (ii present):						
Tuno:					I		
Depth (inclemarks:	ce of hydric so		_	curs througho		dric Soil	Present? Yes No <u>√</u>
Depth (inclemarks:	ce of hydric so		_	curs througho		dric Soil	Present? Yes No <u>√</u>
Depth (inclemarks: o eviden	ce of hydric so		_	curs througho		dric Soil	Present? Yes No <u>✓</u>
Depth (inclemarks: O eviden DROLOG etland Hyde	nes): ce of hydric so	il indicato	rs. Gravel oc				Present? Yes No✓
Depth (inclemarks: Deviden DROLOG Ptland Hyden mary Indica	nes): ce of hydric so SY rology Indicators:	il indicato	rs. Gravel oc	v)		Secon	
Depth (incl marks: Deviden DROLOG etland Hydemary Indica Surface V	ce of hydric so	il indicato	rs. Gravel oc	y) (B11)		Secon	dary Indicators (2 or more required)
Depth (incl marks: Deviden DROLOG etland Hydemary Indica Surface V	ce of hydric so SY rology Indicators: ators (minimum of o Vater (A1) er Table (A2)	il indicato	rs. Gravel oc	y) (B11)		Secon	dary Indicators (2 or more required) /ater·Marks (B1) (Riverine)
Depth (inclemarks: Deviden DROLOG etland Hyde mary Indica Surface V High Wate Saturation	ce of hydric so SY rology Indicators: ators (minimum of o Vater (A1) er Table (A2)	il indicator	rs. Gravel oc neck all that appl Salt Crust Biotic Crus Aquatic Inv	y) (B11) st (B12)		Secon W Se Dr	dary Indicators (2 or more required) /ater Marks (B1) (Riverine) ediment Deposits (B2) (Riverine)
Depth (inclemarks: Deviden DROLOG Stland Hyden Mary Indica Surface V High Water Saturation Water Mar	ce of hydric so GY rology Indicators: ators (minimum of o Vater (A1) er Table (A2) n (A3)	ne required; ch	rs. Gravel oc neck all that apply Salt Crust Biotic Crus Aquatic Inv Hydrogen	y) (B11) st (B12) vertebrates (B13)	ut soil pit.	Secon W Se Di Dr	dary Indicators (2 or more required) /ater Marks (B1) (Riverine) ediment Deposits (B2) (Riverine) rift Deposits (B3) (Riverine)
Depth (inclemarks: Deviden DROLOG Etland Hydinary Indica Surface V High Wate Saturation Water Ma Sediment	ce of hydric so rology Indicators: ators (minimum of o Vater (A1) er Table (A2) in (A3) irks (B1) (Nonriveri	ne required; ch	neck all that apple Salt Crust Biotic Crust Aquatic Inv Hydrogen Oxidized F	y) (B11) st (B12) vertebrates (B13) Sulfide Odor (C1)	ut soil pit.	Secon W Se Di Di Do	dary Indicators (2 or more required) fater Marks (B1) (Riverine) ediment Deposits (B2) (Riverine) rift Deposits (B3) (Riverine) rainage Patterns (B10)
DROLOG etland Hydrimary Indica Surface V High Water Water Ma Sediment Drift Depo	ce of hydric so rology Indicators: ators (minimum of o Vater (A1) er Table (A2) n (A3) rrks (B1) (Nonriveri Deposits (B2) (Non	ne required; ch	neck all that apple Salt Crust Biotic Crust Aquatic Int Hydrogen Oxidized F	y) (B11) st (B12) vertebrates (B13) Sulfide Odor (C1) Rhizospheres along	ut soil pit. Living Roots (C3	Secon W Se Di Di Di Cr	dary Indicators (2 or more required) /ater Marks (B1) (Riverine) ediment Deposits (B2) (Riverine) rift Deposits (B3) (Riverine) rainage Patterns (B10) ry-Season Water Table (C2)
DROLOG etland Hydrimary Indica Surface V High Wate Saturation Water Ma Sediment Drift Depo	ce of hydric so rology Indicators: ators (minimum of o Vater (A1) er Table (A2) n (A3) arks (B1) (Nonriveri Deposits (B2) (Nonriveri	ne required; ch	neck all that apply Salt Crust Biotic Crust Aquatic Inv Hydrogen Oxidized R Presence o	y) (B11) st (B12) vertebrates (B13) Sulfide Odor (C1) Rhizospheres along of Reduced Iron (C4	ut soil pit. Living Roots (C3	Secon W Se Di Di Cr Sr	dary Indicators (2 or more required) (ater Marks (B1) (Riverine) ediment Deposits (B2) (Riverine) rift Deposits (B3) (Riverine) rainage Patterns (B10) ry-Season Water Table (C2) rayfish Burrows (C8)
DROLOG PROLOG Partiand Hydrogram Burface V High Water Saturation Water Ma Sediment Drift Depo Surface S Inundation Water-Sta	ce of hydric so rology Indicators: ators (minimum of o Vater (A1) er Table (A2) in (A3) irks (B1) (Nonriveri Deposits (B2) (Nonriveri soil Cracks (B6) in Visible on Aerial In	ne required; ch	neck all that apply Salt Crust Biotic Crust Aquatic Inv Hydrogen Oxidized R Presence of Recent Iro	y) (B11) st (B12) vertebrates (B13) Sulfide Odor (C1) Rhizospheres along of Reduced Iron (C- n Reduction in Tille	ut soil pit. Living Roots (C3	Secon W Se Di Di Ci Si Si	dary Indicators (2 or more required) /ater Marks (B1) (Riverine) ediment Deposits (B2) (Riverine) rift Deposits (B3) (Riverine) rainage Patterns (B10) ry-Season Water Table (C2) rayfish Burrows (C8) aturation Visible on Aerial Imagery (
Depth (inclemarks: Deviden DROLOG etland Hydrimary Indica Surface V High Water Saturation Water Ma Sediment Drift Depc Surface S Inundation Water-Sta	ce of hydric so rology Indicators: ators (minimum of o Vater (A1) er Table (A2) in (A3) irks (B1) (Nonriveri Deposits (B2) (Nonriveri soil Cracks (B6) in Visible on Aerial In	ne required; ch	neck all that apply Salt Crust Biotic Crust Aquatic Inv Hydrogen Oxidized R Presence of Recent Iro	y) (B11) st (B12) vertebrates (B13) Sulfide Odor (C1) Rhizospheres along of Reduced Iron (C- n Reduction in Tille Surface (C7)	ut soil pit. Living Roots (C3	Secon W Se Di Di Ci Si Si	dary Indicators (2 or more required) /ater Marks (B1) (Riverine) ediment Deposits (B2) (Riverine) rift Deposits (B3) (Riverine) rainage Patterns (B10) ry-Season Water Table (C2) rayfish Burrows (C8) aturation Visible on Aerial Imagery (nallow Aquitard (D3)
DROLOG etland Hydi mary Indica Surface V High Wate Saturation Water Ma Sediment Drift Depo Surface S Inundation Water-Sta	ce of hydric so rology Indicators: ators (minimum of o Vater (A1) er Table (A2) n (A3) rks (B1) (Nonriveri Deposits (B2) (Nonriveri soil Cracks (B6) n Visible on Aerial In ained Leaves (B9)	ne required; ch	rs. Gravel oc	y) (B11) st (B12) vertebrates (B13) Sulfide Odor (C1) Rhizospheres along of Reduced Iron (C- n Reduction in Tille Surface (C7)	ut soil pit. Living Roots (C34) d Soils (C6)	Secon W Se Di Di Ci Si Si	dary Indicators (2 or more required) /ater Marks (B1) (Riverine) ediment Deposits (B2) (Riverine) rift Deposits (B3) (Riverine) rainage Patterns (B10) ry-Season Water Table (C2) rayfish Burrows (C8) aturation Visible on Aerial Imagery (nallow Aquitard (D3)
Depth (inclemarks: O eviden DROLOG etland Hydrimary Indica Surface V High Wate Saturation Water Ma Sediment Drift Depo	ce of hydric so rology Indicators: ators (minimum of o Vater (A1) er Table (A2) n (A3) arks (B1) (Nonriveri Deposits (B2) (Nonriveri soil Cracks (B6) n Visible on Aerial In ained Leaves (B9) ations:	ne required; ch	rs. Gravel oc	y) (B11) st (B12) vertebrates (B13) Sulfide Odor (C1) Rhizospheres along of Reduced Iron (C4) n Reduction in Tille Surface (C7) olain in Remarks)	ut soil pit. Living Roots (C34) d Soils (C6)	Secon W Se Di Di Ci Si Si	dary Indicators (2 or more required) /ater Marks (B1) (Riverine) ediment Deposits (B2) (Riverine) rift Deposits (B3) (Riverine) rainage Patterns (B10) ry-Season Water Table (C2) rayfish Burrows (C8) aturation Visible on Aerial Imagery (nallow Aquitard (D3)
Depth (inclemarks: O eviden DROLOG etland Hydrimary Indica Surface V High Water Saturation Water Ma Sediment Drift Depo Surface S Inundation Water-Sta Ind Observation Water Table F Inturation Precludes capi	ce of hydric so rology Indicators: ators (minimum of o Vater (A1) er Table (A2) in (A3) arks (B1) (Nonriveri Deposits (B2) (Nonriveri soil Cracks (B6) in Visible on Aerial II ained Leaves (B9) ations: Present? Yoursent?	ne required; ch	rs. Gravel oc	y) (B11) st (B12) vertebrates (B13) Sulfide Odor (C1) Rhizospheres along of Reduced Iron (C- n Reduction in Tille Surface (C7) blain in Remarks) ches):	ut soil pit. Living Roots (C34) d Soils (C6) Wetland H	Secon W Secon Di Di Di Di Di Di Di D	dary Indicators (2 or more required) /ater Marks (B1) (Riverine) ediment Deposits (B2) (Riverine) rift Deposits (B3) (Riverine) rainage Patterns (B10) ry-Season Water Table (C2) rayfish Burrows (C8) aturation Visible on Aerial Imagery (nallow Aquitard (D3)
Depth (inclemarks: O eviden DROLOG etland Hydrimary Indica Surface V High Water Saturation Water Ma Sediment Drift Depo Surface S Inundation Water-Sta Ind Observation Water Table F Inturation Precludes capi	ce of hydric so rology Indicators: ators (minimum of o Vater (A1) er Table (A2) n (A3) rrks (B1) (Nonriveri Deposits (B2) (Nonriveri soil Cracks (B6) n Visible on Aerial II ained Leaves (B9) ations: r Present? Yoursent?	ne required; ch	rs. Gravel oc	y) (B11) st (B12) vertebrates (B13) Sulfide Odor (C1) Rhizospheres along of Reduced Iron (C- n Reduction in Tille Surface (C7) blain in Remarks) ches):	ut soil pit. Living Roots (C34) d Soils (C6) Wetland H	Secon W Secon Di Di Di Di Di Di Di D	dary Indicators (2 or more required) fater Marks (B1) (Riverine) ediment Deposits (B2) (Riverine) rift Deposits (B3) (Riverine) rainage Patterns (B10) ry-Season Water Table (C2) rayfish Burrows (C8) aturation Visible on Aerial Imagery (nallow Aquitard (D3) AC-Neutral Test (D5)
Depth (inclemarks: Deviden DROLOG etland Hydrica Surface V High Water Saturation Water-Sta Inundation Water-Sta Ind Observation Water Table Follodes capi	ce of hydric so rology Indicators: ators (minimum of o Vater (A1) er Table (A2) in (A3) arks (B1) (Nonriveri Deposits (B2) (Nonriveri soil Cracks (B6) in Visible on Aerial II ained Leaves (B9) ations: Present? Yoursent?	ne required; ch	rs. Gravel oc	y) (B11) st (B12) vertebrates (B13) Sulfide Odor (C1) Rhizospheres along of Reduced Iron (C- n Reduction in Tille Surface (C7) blain in Remarks) ches):	ut soil pit. Living Roots (C34) d Soils (C6) Wetland H	Secon W Secon Di Di Di Di Di Di Di D	dary Indicators (2 or more required) fater Marks (B1) (Riverine) ediment Deposits (B2) (Riverine) rift Deposits (B3) (Riverine) rainage Patterns (B10) ry-Season Water Table (C2) rayfish Burrows (C8) aturation Visible on Aerial Imagery (nallow Aquitard (D3) AC-Neutral Test (D5)
Depth (inclemarks: Deviden DROLOG etland Hydrica Surface V High Water Mater	ce of hydric so rology Indicators: ators (minimum of o Vater (A1) er Table (A2) n (A3) arks (B1) (Nonriveri Deposits (B2) (Nonriveri soil Cracks (B6) n Visible on Aerial II ained Leaves (B9) ations: r Present? Your sent? Your sent sent sent sent sent sent sent sent	ne required; che	rs. Gravel oc neck all that apple Salt Crust Biotic Crust Aquatic Ine Hydrogen Oxidized F Presence of Recent Iro Thin Muck Other (Exp	y) (B11) st (B12) vertebrates (B13) Sulfide Odor (C1) Rhizospheres along of Reduced Iron (C- n Reduction in Tille Surface (C7) blain in Remarks) ches): ches):	Living Roots (C34) d Soils (C6) Wetland H	Secon W Secon Di Di Di Secon S	dary Indicators (2 or more required) fater Marks (B1) (Riverine) ediment Deposits (B2) (Riverine) rift Deposits (B3) (Riverine) rainage Patterns (B10) ry-Season Water Table (C2) rayfish Burrows (C8) aturation Visible on Aerial Imagery (nallow Aquitard (D3) AC-Neutral Test (D5)

Project/Site: Fulton-Fitch Reconductoring Project	,	City/County	r: Windsor	/Sonoma	Sampling Date: 11/2/12
Applicant/Owner: Pacific Gas & Electric Company				State: <u>CA</u>	Sampling Point: 2a
Investigator(s): Julie Allison and Mike Farmer		Section, To	wnship, Ra	nge: <u>Section 6, Towns</u> l	nip 8N, Range 9W
Landform (hillslope, terrace, etc.): Terrace		Local relie	f (concave,	convex, none): Concave	Slope (%):2
Subregion (LRR): <u>C – Mediterranean California</u>	_ Lat: <u>38</u>	.566890°		Long: -122.793769°	Datum: WGS84
Soil Map Unit Name: FaE - Felta very gravelly loam, 15	-30% slop	es		NWI classific	eation:
Are climatic / hydrologic conditions on the site typical for this			,		· · · · · · · · · · · · · · · · · · ·
Are Vegetation, Soil, or Hydrologys					oresent? Yes No
Are Vegetation, Soil, or Hydrology n				eeded, explain any answe	
SUMMARY OF FINDINGS – Attach site map			-		
Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present? Remarks: Yes ✓ N N N N N N N N N N N N N	o		ne Sampled nin a Wetlan	I Area nd? Yes <u>√</u>	No
Data point taken within seasonal wetland.					
VEGETATION – Use scientific names of plan	te				
VEGETATION - OSe scientific frames of plan	Absolute	Dominant	Indicator	Dominance Test work	sheet:
<u>Tree Stratum</u> (Plot size:) 1	% Cover			Number of Dominant S That Are OBL, FACW,	
2				Total Number of Domin	
3				Species Across All Stra	
4				Percent of Dominant Sp	
Sapling/Shrub Stratum (Plot size:)		= Total Co	over	That Are OBL, FACW,	or FAC: <u>100</u> (A/B)
1				Prevalence Index wor	ksheet:
2					Multiply by:
3				1	x 1 =
4				i .	x 2 =
5				i i	x3=
Herb Stratum (Plot size: _3-foot radius)	-	_= Total Co	over	· ·	x 4 =
1. Lolium perenne	80	Yes	FAC		x 5 = (B)
2. Mentha pulegium	5	No	OBL	Column Totals.	(r) (b)
3. Cyperus eragrostis	5	<u>No</u>	FACW	Prevalence Index	= B/A =
4. Unidentifiable grasses	10	No	FAC	Hydrophytic Vegetation	
5				✓ Dominance Test is	i
6		•		Prevalence Index is	
7				Morphological Ada data in Remarks	ptations ¹ (Provide supporting s or on a separate sheet)
8					phytic Vegetation ¹ (Explain)
Woody Vine Stratum (Plot size:)	100	= Total Co	over		
1					l and wetland hydrology must
2				be present, unless distu	arbed or problematic.
	4	= Total Co	ver	Hydrophytic Vegetation	
% Bare Ground in Herb Stratum % Cover	of Biotic C	rust			s√_ No
Remarks:					
Unidentifiable grasses consisted of short g	racene iu	et etarti	na to ac	rminate and accum	ed to be I olium
perenne given the abundance of this speci	•			minate and assum	eu to be conum
perenne given the abundance of this speci	C3 WILLIII	i tile pic			

Sampling Point: 2a

Depth	Matrix			ox Features		. ,	-	
(inches)	Color (moist)	%	Color (moist)	%	_Type ¹	_Loc ²	Texture	Remarks
-12	5YR 3/1	<u>90</u> .	5YR 4/6	2	_ <u>C</u>	_M		gravelly loam texture
			•	- —				
			·					
			1					
	ncentration, D=De	dotion DM=	Poducod Matrix C	 6-Covered		d Cond C		notion: DI -Doro Lining MA-Matrix
	ndicators: (Applic					a Sana G		cation: PL=Pore Lining, M=Matrix. s for Problematic Hydric Soils ³ :
_ Histosol (able to all t			;u.,			
_	ipedon (A2)		Sandy Red Stripped Ma					Muck (A9) (LRR C) Muck (A10) (LRR B)
_ Black His			Loamy Muc		(F1)			ced Vertic (F18)
_	n Sulfide (A4)		Loamy Gley	•	. ,			arent Material (TF2)
	Layers (A5) (LRR	C)	Depleted M		· -/			(Explain in Remarks)
	ck (A9) (LRR D)	·	✓ Redox Dark		F6)			,
Depleted	Below Dark Surface	e (A11)	Depleted D	ark Surface	e (F7)			
_ Thick Dai	rk Surface (A12)		Redox Dep	ressions (F	⁻ 8)		³ Indicators	of hydrophytic vegetation and
	ucky Mineral (S1)		Vernal Pool	ls (F9)				hydrology must be present,
	eyed Matrix (S4)						unless d	listurbed or problematic.
	avar lif mraaant).						1	
strictive L	ayer (if present):							
Strictive L	ayer (ii present):							
Type: Depth (inclemarks:							Hydric Soil	Present? Yes <u>√</u> No
Type: Depth (inclemarks: ravel occ	nes):urs throughou						Hydric Soil	l Present? Yes <u>√</u> No
Type: Depth (inclemarks: avel occ	nes): urs throughou	ıt soil pit.					Hydric Soil	Present? Yes <u>√</u> No
Type:	hes): urs throughou GY rology Indicators:	it soil pit.						·
Type:	hes): urs throughou GY rology Indicators: ators (minimum of c	it soil pit.	check all that appl			,	Secon	ndary Indicators (2 or more required)
Type:	hes): urs throughou GY rology Indicators: ators (minimum of c	it soil pit.	check all that appl	(B11)			<u>Seco</u> r	ndary Indicators (2 or more required) Vater Marks (B1) (Riverine)
Type: Depth (inclemarks: ravel occ DROLOG etland Hydinary Indicate V _ High Water	hes): urs throughou SY rology Indicators: ators (minimum of control (A1) er Table (A2)	it soil pit.	check all that appl Salt Crust Biotic Crus	(B11) st (B12)			<u>Secor</u> V S	ndary Indicators (2 or more required) Vater Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine)
Depth (inclemarks: avel occ DROLOG etland Hyde mary Indica Surface V High Wate Saturation	hes): urs throughou GY rology Indicators: ators (minimum of control of	it soil pit.	check all that appl Salt Crust Biotic Crus Aquatic In	(B11) st (B12) vertebrates	` '		<u>Secor</u> V S S	ndary Indicators (2 or more required) Vater Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Orift Deposits (B3) (Riverine)
Depth (inclemarks: avel occ DROLOG etland Hyde mary Indicat Surface V High Wate Saturation Water Ma	hes):	nt soil pit.	check all that appl Salt Crust Biotic Crus Aquatic In	(B11) st (B12) vertebrates Sulfide Od	or (C1)		<u>Secon</u> V S D D	ndary Indicators (2 or more required) Vater Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Orift Deposits (B3) (Riverine) Orainage Patterns (B10)
Depth (included) Depth (included) DROLOG Control DROLOG Co	hes):	nt soil pit.	check all that appl Salt Crust Biotic Crust Aquatic In Hydrogen Oxidized F	(B11) st (B12) vertebrates Sulfide Od Rhizosphen	or (C1) es along l	-	Secon V S D D ots (C3) D	ndary Indicators (2 or more required) Vater Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Orift Deposits (B3) (Riverine) Orainage Patterns (B10) Ory-Season Water Table (C2)
Depth (inclemarks: DROLOG etland Hydimary Indica Surface V High Wate Saturation Water Ma Sediment Drift Depo	hes):	nt soil pit.	check all that appl Salt Crust Biotic Crus Aquatic In Hydrogen Oxidized F	(B11) st (B12) vertebrates Sulfide Od Rhizospher of Reduced	or (C1) es along l d Iron (C4)	Secon V S D V D ots (C3) D	ndary Indicators (2 or more required) Vater Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Orift Deposits (B3) (Riverine) Oralinage Patterns (B10) Ory-Season Water Table (C2) Crayfish Burrows (C8)
Depth (inclemarks: DROLOG etland Hyditimary Indicate Surface V High Water Mater Mater Sediment Drift Depo	urs throughou Trology Indicators: ators (minimum of content (A1) er Table (A2) en (A3) arks (B1) (Nonriver content (B2) (Nonriver content (B3) (Nonriver)	ne required; ine) nriverine)	check all that appl Salt Crust Biotic Crust Aquatic In Hydrogen Oxidized F Presence	(B11) st (B12) vertebrates Sulfide Od Rhizospher of Reduced in Reduction	or (C1) es along l d Iron (C4 on in Tilled)	Secon V S S Cots (C3) C C S S S S	ndary Indicators (2 or more required) Vater Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Orift Deposits (B3) (Riverine) Originage Patterns (B10) Ory-Season Water Table (C2) Orayfish Burrows (C8) Saturation Visible on Aerial Imagery (C
Depth (inclemarks: avel occ DROLOG etland Hydemary Indica Surface V High Wate Saturation Water Ma Sediment Drift Depo	hes):	ne required; ine) nriverine)	check all that appl Salt Crust Biotic Crust Aquatic In Hydrogen Oxidized F Presence Recent Iro	(B11) st (B12) vertebrates Sulfide Od Rhizospher of Reduced n Reductio	or (C1) es along l d Iron (C4 on in Tilled C7))	Secon V S C S C S C S S S S S S S S S S S S	ndary Indicators (2 or more required) Vater Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Orift Deposits (B3) (Riverine) Originage Patterns (B10) Ory-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (Catallow Aquitard (D3)
Depth (inclemarks: avel occ DROLOG etland Hyde mary Indica Surface V High Wate Saturation Water Ma Sediment Drift Depo Surface S Inundation Water-Sta	hes):	ne required; ine) nriverine)	check all that appl Salt Crust Biotic Crust Aquatic In Hydrogen Oxidized F Presence Recent Iro	(B11) st (B12) vertebrates Sulfide Od Rhizospher of Reduced in Reduction	or (C1) es along l d Iron (C4 on in Tilled C7))	Secon V S C S C S C S S S S S S S S S S S S	ndary Indicators (2 or more required) Vater Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Orift Deposits (B3) (Riverine) Originage Patterns (B10) Ory-Season Water Table (C2) Orayfish Burrows (C8) Saturation Visible on Aerial Imagery (C
Depth (inclemarks: avel occ DROLOG etland Hyde mary Indica Surface V High Wate Saturation Water Ma Sediment Drift Depo Surface S Inundation Water-Sta	hes):	ine) magery (B7)	check all that appl Salt Crust Biotic Crust Aquatic In Hydrogen Oxidized F Presence Recent Iro Thin Muck Other (Exp	(B11) st (B12) vertebrates Sulfide Od Rhizospher of Reduced in Reduction Surface (Colain in Rer	or (C1) es along diron (C4 on in Tilled C7) marks)) I Soils (C6	Secon V S C S C S C S S S S S S S S S S S S	ndary Indicators (2 or more required) Vater Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Orift Deposits (B3) (Riverine) Originage Patterns (B10) Ory-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (Catallow Aquitard (D3)
Depth (inclemarks: Pavel occ DROLOG etland Hydital Mary Indication Water Mater Sediment Drift Depote Surface Sediment Understand Hydrological Water-States Sediment Water-States Sediment	hes):	ine) magery (B7)	check all that appl Salt Crust Biotic Crust Aquatic In Hydrogen Oxidized F Presence Recent Iro Thin Muck Other (Exp	(B11) st (B12) vertebrates Sulfide Od Rhizospher of Reduced in Reduction Surface (Colain in Rer ches):	or (C1) es along l d Iron (C4 on in Tilled C7) marks)) I Soils (C6	Secon V S C S C S C S S S S S S S S S S S S	ndary Indicators (2 or more required) Vater Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Orift Deposits (B3) (Riverine) Originage Patterns (B10) Ory-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (Catallow Aquitard (D3)
Depth (inclemarks: DROLOG Tavel OCC DROLOG Tavel OCC DROLOG Tavel OCC DROLOG Tavel OCC Tav	hes):	ine) magery (B7)	check all that appl Salt Crust Biotic Crust Aquatic In Hydrogen Oxidized F Presence Recent Iro Thin Muck Other (Exp	(B11) st (B12) vertebrates Sulfide Od Rhizospher of Reduced in Reduction Surface (Colain in Rer ches):	or (C1) es along l d Iron (C4 on in Tilled C7) marks)) I Soils (C6	Secon V S C S C S C S S S S S S S S S S S S	ndary Indicators (2 or more required) Vater Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Orift Deposits (B3) (Riverine) Originage Patterns (B10) Ory-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (Catallow Aquitard (D3)
Depth (inclemarks: Cavel occ DROLOG etland Hyditimary Indication Saturation Water Mater Mat	hes):	ine) magery (B7) es N es N	check all that appl Salt Crust Biotic Crust Aquatic In Hydrogen Oxidized F Presence Recent Iro Thin Muck Other (Exp	(B11) st (B12) vertebrates Sulfide Od Rhizospheri of Reduced in Reduction Surface (Colain in Rer ches): ches):	or (C1) es along l d Iron (C4 on in Tilled C7) marks)) I Soils (C6	Secon V S S S S S S S S S S S S S S S S S S	ndary Indicators (2 or more required) Vater Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Orift Deposits (B3) (Riverine) Originage Patterns (B10) Ory-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (Catallow Aquitard (D3)
Type:	urs throughou Tology Indicators: ators (minimum of control of con	ine) magery (B7) es N es N	check all that appl Salt Crust Biotic Crust Aquatic In Hydrogen Oxidized F Presence Recent Iro Thin Muck Other (Exp	(B11) st (B12) vertebrates Sulfide Od Rhizospheri of Reduced in Reduction Surface (Colain in Rer ches): ches):	or (C1) es along l d Iron (C4 on in Tilled C7) marks)) I Soils (C6	Secon V S S S S S S S S S S S S S S S S S S	ndary Indicators (2 or more required) Vater Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Orift Deposits (B3) (Riverine) Orainage Patterns (B10) Ory-Season Water Table (C2) Orayfish Burrows (C8) Saturation Visible on Aerial Imagery (C8) Shallow Aquitard (D3) SAC-Neutral Test (D5)
Type:	hes):	ine) magery (B7) es N es N	check all that appl Salt Crust Biotic Crust Aquatic In Hydrogen Oxidized F Presence Recent Iro Thin Muck Other (Exp	(B11) st (B12) vertebrates Sulfide Od Rhizospheri of Reduced in Reduction Surface (Colain in Rer ches): ches):	or (C1) es along l d Iron (C4 on in Tilled C7) marks)) I Soils (C6	Secon V S S S S S S S S S S S S S S S S S S	ndary Indicators (2 or more required) Vater Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Orift Deposits (B3) (Riverine) Orainage Patterns (B10) Ory-Season Water Table (C2) Orayfish Burrows (C8) Saturation Visible on Aerial Imagery (C8) Shallow Aquitard (D3) SAC-Neutral Test (D5)
Depth (inclemarks: DROLOG Etland Hyditimary Indication Water Mater Ma	hes):	ine) magery (B7) es N es N	check all that appl Salt Crust Biotic Crust Aquatic In Hydrogen Oxidized F Presence Recent Iro Thin Muck Other (Exp	(B11) st (B12) vertebrates Sulfide Od Rhizospheri of Reduced in Reduction Surface (Colain in Rer ches): ches):	or (C1) es along l d Iron (C4 on in Tilled C7) marks)) I Soils (C6	Secon V S S S S S S S S S S S S S S S S S S	ndary Indicators (2 or more required) Vater Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Orift Deposits (B3) (Riverine) Orainage Patterns (B10) Ory-Season Water Table (C2) Orayfish Burrows (C8) Saturation Visible on Aerial Imagery (C8) Shallow Aquitard (D3) SAC-Neutral Test (D5)
Depth (inclemarks: DROLOG Tavel OCC DROLOG etland Hydrimary Indicate Surface V High Water Saturation Water-Stateld Observation Water-Stateld Observation Water Table Food of the second of t	hes):	ine) magery (B7) es N es N	check all that appl Salt Crust Biotic Crust Aquatic In Hydrogen Oxidized F Presence Recent Iro Thin Muck Other (Exp	(B11) st (B12) vertebrates Sulfide Od Rhizospheri of Reduced in Reduction Surface (Colain in Rer ches): ches):	or (C1) es along l d Iron (C4 on in Tilled C7) marks)) I Soils (C6	Secon V S S S S S S S S S S S S S S S S S S	ndary Indicators (2 or more required) Vater Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Orift Deposits (B3) (Riverine) Orainage Patterns (B10) Ory-Season Water Table (C2) Orayfish Burrows (C8) Saturation Visible on Aerial Imagery (C8) Shallow Aquitard (D3) SAC-Neutral Test (D5)

Project/Site: Fulton-Fitch Reconductoring Project	(City/Coun	ty: Windso	r/Sonoma	Sampling Date:11/2/12
Applicant/Owner: Pacific Gas & Electric Company				State: <u>CA</u>	Sampling Point: 2b
Investigator(s): Julie Allison and Mike Farmer		Section, T	ownship, Ra	ange: Section 6, Towns	hip 8N, Range 9W
Landform (hillslope, terrace, etc.): Terrace		Local relie	ef (concave,	convex, none): Concave	Slope (%):
Subregion (LRR): C – Mediterranean California	Lat: _38.	.566890°	·	Long: -122.793769°	Datum: WGS84
Soil Map Unit Name: FaE - Felta very gravelly loam, 1					cation:
Are climatic / hydrologic conditions on the site typical for the	his time of ve				
Are Vegetation, Soil, or Hydrology			-		oresent? Yes✓_ No
Are Vegetation, Soil, or Hydrology				eeded, explain any answe	· · · · · · · · · · · · · · · · · · ·
SUMMARY OF FINDINGS – Attach site map				-	•
Hydrophytic Vegetation Present? Yes✓	No				
Hydric Soil Present? Yes	_		the Sampled		/
Wetland Hydrology Present? Yes		wit	thin a Wetla	nd? Yes	No <u> </u>
Remarks:	····				
Data point was taken upslope from data	point 2a.				
					E
VEGETATION – Use scientific names of pla	nte				
VEGETATION - Ose scientific fiames of pla	Absolute	Dominar	nt Indicator	Dominance Test work	rahaat:
Tree Stratum (Plot size:)			Status	Number of Dominant S	
1				That Are OBL, FACW,	
2				Total Number of Domin	ant
3				Species Across All Stra	
4				Percent of Dominant Si	pecies
Sapling/Shrub Stratum (Plot size:)	•	= Total C	over	That Are OBL, FACW,	or FAC: <u>67</u> (A/B)
1				Prevalence Index wor	ksheet:
2				Total % Cover of:	Multiply by:
3				OBL species	x 1 =
4				FACW species	x 2 =
5					x3=
Herb Stratum (Plot size: 3-foot radius)		= Total C	over		x 4 =
1. Briza media	30	Yes	FAC		x 5 =
2. Cynosurus echinatus		Yes	UPL	Column Totals:	(A) (B)
3. Lolium perenne	30	Yes		Prevalence Index	= B/A =
4. Unidentifiable grasses	10	No	?	Hydrophytic Vegetation	on Indicators:
5				✓ Dominance Test is	Į.
6	<u> </u>			Prevalence Index is	
7				Morphological Ada	ptations ¹ (Provide supporting s or on a separate sheet)
8					phytic Vegetation ¹ (Explain)
Woody Vine Stratum (Plot size:)	100	= Total C	over		,,
1				¹ Indicators of hydric soi	I and wetland hydrology must
2.				be present, unless distu	urbed or problematic.
		= Total C	over	Hydrophytic	
% Bare Ground in Herb Stratum % Cove	er of Biotic Cr	ust		Vegetation Present? Ye	s√ No
Remarks:				T TOO TO	
		ada ada = 111.	!		h = === = f
Unidentifiable grasses consisted of short	grasses ju	st starti	ing to ger	minate and could	be any of the species
identified within the plot.					

OIL							Sampling Point: 2b
Profile De	scription: (Describe	to the de	pth needed to docu	ment the indicator	or confirn	n the absence	of indicators.)
Depth	Matrix			ox Features			.
(inches)	Color (moist)	%	Color (moist)	<u>% Type¹</u>	_Loc ²	Texture	Remarks
0-12	5YR 3/2	<u>90</u> 	N/A				gravelly loam texture
							-
T 0-			4 Dadward Makin O	0.000000			atten Dipper Linius M-Matrix
			M=Reduced Matrix, Collins of the Matrix of t		a Sana G	Indicators	cation: PL=Pore Lining, M=Matrix. for Problematic Hydric Soils ³ :
Black I Hydrog Stratifi	Epipedon (A2) Histic (A3) gen Sulfide (A4) ed Layers (A5) (LRR	C)		atrix (S6) cky Mineral (F1) yed Matrix (F2)		2 cm M Reduce Red Pa	Muck (A9) (LRR C) Muck (A10) (LRR B) ed Vertic (F18) arent Material (TF2) (Explain in Remarks)
Deplet Thick [Sandy	Muck (A9) (LRR D) ed Below Dark Surfar Dark Surface (A12) Mucky Mineral (S1) Gleyed Matrix (S4)	ce (A11)	Depleted D	k Surface (F6) Park Surface (F7) Pressions (F8) Is (F9)		wetland l	of hydrophytic vegetation and hydrology must be present, isturbed or problematic.
Restrictive	Layer (if present):						
Type: _			Marketin security				
Depth (i	nches):					Hydric Soil	Present? Yes No
Remarks: No evide	ence of hydric s	oil indic	ators. Gravel oc	ccurs througho	ut soil p	it.	
YDROL							
Wetland H	ydrology Indicators	:					
Primary Ind	licators (minimum of	one requir	ed; check all that app	ly)		Secon	dary Indicators (2 or more required
	e Water (A1)		Salt Crust	• •		_	/ater Marks (B1) (Riverine)
	/ater Table (A2)		Biotic Cru			_	ediment Deposits (B2) (Riverine)
Satura				vertebrates (R13)			rift Denosits (B3) (Riverine)

Wetland Hydrology Indicators:					
Primary Indicators (minimum of one required; check all that apply) Secondary Indicators (2 or more required)					
Surface Water (A1)	Surface Water (A1) Salt Crust (B11)				
High Water Table (A2)	Biotic Crust (B12)	Sediment Deposits (B2) (Riverine)			
Saturation (A3)	Aquatic Invertebrates (B13)	Drift Deposits (B3) (Riverine)			
Water Marks (B1) (Nonriverine)	Hydrogen Sulfide Odor (C1)	Drainage Patterns (B10)			
Sediment Deposits (B2) (Nonriverine)	Oxidized Rhizospheres along Living	ng Roots (C3) Dry-Season Water Table (C2)			
Drift Deposits (B3) (Nonriverine)	Presence of Reduced Iron (C4)	Crayfish Burrows (C8)			
Surface Soil Cracks (B6)	Recent Iron Reduction in Tilled So	oils (C6) Saturation Visible on Aerial Imagery (C9)			
Inundation Visible on Aerial Imagery (B7)	Thin Muck Surface (C7)	Shallow Aquitard (D3)			
Water-Stained Leaves (B9)	Other (Explain in Remarks)	FAC-Neutral Test (D5)			
Field Observations:					
Surface Water Present? Yes No _	✓ Depth (inches):				
Water Table Present? Yes No _	✓ Depth (inches):				
Saturation Present? Yes No _ (includes capillary fringe)	✓ Depth (inches):	Wetland Hydrology Present? Yes No✓			
Describe Recorded Data (stream gauge, monito	ring well, aerial photos, previous inspec	tions), if available:			
Remarks:					
No wetland hydrology indicators pr	resent Soil nit was dug unslo	ne from data noint 2a			
The treatment in an ology in alcutors pr	escilli son pit was dug apsio	pe irom adea pome aar			

Project/Site: Fulton-Fitch Reconductoring Project		City/County	: Windsor	/Sonoma Sampling Date: 11/2/12
Applicant/Owner: Pacific Gas & Electric Company				
Investigator(s): Julie Allison and Mike Farmer				
Landform (hillslope, terrace, etc.): Hillslope		Local relie	f (concave,	convex, none): Concave Slope (%): 5
Subregion (LRR): <u>C – Mediterranean California</u>				
Soil Map Unit Name: FaE - Felta very gravelly loam, 30				NWI classification:
Are climatic / hydrologic conditions on the site typical for this			,	
Are Vegetation, Soil, or Hydrologys	•			"Normal Circumstances" present? Yes No
Are Vegetation, Soil, or Hydrology r				eeded, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map			•	
Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present? Yes ✓ N N Remarks:	۰	with	ne Sampled nin a Wetlar	nd? Yes <u>√</u> No
Data point taken within a very shallow line	ar depre	ession cr	eated by	vehicles accessing utility pole.
VEGETATION – Use scientific names of plan	ts.		•	
<u>Tree Stratum</u> (Plot size:) 1	Absolute % Cover	Species?		Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: (A)
2				Total Number of Dominant Species Across All Strata: 2 (B)
4				Percent of Dominant Species
Sapling/Shrub Stratum (Plot size:)		= Total Co	over	That Are OBL, FACW, or FAC: 100 (A/B)
1				Prevalence Index worksheet:
2				Total % Cover of: Multiply by:
3				OBL species x 1 =
4				FACW species x 2 =
5				FAC species x 3 =
Herb Stratum (Plot size: _3-foot radius)		= Total Co	over	FACU species x 4 =
1. Lolium perenne	35	Yes	FAC	UPL species x 5 =
2. Briza media		Yes	FAC	Column Totals: (A) (B)
3. Cynosurus echinatus		No	UPL	Prevalence Index = B/A =
4. Juncus sp.		No	FACW	Hydrophytic Vegetation Indicators:
5				✓ Dominance Test is >50%
6				Prevalence Index is ≤3.0¹
7				Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
8				Problematic Hydrophytic Vegetation (Explain)
Madu Vine Stratum (Diet eine)	90	= Total Co	over	robernatio riyarophytic vegetation (Explain)
Woody Vine Stratum (Plot size:) 1				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2				
% Bare Ground in Herb Stratum10		= Total Co rust		Hydrophytic Vegetation Present? Yes ✓ No
Remarks:				
Juncus species could not be identified but marginal wetland plant community.	it was as	sumed t	to be at l	east FACW. This feature supports a very

SOIL			
JUIL			

Profile Description: (Describe to the depth needed to document the indicator of Depth Matrix Redox Features	i commit the absence of mulcators.)
Depth Matrix Redox Features (inches) Color (moist) % Color (moist) % Type¹	Loc ² Texture Remarks
	silty clay
7,51(3)1 100 14/1	Sircy Clay
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated	
lydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)	Indicators for Problematic Hydric Soils ³ :
Histosol (A1) Sandy Redox (S5)	1 cm Muck (A9) (LRR C)
Histic Epipedon (A2) Stripped Matrix (S6)	2 cm Muck (A10) (LRR B)
Black Histic (A3) Loamy Mucky Mineral (F1)	Reduced Vertic (F18)
Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Stratified Layers (A5) (LRR C) Depleted Matrix (F3)	Red Parent Material (TF2) Other (Explain in Remarks)
1 cm Muck (A9) (LRR D) Redox Dark Surface (F6)	Outer (Explain in Nemarks)
Depleted Below Dark Surface (A11) Depleted Dark Surface (F7)	
Thick Dark Surface (A12) Redox Depressions (F8)	³ Indicators of hydrophytic vegetation and
Sandy Mucky Mineral (S1) Vernal Pools (F9)	wetland hydrology must be present,
Sandy Gleyed Matrix (S4)	unless disturbed or problematic.
estrictive Layer (if present):	
Type:	
Depth (inches):	Hydric Soil Present? Yes✓ No
Depth (inches):Remarks:	Hydric Soil Present? Yes <u>√</u> No
Depth (inches): Remarks: YDROLOGY	Hydric Soil Present? Yes <u>√</u> No
Depth (inches): Remarks: YDROLOGY Wetland Hydrology Indicators:	
Depth (inches):	Secondary Indicators (2 or more required)
Depth (inches):	Secondary Indicators (2 or more required) Water Marks (B1) (Riverine)
Depth (inches):emarks: /DROLOGY /etland Hydrology Indicators: rimary Indicators (minimum of one required; check all that apply) Surface Water (A1) Salt Crust (B11) High Water Table (A2) Biotic Crust (B12)	Secondary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine)
Depth (inches):	Secondary Indicators (2 or more required) Water Marks (B1) (Riverine)
Depth (inches):emarks: //DROLOGY /etland Hydrology Indicators: rimary Indicators (minimum of one required; check all that apply) Surface Water (A1) Salt Crust (B11) High Water Table (A2) Biotic Crust (B12) Saturation (A3) Aquatic Invertebrates (B13) Water Marks (B1) (Nonriverine) Hydrogen Sulfide Odor (C1)	Secondary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10)
Depth (inches):	Secondary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) iving Roots (C3) Dry-Season Water Table (C2)
Depth (inches):	Secondary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) iving Roots (C3) Crayfish Burrows (C8)
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Depth (inches):	Secondary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) iving Roots (C3) Dry-Season Water Table (C2) Crayfish Burrows (C8) Soils (C6) Saturation Visible on Aerial Imagery (C
Depth (inches):	Secondary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) iving Roots (C3) Dry-Season Water Table (C2) Crayfish Burrows (C8) Soils (C6) Saturation Visible on Aerial Imagery (Canonical Control
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Popth (inches): Popth (inches): Popth (inc	Secondary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) iving Roots (C3) Dry-Season Water Table (C2) Crayfish Burrows (C8) Soils (C6) Saturation Visible on Aerial Imagery (Canonical Control Co
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Primary Indicators (minimum of one required; check all that apply) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Drift Deposits (B2) (Nonriverine) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Water Stained Leaves (B9) Water Table (Pazes	Secondary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) iving Roots (C3) Dry-Season Water Table (C2) Crayfish Burrows (C8) Soils (C6) Saturation Visible on Aerial Imagery (Candidate of the company of the compan
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Popth (inches): Primary Indicators (minimum of one required; check all that apply)	Secondary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) iving Roots (C3) Dry-Season Water Table (C2) Crayfish Burrows (C8) Soils (C6) Saturation Visible on Aerial Imagery (Candidate of the company of the compan
Popth (inches): Popth (inches): Popth (inch	Secondary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) iving Roots (C3) Dry-Season Water Table (C2) Crayfish Burrows (C8) Soils (C6) Saturation Visible on Aerial Imagery (Candidate of the company of the compan

Sampling Point: _

3a

Project/Site: Fulton-Fitch Reconductoring Project		City/County: Windsor	r/Sonoma	Sampling Date:11/2/12
Applicant/Owner: Pacific Gas & Electric Company			State: <u>CA</u>	Sampling Point:3b
Investigator(s): Julie Allison and Mike Farmer		Section, Township, Ra	nge: <u>Section 6, Towns</u>	hip 8N, Range 9W
Landform (hillslope, terrace, etc.): Hillslope		Local relief (concave,	convex, none): Concave	Slope (%): 5
Subregion (LRR): <u>C – Mediterranean California</u>		· ·		
Soil Map Unit Name: FaE - Felta very gravelly loam,				cation:
Are climatic / hydrologic conditions on the site typical for				
Are Vegetation, Soil, or Hydrology	_			present? Yes No
Are Vegetation, Soil, or Hydrology			eeded, explain any answe	
SUMMARY OF FINDINGS – Attach site ma		·		
Lhudanahudia Vanatatian Danasud	No/			
	No <u> </u>	Is the Sampled		,
	No ✓	within a Wetla	nd? Yes	No <u></u>
Remarks:				·
Data point taken within a very shallow I	inear depre	ession created by	vehicles accessing	z utility pole.
i i i i i i i i i i i i i i i i i i i	ou. uopi e	,	, , , , , , , , , , , , , , , , , , , ,	,, po.e.
VEGETATION III II III				
VEGETATION – Use scientific names of pl				
Tree Stratum (Plot size:)	Absolute % Cover	Dominant Indicator Species? Status	Dominance Test work	
1			Number of Dominant S That Are OBL, FACW,	
2				
3			Total Number of Domir Species Across All Stra	_
4			Percent of Dominant S	nacine
O-villa (Obrah Obraham (District		= Total Cover	That Are OBL, FACW,	
Sapling/Shrub Stratum (Plot size:)			Prevalence Index wor	·kehoot·
1			Total % Cover of:	
3.				x1=
4.				x 2 =
5.			FAC species	x 3 =
		= Total Cover	FACU species	x 4 =
Herb Stratum (Plot size: 3-foot radius)		V UDI	UPL species	x 5 =
1. Cynosurus echinatus		Yes UPL	Column Totals:	(A) (B)
2. Briza media			Prevalence Index	c = B/A =
3			Hydrophytic Vegetati	
5			Dominance Test is	
6.			Prevalence Index	s ≤3.0 ¹
7			Morphological Ada	ptations ¹ (Provide supporting
8.				s or on a separate sheet)
Mark Mar Olad as (Dist	100	= Total Cover	Problematic Hydro	phytic Vegetation ¹ (Explain)
Woody Vine Stratum (Plot size:)			1 Indicators of hydric so	il and wetland hydrology must
1			be present, unless dist	
		= Total Cover	Hydrophytic	
N Para Out at 11 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		•	Vegetation	N
% Bare Ground in Herb Stratum % Co	over of Biotic Ci	rust	Present? Ye	es No <u> </u>
Remarks:				
:				

0	\sim	
	UЛ	

Sampling Point: ____3b

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1) Histosol (A2) Black Histic Epipedon (A2) Black Histic (A3) Loamy Mucky Mineral (F1) Reduced Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Red Pare Stratified Layers (A5) (LRR C) Depleted Matrix (F3) Depleted Below Dark Surface (A11) Depleted Dark Surface (F6) Depleted Below Dark Surface (A12) Sandy Mucky Mineral (F1) Thick Dark Surface (A12) Sandy Mucky Mineral (F3) Sandy Mucky Mineral (F1) Wetland Present): Type: Depth (inches): Type: Depth (inches): Biotic Crust (B11) Hydric Soil Presents Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine) Sediment Deposits (B2) (Nonriverine) Sediment Deposits (B2) (Nonriverine) Surface Soil Crask (B6) Recent Iron Reduced Iron (C4) Surface Soil Crask (B6) Inundation Visible on Aerial Imagery (B7) Thin Muck Surface (C7) Shall Water-Stalned Leaves (B9) Other (Explain in Remarks) Water Table Present? Yes No ✓ Depth (inches): Water Table Present?	Remarks
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. - 2 Locat Varic Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) - Histosol (A1) - Histosol (A2) - Histosol (A2) - Sandy Redox (S5) - 2 cm Murel Histosol (A3) - Loamy Mucky Mineral (F1) - Reduced Hydrogen Sulfide (A4) - Stratified Layers (A5) (LRR C) - Stratified Layers (A5) (LRR C) - Coepleted Matrix (F2) - Redox Dark Surface (F3) - Other (E) - Stratified Layers (A5) (LRR D) - Redox Dark Surface (F7) - Thick Dark Surface (A12) - Redox Depressions (F8) - Sandy Mucky Mineral (S1) - Sandy Mucky Mineral (S1) - Vernal Pools (F9) - Wetland hydrology Indicators of wetland hydrology Indicators (F9) - Sandy Gleyd Matrix (S4) - Surface Water (A1) - Salt Crust (B11) - High Water Table (A2) - Salturation (A3) - Aquatic Invertebrates (B13) - Water Marks (B1) (Nonriverine) - Sadiument Deposits (B2) (Nonriverine) - Surface Soil Cracks (B6) - Recent Iron Reduction in Tilled Soils (C6) - Saturation Visible on Aerial Imagery (B7) - Water-Stained Leaves (B9) - Other (Explain in Remarks) - FACel Observations: - Wetland Hydrology Follows (F9) - Wetland Hydrology Follows (F9) - Company	Remarks
Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1) Histosol (A2) Black Histic (A3) Loamy Mucky Mineral (F1) Reduced Hydrogen Sulfide (A4) Black Histic (A3) Loamy Mucky Mineral (F1) Reduced Matrix (F2) Red Pare Stratified Layers (A5) (LRR C) Depleted Matrix (F3) Depleted Below Dark Surface (A11) Depleted Below Dark Surface (A12) Sandy Bleyed Matrix (F3) Depleted Below Dark Surface (A12) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Sandy Gleyed Matrix (F3) Wernal Pools (F9) Wetland hydrology Indicators of Wetland hydrology Indicators (F9) Depleted Dark Surface (F9) Depleted Dark Surface (F9) Depleted Dark Surface (F9) Depleted Dark Surface (F9) Wetland hydrology Indicators of Wetland hydrology Indicators of Wetland hydrology Indicators (F9) Wetland Hydric Soil Primarks: DROLOGY Surface Water (A1) Salt Crust (B12) Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine) Drift Deposits (B3) (Nonriverine) Drift Deposits (B3) (Nonriverine) Surface Soil Cracks (B8) Water-Salned Leaves (B9) Drift Other (Explain in Remarks) Water Present? Yes No Depth (inches): Wetland Hydrology Fellower (Wetland Hydrology Fellower (F) Wetland Hydrology Fellower (F) Wetland Hydrology Fellower (F9)	
dric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1) Sandy Redox (S5) 1 cm Muc Histic Epipedon (A2) Stripped Matrix (S6) 2 cm Muc Black Histic (A3) Loamy Mucky Mineral (F1) Reduced Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Red Pare Stratified Layers (A5 (LRR C) ✓ Depleted Matrix (F3) Other (E) 1 cm Muck (A9) (LRR D) Redox Dark Surface (F6) Depleted Below Dark Surface (A11) Depleted Dark Surface (F7) Thick Dark Surface (A12) Redox Depressions (F8) Indicators of wetland hydrology for Matrix (S4) Sandy Gleyed Matrix (S4) Strictive Layer (if present): Type: Depth (inches): Hydric Soil Pr marks: DROLOGY ### ### ### ### ### ### ### ### ### #	
dric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1) Sandy Redox (S5) 1 cm Muc Histic Epipedon (A2) Stripped Matrix (S6) 2 cm Muc Black Histic (A3) Loamy Mucky Mineral (F1) Reduced Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Red Pare Stratified Layers (A5) (LRR C) ✓ Depleted Matrix (F3) Other (E) 1 cm Muck (A9) (LRR D) Redox Dark Surface (F6) Depleted Below Dark Surface (A11) Depleted Dark Surface (F7) Thick Dark Surface (A12) Redox Depressions (F8) Indicators of wetland hydrology for Matrix (S4) Wineral (S1) Wineral (S1) Wineral (S1) Wineral (S6) Wineral (S6) Sandy Gleyed Matrix (S4) Wineral (S6) Wineral (S6	
dric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1) Sandy Redox (S5) 1 cm Muc Histic Epipedon (A2) Stripped Matrix (S6) 2 cm Muc Black Histic (A3) Loamy Mucky Mineral (F1) Reduced Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Red Pare Stratified Layers (A5 (LRR C) ✓ Depleted Matrix (F3) Other (E) 1 cm Muck (A9) (LRR D) Redox Dark Surface (F6) Depleted Below Dark Surface (A11) Depleted Dark Surface (F7) Thick Dark Surface (A12) Redox Depressions (F8) Indicators of wetland hydrology for Matrix (S4) Sandy Gleyed Matrix (S4) Strictive Layer (if present): Type: Depth (inches): Hydric Soil Pr marks: DROLOGY ### ### ### ### ### ### ### ### ### #	
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dric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1) Sandy Redox (S5) 1 cm Muc Histic Epipedon (A2) Stripped Matrix (S6) 2 cm Muc Black Histic (A3) Loamy Mucky Mineral (F1) Reduced Hydrogen Sulfide (A4) Doppleted Matrix (F2) Red Pare Stratified Layers (A5) (LRR C) ✓ Depleted Matrix (F3) Other (E7) Tom Muc (A9) (LRR D) Redox Dark Surface (F6) Depleted Below Dark Surface (A11) Depleted Dark Surface (F7) Thick Dark Surface (A12) Redox Depressions (F8) Sandy Mucky Mineral (S1) Wernal Pools (F9) Wetland hy Sandy Gleyed Matrix (S4) Wunless dist strictive Layer (if present): Type: Depth (inches): Hydric Soil Pr marks: DROLOGY strace Water (A1) Salt Crust (B12) Saturation (A3) Aquatic Invertebrates (B13) Drift Water Marks (B1) (Nonriverine) Hydrogen Sulfide Odor (C1) Drift Saturation (A3) Aquatic Invertebrates (B13) Drift Sediment Deposits (B2) (Nonriverine) Oxidized Rhizospheres along Living Roots (C3) Dry- Drift Deposits (B3) (Nonriverine) Presence of Reduced Iron (C4) Cray Surface Soil Cracks (B6) Recent Iron Reduction in Tilled Soils (C6) Saturation Visible on Aerial Imagery (B7) Thin Muck Surface (C7) Shal Water Marks (B3) (Nonriverine) Thin Muck Surface (C7) Shal Water Stained Leaves (B9) Depth (inches): Hydrology Face Water Present? Yes No ✓ Depth (inches): Hydrology Face Wetland Hydrology Face	
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Histosol (A1)	r Problematic Hydric Soils ³ :
Histic Epipedon (A2) Stripped Matrix (S6) 2 cm Murc Black Histic (A3) Loamy Mucky Mineral (F1) Reduced Lydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Red Pare Stratified Layers (A5) (LRR C) ✓ Depleted Matrix (F3) Other (E5) Other (E5) 1 cm Muck (A9) (LRR D) Redox Dark Surface (F6) Depleted Below Dark Surface (A11) Depleted Dark Surface (F7) Thick Dark Surface (A12) Redox Depressions (F8) Periodical Stratified Layers (A5) (LRR D) Redox Depressions (F8) Periodical Stratified Layers (A5) (LRR D) Periodical Stratified Layer (If present): Sandy Mucky Mineral (S1) Vernal Pools (F9) Wetland hydrology Indicators of Wetland Hydrology Indicators (Minimum of one required; check all that apply) Secondars:	ck (A9) (LRR C)
Black Histic (A3)	ck (A10) (LRR B)
Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Red Pare Stratified Layers (A5) (LRR C)	Vertic (F18)
Stratified Layers (A5) (LRR C)	ent Material (TF2)
Depleted Below Dark Surface (A11) Depleted Dark Surface (F7) Thick Dark Surface (A12) Redox Depressions (F8)	plain in Remarks)
Thick Dark Surface (A12) Redox Depressions (F8) Sandy Mucky Mineral (S1) Vernal Pools (F9) wetland hydrology (Sandy Gleyed Matrix (S4) unless districtive Layer (If present): Type:	
Sandy Mucky Mineral (S1) Vernal Pools (F9) wetland hyu unless districtive Layer (if present): Type: Depth (inches): Hydric Soil Promarks: DROLOGY Hydric Soil Promarks: Hydrology Indicators: Hydrology Indicators: Hydrology Indicators: Hydrology Indicators (minimum of one required; check all that apply)	
Sandy Gleyed Matrix (S4) unless districtive Layer (if present): Type:	hydrophytic vegetation and
Type: Depth (inches): Hydric Soil Property (inches): H	drology must be present,
Type:	urbed or problematic.
DROLOGY extland Hydrology Indicators: mary Indicators (minimum of one required; check all that apply) Seconda Surface Water (A1) High Water Table (A2) Saturation (A3) Aquatic Invertebrates (B13) Drift Water Marks (B1) (Nonriverine) Hydrogen Sulfide Odor (C1) Sediment Deposits (B2) (Nonriverine) Drift Deposits (B3) (Nonriverine) Presence of Reduced Iron (C4) Surface Soil Cracks (B6) Recent Iron Reduction in Tilled Soils (C6) Satu. Inundation Visible on Aerial Imagery (B7) Water Stained Leaves (B9) Other (Explain in Remarks) Metland Hydrology Fedudes capillary fringe) Wetland Hydrology Fedudes capillary fringe)	
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o evidence of wetland hydrology present. Data point was taken outside of shallond starts to slope away from feature.	ow linear depression whe

Attachment G: Representative Photographs of Delineated Wetlands

Attachment G Representative Photographs of Delineated Wetlands



View of seasonal wetland #1 looking west. Red line represents existing access road. Photo Date: November 2, 2012



View of seasonal wetland #1 looking east. Red line represents existing access road.

Photo Date: November 2, 2012



Attachment G Representative Photographs of Delineated Wetlands



View of southern portion of seasonal wetland #3. Photo Date: November 2, 2012



View of northern portion of seasonal wetland #3. Photo Date: November 2, 2012

