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September 4, 2018

Mr. Steven Ring
Managing Principal
Fulcrum Real Estate Development
475 Gate 5 Road, Suite 361
Sausalito, CA 94965

RE: 2028 Piner Road, Santa Rosa, Sonoma County, CA; APN 036-011-053

This letter is a follow-up to my letter of June 6, 2018 based on my site visit of the same day to review the wetland area that was delineated by Charlie Patterson in April 2009 and verified by the U.S. Army Corps of Engineers (USACE) in a letter dated June 2, 2009 for the property located at 2028 Piner Road in Santa Rosa. A second site visit was conducted on August 14, 2018 to flag the wetland area (see photos) so that it could be surveyed and plotted onto the site map for planning purposes.

As previously described, the wetland on the subject property and adjacent property is a degraded wetland with low habitat values. The dominant plant is ryegrass (*Festuca perennis*) which is a facultative (FAC) plant. FAC species have an equal probability of occurring in non-wetlands and in wetlands. Other species noted include curly dock (*Rumex crispus*), Mediterranean barley (*Hordeum marinum*), English plantain (*Plantago lanceolata*), tall flat sedge (*Cyperus eragrostis*), wild oats (*Avena barbata*), soft chess (*Bromus hordaeceus*), sheep sorrel (*Rumex acetosella*), and jointed charlock (*Raphanus raphanistrum*). The plant cover is very dense, tall and weedy.

Based on my review of the most recent site plan that you provided in your email of August 21, 2018, there is a more than sufficient buffer between the wetland and any proposed development to provide an adequate watershed and protection for the existing wetland. The closest point is where the driveway for the Fire Department has to access the rear of the building. At this point the driveway is about 15 feet from the wetland. Otherwise there is a 20 foot or greater buffer zone which is more than adequate to sustain this wetland feature. As discussed, I understand that a fence will be installed that further protects the wetland area from any human traffic and signs could be posted to educate the public that this is a wetland area and is protected so no disturbance is allowed. During construction I recommend that this area be fenced using an orange barrier or other fencing to avoid any disturbance to the area during construction.

Because the area will be avoided there will be no take of habitat and therefore the 2 years of surveys for the 3 listed vernal pool plants known to occur on the SRP area also not required. No mitigation for loss of wetlands or plant habitat is required.

I hope that this information was helpful. Please let me know if you have any questions.

Sincerely,

Jane Valerius

Jane Valerius
Botanist/Wetland Ecologist

SITE PHOTOGRAPHS August 20, 2018



Photo showing area flagged as wetland.



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August 20, 2018

Steve Ring
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Re: Potential for California tiger salamander (*Ambystoma californiense*) occurring at 2028 Piner Road, Santa Rosa

Dear Steve;

This letter presents my findings on the potential for California tiger salamander to occur on the 2.02-acre parcel located at 2028 Piner Road (APN 036-011-053), in Santa Rosa, Sonoma County. My findings are based on a site visit I conducted on August 14, 2018, review of aerial analysis, and the previous reports prepared by Larry Stromberg (Stromberg 2014). In addition, I also reviewed the following:

- *Santa Rosa Plain Conservation Strategy, Enclosure 1* (CDFW 2008)
- *Status Review of the California tiger salamander (*Ambystoma californiense*)* (CDFW 2010)
- *Programmatic Biological Opinion (Programmatic) for U.S. Army corps of Engineers (Corps) Permitted Projects that May Affect California Tiger Salamander and Three Endangered Plant Species on the Santa Rosa Plain, California (Corps File Number 223420N)* (USFWS 2007).
- *Revised Designation of Critical Habitat for the Sonoma County Distinct Population Segment of California Tiger Salamander* (USFWS 2011)
- *Draft Recovery Plan for the Santa Rosa Plain: *Blennosperma bakeri* (Sonoma sunshine); *Lasthenia burkei* (Burke's goldfields); *Limnanthes vincularis* (Sebastopol meadowfoam); Sonoma County Distinct Population Segment of the California Tiger Salamander (*Ambystoma californiense*)* (USFWS 2014)

Wildlife Habitats on the Site

Non-native grasslands: Grassland habitat, including native and non-native grasslands, typically provides habitat for a wide variety of wildlife species. In the drier areas of the pasture evidence of California vole (*Microtus californicus*), and Botta's pocket gopher (*Thomomys bottae*), were observed. Western fence lizard (*Sceloporus occidentalis*), which feed on invertebrates found within and beneath debris within grasslands may use the site. The grasslands provide upland subterranean habitat for California tiger salamander (*Ambystoma californiense*). See below for more details.

The seasonal wetland on the site is an extension of the non-native grasslands and it provides very little in terms of wildlife habitat beyond the non-native grasses. No aquatic habitat occurs on the parcel that would support breeding amphibians.

California Tiger Salamander Analysis

Except for those areas identified as currently developed, the entire Santa Rosa Plain provides breeding and upland habitat for the California tiger salamander (*Ambystoma californiense*), listed by the State (CDFW) as Threatened and by the federal government (USFWS) as Endangered, with Critical Habitat (USFWS 2011) and a Recovery Plan (USFWS 2014).

The table below addresses the regulatory ruling per federal and state documents, including the federal listing (USFWS 2002), the state listing (CDFW 2012), the Santa Rosa Plain Conservation Strategy (SRPCS) (USFWS 2005), the Critical Habitat (USFWS 2011) and the Draft Recovery Plan (USFWS 2014).

Table 1: Proposed Project and the Plans Pertaining to the California Tiger Salamander

	Does the Study Area Occur in the range covered by Document?
USFWS listing	No
CDFW listing	No
SRPCS	No
Critical Habitat	No
Recovery Plan	No, in City of Santa Rosa identified as urban area

The parcel is located within the City of Santa Rosa urban area and is considered outside the all of the Core Management Areas (USFWS 2014). The parcel is identified as *may adversely affect listed plants, but would not likely adversely affect CTS* in the Santa Rosa Plain Conservation Strategy (USFWS 2005) and on the updated (2008) Enclosure 1 of the Santa Rosa Plain Conservation Strategy (USFWS 2005).

After reviewing Google Earth aerial imagery back to 1993, which shows development occurring between areas of known California tiger salamander and the project site, I concur with Stromberg's statement, page 9, .. "... it is unlikely that these areas are currently being used by CTS because of the distance of the project site from known breeding locations and the surrounding structures and development." (Stromberg 2014).

Based on these findings, development of the 2028 Piner Road parcel will not impact individual California tiger salamander, nor will it cause a loss of habitat for the species in the region. Therefore, no mitigation is required.

Sincerely,



Trish Tatarian

References

- CALIFORNIA DEPARTMENT OF FISH AND GAME. 2010. A STATUS REVIEW OF THE CALIFORNIA TIGER SALAMANDER (*AMBYSTOMA CALIFORNIENSE*). WILDLIFE BRANCH NONGAME WILDLIFE PROGRAM REPORT 2010-4. JANUARY 11.
- STROMBERG, L. 2014. BIOLOGICAL ASSESSMENT BAY VILLAGE HOMES PROJECT SITE, SANTA ROSA, SONOMA COUNTY, CALIFORNIA. PREPARED FOR DAN MORGAN, MORGAN PROPERTIES. AUGUST 25. 21 PP.
- U.S. FISH & WILDLIFE SERVICE (USFWS). 2002. PROPOSED RULE: LISTING THE SONOMA COUNTY DISTINCT POPULATION SEGMENT OF THE CALIFORNIA TIGER SALAMANDER AS ENDANGERED. FEDERAL REGISTER 67: 66377-66378.
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- U.S. FISH AND WILDLIFE SERVICE (USFWS). 2011. REVISED DESIGNATION OF CRITICAL HABITAT FOR THE SONOMA COUNTY DISTINCT POPULATION SEGMENT OF CALIFORNIA TIGER SALAMANDER. FEDERAL REGISTER VOL 79 (169): 54346- 54371. AUGUST 11.
- U.S. FISH AND WILDLIFE SERVICE. 2014. DRAFT RECOVERY PLAN FOR THE SANTA ROSA PLAIN: *BLENNOSPERMA BAKERI* (SONOMA SUNSHINE); *LASTHENIA BURKEI* (BURKE'S GOLDFIELDS); *LIMNANTHES VINCULANS* (SEBASTOPOL MEADOWFOAM); SONOMA COUNTY DISTINCT POPULATION SEGMENT OF THE CALIFORNIA TIGER SALAMANDER (*AMBYSTOMA CALIFORNIENSE*). U.S. FISH AND WILDLIFE SERVICE, PACIFIC SOUTHWEST REGION, SACRAMENTO, CALIFORNIA. VI + 132 PP.

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**PRE-JURISDICTIONAL DETERMINATION,
WATERS OF THE UNITED STATES,
A.P. 036-790-052, BAY VILLAGES HOMES PROJECT SITE
SANTA ROSA, CALIFORNIA**

Submitted on Behalf of:

Mr. Dan Morgan
Morgan Properties, Inc.
2658 Bridgeway Avenue, Suite 100
Sausalito, CA 94965
(415) 515-2179

Prepared by:

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59 Jewell Street
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July 14, 2014

**PRE-JURISDICTIONAL DETERMINATION,
WATERS OF THE UNITED STATES,
A.P. 036-790-052, BAY VILLAGES HOMES PROJECT SITE
SANTA ROSA, CALIFORNIA**

1.0. SUMMARY

This report presents the results of a pre-jurisdictional determination, effectively a delineation of wetlands since no drainages or other waters are present, on an approximately 0.78-acre site located on the north side of Bay Village Avenue west of Marlow Road in the City of Santa Rosa.

The pre-jurisdictional determination was conducted in one field visit made to the site on May 12, 2014. Wetland status and boundaries were determined using methods for routine on-site determinations consistent with those specified in the Interim Regional Supplement (Arid West Region) to the U. S. Army Corps of Engineers' 1987 wetland delineation manual..

Four small seasonal wetlands are present on the property, located at or near the north project site boundary. The total area of these wetlands is approximately 1,842 sf or 0.042 acres.

2.0. INTRODUCTION

2.1. SITE LOCATION AND DESCRIPTION

This report presents the results of a delineation of wetlands on a narrow, approximately 0.78-acre property in Santa Rosa (Figure 1) located on the north side of Bay Village Avenue, west of Marlow Road in the northwest part of the City of Santa Rosa (Figure 2) (Figures at the rear of the report).

The site is a currently vacant parcel bounded on the east south and west by residentially developed land and on the north by another vacant parcel. The site is fenced on the north side but open along Bay Village Avenue and Baywood Meadow Drive.

2.2. PHYSICAL AND HYDROLOGIC CONDITIONS

2.2.1. Topography and Drainage

The property is relatively flat, with less than two feet of difference in elevation between low and high points. No natural drainage features are present. A drop inlet has been installed in the southcentral part of the property along Bay Village Avenue

2.2.2. Soils

The soils on the site are mapped by the Soil Conservation Service (U. S. Soil Conservation Service 1978) as belonging to the wet phase of the Wright loam soil series, 0-2 percent slopes. Generally, Wright loam soils are characterized by a water-restricting horizon in the form of a clay horizon and, although not identified by the Soil conservation Service, occasionally a hardpan. In the native, undrained state, the wet phase of the Wright loam series is a hydric soil.

3.0. REGULATORY BACKGROUND

This section provides limited information about the regulatory basis for this preliminary assessment of Corps jurisdiction.

3.1 DEFINITIONS

3.1.1 Waters of the United States

Waters of the United States include "lakes, rivers, intermittent streams, mudflats, sandflats, sloughs, prairie potholes, wet meadows, playa lakes, and natural ponds the use, destruction, and/or degradation of which could affect interstate or foreign commerce" [Section 33, Code of Federal Regulations, Part 328.3(a)(3)].

The lateral extent of the Corps of Engineers' jurisdiction over lakes and drainages with defined beds and banks is the ordinary high water mark. Jurisdiction extends beyond ordinary high water where adjacent wetlands are present.

3.1.2 Wetlands

For the Corps of Engineers to regulate an area as a wetland under the Clean Water Act it must be "inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal conditions does support, a prevalence of vegetation typically adapted for life in saturated soil conditions" [33 CFR 328.3(b)]. Three criteria determine whether or not an area satisfies the definition under "normal circumstances." Under normal circumstances, hydrophytic vegetation, hydric soils, *and* a wetland hydrologic regime must be present for an area to be a wetland.

3.1.2.1. Hydrophytic vegetation. Hydrophytic vegetation is dominated by macrophytic plants adapted to wetland inundation or saturated soils because of physiological and reproductive adaptations. The U. S. Fish and Wildlife Service's National Wetlands Inventory has used field observations, expert opinion, and technical documents to identify wetland plant species and has developed wetland species lists which identify species which occur in wetlands (Reed 1988).

An area is considered vegetated if it has at least five percent vegetative cover. Indicators of hydrophytic vegetation include dominance of the vegetation by plant species with a wetland indicator status using absolute cover and the "50/20" rule; a prevalence indicator of 3.0 or less using numeric assignments to each indicator status (OBL = 1, FACW = 2, FAC = 3, FACU = 5, UPL = 5); and plant morphological adaptations such as adventitious roots, shallow root systems, including those on FACU species as long as they are detected on at least 50 percent of the FACU plants if the site is characterized by hydric soils and wetland hydrologic function.

3.1.2.2. Hydric soil. A hydric soil is one saturated, flooded, or ponded long enough during the growing season to develop anaerobic conditions in the upper part (U. S. D. A. Soil Conservation Service 1986). According to the criteria published in the June 1991 *Hydric Soils of the United*

States, at least 15 consecutive days of saturation or seven days of inundation during the growing season is necessary in most years for a soil to be considered a hydric soil.

The site is located in the Mediterranean California (LRR C) subregion of the Arid West Region. In non-sandy soils, prolonged anaerobic conditions cause chemical reactions, evidence of which can include sulfidic material, reduced soil conditions, an aquic or peraquic moisture regime, a gleyed soil matrix chroma, bright mottles and/or low matrix chroma, and iron and/or manganese concretions.

Although the physical properties described to assess the presence of hydric soils have not changed the new supplement for the Arid West Region lists several new hydric soil indicators that employ horizon thickness, soil matrix characteristics, the abundance and distinctness or prominence of redoximorphic features, and microtopography in setting indicator names. The indicators most likely to occur in soils on the Santa Rosa Plain include a depleted matrix (indicator F3), a redox dark surface (F6), a depleted dark surface (F7), redox depressions (F8), and vernal pools (V9).

3.1.2.3. Wetland hydrologic function (hydrology). Wetland hydrologic function or "hydrology" implies periodic inundation or soil saturation to the surface for some period during the growing season. Soils that are seasonally inundated or saturated to the surface for a consecutive number of days for more than 12.5 percent of the growing season are likely to exhibit wetland hydrologic function and, provided the soil and vegetation parameters are met (soils with compacted surfaces may be inundated but remain unsaturated because of extremely low infiltration rates), may be wetlands. Areas that are inundated or saturated between five percent and 12.5 percent of the growing season may or may not be wetlands. The growing season for the central part of Sonoma County, including the Santa Rosa Plain, is defined in the Soil Survey for Sonoma County (U.S.D.A. Soil Conservation Service 1972) as between 230 and 260 days, requiring that a site characterized by wetland hydrologic function be located on the ground that is saturated and/or inundated for a minimum of five percent of the growing season, which would be between approximately 12 and 13 consecutive days using the estimated growing season from the county soil survey. However, based on field observations of mid-winter plant growth (emergence of herbaceous plants; new crown development from perennial rootstocks; bud burst, leaf elongation, and flower development on woody plants) at sites throughout the Santa Rosa Plain, the actual growing season for natural and naturalized vegetation is likely the full year. On the Santa Rosa Plain, therefore, wetland hydrologic function requires that an area be inundated and/or saturated for at least 18 consecutive days.

In addition to surface water and saturated soils (within the root zone) several other forms of field evidence indicate that a site may exhibit wetland hydrologic function. Such evidence includes water-matted plant material and water-stained leaves; cracks associated with shrink-swell soils; sediment and drift deposits; deep cattle hoof prints and soil "pedestals" standing above the surrounding ground (indicating periods of long saturation during the cattle grazing season); algal staining or crusts; water marks; drift lines; eggs of frogs, salamanders and other amphibians that breed in water; freshwater clams, snails; and other aquatic invertebrates; crayfish burrows.

4.0. METHODS

A May 5, 2012, color aerial photograph available from Google Earth was used to locate sample sites and delineate seasonal wetland boundaries. Field work to support the pre-jurisdictional determination was conducted on two field visits to the site, one on May 12 and one on May 20, 2014.

The methods used to determine whether or not any wetlands are present on the site were methods used for routine on-site determinations that are consistent with those outlined in the Corps wetland manual (U. S. Army Corps of Engineers 2008). Data at seven sample sites were entered onto standard forms modified for use in single-story herbaceous vegetation. The field data forms are contained in Appendix A.

The map was produced and the wetland areas were calculated using Adobe Acrobat software. Individual wetland areas were estimated to one square foot and the total area was converted to acres.

5.0. WETLAND AREA AND DESCRIPTION

The result of the field delineation is a map showing four small seasonal wetlands. The locations of the seven sample sites and the seasonal wetlands are shown on the map in Figure 3 at the rear of the report. Appendix A to this report contains the data sheets (Data Form 1 for routine on-site determinations, modified for use in herbaceous vegetation) completed in the field at sample sites.

The area of the seasonal wetland on the site is estimated to be approximately 1,842 sf or 0.042 acres.

The dominant plant species in the wetlands are ryegrass (*Festuca perennis*) and Mediterranean barley (*Hordeum marinum gussoneanum*). Both are facultative plant species. Common species in the seasonal wetlands include curly dock (*Rumex crispus*) and Harding grass (*Phalaris aquatica*).

Other species present include hedge hyssop (*Lythrum hyssopifolium*), six-weeks fescue (*Festuca bromoides*), meadow barley (*Hordeum brachyantherum*), hedge bindweed (*Convolvulus arvensis*) (late-season species), and toad rush (*Juncus bufonius*).

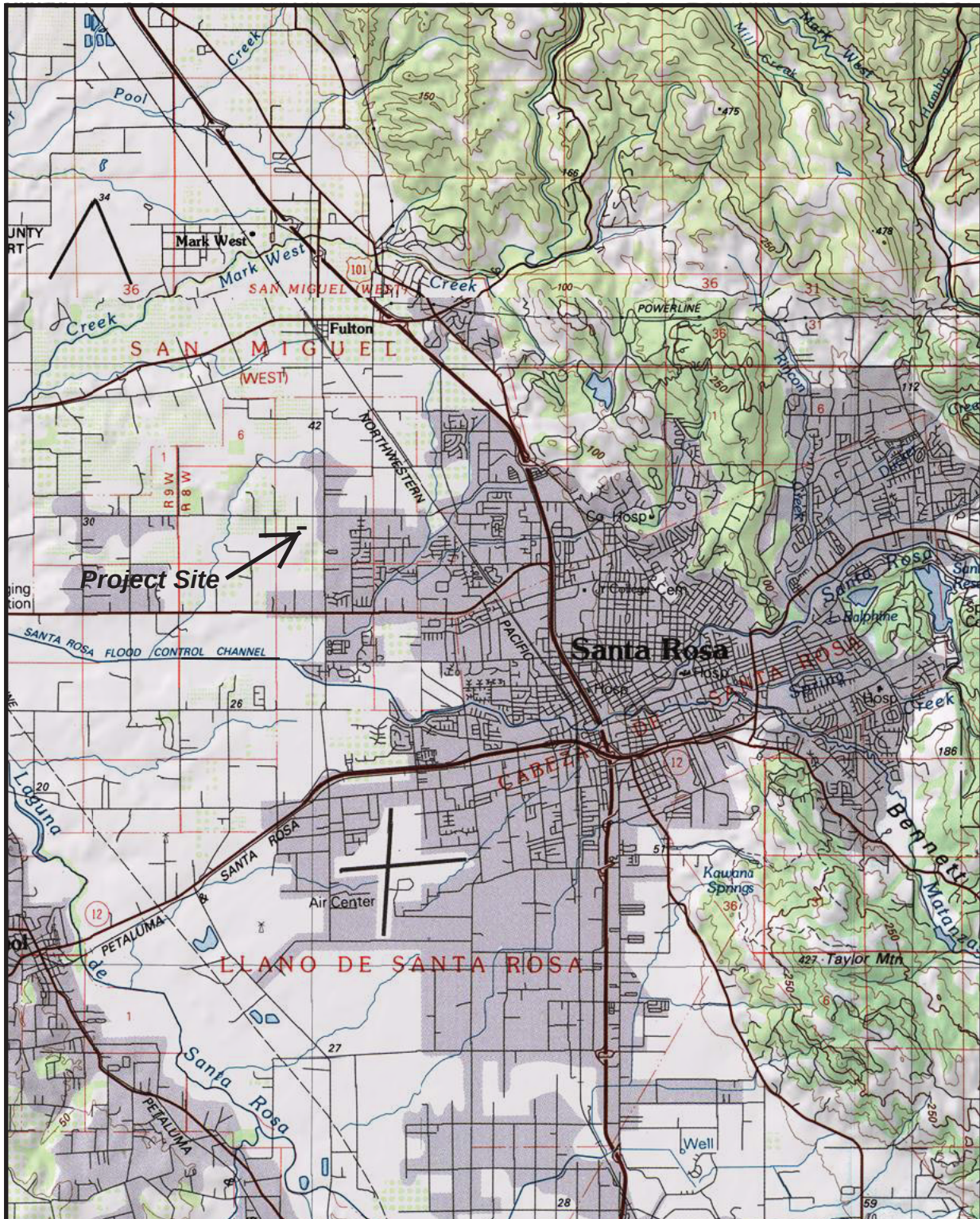
The seasonal wetlands on the site occur in shallow depressions the centers of which are generally off-site on the property to the north. They are characterized by hydric soils and even though no evidence of secondary hydrologic indicators were visible at the time of the delineation, the rainfall for the 2013-2014 rainy season was about 83 percent of normal and the previous year produced only 72 percent of normal rainfall. The seasonal wetlands would be expected to show such evidence in a summer delineation were the previous years wetter. Nevertheless, the soils in the adjacent uplands lack the visible evidence that the soils are hydric and, regardless of the annual rainfall, would not be wetland habitat.

6.0. REFERENCES CITED

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Pre-jurisdictional Determination,
A.P. 036-790-052, Bay Village Homes Project Site,
Santa Rosa, California

FIGURES



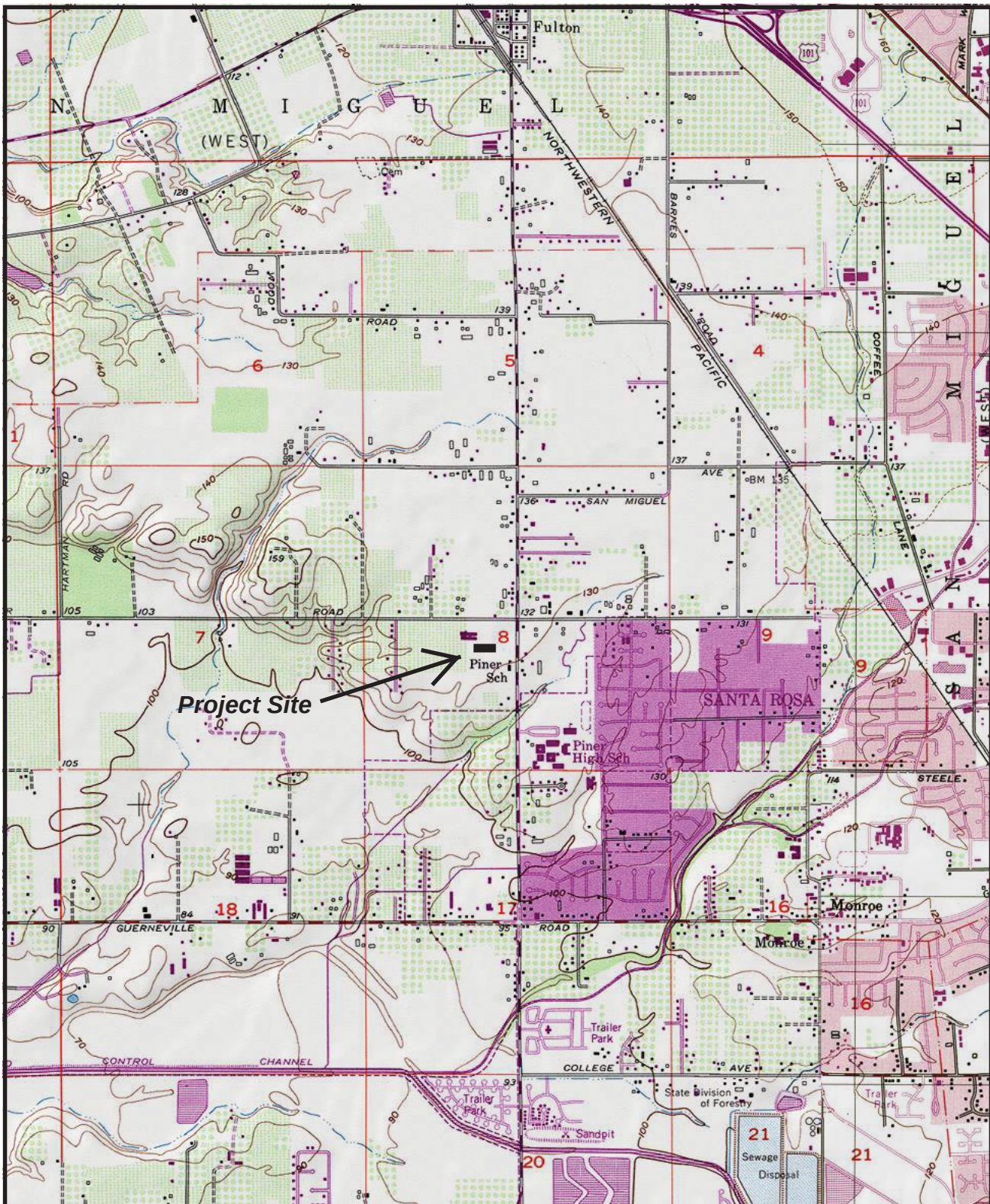
Applicant:
 Mr. Dan Morgan
 Morgan Properties, Inc.
 2658 Bridgeway Avenue, Suite 100
 Sausalito, CA 94965
 (415) 515-2179

Site:
 A.P. 036-790-052, Bay Village Project Site
 Santa Rosa, California



Nominal Scale: 1:10,500

Figure 1.
 Regional Location Map



Applicant:

Mr. Dan Morgan
Morgan Properties, Inc.
2658 Bridgeway Avenue, Suite 100
Sausalito, CA 94965
(415) 515-2179

Site:

A.P. 036-790-052, Bay Village Project Site
Santa Rosa, California



Nominal Scale: 1:3,500

Figure 2.
Project Location Map



Applicant:

Mr. Dan Morgan
Morgan Properties, Inc
2658 Bridgeway, Suite 100
Sausalito CA 94965

Site:

Bay Village Homes (A. P. 036-790-052
Santa Rosa, California



Nominal Scale:
1:700

Figure 3.
Pre-jurisdictional Determination of Waters
of the State and United States

Pre-jurisdictional Determination,
A.P. 036-790-052, Bay Village Homes Project Site,
Santa Rosa, California

APPENDIX A
(Seven Field Data Sheets)

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Bay Village Homes City/County: Santa Rosa/Sonoma Sampling Date: 5/12/14
 Applicant/Owner: Mr. Dan Morgan, Morgan Properties, Inc. State: CA Sampling Point: 1
 Investigator(s): L. P. Stromberg, Ph.D. Section, Township, Range: Not Defined
 Landform (hillslope, terrace, etc.): level ground Local relief (concave, convex, none): flat Slope (%): <2%
 Subregion (LRR): Mediterranean California Lat: 38° 30.907'N Long: 122 o 45' 12.53"± Datum: NAD27
 Soil Map Unit Name: Wright loam, wet, 0 - 2 percent slope NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No ✓ (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u></u> No <u>✓</u>	Is the Sampled Area within a Wetland? Yes <u></u> No <u>✓</u>
Hydric Soil Present? Yes <u></u> No <u>✓</u>	
Wetland Hydrology Present? Yes <u></u> No <u>✓</u>	
Remarks:	

VEGETATION

Herbaceous Stratum (use scientific names)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1 <u>Festuca perennis</u>	<u>30</u>	<u>✓</u>	<u>fac</u>	Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)
2 <u>Convolvulus arvensis</u>	<u>20</u>	<u>✓</u>	<u>upl</u>	Total Number of Dominant Species Across All Strata: <u>2</u> (B)
3 <u>Hordeum marinum gussoneanum</u>	<u>10</u>		<u>fac</u>	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50.0</u> (A/B)
4 <u>Plantago lanceolata</u>	<u>3</u>		<u>upl</u>	Prevalence Index worksheet:
5 <u>Lupinus bicolor</u>	<u>2</u>		<u>upl</u>	
6 <u>Geranium dissectum</u>	<u>2</u>		<u>upl</u>	Total % Cover of:
7 <u>Bromus hordeaceus</u>	<u>1</u>		<u>facu</u>	Multiply by:
8 <u>Rumex crispus</u>	<u>1</u>		<u>fac</u>	OBL species <u>0</u> x 1 = <u>0</u>
9 <u></u>				FACW species <u>0</u> x 2 = <u>0</u>
10 <u></u>				FAC species <u>41</u> x 3 = <u>123</u>
11 <u></u>				FACU species <u>1</u> x 4 = <u>4</u>
12 <u></u>				UPL species <u>27</u> x 5 = <u>135</u>
13 <u></u>				Column Totals: <u>69</u> (A) <u>262</u> (B)
14 <u></u>				Prevalence Index = B/A = <u>3.80</u>
15 <u></u>				Hydrophytic Vegetation Indicators:
16 <u></u>				
17 <u></u>				<u></u> Dominance Test is >50%
18 <u></u>				<u></u> Prevalence Index is ≤3.0 ¹
19 <u></u>				<u></u> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
20 <u></u>				<u></u> Problematic Hydrophytic Vegetation ¹ (Explain)
21 <u></u>				¹ Indicators of hydric soil and wetland hydrology must be present.
22 <u></u>				
23 <u></u>				Hydrophytic Vegetation Present? Yes <u></u> No <u>✓</u>
24 <u></u>				
25 <u></u>				
TOTAL ABSOLUTE COVER <u>69</u>				
% Bare Ground in Herb Stratum <u>31</u> % Cover of Biotic Crust <u>0</u>				

Remarks:

SOIL

Sampling Point: 1

[illegible]

HYDROLOGY

Wetland Hydrology Indicators:			Secondary Indicators (2 or more required)		
Primary Indicators (any one indicator is sufficient)					
☐ Surface Water (A1)	☐ Salt Crust (B11)	☐ Water Marks (B1) (Riverine)			
☐ 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 Roots (C3)	☐ Dry-Season Water Table (C2)			
☐ Drift Deposits (B3) (Nonriverine)	☐ Presence of Reduced Iron (C4)	☐ Thin Muck Surface (C7)			
☐ Surface Soil Cracks (B6)	☐ Recent Iron Reduction in Plowed Soils (C6)	☐ Crayfish Burrows (C8)			
☐ Inundation Visible on Aerial Imagery (B7)	☐ Other (Explain in Remarks)	☐ Saturation Visible on Aerial Imagery (C9)			
☐ Water-Stained Leaves (B9)		☐ Shallow Aquitard (D3)			
		☐ FAC-Neutral Test (D5)			
Field Observations: Surface Water Present? Yes ☐ No ☒ Depth (inches): _____ Water Table Present? Yes ☐ No ☒ Depth (inches): _____ Saturation Present? Yes ☐ No ☒ Depth (inches): _____ (includes capillary fringe)			Wetland Hydrology Present? Yes ☐ No ☒		
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:					
Remarks: The vegetation is not hydrophytic and the soils are not hydric. The site is slightly depressional and the years was drier that normal but a wetter year would not change the soil properties. While the site is depressional is does not support a wetland.					

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Bay Village Homes City/County: Santa Rosa/Sonoma Sampling Date: 5/12/14
 Applicant/Owner: Mr. Dan Morgan, Morgan Properties, Inc. State: CA Sampling Point: 2
 Investigator(s): L. P. Stromberg, Ph.D. Section, Township, Range: Not Defined
 Landform (hillslope, terrace, etc.): level ground Local relief (concave, convex, none): flat Slope (%): <2%
 Subregion (LRR): Mediterranean California Lat: 38 o 27' 56.78" N Long: 122 o 45' 12.53" W Datum: NAD27
 Soil Map Unit Name: Wright loam, wet, 0 - 2 percent slope NWI classification: seasonally flooded emergent palustrine wetlands
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes No ✓ (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>✓</u> No <u> </u>	Is the Sampled Area within a Wetland?	Yes <u>✓</u> No <u> </u>
Hydric Soil Present?	Yes <u>✓</u> No <u> </u>		
Wetland Hydrology Present?	Yes <u>✓</u> No <u> </u>		
Remarks:			

VEGETATION

Herbaceous Stratum (use scientific names)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:																																				
1 <u>Festuca perennis</u>	<u>35</u>	<u>✓</u>	<u>fac</u>	Number of Dominant Species That Are OBL, FACW, or FAC:	<u>1</u> (A)																																			
2 <u>Hordeum marinum gussoneanum</u>	<u>15</u>		<u>fac</u>	Total Number of Dominant Species Across All Strata:	<u>1</u> (B)																																			
3 <u>Rumex crispus</u>	<u>6</u>		<u>fac</u>	Percent of Dominant Species That Are OBL, FACW, or FAC:	<u>100.0</u> (A/B)																																			
4 <u>Lythrum hyssopifolium</u>	<u>4</u>		<u>facw</u>	Prevalence Index worksheet: <table border="0"> <tr> <td colspan="2">Total % Cover of:</td> <td colspan="2">Multiply by:</td> </tr> <tr> <td>OBL species</td> <td><u>0</u></td> <td>x 1 =</td> <td><u>0</u></td> </tr> <tr> <td>FACW species</td> <td><u>5</u></td> <td>x 2 =</td> <td><u>10</u></td> </tr> <tr> <td>FAC species</td> <td><u>56</u></td> <td>x 3 =</td> <td><u>168</u></td> </tr> <tr> <td>FACU species</td> <td><u>0</u></td> <td>x 4 =</td> <td><u>0</u></td> </tr> <tr> <td>UPL species</td> <td><u>4</u></td> <td>x 5 =</td> <td><u>20</u></td> </tr> <tr> <td>Column Totals:</td> <td><u>65</u></td> <td>(A)</td> <td><u>198</u></td> <td>(B)</td> </tr> <tr> <td colspan="4">Prevalence Index = B/A =</td> <td colspan="2"><u>3.04</u></td> </tr> </table>		Total % Cover of:		Multiply by:		OBL species	<u>0</u>	x 1 =	<u>0</u>	FACW species	<u>5</u>	x 2 =	<u>10</u>	FAC species	<u>56</u>	x 3 =	<u>168</u>	FACU species	<u>0</u>	x 4 =	<u>0</u>	UPL species	<u>4</u>	x 5 =	<u>20</u>	Column Totals:	<u>65</u>	(A)	<u>198</u>	(B)	Prevalence Index = B/A =				<u>3.04</u>	
Total % Cover of:		Multiply by:																																						
OBL species	<u>0</u>	x 1 =	<u>0</u>																																					
FACW species	<u>5</u>	x 2 =	<u>10</u>																																					
FAC species	<u>56</u>	x 3 =	<u>168</u>																																					
FACU species	<u>0</u>	x 4 =	<u>0</u>																																					
UPL species	<u>4</u>	x 5 =	<u>20</u>																																					
Column Totals:	<u>65</u>	(A)	<u>198</u>	(B)																																				
Prevalence Index = B/A =				<u>3.04</u>																																				
5 <u>Convolvulus arvensis</u>	<u>4</u>		<u>upl</u>																																					
6 <u>Festuca bromoides</u>	<u>1</u>		<u>facw</u>																																					
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TOTAL ABSOLUTE COVER		<u>65</u>		Hydrophytic Vegetation Indicators: <u>✓</u> Dominance Test is >50% <u> </u> Prevalence Index is ≤3.0 ¹ <u> </u> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present.																																				
% Bare Ground in Herb Stratum	<u>35</u>	% Cover of Biotic Crust	<u>0</u>																																					
Remarks:				Hydrophytic Vegetation Present? Yes <u>✓</u> No <u> </u>																																				

SOIL

Sampling Point: 2

[illegible]

HYDROLOGY

Wetland Hydrology Indicators:			Secondary Indicators (2 or more required)		
Primary Indicators (any one indicator is sufficient)					
☐ Surface Water (A1)	☐ Salt Crust (B11)	☐ Water Marks (B1) (Riverine)			
☐ 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 Roots (C3)	☐ Dry-Season Water Table (C2)			
☐ Drift Deposits (B3) (Nonriverine)	☐ Presence of Reduced Iron (C4)	☐ Thin Muck Surface (C7)			
☐ Surface Soil Cracks (B6)	☐ Recent Iron Reduction in Plowed Soils (C6)	☐ Crayfish Burrows (C8)			
☐ Inundation Visible on Aerial Imagery (B7)	☐ Other (Explain in Remarks)	☐ Saturation Visible on Aerial Imagery (C9)			
☒ Water-Stained Leaves (B9)		☐ Shallow Aquitard (D3)			
		☐ FAC-Neutral Test (D5)			
Field Observations: Surface Water Present? Yes ☐ No ☒ Depth (inches): _____ Water Table Present? Yes ☐ No ☒ Depth (inches): _____ Saturation Present? Yes ☐ No ☒ Depth (inches): _____ (includes capillary fringe)			Wetland Hydrology Present? Yes ☒ No ☐		
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:					
Remarks: The vegetation is hydrophytic and the soils are hydric. The year has been drier than normal and at the time of the survey the soils were dry but the site is located in a depression and is likely ponded and/or the soils are likely characterized by soil saturation for long-duration in years of normal or nearly normal rainfall.					

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Bay Village Homes City/County: Santa Rosa/Sonoma Sampling Date: 5/12/14
 Applicant/Owner: Mr. Dan Morgan, Morgan Properties, Inc. State: CA Sampling Point: 3
 Investigator(s): L. P. Stromberg, Ph.D. Section, Township, Range: Not Defined
 Landform (hillslope, terrace, etc.): level ground Local relief (concave, convex, none): flat Slope (%): <2%
 Subregion (LRR): Mediterranean California Lat: 38° 30.907'N Long: 122 o 45' 12.53"± Datum: NAD27
 Soil Map Unit Name: Wright loam, wet, 0 - 2 percent slope NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No ✓ (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u></u> No <u>✓</u>	Is the Sampled Area within a Wetland? Yes <u></u> No <u>✓</u>
Hydric Soil Present? Yes <u></u> No <u>✓</u>	
Wetland Hydrology Present? Yes <u></u> No <u>✓</u>	
Remarks:	

VEGETATION

Herbaceous Stratum (use scientific names)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1 <u>Avena barbata</u>	<u>25</u>	<u>✓</u>	<u>upl</u>	Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)
2 <u>Rumex acetosella</u>	<u>20</u>	<u>✓</u>	<u>upl</u>	Total Number of Dominant Species Across All Strata: <u>2</u> (B)
3 <u>Hordeum marinum gussoneanum</u>	<u>10</u>		<u>fac</u>	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50.0</u> (A/B)
4 <u>Plantago lanceolata</u>	<u>3</u>		<u>upl</u>	Prevalence Index worksheet:
5 <u>Lupinus bicolor</u>	<u>2</u>		<u>upl</u>	
6 <u>Geranium dissectum</u>	<u>2</u>		<u>upl</u>	Total % Cover of:
7 <u>Bromus hordeaceus</u>	<u>1</u>		<u>facu</u>	Multiply by:
8 <u>Festuca perennis</u>	<u>5</u>		<u>fac</u>	OBL species <u>0</u> x 1 = <u>0</u>
9 <u></u>				FACW species <u>0</u> x 2 = <u>0</u>
10 <u></u>				FAC species <u>41</u> x 3 = <u>123</u>
11 <u></u>				FACU species <u>1</u> x 4 = <u>4</u>
12 <u></u>				UPL species <u>27</u> x 5 = <u>135</u>
13 <u></u>				Column Totals: <u>69</u> (A) <u>262</u> (B)
14 <u></u>				Prevalence Index = B/A = <u>3.80</u>
15 <u></u>				Hydrophytic Vegetation Indicators:
16 <u></u>				
17 <u></u>				<u></u> Dominance Test is >50%
18 <u></u>				<u></u> Prevalence Index is ≤3.0 ¹
19 <u></u>				<u></u> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
20 <u></u>				<u></u> Problematic Hydrophytic Vegetation ¹ (Explain)
21 <u></u>				¹ Indicators of hydric soil and wetland hydrology must be present.
22 <u></u>				
23 <u></u>				Hydrophytic Vegetation Present? Yes <u></u> No <u>✓</u>
24 <u></u>				
25 <u></u>				
TOTAL ABSOLUTE COVER <u>68</u>				
% Bare Ground in Herb Stratum <u>31</u> % Cover of Biotic Crust <u>0</u>				

Remarks:

SOIL

Sampling Point: 3

[illegible]

HYDROLOGY

Wetland Hydrology Indicators:			Secondary Indicators (2 or more required)		
Primary Indicators (any one indicator is sufficient)					
☐ Surface Water (A1)	☐ Salt Crust (B11)	☐ Water Marks (B1) (Riverine)			
☐ 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 Roots (C3)	☐ Dry-Season Water Table (C2)			
☐ Drift Deposits (B3) (Nonriverine)	☐ Presence of Reduced Iron (C4)	☐ Thin Muck Surface (C7)			
☐ Surface Soil Cracks (B6)	☐ Recent Iron Reduction in Plowed Soils (C6)	☐ Crayfish Burrows (C8)			
☐ Inundation Visible on Aerial Imagery (B7)	☐ Other (Explain in Remarks)	☐ Saturation Visible on Aerial Imagery (C9)			
☐ Water-Stained Leaves (B9)		☐ Shallow Aquitard (D3)			
		☐ FAC-Neutral Test (D5)			
Field Observations: Surface Water Present? Yes ☐ No ☒ Depth (inches): _____ Water Table Present? Yes ☐ No ☒ Depth (inches): _____ Saturation Present? Yes ☐ No ☒ Depth (inches): _____ (includes capillary fringe)			Wetland Hydrology Present? Yes ☐ No ☒		
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:					
Remarks: The vegetation is not hydrophytic and the soils are not hydric. The site is slightly depressional and the year was drier than normal but a wetter year would not change the soil properties. While the site is depressional it does not support a wetland.					

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Bay Village Homes City/County: Santa Rosa/Sonoma Sampling Date: 5/12/14
 Applicant/Owner: Mr. Dan Morgan, Morgan Properties, Inc. State: CA Sampling Point: 4
 Investigator(s): L. P. Stromberg, Ph.D. Section, Township, Range: Not Defined
 Landform (hillslope, terrace, etc.): level ground Local relief (concave, convex, none): flat Slope (%): <2%
 Subregion (LRR): Mediterranean California Lat: 38 o 27' 56.78" N + Long: 122 o 45' 12.53" W + Datum: NAD27
 Soil Map Unit Name: Wright loam, wet, 0 - 2 percent slope NWI classification: seasonally flooded emergent
palustrine wetlands
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes No ✓ (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>✓</u>	No <u> </u>	Is the Sampled Area within a Wetland?	Yes <u>✓</u>	No <u> </u>
Hydric Soil Present?	Yes <u>✓</u>	No <u> </u>			
Wetland Hydrology Present?	Yes <u>✓</u>	No <u> </u>			
Remarks:					

VEGETATION

Herbaceous Stratum (use scientific names)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
1 <u>Festuca perennis</u>	<u>50</u>	<u>✓</u>	<u>fac</u>	Number of Dominant Species That Are OBL, FACW, or FAC:	<u>1</u> (A)
2 <u>Hordeum marinum gussoneanum</u>	<u>10</u>		<u>fac</u>	Total Number of Dominant Species Across All Strata:	<u>1</u> (B)
3 <u>Rumex crispus</u>	<u>5</u>		<u>fac</u>	Percent of Dominant Species That Are OBL, FACW, or FAC:	<u>100.0</u> (A/B)
4 <u>Convolvulus arvensis</u>	<u>5</u>		<u>upl</u>		
5					
6					
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8					
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20					
21					
22					
23					
24					
25					
TOTAL ABSOLUTE COVER		<u>70</u>		Prevalence Index worksheet: Total % Cover of: Multiply by: OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>0</u> x 2 = <u>0</u> FAC species <u>65</u> x 3 = <u>195</u> FACU species <u>0</u> x 4 = <u>0</u> UPL species <u>5</u> x 5 = <u>25</u> Column Totals: <u>70</u> (A) <u>220</u> (B) Prevalence Index = B/A = <u>3.14</u>	
% Bare Ground in Herb Stratum <u>30</u>		% Cover of Biotic Crust <u>0</u>		Hydrophytic Vegetation Indicators: ✓ Dominance Test is >50% ___ Prevalence Index is ≤3.0 ¹ ___ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ___ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present.	
Hydrophytic Vegetation Present?				Yes <u>✓</u> No <u> </u>	

Remarks:

SOIL

Sampling Point: 4

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0 - 9	10yr5/2	100					loam	
6 - 9	10yr5/2	95	10yr4/4	5	C	M	loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix. ²Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

Hydric 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)	☐ Red Parent Material (TF2)
☐ 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)	☐ Redox Depressions (F8)	
☐ Sandy Mucky Mineral (S1)	☐ Vernal Pools (F9)	
☐ Sandy Gleyed Matrix (S4)		

³Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present): Type: <u>clay</u> Depth (inches): <u>18 - 24 inches</u>	Hydric Soil Present? Yes ☒ No ☐
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Remarks:

HYDROLOGY

Wetland Hydrology Indicators:		Secondary Indicators (2 or more required)
Primary Indicators (any one indicator is sufficient)		
☐ Surface Water (A1)	☐ Salt Crust (B11)	☐ Water Marks (B1) (Riverine)
☐ 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 Roots (C3)	☐ Dry-Season Water Table (C2)
☐ Drift Deposits (B3) (Nonriverine)	☐ Presence of Reduced Iron (C4)	☐ Thin Muck Surface (C7)
☐ Surface Soil Cracks (B6)	☐ Recent Iron Reduction in Plowed Soils (C6)	☐ Crayfish Burrows (C8)
☐ Inundation Visible on Aerial Imagery (B7)	☐ Other (Explain in Remarks)	☐ Saturation Visible on Aerial Imagery (C9)
☒ Water-Stained Leaves (B9)		☐ Shallow Aquitard (D3)
		☐ FAC-Neutral Test (D5)

Field Observations: Surface Water Present? Yes ☐ No ☒ Depth (inches): <u> </u> Water Table Present? Yes ☐ No ☒ Depth (inches): <u> </u> Saturation Present? Yes ☐ No ☒ Depth (inches): <u> </u> (includes capillary fringe)	Wetland Hydrology Present? Yes ☒ No ☐
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: The vegetation is hydrophytic and the soils are hydric. The year has been drier than normal and at the time of the survey the soils were dry but the site is located in a depression and the site is likely ponded and/or the soils are likely characterized by soil saturation for long-duration in years of normal or nearly normal rainfall.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Bay Village Homes City/County: Santa Rosa/Sonoma Sampling Date: 5/12/14
 Applicant/Owner: Mr. Dan Morgan, Morgan Properties, Inc. State: CA Sampling Point: 5
 Investigator(s): L. P. Stromberg, Ph.D. Section, Township, Range: Not Defined
 Landform (hillslope, terrace, etc.): level ground Local relief (concave, convex, none): flat Slope (%): <2%
 Subregion (LRR): Mediterranean California Lat: 38° 30.907'N Long: 122 o 45' 12.53"± Datum: NAD27
 Soil Map Unit Name: Wright loam, wet, 0 - 2 percent slope NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No ✓ (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u></u> No <u>✓</u>	Is the Sampled Area within a Wetland? Yes <u></u> No <u>✓</u>
Hydric Soil Present? Yes <u></u> No <u>✓</u>	
Wetland Hydrology Present? Yes <u></u> No <u>✓</u>	
Remarks:	

VEGETATION

Herbaceous Stratum (use scientific names)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1 <u>Avena barbata</u>	<u>30</u>	<u>✓</u>	<u>upl</u>	Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A)
2 <u>Bromus hordeaceus</u>	<u>20</u>	<u>✓</u>	<u>facu</u>	Total Number of Dominant Species Across All Strata: <u>2</u> (B)
3 <u>Convolvulus arvensis</u>	<u>10</u>		<u>upl</u>	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0.0</u> (A/B)
4 <u>Vicia sativa</u>	<u>5</u>		<u>upl</u>	Prevalence Index worksheet:
5 <u>Eschscholzia californica</u>	<u>3</u>		<u>upl</u>	
6 <u>Plantago lanceolata</u>	<u>3</u>		<u>fac</u>	Total % Cover of:
7 <u>Hordeum marinum gussoneanum</u>	<u>3</u>		<u>fac</u>	OBL species <u>0</u> x 1 = <u>0</u>
8 <u>Bromus diandrus</u>	<u>2</u>		<u>upl</u>	FACW species <u>2</u> x 2 = <u>4</u>
9 <u>Danthonia californica</u>	<u>2</u>		<u>facw</u>	FAC species <u>3</u> x 3 = <u>9</u>
10				FACU species <u>20</u> x 4 = <u>80</u>
11				UPL species <u>53</u> x 5 = <u>265</u>
12				Column Totals: <u>78</u> (A) <u>358</u> (B)
13				Prevalence Index = B/A = <u>4.59</u>
14				Hydrophytic Vegetation Indicators:
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				¹ Indicators of hydric soil and wetland hydrology must be present.
25				
TOTAL ABSOLUTE COVER <u>78</u>				Hydrophytic Vegetation Present? Yes <u></u> No <u>✓</u>
% Bare Ground in Herb Stratum <u>22</u> % Cover of Biotic Crust <u>0</u>				

Remarks:

SOIL

Sampling Point: 5

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0 - 8	10yr4/2	100					loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix. ²Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

Hydric 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)	☐ Red Parent Material (TF2)
☐ 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)	☐ Redox Depressions (F8)	
☐ Sandy Mucky Mineral (S1)	☐ Vernal Pools (F9)	
☐ Sandy Gleyed Matrix (S4)		

³Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present): Type: <u>clay</u> Depth (inches): <u>18 - 24 inches</u>	Hydric Soil Present? Yes ☐ No ☒
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Remarks:

HYDROLOGY

Wetland Hydrology Indicators:		Secondary Indicators (2 or more required)
Primary Indicators (any one indicator is sufficient) ☐ 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) ☐ Sediment Deposits (B2) (Nonriverine) ☐ Oxidized Rhizospheres along Living Roots (C3) ☐ Drift Deposits (B3) (Nonriverine) ☐ Presence of Reduced Iron (C4) ☐ Surface Soil Cracks (B6) ☐ Recent Iron Reduction in Plowed Soils (C6) ☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Remarks) ☐ Water-Stained Leaves (B9)		☐ Water Marks (B1) (Riverine) ☐ Sediment Deposits (B2) (Riverine) ☐ Drift Deposits (B3) (Riverine) ☐ Drainage Patterns (B10) ☐ Dry-Season Water Table (C2) ☐ Thin Muck Surface (C7) ☐ Crayfish Burrows (C8) ☐ Saturation Visible on Aerial Imagery (C9) ☐ Shallow Aquitard (D3) ☐ FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes ☐ No ☒ Depth (inches): _____ Water Table Present? Yes ☐ No ☒ Depth (inches): _____ Saturation Present? Yes ☐ No ☒ Depth (inches): _____ (includes capillary fringe)		Wetland Hydrology Present? Yes ☐ No ☒
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks: The vegetation is not hydrophytic and the soils are not hydric. The site is at the margin of a slight depression . The year was drier than normal but a wetter year would not change the soil properties.		

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Bay Village Homes City/County: Santa Rosa/Sonoma Sampling Date: 5/12/14
 Applicant/Owner: Mr. Dan Morgan, Morgan Properties, Inc. State: CA Sampling Point: 6
 Investigator(s): L. P. Stromberg, Ph.D. Section, Township, Range: Not Defined
 Landform (hillslope, terrace, etc.): level ground Local relief (concave, convex, none): flat Slope (%): <2%
 Subregion (LRR): Mediterranean California Lat: 38 o 27' 56.78" N + Long: 122 o 45' 12.53" W + Datum: NAD27
 Soil Map Unit Name: Wright loam, wet, 0 - 2 percent slope NWI classification: seasonally flooded emergent
palustrine wetlands
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes No ✓ (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>✓</u>	No <u> </u>	Is the Sampled Area within a Wetland?	Yes <u>✓</u>	No <u> </u>
Hydric Soil Present?	Yes <u>✓</u>	No <u> </u>			
Wetland Hydrology Present?	Yes <u>✓</u>	No <u> </u>			
Remarks:					

VEGETATION

Herbaceous Stratum (use scientific names)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
1 <u>Festuca perennis</u>	<u>20</u>	<u>✓</u>	<u>fac</u>	Number of Dominant Species That Are OBL, FACW, or FAC:	<u>2</u> (A)
2 <u>Hordeum marinum gussoneanum</u>	<u>20</u>	<u>✓</u>	<u>fac</u>	Total Number of Dominant Species Across All Strata:	<u>2</u> (B)
3 <u>Phalaris aquatica</u>	<u>8</u>		<u>facu</u>	Percent of Dominant Species That Are OBL, FACW, or FAC:	<u>100.0</u> (A/B)
4 <u>Convolvulus arvensis</u>	<u>3</u>		<u>upl</u>	Prevalence Index worksheet:	
5 <u>Hordeum brachyantherum</u>	<u>3</u>		<u>facw</u>	Total % Cover of:	Multiply by:
6 <u>Lythrum hyssopifolium</u>	<u>2</u>		<u>facw</u>	OBL species <u>1</u>	x 1 = <u>1</u>
7 <u>Festuca bromoides</u>	<u>1</u>		<u>facw</u>	FACW species <u>6</u>	x 2 = <u>12</u>
8 <u>Downingia concolor</u>	<u>1</u>		<u>obl</u>	FAC species <u>40</u>	x 3 = <u>120</u>
9 <u> </u>	<u> </u>			FACU species <u>8</u>	x 4 = <u>32</u>
10 <u> </u>	<u> </u>			UPL species <u>3</u>	x 5 = <u>15</u>
11 <u> </u>	<u> </u>			Column Totals: <u>58</u> (A)	<u>180</u> (B)
12 <u> </u>	<u> </u>			Prevalence Index = B/A = <u>3.10</u>	
13 <u> </u>	<u> </u>			Hydrophytic Vegetation Indicators:	
14 <u> </u>	<u> </u>			<u>✓</u> Dominance Test is >50%	
15 <u> </u>	<u> </u>			<u> </u> Prevalence Index is ≤3.0 ¹	
16 <u> </u>	<u> </u>			<u> </u> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)	
17 <u> </u>	<u> </u>			<u> </u> Problematic Hydrophytic Vegetation ¹ (Explain)	
18 <u> </u>	<u> </u>			¹ Indicators of hydric soil and wetland hydrology must be present.	
19 <u> </u>	<u> </u>			Hydrophytic Vegetation Present?	
20 <u> </u>	<u> </u>			Yes <u>✓</u> No <u> </u>	
21 <u> </u>	<u> </u>			Remarks:	
22 <u> </u>	<u> </u>				
23 <u> </u>	<u> </u>				
24 <u> </u>	<u> </u>				
25 <u> </u>	<u> </u>				
TOTAL ABSOLUTE COVER <u>58</u>					
% Bare Ground in Herb Stratum <u>42</u>			% Cover of Biotic Crust <u>0</u>		

Remarks:

SOIL

Sampling Point: 6

[illegible]

HYDROLOGY

Wetland Hydrology Indicators:		Secondary Indicators (2 or more required)	
Primary Indicators (any one indicator is sufficient)			
☐ Surface Water (A1)	☐ Salt Crust (B11)	☐ Water Marks (B1) (Riverine)	
☐ 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 Roots (C3)	☐ Dry-Season Water Table (C2)	
☐ Drift Deposits (B3) (Nonriverine)	☐ Presence of Reduced Iron (C4)	☐ Thin Muck Surface (C7)	
☐ Surface Soil Cracks (B6)	☐ Recent Iron Reduction in Plowed Soils (C6)	☐ Crayfish Burrows (C8)	
☐ Inundation Visible on Aerial Imagery (B7)	☐ Other (Explain in Remarks)	☐ Saturation Visible on Aerial Imagery (C9)	
☒ Water-Stained Leaves (B9)		☐ Shallow Aquitard (D3)	
		☐ FAC-Neutral Test (D5)	
Field Observations:			
Surface Water Present?	Yes ☐ No ☒ Depth (inches): _____	Wetland Hydrology Present? Yes ☒ No ☐	
Water Table Present?	Yes ☐ No ☒ Depth (inches): _____		
Saturation Present? (includes capillary fringe)	Yes ☐ No ☒ Depth (inches): _____		
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			
Remarks: The vegetation is hydrophytic and the soils are hydric. The year has been drier than normal and at the time of the survey the soils were dry but the site is located in a depression and the site is likely ponded and/or the soils are likely characterized by soil saturation for long-duration in years of normal or nearly normal rainfall.			

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Bay Village Homes City/County: Santa Rosa/Sonoma Sampling Date: 5/12/14
 Applicant/Owner: Mr. Dan Morgan, Morgan Properties, Inc. State: CA Sampling Point: 7
 Investigator(s): L. P. Stromberg, Ph.D. Section, Township, Range: Not Defined
 Landform (hillslope, terrace, etc.): level ground Local relief (concave, convex, none): flat Slope (%): <2%
 Subregion (LRR): Mediterranean California Lat: 38° 30.907'N Long: 122 o 45' 12.53"± Datum: NAD27
 Soil Map Unit Name: Wright loam, wet, 0 - 2 percent slope NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No ✓ (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u></u> No <u>✓</u>	Is the Sampled Area within a Wetland? Yes <u></u> No <u>✓</u>
Hydric Soil Present? Yes <u></u> No <u>✓</u>	
Wetland Hydrology Present? Yes <u></u> No <u>✓</u>	
Remarks:	

VEGETATION

Herbaceous Stratum (use scientific names)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1 <u>Bromus hordeaceus</u>	<u>20</u>	<u>✓</u>	<u>facu</u>	Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)
2 <u>Phalaris aquatica</u>	<u>20</u>	<u>✓</u>	<u>facu</u>	Total Number of Dominant Species Across All Strata: <u>3</u> (B)
3 <u>Hordeum marinum gussoneanum</u>	<u>20</u>	<u>✓</u>	<u>fac</u>	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>33.3</u> (A/B)
4 <u>Festuca perennis</u>	<u>15</u>		<u>fac</u>	Prevalence Index worksheet: Total % Cover of: Multiply by: OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>1</u> x 2 = <u>2</u> FAC species <u>37</u> x 3 = <u>111</u> FACU species <u>40</u> x 4 = <u>160</u> UPL species <u>9</u> x 5 = <u>45</u> Column Totals: <u>87</u> (A) <u>318</u> (B) Prevalence Index = B/A = <u>3.66</u>
5 <u>Convolvulus arvensis</u>	<u>5</u>		<u>upl</u>	
6 <u>Plantago lanceolata</u>	<u>2</u>		<u>fac</u>	
7 <u>Avena barbata</u>	<u>2</u>		<u>upl</u>	
8 <u>Lupinus bicolor</u>	<u>2</u>		<u>upl</u>	
9 <u>Danthonia californica</u>	<u>1</u>		<u>facw</u>	
10				
11				
12				
13				
14				
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16				
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18				
19				
20				
21				
22				
23				
24				
25				
TOTAL ABSOLUTE COVER <u>87</u>				
% Bare Ground in Herb Stratum <u>13</u>	% Cover of Biotic Crust <u>0</u>	Hydrophytic Vegetation Present? Yes <u></u> No <u>✓</u>		

Remarks:

SOIL

Sampling Point: 7

[illegible]

HYDROLOGY

Wetland Hydrology Indicators:			Secondary Indicators (2 or more required)		
Primary Indicators (any one indicator is sufficient)					
☐ Surface Water (A1)	☐ Salt Crust (B11)	☐ Water Marks (B1) (Riverine)			
☐ 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 Roots (C3)	☐ Dry-Season Water Table (C2)			
☐ Drift Deposits (B3) (Nonriverine)	☐ Presence of Reduced Iron (C4)	☐ Thin Muck Surface (C7)			
☐ Surface Soil Cracks (B6)	☐ Recent Iron Reduction in Plowed Soils (C6)	☐ Crayfish Burrows (C8)			
☐ Inundation Visible on Aerial Imagery (B7)	☐ Other (Explain in Remarks)	☐ Saturation Visible on Aerial Imagery (C9)			
☐ Water-Stained Leaves (B9)		☐ Shallow Aquitard (D3)			
		☐ FAC-Neutral Test (D5)			
Field Observations: Surface Water Present? Yes ☐ No ☒ Depth (inches): _____ Water Table Present? Yes ☐ No ☒ Depth (inches): _____ Saturation Present? Yes ☐ No ☒ Depth (inches): _____ (includes capillary fringe)			Wetland Hydrology Present? Yes ☐ No ☒		
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:					
Remarks: The vegetation is not hydrophytic and the soils are not hydric. The site is at the margin of a slight depression . The year was drier than normal but a wetter year would not change the soil properties.					