APPENDIX D-1

BIOLOGICAL RESOURCES
BIOLOGICAL RESOURCES ASSESSMENT, WRA, 2017

Biological Resources Assessment

Stonegate Subdivision Project
CITY OF CHICO, BUTTE COUNTY, CALIFORNIA

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LIST OF ACRONYMS AND ABBREVIATIONS

CCR	California Code of Regulations
CDFG	California Department of Fish and Game
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CFR	Code of Federal Regulations
CFGC	California Fish and Game Code
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
Corps	U.S. Army Corps of Engineers
EFH	Essential Fish Habitat
ESA	Federal Endangered Species Act
Inventory	CNPS Inventory of Rare and Endangered Plants
MBTA	Migratory Bird Treaty Act
NMFS	National Marine Fisheries Service
NOAA	National Oceanic and Atmospheric Administration
OWHM	Ordinary High Water Mark
Rank	California Rare Plant Rank
RWQCB	Regional Water Quality Control Board
USDA	U.S. Department of Agriculture
USFWS	U.S. Fish and Wildlife Service
VELB	Valley elderberry longhorn beetle
VPFS	Vernal pool fairy shrimp
VPTS	Vernal pool tadpole shrimp
WBWG	Western Bat Working Group
WRA	WRA, Inc.

EXECUTIVE SUMMARY

The purpose of this report is to provide an analysis of the potential for occurrence of sensitive natural communities and special-status species on the approximately 317-acre site (Study Area[1]) proposed for the Stonegate Subdivision/General Plan Amendment/Rezone Project (Project). On May 17 and 18, 2016, WRA, Inc. (WRA) conducted a biological resources assessment within the Study Area. A routine wetland delineation was also conducted in May 2016, and a protocol-level rare plant survey was conducted by WRA in April and July, 2016. Foothill Associates conducted surveys on February 15 and 23, March 3, 17, 18, and 30, April 30, and May 3, 2016 and March 28 and April 21, 2017. WRA conducted additional rare plant surveys on and March 26 and 27, 2018. In addition, Foothill Associates (Foothill) prepared an Aquatic Resources Delineation Report (May 2017) that was verified by the U.S. Army Corps of Engineers (Corps) in July 2017. The delineation report and verification letter are provided in Appendix D. WRA observed eleven sensitive biological communities, 155 plant species, and 18 wildlife species during the March, April, May, and July site visits. Sensitive communities included seasonal wetlands (depressional and riverine), perennial marsh, vernal pool, ephemeral, intermittent, and perennial drainage, ditch/canal, excavated pits, riparian oak woodland, and mixed riparian woodland. Collectively, these sensitive habitats total 21.85 acres. The remaining 295.18 acres consist of annual grassland and developed lands.

Two special-status plant species, the State and Federal-listed Butte County meadowfoam (*Limnanthes floccosa* ssp. *californica*) and CNPS-ranked shield-bracted monkeyflower (*Mimulus glaucescens*), occur within the Study Area. The remaining plant species with potential to occur in the Study Area are considered absent based on the results of a protocol-level rare plant survey. Consultation with the United States Fish and Wildlife Service will be required if impacts to individuals of the species cannot be avoided.

One special-status wildlife species, white-tailed kite (*Elanus leucurus*), was observed in the Study Area during the site assessment. Twelve other special-status wildlife species have a high or moderate potential to occur in the Study Area including: pallid bat (*Antrozous pallidus*), grasshopper sparrow (*Ammodramus savannarum*), oak titmouse (*Baeolophus inornatus*), loggerhead shrike (*Lanius ludovicianus*), yellow-billed magpie (*Pica nuttalli*), Nuttall's woodpecker (*Picoides nuttallii*), western spadefoot (*Spea hammondii*), vernal pool fairy shrimp (*Branchinecta lynchi*), vernal pool tadpole shrimp (*Lepidurus packardi*), midvalley fairy shrimp (*Branchinecta mesovallensis*), California linderiella (*Linderiella occidentalis*), and valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*). Measures are recommended to avoid adverse impacts to these species.

[1] The Study Area (317.03 acres) includes both the 315.23 project site as well as a North Addendum Area (0.08 acres) and a West Addendum Area (1.00 acres).

1.0 INTRODUCTION

The City of Chico, acting as lead agency, is reviewing the proposed Stonegate Subdivision/General Plan Amendment/Rezone Project (Project) which would subdivide an approximately 317-acre site (Study Area) into a combination of open space, public right-of-way, park, single-family residential standard lots, single-family residential half-acre lots, multi-family residential, and commercial uses. On May 17 and 18, 2016, WRA, Inc. (WRA) performed a site visit and field assessment of biological resources within the approximately 317-acre Study Area. A routine wetland delineation was also conducted in May 2016, and a protocol-level rare plant survey was conducted by WRA in April and July, 2016; the results of these supplemental surveys were used to inform this analysis and are discussed in greater detail in separate reports (WRA 2016a and WRA 2016b). In addition, an Aquatic Resources Delineation Report was prepared by Foothill and was verified by the Corps in July 2017 (see Appendix D). The results of this verified delineation were also used to inform this analysis. The Study Area (APNs: 002-190-041, 018-510-007, 018-510-008, and 018-510-009) is located in the City of Chico, Butte County, California (Figure 1). The Study Area is composed of an approximate 315.23-acre site (project site), and two potential parcel addenda, referred to as north (0.80 acre) and west (1.0 acre) addendum areas (Figure 1).

The purpose of the assessment was to gather information necessary to complete a review of biological resources under the California Environmental Quality Act (CEQA) for the proposed Project. This report describes the results of the site visit, which assessed the Study Area for the potential to support special-status species and the presence of other sensitive biological resources protected by local, state, and federal laws and regulations. Any special-status species observed during the site visit were recorded. Specific findings on the habitat suitability or presence of special-status species or sensitive habitats may require that additional protocol-level surveys be conducted. This report also contains recommended avoidance and minimization measures for special-status species and sensitive biological resources that may occur in the Study Area.

A biological resources assessment provides general information on the potential presence of sensitive species and habitats. The biological assessment is not an official protocol-level survey for listed species that may be required for project approval by local, state, or federal agencies. This assessment is based on information available at the time of the study and on site conditions that were observed on the dates of the site visits.

Figure 1. Study Area Location Map

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0 0.5 1 2 Miles

wra
ENVIRONMENTAL CONSULTANTS

Chico
Butte County, California

Map Prepared Date: 5/13/2016
Map Prepared By: MRochelle
Base Source: Esri, National Geographic
Data Source(s): WRA, CNDDB (April 2016)

Path: L:\Acad 2000 Files\26000\26061\GIS\ArcMap\Location.mxd

2.0 REGULATORY BACKGROUND

The following sections explain the regulatory context of the biological assessment, including applicable laws and regulations that were applied to the field investigations and analysis of potential Project impacts.

2.1 Sensitive Biological Communities

Sensitive biological communities include habitats that fulfill special functions or have special values, such as wetlands, streams, or riparian habitat. These habitats are protected under federal regulations such as the Clean Water Act; state regulations such as the Porter-Cologne Act, the California Department of Fish and Wildlife (CDFW) Streambed Alteration Program, and CEQA; and/or local ordinances or policies such as city or county tree ordinances, Special Habitat Management Areas, and General Plan Elements.

Waters of the United States

The U.S. Army Corps of Engineers (Corps) regulates "Waters of the United States" under Section 404 of the Clean Water Act. Waters of the U.S. are defined in the Code of Federal Regulations (CFR) as waters susceptible to use in commerce, including interstate waters and wetlands, all other waters (intrastate waterbodies, including wetlands), and their tributaries (33 CFR 328.3). Potential wetland areas, according to the three criteria used to delineate wetlands as defined in the *Corps of Engineers Wetlands Delineation Manual* (Environmental Laboratory 1987), are identified by the presence of (1) hydrophytic vegetation, (2) hydric soils, and (3) wetland hydrology. Areas that are inundated at a sufficient depth and for a sufficient duration to exclude growth of hydrophytic vegetation are subject to Section 404 jurisdiction as "other waters" and are often characterized by an ordinary high water mark (OHWM). Other waters, for example, generally include lakes, rivers, and streams. The placement of fill material into Waters of the U.S generally requires an individual or nationwide permit from the Corps under Section 404 of the Clean Water Act.

Waters of the State

The term "Waters of the State" is defined by the Porter-Cologne Act as "any surface water or groundwater, including saline waters, within the boundaries of the state." The Regional Water Quality Control Board (RWQCB) protects all waters in its regulatory scope and has special responsibility for wetlands, riparian areas, and headwaters. These waterbodies have high resource value, are vulnerable to filling, and are not systematically protected by other programs. RWQCB jurisdiction includes "isolated" wetlands and waters that may not be regulated by the Corps under Section 404 of the Clean Water Act. Waters of the State are regulated by the RWQCB under the State Water Quality Certification Program which regulates discharges of fill and dredged material under Section 401 of the Clean Water Act and the Porter-Cologne Water Quality Control Act. Projects that require a Corps permit, or fall under other federal jurisdiction, and have the potential to impact Waters of the State, are required to comply with the terms of the Water Quality Certification determination. If a proposed project does not require a federal permit, but does involve dredge or fill activities that may result in a discharge to Waters of the State, the RWQCB has the option to regulate the dredge and fill activities under its state authority in the form of Waste Discharge Requirements.

Streams, Lakes, and Riparian Habitat

Streams and lakes, as habitat for fish and wildlife species, are subject to jurisdiction by CDFW under Sections 1600-1616 of California Department of Fish and Game (CDFG) Code. Alterations to or work within or adjacent to streambeds or lakes generally require a 1602 Lake and Streambed Alteration Agreement. The term “stream”, which includes creeks and rivers, is defined in the California Code of Regulations (CCR) as “a body of water that flows at least periodically or intermittently through a bed or channel having banks and supports fish or other aquatic life [including] watercourses having a surface or subsurface flow that supports or has supported riparian vegetation” (14 CCR 1.72). In addition, the term “stream” can include ephemeral streams, dry washes, watercourses with subsurface flows, canals, aqueducts, irrigation ditches, and other means of water conveyance if they support aquatic life, riparian vegetation, or stream-dependent terrestrial wildlife (CDFG 1994). “Riparian” is defined as “on, or pertaining to, the banks of a stream.” Riparian vegetation is defined as “vegetation which occurs in and/or adjacent to a stream and is dependent on, and occurs because of, the stream itself” (CDFG 1994). Removal of riparian vegetation also requires a Section 1602 Lake and Streambed Alteration Agreement from CDFW.

Essential Fish Habitat

Essential Fish Habitat (EFH) is regulated through the National Marine Fisheries Service (NMFS), a division of the National Oceanic and Atmospheric Administration (NOAA). Protection of EFH is mandated through changes implemented in 1996 to the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act) to protect the loss of habitat necessary to maintain sustainable fisheries in the United States. The Magnuson-Stevens Act defines EFH as "those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity" [16 USC 1802(10)]. NMFS further defines essential fish habitat as areas that "contain habitat essential to the long-term survival and health of our nation's fisheries" (NMFS 2007). EFH can include the water column, certain bottom types such as sandy or rocky bottoms, vegetation such as eelgrass or kelp, or structurally complex coral or oyster reefs. Under regulatory guidelines issued by NMFS, any federal agency that authorizes, funds, or undertakes action that may affect EFH is required to consult with NMFS (50 CFR 600.920).

Other Sensitive Biological Communities

Other sensitive biological communities not discussed above include habitats that fulfill special functions or have special values. Natural communities considered sensitive are those identified in local or regional plans, policies, regulations, or by the CDFW. CDFW ranks sensitive communities as "threatened" or "very threatened" and keeps records of their occurrences in its California Natural Diversity Database (CNDDB; CDFW 2016). Sensitive plant communities are also identified by CDFW (CNPS 2016a). CNDDB vegetation alliances are ranked 1 through 5 based on NatureServe's (2010) methodology, with those alliances ranked globally (G) or statewide (S) as 1 through 3 considered sensitive. Impacts to sensitive natural communities identified in local or regional plans, policies, or regulations or those identified by the CDFW or U.S. Fish and Wildlife Service (USFWS) must be considered and evaluated under CEQA (CCR Title 14, Div. 6, Chap. 3, Appendix G). Specific habitats may also be identified as sensitive in city or county general plans or ordinances.

Butte Regional Conservation Plan

The Butte County Association of Governments initiated development of the Butte Regional Conservation Plan (BCRP) in 2007, which has not yet been formally approved and implemented. The proposed BCRP would function as a Habitat Conservation Plan/Natural Community

Conservation Plan (HCP/NCCP) with the goal of streamlining state and federal environmental permitting for covered activities. The Plan Area for the proposed BRCP includes approximately 560,000 acres in the western half of Butte County, and includes the entire extent of vernal pool landscapes within Butte County. The BRCP would include 38 covered species, including Butte County meadowfoam (*Limnanthes floccosa* ssp. *californica*), valley elderberry longhorn beetle (*Desmocerus californicus dimorphus)*, vernal pool fairy shrimp (*Branchinecta lynchi*), western spadefoot (*Spea hammondii*), and white-tailed kite (*Elanus leucurus*) among others. The BRCP would allow for the removal of approximately 24,500 acres of habitat under federal and state permits, and would protect and restore 90,417 acres.

Since 2007, the development of the BRCP has been coordinated with numerous individuals, groups and entities including 47 meetings with the BRCP Stakeholder Committee, numerous meetings with state and federal agency staff, city and county planning and public works staff, and special interest groups throughout the Plan Area. The first administrative draft of the BRCP was completed and reviewed by the Stakeholder Committee and Wildlife Agencies, and made available on the BRCP website in June 2011. A "preliminary public draft" of the BRCP was released in December 2012 and a "formal public draft" was completed and submitted to the U.S. Fish and Wildlife Service (USFWS) in July 2015. Adoption and final permitting of the BRCP is currently pending final approvals from state and federal agencies.

Relevant Local Policies, Ordinances, Regulations

The City of Chico municipal code requires that a permit be obtained prior to removing any tree from any property. Tree removal permits are issued upon consideration of the overall condition and health of the tree, proximity to existing or proposed structures, interference with utility services, the necessity to remove the tree, feasible alternatives, the effect of tree removal on erosion, soil retention, and diversion or increased stream flow. Tree replacement requirements may be onsite or in the form of an in lieu fee.

The City of Chico municipal code requires a minimum 25-foot setback from the top of creek banks to development and associated above ground infrastructure as a part of project review. Larger setbacks may be necessary to mitigate environmental impacts.

2.2 Sensitive Special-Status Species

Special-status species include those plants and wildlife species that have been formally listed, are proposed as endangered or threatened, or are candidates for such listing under the Federal Endangered Species Act (ESA) or California Endangered Species Act (CESA). These acts afford protection to both listed species and those that are formal candidates for listing. Additionally, CDFW Species of Special Concern, CDFW California Fully Protected species, USFWS Birds of Conservation Concern, and CDFW Special-status Invertebrates are all considered special-status species. Although these aforementioned species generally have no special legal status, they are given special consideration under CEQA. Bat species are also evaluated for conservation status by the Western Bat Working Group (WBWG), a non-governmental entity; bats named as a "High Priority" or "Medium Priority" species for conservation by the WBWG are typically considered special-status and also considered under CEQA. In addition to regulations for special-status species, most native birds in the United States (including non-status species) are protected by the Migratory Bird Treaty Act of 1918 (MBTA) and the CFGC, i.e., sections 3503, 3503.5 and 3513. Under these laws, deliberately destroying active bird nests, eggs, and/or young is illegal.

Plant species on the California Native Plant Society (CNPS) Rare and Endangered Plant Inventory (Inventory) with California Rare Plant Ranks (Rank) of 1 and 2 are also considered

special-status plant species and must be considered under CEQA. Rank 3 and Rank 4 species are afforded little or no protection under CEQA, but are included in this analysis for completeness. A description of the CNPS Ranks is provided below in Table 1.

Table 1. Description of CNPS Ranks and Threat Codes

California Rare Plant Ranks (formerly known as CNPS Lists)	
Rank 1A	Presumed extirpated in California and either rare or extinct elsewhere
Rank 1B	Rare, threatened, or endangered in California and elsewhere
Rank 2A	Presumed extirpated in California, but more common elsewhere
Rank 2B	Rare, threatened, or endangered in California, but more common elsewhere
Rank 3	Plants about which more information is needed - A review list
Rank 4	Plants of limited distribution - A watch list
Threat Ranks	
0.1	Seriously threatened in California
0.2	Moderately threatened in California
0.3	Not very threatened in California

Critical Habitat

Critical habitat is a term defined in the ESA as a specific geographic area that contains features essential for the conservation of a threatened or endangered species and that may require special management and protection. The ESA requires federal agencies to consult with the USFWS to conserve listed species on their lands and to ensure that any activities or projects they fund, authorize, or carry out will not jeopardize the survival of a threatened or endangered species. In consultation for those species with critical habitat, federal agencies must also ensure that their activities or projects do not adversely modify critical habitat to the point that it will no longer aid in the species' recovery. In many cases, this level of protection is similar to that already provided to species by the ESA jeopardy standard. However, areas that are currently unoccupied by the species but which are needed for the species' recovery are protected by the prohibition against adverse modification of critical habitat.

3.0 METHODS

On May 17 and 18, 2016, the Study Area was traversed on foot to determine: (1) plant communities present within the Study Area; (2) if existing conditions provide suitable habitat for any special-status plant or wildlife species; and (3) if sensitive habitats are present. All plant and wildlife species encountered were recorded, and a list of observed species is provided in Appendix A. Plant nomenclature follows Baldwin et al. (2012) and subsequent revisions by the Jepson Flora Project (2016), except where noted. For cases in which regulatory agencies, CNPS, or other entities base rarity on older taxonomic treatments, precedence was given to the treatment used by those entities.

3.1 Biological Communities

Prior to the site visit, the Soil Survey of Butte Area, California, Parts of Butte and Plumas Counties (USDA 2006), aerial photographs (Google Earth 2016), and the United States Geologic Survey (USGS) 7.5 minute quadrangle for Chico were examined to determine if any unique soil types that could support sensitive plant communities and/or aquatic features were present in the Study Area. Biological communities present in the Study Area were classified based on existing plant community descriptions described in the *Preliminary Descriptions of the Terrestrial Natural Communities of California* (Holland 1986) and/or *A Manual of California Vegetation* (CNPS 2016a). However, in some cases it is necessary to identify variants of community types or to describe non-vegetated areas that are not described in the literature. Biological communities were classified as sensitive or non-sensitive as defined by CEQA and other applicable laws and regulations.

3.1.1 Non-sensitive Biological Communities

Non-sensitive biological communities are those communities that are not afforded special protection under CEQA, and other state, federal, and local laws, regulations and ordinances. These communities may, however, provide suitable habitat for some special-status plant or wildlife species and are identified or described in Section 4.1.1 below.

3.1.2 Sensitive Biological Communities

Sensitive biological communities are defined as those communities that are given special protection under CEQA and other applicable federal, state, and local laws, regulations and ordinances. Applicable laws and ordinances are discussed above in Section 2.0. Special methods used to identify sensitive biological communities are discussed below.

Wetlands and Waters

The Study Area was surveyed to determine if any wetlands and waters potentially subject to jurisdiction by the Corps, RWQCB, or CDFW were present. The assessment was based on the presence of wetland plant indicator species as well as observed indicators of hydric soils and wetland hydrology. Potential wetland areas are generally dominated by plant species with a wetland indicator status[2] of OBL, FACW, or FAC as given on the U.S. Army Corps of Engineers National Wetlands Plant List (Lichvar et al. 2016). Evidence of wetland hydrology can include

[2] OBL = Obligate, always found in wetlands (> 99% frequency of occurrence); FACW = Facultative wetland, usually found in wetlands (67-99% frequency of occurrence); FAC = Facultative, equal occurrence in wetland or non-wetlands (34-66% frequency of occurrence).

direct evidence (primary indicators), such as visible inundation or saturation, algal mats, and oxidized root channels, or indirect (secondary) indicators, such as a water table within two feet of the soil surface during the dry season. Some indicators of wetland soils include dark colored soils, soils with a sulfidic odor, and soils that contain redoximorphic features as defined by the Corps Manual (Environmental Laboratory 1987) and Field Indicators of Hydric Soils in the United States (NRCS 2010). The assessment of waters was based primarily on the presence of flowing water, an ordinary high water mark, or a defined drainage course. Wetlands and waters observed in the Study Area are described in greater detail in a separate wetland delineation report prepared by WRA.

Other Sensitive Biological Communities

The Study Area was evaluated for the presence of other sensitive biological communities, including riparian areas and sensitive plant communities recognized by CDFW. Prior to the site visit, aerial photographs, and local soil maps were reviewed to assess the potential for sensitive biological communities to occur in the Study Area. All alliances within the Study Area with a ranking of 1 through 3 were considered sensitive biological communities and mapped. Sensitive communities are described in Section 4.1.2 below.

3.2 Special-Status Species

3.2.1 Literature Review

The potential for occurrence of special-status species in the Study Area was evaluated by first determining which special-status species are known occur in the vicinity of the Study Area through a literature and database search. For the purposes of this analysis, the "vicinity" of the Study Area was defined to include the Chico 7.5-minute USGS quadrangle in which the Study Area is located and the eight surrounding USGS quadrangles. The following sources were reviewed to determine which special-status plant and wildlife species have been documented to occur in the vicinity of the Study Area:

- California Natural Diversity Database (CNDDB) records (CDFW 2016)
- USFWS quadrangle species lists (USFWS 2016)
- CNPS Inventory records (CNPS 2016b)
- CDFG publication "California's Wildlife, Volumes I-III" (Zeiner et al. 1990)
- CDFW publication, "Amphibians and Reptile Species of Special Concern in California" (Jennings and Hayes 1994);
- CDFW publication, *California Bird Species of Special Concern* (Shuford and Gardali 2008);
- *A Field Guide to Western Reptiles and Amphibians* (Stebbins 2003);
- *Fairy Shrimps of California's Puddles, Pools and Playas* (Eriksen and Belk 1999)

3.2.2 Site Assessment

A site visit was conducted to evaluate to potential of the Study Area to support suitable habitats for special-status species. Habitat conditions observed at the Study Area were used to evaluate the potential for presence of special-status species based on these searches and the professional expertise of the investigating biologists. The potential for each special-status species to occur in the Study Area was then evaluated according to the following criteria:

- No Potential. Habitat on and adjacent to the site is clearly unsuitable for the species requirements (foraging, breeding, cover, substrate, elevation, hydrology, plant community, site history, disturbance regime).
- Unlikely. Few of the habitat components meeting the species requirements are present, and/or the majority of habitat on and adjacent to the site is unsuitable or of very poor quality. The species is not likely to be found on the site.
- Moderate Potential. Some of the habitat components meeting the species requirements are present, and/or only some of the habitat on or adjacent to the site is unsuitable. The species has a moderate probability of being found on the site.
- High Potential. All of the habitat components meeting the species requirements are present and/or most of the habitat on or adjacent to the site is highly suitable. The species has a high probability of being found on the site.
- Present. Species is observed on the site or has been recorded (i.e. CNDDB, other reports) on the site recently.

The site assessment is intended to identify the presence or absence of suitable habitat for each special-status species known to occur in the vicinity in order to determine its potential to occur in the Study Area. In cases where little information is known about species occurrences and habitat requirements, the species evaluation was based on best professional judgment of WRA biologists with experience working with the species and habitats.

Any special-status species observed during the site visit were documented and are discussed in Section 4.2. A protocol-level rare plant survey was conducted in April of 2016 for all plant species determined to have potential to occur in the Study Area. The results of the rare plant survey are described in a separate report (WRA 2016a). Protocol-level surveys have not been conducted for any special-status wildlife species with potential to occur in the Study Area. For some wildlife species, a site assessment visit at the level conducted for this report may not be sufficient to determine presence or absence of a species to the specifications of regulatory agencies. In these cases, wildlife species may be assumed to be present or further protocol-level special-status species surveys may be necessary. Special-status species for which further protocol-level surveys may be necessary are described below in Section 5.0.

4.0 RESULTS

The Study Area consists of approximately 317 acres located east of State Highway 99 in the southeast region of the City of Chico. The Study Area is located in the northern portion of the Chico USGS 7.5-minute quadrangle map (USGS 2016). It is bounded by East 20th Street to the north, old Potter Road to the east (now the Steve Harrison Memorial Bike Path, a Class-I paved bike path maintained by the City of Chico), Skyway Road to the south, and adjacent development to the west; it is bisected by Bruce Road, which follows a north/south alignment through the Study Area (Figure 1).

The Study Area is generally level open space, gradually sloping up to the northeast from elevations of 225 feet at its south border along the Skyway to 267 feet on the north border along E. 20th Street. The site was historically used as rangeland, although little grazing has taken place over the past 25 years. All site parcels are currently vacant and undeveloped with the exception of dirt and gravel access roads. The Butte Creek Diversion Channel runs in a north-south direction through the eastern portion of the site, about midway between Bruce Road and the Steve Harrison Memorial Bike Path.

The Study Area is located on the eastern edge of the city limits and is surrounded on three sides by urban development including single and multi-family residences to the north, single-family residences to the west, and commercial land to the south. To the east is privately owned rangeland and open space that slopes gently up in elevation to rolling foothill terrain. The adjacent land to the east is outside of the city limits, but within the City's sphere of influence.

4.1 Soils

The Soil Survey of Butte Area, California, Parts of Butte and Plumas Counties (USDA 2006) indicates that the Study Area has five native soil types: Doemill-Jokerst complex, 3 to 8 percent slopes; Redtough-Redswale complex, 0 to 2 percent slopes; Redsluff gravelly loam, 0 to 2 percent slopes; Wafap-Hamslough complex, 0 to 2 percent slopes; and Clearhayes-Hamslough complex, 0 to 2 percent slopes. These soil types are described below and are shown in Figure 2.

Doemill-Jokerst Complex, 3 to 8 percent slopes. The soils in the Doemill-Jokerst complex are roughly 50 percent Doemill gravelly loam, 40 percent Jokerst very cobbly loam, and 10 percent minor components. Doemill gravelly loam soils occurs as mounds on ridgetops and strath terraces on volcanic ridges. These soils are somewhat poorly drained with very high surface runoff. The available water holding capacity is very low (about 2.1 inches). Jokerst very cobbly loam soils occur in swales on ridgetops and strath terraces on volcanic ridges. These soils are poorly drained with very high surface runoff. The available water holding capacity is very low (about 0.4 inches). Both soil types formed from loamy residuum weathered from volcanic material. Neither soil type is a hydric soil.

Redtough-Redswale Complex, 0 to 2 percent slopes. The soils in the Redtough-Redswale complex are roughly 50 percent Redtough loam, 35 percent Redswale cobbly loam, and 15 percent minor components. Redtough loam occurs as mounds on high fan terraces. Redtough loam soils formed from loamy alluvium over cemented, cobbly and gravelly alluvium derived from volcanic rocks. These soils are somewhat poorly drained with very high surface runoff. The available water holding capacity is very low (about 1.6 inches). Redswale cobbly loam occurs in swales on high fan terraces. Redswale cobbly loam formed from cobbly and loamy alluvium over cemented, cobbly and gravelly alluvium derived from volcanic rocks. These soils are poorly

drained with very high surface runoff. The available water holding capacity is very low (about 0.7 inches). Redtough loam and Redswale cobbly loam are not hydric soils.

Redsluff gravelly loam, 0 to 2 percent slopes. Redsluff gravelly loam occurs on low fan terraces. These soils formed from fine-loamy alluvium derived from igneous, metamorphic, and sedimentary rocks over gravelly alluvium deposited from volcanic rocks. These soils are moderately well drained with negligible surface runoff. The available water holding capacity is moderate (about 5.5 inches). Redsluff gravelly loam is not a hydric soil.

Wafap-Hamslough Complex, 0 to 2 percent slopes. The soils in the Wafap-Hamslough complex are roughly 70 percent Wafap gravelly loam, 15 percent Hamslough clay, and 15 percent minor components. Wafap gravelly loam occurs on bars on low stream terraces. Wafap gravelly loam formed from gravelly and clayey alluvium over cobbly alluvium over cemented, cobbly and gravelly alluvium derived from volcanic rocks. These soils are somewhat poorly drained with very high surface runoff. Wafap gravelly loam is not a hydric soil. Available water holding capacity is low (about 2.7 inches). Hamslough clay occurs in channels on low stream terraces. Hamslough clay formed from clayey alluvium over clayey and gravelly alluvium over cemented, cobbly and gravelly alluvium derived from volcanic rocks. These soils are poorly drained with high surface runoff. The available water holding capacity is very low (about 2.3 inches). Hamslough clay is a hydric soil.

Clearhayes-Hamslough Complex, 0 to 2 percent slopes. The soils in the Clearhayes-Hamslough complex are roughly 70 percent Clearhayes sandy clay loam, 15 percent Hamslough clay, and 15 percent minor components. Clearhayes sandy clay loam occurs on bars on low strath terraces, and formed from fine-loamy alluvium derived from volcanic rocks over gravelly alluvium derived from andesite. The soils are somewhat poorly drained with high surface runoff. The available water holding capacity is low (about 3.0 inches). Clearhayes sandy clay is not a hydric soil. Hamslough clay occurs in channels on low strath terraces, and derived from clayey alluvium over gravelly alluvium derived from volcanic rocks. These soils are poorly drained with high surface runoff. The available water holding capacity is very low (about 2.3 inches). Hamslough clay is a hydric soil.

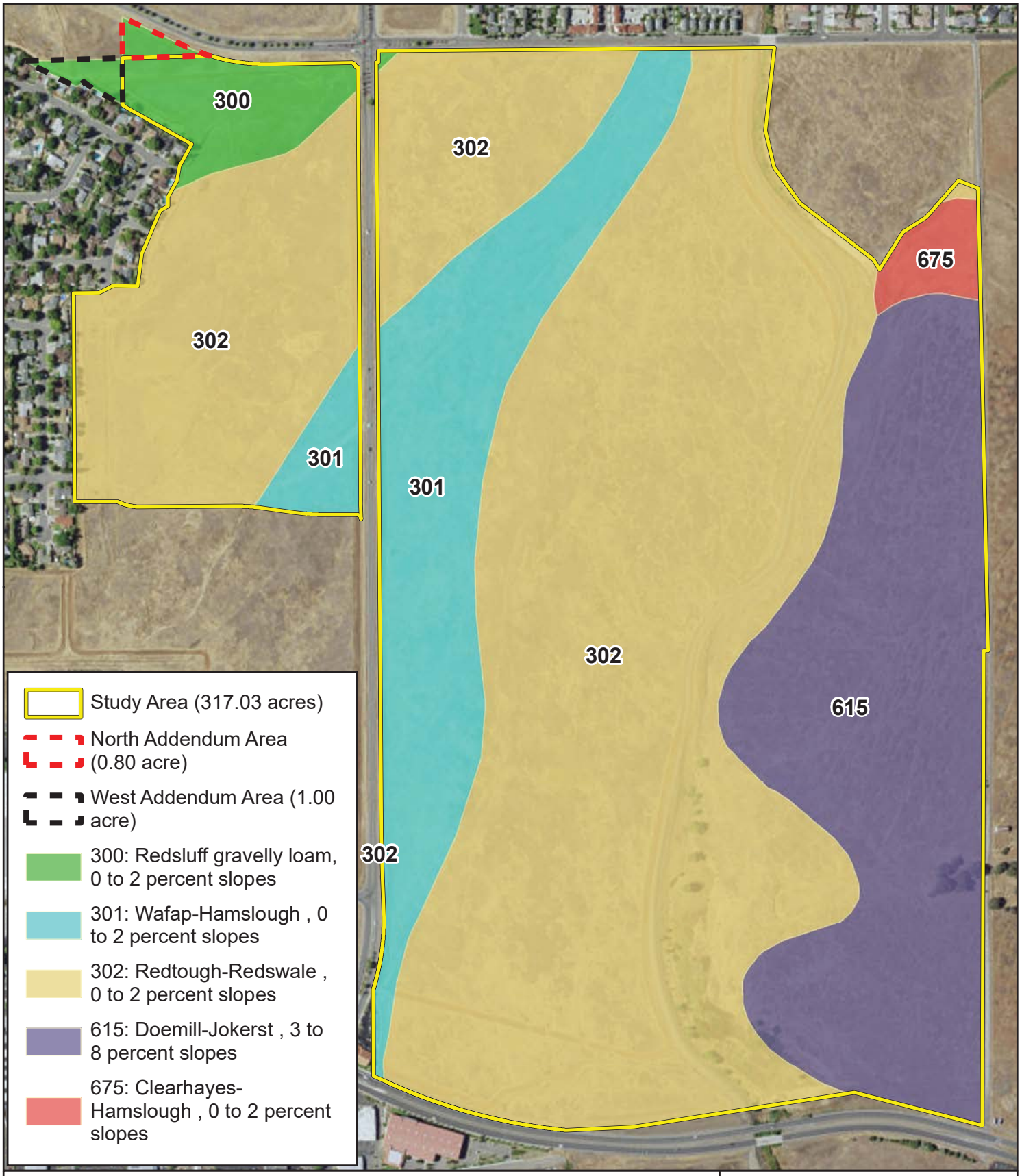

Figure 2. Study Area Soils Map

N
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Chico
Butte County, California

0 250 500 1,000 Feet

wra
ENVIRONMENTAL CONSULTANTS

Map Prepared Date: 2/6/2017
Map Prepared By: mrochelle
Base Source: NAIP 2014
Data Source(s): WRA, NRCS SSURGO Soils

Path: L:\Acad 2000 Files\26000\26061\GIS\ArcMap\Soils.mxd

4.2 Biological Communities

Biological communities found in the Study Area include developed land, annual grassland, seasonal wetlands (depressional and riverine), perennial marsh, vernal pools, ephemeral, intermittent, and perennial drainages, ditch/canal, excavated pits, riparian oak woodland, and mixed riparian woodland. These biological communities are summarized in Table 2, shown on Figure 3 (Biological Communities) and Figure 4 (Aquatic Resources), and described in more detail below. Non-sensitive biological communities in the Study Area include developed land and annual grassland. Eleven sensitive biological communities are found in the Study Area: seasonal wetland (depressional and riverine), vernal pool, perennial marsh, ephemeral, intermittent, and perennial drainage, ditch/canal, excavated pits, riparian oak woodland, and mixed riparian woodland.

Table 2. Summary of Biological Communities in the Study Area

Community Type	Study Area + West Addendum[1] (acres)	Study Area + North Addendum[2] (acres)	Study Area[3] (acres)
Non-Sensitive			
Developed land	26.00	25.63	26.00
Annual grassland	268.38	268.71	269.18
Sensitive			
Wetlands and Waters	**20.19**	**20.03**	**20.19**
Depressional seasonal wetland	4.02	4.01	4.02
Perennial marsh	1.24	1.24	1.24
Vernal pool	3.83	3.68	3.83
Riverine seasonal wetland (vernal swale)	4.74	4.74	4.74
Ephemeral drainage	0.30	0.30	0.30
Intermittent drainage	0.48	0.48	0.48
Perennial drainage	5.12	5.12	5.12
Ditch/Canal	0.39	0.39	0.39
Excavated pit	0.07	0.07	0.07
Riparian	**1.66**	**1.66**	**1.66**
Riparian oak woodland	0.56	0.56	0.56
Mixed riparian woodland	1.10	1.10	1.10
Study Area	**316.23**	**316.03**	**317.03**

Notes:
[1] The West Addendum Area is 1.00 acre and contains 0.37 acres of developed land, 0.47 acres of annual grassland, and 0.16 acres of wetlands.
[2] The North Addendum Area is 0.80 acre and is entirely annual grassland.
[3] The Study Area includes the 315-acre project site with both addenda areas.

West Addendum Area:
- 0.37 ac. Developed
- 0.47 ac. Annual Grassland
- 0.16 ac. Wetland

North Addendum Area:
- 0.80 ac. Annual Grassland

Study Area - 317.03 ac.

North Addendum Area - 0.80 ac.

West Addendum Area - 1.00 ac.

Developed - 26.00 ac.

Mixed Riparian Woodland - 1.10 ac.

Annual Grassland - 269.14 ac.

Riparian Oak Woodland - 0.56 ac.

Wetlands and Waters - 20.19 ac.

Figure 3. Biological Communities in the Study Area

N
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S

0 250 500 1,000
Feet

ENVIRONMENTAL CONSULTANTS

Chico
Butte County, California

Map Prepared Date: 7/26/2017
Map Prepared By: mrochelle
Base Source: Esri Streaming - NAIP 2014
Data Source(s): WRA, Rolls Anderson & Rolls

Path: L:\Acad 2000 Files\26000\26061\GIS\ArcMap\CEQA\BioComm.mxd

Study Area - 317.03 ac.

North Addendum Area - 0.80 ac.

West Addendum Area - 1.00 ac.

Depressional Wetlands

Seasonal Wetland - 4.02 ac.

Perennial Marsh - 1.24 ac.

Vernal Pool - 3.83 ac.

Riverine Wetlands

Seasonal Wetland - 4.74 ac.

Other Aquatic Resources

Ephemeral Drainage - 0.30 ac.

Intermittent Drainage - 0.48 ac.

Perennial Drainage - 5.12 ac.

Ditch\Canal - 0.39 ac.

Excavated Pit - 0.07 ac.

Figure 4. Aquatic Resources in the Study Area

N
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wra
ENVIRONMENTAL CONSULTANTS

Chico
Butte County, California

0 250 500 1,000
Feet

Map Prepared Date: 7/26/2017
Map Prepared By: mrochelle
Base Source: Esri Streaming - NAIP 2014
Data Source(s): WRA, Foothill Associates

Path: L:\Acad 2000 Files\26000\26061\GIS\ArcMap\CEQA\Aquatic Features.mxd

4.2.1 Non-Sensitive Biological Communities

Developed land

Developed land occupies approximately 26.00 acres in the Study Area, including 25.63 in the project site and 0.37 acre within the west addendum area. Developed land within the Study Area includes dirt and gravel access roads as well as a raised gravel berm and paved bike path. These areas are largely un-vegetated, although the dirt roads supported sparse cover of disturbance tolerant plant species such as purple sand spurry (*Spergularia rubra*), narrowleaf cottonrose (*Logfia gallica*), windmill pink (*Petrorhagia dubia*), shining pepper grass (*Lepidium nitidum*), coastal heron's bill (*Erodium cicutarium*), vinegarweed (*Trichostema lanceolatum*), and turkey-mullein (*Croton setiger*).

Developed areas typically provide minimal habitat for wildlife, particularly those that consist primarily of roads or similarly compacted substrates with little to no vegetation. Species that utilize these areas are generally common and adapted to disturbance. Wildlife species observed in developed areas of the Study Area include western fence lizard (*Sceloporus occidentalis*) and killdeer (*Charadrius vociferous*); the latter is one of very few bird species that may nest in these portions of the Study Area.

Annual grassland

Annual grassland comprises the vast majority of the Study Area (approximately 269.18 acres) with 267.87 acres located in the project site, 0.80 acre within the north addendum area, and 0.47 acre within the west addendum area. Annual grasslands are known throughout California on all aspects and topographic positions and underlain by a variety of substrates. Annual grasslands are typically dominated by non-native and native annual grasses and forbs along with scattered native wildflowers. This community contains elements non-native grassland (element code 42200) as described by Holland (1986) and wild oats grassland (*Avena* spp. Semi-Natural Herbaceous Alliance as described by *A Manual of California Vegetation* (CNPS 2016a).

Plant species observed in annual grasslands in the Study Area include medusa head grass (*Elymus caput-medusae*), Italian ryegrass (*Festuca perennis*), oats (*Avena barbata* and *A. fatua*), ripgut brome (*Bromus diandrus*), soft chess (*B. hordeaceus*), foxtail barley (*Hordeum murinum*), yellow starthistle (*Centaurea solstitialis*), blow wives (*Achyrachaena mollis*), harvest brodiaea (*Brodiaea coronaria*), yellow mariposa (*Calochortus luteus*), soaproot (*Chlorogalum angustifolium*), purple clarkia (C*larkia purpurea* ssp. *quadrivulnera*), field bindweed (*Convolvulus arvensis*), frying pans (*Eschscholzia lobbii*), wild geranium (*Geranium dissectum*), rose clover (*Trifolium hirtum*), narrow leaved onion (*Allium amplectens*), and hairy vetch (*Vicia villosa*), among many other grasses and forbs.

Grasslands in the Study Area occur on both low floodplain terraces adjacent to vernal swales and on high terraces characterized by Mima mound topography. Mima mounds are natural mounds forming a conspicuous hummock pattern across the landscape. Mima mounds are typically found in areas with shallow soils and are commonly associated with vernal pools in California (Keeler-Wolf *et al*. 1998). Soils are very thin throughout annual grasslands within the Study Area (approximately 2 to 10 inches) and are underlain by cemented, cobbly and gravelly alluvium derived from volcanic rocks.

Within the Study Area, mounds are typically dominated by a dense cover of non-native annual grasses while depressions between the mounds are more sparsely vegetated and support more native plant species, especially native forbs. As discussed in Section 4.3.1, most of the

occurrences of the State and Federal listed Butte County meadowfoam (*Limnanthes floccosa* ssp. *californica*) were found within areas mapped as annual grassland and most plants were found either in microdepresssions on the high terraces, or along the margins of ephemeral swales.

Although annual grasslands are typically dominated by non-native herbaceous species, they often provide important habitat for native wildlife. Small mammals and herpetofauna (reptiles and amphibians) utilize subterranean refuge (burrows) and other types of cover within grasslands, and many native bird species nest and forage there. Wildlife species observed within annual grasslands in the Study Area include black-tailed jackrabbit (*Lepus californicus*) and western meadowlark (*Sturnella neglecta*), as well the special-status white-tailed kite (*Elanus leucurus*), which uses grasslands for foraging. Common wildlife species that may also occur on-site in this community include western harvest mouse (*Reithrodontomys megalotis*), California vole (*Microtus californicus*), and gopher snake (*Pituophis catenifer*). Special-status wildlife species that may occur within this community include grasshopper sparrow (*Ammodramus savannarum*) and western spadefoot (*Spea hammondii*); the latter is potentially present in underground refugia.

4.2.2 Sensitive Biological Communities

Perennial marsh comprises approximately 1.24 acres of the Study Area within the southeastern portion of the stream corridor (Foothill 2017). Perennial marshes can occur as the result of natural and/or artificial water flows associated with agricultural or residential water uses. Typically, depressional perennial marshes remain inundated or saturated throughout the year. The persistence of inundation/saturation throughout the year permits the growth of warm-season wetland grasses and perennial herbaceous plant species.

Within the Great Central Valley, depressional perennial marshes typically occur in association with the lowland terminus of local riverine watersheds or as the result of artificial excavation activities in low-lying areas exhibiting historic hydric soils conditions, often resulting in artificially created impoundments, such as ponds or reservoirs. The perennial marsh in the Study Area contains elements of coastal and valley freshwater marsh as described by Holland (1986) and cattail marsh (*Typha* spp. Herbaceous Alliance) as described by as described by *A Manual of California Vegetation* (CNPS 2016a). Perennial marshes are known throughout California on all aspects and topographic positions, underlain by a variety of substrates, but are most frequently associated with estuarine and/or riverine systems and contain substantial muck within the soils. Frequently, perennial marshes are situated in-channel, below the ordinary high water mark (OHWM), or on the fringe of the stream.

In the Study Area, the Corps verified delineation identifies a perennial marsh is located adjacent to the Butte Creek Diversion Channel in the southeastern portion of the site, near the mixed riparian woodland and seasonal wetlands. WRA identified perennial marsh habitat within the northern portion of the Butte Creek Diversion Channel. Due to perennial hydrology, marsh habitat is likely interspersed throughout the Butte Creek Diversion Channel. Dominant vegetation within the depressional perennial marsh includes: curly dock (*Rumex crispus*), Himalayan blackberry (*Rubus ameniacus*), narrow leaf cattail (*Typha angustifolia*), common rush (*Juncus effuses*), nut-sedge (*Cyperus sp*.), and spikerush (*Eleocharis macrostachya*), and other freshwater emergent vegetation. All areas mapped as perennial marsh support a prevalence or dominance of hydrophytic vegetation, hydric soils, and wetland hydrology sufficient to meet the requirements as jurisdictional features under Section 404 of the CWA. These features are potentially subject to Corps and RWQCB jurisdiction as Waters of the U.S. and State. Perennial marsh is also potentially subject to Section 1602 of the California Fish and Game Code (CFGC).

The aquatic portions of perennial marsh often host a variety of invertebrate species as described for vernal pools below. Dependent upon the setting, marshes may also support fishes and breeding by common amphibians. Additionally, emergent wetland vegetation within marshes is typically used for foraging, shelter, and nesting by a variety of birds.

Vernal Pools

Vernal pools comprise approximately 3.68 acres of the project site and 0.15 acre of the west addendum area, for a total of 3.83 acres within the Study Area. Vernal pools are shallow, seasonally inundated depressional wetlands that form in soils with a subsurface layer that restricts the downward flow of water. The vernal pools within the Study Area are northern hardpan vernal pools (element code: 44110) as described by Holland (1986) and Fremont's goldfields – Downingia vernal pools (*Lasthenia fremontii – Downingia [bicornuta]* Herbaceous Alliance) as described by *A Manual of California Vegetation* (CNPS 2016a). Northern hardpan vernal pools occur within depressions on cemented soils such as the Corning, Red Bluff, Redding, and San Joaquin soil series within and around the Great Central Valley. Vernal pool soils in the Study Area are typically very thin (approximately 1 to 3 inches) and are underlain by a hardpan of cemented, cobbly and gravelly alluvium derived from volcanic rocks. These vernal pools are characterized by a low, amphibious, herbaceous community dominated by annual herbs and grasses. Germination and growth begin with winter rains, often continuing when inundated. Rising spring temperatures evaporate the pools, leaving concentric bands of vegetation that colorfully encircle the drying pool (Holland 1986). This community is found primarily on older geomorphic surfaces and on volcanic substrates (CNPS 2016a). Vernal pool features within the Study Area occur in topographic depressions that vary in size, depth, and hydroperiod.

Plant species observed in vernal pools onsite include bristled downingia (*Downingia bicornuta* var. *bicornuta*), horned downingia (*D. ornatissima* var. *ornatissima*), spikerush, coyote thistle (*Eryngium vaseyi*), vernal pool goldfields (*Lasthenia fremontii*), white headed navarretia (*Navarretia leucocephala* ssp. *leucocephala*), common vernal pool allocarya (*Plagiobothrys stipitatus* var. *micranthus*), woolly marbles (*Psilocarphus oregonus*), annual beard grass (*Polypogon monspeliensis*), and barley (*Hordeum marinum* ssp. *gussoneanum*). Hydrology sources include direct precipitation and sheet flow. All areas mapped as vernal pools contain a prevalence or dominance of hydrophytic vegetation, hydric soils, and wetland hydrology sufficient to meet the requirements as jurisdictional features under Section 404 of the Clean Water Act (CWA).

Vernal pools typically provide habitat for a variety of invertebrate species, including species that are wholly aquatic and others that are aquatic primarily during larval stages. They are used for breeding and foraging by common amphibian species such as Sierran chorus frog (*Pseudacris sierra*). Additionally, inundated vernal pools often provide important foraging and resting habitat for waterfowl and shorebirds. No wildlife species were observed within vernal pools on the property during the site visits, although the pools were only visually examined and no protocol-level surveys were completed. Special-status wildlife with the potential to occur in the site's vernal pools include western spadefoot (for aquatic breeding) and vernal pool branchiopods (fairy and tadpole shrimps), some of which are listed under the Endangered Species Act.

Seasonal Wetlands within the Study Area

Depressional Seasonal Wetlands

Depressional seasonal wetlands comprise approximately 4.01 acres of the project site and 0.01 acre of the west addendum area for a total of 4.02 acres within the Study Area. Depressional

seasonal wetlands exhibit a hydrologic regime dominated by saturation, rather than inundation. Depressional seasonal wetlands within the site occur as depressions within the topography with a hydrologic regime dominated by saturation and capable of supporting hydrophytic plant species and hydric soils. Dominant vegetation within the depressional seasonal wetlands includes: spikerush, Italian ryegrass, rattail sixweeks grass (*Festuca myuros*), rabbitfoot grass (*Polypogon monspeliensis*), and Mediterranean barley.

Riverine Seasonal Wetlands

Riverine seasonal wetlands or vernal swales comprise 24,247 linear feet or 4.74 acres of the Study Area. Riverine seasonal wetlands are defined by a hydrologic regime dominated by unidirectional flow of water. Riverine seasonal wetlands typically occur in topographic folds or swales and represent natural drainages that convey sufficient water to support wetland vegetation. Riverine seasonal wetlands typically convey water during and shortly after storm events.

Riverine seasonal wetlands occur in the Study Area as dendritic networks of generally narrow, roughly linear depressions that convey channelized flow during the wet season. These riverine seasonal wetlands are an important component of the larger vernal pool complex and act as swales, which often provide hydrologic connections between multiple vernal pools. These wetlands are highly variable in plant composition, depending on the frequency and duration of inundation and/or saturation, as well as average flow velocities. For example, larger swales with higher flow velocities typically have large areas of bare bedrock and very sparse vegetative cover (~5%), while smaller swales typically have deeper soils (still less than 5 inches in depth) and higher vegetative cover.

Compared to vernal pools, vernal swales are typically more sparsely vegetated due to the presence of channelized flow and are dominated by a mix of generalist hydrophytic species, rather than the suite of vernal pool endemics that typically dominate vernal pools in the Study Area. These features are typically sparsely vegetated with hydrophytic grasses and forbs such as barley, Italian ryegrass, coyote thistle, and vernal pool goldfields. Vegetation composition is likely seasonally variable with upland species encroaching more into swale features during the dry season. Dominant vegetation within the riverine seasonal wetlands includes Italian ryegrass, spikerush, and Mediterranean barley.

Soils are very thin (approximately 0 to 5 inches) and are underlain by cemented, cobbly and gravelly alluvium derived from volcanic rocks. Hydrology sources include direct precipitation and runoff from the surrounding watershed. All areas mapped as riverine seasonal wetlands support a prevalence or dominance of hydrophytic vegetation, hydric soils, and wetland hydrology sufficient to meet the requirements as jurisdictional features under Section 404 of the Clean Water Act.

In terms of providing habitat for wildlife, riverine seasonal wetlands are broadly similar to vernal pools, although periods of average continuous inundation are often shorter, and thus both species diversity and overall utilization may be lower. Swales may also provide hydrologic connectivity between vernal pools and other seasonal water features, facilitating the dispersal and movement of aquatic organisms. Within the Study Area, riverine seasonal wetlands that are inundated for relatively long periods and/or hold larger water volumes may be occupied by western spadefoot and vernal pool branchiopods.

Other Aquatic Resources within the Study Area

Ephemeral Drainage

Approximately 1,164 linear feet of ephemeral drainage comprises approximately 0.30 acres of the Study Area. Ephemeral drainages are features that do not meet the three-parameter criteria for vegetation, hydrology and soils, but do convey water and exhibit an "ordinary high water mark." Ephemeral drainages are primarily fed by stormwater runoff. These features convey flows during and immediately after storm events but may stop flowing or begin to dry if the interval between storm events is long enough. Typically, these features exhibit a defined bed and bank and often show signs of scouring as a result of rapid flow events. Within ephemeral drainages, topographic depressions in the bed of the feature may exhibit vegetation patterns commonly associated with vernal pools or depressional seasonal wetlands. Often these features are lightly vegetated due to seasonal rapid-flow events resulting in a scoured channel, bed, and bank. Dominant vegetation identified by Foothill within the bed and along the banks of the ephemeral drainages include upland species including common vetch, filaree, slender oat, wild oat, medusa head, and soft chess.

Areas mapped as ephemeral drainage include an un-named tributary to the Butte Creek Diversion Channel in the northeastern portion of the Study Area. Ephemeral drainages in the Study Area flow over partially exposed bedrock with cobbles. Plant species observed within the ephemeral drainage include gumweed (*Grindelia camporum*), coyote thistle, and spikerush, Mediterranean barley, and Italian ryegrass, among other species. During the site visit by WRA, surface water was observed in isolated pools within the Butte Creek Diversion Channel. Areas mapped as ephemeral drainages are jurisdictional under Section 401 and 404 of the Clean Water Act and Section 1602 of the CFGC.

When they are inundated, ephemeral drainages typically host invertebrate populations and may also be used by fishes (if connected to perennial waters) and breeding amphibians. Wildlife species observed in ephemeral drainages in the Study Area include bullfrog and western toad. In the Study Area, ephemeral drainages are unlikely to support special-status wildlife species.

Intermittent Drainage

Approximately 1,776 linear feet of intermittent drainage comprises approximately 0.48 acres of the Study Area. Intermittent drainages, as in ephemeral drainages, are features that do not meet the three-parameter criteria for vegetation, hydrology, and soils but do convey water and exhibit an "ordinary high water mark." Water flows within intermittent drainages are fed primarily by a seasonally perched groundwater table and supplemented by precipitation and stormwater runoff. After the initial onset of rains, these features have persistent flows throughout and past the end of the rainy season. Typically, these features exhibit a defined bed and bank and show signs of scouring as a result of rapid flow events. The bed of intermittent drainages consists of cobble often interrupted with bedrock. Water was present during the field delineations conducted by Foothill. Dominant vegetation observed along the banks of the intermittent drainages includes blue oak (*Quercus douglasii*), valley oak (*Quercus lobata*), American wild mint (*Mentha arvensis*), common rush, Italian ryegrass, wild oat, medusa head, and soft chess.

Areas mapped as intermittent drainage include an un-named tributary to the Butte Creek Diversion Channel, which runs generally in an east-west direction in the southeast portion of the Study Area. Plant species observed by WRA within the intermittent drainage include gumweed, coyote thistle, and spikerush, Mediterranean barley, and Italian ryegrass, among other species. A tributary in the southeast portion of the Study Area flows through a riparian oak woodland

community (described below). The tributary was dry at the time of the site visit by WRA and encroached by Italian ryegrass. Areas mapped as intermittent drainage are jurisdictional under Section 401 and 404 of the Clean Water Act and Section 1602 of the CFGC.

When they are inundated, intermittent drainages typically host invertebrate populations and may also be used by fishes (if connected to perennial waters) and breeding amphibians. Wildlife species observed in intermittent drainages in the Study Area include bullfrog and western toad. In the project site, intermittent drainages are unlikely to support special-status wildlife species.

Perennial Drainage

Approximately 6,212 linear feet of perennial drainage comprises approximately 5.12 acres of the Study Area. Perennial drainages are features that may not meet the three-parameter criteria for vegetation, hydrology, and soils, but do convey water and exhibit an "ordinary high water mark." Perennial drainages generally convey unidirectional water flows throughout the entire year. Perennial drainages typically consists of a channel, bed, and bank and are devoid of vegetation due to the scouring effect of flowing water. Perennial drainages are often bordered by wetland vegetation communities of various composition and cover depending on flow rates, duration of flows, and soil types. Water was observed flowing during the Foothill wetland delineation. Dominant vegetation observed along the banks of the perennial drainage includes Italian ryegrass, arroyo willow (*Salix lasiolepis*), narrow leaf cattail, rabbitfoot grass, soft chess, and ripgut brome. Areas mapped as perennial drainage include the Butte Creek Diversion Channel, which runs generally in a north-south direction through the eastern portion of the site, and an un-named tributary, which runs generally in an east-west direction in the northeast portion of the Study Area. Perennial drainages in the Study Area flow over partially exposed bedrock with cobbles. Plant species observed within the Butte Creek Diversion Channel include gumweed, coyote thistle, and spikerush, Mediterranean barley, and Italian ryegrass, among other species. Scattered trees and shrubs adjacent to the Butte Creek Diversion Channel are described in the mixed riparian woodland community below. During the site visit by WRA, surface water was observed in isolated pools within the Butte Creek Diversion Channel. Areas mapped as perennial drainage are jurisdictional under Section 401 and 404 of the Clean Water Act and Section 1602 of the CFGC.

When they are inundated, perennial drainages typically host invertebrate populations and may also be used by fishes (if connected to perennial waters) and breeding amphibians. Wildlife species observed in perennial drainages in the Study Area include bullfrog and western toad. In the Study Area, perennial drainages are unlikely to support special-status wildlife species.

Ditch/Canal

Approximately 2,332 linear feet of ditch/canal comprising approximately 0.39 acre are located within the Study Area. Ditches/canals are man-made channels that have been excavated for the purpose of conveying water. At the time of the WRA May site visits, ditches/canals were dry and supported sparse to dense cover of annual grasses such as barley and Italian ryegrass as well as some vernal pool species such as white headed navarretia and coyote thistle. Soils are thin and rocky with cobbles. The ditches/canals contained water at the time of the field delineations by Foothill. Dominant vegetation along the banks of the ditches/canals are comprised of upland vegetation including soft chess, ripgut brome, and medusa head. Ditch/canal features in the project site are potentially subject to Corps and RWQCB jurisdiction as Waters of the U.S. and State.

When they are inundated, ditches/canals may host invertebrate populations and be used by amphibians such as Sierran chorus frogs for breeding. Emergent wetland and other vegetation within ditches may provide foraging habitat and shelter for a variety of common wildlife species and nesting substrates for birds. No wildlife species were observed in the Study Area's ditches/canals during the WRA May site visits, and special-status wildlife are unlikely to occur there.

Excavated Pit

An excavated pit comprises approximately 0.07 acres of the Study Area. The pits were excavated to obtain information on soils within the Study Area. The excavated pits contained water at the time of the Foothill wetland delineations and lacked vegetation.

Riparian Oak Woodland

Riparian oak woodland comprises approximately 0.56 acre of the Study Area. Riparian oak woodland in the Study Area contains elements of valley oak woodland (element code: 71130) as described by Holland (1986) and valley oak woodland (*Quercus lobata* Woodland Alliance) as described by *A Manual of California Vegetation* (CNPS 2016a). Tree canopy in this community is intermittent and dominated by valley oak. Within the Study Area, this community is associated with an un-named tributary to the Butte Creek Diversion Channel, which runs in an east-west direction in the southeast region of the property. The tree canopy is dominated by valley oak with blue oak and interior live oak (*Q. wislizeni* var. *wislizeni*). Shrubs are largely absent and the herbaceous layer is grassy and dominated by oats and Italian ryegrass. Riparian oak woodland is considered a sensitive community under Section 1602 of the CFGC and may be regulated by the RWQCB and CDFW.

Riparian oak woodland generally features structurally-complex trees in close proximity to water or otherwise mesic soils, and thus provides high-quality habitat for a wide variety of wildlife including terrestrial invertebrates, mammals, many types of birds, and herpetofauna. Wildlife species observed in riparian oak woodland in the Study Area include acorn woodpecker (*Melanerpes formicivorus*), mourning dove (*Zenaida macroura*), northern mockingbird (*Mimus polyglottos*), and western scrub jay (*Aphelocoma californica*), all of which may nest there. Special-status birds that may also utilize riparian oak woodland in the Study Area for foraging and nesting include oak titmouse (*Baeolophus inornatus*), white-tailed kite, loggerhead shrike (*Lanius ludovicianus*), yellow-billed magpie (*Pica nuttalli*), and Nuttall's woodpecker (*Picoides nuttallii*); special-status mammals that may occupy this habitat include pallid bat (*Antrozous pallidus*).

Mixed Riparian Woodland

Mixed riparian woodland comprises approximately 1.10 acres of the Study Area. This community is associated with the southern portion of the Butte Creek Diversion Channel. Scattered trees and shrubs include white alder (*Alnus rhombifolia*), California coffeeberry (*Frangula californica*), ash (*Fraxinus dipetala* and *F. latifolia*), cottonwood (*Populus fremontii* ssp. *fremontii*), Himalayan blackberry, blue elderberry (*Sambucus nigra* ssp. *caerulea*), poison oak (*Toxicodendron diversilobum*), and California wild grape (*Vitis californica*). The herbaceous layer is grassy and dominated by oats and Italian ryegrass. Mixed riparian woodland is considered a sensitive community under Section 1602 of the CFGC and may be regulated by the RWQCB and CDFW.

Mixed riparian woodland generally provides high-quality habitat for wildlife as described for riparian oak woodland above. However, vegetative structure is more diverse within this community, so both species diversity and utilization may be higher. Wildlife species observed in

mixed riparian woodland in the Study Area include red-winged blackbird (*Agelaius phoeniceus*) and house finch (*Haemorhous mexicanus*). The special-status birds named above under oak riparian woodland have the potential to occur within the Study Area's mixed riparian woodland, as does the Federal listed valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*).

4.3 Special-Status Species

4.3.1 Plants

Based upon a review of the resources and databases given in Section 3.2.1, 40 special-status plant species have been documented in the vicinity of the Study Area. Species that have been documented within a 5-mile radius of the Study Area and included in the CNDDB (CDFW 2016) are illustrated in Figure 5. Twelve species were determined to have a moderate or high potential to occur in the Study Area or have been documented in the Study Area. The remaining 28 special-status plant species are unlikely or do not have the potential to occur within the Study Area due to one or more of the following reasons:

- Hydrologic conditions (e.g. marsh habitat, perennial streams) necessary to support the special-status plant(s) are not present in the Study Area;
- Edaphic (soil) conditions (e.g. serpentine, alkaline soils, clay soils) necessary to support the special-status plant(s) are not present in the Study Area;
- Associated vegetation communities (e.g. chaparral, coniferous forest) necessary to support the special-status plant(s) are not present in the Study Area;
- The Study Area is outside of the known elevation and/or localized distribution of the special-status plant(s).

A table of all 40 rare plant species, including their habitat requirements, blooming periods, elevation ranges, and status, is provided in Appendix B. Special-status plant species that are present or are most likely (high or moderate potential) to occur in the Study Area are discussed in the Rare Plant Survey Report prepared by WRA (2016a) and are listed below.

- Depauperate milk-vetch (*Astragalus pauperculus*). Rank 4.3.
- Hoover's spurge (*Euphorbia hooveri*). Federal-threatened, Rank 1B.2.
- Woolly rose-mallow (*Hibiscus lasiocarpos* var. *occidentalis*). Rank 1B.2.
- Red Bluff dwarf rush (*Juncus leiospermus* var*. leiospermus*). Rank 1B.1.
- Woolly meadowfoam (*Limnanthes floccosa* ssp. *floccosa*). Rank 4.2.
- Shield-bracted monkeyflower (*Mimulus glaucescens*. Rank 4.3.
- Tehama navarretia (*Navarretia heterandra*). Rank 4.3.
- Hairy Orcutt grass (Orcuttia pilosa). Federal Endangered, State Endangered, Rank 1B.1.
- Ahart's paronychia (*Paronychia ahartii*). Rank 1B.1.
- Bidwell's knotweed (*Polygonum bidwelliae*). Rank 4.3.
- California beaked-rush (*Rhynchospora californica*). Rank 1B.1.
- Brownish beaked-rush (*Rhynchospora capitellata*). Rank 2B.2.

Two rare plant species were observed in the Study Area: Butte County meadowfoam and Shield-bracted monkeyflower (Figure 6). These species are discussed in detail below.

Butte County meadowfoam (*Limnanthes floccosa* ssp. *californica*). Federal Endangered, State Endangered, Rank 1B.1. Present. Butte County meadowfoam is an annual herb in the Limnanthaceae family that blooms from March to May. This species is found in vernal pools and

vernally mesic areas in valley and foothill grassland communities, at elevations ranging from approximately 150 to 3,050 feet (CNPS 2016b). Observed associated species include peppergrass, vernal pool goldfields, big heron bill (*Erodium botrys*), common stickyseed (*Blennosperma nanum*), stalked popcorn flower, Fremont's tidy tips (*Layia fremontii*), butter 'n' eggs (*Triphysaria eriantha*), white headed navarretia, soft blow wives (*Achyrachaena mollis*), common meadowfoam (*Limnanthes douglasii*), typical white meadowfoam (*L. alba* ssp. *alba*), woolly meadowfoam (*L. floccosa* ssp. *floccosa*), Sacramento mint, Great valley eryngo, California goldfields (*Lasthenia californica* ssp. *californica*), pacific foxtail (*Alopecurus saccatus*), stalked popcorn flower, Italian ryegrass, and barley.

This species is known from six USGS 7.5-minute quadrangles in Butte county CNPS (2016b). This species was documented in vernally mesic areas in the Study Area during the April 2016 survey and has previously been documented in the Study Area (CDFW 2016). Approximately 16,542 individuals of Butte County meadowfoam were observed in annual grasslands and along the fringes of a few vernal pool and swale features in the Study Area, over the course of the various survey. Figure 6 displays occurrences of Butte County meadowfoam documented during the all protocol-level rare plant surveys conducted by WRA and Foothill. Observed species associated with Butte County meadowfoam in the Study Area include narrow leaved onion, barley, Italian ryegrass, narrow boisduvalia (*Epilobium torreyi*), low Brodiaea (*Brodiaea minor*), California plantain (*Plantago erecta*), Sierra mock stonecrop (*Sedella pumila*), Padre's shooting star (*Primula clevelandii*), vernal pool goldfields, and rose clover.

Shield-bracted monkeyflower (*Mimulus glaucescens*). Rank 4.3. Present. This species was observed during surveys conducted by Foothill Associates in March, April and July 2016 (Foothill 2016). Shield-bracted monkeyflower is an annual herb found on serpentine seeps, and sometimes on streambanks, in chaparral, cismontane woodland, lower montane coniferous forest, and valley and foothill grassland from 197 to 4,068 feet (CNPS 2016b). The blooming period for this species is from February through September (CNPS 2016b). There are no CNDDB occurrences documented for this species within a five-mile radius of the Site (Figure 5). This species was observed along the banks of the perennial drainage; the non-native annual grassland, riverine seasonal wetlands, and drainages (perennial, intermittent, and ephemeral) provide habitat for this species on Site (Foothill 2016).

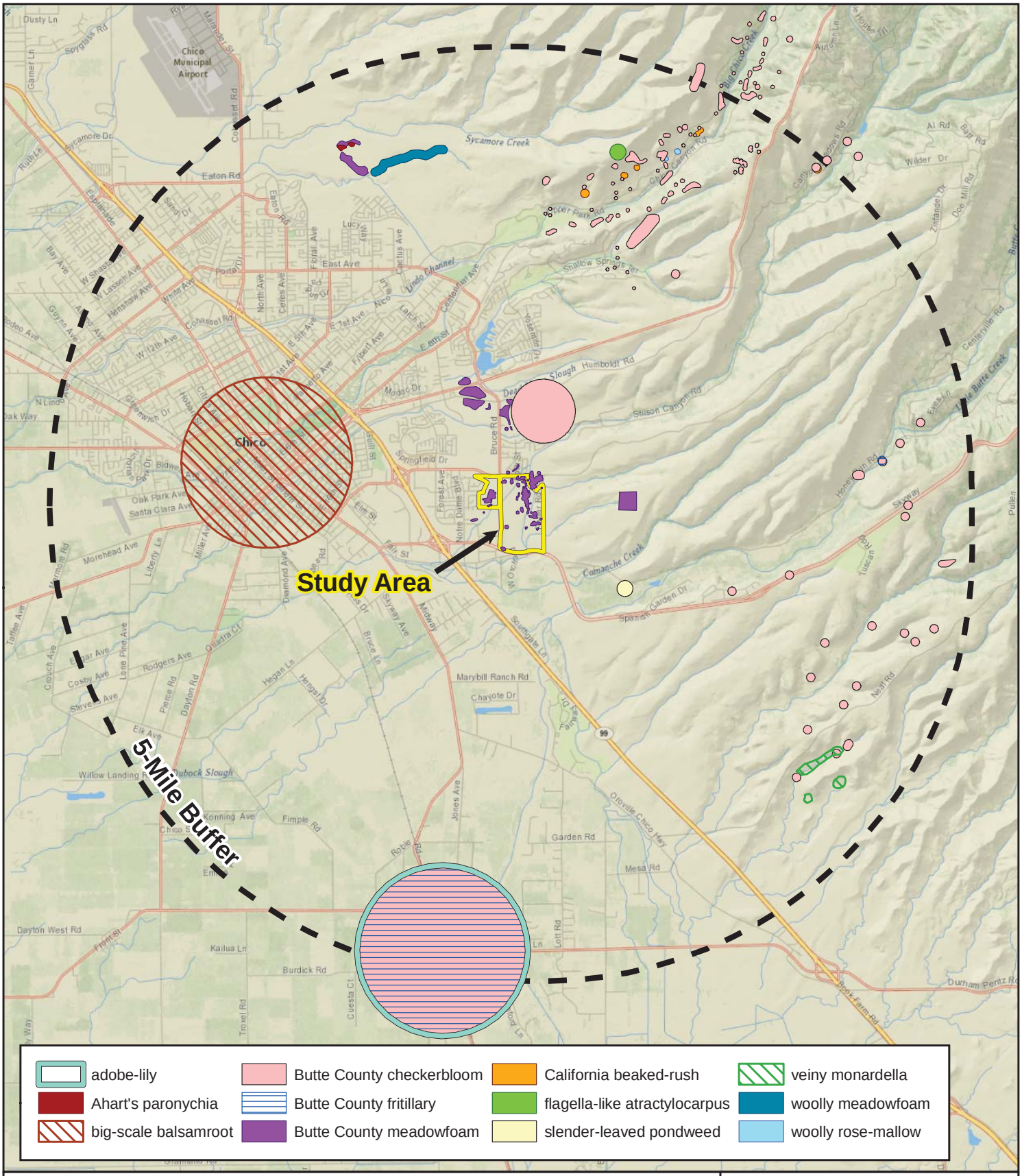

Figure 5. Special Status Plant Species within 5 Miles of the Study Area

N
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wra
ENVIRONMENTAL CONSULTANTS

Chico
Butte County, California

0 0.5 1 2 Miles

Map Prepared Date: 5/13/2016
Map Prepared By: MRochelle
Base Source: Esri, National Geographic
Data Source(s): WRA, CNDDB (April 2016)

Path: L:\Acad 2000 Files\26000\26061\GIS\ArcMap\CNDDB_Plants.mxd

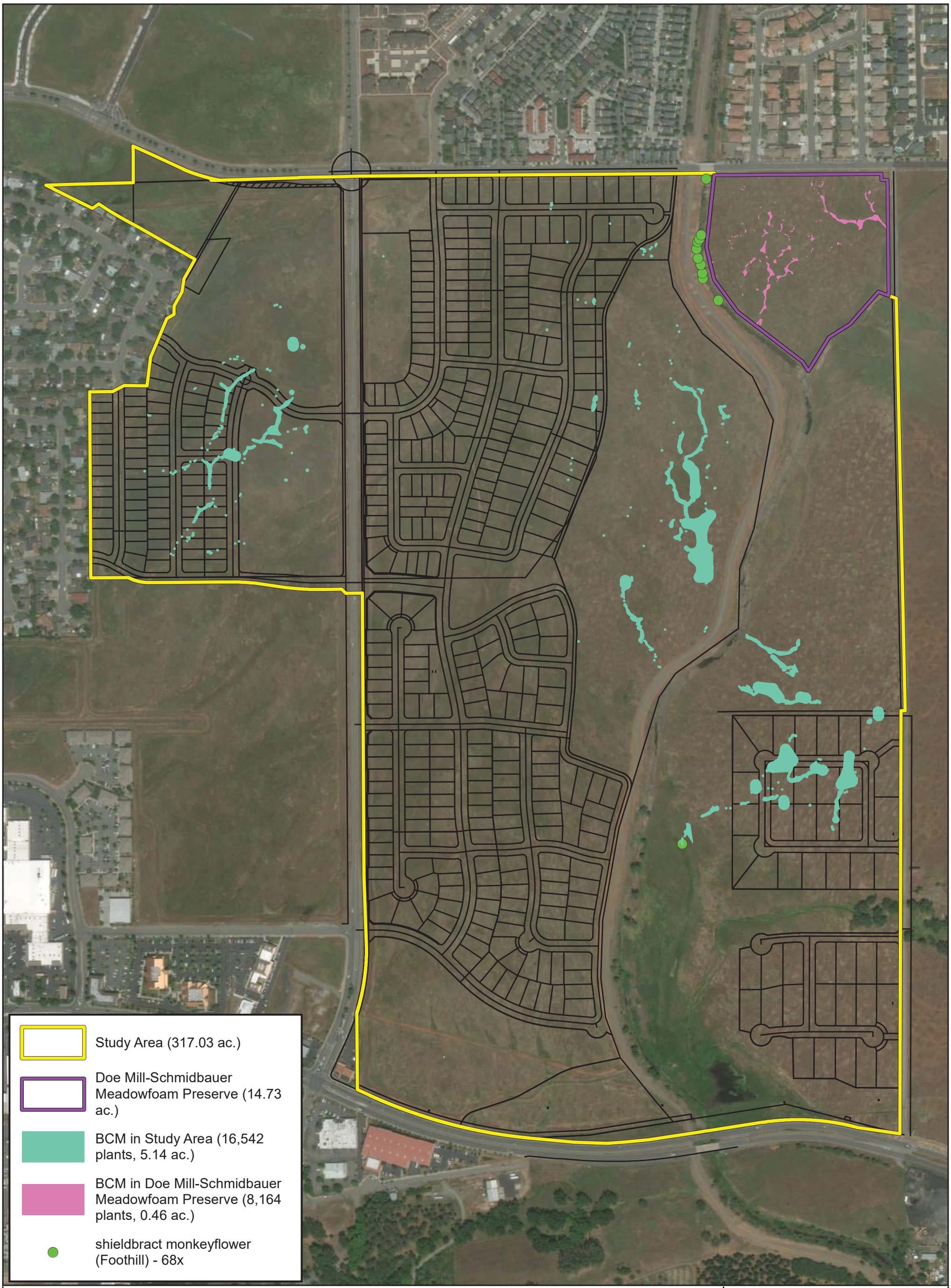

Figure 6. BCM Map/Rare Plant Survey

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ENVIRONMENTAL CONSULTANTS

Stonegate Vesting Tentative Subdivision
Map and GPA/Rezone
City of Chico, California

0 250 500 1,000
Feet

Map Prepared Date: 4/6/2018
Map Prepared By: smortensen
Base Source: Esri Streaming - NAIP 2014
Data Source(s): WRA, Rolls Anderson & Rolls, Foothill

Path: L:\Acad 2000 Files\26000\26061\GIS\ArcMap\CEQA\2018\Rare Plants Impacts 20180406.mxd

4.3.2 Wildlife

Forty-one special-status species of wildlife have been recorded in the vicinity of the Study Area. The potential for each of these species to occur in the Study Area is summarized in Appendix B. Figure 7 displays CNDDB occurrences of special-status wildlife species documented within 5 miles of the Study Area. Only one special-status wildlife species was observed in the Study Area during the site assessment: white-tailed kite. Twelve additional special-status wildlife species have a high or moderate potential to occur in the Study Area. The remaining 28 special-status wildlife species are unlikely or do not have the potential to occur within the Study Area due to one or more of the following reasons:

- Aquatic habitats necessary to support the special-status wildlife species (e.g., perennial streams) are not present.
- Vegetation habitats (e.g., coniferous forest, riparian woodland/forest, chaparral) that provide nesting and/or foraging resources necessary support the special-status wildlife species are not present.
- Structures or vegetation (e.g., caves, old-growth trees) necessary to provide nesting or cover habitat to support the special-status wildlife species are not present in the Study Area.
- The Study Area is outside (e.g., north of, west of) the special-status wildlife species local documented range, or specifically nesting range (generally applies to birds).

Special-status wildlife species that have the potential to be present are discussed in detail below.

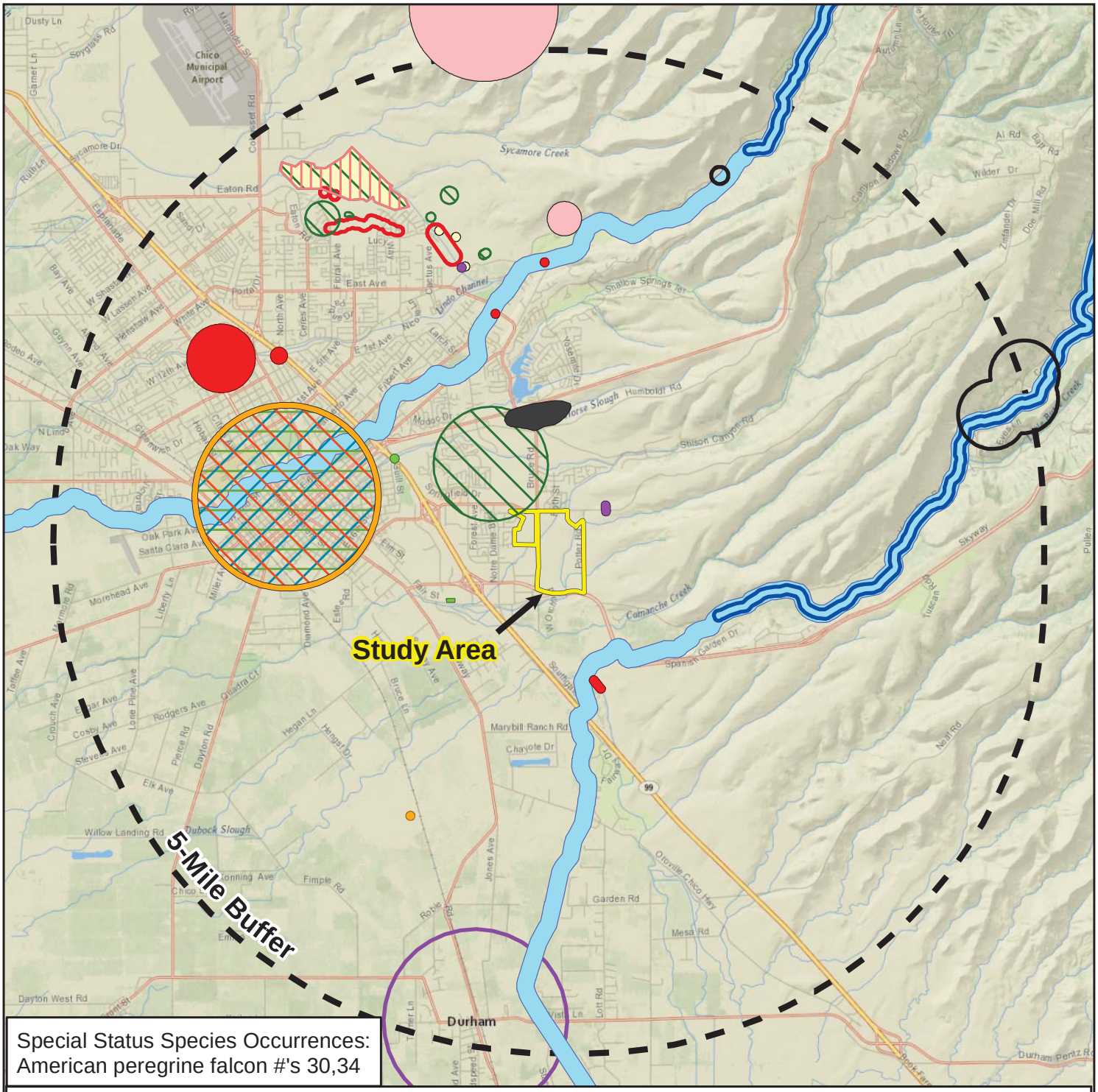

Figure 7. Special Status Wildlife Species within 5 Miles of the Study Area

Chico
Butte County, California

0 0.5 1 2 Miles

ENVIRONMENTAL CONSULTANTS

Map Prepared Date: 5/13/2016
Map Prepared By: MRochelle
Base Source: Esri, National Geographic
Data Source(s): WRA, CNDDB (April 2016)

Path: L:\Acad 2000 Files\26000\26061\GIS\ArcMap\CNDDB_Wildlife.mxd

Pallid bat (*Antrozous pallidus*), CDFW Species of Special Concern, WBWG High Priority. Pallid bats are distributed from southern British Columbia and Montana to central Mexico, and east to Texas, Oklahoma, and Kansas. This species occurs in a number of habitats ranging from rocky arid deserts to grasslands, and into higher elevation coniferous forests. They are most abundant in the arid Sonoran life zones below 6,000 feet, but have been found up to 10,000 feet in the Sierra Nevada. Pallid bats often roost in colonies of between 20 and several hundred individuals. Roosts are typically in rock crevices, tree hollows, mines, caves, and a variety of man-made structures, including vacant and occupied buildings. Tree roosting has been documented in large conifer snags (e.g., ponderosa pine), inside basal hollows of redwoods and giant sequoias, and within bole cavities in oak trees. They have also been reported roosting in stacks of burlap sacks and stone piles. Pallid bats are primarily insectivorous, feeding on large prey that is usually taken on the ground but sometimes in flight. Prey items include arthropods such as scorpions, ground crickets, and cicadas (WBWG 2016).

The Study Area contains several tree cavities that may provide suitable roost habitat for this species, particularly in the riparian oak woodland in the southeast. Open annual grassland and aquatic features may also provide suitable foraging habitat for this species.

Grasshopper sparrow (*Ammodramus savannarum*). CDFW Species of Special Concern. Moderate Potential. The grasshopper sparrow is a summer resident in California, wintering in Mexico and Central America. This species occurs in open grassland and prairie-like habitats with short- to moderate-height vegetation, and often scattered shrubs. Both perennial and annual (non-native) grasslands are used. Nests are placed on the ground and well concealed, often adjacent to grass clumps (Shuford and Gardali 2008). Grasshopper sparrows are secretive and generally detected by voice. Insects comprise the majority of the diet.

The Study Area is within this species' nesting range as per a monograph in Shuford and Gardali (2008). Open annual grassland areas there provide suitable nesting habitat.

Oak titmouse (*Baeolophus inornatus*). USFWS Bird of Conservation Concern. High Potential. This relatively common species is year-round resident throughout much of California including most of the coastal slope, the Central Valley and the western Sierra Nevada foothills. Its primary habitat is woodland dominated by oaks. In addition, the species may also occur in riparian areas, as well as residential settings where landscaping and/or preserved trees provide suitable habitat. The oak titmouse nests in tree cavities, usually natural cavities or those excavated by woodpeckers, though they may partially excavate their own (Cicero 2000). Seeds and arboreal invertebrates make up the birds' diet.

Oaks and other trees within the Study Area provide suitable year-round habitat for this species, including nesting. There are numerous recent observations of this species within 1.0 mile of the Study Area, including in directly adjacent areas (eBird 2016).

White-tailed kite (*Elanus leucurus*). CDFW Fully Protected Species. Present. The white-tailed kite is resident in open to semi-open habitats throughout the lower elevations of California, including grasslands, savannahs, woodlands, agricultural areas and wetlands. Vegetative structure and prey availability seem to be more important habitat elements than associations with specific plants or vegetative communities (Dunk 1995). Nests are constructed mostly of twigs and placed in trees, often at habitat edges. Nest trees are highly variable in size, structure, and immediate surroundings, ranging from shrubs to trees greater than 150 feet tall (Dunk 1995). This species preys upon a variety of small mammals, as well as other vertebrates and invertebrates.

The Study Area provides typical habitat for this this species, with open annual grassland for foraging and trees for nesting. Kites have been recently observed in adjacent areas (eBird 2016), and one was observed foraging over the site during the May 18, 2016 site visit.

Loggerhead shrike (*Lanius ludovicianus*). CDFW Species of Special Concern, USFWS Bird of Conservation Concern. Moderate Potential. The loggerhead shrike is a year-round resident and winter visitor in lowlands and foothills throughout California. This species is associated with open country with short vegetation and scattered trees, shrubs, fences, utility lines and/or other perches. Although they are songbirds, shrikes are predatory and forage on a variety of invertebrates and small vertebrates. Captured prey items are often impaled for storage purposes on suitable substrates, including thorns or spikes on vegetation, and barbed wire fences. Nests in trees and large shrubs; nests are usually placed three to ten feet off the ground (Shuford and Gardali 2008).

The Study Area provides open annual grassland areas with scattered trees and shrubs for foraging and nesting. There are recent observations of this species within 5.0 miles of the Study Area (eBird 2016).

Yellow-billed magpie (*Pica nuttalli*). USFWS Bird of Conservation Concern. Moderate Potential. The yellow-billed magpie is endemic to California, occurring year-round in the Central Valley and associated foothills, and the central Coast Ranges. This species inhabits open park-like areas including oak savanna and woodland, the margins of stream courses, and some agricultural areas (e.g., orchards). Breeding typically occurs in loose colonies. The large, dome-shaped nests are placed high in trees, usually oaks, and often in clumps of mistletoe (Koenig and Reynolds 2009). This species is an omnivore and an opportunistic feeder.

The Study Area provides open annual grassland with trees for nesting; this species has been recently observed in several nearby areas (eBird 2016).

Nuttall's woodpecker (*Picoides nuttallii*). USFWS Bird of Conservation Concern. Moderate Potential. Nuttall's woodpecker, common in much of its range, is a year-round resident throughout most of California west of the Sierra Nevada. Typical habitat is oak or mixed woodland, and riparian areas (Lowther 2000). Nesting occurs in tree cavities, principally those of oaks and larger riparian trees. Nuttall's woodpecker also occurs in older residential settings and orchards where mature trees provide suitable foraging and nesting habitat. This species forages on a variety of arboreal invertebrates.

Oaks and other trees within the Study Area provide year-round habitat for this species, including for nesting. There are numerous observations within 1.0 mile of the Study Area (eBird 2016).

Western spadefoot (*Spea hammondii*). CDFW Species of Special Concern. Moderate Potential. The western spadefoot (also called "spadefoot toad") ranges throughout California's Central Valley and adjacent foothills. Suitable habitat for this amphibian consists of open areas with sandy or gravelly soils, and includes grassland, scrubland, woodland, washes, and alluvial fans. Spadefoots spend most of the year underground in burrows and similar refugia, and often constructs their own burrows. Breeding occurs in shallow, temporary pools formed by heavy winter rains; at least four weeks of continuous inundation are required for successful larval metamorphosis.

The Study Area provides open annual grassland with friable soil and gopher burrows also present. Additionally, seasonal water features (vernal pools and swales) that appear relatively short-lived are also present, and may be used for spadefoot breeding. There are recent documented

occurrences of this species within 4.4 miles to the north, at a similar elevation range to that of the Study Area (CDFW 2016).

Vernal pool fairy shrimp (*Branchinecta lynchi*). Federal Threatened, CDFW Special-Status Invertebrate. High Potential. The vernal pool fairy shrimp (VPFS) was listed in 1994 and is nearly endemic to California. Populations are known from Stillwater Plain in Shasta County through most of the length of the Central Valley to Pixley in Tulare County; additional disjunct populations exist at various other locations, including in the central and southern Coast Ranges. Overall, this species is widespread but generally not abundant in occupied areas. VPFS occurs primarily in vernal pools but is also found in a variety of both natural and artificial temporary wetland habitats including alkali pools, ephemeral drainages, stock ponds, vernal swales, rock outcrop pools, and even roadside ditches (Helm 1997). Occupied features are typically small (ranging from 0.1 to 0.05 acre in size), and pond for a relatively short duration (e.g., as little as 3-4 weeks; Eriksen and Belk 1999). Soil types associated with VPFS vary greatly with geography and influence the ecology of the species. Known water quality tolerances are 48 to 481 ppm for salinity, and 6.3 to 8.5 for pH (Eriksen and Belk 1999).

Vernal pools within the Study Area appear to be relatively small in area and shorter-lived, and thus provide potential habitat for VPFS. Longer-ponding vernal swales also have the potential to be occupied. There are several documented occurrences at a similar elevation range within 5.0 miles to the north (as well as another cluster of occurrences located between approximately 10.5 and 15.5 miles to the southeast; CDFW 2016). For these reasons, VPFS has a high potential to be present within the Study Area. VPFS have apparently been previously documented in the Study Area, according to a Corps Public Notice for a previously proposed project, although the source of the occurrence data is not reported (Corps 2000).

Midvalley fairy shrimp (*Branchinecta mesovallensis*). CDFW Special-status Invertebrate. Moderate Potential. As is known, this relatively recently-described fairy shrimp is endemic to California's Central Valley. It typically occurs in small, grass-bottomed vernal pools and puddles that are highly ephemeral (Eriksen and Belk 1999). Vernal pools and possibly other seasonal aquatic features within the Study Area provide potential habitat. The nearest documented occurrence is located approximately 11.8 miles northwest of the Study Area, at a similar elevation range (CDFW 2016).

Valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*). Federal Threatened, CDFW Special-status Invertebrate. Moderate Potential. The valley elderberry longhorn beetle (VELB) was listed in 1980. It is found throughout much of the Central Valley in elderberry (*Sambucus* sp.) shrubs, on which it is completely dependent for larval development, and to a lesser degree, adult feeding. Typical habitat is characterized as large stands of mature elderberry shrubs in riparian or floodplain areas, with a variety of other riparian-affiliated trees and shrubs also present in the canopy.

Elderberry shrubs within the Study Area are large enough to support VELB. The nearest documented occurrences are within 2.6 miles to the north of the Project Area (in association with riparian forest along Big Chico Creek), and within 2.0 miles to the south (in association with Butte Creek; CDFW 2016).

Vernal pool tadpole shrimp (*Lepidurus packardi*). Federal Endangered, CDFW Special-Status Invertebrate. High Potential. The vernal pool tadpole shrimp (VPTS) was listed in 1994 and is virtually endemic to the Central Valley, with the majority of known populations occurring in the Sacramento Valley. Like other branchiopod shrimps, VPTS inhabits pools/wetlands that dry down seasonally. Suitable habitats vary considerably and include vernal pools, clay flats, alkaline

pools, ephemeral stock ponds, roadside ditches, and deeper road ruts (Rogers 2001, CDFW 2015). Occupied vernal pools may range in size from small, clear, and well-vegetated to highly turbid, alkali scald pools to large winter "lakes" (Rogers 2001). They may be seasonal or ephemeral, and may exhibit a wide range of salinity levels. However, VPTS survival requires that water bodies be deeper than five inches, pond for a minimum of 40 days, and not experience wide daily temperature fluctuations (Rogers 2001). VPTS cysts (resting eggs) must have the opportunity to dry out completely before they can hatch.

Vernal pools and other seasonal aquatic features (e.g., swales) within the Study Area may support VPTS. Features that tend to have longer average inundation periods and/or deeper water are the most likely to be occupied. There are several documented occurrences within 5.0 miles to the north, the nearest being 0.6 mile away (CDFW 2016). VPTS have apparently been previously documented in the Study Area, according to a Corps Public Notice for a previously proposed project, although the source of the occurrence data is not reported (Corps 2000).

California linderiella (*Linderiella occidentalis*). CDFW Special-Status Invertebrate. Moderate Potential. This fairy shrimp is widely distributed and relatively common in the Central Valley and Coast Ranges (Eriksen and Belk 1999). Linderiellas occur primarily in vernal pools in unplowed grasslands with old alluvial soils, but may also be found in sandstone depressions as well as more turbid, mud-bottomed pools. Occupied features must be continuously inundated for a minimum of 31 days for successful reproduction to occur. This species is relatively tolerant of higher water temperatures. Vernal pools and other seasonal aquatic features within the Study Area provide potential habitat for California linderiella; the nearest documented occurrences are respectively located 4.6 and 5.2 miles to the north within a similar elevation range to that of the Study Area (CDFW 2016).

5.0 SUMMARY AND RECOMMENDATIONS

Eleven sensitive biological communities were identified within the Study Area. One special-status plant species, the State and Federal listed Butte County meadowfoam, is present within the Study Area. Eleven additional special-status plant species were determined to have a moderate to high potential to occur within the Study Area, but were determined to be absent based on the results of a protocol-level rare plant survey conducted by WRA in April and July of 2016. Thirteen special-status wildlife species have a moderate or high potential to occur within the Study Area, one of which was observed during the site visit. The following sections present recommendations for future studies and/or measures to avoid or reduce impacts to these species and sensitive habitats.

5.1 Biological Communities

Most of the Study Area is comprised of annual grassland, which is not a sensitive biological community. However, the Study Area does contain 20.19 acres of wetlands and waters potentially within the jurisdiction of the Corps under Section 404 of the Clean Water Act and RWQCB under the Porter Cologne Act and Section 401 of the Clean Water Act. A jurisdictional wetland delineation was performed by WRA in the Study Area which describes wetlands and waters potentially subject to Corps and RWQCB jurisdiction in greater detail (WRA 2016b). An Aquatic Resources Delineation Report was also prepared by Foothill for the Study Area and was verified by the Corps in July 2017 (Appendix D). In addition, the Study Area contains 1.66 acres of riparian communities, which may be subject to the jurisdiction of the RWQCB and CDFW under Sections 1600-1616 of the CDFG.

5.2 Special-Status Plant Species

Two special-status plant species, shield-bracted monkeyflower and the State and Federal-listed Butte County meadowfoam are present within the Study Area. On-site populations of these species should be avoided to the maximum extent practicable. If complete avoidance is not feasible, the Project should consult with the USFWS and the CDFW to develop appropriate compensatory mitigation measures.

5.3 Special-Status Wildlife Species

Of the 41 special-status wildlife species known to occur in the vicinity of the Study Area, 12 species were determined to have the potential to occur in the Study Area. Six of these species are birds that are named as Fully Protected by the CFGC, or are CDFW Species of Special Concern and/or USFWS Birds of Conservation Concern. One special-status amphibian (western spadefoot; Species of Special Concern) has the potential to be present within the Study Area. The remaining special-status species with the potential to occur are invertebrates, three of which are listed under the ESA. Two of the listed invertebrates are aquatic crustaceans that occur within vernal pools and other seasonal water features; the third species (VELB) is terrestrial and strongly associated with elderberry plants in riparian areas. In addition to special-status species, a variety of bird species with baseline protections under the MBTA and CFGC utilize the Study Area, and likely nest there.

Recommendations to avoid adverse impacts to special-status wildlife and protected (non-status) birds are outlined below.

5.3.1 Special-status and non-status birds

Six special-status birds have the potential to utilize and nest within the Study Area: grasshopper sparrow, oak titmouse, white-tailed kite, loggerhead shrike, yellow-billed magpie, and Nuttall's woodpecker. Additionally, a variety of other native species with baseline protections under Federal and State law also presumably nest within the Study Area. Nesting may occur on a wide variety of substrates including trees and shrubbery (including tree cavities), herbaceous/grassland vegetation, man-made structures (buildings, bridges, utilities infrastructure), or even simply on the ground.

The following general measures are recommended prior to any land use alterations within the Study Area to avoid adverse impacts to nesting birds:

- To the fullest extent feasible, vegetation removal and/or initial ground disturbance should occur during the non-nesting season (September 1 to January 31). No pre-construction surveys would be required during this period.
- If initial ground disturbance and/or vegetation removal occurs during the breeding season (February 1 through August 31), a qualified biologist should conduct a breeding bird survey no more than 14 days prior to ground disturbance to determine if any birds are nesting within or adjacent to project impact areas.
- If active nests are found within project impact areas or close enough to these areas to affect breeding success, the biologist should establish an appropriate exclusion zone (buffer) around each nest within which no project-related activities are allowed. Appropriate exclusion buffer sizes vary depending upon the bird species in question, nest location, and the existing ambient disturbance regime (visual, aural, and vibratory); buffer radii may be as small as 50 feet (for common, disturbance-adapted species) to 250 feet or more (for special-status birds and raptors). Once all young within a nest have fledged (left the nest structure and are no longer dependent upon it), or the nest otherwise becomes inactive (e.g., due to predation), work may take place in the former exclusion zone.
- If initial ground disturbance is delayed or there is a break in project activities of greater than 14 days within the bird nesting season, then a follow-up nesting bird survey should be performed to ensure no nests have been established in the interim.

5.3.2 Western spadefoot

Western spadefoot has the potential to be present within the Study Area, including both within terrestrial habitat (mammal burrows and similar refugia) and aquatic breeding habitat (vernal pools and other seasonal water features). The following measures are recommended to avoid adverse impacts to western spadefoot:

- Prior to initial ground disturbance, a pre-construction presence/absence survey effort should be conducted by a qualified biologist using appropriate site-specific methodology (e.g., visual surveys for adult spadefoots during or immediately following the first heavy rains of the fall/winter period). Aquatic habitat may also be surveyed for breeding adults, eggs, and/or larvae; such surveys could be conducted concurrently with wet-season surveys for vernal pool crustaceans described below.
- If western spadefoot is determined to be present within the Study Area, the lead agency should compare data derived from on-site studies (e.g., number and quality of aquatic featured used for breeding, number of adult spadefoots observed during breeding events,

etc.) with available information regarding local abundance and distribution of this species, to determine thresholds of significance for impacts under CEQA.
- If western spadefoots are known to be present within or adjacent to the Study Area and portions of the Study Area are to be preserved, the preservation design should maximize the amount of spadefoot habitat present, including both terrestrial and aquatic breeding habitat, and maintain connectivity between this habitat and any occupied, off-site areas.

5.3.3 Vernal pool crustaceans

Four special-status vernal pool crustaceans, including the Federal listed VPTS and VPFS, have the potential to be present within the Study Area. The following measures are recommended to avoid adverse impacts to these species:

- If direct or indirect impacts to habitat features (vernal pools, adjoining grassland, etc.) are anticipated, completion of protocol-level presence/absence surveys, or simply assuming presence, will presumably be necessary to proceed with project planning and (if necessary) compensatory mitigation. Protocol surveys require one wet-season survey effort (for adults) and one dry-season survey (for cysts, i.e., resting eggs) within a three-year period (USFWS 2015).
- If VPFS and/or VPTS are assumed or determined by surveys to be present and direct impacts to habitat are proposed, consultation with the USFWS would be necessary and compensatory mitigation for direct and indirect impacts to vernal pool branchiopods would likely be required. If no direct impacts to habitat are proposed, mitigation for indirect impacts could potentially be required thorough the CEQA or City planning processes.
- USFWS may use a 250-foot buffer as a starting point for determining indirect impacts of development within the watershed of occupied habitat. Site-specific hydrologic analyses may be effective in justifying a reduced watershed buffer for occupied habitat(s).
- Any avoidance measures or mitigation associated with VPFS or VPTS would be sufficient to avoid impacts to the non-listed midvalley fairy shrimp and California linderiella (if relevant).

5.3.4 Valley elderberry longhorn beetle

VELB has the potential to be present within the Study Area. The following measures are recommended to avoid adverse impacts to this species:

- All elderberry plants within the Study Area should be avoided to the fullest extent feasible, including preserving sufficient surrounding habitat to ensure their survival.
- If impacts to elderberry plants are unavoidable, a qualified biologist experienced in VELB natural history and identification (including identification of VELB sign, e.g., exit holes on elderberry stems) should survey all elderberry plants to be impacted within the Study Area using appropriate methodology to determine if this species is present.
- If VELB is determined to be present, consultation with the USFWS would be necessary, and some form of compensatory mitigation would likely be required. (If impacts to VPFS and/or VPTS are anticipated, consultation for VELB could occur concurrently with consultation for the former species.)
- To the extent feasible, future land use alterations within the Study Area should preserve and enhance existing riparian woodland areas.

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APPENDIX A

LIST OF OBSERVED PLANT AND WILDLIFE SPECIES

Appendix A. List of Plant Species Observed in the Study Area on April 23, April 24, May 17, May 18, and July 12, 2016.

Family	Scientific Name	Common Name	Origin	Form	Wetland Status (AW 2016)	Rarity Status	CAL-IPC Status
Adoxaceae	*Sambucus nigra* ssp. *caerulea*	Blue elderberry	native	shrub	FAC	-	-
Agavaceae	*Chlorogalum angustifolium*	Narrow leaved soaproot	native	perennial herb	-	-	-
Agavaceae	*Chlorogalum pomeridianum* var. *pomeridianum*	Common soaproot	native	perennial herb	-	-	-
Alismataceae	*Alisma triviale*	Northern water plantain	native	perennial herb (aquatic)	OBL	-	-
Alliaceae	*Allium amplectens*	Narrow leaved onion	native	perennial herb (bulb)	-	-	-
Anacardiaceae	*Toxicodendron diversilobum*	Poison oak	native	vine, shrub	FACU	-	-
Apiaceae	*Anthriscus caucalis*	Bur chevril	non-native	annual herb, vine	-	-	-
Apiaceae	*Eryngium vaseyi*	Coyote thistle	native	perennial herb	FACW	-	-
Apiaceae	*Yabea microcarpa*	Hedge parsley	native	annual herb	FACU	-	-
Apocynaceae	*Asclepias speciosa*	Showy milkweed	native	perennial herb	FAC	-	-
Asteraceae	*Achyrachaena mollis*	Blow wives	native	annual herb	FAC	-	-
Asteraceae	*Anthemis cotula*	Dog fennel	non-native (invasive)	annual herb	FACU	-	-
Asteraceae	*Artemisia douglasiana*	California mugwort	native	perennial herb	FAC	-	-
Asteraceae	*Blennosperma nanum* var. *nanum*	Common blennosperma	native	annual herb	FACW	-	-
Asteraceae	*Brickellia californica*	California brickellia	native	perennial herb	FACU	-	-
Asteraceae	*Carduus pycnocephalus* ssp. *pycnocephalus*	Italian thistle	non-native	annual herb	-	-	Moderate
Asteraceae	*Centaurea solstitialis*	Yellow starthistle	non-native (invasive)	annual herb	-	-	High

Family	Scientific Name	Common Name	Origin	Form	Wetland Status (AW 2016)	Rarity Status	CAL-IPC Status
Asteraceae	*Centromadia fitchii*	Spikeweed	native	annual herb	FACU	-	-
Asteraceae	*Cichorium intybus*	Chicory	non-native	perennial herb	FACU	-	-
Asteraceae	*Dittrichia graveolens*	Stinkwort	non-native (invasive)	annual herb	-	-	Moderate
Asteraceae	*Gnaphalium palustre*	Lowland cudweed	native	annual herb	FACW	-	-
Asteraceae	*Grindelia camporum*	Gumweed	native	perennial herb	FACW	-	-
Asteraceae	*Helianthus annuus*	Hairy leaved sunflower	native	annual herb	FACU	-	-
Asteraceae	*Hypochaeris glabra*	Smooth cats ear	non-native (invasive)	annual herb	-	-	Limited
Asteraceae	*Lactuca serriola*	Prickly lettuce	non-native (invasive)	annual herb	FACU	-	-
Asteraceae	*Lasthenia fremontii*	Vernal pool goldfields	native	annual, perennial herb	OBL	-	-
Asteraceae	*Layia fremontii*	Fremont's tidy tips	native	annual herb	-	-	-
Asteraceae	*Leontodon saxatilis*	Hawkbit	non-native	annual herb	FACU	-	-
Asteraceae	*Logfia gallica*	Narrowleaf cottonrose	non-native	annual herb	-	-	-
Asteraceae	*Matricaria discoidea*	Pineapple weed	native	annual herb	FACU	-	-
Asteraceae	*Micropus californicus* var. *californicus*	Slender cottonweed	native	annual herb	FACU	-	-
Asteraceae	*Microseris acuminata*	Sierra foothills microseris	native	annual herb	-	-	-
Asteraceae	*Psilocarphus brevissimus* var. *brevissimus*	Woolly heads	native	annual herb	FACW	-	-
Asteraceae	*Psilocarphus oregonus*	Woolly marbles	native	annual herb	OBL	-	-
Asteraceae	*Senecio sylvaticus*	Woodland groundsel	non-native	annual herb	UPL	-	-

Family	Scientific Name	Common Name	Origin	Form	Wetland Status (AW 2016)	Rarity Status	CAL-IPC Status
Asteraceae	*Senecio vulgaris*	Common groundsel	non-native	annual herb	FACU	-	-
Asteraceae	*Silybum marianum*	Milk thistle	non-native (invasive)	annual, perennial herb	-	-	Limited
Asteraceae	*Symphyotrichum chilense*	Pacific aster	native	perennial herb	FAC	-	-
Asteraceae	*Xanthium strumarium*	Cocklebur	native	annual herb	FAC	-	-
Betulaceae	*Alnus rhombifolia*	White alder	native	tree	FACW	-	-
Boraginaceae	*Amsinckia intermedia*	Common fiddleneck	native	annual herb	-	-	-
Boraginaceae	*Heliotropium europaeum*	European heliotrope	non-native	annual herb	-	-	-
Boraginaceae	*Plagiobothrys fulvus* var. *campestris*	Tawny popcorn flower	native	annual herb	-	-	-
Boraginaceae	*Plagiobothrys nothofulvus*	Rusty haired popcorn flower	native	annual herb	FAC	-	-
Boraginaceae	*Plagiobothrys stipitatus* var. *micranthus*	Common vernal pool allocarya	native	annual herb	FACW	-	-
Brassicaceae	*Brassica nigra*	Black mustard	non-native (invasive)	annual herb	-	-	Moderate
Brassicaceae	*Cardamine oligosperma*	Idaho bittercress	native	annual, perennial herb	FAC	-	-
Brassicaceae	*Hirschfeldia incana*	Mustard	non-native (invasive)	perennial herb	-	-	Moderate
Brassicaceae	*Lepidium nitidum*	Shining pepper grass	native	annual herb	FAC	-	-
Brassicaceae	*Nasturtium officinale*	Watercress	native	perennial herb (aquatic)	OBL	-	-
Brassicaceae	*Raphanus raphanistrum*	Jointed charlock	non-native	annual, perennial herb	-	-	-
Brassicaceae	*Raphanus sativus*	Jointed charlock	non-native (invasive)	annual, biennial herb	-	-	Limited

Family	Scientific Name	Common Name	Origin	Form	Wetland Status (AW 2016)	Rarity Status	CAL-IPC Status
Campanulaceae	*Downingia bicornuta* var. *bicornuta*	Bristled downingia	native	annual herb	OBL	-	-
Campanulaceae	*Downingia ornatissima* var. *ornatissima*	Horned downingia	native	annual herb	OBL	-	-
Caryophyllaceae	*Cerastium glomeratum*	Large mouse ears	non-native	annual herb	UPL	-	-
Caryophyllaceae	*Petrorhagia dubia*	Windmill pink	non-native	annual herb	-	-	-
Caryophyllaceae	*Spergularia rubra*	Purple sand spurry	non-native	annual, perennial herb	FAC	-	-
Chenopodiaceae	*Chenopodium strictum* var. *glaucophyllum*	White leaved goosefoot	non-native	annual herb	-	-	-
Chenopodiaceae	*Salsola tragus*	Russian thistle	non-native (invasive)	annual herb	FACU	-	Limited
Convolvulaceae	*Convolvulus arvensis*	Field bindweed	non-native (invasive)	perennial herb, vine	-	-	-
Convolvulaceae	*Cuscuta howelliana*	Boggs lake dodder	native	vine	-	-	-
Crassulaceae	*Crassula tillaea*	Mediterranean pygmy weed	non-native	annual herb	FACU	-	-
Crassulaceae	*Sedella pumila*	Sierra mock stonecrop	native	annual herb	FAC	-	-
Cyperaceae	*Cyperus eragrostis*	Tall cyperus	native	perennial grasslike herb	FACW	-	-
Cyperaceae	*Eleocharis macrostachya*	Spike rush	native	perennial grasslike herb	OBL	-	-
Cyperaceae	*Schoenoplectus tabernaemontani*	Softstem bulrush	native	perennial grasslike herb	OBL	-	-
Euphorbiaceae	*Croton setiger*	Turkey-mullein	native	perennial herb	-	-	-
Euphorbiaceae	*Euphorbia maculata*	Spotted spurge	non-native	annual herb	UPL	-	-
Euphorbiaceae	*Euphorbia ocellata* ssp. *ocellata*	Valley spurge	native	annual, perennial herb	-	-	-
Euphorbiaceae	*Euphorbia peplus*	Petty spurge	non-native	annual herb	-	-	-

Family	Scientific Name	Common Name	Origin	Form	Wetland Status (AW 2016)	Rarity Status	CAL-IPC Status
Fabaceae	*Acmispon americanus* var. *americanus*	Spanish lotus	native	annual herb	UPL	-	-
Fabaceae	*Acmispon brachycarpus*	Short podded lotus	native	annual herb	-	-	-
Fabaceae	*Lupinus nanus*	Valley sky lupine	native	annual herb	-	-	-
Fabaceae	*Medicago lupulina*	Black medick	non-native	annual, perennial herb	FAC	-	-
Fabaceae	*Medicago polymorpha*	California burclover	non-native (invasive)	annual herb	FACU	-	Limited
Fabaceae	*Trifolium depauperatum* var. *depauperatum*	Dwarf bladder clover	native	annual herb	FAC	-	-
Fabaceae	*Trifolium hirtum*	Rose clover	non-native (invasive)	annual herb	-	-	Limited
Fabaceae	*Trifolium microcephalum*	Small head clover	native	annual herb	FAC	-	-
Fabaceae	*Trifolium variegatum*	Variegated clover	native	annual herb	FAC	-	-
Fabaceae	*Trifolium willdenovii*	Tomcat clover	native	annual herb	FACW	-	-
Fabaceae	*Vicia villosa*	Hairy vetch	non-native (invasive)	annual herb, vine	-	-	-
Fagaceae	*Quercus douglasii*	Blue oak	native	tree	-	-	-
Fagaceae	*Quercus lobata*	Valley oak	native	tree	FACU	-	-
Fagaceae	*Quercus wislizeni* var. *wislizeni*	Interior live oak	native	tree, shrub	-	-	-
Gentianaceae	*Centaurium tenuiflorum*	Slender centaury	non-native	annual herb	FACW	-	-
Gentianaceae	*Cicendia quadrangularis*	Common microcalis	native	annual herb	FAC	-	-
Gentianaceae	*Zeltnera muehlenbergii*	Muehlenberg's centaury	native	annual herb	FAC	-	-
Geraniaceae	*Erodium botrys*	Big heron bill	non-native (invasive)	annual herb	FACU	-	-

Family	Scientific Name	Common Name	Origin	Form	Wetland Status (AW 2016)	Rarity Status	CAL-IPC Status
Geraniaceae	*Erodium cicutarium*	Coastal heron's bill	non-native (invasive)	annual herb	-	-	Limited
Geraniaceae	*Erodium moschatum*	Whitestem filaree	non-native (invasive)	annual herb	-	-	-
Geraniaceae	*Geranium carolinianum*	Carolina geranium	native	annual herb	-	-	-
Geraniaceae	*Geranium dissectum*	Wild geranium	non-native (invasive)	annual herb	-	-	Limited
Hypericaceae	*Hypericum perforatum* ssp. *perforatum*	Klamathweed	non-native	perennial herb	FACU	-	-
Juncaceae	*Juncus balticus* ssp. *ater*	Baltic rush	native	perennial grasslike herb	FACW	-	-
Juncaceae	*Juncus bufonius*	Common toad rush	native	annual grasslike herb	FACW	-	-
Juncaceae	*Juncus uncialis*	Inch high dwarf rush	native	annual grasslike herb	OBL	-	-
Juncaginaceae	*Triglochin scilloides*	Flowering-quillwort	native	annual herb (aquatic)	OBL	-	-
Lamiaceae	*Mentha spicata*	Spearmint	non-native	perennial herb	FACW	-	-
Lamiaceae	*Pogogyne zizyphoroides*	Sacramento mint	native	annual herb	OBL	-	-
Lamiaceae	*Trichostema lanceolatum*	Vinegarweed	native	annual herb	FACU	-	-
Liliaceae	*Calochortus luteus*	Yellow mariposa	native	perennial herb	-	-	-
Liliaceae	*Calochortus superbus*	Yellow mariposa	native	perennial herb	-	-	-
Limnanthaceae	*Limnanthes douglasii* ssp. *rosea*	Rosy douglas' meadowfoam	native	annual herb	OBL	-	-
Limnanthaceae	*Limnanthes floccosa* ssp. *californica*	Butte county meadowfoam	native	annual herb	OBL	FE, SE, Rank 1B.1	-
Lythraceae	*Lythrum hyssopifolia*	Hyssop loosestrife	non-native	annual, perennial herb	OBL	-	-

Family	Scientific Name	Common Name	Origin	Form	Wetland Status (AW 2016)	Rarity Status	CAL-IPC Status
Malvaceae	*Sidalcea hartwegii*	Hartweg's checkerbloom	native	annual herb	-	-	-
Montiaceae	*Montia fontana*	Water montia	native	annual herb	OBL	-	-
Moraceae	*Ficus carica*	Common fig	non-native (invasive)	tree	FACU	-	Moderate
Oleaceae	*Fraxinus dipetala*	Two petaled ash	native	tree, shrub	-	-	-
Oleaceae	*Fraxinus latifolia*	Oregon ash	native	tree	FACW	-	-
Onagraceae	*Clarkia gracilis*	Graceful clarkia	native	annual herb	-	-	-
Onagraceae	*Clarkia purpurea* ssp. *quadrivulnera*	Purple clarkia	native	annual herb	-	-	-
Onagraceae	*Epilobium ciliatum*	Slender willow herb	native	perennial herb	FACW	-	-
Onagraceae	*Epilobium torreyi*	Narrow boisduvalia	native	annual herb	FACW	-	-
Orobanchaceae	*Castilleja attenuata*	Narrow leaved owl's clover	native	annual herb	-	-	-
Orobanchaceae	*Triphysaria eriantha* ssp. *eriantha*	Butter 'n' eggs	native	annual herb	-	-	-
Oxalidaceae	*Oxalis micrantha*	Dwarf woodsorrel	non-native	annual herb	-	-	-
Papaveraceae	*Eschscholzia californica*	California poppy	native	annual, perennial herb	-	-	-
Papaveraceae	*Eschscholzia lobbii*	Frying pans	native	annual herb	-	-	-
Phrymaceae	*Mimulus guttatus*	Yellow monkey flower	native	annual, perennial herb (rhizomatous)	OBL	-	-
Phytolaccaceae	*Phytolacca americana* var. *americana*	American pokeweed	non-native	perennial herb	FAC	-	-
Plantaginaceae	*Gratiola ebracteata*	Common hedge hyssop	native	annual herb	OBL	-	-
Plantaginaceae	*Plantago erecta*	California plantain	native	annual herb	-	-	-
Plantaginaceae	*Plantago lanceolata*	Ribwort	non-native (invasive)	perennial herb	FAC	-	Limited

Family	Scientific Name	Common Name	Origin	Form	Wetland Status (AW 2016)	Rarity Status	CAL-IPC Status
Poaceae	*Aira caryophyllea*	Silvery hairgrass	non-native (invasive)	annual grass	FACU	-	-
Poaceae	*Alopecurus saccatus*	Foxtail	native	annual grass	OBL	-	-
Poaceae	*Avena barbata*	Slim oat	non-native (invasive)	annual, perennial grass	-	-	Moderate
Poaceae	*Avena fatua*	Wildoats	non-native (invasive)	annual grass	-	-	Moderate
Poaceae	*Briza minor*	Little rattlesnake grass	non-native	annual grass	FAC	-	-
Poaceae	*Bromus diandrus*	Ripgut brome	non-native (invasive)	annual grass	-	-	Moderate
Poaceae	*Bromus hordeaceus*	Soft chess	non-native (invasive)	annual grass	FACU	-	Limited
Poaceae	*Bromus madritensis* ssp. *rubens*	Foxtail chess, foxtail brome	non-native	annual grass	UPL	-	Moderate
Poaceae	*Cynodon dactylon*	Bermuda grass	non-native (invasive)	perennial grass	FACU	-	Moderate
Poaceae	*Deschampsia danthonioides*	Annual hairgrass	native	annual grass	FACW	-	-
Poaceae	*Elymus caput-medusae*	Medusa head	non-native	annual grass	-	-	-
Poaceae	*Festuca microstachys*	Small fescue	native	annual grass	-	-	-
Poaceae	*Festuca myuros*	Rattail sixweeks grass	non-native (invasive)	annual grass	FACU	-	-
Poaceae	*Festuca perennis*	Italian rye grass	non-native	annual, perennial grass	FAC	-	-
Poaceae	*Gastridium phleoides*	Nit grass	non-native	annual grass	FACU	-	-
Poaceae	*Hordeum marinum* ssp. *gussoneanum*	Barley	non-native	annual grass	FAC	-	-
Poaceae	*Hordeum murinum*	Foxtail barley	non-native (invasive)	annual grass	FACU	-	-
Poaceae	*Paspalum dilatatum*	Dallis grass	non-native	perennial grass	FAC	-	-

Family	Scientific Name	Common Name	Origin	Form	Wetland Status (AW 2016)	Rarity Status	CAL-IPC Status
Poaceae	*Phragmites australis*	Common reed	native	perennial grass	FACW	-	-
Poaceae	*Poa annua*	Annual blue grass	non-native	annual grass	FAC	-	-
Poaceae	*Polypogon monspeliensis*	Annual beard grass	non-native (invasive)	annual grass	FACW	-	Limited
Poaceae	*Sorghum halepense*	Johnsongrass	non-native (invasive)	perennial grass	FACU	-	-
Poaceae	*Stipa pulchra*	Purple needle grass	native	perennial grass	-	-	-
Polemoniaceae	*Navarretia intertexta*	Interwoven navarretia	native	annual herb	FACW	-	-
Polemoniaceae	*Navarretia leucocephala* ssp. *leucocephala*	White headed navarretia	native	annual herb	OBL	-	-
Polemoniaceae	*Navarretia tagetina*	Marigold navarretia	native	annual herb	FACW	-	-
Polygonaceae	*Persicaria lapathifolia*	Common knotweed	native	annual herb	FACW	-	-
Polygonaceae	*Polygonum aviculare* ssp. *aviculare*	Prostrate knotweed	non-native	annual, perennial herb	FACW	-	-
Polygonaceae	*Rumex crispus*	Curly dock	non-native (invasive)	perennial herb	FAC	-	Limited
Primulaceae	*Primula clevelandii*	Padre's shooting star	native	perennial herb	-	-	-
Pteridaceae	*Pentagramma triangularis*	Gold back fern	native	fern	-	-	-
Ranunculaceae	*Delphinium variegatum* ssp. *variegatum*	Royal larkspur	native	perennial herb	-	-	-
Ranunculaceae	*Ranunculus arvensis*	Field buttercup	non-native	annual herb	FACU	-	-
Ranunculaceae	*Ranunculus bonariensis* var. *trisepalus*	Vernal pool buttercup	native	annual herb	OBL	-	-
Ranunculaceae	*Ranunculus muricatus*	Buttercup	non-native	annual, perennial herb	FACW	-	-

Family	Scientific Name	Common Name	Origin	Form	Wetland Status (AW 2016)	Rarity Status	CAL-IPC Status
Rhamnaceae	*Frangula californica*	California coffeeberry	native	shrub	-	-	-
Rosaceae	*Rubus armeniacus*	Himalayan blackberry	non-native (invasive)	shrub	FAC	-	High
Rubiaceae	*Galium aparine*	Cleavers	native	annual herb	FACU	-	-
Rubiaceae	*Galium murale*	Tiny bedstraw	non-native	annual herb	-	-	-
Rubiaceae	*Galium parisiense*	Wall bedstraw	non-native	annual herb	UPL	-	-
Rubiaceae	*Sherardia arvensis*	Field madder	non-native	annual herb	-	-	-
Salicaceae	*Populus fremontii* ssp. *fremontii*	Cottonwood	native	tree	FAC	-	-
Salicaceae	*Salix gooddingii*	Gooding's willow	native	tree	FACW	-	-
Scrophulariaceae	*Verbascum blattaria*	Moth mullein	non-native	perennial herb	UPL	-	-
Tecophilaeaceae	*Odontostomum hartwegii*	Hartweg's odontostomum	native	perennial herb	-	-	-
Themidaceae	*Brodiaea coronaria*	Harvest brodiaea	native	perennial herb (bulb)	FAC	-	-
Themidaceae	*Brodiaea minor*	Low brodiaea	native	perennial herb	-	-	-
Themidaceae	*Dichelostemma capitatum* ssp. *capitatum*	Wild hyacinth	native	perennial herb	FACU	-	-
Themidaceae	*Dichelostemma multiflorum*	Many flowered brodiaea	native	perennial herb	-	-	-
Themidaceae	*Triteleia hyacinthina*	Wild hyacinth	native	perennial herb	FAC	-	-
Typhaceae	*Typha angustifolia*	Narrow leaf cattail	non-native	perennial herb (aquatic)	OBL	-	-
Vitaceae	*Vitis californica*	California wild grape	native	vine, shrub	FACU	-	-
Zygophyllaceae	*Tribulus terrestris*	Puncture vine	non-native (invasive)	annual herb	-	-	-

Appendix A. List of Wildlife Species Observed in the Study Area on April 23, April 24, May 17, and May 18, 2016

Scientific Name	Common Name
Mammals	
Lepus californicus	Black-tailed jackrabbit
Birds	
Agelaius phoeniceus	Red-winged blackbird
Aphelocoma californica	Western scrub jay
Ardea alba	Great egret
Cathartes aura	Turkey vulture
Charadrius vociferus	Killdeer
Elanus leucurus	White-tailed kite
Haemorhous mexicanus	House finch
Melanerpes formicivorus	Acorn woodpecker
Mimus polyglottos	Northern mockingbird
Petrochelidon pyrrhonota	Cliff swallow
Sayornis nigricans	Black phoebe
Sturnella neglecta	Western meadowlark
Tyrannus verticalis	Western kingbird
Zenaida macroura	Mourning dove
Reptiles	
Sceloporus occidentalis	Western fence lizard
Amphibians	
Anaxyrus boreas	Western toad
Lithobates catesbeianus	Bullfrog

APPENDIX B

POTENTIAL FOR SPECIAL-STATUS SPECIES TO OCCUR IN THE STUDY AREA

Appendix B. Potential for special-status plant and wildlife species to occur in the Study Area. List compiled from the California Department of Fish and Wildlife (CDFW) Natural Diversity Database (CDFW 2016), U.S. Fish and Wildlife Service (USFWS) Species Lists, and California Native Plant Society (CNPS) Electronic Inventory search of the Chico, Nord, Richardson Springs, Paradise West, Hamlin Canyon, Shippee, Nelson, Llano Seco, and Ord Ferry USGS 7.5' quadrangles and a review of other CDFW lists and publications (Shuford and Gardali 2008, Jennings and Hayes 1994, Zeiner et al. 1990).

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE**	CONCLUSIONS/ RECOMMENDATIONS
Plants				
depauperate milk-vetch *Astragalus pauperculus*	Rank 4.3	Chaparral, cismontane woodland, valley and foothill grassland/vernally mesic, volcanic. Elevation ranges from 200 to 3990 feet (60 to 1215 meters). Blooms March to June.	**Moderate Potential.** The Study Area supports suitable vernally mesic grassland with stony, volcanically-derived soils.	**Not Present.** This species was not observed during protocol-level, floristic rare plant surveys. No further actions are recommended for this species.
Ferris' milk-vetch *Astragalus tener var. ferrisiae*	Rank 1B.1	Meadows and seeps (vernally mesic), valley and foothill grassland (subalkaline flats). Elevation ranges from 10 to 250 feet (2 to 75 meters). Blooms April to May.	**Unlikely.** This species is typically associated with lower elevation subalkaline flats with dry, adobe soil. The Study Area lacks suitable dry adobe soils and is on the upper edge of the documented elevation range for this species.	**Not Present.** This species was not observed during protocol-level, floristic rare plant surveys. No further actions are recommended for this species.
Mexican mosquito fern *Azolla microphylla*	Rank 4.2	Marshes and swamps (ponds, slow water). Elevation ranges from 100 to 330 feet (30 to 100 meters). Blooms August.	**Unlikely.** There are no ponds in the Study Area and none of the seasonal wetlands have a sufficient hydroperiod to support this species.	**Not Present.** This species was not observed during protocol-level, floristic rare plant surveys. Although the bloom period is listed as August in the CNPS Inventory, CCH lists collections from every month of the year (CCH 2016). Therefore, we believe the

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE**	CONCLUSIONS/ RECOMMENDATIONS
				April survey timing was suitable to detect this species. No further actions are recommended for this species.
big-scale balsamroot *Balsamorhiza macrolepis*	Rank 1B.2	Chaparral, cismontane woodland, valley and foothill grassland/sometimes serpentine. Elevation ranges from 300 to 5100 feet (90 to 1555 meters). Blooms March to June.	**Unlikely.** The Study Area is slightly below the documented elevation range for this species and lacks serpentine soils.	**Not Present.** This species was not observed during protocol-level, floristic rare plant surveys. No further actions are recommended for this species.
watershield *Brasenia schreberi*	Rank 2B.3	Marshes and swamps/freshwater. Elevation ranges from 100 to 7220 feet (30 to 2200 meters). Blooms June to September.	**Unlikely.** There are no ponds in the Study Area and none of the seasonal wetlands have a sufficient hydroperiod to support this species.	**Not Present.** This species was not observed during protocol-level, floristic rare plant surveys. Although the survey was conducted outside of the listed bloom period, this species would have been vegetatively identifiable to genus level at the time of the survey. No further actions are recommended for this species.
brassy bryum *Bryum chryseum*	Rank 4.3	Chaparral (openings), cismontane woodland, valley and foothill grassland. Elevation ranges from 160 to 1970 feet (50 to 600 meters).	**Unlikely.** The Study Area is on the low end of the documented elevation range for this species.	**Not Present.** This species was not observed during protocol-level, floristic rare plant surveys. No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE**	CONCLUSIONS/ RECOMMENDATIONS
round-leaved filaree *California macrophylla*	Rank 1B.2	Cismontane woodland, valley and foothill grassland/clay. Elevation ranges from 50 to 3940 feet (15 to 1200 meters). Blooms March to May.	**Unlikely.** The Study Area lacks suitable clay soils.	**Not Present.** This species was not observed during protocol-level, floristic rare plant surveys. No further actions are recommended for this species.
Butte County calycadenia *Calycadenia oppositifolia*	Rank 4.2	Chaparral, cismontane woodland, lower montane coniferous forest, meadows and seeps, valley and foothill grassland/openings; volcanic, granitic or serpentine. Elevation ranges from 300 to 3100 feet (90 to 945 meters). Blooms April to July.	**Unlikely.** This species is typically associated with dry stoney plains and rock outcrops. The grassland in the Study Area is vernally mesic and is slightly below the documented elevation range for this species.	**Not Present.** This species was not observed during protocol-level, floristic rare plant surveys. No further actions are recommended for this species.
Butte County morning-glory *Calystegia atriplicifolia ssp. buttensis*	Rank 4.2	Chaparral, lower montane coniferous forest/rocky, sometimes roadside. Elevation ranges from 1850 to 5000 feet (565 to 1524 meters). Blooms May to July.	**No Potential.** The Study Area lacks suitable chaparral or forest habitat and is well below the elevation range for this species.	**Not Present.** This species was not observed during protocol-level, floristic rare plant surveys. No further actions are recommended for this species.
flagella-like atractylocarpus *Campylopodiella stenocarpa*	Rank 2B.2	Cismontane woodland. Elevation ranges from 330 to 1640 feet (100 to 500 meters).	**Unlikely.** The Study Area lacks suitable woodland habitat and is slight below the elevation range for this species.	**Not Present.** This species was not observed during protocol-level, floristic rare plant surveys. No further actions are recommended for this species.
dissected-leaved toothwort *Cardamine pachystigma var. dissectifolia*	Rank 1B.2	Chaparral, lower montane coniferous forest/usually serpentine, rocky. Elevation ranges from 840 to 6890 feet (255 to 2100 meters). Blooms February to May.	**No Potential.** The Study Area lacks suitable chaparral or forest habitat and is well below the elevation range for this species.	**Not Present.** This species was not observed during protocol-level, floristic rare plant surveys. No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE**	CONCLUSIONS/ RECOMMENDATIONS
pink creamsacs *Castilleja rubicundula var. rubicundula*	Rank 1B.2	Chaparral (openings), cismontane woodland, meadows and seeps, valley and foothill grassland/serpentine. Elevation ranges from 70 to 2990 feet (20 to 910 meters). Blooms April to June.	**No Potential.** This species is a strict serpentine endemic and the Study Area lacks serpentine soils.	**Not Present.** This species was not observed during protocol-level, floristic rare plant surveys. No further actions are recommended for this species.
Parry's rough tarplant *Centromadia parryi ssp. rudis*	Rank 4.2	Valley and foothill grassland, vernal pools/alkaline, vernally mesic, seeps, sometimes roadsides. Elevation ranges from 0 to 330 feet (0 to 100 meters). Blooms May to October.	**Unlikely.** The Study Area lacks suitable alkaline clay soils.	**Not Present.** This species was not observed during protocol-level, floristic rare plant surveys. Although the surveys were conducted prior to the bloom period this species would have been vegetatively identifiable to genus level at the time of the survey and only *C. fitchii* was observed. No further actions are recommended for this species.
white-stemmed clarkia *Clarkia gracilis ssp. albicaulis*	Rank 1B.2	Chaparral, cismontane woodland/sometimes serpentine. Elevation ranges from 800 to 3560 feet (245 to 1085 meters). Blooms May to July.	**No Potential.** The Study Area lacks suitable chaparral or woodland habitat and is well below the elevation range for this species.	**Not Present.** This species was not observed during protocol-level, floristic rare plant surveys. No further actions are recommended for this species.
marsh claytonia *Claytonia palustris*	Rank 4.3	Meadows and seeps (mesic), marshes and swamps, upper montane coniferous forest. Elevation ranges from 3280 to 8200 feet (1000 to 2500 meters). Blooms May to October.	**No Potential.** The Study Area is well below the elevation range for this species.	**Not Present.** This species was not observed during protocol-level, floristic rare plant surveys. No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE**	CONCLUSIONS/ RECOMMENDATIONS
recurved larkspur *Delphinium recurvatum*	Rank 1B.2	Chenopod scrub, cismontane woodland, valley and foothill grassland/alkaline. Elevation ranges from 10 to 2590 feet (3 to 790 meters). Blooms March to June.	**Unlikely.** The Study Area lacks suitable fine alkaline soils.	**Not Present.** This species was not observed during protocol-level, floristic rare plant surveys. No further actions are recommended for this species.
Hoover's spurge *Euphorbia hooveri*	FT, Rank 1B.2	Vernal pools. Elevation ranges from 80 to 820 feet (25 to 250 meters). Blooms July to September (occasionally October).	**Moderate Potential.** Vernal pools in the Study Area could provide suitable habitat for this species.	
Butte County fritillary *Fritillaria eastwoodiae*	Rank 3.2	Chaparral, cismontane woodland, lower montane coniferous forest (openings)/sometimes serpentine. Elevation ranges from 160 to 4920 feet (50 to 1500 meters). Blooms March to June.	**Unlikely.** The Study Area lacks suitable forest, woodland, or chaparral habitat.	**Not Present.** This species was not observed during protocol-level, floristic rare plant surveys. No further actions are recommended for this species.
adobe-lily *Fritillaria pluriflora*	Rank 1B.2	Chaparral, cismontane woodland, valley and foothill grassland/often adobe. Elevation ranges from 200 to 2310 feet (60 to 705 meters). Blooms February to April.	**Unlikely.** The Study Area lacks suitable clay soils.	**Not Present.** This species was not observed during protocol-level, floristic rare plant surveys. No further actions are recommended for this species.
hogwallow starfish *Hesperevax caulescens*	Rank 4.2	Valley and foothill grassland (mesic, clay), vernal pools (shallow)/sometimes alkaline. Elevation ranges from 0 to 1660 feet (0 to 505 meters). Blooms March to June.	**Unlikely.** The Study Area lacks suitable clay soils.	**Not Present.** This species was not observed during protocol-level, floristic rare plant surveys. No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE**	CONCLUSIONS/ RECOMMENDATIONS
woolly rose-mallow *Hibiscus lasiocarpos var. occidentalis*	Rank 1B.2	Marshes and swamps (freshwater)/often in riprap on sides of levees. Elevation ranges from 0 to 390 feet (0 to 120 meters). Blooms June to September.	**Moderate Potential.** The banks of the stream channel that flows through the Study Area could provide suitable habitat for this species.	**Not Present.** This species was not observed during protocol-level, floristic rare plant surveys. Although the survey was conducted outside of the listed bloom period, this species would have been vegetatively identifiable to genus level at the time of the survey. No further actions are recommended for this species.
California satintail *Imperata brevifolia*	Rank 2B.1	Chaparral, coastal scrub, Mojavean desert scrub, meadows and seeps (often alkali), riparian scrub/mesic. Elevation ranges from 0 to 3990 feet (0 to 1215 meters). Blooms September to May.	**Unlikely.** The Study Area lacks suitable chaparral or scrub habitats with alkaline soils.	**Not Present.** This species was not observed during protocol-level, floristic rare plant surveys. No further actions are recommended for this species.
Red Bluff dwarf rush *Juncus leiospermus var. leiospermus*	Rank 1B.1	Chaparral, cismontane woodland, meadows and seeps, valley and foothill grassland, vernal pools/vernally mesic. Elevation ranges from 110 to 4100 feet (35 to 1250 meters). Blooms March to June.	**Moderate Potential.** Vernal pools and vernally mesic grassland in the Study Area could provide suitable habitat for this species.	**Not Present.** This species was not observed during protocol-level, floristic rare plant surveys. No further actions are recommended for this species.
Humboldt lily *Lilium humboldtii ssp. humboldtii*	Rank 4.2	Chaparral, cismontane woodland, lower montane coniferous forest/openings. Elevation ranges from 300 to 4200 feet (90 to 1280 meters). Blooms May to July.	**No Potential.** The Study Area lacks suitable chaparral, forest, or woodland habitat.	**Not Present.** This species was not observed during protocol-level, floristic rare plant surveys. No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE**	CONCLUSIONS/ RECOMMENDATIONS
Butte County meadowfoam *Limnanthes floccosa ssp. californica*	FE, SE, Rank 1B.1	Valley and foothill grassland (mesic), vernal pools. Elevation ranges from 150 to 3050 feet (46 to 930 meters). Blooms March to May.	**Present.** This species has been previously documented in the Study Area (CDFW 2016).	**Present.** Approximately XX individuals of this species were observed in the Project Area.
woolly meadowfoam *Limnanthes floccosa ssp. floccosa*	Rank 4.2	Chaparral, cismontane woodland, valley and foothill grassland, vernal pools/vernally mesic. Elevation ranges from 200 to 4380 feet (60 to 1335 meters). Blooms March to May (occasionally June).	**High Potential.** Vernal pools and vernally mesic grassland in the Study Area provide ideal habitat for this species and it has been previously documented within four miles of the Study Area on the same soil series (CDFW 2016).	**Not Present.** This species was not observed during protocol-level, floristic rare plant surveys. No further actions are recommended for this species.
shield-bracted monkeyflower *Mimulus glaucescens*	Rank 4.3	Chaparral, cismontane woodland, lower montane coniferous forest, valley and foothill grassland/serpentine seeps, sometimes streambanks. Elevation ranges from 200 to 4070 feet (60 to 1240 meters). Blooms February to August (occasionally September).	**Unlikely.** This species is a broad serpentine endemic associated with serpentine seeps, and the Study Area lacks serpentine soils.	**Not Present.** This species was not observed during protocol-level, floristic rare plant surveys. No further actions are recommended for this species.
veiny monardella *Monardella venosa*	Rank 1B.1	Cismontane woodland, valley and foothill grassland/heavy clay. Elevation ranges from 200 to 1350 feet (60 to 410 meters). Blooms May to July.	**Unlikely.** The Study Area lacks suitable heavy clay soils.	**Not Present.** This species was not observed during protocol-level, floristic rare plant surveys. Although the survey was conducted outside of the listed bloom period, this species would have been vegetatively identifiable to genus level at the time of the survey. No

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE**	CONCLUSIONS/ RECOMMENDATIONS
				further actions are recommended for this species.
Tehama navarretia *Navarretia heterandra*	Rank 4.3	Valley and foothill grassland (mesic), vernal pools. Elevation ranges from 100 to 3310 feet (30 to 1010 meters). Blooms April to June.	**High Potential.** Vernal pools and vernally mesic grassland in the Study Area provide ideal habitat for this species and it has been previously documented within 1/4 mile of the Study Area on the same soil series in 1988 (CCH 2016).	**Not Present.** This species was not observed during protocol-level, floristic rare plant surveys. No further actions are recommended for this species.
adobe navarretia *Navarretia nigelliformis ssp. nigelliformis*	Rank 4.2	Valley and foothill grassland (vernally mesic), vernal pools (sometimes clay, sometimes serpentine). Elevation ranges from 330 to 3280 feet (100 to 1000 meters). Blooms April to June.	**Unlikely.** The Study Area lacks suitable clay soils.	**Not Present.** This species was not observed during protocol-level, floristic rare plant surveys. No further actions are recommended for this species.
hairy Orcutt grass *Orcuttia pilosa*	FE, SE, Rank 1B.1	Vernal pools. Elevation ranges from 150 to 660 feet (46 to 200 meters). Blooms May to September.	**Moderate Potential.** Vernal pools in the Study Area could provide suitable habitat for this species.	**Not Present.** This species was not observed during protocol-level, floristic rare plant surveys. Although the survey was conducted outside of the listed bloom period, this species would have been vegetatively identifiable to genus level at the time of the survey. No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE**	CONCLUSIONS/ RECOMMENDATIONS
Ahart's paronychia *Paronychia ahartii*	Rank 1B.1	Cismontane woodland, valley and foothill grassland, vernal pools. Elevation ranges from 100 to 1670 feet (30 to 510 meters). Blooms February to June.	**High Potential.** Vernal pools and vernally mesic grassland in the Study Area provide suitable habitat for this species and it has been previously documented within four miles of the Study Area on the same soil series (CDFW 2016).	**Not Present.** This species was not observed during protocol-level, floristic rare plant surveys. No further actions are recommended for this species.
Bidwell's knotweed *Polygonum bidwelliae*	Rank 4.3	Chaparral, cismontane woodland, valley and foothill grassland/volcanic. Elevation ranges from 200 to 3940 feet (60 to 1200 meters). Blooms April to July.	**High Potential.** Grasslands with volcanically derived soils in the Study Area provide ideal habitat for this species and it has been previously documented within 1/4 mile of the Study Area on the same soil series in 2005 (CCH 2016).	**Not Present.** This species was not observed during protocol-level, floristic rare plant surveys. No further actions are recommended for this species.
California beaked-rush *Rhynchospora californica*	Rank 1B.1	Bogs and fens, lower montane coniferous forest, meadows and seeps (seeps), marshes and swamps (freshwater). Elevation ranges from 150 to 3310 feet (45 to 1010 meters). Blooms May to July.	**Moderate Potential.** Seasonal wetland habitat in the southern portion of the Study Area may provide suitable habitat.	

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE**	CONCLUSIONS/ RECOMMENDATIONS
brownish beaked-rush *Rhynchospora capitellata*	Rank 2B.2	Lower montane coniferous forest, meadows and seeps, marshes and swamps, upper montane coniferous forest/mesic. Elevation ranges from 150 to 6560 feet (45 to 2000 meters). Blooms July to August.	**Moderate Potential.** Seasonal wetland habitat in the southern portion of the Study Area may provide suitable habitat.	
Butte County checkerbloom *Sidalcea robusta*	Rank 1B.2	Chaparral, cismontane woodland. Elevation ranges from 300 to 5250 feet (90 to 1600 meters). Blooms April to June.	**Unlikely.** The Study Area lacks suitable chaparral or woodland habitats.	**Not Present.** This species was not observed during protocol-level, floristic rare plant surveys. No further actions are recommended for this species.
slender-leaved pondweed *Stuckenia filiformis ssp. alpina*	Rank 2B.2	Marshes and swamps (assorted shallow freshwater). Elevation ranges from 980 to 7050 feet (300 to 2150 meters). Blooms May to July.	**No Potential.** The Study Area is well below the elevation range for this species.	**Not Present.** This species was not observed during protocol-level, floristic rare plant surveys. No further actions are recommended for this species.
Butte County golden clover *Trifolium jokerstii*	Rank 1B.2	Valley and foothill grassland (mesic), vernal pools. Elevation ranges from 160 to 1260 feet (50 to 385 meters). Blooms March to May.	**Unlikely.** This species has an extremely narrow range of endemism and is known only from North Table Mountain Ecological Preserve and the immediately surrounding area. The closest known occurrence is more than 10 miles south of the Study Area (CDFW 2016).	**Not Present.** This species was not observed during protocol-level, floristic rare plant surveys. No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE**	CONCLUSIONS/ RECOMMENDATIONS
Greene's tuctoria *Tuctoria greenei*	FE, SR, Rank 1B.1	Vernal pools. Elevation ranges from 100 to 3510 feet (30 to 1070 meters). Blooms May to July (occasionally September).	**Unlikely.** Vernal pools in the Study Area may provide suitable habitat; however, this species is typically associated with clay soils.	**Not Present.** This species was not observed during protocol-level, floristic rare plant surveys. No further actions are recommended for this species.
Brazilian watermeal *Wolffia brasiliensis*	Rank 2B.3	Marshes and swamps (assorted shallow freshwater). Elevation ranges from 70 to 330 feet (20 to 100 meters). Blooms April to December.	**Unlikely.** There are no ponds in the Study Area and none of the seasonal wetlands have a sufficient hydroperiod to support this species.	**Not Present.** This species was not observed during protocol-level, floristic rare plant surveys. No further actions are recommended for this species.
Mammals				
pallid bat *Antrozous pallidus*	SSC, WBWG High	Found in deserts, grasslands, shrublands, woodlands, and forests. Most common in open areas; forages along river channels. Roost sites include crevices in rocky outcrops and cliffs, caves, mines, trees and various human structures such as bridges, barns, and buildings (including occupied buildings). Roosts must protect bats from high temperatures. Very sensitive to disturbance of roosting sites.	**Moderate Potential.** Few trees within the Study Area contain cavities of the large size typically favored for roosting by this species. May forage within the Study Area. The nearest documented occurrence is located within “Chico” (location not specified; CDFW 2016).	No further actions are recommended.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE**	CONCLUSIONS/ RECOMMENDATIONS
western mastiff bat *Eumops perotis*	SSC, WBWG High	Found in a wide variety of open, arid and semi-arid habitats. Distribution appears to be tied to large rock structures which provide suitable roosting sites, including cliff crevices and cracks in boulders.	**Unlikely.** The Study Area lacks rockpiles, boulders and cliffs. May forage within the Study Area. The nearest documented occurrence with a specific location is located approximately 8.3 miles to the west, in association with riparian forest along the Sacramento River (CDFW 2016).	No further actions are recommended.
silver-haired bat *Lasionycteris noctivagans*	WBWG Medium	Primarily a forest dweller, feeding over streams, ponds, and open brushy areas. Summer habitats include a variety of forest and woodland types, both coastal and montane. Roosts in hollow trees, snags, buildings, rock crevices, caves, and under bark.	**Unlikely.** Tree cover within the Study Area is limited. The nearest documented occurrence with a specific location is located approximately 8.3 miles to the west, in association with riparian forest along the Sacramento River (CDFW 2016).	No further actions are recommended.
western red bat *Lasiurus blossevillii*	SSC, WBWG High	Highly migratory and is typically solitary, roosting primarily in the foliage of trees or shrubs. It is associated with broad-leaved tree species including cottonwoods, sycamores, alders, and maples. Day roosts are commonly in edge habitats adjacent to streams or open fields, in orchards, and sometimes in urban areas.	**Unlikely.** Tree cover within the Study Area is limited. The nearest documented occurrence with a specific location is located approximately 8.3 miles to the west, in association the Sacramento River (CDFW 2016).	No further actions are recommended.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE**	CONCLUSIONS/ RECOMMENDATIONS
hoary bat *Lasiurus cinereus*	WBWG Medium	Prefers open forested habitats or habitat mosaics, with access to trees for cover and open areas or habitat edges for feeding. Roosts in dense foliage of medium to large trees. Feeds primarily on moths. Requires water.	**Unlikely.** Tree cover within the Study Area is limited. The nearest documented occurrence with a specific location is located approximately 8.3 miles to the west, in association with riparian forest along the Sacramento River (CDFW 2016).	No further actions are recommended.
American badger *Taxidea taxus*	SSC	Most abundant in drier open stages of most shrub, forest, and herbaceous habitats, with friable soils. Requires friable soils and open, uncultivated ground. Preys on burrowing rodents.	**Unlikely.** No badger-sized burrows or analogous potential refugia were observed within the Study Area during the site visit; no CNDDB occurrences in the vicinity (CDFW 2016).	No further actions are recommended.
Birds				
tricolored blackbird *Agelaius tricolor*	SC, SSC, BCC, RP	Nearly endemic to California, where it is most numerous in the Central Valley and vicinity. Highly colonial, nesting in dense aggregations over or near freshwater in emergent growth or riparian thickets. Also uses flooded agricultural fields. Abundant insect prey near breeding areas essential.	**Unlikely.** Although the nearest documented nesting occurrence is located approximately 1.0 mile to the north (CDFW 2016), Emergent vegetation within the Butte Creek Diversion Channel is too spare and short overall to provide suitable nesting habitat.	No further actions are recommended.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE**	CONCLUSIONS/ RECOMMENDATIONS
grasshopper sparrow *Ammodramus savannarum*	SSC	Summer resident. Breeds in open grasslands, generally with low- to moderate-height grasses and scattered shrubs. Well-hidden nests are placed on the ground.	**Moderate Potential.** Grassland within the Study Area provides suitable nesting habitat for this species.	If ground disturbance or vegetation removal occurs during the nesting bird season (Feb. 1 to Aug. 31), a pre-construction nesting bird survey should be conducted and active nest sites avoided.
great egret *Ardea alba*	none (breeding sites protected by CDFW)	Year-round resident. Nests colonially or semi-colonially, usually in trees, occasionally on the ground or elevated platforms. Breeding sites usually in close proximity to foraging areas: marshes, lake margins, tidal flats, and rivers. Forages primarily on fishes and other aquatic prey, also smaller terrestrial vertebrates.	**Unlikely.** Aquatic habitats within and near the Study Area presumably lack prey resources to support nesting colonies of this species. Nearest documented breeding occurrences are in association with the Sacramento River (CDFW 2016).	No further actions are recommended.
great blue heron *Ardea herodias*	none (breeding sites protected by CDFW)	Year-round resident. Nests colonially or semi-colonially in tall trees and on cliffs, also sequested terrestrial substrates. Breeding sites usually in close proximity to foraging areas: marshes, lake margins, tidal flats, and rivers. Forages primarily on fishes and other aquatic prey, also smaller terrestrial vertebrates.	**Unlikely.** Aquatic habitats within and near the Study Area presumably lack prey resources to support nesting colonies of this species. Nearest documented breeding occurrences are in association with the Sacramento River (CDFW 2016).	No further actions are recommended.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE**	CONCLUSIONS/ RECOMMENDATIONS
short-eared owl *Asio flammeus*	SSC	Occurs year-round, but primarily as a winter visitor; breeding very restricted in most of California. Found in open, treeless areas (e.g., marshes, grasslands) with elevated sites for foraging perches and dense herbaceous vegetation for roosting and nesting. Preys mostly on small mammals, particularly voles.	**Unlikely.** The Study Area is outside of this species known current breeding range (Shuford and Gardali), and is too disturbed to support wintering.	No further actions are recommended.
long-eared owl *Asio otus*	SSC	Occurs year-round in California. Nests in trees in a variety of woodland habitats, including oak and riparian, as well as tree groves. Requires adjacent open land with rodents for foraging, and the presence of old nests of larger birds (hawks, crows, magpies) for breeding.	**Unlikely.** Tree cover within the Study Area is too limited to provide typical habitat for this species; no observations in the vicinity (eBird 2016).	No further actions are recommended.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE**	CONCLUSIONS/ RECOMMENDATIONS
burrowing owl *Athene cunicularia*	SSC, BCC	Year-round resident and winter visitor. Occurs in open, dry grasslands and scrub habitats with low-growing vegetation, perches and abundant mammal burrows. Preys upon insects and small vertebrates. Nests and roosts in old mammal burrows, most commonly those of ground squirrels.	**Unlikely.** Open grassland within the Study Area provides ostensibly suitable year-round habitat for this species. The nearest documented CNDDB occurrence is located approximately 0.3 mile east of the Study Area (dating from 2008; CDFW 2016), and nearby observations have also been reported on eBird (2016). However, no ground squirrel burrows or analogous refugia suitable for this species were observed during the site visit.	No further actions are recommended.
oak titmouse *Baeolophus inornatus*	BCC	Occurs year-round in woodland and savannah habitats where oaks are present, as well as riparian areas. Nests in tree cavities.	**High Potential.** Oaks and riparian trees provide year-round habitat. There are numerous recent observations of this species within 1.0 mile of the Study Area (eBird 2016).	If tree removal or trimming occurs during the nesting bird season (Feb. 1 to Aug. 31), a pre-construction nesting bird survey should be conducted and active nest sites avoided.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE**	CONCLUSIONS/ RECOMMENDATIONS
Swainson's hawk *Buteo swainsoni*	ST, BCC	Summer resident in California's Central Valley. Nests in tree groves and isolated trees in riparian and agricultural areas, including near buildings. Forages in grasslands and scrub habitats as well as agricultural fields, especially alfalfa. Preys on arthropods year-round as well as smaller vertebrates during the breeding season.	**Unlikely.** Although the Study Area contains trees that may be suitable for nesting, all local nesting occurrences in CNDDB are located a minimum of 2.9 miles west (including north- and south-west) of the Study Area, on the Sacramento Valley floor (CDFW 2016). May occasionally pass through the area.	No further actions are recommended.
western yellow-billed cuckoo *Coccyzus americanus occidentalis*	FT, SE, BCC, FS sensitive	Summer resident, breeding in dense riparian forests and jungles, typically with early successional vegetation present. Utilizes densely-foliaged deciduous trees and shrubs. Eats mostly caterpillars. Current breeding distribution within California very restricted.	**No Potential.** The Study Area lacks riparian forest; all modern local nesting by this species occurs in association with the Sacramento River (CDFW 2016).	No further actions are recommended.
white-tailed kite *Elanus leucurus*	CFP	Year-round resident in coastal and valley lowlands with scattered trees and large shrubs, including grasslands, marshes and agricultural areas. Nests in trees, of which the type and setting are highly variable. Preys on small mammals and other vertebrates.	**High Potential.** The Study Area provides open grassland for foraging and trees for nesting. This species has been recently observed in adjacent areas (eBird 2016).	Pre-construction nesting bird surveys and avoidance of active nests, if vegetation removal and/or ground disturbance occurs during the nesting bird season.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE**	CONCLUSIONS/ RECOMMENDATIONS
American peregrine falcon *Falco peregrinus anatum*	FD, SD, CFP, BCC	Year-round resident and winter visitor. Occurs in a wide variety of habitats, though often associated with coasts, bays, marshes and other bodies of water. Nests on protected cliffs and also on man-made structures including buildings and bridges. Preys on birds, especially waterbirds. Forages widely.	**Unlikely.** The Study Area does not provide suitable nesting substrates for this species. May occasionally forage within the Study Area, particularly during the non-breeding period.	No further actions are recommended.
bald eagle *Haliaeetus leucocephalus*	FD, SE, CFP, BCC	Occurs year-round in California, but primarily a winter visitor. Nests in large trees in the vicinity of larger lakes, reservoirs and rivers. Wintering habitat somewhat more variable but usually features large concentrations of waterfowl or fish.	**Unlikely (nesting).** The Study Area lacks sufficient aquatic resources to support nesting. Individuals documented to winter in the vicinity, within 1.0 mile to the south (eBird 2016). May forage or roost within the Study Area during the non-breeding period, particularly when standing/flowing water is at a maximum.	No further actions are recommended.
loggerhead shrike *Lanius ludovicianus*	SSC, BCC	Year-round resident in open woodland, grassland, savannah and scrub. Prefers areas with sparse shrubs, trees, posts, and other suitable perches for foraging. Preys upon large insects and small vertebrates. Nests are well-concealed in densely-foliaged shrubs or trees.	**Moderate Potential.** The Study Area provides open grassland areas with scattered trees and shrubs. There are recent observations of this species within 5.0 miles (eBird 2016).	Pre-construction nesting bird surveys and avoidance of active nests, if vegetation removal and/or ground disturbance occurs during the nesting bird season.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE**	CONCLUSIONS/ RECOMMENDATIONS
California black rail *Laterallus jamaicensis coturniculus*	ST, CFP	Year-round resident in marshes (saline to freshwater) with dense vegetation within four inches of the ground. Prefers larger, undisturbed marshes that have an extensive upper zone and are close to a major water source. Extremely secretive and cryptic. Isolated populations exist in the northern Sierra Nevada foothills.	**No Potential.** The Study Area does not provide the required dense, extensive marsh vegetation. The nearest documented occurrences are located a minimum of 5.0 miles to the east, in higher-elevation areas with more suitable habitat.	No further actions are recommended.
yellow-billed magpie *Pica nuttalli*	BCC	Endemic to the Central Valley and central Coast Ranges. Favors open park-like areas with expanses of open ground, including oak savannah, orchards, and along stream courses. Large, spherical stick nests are placed in trees.	**Moderate Potential.** The Study Area provides open areas for foraging and trees for nesting. This species has been recently observed in nearby areas (eBird 2016).	If tree removal or trimming occurs during the nesting bird season (Feb. 1 to Aug. 31), a pre-construction nesting bird survey should be conducted and active nest sites avoided.
Nuttall's woodpecker *Picoides nuttallii*	BCC	Year-round resident in lowland woodlands throughout much of California west of the Sierra Nevada. Typical habitat is dominated by oaks; also occurs in riparian woodland. Nests in tree cavities.	**Moderate Potential.** Oaks and riparian trees provide year-round habitat.	If tree removal or trimming occurs during the nesting bird season (Feb. 1 to Aug. 31), a pre-construction nesting bird survey should be conducted and active nest sites avoided.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE**	CONCLUSIONS/ RECOMMENDATIONS
bank swallow *Riparia riparia*	ST	Summer resident in riparian and other lowland habitats near rivers, lakes and the ocean in northern California. Nests colonially in excavated burrows on vertical cliffs and bank cuts (natural and manmade) with fine-textured soils. Historical nesting range in southern and central areas of California has been eliminated by habitat loss. Currently known to breed in Siskiyou, Shasta, and Lassen Cos., portions of the north coast, and along Sacramento River from Shasta Co. south to Yolo Co.	**Unlikely.** Potential nesting habitat within the Study Area is marginal at best; all recent documented nesting occurrences in the general vicinity are in direct association with the Sacramento River (CDFW 2016).	No further actions are recommended.
yellow warbler *Setophaga (Dendroica) petechia brewsteri*	SSC, BCC	Summer resident throughout much of California. Breeds in riparian vegetation close to water, including streams and wet meadows. Microhabitat used for nesting variable, but dense willow growth is typical. Occurs widely on migration.	**Unlikely.** Riparian habitat within the Study Area lacks willows and is not suitably dense to support this species. There are many local, recent observations of this species in eBird (2016), all of them outside of the nesting period.	No further actions are recommended.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE**	CONCLUSIONS/ RECOMMENDATIONS
least bell's vireo *Vireo bellii pusillus*	FE, SE	Summer resident, though nearly entirely extirpated in northern California. Breeds in riparian habitat along perennial or intermittent rivers and creeks; prefers a multi-tiered canopy with dense early successional vegetation in the understory. Willows, mulefat and other understory species are typically used for nesting.	**No Potential.** Riparian habitat within the Study Area is not suitably dense and extensive to support nesting. The only documented nesting occurrence in the general vicinity (approximately 11.0 miles to the south) dates from 1906 (CDFW 2016).	No further actions are recommended.
Reptiles and Amphibians				
Pacific (western) pond turtle *Actinemys marmorata*	SSC	A thoroughly aquatic turtle of ponds, marshes, rivers, streams and irrigation ditches with aquatic vegetation. Require basking sites such as partially submerged logs, vegetation mats, or open mud banks, and suitable upland habitat (sandy banks or grassy open fields) for egg-laying.	**Unlikely.** Although there are documented occurrences within 1.0 mile of the Study Area (CDFW 2016), these are in association with perennial ponds. The Butte Creek Diversion channel is presumably too ephemeral and limited in extent to support this species.	No further actions are recommended.
Blainville's (coast) horned lizard *Phrynosoma blainvillii (coronatum)*	SSC	Frequents a wide variety of habitats, most common in lowlands along sandy washes with scattered low bushes. Prefers friable, rocky, or shallow sandy soils for burial; open areas for sunning; bushes for cover; and an abundant supply of ants and other insects.	**Unlikely.** Sandy wash areas within the Study Area provide some suitable habitat elements, but are limited and disturbed. The nearest documented occurrence in CNDDB is	No further actions are recommended.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE**	CONCLUSIONS/ RECOMMENDATIONS
			located approximately 6.7 miles east of the Study Area at higher elevation, and dates from 1933 (CDFW 2016).	
foothill yellow-legged frog *Rana boylii*	SSC	Found in or near rocky streams in a variety of habitats. Prefers partly-shaded, shallow streams and riffles with a rocky substrate; requires at least some cobble-sized substrate for egg-laying. Needs at least 15 weeks to attain metamorphosis. Feeds on both aquatic and terrestrial invertebrates. Highly aquatic.	**Unlikely.** While this species is present in perennial foothill streams at higher-elevations to the east, within the Study Area the Butte Creek Diversion channel is too ephemeral and disturbed to support occupancy.	No further actions are recommended.
western spadefoot *Spea (*formerly *Scaphiopus) hammondii*	SSC	Occurs primarily in grasslands, but can be found in hardwood woodlands, scrublands, and other habitats. Shallow temporary pools formed by winter rains are essential for breeding. Most of non-breeding period spent underground in burrows.	**Moderate Potential.** Vernal pools within the Study Area provide potential breeding habitat, with gopher burrows and friable soil also present. There are recent documented occurrences within 4.4 miles to the north, at a similar elevation range to that of the Study Area (CDFW 2016).	Presence/absence surveys should be conducted following heavy rains and inundation of on-site vernal pools and other seasonal water features.
giant garter snake *Thamnophis gigas*	FT, ST, RP	Endemic to California's Central Valley. Prefers freshwater marsh and low gradient streams with dense emergent vegetation. Has adapted to drainage canals	**No Potential.** The Study Area lacks densely-vegetated perennial waters; all documented	No further actions are recommended.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE**	CONCLUSIONS/ RECOMMENDATIONS
		and irrigation ditches. This is the most aquatic of the garter snakes in California.	occurrences in the general vicinity at least 6.7 miles to the west or southwest, on the Sacramento Valley floor (CDFW 2016).	
Fishes				
steelhead - central valley DPS *Oncorhynchus mykiss irideus*	FT, NMFS	The Central Valley DPS includes all naturally spawned populations (and their progeny) in the Sacramento and San Joaquin Rivers and their tributaries, excluding San Francisco and San Pablo Bays and their tributaries. Preferred spawning habitat is in cool to cold perennial streams with high dissolved oxygen levels and fast flowing water. Abundant riffle areas for spawning, and deeper pools with sufficient riparian cover for rearing, are necessary for successful breeding.	**No Potential.** The Butte Creek Diversion channel within the Study Area is isolated from Butte Creek proper by barriers that are impassable to anadromous fishes.	No further actions are recommended.
Chinook salmon - central valley spring-run ESU *Oncorhynchus tshawytscha*	FT,ST	Occurs in the Feather River and the Sacramento River and its tributaries, including Butte, Mill, Deer, Antelope and Beegum Creeks. Adults enter the Sacramento River from late March through September. Adults migrate upstream to spawn in cool, clear, well-oxygenated streams from mid-August through early October.	**No Potential.** The Butte Creek Diversion channel within the Study Area is isolated from Butte Creek proper by barriers that are impassable to anadromous fishes.	No further actions are recommended.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE**	CONCLUSIONS/ RECOMMENDATIONS
		Juveniles migrate soon after emergence as young-of-the-year, or remain in freshwater and migrate as yearlings.		
Invertebrates				
Antioch Dunes anthicid beetle *Anthicus antiochensis*	SSI	Associated with unvegetated, loose sandy soils. Apparently extirpated from the type locality at Antioch Dunes. Also known from at several sites along the Sacramento River in Glenn, Tehama, Shasta, and Solano Counties, and from one site at Nicolas on the Feather River in Sutter County.	**Unlikely.** The Study Area is completely isolated from the nearest documented occurrence along the Sacramento River (CDFW 2016).	No further actions are recommended.
Sacramento anthicid beetle *Anthicus sacramento*	SSI	Known from several locations along the Sacramento and San Joaquin rivers, from Shasta to San Joaquin counties, and at one site along the Feather River at Nicolaus. Inhabits sand slipfaces among bamboo and willow, interior sand dunes, and sand bars; has also been found in dredge spoil heaps.	**Unlikely.** The Study Area is completely isolated from the nearest documented occurrence along the Sacramento River (CDFW 2016).	No further actions are recommended.
Conservancy fairy shrimp *Branchinecta conservatio*	FE, SSI, RP	Endemic to the grasslands of the northern two-thirds of the Central Valley; found in large, turbid seasonal pools. Occupied pools typically located in swales formed by old, braided alluvium; and filled by winter/spring rains,	**Unlikely.** Vernal pools within the Study Area appear to be relatively small and short-lived. The nearest documented occurrences are located a minimum of 8.4 miles	No further actions are recommended.

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE**	CONCLUSIONS/ RECOMMENDATIONS
		lasting until June.	to the northwest (CDFW 2016).	
vernal pool fairy shrimp *Branchinecta lynchi*	FT, SSI, RP	Endemic to the grasslands of the Central Valley, and central and southern Coast Ranges. Occupies seasonal rain-filled pools. Usually occurs in small, clear-water sandstone-depression pools and grassed swale, earth slump, or basalt-flow depression pools.	**High Potential.** Vernal pools within the Study Area appear to be relatively small and shorter-lived. There are several documented occurrences at a similar elevation range within 5.0 miles to the north (CDFW 2016).	Protocol-level aquatic (wet-season) surveys should be conducted prior to any ground disturbance; occupied pools should be avoided to the fullest extent feasible. Consultation with the USFWS will presumably be required for any impacts to occupied pools, and compensatory mitigation likely required.
midvalley fairy shrimp *Branchinecta mesovallensis*	SSI	Known only from the Central Valley, primarily its central portions. Typically inhabits short-lived, grass-bottomed vernal pools and other seasonal water features.	**Moderate Potential.** Vernal pools within the Study Area are relatively short-lived and may support this species; the nearest documented occurrence is located approximately 11.8 miles northwest of the Study Area, at a similar elevation range (CDFW 2016).	Protocol-level aquatic (wet-season) surveys should be conducted prior to any ground disturbance; occupied pools should be avoided to the fullest extent feasible.
valley elderberry longhorn beetle *Desmocerus californicus dimorphus*	FT, SSI, RP	Occurs only in California's Central Valley, in association with blue elderberry (*Sambucus* spp.). Prefers to lay eggs in elderberry 2 to 8 inches in diameter; some preference shown for "stressed" elderberry.	**Moderate Potential.** Elderberry shrubs within the Study Area are suitable for occupation by this species. There are documented occurrences within 2.6 miles to the north (in	Elderberry shrubs should be avoided to the extent feasible. If avoidance is not possible; a qualified biologist should survey all elderberries to be impacted to determine presence/absence of the

SPECIES	STATUS*	HABITAT	POTENTIAL FOR OCCURRENCE**	CONCLUSIONS/ RECOMMENDATIONS
			association with Big Chico Creek), and within 2.0 miles to the south (in association with Butte Creek; CDFW 2016).	species. If present, consultation with the USFWS would be necessary.
vernal pool tadpole shrimp *Lepidurus packardi*	FE, SSI, RP	Inhabits vernal pools and swales in the Sacramento Valley containing clear to highly turbid water. Pools commonly found in grass bottomed swales of unplowed grasslands. Some pools are mud-bottomed and highly turbid.	**High Potential.** Vernal pools and other seasonal features within the Study Area provide suitable habitat for this species. There are several documented occurrences at a similar elevation range within 5.0 miles to the north, the nearest being 0.6 mile away (CDFW 2016).	Protocol-level aquatic (wet-season) surveys should be conducted prior to any ground disturbance; occupied pools should be avoided to the fullest extent feasible. Consultation with the USFWS will presumably be required for any impacts to occupied pools, and compensatory mitigation likely required.
California linderiella *Linderiella occidentalis*	SSI	Seasonal pools in unplowed grasslands with old alluvial soils underlain by hardpan or in sandstone depressions. Water in occupied pools typically has very low alkalinity and conductivity.	**Moderate Potential.** Vernal pools within the Study Area may support this species; the nearest documented occurrence is located approximately 4.1 miles north of the Study Area, at a similar elevation range (CDFW 2016).	Protocol-level aquatic (wet-season) surveys should be conducted prior to any ground disturbance; occupied pools should be avoided to the fullest extent feasible.

*** Key to status codes:**

BCC	U.S. Fish & Wildlife Service (USFWS) Birds of Conservation Concern
CFP	California Department of Fish and Wildlife (CDFW) Fully Protected Animal
FC	Federal Candidate
FE	Federal Endangered

FT	Federal Threatened
RP	Sensitive species included in a USFWS Recovery Plan or Draft Recovery Plan
SE	State Endangered
SC	State Candidate
SSC	California Department of Fish and Wildlife (CDFW) Species of Special Concern
SSI	California Department of Fish and Wildlife (CDFW) Special Status Invertebrate
ST	State Threatened
Rank 1A	California Native Plant Society (CNPS) Rank 1A: Plants presumed extirpated in California and rare or extinct elsewhere
Rank 1B.1	California Native Plant Society (CNPS) Rank 1B.1: Plants rare, threatened or endangered in California and elsewhere (seriously threatened in California)
Rank 1B.2	California Native Plant Society (CNPS) Rank 1B.2: Plants rare, threatened, or endangered in California and elsewhere (moderately threatened in California)
Rank 2B.2	California Native Plant Society (CNPS) Rank 2B.2: Plants rare, threatened, or endangered in California, but more common elsewhere (moderately threatened in California)
Rank 4.3	California Rare Plant Rank 4.3: Plants of Limited Distribution - A Watch List (not very threatened in California)
WBWG	Western Bat Working Group High or Medium Priority Species

****Potential species occurrence definitions:**

Present. Species was observed on the site during site visits or has been recorded (i.e. CNDDB, other reports) on the site recently.

High Potential. All of the habitat components meeting the species requirements are present and/or most of the habitat on or adjacent to the site is highly suitable. The species has a high probability of being found on the site.

Moderate Potential. Some of the habitat components meeting the species requirements are present, and/or only some of the habitat on or adjacent to the site is unsuitable. The species has a moderate probability of being found on the site.

Unlikely. Few of the habitat components meeting the species requirements are present, and/or the majority of habitat on and adjacent to the site is unsuitable or of very poor quality. The species has a low probability of being found on the site.

No Potential. Habitat on and adjacent to the site is clearly unsuitable for the species requirements (foraging, breeding, cover, substrate, elevation, hydrology, plant community, site history, disturbance regime).

APPENDIX C

REPRESENTATIVE SITE PHOTOGRAPHS

Berm road in the Study Area mapped as developed.

Berm road in the Study Area mapped as developed. Annual grassland visible in the background.

Annual grassland in the Study Area dominated by slim oat, Italian ryegrass, and medusa head.

Annual grassland in the southern region of the Study Area dominated by curly dock , Italian ryegrass, and medusa head.

Vernal pool in the northern region of the Study Area.

Vernal pool in the southern region of the Study Area . This feature is larger ,deeper , and has a longer hydroperiod than other features mapped as vernal pools in the Study Area.

Area to the left is mapped as a vernal swale feature. Vernal swale boundary mapped based on slight change in topography and shift to upland-dominated species.

Vernal swale mapped within the Study Area with coyote thistle, barley, and Italian ryegrass.

Freshwater marsh dominated by cattail visible in the central region of the photograph. Annual grassland visible to the left and the developed berm road is visible to the right.

Freshwater marsh dominated by cattail.

Intermittent stream (un-named tributary to the Butte Creek Diversion Channel) in the Study Area.

Intermittent stream (Butte Creek Diversion Channel) in the southern region of the Study Area.

Man-made drainage ditch in the Study Area.

Man-made drainage ditch in the Study Area.

Riparian oak woodland in the southeast region of the Study Area.

Riparian oak woodland surrounded by annual grassland in the southeast region of the Study Area.

Mixed riparian woodland adjacent to the Butte Creek Diversion Channel in the southern region of the Study Area.

Mixed riparian woodland adjacent to the Butte Creek Diversion Channel in the southern region of the Study Area.

APPENDIX D

AQUATIC RESOURCES DELINEATION REPORT AND VERIFICATION LETTER

Aquatic Resources Delineation Report

Stonegate Property ±320-Acre Site
Chico, Butte County, California

Prepared for:

U.S. Army Corps of Engineers

Contracted by:

Epick Homes, Inc.

June 17, 2016

Revised July 13, 2016

Revised May 25, 2017

Prepared by:

FOOTHILL ASSOCIATES

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Acronyms and Abbreviations

CWA	Clean Water Act
Corps	U.S. Army Corps of Engineers
FAC	Facultative plants
FACU	Facultative upland plants
FACW	Facultative wetland plants
GIS	Geographic Information System
GPS	Global Positioning System
MCV	*A Manual of California Vegetation*
MSL	mean sea level
NAD	North American Datum
NRCS	Natural Resource Conservation Service
NWI	National Wetland Inventory
NWPL	National Wetland Plant Inventory
OBL	Obligate wetland plants
OHWM	Ordinary High Water Mark
PEM	palustrine emergent
PFO	palustrine forested
PSS	palustrine scrub-shrub
RWQCB	Regional Water Quality Control Board
ROW	right-of-way
SR	State Route
UPL	upland
U.S.	United States
USDA	U.S. Department of Agriculture
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
UTM	Universal Transverse Mercator coordinate system
WRIA	Water Resource Inventory Area

Executive Summary

This report presents the results of a delineation of the aquatic resources conducted within the approximate 320-acre Stonegate Property (Site), located in the City of Chico, Butte County, California. Aquatic resources were identified and delineated following the technical guidelines provided in the *Corps of Engineers Wetlands Delineation Manual* (Corps Manual) (Environmental Laboratory 1987) and the U.S. Army Corps of Engineers (Corps) *Arid West Regional Supplement* (Supplement) (Corps 2008). The Supplement presents wetland indicators, delineation guidance, and other information that is specific to the Arid West Region. The jurisdictional boundaries for other waters of the U.S. were identified based on the presence of an ordinary high water mark (OHWM), as defined in 33 C.F.R. 328.3(e).

A total of 20.19 acres of potential waters of the United States and non-jurisdictional waters occur within the Site. Potentially jurisdictional waters include: 4.02 acres of depressional seasonal wetland, 1.24 acres of depressional perennial marsh, 3.83 acres of vernal pool, 4.74 acres of riverine seasonal wetland, 0.30 acres of ephemeral drainage, 0.48 acres of intermittent drainage, 5.12 acres of perennial drainage, 0.39 acre of ditch/canal, and 0.07 acre of excavated pit.

1.0 INTRODUCTION

The purpose of this report is to present the results of a formal delineation of jurisdictional waters of the United States (U.S.), including wetlands, on the ±320-acre Stonegate Property, located within the City of Chico, Butte County, California (**Figure 1**). This report was prepared in accordance with the *Minimum Standards for Acceptance of Aquatic Resources Delineation Reports* (Corps 2016) and presents the results of Foothill Associates' review of available literature, aerial photographs, soil surveys (**Figure 2**), and fieldwork within the Site. The delineation methodology is described in this report, followed by the results of the delineation. Contact information and directions to the Site are provided in **Appendix A**. Site access notification information is provided in **Appendix B**. Details regarding soils, topography, hydrology, and vegetation are summarized herein and routine wetland determination data forms are provided in **Appendix C**. A detailed delineation map that illustrates potential waters of the U.S. within the Site is included in **Figure 3**.

2.0 REGULATORY BACKGROUND

The Corps regulates discharge of dredged or fill material into waters of the United States under Section 404 of the Clean Water Act (CWA). "Discharges of fill material" is defined as the addition of fill material into waters of the U.S., including, but not limited to the following: placement of fill that is necessary for the construction of any structure, or impoundment requiring rock, sand, dirt, or other material for its construction; site-development fills for recreational, industrial, commercial, residential, and other uses; causeways or road fills; fill for intake and outfall pipes; and subaqueous utility lines [33 C.F.R. §328.2(f)].

Section 401 of the CWA (33 U.S.C. 1341) requires any applicant for a Federal license or permit to conduct any activity that may result in a discharge of a pollutant into waters of the United States to obtain a certification that the discharge will comply with the applicable effluent limitations and water quality standards.

Section 404 of the CWA requires approval prior to discharging dredged or fill material into the waters of the United States. Typical activities requiring Section 404 permits are:

- Depositing of fill or dredged material in waters of the U.S. or adjacent wetlands;
- Site development fill for residential, commercial, or recreational developments;
- Construction of revetments, groins, breakwaters, levees, dams, dikes, and weirs; and
- Placement of riprap and road fills.

Section 10 of the Rivers and Harbors Act of 1899 requires approval prior to the accomplishment of any work in or over navigable waters of the United States, or which affects the course, location, condition, or capacity of such waters. Typical activities requiring Section 10 permits are:

- Construction of piers, wharves, bulkheads, dolphins, marinas, ramps, floats intake structures, and cable or pipeline crossings; and
- Dredging and excavation.

Any person, firm, or agency (including Federal, state, and local government agencies) planning to work in navigable waters of the United States, or dump or place dredged or fill material in waters of the United States, must first obtain a permit from the Corps. Permits, licenses, variances, or similar authorization may also be required by other federal, State, and local statutes.

2.1. Waters of the United States

Waters of the United States were defined in a Federal Rule published on June 29, 2015 and which went into effect on August 28, 2015. The term "waters of the United States" includes (a) traditional navigable waters, (b) interstate waters, (c) territorial seas, (d) impoundments of jurisdictional waters, and (e) their tributaries. Tributaries must have a bed and bank and

ordinary high water mark and may have ephemeral, intermittent, or perennial flow. Additionally, the rule defines "adjacent waters" as jurisdictional due to their significant nexus with a jurisdictional water in class (a) through (e). Adjacent waters include any waters located in whole or part within 100 feet of a jurisdictional water in class (a) through (e); any waters located within the 100-year floodplain and within 1,500 feet of a jurisdictional water in class (a) through (e); and any waters within 1,500 feet (f) the ordinary high water mark of a traditionally navigable water, territorial sea, or the Great Lakes. Five classes of waters, prairie potholes, Carolina bays and Delmarva bays, pocosins, western vernal pools, and Texas coastal prairie wetlands, were determined to be jurisdictional due to their nexus with jurisdictional waters when considered in combination with similarly situated waters. Other waters not previously defined as jurisdictional that are located within the 100-year floodplain of a traditionally navigable water, interstate water, or territorial sea or are within 4,000 feet of the ordinary high water mark of a jurisdictional water in class (a) through (e) are evaluated on a case-specific basis.

The rule specifically exempts the following types of features from Federal jurisdiction: waste treatment systems, including ponds or lagoons designed to meet the requirements of the Clean Water Act, prior converted cropland, ditches with ephemeral or intermittent flow that are not a relocated tributary, excavated in a tributary, or drain wetlands, ditches that do not flow directly or indirectly into a jurisdictional water, artificially irrigated areas that would revert to dry land should irrigation cease, artificial constructed lakes, ponds, reflecting pools, or swimming pools constructed in uplands, water filled depressions created in uplands incidental to mining or construction activity, erosional features, puddles, and stormwater control features and wastewater recycling structures constructed in uplands [33 C.F.R. § 328.3].

The new rule was challenged in court and on October 9, 2015 the U.S. Court of Appeals for the Sixth Circuit stayed the new rule nationwide. Until a final ruling is made, the Corps will continue to operate pursuant to the Supreme Court's decision in the consolidated cases *Rapanos v. United States* and *Carabell v. United States* (126 S. Ct. 2208) and agency guidance subsequent to this decision. Under these rules, the Corps will assert jurisdiction over wetlands adjacent to traditional navigable waters, relatively permanent non-navigable tributaries (i.e., waters that have a continuous flow at least three months out of the year), and wetlands that abut relatively permanent tributaries. The Corps will determine jurisdiction over waters that are non-navigable tributaries that are not relatively permanent, and wetlands adjacent to these tributaries, by making a determination whether such waters "significantly affect the chemical, physical, and biological integrity of other jurisdictional waters more readily understood as "navigable." Finally, the Corps generally does not consider the following to be "waters of the United States": swales or erosional features (e.g., gullies, small washes characterized by low volume, infrequent or short duration flow) and ditches "wholly in and draining only uplands…which do not carry a relatively permanent flow of water." Navigable waters of the United States are defined as waters that have been used in the past, are now used, or are susceptible to use as a means to transport interstate or foreign commerce up to the head of navigation.

Section 10 and/or Section 404 permits are required for construction activities in these waters. Boundaries between jurisdictional waters and uplands are determined in a variety of ways depending on which type of water is present. Methods for delineating wetlands and non-tidal waters are described below.

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 C.F.R. §328.3(b)]. Presently, to be a wetland, a site must exhibit positive indicators of three wetland criteria: hydrophytic vegetation, hydric soils, and wetland hydrology existing under the "normal circumstances" for the site.

The lateral regulatory extent of non-tidal waters is determined by delineating the ordinary high water mark (OHWM) [33 C.F.R. §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 C.F.R. §328.3(e)].

3.0 METHODS

3.1. Site-Specific References

Available information pertaining to the natural resources of the region was reviewed. All references reviewed for this delineation are listed in **Section 6.0**. Pertinent site-specific reports and general references utilized for the delineation include the following:

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- U.S. Geological Survey (USGS). 1950. *Chico, California*. 7.5 -minute series topographic quadrangle. U.S. Department of the Interior.

3.2. Research and Field Methodology

This delineation utilized the Corps' 1987 three-parameter (vegetation, hydrology, and soils) methodology to delineate aquatic resources. The Supplement was also used in conjunction with the Corps Manual for applications in the Arid West Region. Where differences in the two documents occur, the Supplement takes precedence over the Corps Manual.

The Arid West Region consists of all or significant portions of 11 states, including California (Corps 2008). This region is differentiated from other surrounding areas by having a predominantly dry climate and long summer dry season. Vegetation characteristics of the Arid West Region include little to no forest cover consisting of mainly annual grasslands, shrublands, hardwood savannas, deciduous woodlands, and pinyon/juniper woodlands. The Arid West Supplement was used on this Site because it is located in the *Mediterranean California* Land Resource Region (LRR C), which is characterized by warm, wet winters and dry summers.

The three-parameter methodology requires the collection of data on soils, vegetation, and hydrology at several locations to establish the jurisdictional boundary of wetlands. Additional methods to identify and delineate other waters of the U.S. (e.g., streams, drainages, lakes) were used as applicable. The method typically used for delineation of non-wetland waters of the U.S. is the delineation of the OHWM. The OHWM was mapped as the top of bank.

A review of historic and recent aerial photographs, topographic maps, and soil survey data was conducted before delineating the Site on February 15, and 23, 2016, March 3, 17, 18, and 30, 2016, April 30, 2016, May 3, 2016 and March 28 and April 21, 2017. The weather during the Site visits ranged from sunny with clear skies to heavy rain. Biologists visually inspected the entire Site and collected representative data at points within potential wetland areas and corresponding uplands. The location of each data point is depicted in **Figure 3** and corresponding routine wetland determination data forms are provided in **Appendix C**.

Correlations were developed between the three parameters (vegetation, hydrology, and soils) to make wetland determinations. Specifically, plots at data point locations were evaluated to determine the composition and identification of dominant plant species. The indicator status of all dominant plant species [as determined by the U.S. Fish and Wildlife Service *National List of Plant Species that Occur in Wetlands: 1988 California (Region 0)*] was applied and evaluated as part of the vegetation assessment portion of the wetland determination process. The plant indicator status includes the following categories:

Obligate wetland plants (OBL):	Occur almost always under natural wetland conditions (estimated probability > 99%).
Facultative wetland plants (FACW):	Usually occur in wetlands, but occasionally found in non-wetlands (67-99%).
Facultative plants (FAC):	Equally likely to occur in wetlands and non-wetlands (34-66%).
Facultative upland plants (FACU):	Usually occur in non-wetlands, but occasionally found in wetlands (1-33%).
Upland (UPL):	Occur almost always under natural conditions in non-wetlands (>99%); may occur in wetlands in other regions.

The absolute cover was estimated for each vegetation stratum; these strata include tree, sapling/shrub, herb, and woody vine. Species that are dominant in more than one stratum were counted multiple times. Some wetland plant communities may fail a test based only on dominant species. Where indicators of hydric soils and hydrology are present and vegetation is not dominated by hydrophytes, the vegetation was re-evaluated with the prevalence index, which takes into consideration all plant species in the community, not just the subset of dominant species.

The onsite soils were examined for hydric indicators. Hydric soil indicators are described in the *Field Indicators of Hydric Soils in the U.S.*, Version 6.0 (USDA, NRCS 2006). If one or more of these indicators are present, then the soil is hydric. Nearly all hydric soils exhibit characteristic morphologies that are caused by anaerobic, reduced soil conditions due to prolonged soil saturation. The most commonly observed indicators are related to iron (Fe) and manganese (Mn) redox concentrations or depletions. Less commonly observed indicators include gleyed matrix and black histic (low amounts of Fn-Mn and accumulations of organic carbon).

Observations were made and recorded for both primary and secondary wetland hydrology indicators, if present. Without monitoring or direct observation of inundation/saturation, indirect indicators of wetland hydrology are typically used and include primary indicators such as water marks, drift lines, and sediment deposits, or secondary indicators such as crayfish burrows or the FAC-neutral test. The Site was visited during the wet season, so saturation and inundation were the most commonly observed hydrologic indicators.

3.3. GPS Data Integration

Boundaries of wetlands and other waters of the U.S. within the Site were surveyed and mapped with a Trimble GeoXT Global Positioning System (GPS) hand-held unit. This is a mapping-grade GPS unit capable of real-time differential correction and sub-meter accuracy. The GPS data were downloaded from the unit and differentially corrected utilizing Trimble Pathfinder Office software and appropriate base station data, and then converted to ESRI® shape file format. Data are typically exported to the Geographic Information System (GIS) software in the State Plane coordinate system (NAD 83) with units as "survey feet." Within the GIS, data are edited and linear features are built into polygons using recorded width information. All wetland shape files are merged to create a single wetland file with calculated acreages. These results are presented in **Figure 3**.

4.0 RESULTS

4.1. Site Location and Land Use

4.1.1. Site Location

The ±320-acre Site is located in eastern Butte County approximately 0.64 miles east of California State Route 99. The Site is bordered by Skyway Avenue to the southeast, a vacant parcel comprised of non-native annual grassland to the southwest, residential development to the west, East 20th Street to the northwest, Doe Mill Road to the northeast, and a paved bike path to the east. The Site is located within portions of Sections 31 and 32 of Township 22 North and Range 2 East on the USGS *Chico, California* 7.5-minute quadrangle map. The approximate location of the Site is 39° 43' 12.325'' North, 121° 47' 1.669'' West (**Figure 1**).

4.1.2. Land Use

The majority of the Site is comprised of non-native annual grassland. The Site does not appear to have been grazed in over ten years. Local land uses surrounding the Site include commercial development to the south, residential development to the north and west, and non-native annual grassland to the east beyond the paved bike path.

4.1.3. Site History

The soils within the Site appear to support wetlands based on a review of the August 1998 aerial photography (GoogleEarth 2016).

4.2. Physical Features

4.2.1. Soils

The Natural Resource Conservation Service (NRCS) has identified and mapped five soils occurring within the Site (**Figure 2**): **Clearhayes-Hamslough Complex, 0 to 2 Percent Slopes**, **Doemill-Jokerst Complex, 3 to 8 Percent Slopes**, **Redsluff Gravelly Loam, 0 to 2 Percent Slopes**, **Redtough-Redswale Complex, 0 to 2 Percent Slopes**, and **WaFap-Hamslough Complex, 0 to 2 Percent Slopes**. The general characteristics and properties associated with these soils are described below (USDA, NRCS, 2016a).

- **(675) Clearhayes-Hamslough Complex, 0 to 2 Percent Slopes**: This soil unit is a sandy and gravelly clay loam found on toeslopes and treads on strath terraces. The parent material for this soil unit is fine-loamy alluvium derived from volcanic rock over gravelly alluvium derived from andesite. This soil unit is somewhat poorly drained with a high runoff class. The hydric soils list for the Butte County area identifies the Hamslough, clay, Anita, gravelly duripan, and unnamed, frequent long ponding soil components of this soil type as being hydric within strath terraces (USDA, NRCS, 2016b).
- **(615) Doemill-Jokerst Complex, 3 to 8 Percent Slopes**: This soil unit is a gravely loam somewhat poorly drained with a very high runoff class formed in residuum from volcanic mudflow breccia. The soil unit is found on mounds or convex areas on ridgetops

and side slopes, and experiences frequent long ponding. The vegetation in uncultivated areas consists of annual grasses and forbs. The hydric soils list for Butte County area identifies unnamed, frequent long ponding soil component of this soil type as being hydric within ridges (USDA, NRCS, 2016b).

- **(300) Redsluff Gravelly Loam, 0 to 2 Percent Slopes**: This soil unit occurs on low terraces on the eastside of the northern Sacramento Valley at elevations between 175 to 400 feet above mean sea level (MSL). The Redsluff gravelly loam is a moderately drained soil derived for various rock sources. Water permeability is moderately slow and available water capacity is moderate. The hydric soils list for the Butte County area identifies the Anita, gravelly duripan component of this soil type as being hydric within fan terraces (USDA, NRCS, 2016b).
- **(302) Redtough-Redswale Complex, 0 to 2 Percent Slopes**: This soil unit consists of somewhat poorly drained loamy alluvium over cemented cobbly and gravelly alluvium derived from volcanic rock. This soil unit has a high runoff class and is usually found on fan terraces. Frequent long ponding occurs within this soil unit. The hydric soils list for the Butte County area identifies the Anita, gravelly duripan and unnamed, frequent long ponding soil components of this soil type as being hydric within fan terraces (USDA, NRCS, 2016b).
- **(301) WaFap-Hamslough Complex, 0 to 2 Percent Slopes**: This soil complex is located on low stream terraces on the eastside of Sacramento Valley at elevations between 150 and 440 feet above MSL. This soil complex was derived from alluvium that developed from volcanic rock. Water permeability is unknown and available water capacity is low. This is a somewhat poorly drained soil complex. The hydric soils list for the Butte County area identifies the Hamslough, clay, Anita, gravelly duripan, and unnamed, frequent long ponding soil components of this soil type as being hydric within fan and stream terraces (USDA, NRCS, 2016b).

4.2.2. Topography

The Site is comprised of gently rolling hills and flat areas. Slopes are dominantly convex and incised by many shallow drainageways and depressions. The slopes throughout the Site range from approximately less than one percent to six percent.

4.2.3. Regional Hydrology

The Site occurs within the Lower Butte Watershed. The Site occurs within Hydrologic Unit Code (HUC): 18020105.

4.2.4. Site-Specific Hydrology

Depressional seasonal wetland, depressional perennial marsh, vernal pool, riverine seasonal wetland, ephemeral drainage, intermittent drainage, perennial drainage, ditch/canal, and excavated pit occur within the Site (**Figure 3**). Diagnostic characteristics of the features mapped on the Site are defined and discussed in **Section 4.4**. The depressional seasonal wetlands, vernal

pools, and depressional perennial marsh are predominantly re-charged by precipitation as well as the natural sheeting effect of rainfall conveyed by surrounding upland topography.

A riverine seasonal wetland flows north to southwest through the Site, is culverted beneath Bruce Road, continues southwest, then exits the Site. The feature continues southwest to commercial development, where it has been channelized. Water flows north to south through the Site through a perennial drainage known as the Little Chico Butte Creek Diversion Channel. Little Chico Butte Creek Diversion Channel is tributary to Butte Creek. Butte Creek is tributary to the Sacramento River. Annual average precipitation is approximately 26 inches and primarily falls between October through April, with the largest amount of rain per month occurring in January (U.S. Climate Data 2016).

4.3. Vegetation

California annual grassland alliance and disturbed areas are the terrestrial vegetation communities present within the Site. Aquatic vegetation assemblages are discussed further in **Section 4.4**. A list of all plants observed within the Site is included in **Appendix D**.

4.3.1. California Annual Grassland

California annual grassland consists of a myriad of native and non-native annual plant species and occurs in a majority of the State of California at elevations from sea level to approximately 4,000 feet above MSL. Composition of this vegetation community varies depending on distribution, geographic location, and land use. Dominant vegetation present within the California annual grassland within the Site includes: soft brome (*Bromus hordeaceus*), oat (*Avena* sp.), mouse-tail grass (*Vulpia myuros*), medusahead (*Elymus caput-medusae*), long-beaked filaree (*Erodium botrys*), barley (*Hordeum murinum*), and royal larkspur (*Delphinium variegatum* ssp. *variegatum*).

4.3.2. Disturbed

Disturbed areas occur within the Site and are comprised of graded fire and levee roads. Minimal vegetation occurs within the disturbed/developed areas includes: medusahead, barley, and soft brome.

4.4. Classification of Aquatic Resources

As previously discussed, aquatic resources are classified into multiple types based on topography, edaphics (soils), vegetation, and hydrologic regime. Primarily, the Corps establishes two distinctions: wetland and non-wetland waters, which are commonly referred to as other waters.

Wetland types delineated within the Site include: depressional seasonal wetland, depressional perennial marsh, vernal pool, and riverine seasonal wetland. Other aquatic resources delineated within the Site include: ephemeral drainage, intermittent drainage, perennial drainage, ditch/canal, and excavated pit. A description of all of the features delineated within the Site is provided in the following sections. Wetland data sheets are included in **Appendix C**. Representative photographs of aquatic features are included in **Appendix E**.

A number of upland swales cross the Site. While some of these features contain wetlands within portions of the swales, the remainder of the features are not included on the aquatic resources delineation map because they neither exhibit an ordinary high water mark nor meet wetland criteria. These features are located at data points 13B, 14B, and 15B on **Figure 3** and in **Appendix C**, but are not further discussed in this report.

4.4.1. Depressional Seasonal Wetland

A total of **4.02 acres** of depressional seasonal wetlands has been delineated within the Site. Depressional seasonal wetlands exhibit a hydrologic regime dominated by saturation, rather than inundation. Depressional seasonal wetlands within the Site occur as depressions within the topography with a hydrologic regime dominated by saturation and capable of supporting hydrophytic plant species and hydric soils. Dominant vegetation within the depressional seasonal wetlands includes: spikerush, ryegrass (*Festuca perennis*), rattail sixweeks grass (*Festuca myuros*), rabbitfoot grass (*Polypogon monspeliensis*), and Mediterranean barley (*Hordeum marinum* ssp. *gussoneanum*).

4.4.2. Depressional Perennial Marsh

A total of **1.24 acres** of depressional perennial marsh has been delineated within the Site. Depressional perennial marshes can occur as the result of natural and/or artificial water flows associated with agricultural or residential water uses. Depressional perennial marshes are dominated by inundation. Typically, depressional perennial marshes remain inundated or saturated throughout the year. The persistence of inundation/saturation throughout the year permits the growth of warm-season wetland grasses and perennial herbaceous plant species. Within the Great Central Valley, depressional perennial marshes typically occur in association with the lowland terminus of local riverine watersheds or as the result of artificial excavation activities in low lying areas exhibiting historic hydric soils conditions, often resulting in artificially created impoundments, such as ponds or reservoirs. Dominant vegetation within the depressional perennial marsh includes: curly dock (*Rumex crispus*), Himalayan blackberry (*Rubus armeniacus*), narrow leaf cattail (*Typha angustifolia*), common rush (*Juncus effusus*), nut-sedge (*Cyperus* sp.), and spikerush (*Eleocharis macrostachya*).

4.4.3. Vernal Pool

A total of **3.83 acres** of vernal pools has been delineated within the Site. Vernal pools are shallow, seasonally inundated depressional wetlands that form in soils with a subsurface layer that restricts the downward flow of water. The vernal pools within the Site are northern hardpan vernal pools. Northern hardpan vernal pools occur within depressions on cemented soils such as the Corning, Red Bluff, Redding, and San Joaquin soil series within and around the Great Central Valley. Dominant vegetation within the vernal pools includes: coyote thistle (*Eryngium vaseyi*), spikerush, hedge-hyssop (*Gratiola ebracteata*), annual hairgrass (*Deschampsia danthonioides*), and woolly marbles (*Psilocarphus brevissimus*).

4.4.4. Riverine Seasonal Wetland

A total of **4.74 acres** of riverine seasonal wetlands has been delineated within the Site over approximately 24,247 linear feet. Riverine seasonal wetlands are defined by a hydrologic regime dominated by unidirectional flow of water. Riverine seasonal wetlands typically occur in topographic folds or swales and represent natural drainages that convey sufficient water to support wetland vegetation. Riverine seasonal wetlands typically convey water during and shortly after storm events. Dominant vegetation within the riverine seasonal wetlands includes: ryegrass, spikerush, and Mediterranean barley.

4.4.5. Ephemeral Drainage

A total of **0.30 acre** of ephemeral drainage has been delineated within the Site over approximately 1,164 linear feet. Ephemeral drainages are features that do not meet the three-parameter criteria for vegetation, hydrology and soils, but do convey water and exhibit an "ordinary high water mark." Ephemeral drainages are primarily fed by stormwater runoff. These features convey flows during and immediately after storm events but may stop flowing or begin to dry if the interval between storm events is long enough. Typically, these features exhibit a defined bed and bank and often show signs of scouring as a result of rapid flow events. Within ephemeral drainages, topographic depressions in the bed of the feature may exhibit vegetation patterns commonly associated with vernal pools or depressional seasonal wetlands. Often these features are lightly vegetated due to seasonal rapid-flow events resulting in a scoured channel, bed and bank. Dominant vegetation within the bed and along the banks of the ephemeral drainages include upland species including common vetch, filaree, slender oat, wild oat, medusa head, and soft chess.

4.4.6. Intermittent Drainage

A total of **0.48 acre** of intermittent drainage has been delineated within the Site over approximately 1,776 linear feet. Intermittent drainages, as in ephemeral drainages, are features that do not meet the three-parameter criteria for vegetation, hydrology, and soils but do convey water and exhibit an "ordinary high water mark." Water flows within intermittent drainages are fed primarily by a seasonally perched groundwater table and supplemented by precipitation and stormwater runoff. After the initial onset of rains these features have persistent flows throughout and past the end of the rainy season. Typically, these features exhibit a defined bed and bank and show signs of scouring as a result of rapid flow events. The bed of intermittent drainages consists of cobble often interrupted with bedrock. Water was present during the field delineations. Dominant vegetation along the banks of the intermittent drainages includes blue oak (*Quercus douglasii*), valley oak (*Quercus lobata*), American wild mint (*Mentha arvensis*), common rush, ryegrass, wild oat, medusa head, and soft chess.

4.4.7. Perennial Drainage

A total of **5.12 acres** of perennial drainage (Little Chico Butte Creek Diversion Channel) has been delineated within the Site over approximately 6,212 linear feet. Perennial drainages are features that may not meet the three-parameter criteria for vegetation, hydrology, and soils but do convey water and exhibit an "ordinary high water mark." Perennial drainages generally

convey unidirectional water flows throughout the entire year. Perennial drainages typically consist of a channel, bed, and bank and are devoid of vegetation due to the scouring effect of flowing water. Perennial drainages are often bordered by wetland vegetation communities of various composition and cover depending on flow rates, duration of flows, and soil types. Water was observed flowing during the field delineations. Dominant vegetation observed along the banks of the perennial drainage includes ryegrass, arroyo willow (*Salix lasiolepis*), narrow leaf cattail, rabbitfoot grass, soft chess, and ripgut brome.

4.4.8. Ditch/Canal

A total of **0.39 acre** of ditch/canal has been delineated within the Site over 2,332 linear feet. The ditches/canals contained water at the time of the field delineations. Dominant vegetation along the banks of the ditches/canals are comprised of upland vegetation including soft chess, ripgut brome, and medusa head.

4.4.9. Excavated Pit

A total **0.07 acre** of excavated pit has been delineated within the Site. The pits were excavated to obtain information on soils within the Site. The excavated pits contained water at the time of the field delineations and lacked vegetation.

5.0 CONCLUSIONS

The aquatic features mapped within the Site include: depressional seasonal wetland, depressional perennial marsh, vernal pool, riverine seasonal wetland, ephemeral drainage, intermittent drainage, perennial drainage, ditch/canal, and excavated pit.

The ditch/canal within the western portion of the Site was constructed in uplands and drains only uplands and is, therefore, not likely regulated by the Corps. The excavated pits were wholly excavated in uplands and are supplied by surface runoff and direct precipitation events, and therefore, are not jurisdictional features. However, the Corps' determination of jurisdiction is on a case-by-case basis and will be determined during the verification process. Areas deemed jurisdictional will then be subject to the regulatory requirements of the Federal Clean Water Act including permitting and mitigation, as required.

Table 1 summarizes the acreage per class of aquatic feature found within the Site. Detailed information on each feature is included in **Appendix F**.

TABLE 1 — AQUATIC FEATURES BY RESOURCE CLASSIFICATION AND SIZE

Aquatic Resource Type	Aquatic Resources Classification	Aquatic Resource Size (acres)	Aquatic Resource Size (linear feet)
Depressional Seasonal Wetland	PEM2B	4.02	--
Depressional Perennial Marsh	PEM1F	1.24	--
Vernal Pool	PEM2C	3.83	--
Riverine Seasonal Wetland	PEM2B	4.74	24,247
Ephemeral Drainage	R4SB	0.30	1,164
Intermittent Drainage	R4SB	0.48	1,776
Perennial Drainage	R2UB	5.12	6,212
Ditch/Canal	R4SB5	0.39	2,332
Excavated Pit	POW	0.07	--
Total	--	20.19	35,731

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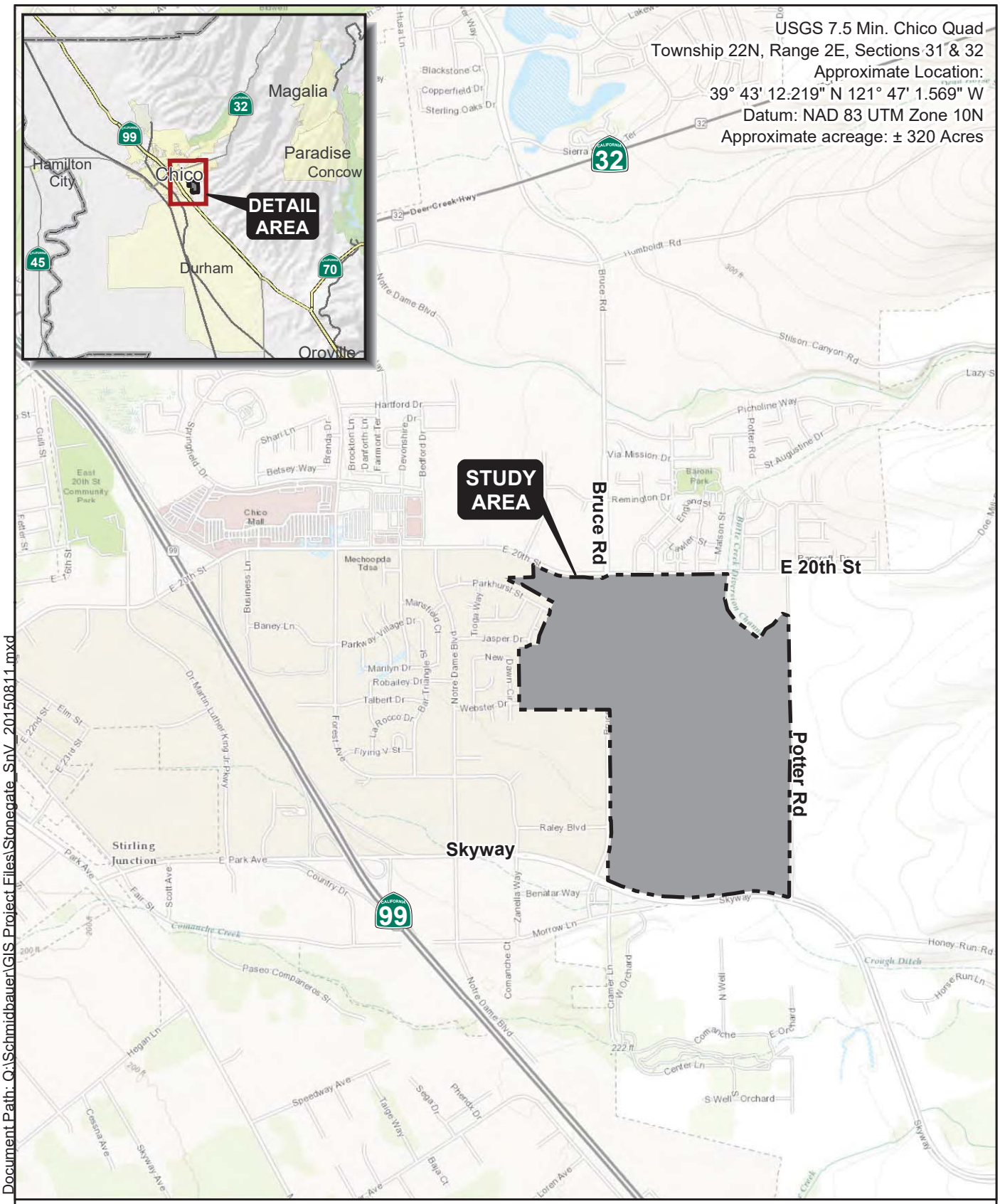


SITE AND VICINITY

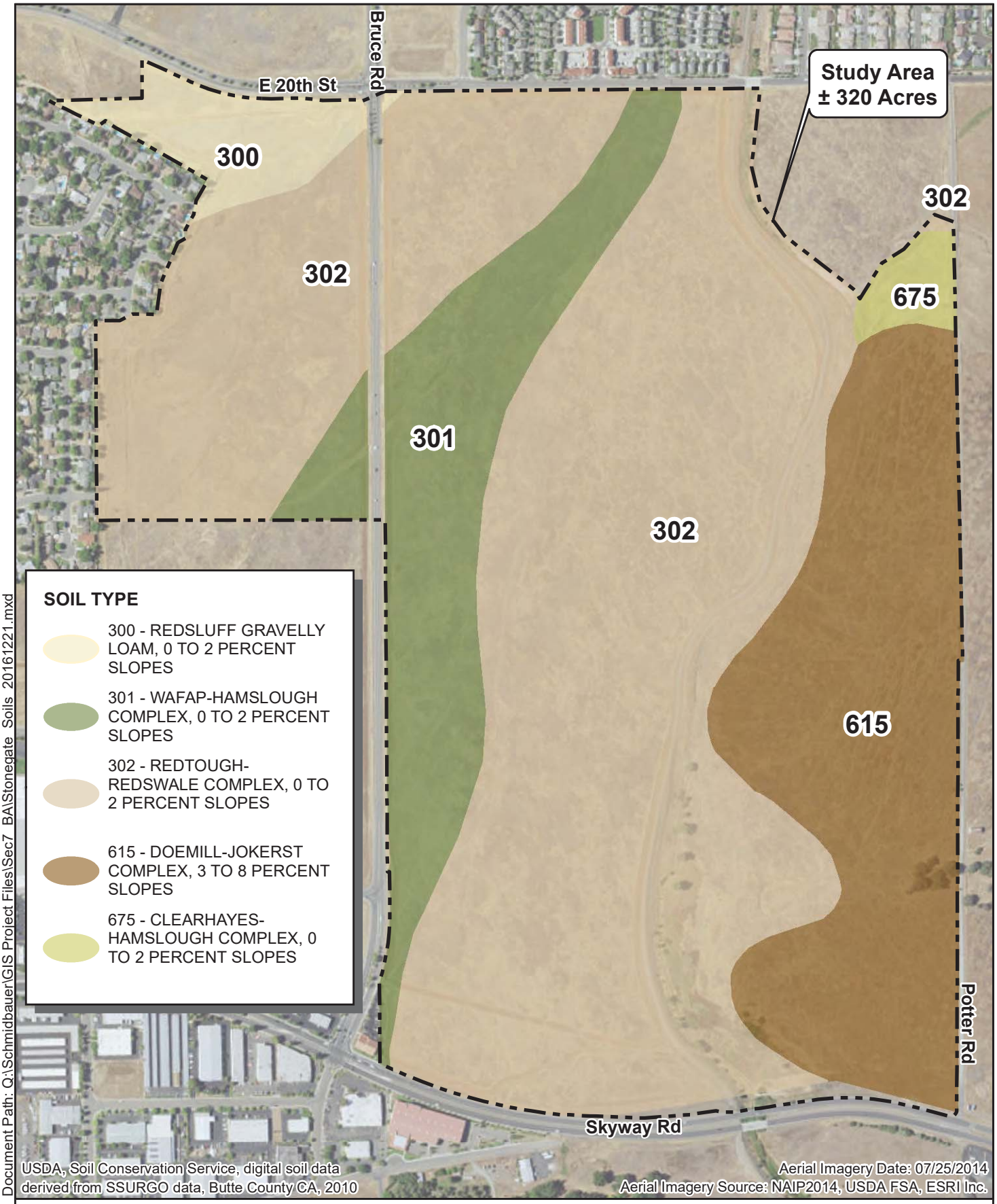
FOOTHILL ASSOCIATES
ENVIRONMENTAL CONSULTING • PLANNING • LANDSCAPE ARCHITECTURE

N

0 0.2 0.4
Miles
1 in = 0.4 miles

Drawn By: MUB
QA/QC: AMP
Date: 04/06/2017

FIGURE 1



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SOILS

FOOTHILL ASSOCIATES
ENVIRONMENTAL CONSULTING • PLANNING • LANDSCAPE ARCHITECTURE

N

0 300 600
Feet
1 inch = 600 feet

Drawn By: MUB
QA/QC: AMP
Date: 04/06/2017

FIGURE 2

STONEGATE

Document Name: Stonegate_Soils_20161221.mxd : : 4/6/2017 1:30:09 PM

Aquatic Resources

Depressional Seasonal Wetland

Label	Acres*	Latitude	Longitude
1	0.061	39.725733	-121.789101
2	0.141	39.72578	-121.782268
3	0.087	39.725767	-121.785837
4	0.056	39.725751	-121.78508
5	0.008	39.725544	-121.785887
6	0.005	39.725446	-121.788187
7	0.041	39.725396	-121.784798
8	0.092	39.725282	-121.78693
9	0.016	39.724785	-121.786738
11	0.001	39.724774	-121.789592
12	0.001	39.724737	-121.788488
13	0.023	39.724626	-121.788913
14	0.005	39.724618	-121.786914
15	0.003	39.724513	-121.787274
16	0.003	39.72451	-121.787237
17	0.051	39.724411	-121.788461
18	0.007	39.724408	-121.78695
19	0.001	39.724297	-121.781789
20	0.013	39.724287	-121.786699
21	0.017	39.724291	-121.789067
22	0.003	39.724282	-121.786417
23	0.004	39.724232	-121.787051
24	0.001	39.724207	-121.786866
25	0.066	39.724152	-121.785341
26	0.001	39.724148	-121.785902
27	0.004	39.72414	-121.786972
28	0.022	39.724086	-121.786441
29	0.002	39.724078	-121.785913
30	0.003	39.724052	-121.787029
31	0.016	39.72396	-121.783888
32	0.003	39.723935	-121.787014
34	0.028	39.723867	-121.783424
35	0.007	39.723833	-121.783671
36	0.010	39.723797	-121.790652
37	0.006	39.723723	-121.789327
38	0.005	39.723687	-121.781847
40	0.006	39.723584	-121.789733
42	0.009	39.723443	-121.783635
43	0.001	39.723425	-121.780931
44	0.005	39.72342	-121.789719
45	0.012	39.723306	-121.781532
46	0.190	39.7233	-121.78667
47	0.004	39.723292	-121.791482
48	0.007	39.723201	-121.783178
49	0.002	39.723107	-121.783966
50	0.002	39.723056	-121.778191
51	0.005	39.723063	-121.787228
52	0.001	39.722962	-121.778086
53	0.024	39.722965	-121.783208
54	0.006	39.722935	-121.783607
55	0.002	39.722917	-121.778104
56	0.001	39.722798	-121.77823
57	0.138	39.722696	-121.784571
58	0.001	39.722682	-121.782405
59	0.003	39.722682	-121.787087
60	0.140	39.722579	-121.786913
62	0.017	39.722499	-121.785336
63	0.002	39.722467	-121.781424
64	0.011	39.722346	-121.784401
65	0.005	39.722105	-121.783613
66	0.042	39.721992	-121.783724
67	0.007	39.721876	-121.789417
68	0.008	39.721876	-121.791359
69	0.018	39.721778	-121.78809
70	0.001	39.72173	-121.789974
71	0.001	39.721718	-121.78375
72	0.027	39.721667	-121.789495
73	0.004	39.721394	-121.781637
74	0.010	39.721344	-121.786967
75	0.072	39.721289	-121.785126
76	0.046	39.721216	-121.791348
77	0.002	39.721156	-121.781589
78	0.001	39.721129	-121.782004
79	0.001	39.721128	-121.781936
80	0.005	39.721126	-121.781436
81	0.001	39.721125	-121.784467
82	0.003	39.721068	-121.781238
84	0.004	39.72103	-121.779129
85	0.001	39.72095	-121.778959
86	0.001	39.720954	-121.782131
87	0.001	39.720959	-121.791481
88	0.003	39.720934	-121.782478
89	0.006	39.720824	-121.787691
90	0.027	39.720789	-121.785192
91	0.001	39.720769	-121.782403
92	0.002	39.720768	-121.782072
93	0.004	39.720755	-121.779389
94	0.008	39.720743	-121.782588
95	0.099	39.720712	-121.784229
96	0.002	39.720581	-121.78293
97	0.004	39.720511	-121.782419
98	0.004	39.720309	-121.784574
99	0.001	39.720211	-121.778161
100	0.007	39.720174	-121.781209
101	0.029	39.720151	-121.783559
102	0.013	39.720142	-121.784723
103	0.002	39.720014	-121.778086
104	0.005	39.719946	-121.777985
105	0.002	39.719922	-121.782367
106	0.002	39.719877	-121.782304
107	0.010	39.719869	-121.785009
108	0.003	39.71987	-121.786408
109	0.000	39.719742	-121.778172
110	0.002	39.719702	-121.779678
111	0.002	39.719703	-121.782141
112	0.002	39.719658	-121.781965
113	0.011	39.719659	-121.783319
114	0.002	39.719636	-121.779395
115	0.001	39.719619	-121.782616
116	0.003	39.719594	-121.782107
117	0.015	39.719421	-121.782324
118	0.002	39.719416	-121.782524
119	0.001	39.719384	-121.782579
120	0.002	39.719324	-121.778242
121	0.002	39.719271	-121.782401
122	0.006	39.719244	-121.78536
123	0.090	39.719147	-121.786926
124	0.004	39.719138	-121.785687
125	0.038	39.719029	-121.78462
126	0.001	39.719016	-121.779759
127	0.002	39.719007	-121.778668
128	0.004	39.718973	-121.786213
129	0.002	39.718934	-121.778698
130	0.001	39.718696	-121.77999
131	0.004	39.718651	-121.783826
132	0.033	39.718642	-121.786984
133	0.007	39.718518	-121.783252
134	0.002	39.718485	-121.782831
135	0.004	39.718432	-121.783948
136	0.002	39.718391	-121.78262
137	0.001	39.718335	-121.779567
138	0.001	39.718249	-121.783121
139	0.006	39.718247	-121.787037
140	0.002	39.71814	-121.783664
141	0.007	39.718074	-121.784807
142	0.024	39.717994	-121.786554
143	0.070	39.717942	-121.786971
144	0.001	39.717693	-121.78336
145	0.006	39.717548	-121.785421
147	0.001	39.717464	-121.779061
148	0.014	39.717427	-121.784744
149	0.021	39.717394	-121.786826
151	0.002	39.717314	-121.785058
152	0.002	39.717278	-121.783324
153	0.007	39.717276	-121.787027
154	0.003	39.717158	-121.783234
155	0.004	39.716761	-121.783439
156	0.001	39.716573	-121.783488
157	0.002	39.716096	-121.783377
158	0.614	39.716079	-121.781711
159	0.003	39.716	-121.784448
160	0.001	39.715977	-121.783299
161	0.002	39.715896	-121.783249
162	0.001	39.71566	-121.784997
163	0.007	39.715456	-121.785402
164	0.023	39.715409	-121.786955
165	0.008	39.715001	-121.784762
166	0.002	39.714774	-121.786677
167	0.005	39.714657	-121.786775
168	0.003	39.714643	-121.780907
169	0.020	39.714459	-121.781244
170	0.001	39.714447	-121.785825
171	0.001	39.714344	-121.786412
172	0.004	39.714343	-121.786974
173	0.014	39.714307	-121.780706
174	0.033	39.714223	-121.783226
175	0.001	39.714211	-121.785403
176	0.011	39.714151	-121.784025
177	0.004	39.714147	-121.78368
178	0.003	39.714066	-121.783992
179	0.004	39.714051	-121.784654
180	0.005	39.713937	-121.784857
181	0.010	39.71391	-121.786611
182	0.001	39.713875	-121.783564
183	0.002	39.713874	-121.786226
184	0.000	39.713847	-121.783316
185	0.000	39.713789	-121.782795
186	0.002	39.713771	-121.783301
187	0.012	39.713776	-121.786154
188	0.030	39.713705	-121.78211
189	0.002	39.713698	-121.78464
190	0.003	39.713647	-121.783302
191	0.002	39.713603	-121.783885
192	0.017	39.713517	-121.785311
193	0.011	39.713508	-121.782134
194	0.000	39.713499	-121.783823
195	0.022	39.71349	-121.784094
196	0.009	39.713403	-121.784253
482	0.010	39.723779	-121.778383
520	0.011	39.726071	-121.792251
521	0.004	39.72587	-121.787997
522	0.028	39.725743	-121.787917
523	0.001	39.725479	-121.788491
524	0.003	39.725221	-121.782594
525	0.009	39.725181	-121.783092
526	0.007	39.724893	-121.784622
527	0.005	39.724876	-121.784454
528	0.003	39.724819	-121.788385
529	0.023	39.724793	-121.782921
530	0.039	39.724562	-121.789917
531	0.007	39.724446	-121.788881
532	0.004	39.724307	-121.78468
533	0.016	39.723655	-121.785056
534	0.006	39.723375	-121.779022
535	0.021	39.723297	-121.788685
536	0.002	39.72329	-121.789566
537	0.013	39.723265	-121.788405
538	0.003	39.723125	-121.788571
539	0.014	39.723086	-121.790493
540	0.001	39.72271	-121.780627
541	0.008	39.722596	-121.789072
542	0.001	39.7225	-121.781348
543	0.003	39.722463	-121.788501
544	0.021	39.72246	-121.789518
545	0.005	39.722285	-121.789895
546	0.005	39.722081	-121.788574
548	0.038	39.721626	-121.780646
549	0.009	39.721581	-121.78893
550	0.010	39.721335	-121.790305
551	0.013	39.72128	-121.7893
552	0.005	39.721256	-121.790491
553	0.064	39.721073	-121.790025
554	0.003	39.720973	-121.790569
555	0.028	39.720891	-121.786916
556	0.024	39.720639	-121.786982
558	0.007	39.719998	-121.781278
559	0.007	39.71958	-121.781969
560	0.004	39.718951	-121.778921
561	0.009	39.718831	-121.781537
562	0.004	39.718754	-121.78641
563	0.013	39.718577	-121.786805
565	0.017	39.717425	-121.786441
566	0.005	39.717306	-121.785504
567	0.018	39.717054	-121.786593
568	0.004	39.716947	-121.784187
570	0.009	39.716789	-121.786674
571	0.012	39.716622	-121.786687
572	0.003	39.716495	-121.780952
573	0.007	39.716367	-121.786666
574	0.011	39.716327	-121.784067
575	0.024	39.716141	-121.786573
576	0.002	39.716036	-121.784072
577	0.002	39.715929	-121.78037
578	0.000	39.715769	-121.780856
579	0.021	39.715275	-121.782164
580	0.010	39.714203	-121.782778
581	0.006	39.71375	-121.784017
582	0.005	39.713463	-121.784537

Continued in next column

Depressional Seasonal Wetland (Cont.)

Label	Acres*	Latitude	Longitude
583	0.006	39.713343	-121.784243
607	0.004	39.720949	-121.790959
608	0.001	39.720964	-121.790872
609	0.042	39.725428	-121.790274
610	0.038	39.72597	-121.790184
611	0.004	39.723469	-121.789349
612	0.004	39.723595	-121.788886
613	0.004	39.724829	-121.788547
614	0.000	39.717891	-121.783881
615	0.000	39.721982	-121.782677
616	0.009	39.714977	-121.781167
617	0.009	39.714987	-121.780809
618	0.003	39.723311	-121.780673
619	0.003	39.715182	-121.780658
620	0.003	39.71776	-121.780023
621	0.009	39.717901	-121.78001
Subtotal:	**4.023**		

Depressional Perennial Marsh

Label	Acres*	Latitude	Longitude
197	1.236	39.714006	-121.780954
Subtotal:	**1.236**		

Vernal Pool

Label	Acres*	Latitude	Longitude
33	0.039	39.723908	-121.788951
39	0.027	39.723668	-121.786698
41	0.004	39.723567	-121.786881
198	0.020	39.726055	-121.791957
199	0.053	39.726019	-121.785423
200	0.001	39.725963	-121.784443
201	0.006	39.725922	-121.783907
202	0.130	39.725888	-121.791425
203	0.008	39.725672	-121.784014
204	0.009	39.72556	-121.785286
205	0.004	39.725512	-121.785446
206	0.023	39.725328	-121.789545
207	0.001	39.725303	-121.785514
208	0.029	39.725128	-121.782275
209	0.069	39.724963	-121.789351
210	0.010	39.724942	-121.785842
211	0.011	39.724887	-121.782579
212	0.016	39.724823	-121.783811
213	0.002	39.724573	-121.782099
215	0.002	39.724558	-121.785528
216	0.022	39.72455	-121.787049
217	0.022	39.724437	-121.783168
218	0.001	39.724427	-121.782502
219	0.002	39.724421	-121.781956
220	0.003	39.724401	-121.785563
221	0.002	39.724213	-121.781431
222	0.007	39.724173	-121.78265
223	0.002	39.724066	-121.781376
224	0.149	39.723914	-121.789758
225	0.002	39.723936	-121.782258
226	0.000	39.723915	-121.78211
227	0.002	39.723884	-121.782443
228	0.011	39.723845	-121.782546
230	0.003	39.72365	-121.782608
231	0.001	39.72362	-121.782538
232	0.000	39.723608	-121.782276
233	0.001	39.723524	-121.78246
234	0.008	39.723469	-121.790755
235	0.011	39.72337	-121.78492
236	0.029	39.723348	-121.787882
237	0.002	39.723257	-121.782454
238	0.016	39.723227	-121.779139
239	0.002	39.723186	-121.782179
240	0.003	39.723177	-121.787791
242	0.002	39.723062	-121.778612
243	0.005	39.722957	-121.778312
244	0.001	39.722952	-121.778227
245	0.002	39.722947	-121.778167
246	0.002	39.722869	-121.778514
247	0.002	39.722845	-121.778038
248	0.028	39.722795	-121.78826
249	0.001	39.722761	-121.778302
250	0.019	39.722773	-121.78702
251	0.002	39.722735	-121.782282
252	0.002	39.722714	-121.779106
253	0.001	39.7227	-121.788448
254	0.002	39.722676	-121.781859
255	0.002	39.722646	-121.782829
256	0.029	39.722642	-121.790928
257	0.004	39.722609	-121.780901
258	0.017	39.72253	-121.7806
259	0.004	39.722475	-121.780825
260	0.017	39.722481	-121.787044
261	0.011	39.722451	-121.785887
262	0.034	39.722417	-121.787208
263	0.010	39.722403	-121.78932
264	0.020	39.722386	-121.791449
265	0.005	39.722365	-121.782569
266	0.011	39.72231	-121.785788
267	0.003	39.722276	-121.780331
268	0.053	39.722215	-121.791287
269	0.002	39.722184	-121.781934
270	0.018	39.722183	-121.785558
271	0.016	39.722143	-121.786428
272	0.004	39.722086	-121.783219
273	0.058	39.721873	-121.785873
274	0.003	39.721815	-121.782018
275	0.001	39.721808	-121.782862
276	0.001	39.721803	-121.781514
277	0.001	39.721763	-121.78281
278	0.001	39.721768	-121.782937
279	0.004	39.721749	-121.783277
280	0.065	39.721704	-121.786557
281	0.001	39.721668	-121.782326
282	0.004	39.721648	-121.782549
283	0.003	39.721599	-121.78325
284	0.035	39.721573	-121.782723
285	0.015	39.721566	-121.786893
286	0.023	39.721472	-121.78702
287	0.011	39.721458	-121.781881
288	0.089	39.721351	-121.783828
289	0.024	39.721312	-121.79145
290	0.003	39.721336	-121.782328
291	0.012	39.721319	-121.788635
292	0.002	39.721272	-121.781702
293	0.001	39.72119	-121.778209
294	0.010	39.721195	-121.786684
295	0.012	39.721172	-121.782331
296	0.002	39.721162	-121.778031
297	0.007	39.721152	-121.786802
298	0.005	39.72113	-121.789594
299	0.001	39.721099	-121.778493
300	0.021	39.721113	-121.786499
301	0.002	39.721026	-121.77885
302	0.050	39.72093	-121.785961
303	0.002	39.720837	-121.782862
304	0.014	39.720828	-121.787948
305	0.001	39.720807	-121.791526
306	0.024	39.720711	-121.785497
307	0.001	39.720693	-121.779355
308	0.099	39.720611	-121.783822
309	0.024	39.720562	-121.785805
310	0.001	39.720464	-121.77919
311	0.005	39.720425	-121.783027
312	0.001	39.720324	-121.784003
313	0.121	39.720251	-121.786933
314	0.002	39.720203	-121.780264
315	0.056	39.720195	-121.785915
316	0.002	39.719931	-121.780412
317	0.003	39.719889	-121.778096
318	0.006	39.71984	-121.779387
319	0.002	39.719831	-121.780235
320	0.002	39.71982	-121.778556
321	0.001	39.719813	-121.780438
322	0.005	39.719802	-121.780661
323	0.001	39.719778	-121.780078
324	0.040	39.719788	-121.7859
325	0.002	39.719769	-121.778824
326	0.001	39.719748	-121.779918
327	0.001	39.719712	-121.778371
328	0.014	39.719686	-121.783756
329	0.004	39.719685	-121.786533
330	0.005	39.719545	-121.779815
331	0.004	39.719463	-121.779758
332	0.001	39.719426	-121.779169
333	0.136	39.719309	-121.783265
334	0.002	39.719225	-121.779832
335	0.012	39.71922	-121.786024
336	0.028	39.7192	-121.780035
337	0.102	39.719181	-121.782607
338	0.045	39.719171	-121.784263
339	0.007	39.719152	-121.77961
340	0.003	39.719111	-121.779334
341	0.001	39.719084	-121.77982
342	0.053	39.719022	-121.78506
343	0.002	39.718963	-121.77911
344	0.001	39.71896	-121.779663
345	0.006	39.718842	-121.778437
346	0.003	39.71884	-121.779369
347	0.002	39.718835	-121.778876
348	0.001	39.718836	-121.779532
349	0.001	39.718821	-121.779161
350	0.001	39.718746	-121.77943
351	0.002	39.718733	-121.778944
352	0.010	39.718727	-121.779659
353	0.001	39.718659	-121.779346
354	0.001	39.718601	-121.779821
355	0.135	39.718598	-121.784821
356	0.002	39.718484	-121.778848
357	0.001	39.718482	-121.779078
358	0.004	39.718424	-121.782677
359	0.001	39.71839	-121.779924
360	0.002	39.718314	-121.780024
361	0.002	39.718298	-121.782725
362	0.017	39.718298	-121.782941
363	0.001	39.71826	-121.77915
364	0.002	39.71826	-121.779748
365	0.001	39.718225	-121.779824
366	0.002	39.718213	-121.779891
367	0.005	39.718213	-121.780136
368	0.003	39.718203	-121.779038
369	0.002	39.718201	-121.779115
370	0.003	39.718192	-121.779794
371	0.004	39.718166	-121.780057
372	0.012	39.718129	-121.782997
373	0.004	39.71812	-121.779582
374	0.006	39.718102	-121.778893
375	0.002	39.718066	-121.77865
376	0.002	39.717933	-121.779162
377	0.004	39.717925	-121.778907
378	0.003	39.717879	-121.778842
379	0.002	39.717723	-121.778999
380	0.010	39.717693	-121.78281
381	0.003	39.71757	-121.785044
382	0.013	39.717508	-121.7834
383	0.001	39.717426	-121.783192
384	0.002	39.717397	-121.783227
385	0.002	39.717346	-121.783151
386	0.006	39.716803	-121.78451
387	0.008	39.716585	-121.783422
388	0.003	39.716576	-121.784388
389	0.001	39.716457	-121.783347
390	0.013	39.716335	-121.779887
391	0.029	39.716287	-121.784487
392	0.003	39.716116	-121.785082
393	0.011	39.716095	-121.784599
394	0.025	39.716048	-121.785223
395	0.005	39.716035	-121.784701
396	0.008	39.715806	-121.785154
397	0.001	39.715655	-121.77872
398	0.009	39.715609	-121.784248
399	0.003	39.715601	-121.784967
400	0.002	39.715532	-121.784618
401	0.008	39.715453	-121.785931
402	0.005	39.715446	-121.784666
403	0.036	39.71544	-121.78349
404	0.009	39.71539	-121.781469
405	0.006	39.715376	-121.78484
406	0.008	39.715181	-121.786036
407	0.026	39.715153	-121.786293
408	0.010	39.71513	-121.785873
409	0.007	39.714958	-121.785301
410	0.031	39.714912	-121.780956
411	0.013	39.714917	-121.786599
412	0.008	39.714882	-121.783646
413	0.004	39.714857	-121.7796
414	0.042	39.714865	-121.786034
415	0.004	39.714844	-121.784726
416	0.009	39.714828	-121.783244
417	0.014	39.714736	-121.785601
418	0.049	39.714621	-121.785039
419	0.004	39.714613	-121.786176
420	0.008	39.714579	-121.783445

Continued in next column

Vernal Pool (Cont.)

Label	Acres*	Latitude	Longitude
421	0.062	39.714581	-121.784651
422	0.012	39.71458	-121.785905
423	0.001	39.714553	-121.78612
424	0.032	39.714504	-121.786852
425	0.037	39.714476	-121.787274
426	0.001	39.714471	-121.786648
427	0.003	39.714462	-121.786176
428	0.021	39.714451	-121.784155
429	0.015	39.714449	-121.785463
430	0.036	39.714434	-121.783673
431	0.000	39.714413	-121.786466
432	0.000	39.714375	-121.785586
433	0.001	39.714371	-121.786753
434	0.003	39.714361	-121.783491
435	0.002	39.714345	-121.785911
436	0.001	39.714332	-121.785452
437	0.001	39.714318	-121.785526
438	0.001	39.714318	-121.786138
439	0.002	39.714288	-121.786101
440	0.001	39.714287	-121.786055
441	0.008	39.71426	-121.784631
442	0.001	39.714245	-121.785744
443	0.001	39.714245	-121.786146
444	0.011	39.714244	-121.78632
445	0.007	39.714242	-121.785977
446	0.000	39.714228	-121.786122
447	0.001	39.714213	-121.785823
448	0.042	39.714204	-121.786809
449	0.001	39.7142	-121.786144
450	0.003	39.714197	-121.785547
451	0.001	39.714172	-121.786273
452	0.003	39.714151	-121.786029
453	0.001	39.714097	-121.784651
454	0.005	39.714089	-121.78494
455	0.003	39.714082	-121.786568
456	0.025	39.714056	-121.786694
457	0.003	39.714045	-121.78432
458	0.003	39.714042	-121.785602
459	0.003	39.714027	-121.786489
460	0.013	39.714019	-121.786361
461	0.001	39.713991	-121.78651
462	0.006	39.713981	-121.786067
463	0.004	39.713926	-121.785521
464	0.002	39.713901	-121.7865
465	0.024	39.713892	-121.785263
466	0.038	39.713858	-121.786342
467	0.013	39.71385	-121.785992
468	0.002	39.713777	-121.785592
469	0.035	39.71372	-121.785902
470	0.013	39.713694	-121.785695
471	0.006	39.713669	-121.78281
472	0.016	39.713672	-121.785548
473	0.001	39.713654	-121.782745
474	0.001	39.713586	-121.783725
475	0.001	39.713544	-121.783852
476	0.001	39.713526	-121.784929
509	0.005	39.72251	-121.789982
584	0.009	39.725895	-121.787654
585	0.002	39.725784	-121.787244
586	0.004	39.725161	-121.786601
587	0.004	39.725063	-121.785341
588	0.002	39.725027	-121.78807
589	0.004	39.724762	-121.786493
590	0.011	39.723822	-121.788084
591	0.008	39.722341	-121.78773
592	0.008	39.722231	-121.788221
593	0.008	39.722065	-121.788383
594	0.004	39.721735	-121.788546
595	0.004	39.721335	-121.781365
596	0.005	39.721208	-121.781229
597	0.002	39.720595	-121.781222
598	0.005	39.719768	-121.787041
599	0.002	39.719444	-121.787063
600	0.017	39.718011	-121.781884
622	0.010	39.723244	-121.79033
623	0.011	39.716674	-121.784908
624	0.012	39.723645	-121.782071
625	0.012	39.721695	-121.781867
626	0.003	39.723823	-121.781268
627	0.005	39.723861	-121.781193
628	0.003	39.72211	-121.781172
629	0.016	39.722311	-121.78083
Subtotal:	**3.833**		

Riverine Seasonal Wetland

Label	Acres*	Length (Ft)	Latitude	Longitude
10	0.014	110	39.724779	-121.78873
477	0.128	604	39.72545	-121.783398
478	0.015	40	39.725302	-121.789678
480	0.005	64	39.724856	-121.782755
481	0.226	1150	39.72429	-121.783895
483	0.167	882	39.722569	-121.786293
484	0.062	624	39.721391	-121.788061
485	0.075	331	39.720943	-121.790686
486	0.011	122	39.717429	-121.781571
487	0.186	1438	39.717853	-121.784088
488	0.043	305	39.716684	-121.780605
489	0.010	205	39.716529	-121.780075
490	0.130	689	39.715545	-121.784014
491	0.806	487	39.714418	-121.781835
492	0.734	810	39.713693	-121.780447
601	0.001	25	39.724471	-121.786996
604	0.009	72	39.72346	-121.786961
605	0.043	864	39.716285	-121.786196
606	0.017	123	39.715185	-121.787074
630	0.059	191	39.722529	-121.791248
631	0.016	152	39.7229	-121.790705
632	0.073	488	39.722307	-121.790336
633	0.011	145	39.723283	-121.790254
634	0.026	218	39.721482	-121.790247
635	0.034	293	39.721888	-121.789845
636	0.047	307	39.722829	-121.78976
637	0.002	33	39.723508	-121.789744
638	0.023	165	39.721194	-121.789619
639	0.002	43	39.723351	-121.789618
640	0.031	105	39.723754	-121.789586
641	0.004	78	39.723385	-121.789467
642	0.003	27	39.721789	-121.789434
643	0.027	187	39.72254	-121.789235
644	0.027	126	39.721417	-121.789121
645	0.015	162	39.723614	-121.789091
646	0.076	293	39.7242	-121.789007
647	0.020	92	39.721923	-121.788979
648	0.041	280	39.7254	-121.788978
649	0.003	27	39.724511	-121.788895
650	0.017	198	39.722784	-121.788794
651	0.008	50	39.724452	-121.788751
652	0.018	104	39.721627	-121.788735
653	0.031	104	39.721747	-121.788296
654	0.026	185	39.725507	-121.788207
655	0.005	36	39.72593	-121.787982
656	0.010	50	39.721853	-121.787977
657	0.006	45	39.725796	-121.787974
658	0.014	174	39.717709	-121.786714
659	0.009	144	39.719462	-121.786709
660	0.005	117	39.724969	-121.786705
661	0.001	16	39.716734	-121.786688
662	0.002	39	39.71647	-121.786675
663	0.001	38	39.716884	-121.786637
664	0.001	32	39.716254	-121.786634
665	0.005	99	39.718645	-121.786575
666	0.003	67	39.717239	-121.786512
667	0.004	65	39.719785	-121.786489
668	0.040	259	39.718316	-121.786306
669	0.004	76	39.718869	-121.786304
670	0.015	212	39.720598	-121.786252
671	0.012	255	39.725319	-121.786221
672	0.004	69	39.719076	-121.786118
673	0.010	131	39.719472	-121.78596
674	0.006	95	39.722165	-121.785847
675	0.019	214	39.721333	-121.785818
676	0.004	35	39.725597	-121.785812
677	0.036	280	39.723678	-121.785747
678	0.005	73	39.722051	-121.785571
679	0.018	162	39.715678	-121.785532
680	0.004	61	39.717421	-121.785462
681	0.070	600	39.718373	-121.785399
682	0.017	152	39.715206	-121.785345
683	0.006	64	39.714838	-121.785226
684	0.048	543	39.724738	-121.785082
685	0.015	123	39.72098	-121.785049
686	0.092	695	39.72203	-121.785045
687	0.230	1320	39.72088	-121.784858
688	0.007	85	39.719981	-121.784853
689	0.011	105	39.715141	-121.784788
690	0.002	28	39.714916	-121.784735
691	0.002	17	39.714789	-121.784702
692	0.014	205	39.725727	-121.784643
693	0.003	43	39.72023	-121.784598
694	0.056	246	39.723079	-121.784482
695	0.006	88	39.720424	-121.784446
696	0.003	61	39.726035	-121.784367
697	0.017	97	39.71713	-121.784228
698	0.015	161	39.721053	-121.784099
699	0.005	47	39.720402	-121.783989
700	0.165	421	39.725565	-121.78397
701	0.018	216	39.720047	-121.7839
702	0.004	94	39.72156	-121.783776
703	0.004	66	39.72183	-121.783744
704	0.037	392	39.722566	-121.783512
705	0.010	108	39.719897	-121.783454
706	0.002	47	39.719502	-121.783232
707	0.040	341	39.725223	-121.782448
708	0.006	186	39.72158	-121.781543
709	0.007	211	39.722086	-121.781485
710	0.005	35	39.721266	-121.7813
711	0.005	39	39.721154	-121.781198
712	0.041	292	39.720641	-121.781128
713	0.021	125	39.716331	-121.780942
714	0.009	73	39.719987	-121.780556
715	0.009	56	39.716937	-121.780485
716	0.003	47	39.71988	-121.780325
717	0.060	474	39.715892	-121.780226
718	0.033	251	39.71981	-121.779849
719	0.005	53	39.716382	-121.77957
720	0.026	183	39.71599	-121.779403
721	0.001	15	39.719851	-121.779297
Subtotal:	**4.738**	**24,247**		

Ephemeral Drainage

Label	Acres*	Length (Ft)	Latitude	Longitude
493	0.026	446	39.723279	-121.778555
494	0.276	718	39.721328	-121.779799
Subtotal:	**0.303**	**1,164**		

Intermittent Drainage

Label	Acres*	Length (Ft)	Latitude	Longitude
495	0.482	1776	39.715907	-121.780055
Subtotal:	**0.482**	**1,776**		

Perennial Drainage

Label	Acres*	Length (Ft)	Latitude	Longitude
496	0.012	255	39.722829	-121.779072
497	5.106	5957	39.721305	-121.780907
Subtotal:	**5.118**	**6,212**		

Ditch/Canal

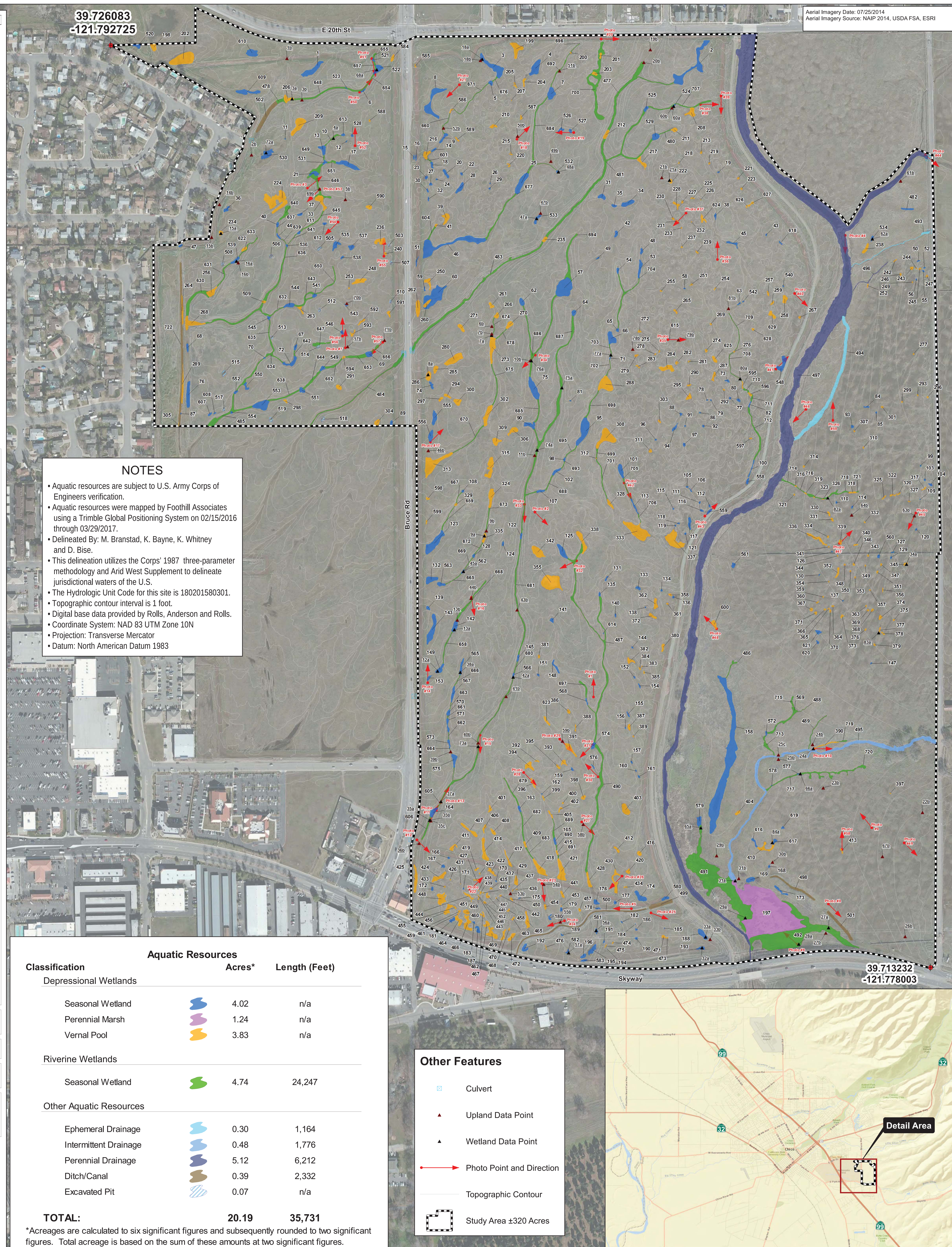
Label	Acres*	Length (Ft)	Latitude	Longitude
498	0.040	258	39.714339	-121.78043
499	0.047	119	39.714123	-121.782857
500	0.052	757	39.71385	-121.784372
501	0.051	194	39.713816	-121.779622
502	0.066	185	39.725086	-121.789938
722	0.134	819	39.721921	-121.791474
Subtotal:	**0.391**	**2,332**		

Excavated Pit

Label	Acres*	Latitude	Longitude
503	0.003	39.723291	-121.787727
505	0.005	39.72325	-121.788985
506	0.004	39.723144	-121.789855
507	0.004	39.723052	-121.787689
508	0.004	39.723034	-121.790727
510	0.003	39.722506	-121.787701
512	0.004	39.722392	-121.788983
513	0.005	39.722015	-121.789843
514	0.006	39.721883	-121.789
515	0.009	39.721518	-121.790707
517	0.003	39.721018	-121.790708
518	0.008	39.720876	-121.788926
519	0.008	39.720874	-121.789861
Subtotal:	**0.067**		

	Acres	Length (Ft)
TOTALS:	20.19	35,731

* Features shown as 0.000 Acres are <0.0005 Acres. Features calculated at 6 significant digits and rounded to 3 significant digits.



NOTES

- Aquatic resources are subject to U.S. Army Corps of Engineers verification.
- Aquatic resources were mapped by Foothill Associates using a Trimble Global Positioning System on 02/15/2016 through 03/29/2017.
- Delineated By: M. Branstad, K. Bayne, K. Whitney and D. Bise.
- This delineation utilizes the Corps' 1987 three-parameter methodology and Arid West Supplement to delineate jurisdictional waters of the U.S.
- The Hydrologic Unit Code for this site is 180201580301.
- Topographic contour interval is 1 foot.
- Digital base data provided by Rolls, Anderson and Rolls.
- Coordinate System: NAD 83 UTM Zone 10N
- Projection: Transverse Mercator
- Datum: North American Datum 1983

Aquatic Resources

Classification	Acres*	Length (Feet)
Depressional Wetlands		
Seasonal Wetland	4.02	n/a
Perennial Marsh	1.24	n/a
Vernal Pool	3.83	n/a
Riverine Wetlands		
Seasonal Wetland	4.74	24,247
Other Aquatic Resources		
Ephemeral Drainage	0.30	1,164
Intermittent Drainage	0.48	1,776
Perennial Drainage	5.12	6,212
Ditch/Canal	0.39	2,332
Excavated Pit	0.07	n/a
TOTAL:	**20.19**	**35,731**

*Acreages are calculated to six significant figures and subsequently rounded to two significant figures. Total acreage is based on the sum of these amounts at two significant figures.

Other Features

- Culvert
- Upland Data Point
- Wetland Data Point
- Photo Point and Direction
- Topographic Contour
- Study Area ±320 Acres

FOOTHILL ASSOCIATES
ENVIRONMENTAL CONSULTING • PLANNING • LANDSCAPE ARCHITECTURE

AQUATIC RESOURCES DELINEATION MAP

N

0 200 400 600 800 1,600
Feet
1 inch = 200 feet

Drawn By:	MUB
QA/QC:	AMP
Date:	06/14/2016
Revised:	05/25/2017

FIGURE 3

STONEGATE

Document Path: Q:\Schmidbauer\GIS Project Files\SG_AquaticResources_rvsd_20170524.mxd
Document Name: SG_AquaticResources_rvsd_20170524 : Date Saved: 5/25/2017 11:01:10 AM

Appendix A — Contact Information and Directions

Client Contact Information:	Pete Giampaoli Epick Homes, Inc. 901 Bruce Road, Suite 100 Chico, CA 95928 Phone Number: (530) 891-4757 Email: pete@epickhomes.com
Delineation Conducted By:	Kenneth D. Whitney, Ph.D. David Bise Meredith Branstad Kelly Bayne Foothill Associates 590 Menlo Drive, Suite 5 Rocklin, CA 95765 Phone Number: (916) 435-1202 dbise@foothill.com
Directions to the Project Site:	From Sacramento, take Interstate 5 (I-5) North, merge onto CA-99 N, turn right onto State Highway 70/9th Street, turn left onto CA-70/B Street, continue onto CA-149 North, merge onto CA-99 N, exit Skyway Road, turn right, and drive for 0.7 miles to the project site.

Appendix B — Signed Statement Form Property Owner(s) Allowing Access

In the event the U.S. Army Corps of Engineers determined that a site inspection is necessary, I request the USACE to first contact Foothill Associates (David Bise) at (916) 435-1202 to schedule a date and time to enter the property described in this report. If the property is land-locked, the owner or proponent must obtain permission from the adjacent property owner(s) in order to provide access. I understand that this may delay the USACE's jurisdictional determination and the USACE's issuance of a determination letter.

George Schmidbauer — June 17, 2016

Signature of Property Owner (s) — Date

George Schmidbauer

Printed Name

Bruce Road Associates L.P.

Signature of Property Owner (s) — Date

Printed Name

Appendix C — Routine Wetland Determination Data Forms

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Stonegate Property City/County: Chico/ Butte Sampling Date: 02/15/2016

Applicant/Owner: Epick Homes, Inc. State: CA Sampling Point: 1B

Investigator(s): Meredith Branstad, Marisa Brilts Section, Township, Range: Sections 31 & 32, Township 22North, Range 2E

Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): convex Slope (%): _____

Subregion (LRR): C Lat: 39.725 Long: -121.79 Datum: NAD83

Soil Map Unit Name: Redsluff Gravelly Loam, 0 to 2 Percent Slopes NWI classification: UPL

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 _____	No ✓	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____	No ✓	
Wetland Hydrology Present?	Yes _____	No ✓	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0 = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
Herb Stratum (Plot size: _____)			
1. Festuca perennis	60	Yes	FAC
2. Avena fatua	30	Yes	UPL
3. Erodium botrys	5	No	FACU
4. Vicia sp.	3	No	UPL
5. Lupin sp.	2	No	UPL
6.			
7.			
8.			
	100 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	0 = Total Cover		

% Bare Ground in Herb Stratum _____ % Cover of Biotic Crust _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	60	x 3 =	180
FACU species	5	x 4 =	20
UPL species	35	x 5 =	175
Column Totals:	100 (A)		375 (B)

Prevalence Index = B/A = 3.75

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, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes _____ No ✓

Remarks:

SOIL

Sampling Point: 1B

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
1-8	7.5YR 2.5/3	50	7.5YR 4/3	50				

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✓

Remarks:

No modeling. Manganese black particles.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ 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? (includes capillary fringe) Yes _____ No ✓ Depth (inches): _____

Wetland Hydrology Present? Yes _____ No ✓

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Stonegate Property City/County: Chico/ Butte Sampling Date: 02/15/2016

Applicant/Owner: Epick Homes, Inc. State: CA Sampling Point: 2b

Investigator(s): Meredith Branstad, Marisa Brilts Section, Township, Range: Sections 31 & 32, Township 22North, Range 2E

Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): concave Slope (%): 2

Subregion (LRR): C Lat: 39.724 Long: -121.79 Datum: NAD83

Soil Map Unit Name: Redtough-Redswale Complex, 0 to 2 Percent Slopes 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 ✓	No _____	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____	No ✓	
Wetland Hydrology Present?	Yes _____	No ✓	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0 = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
Herb Stratum (Plot size: _____)			
1. Festuca perennis	100	Yes	FAC
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	100 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	0 = Total Cover		

% Bare Ground in Herb Stratum _____ % Cover of Biotic Crust _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species _____	x 1 =	0
FACW species _____	x 2 =	0
FAC species _____	x 3 =	0
FACU species _____	x 4 =	0
UPL species _____	x 5 =	0
Column Totals: 0 (A)		0 (B)

Prevalence Index = B/A = NaN

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, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks:

SOIL

Sampling Point: 2b

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
1-6	10YR 3/3	80	5YR 5/6	20	C	M		

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✓

Remarks:

Modeling
Soft masses

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ 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? (includes capillary fringe) Yes _____ No ✓ Depth (inches): _____

Wetland Hydrology Present? Yes _____ No ✓

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Stonegate Property City/County: Chico/ Butte Sampling Date: 02/15/2016

Applicant/Owner: Epick Homes, Inc. State: CA Sampling Point: 3a

Investigator(s): Meredith Branstad, Marisa Brilts Section, Township, Range: Sections 31 & 32, Township 22North, Range 2E

Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): concave Slope (%): _____

Subregion (LRR): C Lat: 39.725 Long: -121.789 Datum: NAD83

Soil Map Unit Name: Redsluff Gravelly Loam, 0 to 2 Percent Slopes NWI classification: VP

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 ✓ No _____	**Is the Sampled Area within a Wetland?** Yes ✓ No _____
Hydric Soil Present?	Yes ✓ No _____	
Wetland Hydrology Present?	Yes ✓ No _____	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0 = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
Herb Stratum (Plot size: _____)			
1. Festuca perennis	90	Yes	FAC
2. Hordeum marinum	10	No	FAC
3.			
4.			
5.			
6.			
7.			
8.			
	100 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	0 = Total Cover		

% Bare Ground in Herb Stratum 0 % Cover of Biotic Crust _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = 0
FACW species _____	x 2 = 0
FAC species _____	x 3 = 0
FACU species _____	x 4 = 0
UPL species _____	x 5 = 0
Column Totals: 0 (A)	0 (B)

Prevalence Index = B/A = NaN

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, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks:

SOIL

Sampling Point: 3a

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
1-6	7.5YR 3/2	95	2.5YR 3/6	5	C	PL	clay	
			magnes.					

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ✓ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: hardpan

Depth (inches): 6

Hydric Soil Present? Yes ✓ No ___

Remarks:

modeling 3%

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ✓ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ 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): 6

Saturation Present? (includes capillary fringe) Yes ✓ No ___ Depth (inches): 6

Wetland Hydrology Present? Yes ✓ No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Stonegate Property City/County: Chico/ Butte Sampling Date: 02/15/2016

Applicant/Owner: Epick Homes, Inc. State: CA Sampling Point: 3b

Investigator(s): Meredith Branstad, Marisa Brilts Section, Township, Range: Sections 31 & 32, Township 22North, Range 2E

Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): concave Slope (%): _____

Subregion (LRR): C Lat: 39.725 Long: -121.789 Datum: NAD83

Soil Map Unit Name: Redsluff Gravelly Loam, 0 to 2 Percent Slopes NWI classification: UPL

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 ✓	No _____	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____	No ✓	
Wetland Hydrology Present?	Yes _____	No ✓	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0 = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
Herb Stratum (Plot size: _____)			
1. Festuca perennis	90	Yes	FAC
2. Hordeum marinum	5	No	FAC
3. Vicia sp.	5	No	UPL
4.			
5.			
6.			
7.			
8.			
	100 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	0 = Total Cover		

% Bare Ground in Herb Stratum 0 % Cover of Biotic Crust _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species	x 1 =	0
FACW species	x 2 =	0
FAC species	x 3 =	0
FACU species	x 4 =	0
UPL species	x 5 =	0
Column Totals: 0 (A)		0 (B)

Prevalence Index = B/A = NaN

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, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks:

SOIL

Sampling Point: 3b

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
1-8	7.5YR 2.5/3	100					Clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✓

Remarks:

no bright modeling
some manganese nodules 3%

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ 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? (includes capillary fringe) Yes _____ No ✓ Depth (inches): _____

Wetland Hydrology Present? Yes _____ No ✓

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

slight depression

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Stonegate Property City/County: Chico/ Butte Sampling Date: 02/15/2016

Applicant/Owner: Epick Homes, Inc. State: CA Sampling Point: 4a

Investigator(s): Meredith Branstad, Marisa Brilts Section, Township, Range: Sections 31 & 32, Township 22North, Range 2E

Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): concave Slope (%): _____

Subregion (LRR): C Lat: 39.724 Long: -121.789 Datum: NAD83

Soil Map Unit Name: Redtough-Redswale Complex, 0 to 2 Percent Slopes NWI classification: DSW

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 ✓ No _____	**Is the Sampled Area within a Wetland?** Yes ✓ No _____
Hydric Soil Present?	Yes ✓ No _____	
Wetland Hydrology Present?	Yes ✓ No _____	

Remarks:

Photo 59

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0 = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
Herb Stratum (Plot size: _____)			
1. Festuca perennis	70	Yes	FAC
2. Hordeum marinum	20	Yes	FAC
3. Eleocharis macrostachya	5	No	FACW
4. Blennosperma nanum	2	No	FAC
5. Avena fatua	2	No	UPL
6. Vicia sp.	1	No	UPL
7.			
8.			
	100 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	0 = Total Cover		

% Bare Ground in Herb Stratum 0 % Cover of Biotic Crust _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species	x 1 =	0
FACW species	x 2 =	0
FAC species	x 3 =	0
FACU species	x 4 =	0
UPL species	x 5 =	0
Column Totals: 0 (A)		0 (B)

Prevalence Index = B/A = NaN

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, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks:

SOIL

Sampling Point: 4a

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	7.5YR 3/2	95	2.5YR 3/6	5	C	PL	clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ✓ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ✓ **No** _____

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ✓ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ 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? (includes capillary fringe) Yes ✓ No _____ Depth (inches): 6

Wetland Hydrology Present? Yes ✓ **No** _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Stonegate Property City/County: Chico/ Butte Sampling Date: 02/15/2016

Applicant/Owner: Epick Homes, Inc. State: CA Sampling Point: 5b

Investigator(s): Meredith Branstad, Marisa Brilts Section, Township, Range: Sections 31 & 32, Township 22North, Range 2E

Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): convex Slope (%): _____

Subregion (LRR): C Lat: 39.723 Long: -121.789 Datum: NAD83

Soil Map Unit Name: Redtough-Redswale Complex, 0 to 2 Percent Slopes NWI classification: UPL

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 ✓	No _____	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____	No ✓	
Wetland Hydrology Present?	Yes _____	No ✓	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0 = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
Herb Stratum (Plot size: _____)			
1. Festuca perennis	75	Yes	FAC
2. Bromus hordeaceus	15	No	FACU
3. Triteleia laxa	5	No	FAC
4. Senecio vulgaris	5	No	FACU
5.			
6.			
7.			
8.			
	100 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	0 = Total Cover		

% Bare Ground in Herb Stratum 0 % Cover of Biotic Crust _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species	x 1 =	0
FACW species	x 2 =	0
FAC species	x 3 =	0
FACU species	x 4 =	0
UPL species	x 5 =	0
Column Totals: 0 (A)		0 (B)

Prevalence Index = B/A = NaN

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, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks:

SOIL

Sampling Point: 5b

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
1-6	7.5YR 3/3	100						

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✓

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ 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? (includes capillary fringe) Yes _____ No ✓ Depth (inches): _____

Wetland Hydrology Present? Yes _____ No ✓

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Stonegate Property City/County: Chico / Butte Sampling Date: 02/23/2016

Applicant/Owner: Epick Homes, Inc. State: CA Sampling Point: 6b

Investigator(s): Meredith Branstad/ Marisa Brilts Section, Township, Range: Sections 31 & 32, Township 22North, Range 2E

Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): convex Slope (%): <1

Subregion (LRR): C Lat: 39.722 Long: -121.786 Datum: NAD83

Soil Map Unit Name: WaFap-Hamslough Complex, 0 to 2 Percent Slopes NWI classification: UPL

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 ✓	No _____	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____	No ✓	
Wetland Hydrology Present?	Yes ✓	No _____	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0 = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
Herb Stratum (Plot size: _____)			
1. Festuca perennis	80	Yes	FAC
2. Eleocharis macrostachya	15	No	OBL
3. Hordeum murinum	5	No	FACU
4.			
5.			
6.			
7.			
8.			
	100 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	0 = Total Cover		

% Bare Ground in Herb Stratum _____ % Cover of Biotic Crust _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species _____	x 1 =	0
FACW species _____	x 2 =	0
FAC species _____	x 3 =	0
FACU species _____	x 4 =	0
UPL species _____	x 5 =	0
Column Totals: 0 (A)		0 (B)

Prevalence Index = B/A = NaN

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, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks:

SOIL

Sampling Point: 6b

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	10YR 3/4	98		2	C	M	clay	mang. concentrations

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✓

Remarks:

cobbles - not dark surface nor redox reactions

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ✓ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ✓ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ 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? (includes capillary fringe) Yes ✓ No _____ Depth (inches): 6

Wetland Hydrology Present? Yes ✓ No _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Stonegate Property City/County: Chico/ Butte Sampling Date: 02/23/2016

Applicant/Owner: Epick Homes, Inc. State: CA Sampling Point: 7a

Investigator(s): Meredith Branstad, Marisa Brilts Section, Township, Range: Sections 31 & 32, Township 22North, Range 2E

Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): concave Slope (%): _____

Subregion (LRR): C Lat: 39.722 Long: -121.786 Datum: NAD83

Soil Map Unit Name: WaFap-Hamslough Complex, 0 to 2 Percent Slopes NWI classification: VP

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 ✓ No _____	**Is the Sampled Area within a Wetland?** Yes ✓ No _____
Hydric Soil Present?	Yes ✓ No _____	
Wetland Hydrology Present?	Yes ✓ No _____	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0 = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
Herb Stratum (Plot size: _____)			
1. Eleocharis macrostachya	50	Yes	FACW
2. Festuca perennis	40	Yes	FAC
3. Hordeum marinum	9	No	FAC
4. Blennosperma nanum	1	No	FACW
5.			
6.			
7.			
8.			
	100 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	0 = Total Cover		

% Bare Ground in Herb Stratum 0 % Cover of Biotic Crust _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species	x 1 =	0
FACW species	x 2 =	0
FAC species	x 3 =	0
FACU species	x 4 =	0
UPL species	x 5 =	0
Column Totals: 0 (A)		0 (B)

Prevalence Index = B/A = NaN

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, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks:

SOIL

Sampling Point: 7a

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
1-6	10YR 3/2	90	2.5YR 3/6	10	C	PL	clay/sand	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ✓ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ✓ **No** _____

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ✓ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ✓ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ 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? (includes capillary fringe) Yes ✓ No _____ Depth (inches): 4"

Wetland Hydrology Present? Yes ✓ **No** _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Stonegate Property City/County: Chico/ Butte Sampling Date: 02/23/2016

Applicant/Owner: Epick Homes, Inc. State: CA Sampling Point: 7b

Investigator(s): Meredith Branstad, Maris Brilts Section, Township, Range: Sections 31 & 32, Township 22North, Range 2E

Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): convex Slope (%): _____

Subregion (LRR): C Lat: 39.722 Long: -121.786 Datum: NAD83

Soil Map Unit Name: WaFap-Hamslough Complex, 0 to 2 Percent Slopes NWI classification: UPL

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 ✓ No _____	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____ No ✓	
Wetland Hydrology Present?	Yes _____ No ✓	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0 = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
Herb Stratum (Plot size: _____)			
1. Festuca perennis	80	Yes	FAC
2. Eleocharis macrostachya	5	No	OBL
3. Centaurea solstitialis	3	No	UPL
4. Hordeum murinum	2	No	UPL
5.			
6.			
7.			
8.			
	90 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	0 = Total Cover		

% Bare Ground in Herb Stratum 10 % Cover of Biotic Crust _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = 0
FACW species _____	x 2 = 0
FAC species _____	x 3 = 0
FACU species _____	x 4 = 0
UPL species _____	x 5 = 0
Column Totals: 0 (A)	0 (B)

Prevalence Index = B/A = NaN

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, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks:

SOIL

Sampling Point: 7b

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-6	7.5YR 2/3	100					clay/silt	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✓

Remarks:

3% mang. concentrations

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ 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? (includes capillary fringe) Yes _____ No ✓ Depth (inches): _____

Wetland Hydrology Present? Yes _____ No ✓

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Stonegate Property City/County: Chico/ Butte Sampling Date: 02/23/2016

Applicant/Owner: Epick Homes, Inc. State: CA Sampling Point: 8a

Investigator(s): Meredith Branstad, Marisa Brilts Section, Township, Range: Sections 31 & 32, Township 22North, Range 2E

Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): concave Slope (%): <1

Subregion (LRR): C Lat: 39.721 Long: -121.787 Datum: NAD83

Soil Map Unit Name: WaFap-Hamslough Complex, 0 to 2 Percent Slopes NWI classification: VP

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 ✓	No _____	**Is the Sampled Area within a Wetland?** Yes ✓ No _____
Hydric Soil Present?	Yes ✓	No _____	
Wetland Hydrology Present?	Yes ✓	No _____	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0 = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
Herb Stratum (Plot size: _____)			
1. Festuca Perennis	50	Yes	FAC
2. Eleocharis macrostachya	20	Yes	OBL
3. Hordeum marinum	5	No	FAC
4.			
5.			
6.			
7.			
8.			
	75 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	0 = Total Cover		

% Bare Ground in Herb Stratum 25 % Cover of Biotic Crust _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = 0
FACW species _____	x 2 = 0
FAC species _____	x 3 = 0
FACU species _____	x 4 = 0
UPL species _____	x 5 = 0
Column Totals: 0 (A)	0 (B)

Prevalence Index = B/A = NaN

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, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks:

SOIL

Sampling Point: 8a

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
1-6	10YR 3/2	95	2.5YR 3/6	5	C	PL	clay/silt	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ✓ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ✓ No ___

Remarks:

dark surface/veg .5"
2% black spots

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ✓ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ✓ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ 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? (includes capillary fringe) Yes ✓ No ___ Depth (inches): 2

Wetland Hydrology Present? Yes ✓ No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

water filled fast in hole

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Stonegate Property City/County: Chico/ Butte Sampling Date: 02/23/2016

Applicant/Owner: Epick Homes, Inc. State: CA Sampling Point: 9a

Investigator(s): Meredith Branstad, Marisa Brilts Section, Township, Range: Sections 31 & 32, Township 22North, Range 2E

Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): concave Slope (%): _____

Subregion (LRR): C Lat: 39.719 Long: -121.786 Datum: NAD83

Soil Map Unit Name: Redtough-Redswale Complex, 0 to 2 Percent Slopes NWI classification: VP

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 ✓ No _____	**Is the Sampled Area within a Wetland?** Yes ✓ No _____
Hydric Soil Present?	Yes ✓ No _____	
Wetland Hydrology Present?	Yes ✓ No _____	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0 = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
Herb Stratum (Plot size: _____)			
1. Eleocharis macrostachya	82	Yes	OBL
2. Blennosperma nanum	8	No	FACW
3. Hordeum marinum	8	No	FAC
4. Trifolium sp.	2	No	UPL
5.			
6.			
7.			
8.			
	100 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	0 = Total Cover		

% Bare Ground in Herb Stratum 0 % Cover of Biotic Crust _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = 0
FACW species _____	x 2 = 0
FAC species _____	x 3 = 0
FACU species _____	x 4 = 0
UPL species _____	x 5 = 0
Column Totals: 0 (A)	0 (B)

Prevalence Index = B/A = NaN

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, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks:

photo 21

SOIL

Sampling Point: 9a

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	7.5YR 3/2	95	2.5YR 3/6	5	C	PL	clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ✓ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: hardpan

Depth (inches): 6

Hydric Soil Present? Yes ✓ No ___

Remarks:

very cobbly

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ✓ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ✓ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ 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? (includes capillary fringe) Yes ___ No ✓ Depth (inches): ___

Wetland Hydrology Present? Yes ✓ No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

matted veg

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Stonegate Property City/County: Chico/ Butte Sampling Date: 02/23/2016

Applicant/Owner: Epick Homes, Inc. State: CA Sampling Point: 9b

Investigator(s): Meredith Branstad, Marisa Brilts Section, Township, Range: Sections 31 & 32, Township 22North, Range 2E

Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): convex Slope (%): _____

Subregion (LRR): C Lat: 39.719 Long: -121.786 Datum: NAD83

Soil Map Unit Name: Redtough-Redswale Complex, 0 to 2 Percent Slopes NWI classification: UPL

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 ✓	No _____	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____	No ✓	
Wetland Hydrology Present?	Yes _____	No ✓	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0 = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
Herb Stratum (Plot size: _____)			
1. Eleocharis macrostachya	35	Yes	OBL
2. Hordeum marinum	25	Yes	FAC
3. Hordeum murinum	15	No	FACU
4. Avena fatua	15	No	UPL
5. Senecio vulgaris	5	No	UPL
6. Centaurea solstitialis	3	No	UPL
7. Leontodon saxatilis	2	No	UPL
8.			
	100 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	0 = Total Cover		

% Bare Ground in Herb Stratum 0 % Cover of Biotic Crust _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species _____	x 1 =	0
FACW species _____	x 2 =	0
FAC species _____	x 3 =	0
FACU species _____	x 4 =	0
UPL species _____	x 5 =	0
Column Totals: 0 (A)		0 (B)

Prevalence Index = B/A = NaN

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, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks:

SOIL

Sampling Point: 9b

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
1-4	7.5YR 3/3	100					Clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✓

Remarks:

no redox
photo 20

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ 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? (includes capillary fringe) Yes _____ No ✓ Depth (inches): _____

Wetland Hydrology Present? Yes _____ No ✓

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Stonegate Property City/County: Chico/ Butte Sampling Date: 02/23/2016

Applicant/Owner: Epick Homes, Inc. State: CA Sampling Point: 10b

Investigator(s): Meredith Branstad, Marisa Brilts Section, Township, Range: Sections 31 & 32, Township 22North, Range 2E

Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): concave Slope (%): _____

Subregion (LRR): C Lat: 39.721 Long: -121.785 Datum: NAD83

Soil Map Unit Name: Redtough-Redswale Complex, 0 to 2 Percent Slopes NWI classification: UPL

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 ✓	No _____	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____	No ✓	
Wetland Hydrology Present?	Yes ✓	No _____	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0 = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
Herb Stratum (Plot size: _____)			
1. Eleocharis macrostachya	79	Yes	OBL
2. Festuca perennis	20	Yes	FAC
3. Hordeum marinum	1	No	FAC
4.			
5.			
6.			
7.			
8.			
	100 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	0 = Total Cover		

% Bare Ground in Herb Stratum _____ % Cover of Biotic Crust _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species _____	x 1 =	0
FACW species _____	x 2 =	0
FAC species _____	x 3 =	0
FACU species _____	x 4 =	0
UPL species _____	x 5 =	0
Column Totals: 0 (A)		0 (B)

Prevalence Index = B/A = NaN

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, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks:

SOIL

Sampling Point: 10b

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	7.5YR 2.5/3	98		2	c	M	silt/clay	soft masses, no mottles

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✓

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ✓ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ✓ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ✓ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ 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? (includes capillary fringe) Yes ✓ No _____ Depth (inches): 1

Wetland Hydrology Present? Yes ✓ No _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Stonegate Property City/County: Chico/ Butte Sampling Date: 02/23/2016

Applicant/Owner: Epick Homes, Inc. State: CA Sampling Point: 11b

Investigator(s): Meredith Branstad, Marisa Brilts Section, Township, Range: Sections 31 & 32, Township 22North, Range 2E

Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): concave Slope (%): _____

Subregion (LRR): C Lat: 39.720 Long: -121.785 Datum: NAD83

Soil Map Unit Name: Redtough-Redswale Complex, 0 to 2 Percent Slopes NWI classification: UPL

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 ✓	No _____	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____	No ✓	
Wetland Hydrology Present?	Yes ✓	No _____	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	0	= Total Cover	
Herb Stratum (Plot size: _____)			
1. Eleocharis macrostachya	78	Yes	OBL
2. Festuca perennis	20	Yes	FAC
3. Hordeum marinum	1	No	FAC
4. Hordeum murinum	1	No	FACU
5.			
6.			
7.			
8.			
	100	= Total Cover	
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	0	= Total Cover	

% Bare Ground in Herb Stratum _____ % Cover of Biotic Crust _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species _____	x 1 =	0
FACW species _____	x 2 =	0
FAC species _____	x 3 =	0
FACU species _____	x 4 =	0
UPL species _____	x 5 =	0
Column Totals: 0 (A)		0 (B)

Prevalence Index = B/A = NaN

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, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks:

SOIL

Sampling Point: 11b

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
1-6	7.5YR 2.5/2	100					silt/clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✓

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ✓ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ✓ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ 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? (includes capillary fringe) Yes ✓ No _____ Depth (inches): 2

Wetland Hydrology Present? Yes ✓ No _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Stonegate Property City/County: Chico/ Butte Sampling Date: 02/23/2016

Applicant/Owner: Epick Homes, Inc. State: CA Sampling Point: 12a

Investigator(s): Meredith Branstad, Marisa Brilts Section, Township, Range: Sections 31 & 32, Township 22North, Range 2E

Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): concave Slope (%): <1

Subregion (LRR): C Lat: 39.717 Long: -121.787 Datum: NAD83

Soil Map Unit Name: Redtough-Redswale Complex, 0 to 2 Percent Slopes NWI classification: DSW

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 ✓ No _____	**Is the Sampled Area within a Wetland?** Yes ✓ No _____
Hydric Soil Present?	Yes ✓ No _____	
Wetland Hydrology Present?	Yes ✓ No _____	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0 = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
Herb Stratum (Plot size: _____)			
1. Festuca perennis	72	Yes	FAC
2. Eleocharis macrostachya	25	Yes	OBL
3. Hordeum marinum	2	No	FAC
4. Limnanthes sp.	1	No	OBL
5.			
6.			
7.			
8.			
	100 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	0 = Total Cover		

% Bare Ground in Herb Stratum 0 % Cover of Biotic Crust _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species	x 1 =	0
FACW species	x 2 =	0
FAC species	x 3 =	0
FACU species	x 4 =	0
UPL species	x 5 =	0
Column Totals: 0 (A)		0 (B)

Prevalence Index = B/A = NaN

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, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks:

SOIL

Sampling Point: 12a

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
1-6	10YR 3/2	95	2.5YR 4/6	5	C	PL	clay	yes

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ✓ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: hardpan

Depth (inches): 6

Hydric Soil Present? Yes ✓ No ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ✓ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ 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? (includes capillary fringe) Yes ✓ No ___ Depth (inches): 1

Wetland Hydrology Present? Yes ✓ No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Stonegate Property City/County: Chico/ Butte Sampling Date: 02/23/2016

Applicant/Owner: Epick Homes, Inc. State: CA Sampling Point: 13a

Investigator(s): Meredith Branstad, Marisa Brilts Section, Township, Range: Sections 31 & 32, Township 22North, Range 2E

Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): concave Slope (%): <1

Subregion (LRR): C Lat: 39.39.717 Long: -121.787 Datum: NAD83

Soil Map Unit Name: Redtough-Redswale Complex, 0 to 2 Percent Slopes NWI classification: DSW

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 ✓ No _____	**Is the Sampled Area within a Wetland?** Yes ✓ No _____
Hydric Soil Present?	Yes ✓ No _____	
Wetland Hydrology Present?	Yes ✓ No _____	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0 = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
Herb Stratum (Plot size: _____)			
1. Eleocharis macrostachya	65	Yes	OBL
2. Hordeum marinum	20	Yes	FAC
3. Festuca perennis	15	No	FAC
4.			
5.			
6.			
7.			
8.			
	100 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	0 = Total Cover		

% Bare Ground in Herb Stratum 0 % Cover of Biotic Crust _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species	x 1 =	0
FACW species	x 2 =	0
FAC species	x 3 =	0
FACU species	x 4 =	0
UPL species	x 5 =	0
Column Totals: 0 (A)		0 (B)

Prevalence Index = B/A = NaN

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, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks:

cobbles

SOIL

Sampling Point: 13a

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
1-6	7.5YR 3/2	90	2.5YR 3/6	10	C	PL	clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ✓ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ✓ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: hardpan

Depth (inches): 6

Hydric Soil Present? Yes ✓ No ___

Remarks:

cobbly, algae matting, matted down veg

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ✓ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ✓ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ 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? (includes capillary fringe) Yes ✓ No ___ Depth (inches): 2

Wetland Hydrology Present? Yes ✓ No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

surface damp

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Stonegate Property City/County: Chico/ Butte Sampling Date: 02/23/2016

Applicant/Owner: Epick Homes, Inc. State: CA Sampling Point: 13b

Investigator(s): Meredith Branstad, Marisa Brilts Section, Township, Range: Sections 31 & 32, Township 22North, Range 2E

Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): concave Slope (%): <1

Subregion (LRR): C Lat: 39.717 Long: -121.787 Datum: NAD83

Soil Map Unit Name: Redtough-Redswale Complex, 0 to 2 Percent Slopes 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 ✓	No _____	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____	No ✓	
Wetland Hydrology Present?	Yes _____	No ✓	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0 = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
Herb Stratum (Plot size: _____)			
1. Festuca perennis	90	Yes	FAC
2. Hordeum murinum	10	No	FACU
3. Eleocharis macrostachya	2	No	OBL
4.			
5.			
6.			
7.			
8.			
	102 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	0 = Total Cover		

% Bare Ground in Herb Stratum 0 % Cover of Biotic Crust _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species	x 1 =	0
FACW species	x 2 =	0
FAC species	x 3 =	0
FACU species	x 4 =	0
UPL species	x 5 =	0
Column Totals: 0 (A)		0 (B)

Prevalence Index = B/A = NaN

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, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks:

SOIL

Sampling Point: 13b

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
1-4	7.5YR 3/2	99	2.5YR 3/6	1	C	PL	clay silt	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✓

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ 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? (includes capillary fringe) Yes _____ No ✓ Depth (inches): _____

Wetland Hydrology Present? Yes _____ No ✓

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Stonegate Property City/County: Chico/ Butte Sampling Date: 2/15/16

Applicant/Owner: Epick Homes, Inc. State: CA Sampling Point: 14b

Investigator(s): Kelly Bayne, Charlotte Marks Section, Township, Range: Sec 31&32, Township 22North, Range 2E

Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Convex Slope (%): 2

Subregion (LRR): C Lat: 39.723867 Long: -121.790776 Datum: _____

Soil Map Unit Name: Redtough-Redswale Complex, 0 to 2 Percent Slopes NWI classification: N/A

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 _____	No ✓	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____	No ✓	
Wetland Hydrology Present?	Yes _____	No ✓	

Remarks:

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:	0		
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
Total Cover:	0		
Herb Stratum			
1. Avena fatua	70	Y	UPL
2. Vicia villosa	20	Y	UPL
3. Geranium molle	5	N	UPL
4. Erodium botrys	5	N	FACU
5.			
6.			
7.			
8.			
Total Cover:	100		
Woody Vine Stratum			
1.			
2.			
Total Cover:	0		

% Bare Ground in Herb Stratum 0 % Cover of Biotic Crust _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

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 _____ No ✓

Remarks:

SOIL

Sampling Point: 14b

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-12	7.5YR 2.5/2	100					Clay	

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✓

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Plowed Soils (C6)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ 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? (includes capillary fringe) Yes _____ No ✓ Depth (inches): _____

Wetland Hydrology Present? Yes _____ No ✓

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Stonegate Property City/County: Chico/ Butte Sampling Date: 2/15/16

Applicant/Owner: Epick Homes, Inc. State: CA Sampling Point: 15a

Investigator(s): Kelly Bayne, Charlottte Marks Section, Township, Range: Sec 31&32, Township 22North, Range 2E

Landform (hillslope, terrace, etc.): Grassland Local relief (concave, convex, none): Concave Slope (%): <1

Subregion (LRR): C Lat: 39.723466 Long: -121.790753 Datum: _____

Soil Map Unit Name: Redtough-Redswale Complex, 0 to 2 Percent Slopes NWI classification: DSW

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 ✓ No _____	**Is the Sampled Area within a Wetland?** Yes ✓ No _____
Hydric Soil Present?	Yes ✓ No _____	
Wetland Hydrology Present?	Yes ✓ No _____	

Remarks:

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:	0		
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
Total Cover:	0		
Herb Stratum			
1. Festuca perennis	60	Y	FAC
2. Rumex crispus	5	N	FAC
3.			
4.			
5.			
6.			
7.			
8.			
Total Cover:	65		
Woody Vine Stratum			
1.			
2.			
Total Cover:	0		

% Bare Ground in Herb Stratum 35 % Cover of Biotic Crust 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

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 ✓ No _____

Remarks:

SOIL

Sampling Point: 15a

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-12	7.5YR 3/2	95	5YR 3/4	5	C	PL	Clay	

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ✓ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ✓ No _____

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ✓ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Plowed Soils (C6)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ 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? (includes capillary fringe) Yes _____ No ✓ Depth (inches): _____

Wetland Hydrology Present? Yes ✓ No _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Stonegate Property City/County: Chico/ Butte Sampling Date: 2/15/16

Applicant/Owner: Epick Homes, Inc. State: CA Sampling Point: 15b

Investigator(s): Kelly Bayne, Charlottte Marks Section, Township, Range: Sec 31&32, Township 22North, Range 2E

Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Convex Slope (%): 2

Subregion (LRR): C Lat: 39.723411 Long: -121.790921 Datum: _____

Soil Map Unit Name: Redtough-Redswale Complex, 0 to 2 Percent Slopes NWI classification: N/A

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 _____	No ✓	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____	No ✓	
Wetland Hydrology Present?	Yes _____	No ✓	

Remarks:

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:	0		
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
Total Cover:	0		
Herb Stratum			
1. Avena fatua	70	Y	UPL
2. Vicia villosa	20	Y	UPL
3. Geranium molle	5	N	UPL
4. Erodium botrys	5	N	FACU
5.			
6.			
7.			
8.			
Total Cover:	100		
Woody Vine Stratum			
1.			
2.			
Total Cover:	0		

% Bare Ground in Herb Stratum 0 % Cover of Biotic Crust _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

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 _____ No ✓

Remarks:

SOIL

Sampling Point: 15b

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-12	7.5YR 2.5/2	100					Clay	

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✓

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Plowed Soils (C6)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ 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? (includes capillary fringe) Yes _____ No ✓ Depth (inches): _____

Wetland Hydrology Present? Yes _____ No ✓

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Stonegate Property City/County: Chico/ Butte Sampling Date: 2/15/16

Applicant/Owner: Epick Homes, Inc. State: CA Sampling Point: 16a

Investigator(s): Kelly Bayne, Charlottte Marks Section, Township, Range: Sec 31&32, Township 22North, Range 2E

Landform (hillslope, terrace, etc.): Grassland Local relief (concave, convex, none): Concave Slope (%): <1

Subregion (LRR): C Lat: 39.723077 Long: -121.790472 Datum: _____

Soil Map Unit Name: Redtough-Redswale Complex, 0 to 2 Percent Slopes NWI classification: VP

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 ✓ No _____	**Is the Sampled Area within a Wetland?** Yes ✓ No _____
Hydric Soil Present?	Yes ✓ No _____	
Wetland Hydrology Present?	Yes ✓ No _____	

Remarks:

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:	0		
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
Total Cover:	0		
Herb Stratum			
1. Eleochaeris macrostachya	60	Y	OBL
2. Blennosperma nanum	10	Y	FACW
3.			
4.			
5.			
6.			
7.			
8.			
Total Cover:	70		
Woody Vine Stratum			
1.			
2.			
Total Cover:	0		

% Bare Ground in Herb Stratum 30 % Cover of Biotic Crust 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

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 ✓ No _____

Remarks:

SOIL

Sampling Point: 16a

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-12	7.5YR 3/2	95	5YR 3/6	5	C	PL	Clay	

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ✓ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ✓ No _____

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ✓ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Plowed Soils (C6)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ 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? (includes capillary fringe) Yes _____ No ✓ Depth (inches): _____

Wetland Hydrology Present? Yes ✓ No _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Stonegate Property City/County: Chico/ Butte Sampling Date: 2/15/16

Applicant/Owner: Epick Homes, Inc. State: CA Sampling Point: 16b

Investigator(s): Kelly Bayne, Charlottte Marks Section, Township, Range: Sec 31&32, Township 22North, Range 2E

Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): Concave Slope (%): <1

Subregion (LRR): C Lat: 39.723054 Long: -121.790441 Datum: _____

Soil Map Unit Name: Redtough-Redswale Complex, 0 to 2 Percent Slopes NWI classification: Upland

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 _____	No ✓	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____	No ✓	
Wetland Hydrology Present?	Yes ✓	No _____	

Remarks:
Ponded water caused by disturbance of ground.

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:	0		
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
Total Cover:	0		
Herb Stratum			
1. Vicia villosa	35	Y	UPL
2. Erodium botrys	30	Y	FACU
3. Avena sativa	30	Y	UPL
4. Geranium molle	5	N	UPL
5.			
6.			
7.			
8.			
Total Cover:	100		
Woody Vine Stratum			
1.			
2.			
Total Cover:	0		

% Bare Ground in Herb Stratum 0 % Cover of Biotic Crust _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

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 _____ No ✓

Remarks:

SOIL

Sampling Point: 16b

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-10	7.5YR 3/4	100					Clay	

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✓

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ✓ Surface Water (A1)
- ✓ High Water Table (A2)
- ✓ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Plowed Soils (C6)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ 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): 3

Water Table Present? Yes ✓ No _____ Depth (inches): 3

Saturation Present? (includes capillary fringe) Yes ✓ No _____ Depth (inches): 10

Wetland Hydrology Present? Yes ✓ No _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Stonegate Property City/County: Chico/ Butte Sampling Date: 2/15/16

Applicant/Owner: Epick Homes, Inc. State: CA Sampling Point: 17b

Investigator(s): Kelly Bayne, Charlottte Marks Section, Township, Range: Sec 31&32, Township 22North, Range 2E

Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Convex Slope (%): 1

Subregion (LRR): C Lat: 39.721884 Long: -121.788476 Datum: _____

Soil Map Unit Name: Redtough-Redswale Complex, 0 to 2 Percent Slopes NWI classification: N/A

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 _____	No ✓	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____	No ✓	
Wetland Hydrology Present?	Yes _____	No ✓	

Remarks:

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:	0		
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
Total Cover:	0		
Herb Stratum			
1. Vicia villosa	30	Y	UPL
2. Centauria solstitialis	30	Y	UPL
3. Avena fatua	20	Y	UPL
4. Erodium botrys	10	N	FACU
5. Elymus caput-medusae	10	N	UPL
6.			
7.			
8.			
Total Cover:	100		
Woody Vine Stratum			
1.			
2.			
Total Cover:	0		

% Bare Ground in Herb Stratum 0 % Cover of Biotic Crust _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

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 _____ No ✓

Remarks:

SOIL

Sampling Point: 17b

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-12	7.5YR 3/4	100					Clay	

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✓

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Plowed Soils (C6)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ 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? (includes capillary fringe) Yes _____ No ✓ Depth (inches): _____

Wetland Hydrology Present? Yes _____ No ✓

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Stonegate Property City/County: Chico/ Butte Sampling Date: 2/15/16

Applicant/Owner: Epick Homes, Inc. State: CA Sampling Point: 18a

Investigator(s): Kelly Bayne/ Charlotte Marks Section, Township, Range: _____

Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): Concave Slope (%): <1

Subregion (LRR): C Lat: 39.725878 Long: -121.78604 Datum: _____

Soil Map Unit Name: Redtough-Redswale Complex, 0 to 2 Percent Slopes NWI classification: DSW

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 ✓ No _____	**Is the Sampled Area within a Wetland?** Yes ✓ No _____
Hydric Soil Present?	Yes ✓ No _____	
Wetland Hydrology Present?	Yes ✓ No _____	

Remarks:

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:	0		
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
Total Cover:	0		
Herb Stratum			
1. Blennosperma nanum	40	Y	FACW
2. Lepidium latifolium	30	Y	FAC
3. Hordeum marinum	20	Y	FAC
4. Crssula sp.	5	N	
5.			
6.			
7.			
8.			
Total Cover:	95		
Woody Vine Stratum			
1.			
2.			
Total Cover:	0		

% Bare Ground in Herb Stratum 5 % Cover of Biotic Crust _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

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 ✓ No _____

Remarks:

SOIL

Sampling Point: 18a

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	7.5YR 3/2	90	7.5YR 3/6	10	C	PL	Clay	Rocky

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ✓ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ✓ No _____

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ✓ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Plowed Soils (C6)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ 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? (includes capillary fringe) Yes _____ No ✓ Depth (inches): _____

Wetland Hydrology Present? Yes ✓ No _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Stonegate Property City/County: Chico/ Butte Sampling Date: 2/15/16

Applicant/Owner: Epick Homes, Inc. State: CA Sampling Point: 18b

Investigator(s): Kelly Bayne, Charlotte Marks Section, Township, Range: Sec 31&32, Township 22North, Range 2E

Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): Convex Slope (%): <1

Subregion (LRR): C Lat: 39.72586 Long: -121.786073 Datum: _____

Soil Map Unit Name: Redtough-Redswale Complex, 0 to 2 Percent Slopes NWI classification: N/A

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 _____	No ✓	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____	No ✓	
Wetland Hydrology Present?	Yes _____	No ✓	

Remarks:

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:	0		
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
Total Cover:	0		
Herb Stratum			
1. Avena barbata	50	Y	UPL
2. Hordeum murinum	40	Y	UPL
3. Erodium botrys	10	N	FACU
4.			
5.			
6.			
7.			
8.			
Total Cover:	100		
Woody Vine Stratum			
1.			
2.			
Total Cover:	0		

% Bare Ground in Herb Stratum 0 % Cover of Biotic Crust _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

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 _____ No ✓

Remarks:

SOIL

Sampling Point: 18b

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-13	7.5YR 3/4	100					Clay loam	Rocky

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✓

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Plowed Soils (C6)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ 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? (includes capillary fringe) Yes _____ No ✓ Depth (inches): _____

Wetland Hydrology Present? Yes _____ No ✓

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Stonegate Property City/County: Chico/ Butte Sampling Date: 2/15/16

Applicant/Owner: Epick Homes, Inc. State: CA Sampling Point: 19b

Investigator(s): Kelly Bayne, Charlotte Marks Section, Township, Range: Sec 31&32, Township 22North, Range 2E

Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): Convex Slope (%): 1

Subregion (LRR): C Lat: 39.726004 Long: -121.783011 Datum: _____

Soil Map Unit Name: Redtough-Redswale Complex, 1 to 2 Percent Slopes 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 _____	No ✓	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____	No ✓	
Wetland Hydrology Present?	Yes _____	No ✓	

Remarks:
Upland

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:	0		
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
Total Cover:	0		
Herb Stratum			
1. Vicia villosa	30	Y	UPL
2. Avena barbata	30	Y	UPL
3. Elymus caput-medusae	30	Y	UPL
4. Festuca perennis	10	N	FAC
5.			
6.			
7.			
8.			
Total Cover:	100		
Woody Vine Stratum			
1.			
2.			
Total Cover:	0		

% Bare Ground in Herb Stratum 0 % Cover of Biotic Crust _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

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 _____ No ✓

Remarks:

SOIL

Sampling Point: 19b

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-12	7.5YR 3/4	100					Clay loam	

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✓

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Plowed Soils (C6)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ 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? (includes capillary fringe) Yes _____ No ✓ Depth (inches): _____

Wetland Hydrology Present? Yes _____ No ✓

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

View ph. 25 - South

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Stonegate Property City/County: Butte County Sampling Date: 2/23/16

Applicant/Owner: Epick Homes, Inc. State: CA Sampling Point: 20b

Investigator(s): Kelly Bayne Section, Township, Range: Sec 31&32, Township 22North, Range 2E

Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): Concave Slope (%): <1

Subregion (LRR): C Lat: 39.725827 Long: -121.78313 Datum: _____

Soil Map Unit Name: Redtough-Redswale Complex, 1 to 2 Percent Slopes 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 _____ No ✓	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____ No ✓	
Wetland Hydrology Present?	Yes _____ No ✓	

Remarks:

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:	0		
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
Total Cover:	0		
Herb Stratum			
1. Avena fatua	30	Y	UPL
2. Fastuca perennis	30	Y	FAC
3. Hordeum marinum	30	Y	UPL
4. Erodium botrys	10	N	FACU
5.			
6.			
7.			
8.			
Total Cover:	100		
Woody Vine Stratum			
1.			
2.			
Total Cover:	0		

% Bare Ground in Herb Stratum 0 % Cover of Biotic Crust _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 33 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

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 _____ No ✓

Remarks:

SOIL

Sampling Point: 20b

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-12	7.5YR3/3	100						

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

___ Histosol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5) (**LRR C**)
___ 1 cm Muck (A9) (**LRR D**)
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Sandy Mucky Mineral (S1)
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Loamy Mucky Mineral (F1)
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)
___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

___ 1 cm Muck (A9) (**LRR C**)
___ 2 cm Muck (A10) (**LRR B**)
___ Reduced Vertic (F18)
___ Red Parent Material (TF2)
___ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✓

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

___ Surface Water (A1)
___ High Water Table (A2)
___ Saturation (A3)
___ Water Marks (B1) (**Nonriverine**)
___ Sediment Deposits (B2) (**Nonriverine**)
___ Drift Deposits (B3) (**Nonriverine**)
___ Surface Soil Cracks (B6)
___ Inundation Visible on Aerial Imagery (B7)
___ Water-Stained Leaves (B9)
___ Salt Crust (B11)
___ Biotic Crust (B12)
___ Aquatic Invertebrates (B13)
___ Hydrogen Sulfide Odor (C1)
___ Oxidized Rhizospheres along Living Roots (C3)
___ Presence of Reduced Iron (C4)
___ Recent Iron Reduction in Plowed Soils (C6)
___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

___ 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? (includes capillary fringe) Yes _____ No ✓ Depth (inches): _____

Wetland Hydrology Present? Yes _____ No ✓

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Stonegate Property City/County: Chico/ Butte Sampling Date: 2/15/16

Applicant/Owner: Epick Homes, Inc. State: CA Sampling Point: 21a

Investigator(s): Kelly Bayne, Charlotte Marks Section, Township, Range: Sec 31&32, Township 22North, Range 2E

Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): Concave Slope (%): 1

Subregion (LRR): C Lat: 39.724188 Long: -121.78267 Datum: _____

Soil Map Unit Name: Redtough-Redswale Complex, 0 to 2 Percent Slopes NWI classification: VP

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 ✓ No _____	**Is the Sampled Area within a Wetland?** Yes ✓ No _____
Hydric Soil Present?	Yes ✓ No _____	
Wetland Hydrology Present?	Yes ✓ No _____	

Remarks:

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:	0		
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
Total Cover:	0		
Herb Stratum			
1. Hordeum marinum	40	Y	FAC
2. Plagiobothrys stipitatus	20	Y	FACW
3. Festuca perennis	20	Y	FAC
4. Blennosperma nanum	15	N	FACW
5.			
6.			
7.			
8.			
Total Cover:	95		
Woody Vine Stratum			
1.			
2.			
Total Cover:	0		

% Bare Ground in Herb Stratum 5 % Cover of Biotic Crust 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

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 ✓ No _____

Remarks:

SOIL

Sampling Point: 21a

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-10	7.5YR 3/2	60	7.5YR 2.5/1	30	D	M	Clay	
			7.5YR 4/6	10	C	PL		

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ✓ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ✓ No _____

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ✓ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ✓ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Plowed Soils (C6)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ 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? (includes capillary fringe) Yes ✓ No _____ Depth (inches): 6

Wetland Hydrology Present? Yes ✓ No _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Stonegate Property City/County: Chico/ Butte Sampling Date: 2/23/16

Applicant/Owner: Epick Homes, Inc. State: CA Sampling Point: 21b

Investigator(s): Kelly Bayne, Charlotte Marks Section, Township, Range: Sec 31&32, Township 22North, Range 2E

Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): Convex Slope (%): <1

Subregion (LRR): C Lat: 39.724225 Long: -121.782811 Datum: _____

Soil Map Unit Name: Redtough-Redswale Complex, 1 to 2 Percent Slopes NWI classification: Upland

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 _____	No ✓	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____	No ✓	
Wetland Hydrology Present?	Yes _____	No ✓	

Remarks:

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:	0		
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
Total Cover:	0		
Herb Stratum			
1. Elymus caput-medusae	55	Y	UPL
2. Avena sp.	30	Y	UPL
3. Festuca perennis	10	N	
4.			
5.			
6.			
7.			
8.			
Total Cover:	95		
Woody Vine Stratum			
1.			
2.			
Total Cover:	0		

% Bare Ground in Herb Stratum 5 % Cover of Biotic Crust _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

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 _____ No ✓

Remarks:

SOIL

Sampling Point: 21b

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-13	7.5YR 3/3	100					Clay	

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: Rock

Depth (inches): 13

Hydric Soil Present? Yes _____ No ✓

Remarks:

Large rocks interspersed throughout soil profile.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Plowed Soils (C6)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ 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? (includes capillary fringe) Yes _____ No ✓ Depth (inches): _____

Wetland Hydrology Present? Yes _____ No ✓

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Stonegate Property City/County: Chico/ Butte Sampling Date: 2/23/16

Applicant/Owner: Epick Homes, Inc. State: CA Sampling Point: 22b

Investigator(s): Kelly Bayne, Charlotte Marks Section, Township, Range: Sec 31&32, Township 22North, Range 2E

Landform (hillslope, terrace, etc.): Hill (mima) Local relief (concave, convex, none): Convex Slope (%): 1

Subregion (LRR): C Lat: 39.715389 Long: -121.778142 Datum: _____

Soil Map Unit Name: Doemill-Jokerst Complex, 3 to 8 Percent Slopes 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 _____	No ✓	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____	No ✓	
Wetland Hydrology Present?	Yes _____	No ✓	

Remarks:

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:	0		
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
Total Cover:	0		
Herb Stratum			
1. Avena fatua	60	Y	UPL
2. Erodium botrys	20	Y	FACU
3. Elymus caput-medusae	15	N	
4. Matricaria discoidea	5	N	
5.			
6.			
7.			
8.			
Total Cover:	100		
Woody Vine Stratum			
1.			
2.			
Total Cover:	0		

% Bare Ground in Herb Stratum 0 % Cover of Biotic Crust _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

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 _____ No ✓

Remarks:

SOIL

Sampling Point: 22b

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-12	7.5YR 3/3	100					Loamy GR	

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: Rock

Depth (inches): 12

Hydric Soil Present? Yes _____ No ✓

Remarks:

Rocks interspersed throughout soil profile.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Plowed Soils (C6)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ 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? (includes capillary fringe) Yes _____ No ✓ Depth (inches): _____

Wetland Hydrology Present? Yes _____ No ✓

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Stonegate Property City/County: Chico/Butte Sampling Date: 02/25/2016

Applicant/Owner: Epick Homes, Inc. State: CA Sampling Point: 23b

Investigator(s): Meredith Branstad, Marisa Brilts Section, Township, Range: Sections 31 & 32, Township 22North, Range 2E

Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): convex Slope (%): _____

Subregion (LRR): C Lat: 39.713 Long: -121.778 Datum: NAD83

Soil Map Unit Name: Redtough-Redswale Complex, 0 to 2 Percent Slopes NWI classification: UPL

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 _____	No ✓	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____	No ✓	
Wetland Hydrology Present?	Yes _____	No ✓	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0 = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
Herb Stratum (Plot size: _____)			
1. Avena fatua	89	Yes	UPL
2. Geranium sp.	5	No	FAC
3. Senecio vulgaris	2	No	FACU
4. Hordeum murinum	2	No	FACU
5. Vicia sp.	2	No	UPL
6.			
7.			
8.			
	100 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	0 = Total Cover		

% Bare Ground in Herb Stratum _____ % Cover of Biotic Crust _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = 0
FACW species _____	x 2 = 0
FAC species _____	x 3 = 0
FACU species _____	x 4 = 0
UPL species _____	x 5 = 0
Column Totals: 0 (A)	0 (B)

Prevalence Index = B/A = NaN

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, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes _____ No ✓

Remarks:

SOIL

Sampling Point: 23b

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
1-6	5YR 3/2	100					Clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** _____ **No** ✓

Remarks:

no redox / moss growing, small patch, and worms

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ 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? (includes capillary fringe) Yes _____ No ✓ Depth (inches): _____

Wetland Hydrology Present? **Yes** _____ **No** ✓

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Stonegate Property City/County: Chico/ Butte Sampling Date: 02/25/2016

Applicant/Owner: Epick Homes, Inc. State: CA Sampling Point: 24a

Investigator(s): Meredith Branstad, Marisa Brilts Section, Township, Range: Sections 31 & 32, Township 22North, Range 2E

Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): concave Slope (%): _____

Subregion (LRR): C Lat: 39.713 Long: -121.78 Datum: NAD83

Soil Map Unit Name: Redtough-Redswale Complex, 0 to 2 Percent Slopes NWI classification: VP

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 ✓ No _____	**Is the Sampled Area within a Wetland?** Yes ✓ No _____
Hydric Soil Present?	Yes ✓ No _____	
Wetland Hydrology Present?	Yes ✓ No _____	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0 = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
Herb Stratum (Plot size: _____)			
1. Eleocharis macrostachya	65	Yes	OBL
2. Festuca perennis	25	Yes	FAC
3. Hordeum murinum	10	No	FACU
4.			
5.			
6.			
7.			
8.			
	100 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	0 = Total Cover		

% Bare Ground in Herb Stratum 0 % Cover of Biotic Crust _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = 0
FACW species _____	x 2 = 0
FAC species _____	x 3 = 0
FACU species _____	x 4 = 0
UPL species _____	x 5 = 0
Column Totals: 0 (A)	0 (B)

Prevalence Index = B/A = NaN

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, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks:

SOIL

Sampling Point: 24a

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
1-12	7.5YR 3/2	85	2.5YR 3/6	15	C	PL		clay

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ✓ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ✓ **No** _____

Remarks:

mang. @ 7%
soft masses

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ✓ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ✓ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ 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? (includes capillary fringe) Yes ✓ No _____ Depth (inches): 2

Wetland Hydrology Present? Yes ✓ **No** _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

water filled fast to 2"

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Stonegate Property City/County: Chico/ Butte Sampling Date: 02/25/2016

Applicant/Owner: Epick Homes, Inc. State: CA Sampling Point: 24b

Investigator(s): Meredith Branstad, Marisa Brilts Section, Township, Range: Sections 31 & 32, Township 22North, Range 2E

Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): convex Slope (%): _____

Subregion (LRR): C Lat: 39.716 Long: -121.78 Datum: NAD83

Soil Map Unit Name: Redtough-Redswale Complex, 0 to 2 Percent Slopes NWI classification: UPL

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 ✓	No _____	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____	No ✓	
Wetland Hydrology Present?	Yes _____	No ✓	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0 = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
Herb Stratum (Plot size: _____)			
1. Festuca perennis	52	Yes	FAC
2. Hordeum marinum	40	Yes	FAC
3. Avena fatua	5	No	UPL
4. Rumex crispus	1	No	FAC
5. Vicia sp.	1	No	UPL
6. Plantago erecta	1	No	UPL
7.			
8.			
	100 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	0 = Total Cover		

% Bare Ground in Herb Stratum 0 % Cover of Biotic Crust _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species	x 1 =	0
FACW species	x 2 =	0
FAC species	x 3 =	0
FACU species	x 4 =	0
UPL species	x 5 =	0
Column Totals: 0 (A)		0 (B)

Prevalence Index = B/A = NaN

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, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks:

SOIL

Sampling Point: 24b

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
1-6	7.5YR 3/3	100						

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✓

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ 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? (includes capillary fringe) Yes _____ No ✓ Depth (inches): _____

Wetland Hydrology Present? Yes _____ No ✓

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Stonegate Property City/County: Chico/ Butte Sampling Date: 02/25/2016

Applicant/Owner: Epick Homes, Inc. State: CA Sampling Point: 25b

Investigator(s): Meredith Branstad, Marisa Brilts Section, Township, Range: Sections 31 & 32, Township 22North, Range 2E

Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): concave Slope (%): _____

Subregion (LRR): C Lat: 39.713 Long: -121.78 Datum: NAD83

Soil Map Unit Name: Doemill-Jokerst Complex, 3 to 8 Percent Slopes NWI classification: UPL

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 ✓	No _____	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____	No ✓	
Wetland Hydrology Present?	Yes ✓	No _____	

Remarks:

Photo 2 NW

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0 = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
Herb Stratum (Plot size: _____)			
1. Festuca perennis	20	Yes	FAC
2. Eleocharis macrostachya	7	Yes	OBL
3. Geranium sp.	3	No	UPL
4.			
5.			
6.			
7.			
8.			
	30 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	0 = Total Cover		

% Bare Ground in Herb Stratum 70 % Cover of Biotic Crust _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = 0
FACW species _____	x 2 = 0
FAC species _____	x 3 = 0
FACU species _____	x 4 = 0
UPL species _____	x 5 = 0
Column Totals: 0 (A)	0 (B)

Prevalence Index = B/A = NaN

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, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks:

SOIL

Sampling Point: 25b

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
1-4	7.5YR 3/3	95	5YR 4/6	5	C		clay/loam	
4-6	7.5YR 5/8	95	10YR 3/3	5				

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ____ No ✓

Remarks:

Mn @ 5% 1-6"
soft masses

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ✓ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ 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? (includes capillary fringe) Yes ____ No ✓ Depth (inches): _____

Wetland Hydrology Present? Yes ✓ No ____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

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WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Stonegate Property City/County: Chico/ Butte Sampling Date: 02/25/2016

Applicant/Owner: Epick Homes, Inc. State: CA Sampling Point: 25c

Investigator(s): Meredith Branstad/ Marisa Brilts Section, Township, Range: Sections 31 & 32, Township 22North, Range 2E

Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): concave Slope (%): _____

Subregion (LRR): C Lat: 39.713 Long: -121.78 Datum: NAD83

Soil Map Unit Name: Doemill-Jokerst Complex, 3 to 8 Percent Slopes NWI classification: UPL

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 ✓	No _____	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____	No ✓	
Wetland Hydrology Present?	Yes ✓	No _____	

Remarks:

Photo 2 NW

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	0	= Total Cover	
Herb Stratum (Plot size: _____)			
1. Festuca perennis	10	Yes	FAC
2. Eleocharis macrostachya	7	Yes	OBL
3. Geranium sp.	3	No	UPL
4.			
5.			
6.			
7.			
8.			
	20	= Total Cover	
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	0	= Total Cover	

% Bare Ground in Herb Stratum 80 % Cover of Biotic Crust _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species	x 1 =	0
FACW species	x 2 =	0
FAC species	x 3 =	0
FACU species	x 4 =	0
UPL species	x 5 =	0
Column Totals: 0 (A)		0 (B)

Prevalence Index = B/A = NaN

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, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks:

SOIL

Sampling Point: 25c

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
1-4	7.5YR 3/3	95	5YR 4/6	5	C		clay/loam	
4-6	7.5YR 5/8	95	10YR 3/3	5				

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✓

Remarks:

Mn @ 5% 1-6"
soft masses

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ✓ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ 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? (includes capillary fringe) Yes _____ No ✓ Depth (inches): _____

Wetland Hydrology Present? Yes ✓ No _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

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WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Stonegate Property City/County: Chico/ Butte Sampling Date: 02/25/2016

Applicant/Owner: Epick Homes, Inc. State: CA Sampling Point: 26b

Investigator(s): Meredith Branstad, Marisa Brilts Section, Township, Range: Sections 31 & 32, Township 22North, Range 2E

Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): _____ Slope (%): _____

Subregion (LRR): C Lat: 39.713 Long: -121.718 Datum: NAD83

Soil Map Unit Name: Doemill-Jokerst Complex, 3 to 8 Percent Slopes NWI classification: UPL

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 _____	No ✓	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____	No ✓	
Wetland Hydrology Present?	Yes _____	No ✓	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0 = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
Herb Stratum (Plot size: _____)			
1. Geranium molle	60	Yes	FACU
2. Festuca perennis	25	Yes	FAC
3. Hordeum marinum	10	No	FAC
4. Avena fatua	5	No	UPL
5.			
6.			
7.			
8.			
	100 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	0 = Total Cover		

% Bare Ground in Herb Stratum 0 % Cover of Biotic Crust _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	35	x 3 =	105
FACU species	70	x 4 =	280
UPL species	5	x 5 =	25
Column Totals:	110 (A)		410 (B)

Prevalence Index = B/A = 3.727272727

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, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes _____ No ✓

Remarks:

SOIL

Sampling Point: 26b

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
1-6	7.5YR 3/2	99					Clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✓

Remarks:

1% Mn concentrations

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ 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? (includes capillary fringe) Yes _____ No ✓ Depth (inches): _____

Wetland Hydrology Present? Yes _____ No ✓

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Stonegate Property City/County: Chico/ Butte Sampling Date: 02/25/2016

Applicant/Owner: Epick Homes, Inc. State: CA Sampling Point: 27a

Investigator(s): Meredith Branstad, Marisa Brilts Section, Township, Range: Sections 31 & 32, Township 22North, Range 2E

Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): concave Slope (%): 3

Subregion (LRR): C Lat: 39.713 Long: -121.78 Datum: NAD83

Soil Map Unit Name: Redtough-Redswale Complex, 0 to 2 Percent Slopes NWI classification: RSW

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 ✓ No _____	**Is the Sampled Area within a Wetland?** Yes ✓ No _____
Hydric Soil Present?	Yes ✓ No _____	
Wetland Hydrology Present?	Yes ✓ No _____	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0 = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
Herb Stratum (Plot size: _____)			
1. Blennosperma nanum	75	Yes	FACW
2. Eleocharis macrostachya	2	No	OBL
3.			
4.			
5.			
6.			
7.			
8.			
	77 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	0 = Total Cover		

% Bare Ground in Herb Stratum 23 % Cover of Biotic Crust _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species _____	x 1 =	0
FACW species _____	x 2 =	0
FAC species _____	x 3 =	0
FACU species _____	x 4 =	0
UPL species _____	x 5 =	0
Column Totals: 0 (A)		0 (B)

Prevalence Index = B/A = NaN

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, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks:

SOIL

Sampling Point: 27a

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
1-6	2.5YR 3/2	90	2.5YR 3/6	10	C	PL	Clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ✓ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ✓ **No** _____

Remarks:

Mn 7% mottling

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ✓ Saturation (A3)
- ✓ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ✓ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ✓ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ 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? (includes capillary fringe) Yes ✓ No _____ Depth (inches): 4

Wetland Hydrology Present? Yes ✓ **No** _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Stonegate Property City/County: Chico/ Butte Sampling Date: 02/25/2016

Applicant/Owner: Epick Homes, Inc. State: CA Sampling Point: 27b

Investigator(s): Meredith Branstad, Marisa Brilts Section, Township, Range: Sections 31 & 32, Township 22North, Range 2E

Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): convex Slope (%): 1

Subregion (LRR): C Lat: 39.713 Long: -121.78 Datum: NAD83

Soil Map Unit Name: Redtough-Redswale Complex, 0 to 2 Percent Slopes NWI classification: UPL

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 _____	No ✓	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____	No ✓	
Wetland Hydrology Present?	Yes _____	No ✓	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0 = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
Herb Stratum (Plot size: _____)			
1. Festuca perennis	75	Yes	FAC
2. Avena fatua	25	Yes	UPL
3.			
4.			
5.			
6.			
7.			
8.			
	100 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	0 = Total Cover		

% Bare Ground in Herb Stratum 0 % Cover of Biotic Crust _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species	x 1 =	0
FACW species	x 2 =	0
FAC species 75	x 3 =	225
FACU species	x 4 =	0
UPL species 25	x 5 =	125
Column Totals: 100 (A)		350 (B)

Prevalence Index = B/A = 3.5

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, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes _____ No ✓

Remarks:

SOIL

Sampling Point: 27b

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
1-4	10YR 4/2	100					clay/loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✓

Remarks:

no redox

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ 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? (includes capillary fringe) Yes _____ No ✓ Depth (inches): _____

Wetland Hydrology Present? Yes _____ No ✓

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Stonegate Property City/County: Chico/ Butte Sampling Date: 02/25/2016

Applicant/Owner: Epick Homes, Inc. State: CA Sampling Point: 28a

Investigator(s): Meredith Branstad, Marisa Brilts Section, Township, Range: Sections 31 & 32, Township 22North, Range 2E

Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): concave Slope (%): _____

Subregion (LRR): C Lat: 39.713 Long: -121.78 Datum: NAD83

Soil Map Unit Name: Redtough-Redswale Complex, 0 to 2 Percent Slopes NWI classification: RSW

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 ✓	No _____	**Is the Sampled Area within a Wetland?** Yes ✓ No _____
Hydric Soil Present?	Yes ✓	No _____	
Wetland Hydrology Present?	Yes ✓	No _____	

Remarks:

photo 11 S

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0 = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
Herb Stratum (Plot size: _____)			
1. Eleocharis macrostachya	100	Yes	OBL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	100 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	0 = Total Cover		

% Bare Ground in Herb Stratum 0 % Cover of Biotic Crust _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = 0
FACW species _____	x 2 = 0
FAC species _____	x 3 = 0
FACU species _____	x 4 = 0
UPL species _____	x 5 = 0
Column Totals: 0 (A)	0 (B)

Prevalence Index = B/A = NaN

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, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks:

SOIL

Sampling Point: 28a

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
1-6	7.5YR 3/2	95	2.5YR 2.5/4	5	C	PL	clay / silt	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ✓ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ✓ No ___

Remarks:

Mn 5%

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ✓ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ✓ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ 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? (includes capillary fringe) Yes ✓ No ___ Depth (inches): 4

Wetland Hydrology Present? Yes ✓ No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Stonegate Property City/County: Chico/ Butte Sampling Date: 2/25/16

Applicant/Owner: Epick Homes, Inc. State: CA Sampling Point: 29a

Investigator(s): Charlotte Marks Section, Township, Range: Sec 31&32, Township 22North, Range 2E

Landform (hillslope, terrace, etc.): depression Local relief (concave, convex, none): concave Slope (%): 1

Subregion (LRR): _____ Lat: 39.713931 Long: -121.781339 Datum: _____

Soil Map Unit Name: Redtough-Redswale Complex, 0 to 2 Percent Slopes NWI classification: RSW

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 ✓ No _____	**Is the Sampled Area within a Wetland?** Yes ✓ No _____
Hydric Soil Present?	Yes ✓ No _____	
Wetland Hydrology Present?	Yes ✓ No _____	

Remarks:

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:	0		
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
Total Cover:	0		
Herb Stratum			
1. Eryngium vaseyi	80	YES	OBL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
Total Cover:	80		
Woody Vine Stratum			
1.			
2.			
Total Cover:	0		

% Bare Ground in Herb Stratum 20 % Cover of Biotic Crust _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

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 ✓ No _____

Remarks:

Bare ground and small to medium sized rocks cover remaining substrate

SOIL

Sampling Point: 29a

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	7.5 Y/R 3/2	90	2.5 Y/R 4/6	10	C	PL	Clay	

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ✓ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: Rock

Depth (inches): 6 inches

Hydric Soil Present? Yes ✓ No ___

Remarks:

Large and medium sized rocks interspersed throughout soil profile

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ✓ Surface Water (A1)
- ✓ High Water Table (A2)
- ✓ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ✓ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Plowed Soils (C6)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ 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): 0.5

Water Table Present? Yes ✓ No ___ Depth (inches): 1

Saturation Present? (includes capillary fringe) Yes ✓ No ___ Depth (inches): 1

Wetland Hydrology Present? Yes ✓ No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Stonegate Property City/County: Chico/ Butte Sampling Date: 2/25/16

Applicant/Owner: Epick Homes, Inc. State: CA Sampling Point: 29b

Investigator(s): Charlotte Marks Section, Township, Range: _____

Landform (hillslope, terrace, etc.): hilltop Local relief (concave, convex, none): convex Slope (%): 1

Subregion (LRR): _____ Lat: 39.714796 Long: -121.781851 Datum: _____

Soil Map Unit Name: Redtough-Redswale Complex, 0 to 2 Percent Slopes NWI classification: N/A

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 _____	No ✓	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____	No ✓	
Wetland Hydrology Present?	Yes _____	No ✓	

Remarks:

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:	0		
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
Total Cover:	0		
Herb Stratum			
1. Centaurea solstitialis	60	YES	UPL
2. Avena fatua	30		UPL
3. Elymus caput-medusae	10		UPL
4.			
5.			
6.			
7.			
8.			
Total Cover:	100		
Woody Vine Stratum			
1.			
2.			
Total Cover:	0		

% Bare Ground in Herb Stratum 0 % Cover of Biotic Crust _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A)

Total Number of Dominant Species Across All Strata: _____ (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	100	x 5 =	500
Column Totals:	100 (A)		500 (B)

Prevalence Index = B/A = 5.00

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 _____ No ✓

Remarks:

SOIL

Sampling Point: 29b

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-13	7.5 Y/R 3/4	100						Loamy clay

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: Rock

Depth (inches): 13 inches

Hydric Soil Present? Yes _____ No ✓

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Plowed Soils (C6)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ 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? (includes capillary fringe) Yes _____ No ✓ Depth (inches): _____

Wetland Hydrology Present? Yes _____ No ✓

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Stonegate Property City/County: Chico/ Butte Sampling Date: 2/25/16

Applicant/Owner: Epick Homes, Inc. State: CA Sampling Point: 30b

Investigator(s): Charlotte Marks Section, Township, Range: Sec 31&32, Township 22North, Range 2E

Landform (hillslope, terrace, etc.): hummock Local relief (concave, convex, none): convex Slope (%): 1.5

Subregion (LRR): C Lat: 39.714703 Long: -121.780844 Datum: _____

Soil Map Unit Name: Redtough-Redswale Complex, 0 to 2 Percent Slopes NWI classification: N/A

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 _____	No ✓	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____	No ✓	
Wetland Hydrology Present?	Yes _____	No ✓	

Remarks:

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:	0		
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
Total Cover:	0		
Herb Stratum			
1. Erodium botrys	10		FACU
2. Avena fatua	30		UPL
3. Elymus caput-medusae	55	YES	UPL
4. Dichelostemma capitatum	5		FACU
5.			
6.			
7.			
8.			
Total Cover:	100		
Woody Vine Stratum			
1.			
2.			
Total Cover:	0		

% Bare Ground in Herb Stratum _____ % Cover of Biotic Crust _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	15	x 4 =	60
UPL species	85	x 5 =	425
Column Totals:	100 (A)		485 (B)

Prevalence Index = B/A = 4.85

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 _____ No ✓

Remarks:

SOIL

Sampling Point: 30b

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-12	7.5 Y/R 3/4	100					clay loam	

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: Rock

Depth (inches): 12 inches

Hydric Soil Present? Yes _____ No ✓

Remarks:

Rocks interspersed throughout soil profile

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Plowed Soils (C6)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ 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? (includes capillary fringe) Yes _____ No ✓ Depth (inches): _____

Wetland Hydrology Present? Yes _____ No ✓

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Stonegate Property City/County: Chico/ Butte Sampling Date: 2/29/16

Applicant/Owner: Epick Homes, Inc. State: CA Sampling Point: 31a

Investigator(s): Charlotte Marks Section, Township, Range: Sec 31&32, Township 22North, Range 2E

Landform (hillslope, terrace, etc.): depression Local relief (concave, convex, none): concave Slope (%): 0.5

Subregion (LRR): _____ Lat: 39.714446 Long: -121.781519 Datum: _____

Soil Map Unit Name: Redtough-Redswale Complex, 0 to 2 Percent Slopes NWI classification: DPM

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 ✓ No _____	**Is the Sampled Area within a Wetland?** Yes ✓ No _____
Hydric Soil Present?	Yes ✓ No _____	
Wetland Hydrology Present?	Yes ✓ No _____	

Remarks:

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:	0		
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
Total Cover:	0		
Herb Stratum			
1. Triphysaria eriantha	3		UPL
2. Blennosperma nanum	10		FACW
3. Eleocharis macrostachya	45	YES	OBL
4. Erodium botrys	2		FACU
5. Crassula connata	35	YES	FAC
6.			
7.			
8.			
Total Cover:	95		
Woody Vine Stratum			
1.			
2.			
Total Cover:	0		

% Bare Ground in Herb Stratum 5 % Cover of Biotic Crust _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	45	x 1 =	45
FACW species	10	x 2 =	20
FAC species	35	x 3 =	105
FACU species	2	x 4 =	8
UPL species	3	x 5 =	15
Column Totals:	95 (A)		193 (B)

Prevalence Index = B/A = 2.03

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 ✓ No _____

Remarks:

SOIL

Sampling Point: 31a

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	7.5 Y/R 3/3	93	2.5 Y/R 2.5/3	2	C	PL		Loamy Clay
			Gley 2 2.5/5B	5	C	M		Manganese concentrations

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ✓ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: Rock

Depth (inches): 6 inches

Hydric Soil Present? Yes ✓ No ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ✓ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Plowed Soils (C6)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ 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? (includes capillary fringe) Yes ___ No ✓ Depth (inches): ___

Wetland Hydrology Present? Yes ✓ No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Stonegate Property City/County: Chico/ Butte Sampling Date: 2/25/16

Applicant/Owner: Epick Homes, Inc. State: CA Sampling Point: 31b

Investigator(s): Charlotte Marks Section, Township, Range: Sec 31&32, Township 22North, Range 2E

Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): none Slope (%): 0

Subregion (LRR): Lat: 39.714476 Long: -121.781455 Datum:

Soil Map Unit Name: Redtough-Redswale Complex, 0 to 2 Percent Slopes NWI classification: N/A

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 _____	No ✓	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____	No ✓	
Wetland Hydrology Present?	Yes _____	No ✓	

Remarks:

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:	0		
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
Total Cover:	0		
Herb Stratum			
1. Centaurea solstitialis	23		UPL
2. Chlorogalum pomeridianum	2		UPL
3. Elymus caput-medusae	50	YES	UPL
4. Vicia villosa	25		UPL
5.			
6.			
7.			
8.			
Total Cover:	100		
Woody Vine Stratum			
1.			
2.			
Total Cover:	0		

% Bare Ground in Herb Stratum 0 % Cover of Biotic Crust _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	100	x 5 =	500
Column Totals:	100 (A)		500 (B)

Prevalence Index = B/A = 5.00

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 _____ No ✓

Remarks:

SOIL

Sampling Point: 31b

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-14	7.5 Y/R 3/4	100						Loamy clay

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: Rock

Depth (inches): 14 inches

Hydric Soil Present? Yes _____ No ✓

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Plowed Soils (C6)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ 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? (includes capillary fringe) Yes _____ No ✓ Depth (inches): _____

Wetland Hydrology Present? Yes _____ No ✓

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Stonegate Property City/County: Chico/ Butte Sampling Date: 2/29/16

Applicant/Owner: Epick Homes, Inc. State: CA Sampling Point: 32a

Investigator(s): Meredith Branstad, Kelly Bayne Section, Township, Range: Sec 31&32, Township 22North, Range 2E

Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): concave Slope (%): <1

Subregion (LRR): C Lat: 39.713517 Long: -121.782119 Datum: _____

Soil Map Unit Name: Redtough-Redswale Complex, 0 to 2 Percent Slopes NWI classification: excavated ditch

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 ✓ No _____	**Is the Sampled Area within a Wetland?** Yes ✓ No _____
Hydric Soil Present?	Yes ✓ No _____	
Wetland Hydrology Present?	Yes ✓ No _____	

Remarks:

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:	0		
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
Total Cover:	0		
Herb Stratum			
1. Eryngium vaseyi	25	Y	FACW
2.			
3.			
4.			
5.			
6.			
7.			
8.			
Total Cover:	25		
Woody Vine Stratum			
1.			
2.			
Total Cover:	0		

% Bare Ground in Herb Stratum 75 % Cover of Biotic Crust _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

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 ✓ No _____

Remarks:

SOIL

Sampling Point: 32a

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-4	7.5YR 3/2	96	7.5YR 4/6	2	C	M	Clay	
0-4			7.5YR 2.5/1	2	C	M		soft masses

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ✓ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ✓ No _____

Remarks:

Cobbley

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ✓ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Plowed Soils (C6)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ 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? (includes capillary fringe) Yes _____ No ✓ Depth (inches): _____

Wetland Hydrology Present? Yes ✓ No _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Excavated ditch. Some ponded water present at south end.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Stonegate Property City/County: Chico/ Butte Sampling Date: 2/23/16

Applicant/Owner: Epick Homes, Inc. State: CA Sampling Point: 33a

Investigator(s): Kelly Bayne, Meredith Branstad Section, Township, Range: Sec 31&32, Township 22North, Range 2E

Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): concave Slope (%): <1

Subregion (LRR): C Lat: 39.713664 Long: -121.782055 Datum: _____

Soil Map Unit Name: Redtough-Redswale Complex, 0 to 2 Percent Slopes 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 ✓ No _____	**Is the Sampled Area within a Wetland?** Yes ✓ No _____
Hydric Soil Present?	Yes ✓ No _____	
Wetland Hydrology Present?	Yes ✓ No _____	

Remarks:

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:	0		
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
Total Cover:	0		
Herb Stratum			
1. Hordeum marinum	90	Y	FAC
2. Avena fatua	10	N	UPL
3.			
4.			
5.			
6.			
7.			
8.			
Total Cover:	100		
Woody Vine Stratum			
1.			
2.			
Total Cover:	0		

% Bare Ground in Herb Stratum 0 % Cover of Biotic Crust _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

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 ✓ No _____

Remarks:

SOIL

Sampling Point: 33a

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	7.5YR 2.5/2		7.5YR 5/8	5	C	M	Clay	
			7.5YR 2/1		C	M		Prominent mottling, soft mass

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ✓ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ✓ No _____

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Plowed Soils (C6)
- ✓ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ 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? (includes capillary fringe) Yes _____ No ✓ Depth (inches): _____

Wetland Hydrology Present? Yes ✓ No _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Matted vegetation

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Stonegate Property City/County: Chico/ Butte Sampling Date: 2/23/16

Applicant/Owner: Epick Homes, Inc. State: CA Sampling Point: 33b

Investigator(s): Kelly Bayne, Meredith Branstad Section, Township, Range: Sec 31&32, Township 22North, Range 2E

Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): convex Slope (%): <1

Subregion (LRR): C Lat: 39.713631 Long: -121.781972 Datum: _____

Soil Map Unit Name: Redtough-Redswale Complex, 0 to 2 Percent Slopes NWI classification: Upland

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 _____ No ✓	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____ No ✓	
Wetland Hydrology Present?	Yes _____ No ✓	

Remarks:

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:	0		
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
Total Cover:	0		
Herb Stratum			
1. Hordeum marinum	90	Y	UPL
2. Avena fatua	8	N	
3. Centaurea solstitialis	2	N	
4.			
5.			
6.			
7.			
8.			
Total Cover:	100		
Woody Vine Stratum			
1.			
2.			
Total Cover:	0		

% Bare Ground in Herb Stratum 0 % Cover of Biotic Crust _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

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 _____ No ✓

Remarks:

SOIL

Sampling Point: 33b

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-4	5YR 3/4	93	Manganese nodules	7	C	M	Silty clay	

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

___ Histosol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5) (**LRR C**)
___ 1 cm Muck (A9) (**LRR D**)
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Sandy Mucky Mineral (S1)
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Loamy Mucky Mineral (F1)
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)
___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

___ 1 cm Muck (A9) (**LRR C**)
___ 2 cm Muck (A10) (**LRR B**)
___ Reduced Vertic (F18)
___ Red Parent Material (TF2)
___ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✓

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

___ Surface Water (A1)
___ High Water Table (A2)
___ Saturation (A3)
___ Water Marks (B1) (**Nonriverine**)
___ Sediment Deposits (B2) (**Nonriverine**)
___ Drift Deposits (B3) (**Nonriverine**)
___ Surface Soil Cracks (B6)
___ Inundation Visible on Aerial Imagery (B7)
___ Water-Stained Leaves (B9)
___ Salt Crust (B11)
___ Biotic Crust (B12)
___ Aquatic Invertebrates (B13)
___ Hydrogen Sulfide Odor (C1)
___ Oxidized Rhizospheres along Living Roots (C3)
___ Presence of Reduced Iron (C4)
___ Recent Iron Reduction in Plowed Soils (C6)
___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

___ 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? (includes capillary fringe) Yes _____ No ✓ Depth (inches): _____

Wetland Hydrology Present? Yes _____ No ✓

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Stonegate Property City/County: Chico/ Butte Sampling Date: 2/25/16

Applicant/Owner: Epick Homes, Inc. State: CA Sampling Point: 34a

Investigator(s): Meredith Branstad, Charlotte Marks Section, Township, Range: Sec 31&32, Township 22North, Range 2E

Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): Concave Slope (%): 1

Subregion (LRR): C Lat: 39.718843 Long: -121.77842 Datum: _____

Soil Map Unit Name: Doemill-Jokerst Complex, 3 to 8 Percent Slopes NWI classification: VP

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 ✓ No _____	**Is the Sampled Area within a Wetland?** Yes ✓ No _____
Hydric Soil Present?	Yes ✓ No _____	
Wetland Hydrology Present?	Yes ✓ No _____	

Remarks:

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:	0		
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
Total Cover:	0		
Herb Stratum			
1. Hordeum marinum	40	Y	FAC
2. Plagiobothrys stipitatus	20	Y	FACW
3. Festuca perennis	20	Y	FAC
4. Blennosperma nanum	15	N	FACW
5.			
6.			
7.			
8.			
Total Cover:	95		
Woody Vine Stratum			
1.			
2.			
Total Cover:	0		

% Bare Ground in Herb Stratum 5 % Cover of Biotic Crust 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

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 ✓ No _____

Remarks:

SOIL

Sampling Point: 34a

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-10	7.5YR 3/2	70	7.5YR 2.5/1	10	D	M	Clay	
			7.5YR 4/6	20	C	PL		

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ✓ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ✓ No _____

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ✓ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ✓ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Plowed Soils (C6)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ 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? (includes capillary fringe) Yes ✓ No _____ Depth (inches): 6

Wetland Hydrology Present? Yes ✓ No _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Stonegate Property City/County: Chico/ Butte Sampling Date: 9/23/16

Applicant/Owner: Epick Homes, Inc. State: CA Sampling Point: 35a

Investigator(s): Meredith Branstad Section, Township, Range: Sec 31&32, Township 22North, Range 2E

Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): Concave Slope (%): <1%

Subregion (LRR): C Lat: 39.7153 Long: -121.7870 Datum: NAD 83

Soil Map Unit Name: Wafap-Hamslough Complex, 0 to 2 Percent Slopes NWI classification: Wetland

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 ✓ No _____	**Is the Sampled Area within a Wetland?** Yes ✓ No _____
Hydric Soil Present?	Yes ✓ No _____	
Wetland Hydrology Present?	Yes ✓ No _____	

Remarks:

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:	0		
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
Total Cover:	0		
Herb Stratum			
1. Festuca perennis	95	Y	FAC
2. Hordeum marinum	5	N	FAC
3. Eryngium vaseyi	3	N	FACW
4.			
5.			
6.			
7.			
8.			
Total Cover:	103		
Woody Vine Stratum			
1.			
2.			
Total Cover:	0		

% Bare Ground in Herb Stratum 5 % Cover of Biotic Crust 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

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 ✓ No _____

Remarks:

SOIL

Sampling Point: 35a

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-5	7.5YR 2.5/2	90	7.5YR 3/6	10	C	M	Clay loam	extremely cobbley

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ✓ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ✓ No _____

Remarks:

Very hard to get testable soil sample due to cobbles.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ✓ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Plowed Soils (C6)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ 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? (includes capillary fringe) Yes _____ No _____ Depth (inches): _____

Wetland Hydrology Present? Yes ✓ No _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

In topographic depression. No incised drainage patterns in soil, but expected to occur in storms based on swale topography.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Stonegate Property City/County: Chico/ Butte Sampling Date: 9/23/16

Applicant/Owner: Epick Homes, Inc. State: CA Sampling Point: 35b

Investigator(s): Meredith Branstad Section, Township, Range: Sec 31&32, Township 22North, Range 2E

Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): Concave Slope (%): <1%

Subregion (LRR): C Lat: 39.7153 Long: -121.7869 Datum: NAD 83

Soil Map Unit Name: Wafap-Hamslough Complex, 0 to 2 Percent Slopes NWI classification: Upland

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 ✓ No _____	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____ No ✓	
Wetland Hydrology Present?	Yes ✓ No _____	

Remarks:

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:	0		
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
Total Cover:	0		
Herb Stratum			
1. Festuca perennis	95	Y	FAC
2. Hordeum marinum	5	N	FAC
3. Tritelileia hyacinthina	1	N	FAC
4.			
5.			
6.			
7.			
8.			
Total Cover:	101		
Woody Vine Stratum			
1.			
2.			
Total Cover:	0		

% Bare Ground in Herb Stratum 0 % Cover of Biotic Crust 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals: (A)	(B)

Prevalence Index = B/A = _____

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 ✓ No _____

Remarks:

SOIL

Sampling Point: 35b

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-3	7.5YR 2.5/2	100	None				Clay loam	no mottles
3-6	7.5YR 2.5/2	93	2.5YR 2.5/4	7	C	PL	Clay loam	prominent mottles sitting on top of cobbles

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ✓ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✓

Remarks:

Value too low for F3
F6- requires 5% or more redox and 4 in. thick
Some mottling on top of cobbles, but not sufficient thickness to meet F6

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Plowed Soils (C6)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ 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? (includes capillary fringe) Yes _____ No _____ Depth (inches): _____

Wetland Hydrology Present? Yes ✓ No _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

On edge of topological depression. No incised drainage patterns in soil, but expected to occur in storms based on swale topography.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Stonegate Property City/County: Chico/ Butte Sampling Date: 9/23/16

Applicant/Owner: Epick Homes, Inc. State: CA Sampling Point: 35c

Investigator(s): Meredith Branstad Section, Township, Range: Sec 31&32, Township 22North, Range 2E

Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): Concave Slope (%): 1%

Subregion (LRR): C Lat: 39.7153 Long: -121.7870 Datum: NAD 83

Soil Map Unit Name: Wafap-Hamslough Complex, 0 to 2 Percent Slopes NWI classification: Upland

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 _____ No ✓	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____ No ✓	
Wetland Hydrology Present?	Yes _____ No ✓	

Remarks:

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:	0		
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
Total Cover:	0		
Herb Stratum			
1. Croton setigerus	3	N	UPL
2. Festuca perennis	60	Y	FAC
3. Elymus caput-medusae	30	Y	UPL
4. Hordeum marinum	10	N	FAC
5.			
6.			
7.			
8.			
Total Cover:	103		
Woody Vine Stratum			
1.			
2.			
Total Cover:	0		

% Bare Ground in Herb Stratum _____ % Cover of Biotic Crust 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species 70	x 3 = 210
FACU species _____	x 4 = _____
UPL species 33	x 5 = 165
Column Totals: 103 (A)	375 (B)

Prevalence Index = B/A = 3.64

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 _____ No ✓

Remarks:

SOIL

Sampling Point: 35c

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	7.5YR 2.5/2	100	none				Clay loam	no redox features

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✓

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Plowed Soils (C6)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ 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? (includes capillary fringe) Yes _____ No _____ Depth (inches): _____

Wetland Hydrology Present? Yes _____ No ✓

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

On edge of topographic depression

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Stonegate Property City/County: Chico/ Butte Sampling Date: 9/23/16

Applicant/Owner: Epick Homes, Inc. State: CA Sampling Point: 36b

Investigator(s): Meredith Branstad Section, Township, Range: Sec 31&32, Township 22North, Range 2E

Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): convex Slope (%): <1

Subregion (LRR): C Lat: 39.7150 Long: -121.7872 Datum: NAD 83

Soil Map Unit Name: Wafap-Hamslough Complex, 0 to 2 Percent Slopes NWI classification: Upland

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 ✓ No _____	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____ No ✓	
Wetland Hydrology Present?	Yes _____ No ✓	

Remarks:

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:	0		
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
Total Cover:	0		
Herb Stratum			
1. Festuca perennis	40	Y	FAC
2. Hordeum marinum	40	Y	FAC
3. Avena fatua	20	Y	UPL
4.			
5.			
6.			
7.			
8.			
Total Cover:	100		
Woody Vine Stratum			
1.			
2.			
Total Cover:	0		

% Bare Ground in Herb Stratum 0 % Cover of Biotic Crust 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 67% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

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 ✓ No _____

Remarks:

SOIL

Sampling Point: 36b

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-4	7.5YR 2.5/3	99	5YR 3/4	1	C	M	Clay loam	Faint mottles

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✓

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Plowed Soils (C6)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ 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? (includes capillary fringe) Yes _____ No _____ Depth (inches): _____

Wetland Hydrology Present? Yes _____ No ✓

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

At edge of road/fire break area- frequently driven. Raised above adjacent drainage swales.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Stonegate Property City/County: Chico/ Butte Sampling Date: 9/23/16

Applicant/Owner: Epick Homes, Inc. State: CA Sampling Point: 37a

Investigator(s): Meredith Branstad Section, Township, Range: Sec 31&32, Township 22North, Range 2E

Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): Concave Slope (%): <1

Subregion (LRR): C Lat: 39.7155 Long: -121.7869 Datum: NAD 83

Soil Map Unit Name: Wafap-Hamslough Complex, 0 to 2 Percent Slopes NWI classification: Wetland

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 ✓ No _____	**Is the Sampled Area within a Wetland?** Yes ✓ No _____
Hydric Soil Present?	Yes ✓ No _____	
Wetland Hydrology Present?	Yes ✓ No _____	

Remarks:

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:	0		
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
Total Cover:	0		
Herb Stratum			
1. Festuca perennis	40	Y	FAC
2. Hordeum marinum	60	Y	FAC
3. Centromadia fitchii	3	N	FACU
4.			
5.			
6.			
7.			
8.			
Total Cover:	103		
Woody Vine Stratum			
1.			
2.			
Total Cover:	0		

% Bare Ground in Herb Stratum _____ % Cover of Biotic Crust 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

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 ✓ No _____

Remarks:

SOIL

Sampling Point: 37a

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	7.5YR 2.5/2	75	2.5YR 4/8	25	C	M	loam	prominent mottles

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ✓ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ✓ No _____

Remarks:

Very cobbley

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Plowed Soils (C6)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ 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? (includes capillary fringe) Yes _____ No _____ Depth (inches): _____

Wetland Hydrology Present? Yes ✓ No _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

In topographic depression. No incised drainage patterns in soil, but expected to occur in storms based on swale topography.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Stonegate Property City/County: Chico/ Butte Sampling Date: 9/23/16

Applicant/Owner: Epick Homes, Inc. State: CA Sampling Point: 38a

Investigator(s): Meredith Branstad Section, Township, Range: Sec 31&32, Township 22North, Range 2E

Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): Concave Slope (%): <1

Subregion (LRR): C Lat: 39.7174 Long: -121.7865 Datum: NAD 83

Soil Map Unit Name: Wafap-Hamslough Complex, 0 to 2 Percent Slopes NWI classification: Wetland

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 ✓ No _____	**Is the Sampled Area within a Wetland?** Yes ✓ No _____
Hydric Soil Present?	Yes ✓ No _____	
Wetland Hydrology Present?	Yes ✓ No _____	

Remarks:

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:	0		
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
Total Cover:	0		
Herb Stratum			
1. Hordeum marinum	50	Y	FAC
2. Festuca perennis	30	Y	FAC
3. Eryngium vaseyi	10	N	FACW
4. Elymus caput-medusae	10	N	UPL
5. Triteleia hyacinthina	10	N	FAC
6.			
7.			
8.			
Total Cover:	110		
Woody Vine Stratum			
1.			
2.			
Total Cover:	0		

% Bare Ground in Herb Stratum _____ % Cover of Biotic Crust 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

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 ✓ No _____

Remarks:

SOIL

Sampling Point: 38a

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-4	7.5YR 2.5/2	70	2.5YR 4/8	30	C	M	loam	prominent mottles

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ✓ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ✓ No _____

Remarks:

Very cobbley

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ✓ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Plowed Soils (C6)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ 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? (includes capillary fringe) Yes _____ No _____ Depth (inches): _____

Wetland Hydrology Present? Yes ✓ No _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Stonegate Property City/County: Chico/ Butte Sampling Date: 9/23/16

Applicant/Owner: Epick Homes, Inc. State: CA Sampling Point: 39b

Investigator(s): Meredith Branstad Section, Township, Range: Sec 31&32, Township 22North, Range 2E

Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): concave Slope (%): 4

Subregion (LRR): C Lat: 39.7163 Long: -121.7867 Datum: NAD 83

Soil Map Unit Name: Wafap-Hamslough Complex, 0 to 2 Percent Slopes NWI classification: Upland

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 ✓ No _____	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____ No ✓	
Wetland Hydrology Present?	Yes _____ No ✓	

Remarks:

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:	0		
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
Total Cover:	0		
Herb Stratum			
1. Avena fatua	15	N	UPL
2. Festuca perennis	55	Y	FAC
3. Elymus caput-medusae	10	N	UPL
4. Hordeum marinum	15	N	FAC
5.			
6.			
7.			
8.			
Total Cover:	95		
Woody Vine Stratum			
1.			
2.			
Total Cover:	0		

% Bare Ground in Herb Stratum 5 % Cover of Biotic Crust 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

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 ✓ No _____

Remarks:

SOIL

Sampling Point: 39b

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-4	7.5YR 3.5/2	100	NONE				loam	

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✓

Remarks:

Many cobbles.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Plowed Soils (C6)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ 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? (includes capillary fringe) Yes _____ No _____ Depth (inches): _____

Wetland Hydrology Present? Yes _____ No ✓

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

In topographic depression. No incised drainage patterns in soil, but expected to occur in storms based on topography.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Stonegate Property City/County: Chico/ Butte Sampling Date: 9/23/16

Applicant/Owner: Epick Homes, Inc. State: CA Sampling Point: 40b

Investigator(s): Meredith Branstad Section, Township, Range: Sec 31&32, Township 22North, Range 2E

Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): concave Slope (%): <1

Subregion (LRR): C Lat: 39.7164 Long: -121.7861 Datum: NAD 83

Soil Map Unit Name: Wafap-Hamslough Complex, 0 to 2 Percent Slopes NWI classification: Upland

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 ✓ No _____	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____ No ✓	
Wetland Hydrology Present?	Yes ✓ No _____	

Remarks:

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:	0		
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
Total Cover:	0		
Herb Stratum			
1. Festuca perennis	80	Y	FAC
2. Eryngium vaseyi	10	N	FACW
3. Elymus caput-medusae	10	N	UPL
4.			
5.			
6.			
7.			
8.			
Total Cover:	100		
Woody Vine Stratum			
1.			
2.			
Total Cover:	0		

% Bare Ground in Herb Stratum 0 % Cover of Biotic Crust 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

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 ✓ No _____

Remarks:

SOIL

Sampling Point: 40b

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-6	7.5YR 2.5/2	100	NONE					

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✓

Remarks:

Many cobbles.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Plowed Soils (C6)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ 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? (includes capillary fringe) Yes _____ No _____ Depth (inches): _____

Wetland Hydrology Present? Yes ✓ No _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

In topographic depression. No incised drainage patterns in soil, but expected to occur in storms based on swale topography.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Stonegate Property City/County: Chico/ Butte Sampling Date: 9/23/16

Applicant/Owner: Epick Homes, Inc. State: CA Sampling Point: 41b

Investigator(s): Meredith Branstad Section, Township, Range: Sec 31&32, Township 22North, Range 2E

Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): concave Slope (%): 1

Subregion (LRR): C Lat: 39.7170 Long: -121.7856 Datum: NAD 83

Soil Map Unit Name: Wafap-Hamslough Complex, 0 to 2 Percent Slopes NWI classification: Upland

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 ✓ No _____	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____ No ✓	
Wetland Hydrology Present?	Yes ✓ No _____	

Remarks:

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:	0		
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
Total Cover:	0		
Herb Stratum			
1. Festuca perennis	100	Y	FAC
2.			
3.			
4.			
5.			
6.			
7.			
8.			
Total Cover:	100		
Woody Vine Stratum			
1.			
2.			
Total Cover:	0		

% Bare Ground in Herb Stratum 0 % Cover of Biotic Crust 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals: (A)	(B)

Prevalence Index = B/A = _____

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 ✓ No _____

Remarks:

SOIL

Sampling Point: 41b

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-5	7.5YR 2.5/2	98	2YR 4/6	2	C	M	Clayloam	prominent mottles

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✓

Remarks:

Redox only on one small pedon.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Plowed Soils (C6)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ 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? (includes capillary fringe) Yes _____ No _____ Depth (inches): _____

Wetland Hydrology Present? Yes ✓ No _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

In topographic depression. No incised drainage patterns in soil, but expected to occur in storms based on swale topography.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Stonegate Property City/County: Chico/ Butte Sampling Date: 9/23/16

Applicant/Owner: Epick Homes, Inc. State: CA Sampling Point: 42a

Investigator(s): Meredith Branstad Section, Township, Range: Sec 31&32, Township 22North, Range 2E

Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): Concave Slope (%): 2

Subregion (LRR): C Lat: 39.7174 Long: -121.7855 Datum: NAD 83

Soil Map Unit Name: Wafap-Hamslough Complex, 0 to 2 Percent Slopes NWI classification: Wetland

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 ✓ No _____	**Is the Sampled Area within a Wetland?** Yes ✓ No _____
Hydric Soil Present?	Yes ✓ No _____	
Wetland Hydrology Present?	Yes ✓ No _____	

Remarks:

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:	0		
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
Total Cover:	0		
Herb Stratum			
1. Festuca perennis	90	Y	FAC
2. Avena fatua	3	N	UPL
3. Triteleia hyacinthina	2	N	FAC
4.			
5.			
6.			
7.			
8.			
Total Cover:	95		
Woody Vine Stratum			
1.			
2.			
Total Cover:	0		

% Bare Ground in Herb Stratum 5 % Cover of Biotic Crust 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

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 ✓ No _____

Remarks:

SOIL

Sampling Point: 42a

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-4	7.5YR 2.5/2	92	2.5YR 3/6	6	C	M	Clay loam	prominent mottles
			soft masses	2	C	M		

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ✓ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ✓ No _____

Remarks:

Very cobbley

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ✓ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Plowed Soils (C6)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ 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? (includes capillary fringe) Yes _____ No _____ Depth (inches): _____

Wetland Hydrology Present? Yes ✓ No _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

In topographic depression. No incised drainage patterns in soil, but expected to occur in storms based on swale topography.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Stonegate Property City/County: Chico/ Butte Sampling Date: 9/23/16

Applicant/Owner: Epick Homes, Inc. State: CA Sampling Point: 43b

Investigator(s): Meredith Branstad Section, Township, Range: Sec 31&32, Township 22North, Range 2E

Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): concave Slope (%): 1

Subregion (LRR): _____ Lat: 39.7182 Long: -121.7854 Datum: NAD 83

Soil Map Unit Name: Wafap-Hamslough Complex, 0 to 2 Percent Slopes NWI classification: Upland

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 ✓ No _____	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____ No ✓	
Wetland Hydrology Present?	Yes ✓ No _____	

Remarks:

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:	0		
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
Total Cover:	0		
Herb Stratum			
1. Bromus hordeaceus	20	Y	FACU
2. Festuca perennis	30	Y	FAC
3. Avena fatua	10	N	UPL
4. Eryngium vaseyi	1	N	FACW
5. Elymus caput-medusae	10	N	UPL
6. Hordeum marinum	20	Y	FAC
7.			
8.			
Total Cover:	91		
Woody Vine Stratum			
1.			
2.			
Total Cover:	0		

% Bare Ground in Herb Stratum 10 % Cover of Biotic Crust 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 67 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

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 ✓ No _____

Remarks:

SOIL

Sampling Point: 43b

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-4	7.5YR 2.5/2	98	Soft masses	2	C	M	Clayloam	

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✓

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Plowed Soils (C6)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ 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? (includes capillary fringe) Yes _____ No _____ Depth (inches): _____

Wetland Hydrology Present? Yes ✓ No _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

In topographic depression. No incised drainage patterns in soil, but expected to occur in storms based on swale topography.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Stonegate Property City/County: Chico/ Butte Sampling Date: 9/23/16

Applicant/Owner: Epick Homes, Inc. State: CA Sampling Point: 44b

Investigator(s): Meredith Branstad Section, Township, Range: Sec 31&32, Township 22North, Range 2E

Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): concave Slope (%): 1

Subregion (LRR): Lat: 39.7184 Long: -121.7862 Datum: NAD 83

Soil Map Unit Name: Wafap-Hamslough Complex, 0 to 2 Percent Slopes NWI classification: Upland

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 ✓ No _____	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____ No ✓	
Wetland Hydrology Present?	Yes ✓ No _____	

Remarks:

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:	0		
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
Total Cover:	0		
Herb Stratum			
1. Elymus caput-medusae	50	Y	UPL
2. Eryngium vaseyi	2	N	FACW
3. Festuca perennis	50	Y	FAC
4. Tritileia hyacinthina	2	N	FAC
5.			
6.			
7.			
8.			
Total Cover:	104		
Woody Vine Stratum			
1.			
2.			
Total Cover:	0		

% Bare Ground in Herb Stratum 10 % Cover of Biotic Crust 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species	2	x 2 =	4
FAC species	52	x 3 =	156
FACU species		x 4 =	
UPL species	50	x 5 =	250
Column Totals:	104 (A)		310 (B)

Prevalence Index = B/A = 2.98

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 ✓ No _____

Remarks:

SOIL

Sampling Point: 44b

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-4	7.5YR 3/2	98	Soft masses	2	C	M	Loam	

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✓

Remarks:

F6 requires at least 5% redox reactions.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Plowed Soils (C6)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ 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? (includes capillary fringe) Yes _____ No _____ Depth (inches): _____

Wetland Hydrology Present? Yes ✓ No _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

In topographic depression. No incised drainage patterns in soil, but expected to occur in storms based on swale topography.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Stonegate Property City/County: Chico/ Butte Sampling Date: 9/23/16

Applicant/Owner: Epick Homes, Inc. State: CA Sampling Point: 45a

Investigator(s): Meredith Branstad Section, Township, Range: Sec 31&32, Township 22North, Range 2E

Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): Concave Slope (%): 1

Subregion (LRR): C Lat: 39.7192 Long: -121.7860 Datum: NAD 83

Soil Map Unit Name: Wafap-Hamslough Complex, 0 to 2 Percent Slopes NWI classification: Wetland

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 ✓ No _____	**Is the Sampled Area within a Wetland?** Yes ✓ No _____
Hydric Soil Present?	Yes ✓ No _____	
Wetland Hydrology Present?	Yes ✓ No _____	

Remarks:

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:	0		
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
Total Cover:	0		
Herb Stratum			
1. Festuca perennis	80	Y	FAC
2. Eryngium vaseyi	5	N	FACW
3. Triteleia hyacinthina	2	N	FAC
4. Elymus caput-medusae	10	N	UPL
5.			
6.			
7.			
8.			
Total Cover:	97		
Woody Vine Stratum			
1.			
2.			
Total Cover:	0		

% Bare Ground in Herb Stratum 3 % Cover of Biotic Crust 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

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 ✓ No _____

Remarks:

SOIL

Sampling Point: 45a

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-4	7.5YR 2.5/2	92	2YR 6/8	8	C	M	Loam	Prominent mottles
			soft masses	2	C	M		

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ✓ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ✓ No _____

Remarks:

Very cobbley

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Plowed Soils (C6)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ 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? (includes capillary fringe) Yes _____ No _____ Depth (inches): _____

Wetland Hydrology Present? Yes ✓ No _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

In topographic depression. No incised drainage patterns in soil, but expected to occur in storms based on swale topography.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Stonegate Property City/County: Chico/ Butte Sampling Date: 9/23/16

Applicant/Owner: Epick Homes, Inc. State: CA Sampling Point: 46b

Investigator(s): Meredith Branstad Section, Township, Range: Sec 31&32, Township 22North, Range 2E

Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): concave Slope (%): 1

Subregion (LRR): C Lat: 39.7205 Long: -121.7870 Datum: NAD 83

Soil Map Unit Name: Wafap-Hamslough Complex, 0 to 2 Percent Slopes NWI classification: Upland

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 ✓ No _____	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____ No ✓	
Wetland Hydrology Present?	Yes ✓ No _____	

Remarks:

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:	0		
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
Total Cover:	0		
Herb Stratum			
1. Hordeum marinum	25	Y	FAC
2. Festuca perennis	70	Y	FAC
3. Avena fatua	3	N	UPL
4. Elymus caput-medusae	5	N	UPL
5. Tritileia hyacinthina	3	N	FAC
6.			
7.			
8.			
Total Cover:	106		
Woody Vine Stratum			
1.			
2.			
Total Cover:	0		

% Bare Ground in Herb Stratum _____ % Cover of Biotic Crust 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

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 ✓ No _____

Remarks:

SOIL

Sampling Point: 46b

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-4	7.5YR 2.5/2	98	2.5YR 4/8	2	C	M	Clay loam	Prominent mottles

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✓

Remarks:

Does not meet the 5% redox features required for F6.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Plowed Soils (C6)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ 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? (includes capillary fringe) Yes _____ No _____ Depth (inches): _____

Wetland Hydrology Present? Yes ✓ No _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

In slight depression. No incised drainage patterns in soil, but expected to occur in storms based on swale topography.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Stonegate Property City/County: Chico/ Butte Sampling Date: 9/23/16

Applicant/Owner: Epick Homes, Inc. State: CA Sampling Point: 47a

Investigator(s): Meredith Branstad Section, Township, Range: Sec 31&32, Township 22North, Range 2E

Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): Concave Slope (%): 1

Subregion (LRR): C Lat: 39.7273 Long: -121.7851 Datum: NAD 83

Soil Map Unit Name: Wafap-Hamslough Complex, 0 to 2 Percent Slopes NWI classification: Wetland

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 ✓ No _____	**Is the Sampled Area within a Wetland?** Yes ✓ No _____
Hydric Soil Present?	Yes ✓ No _____	
Wetland Hydrology Present?	Yes ✓ No _____	

Remarks:

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:	0		
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
Total Cover:	0		
Herb Stratum			
1. Hordeum marinum	85	Y	FAC
2. Festuca perennis	15	N	FAC
3. Eryngium vaseyi	2	N	FACW
4. Centauria solstitialis	1	N	UPL
5. Avena fatua	1	N	UPL
6.			
7.			
8.			
Total Cover:	104		
Woody Vine Stratum			
1.			
2.			
Total Cover:	0		

% Bare Ground in Herb Stratum _____ % Cover of Biotic Crust 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

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 ✓ No _____

Remarks:

SOIL

Sampling Point: 47a

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-4	5YR 3/3	85	10R 4/8	10	C	M	Clay loam	Prominent mottles
			soft masses	5	C	M		

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ✓ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ✓ No _____

Remarks:

In closed basin

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ✓ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Plowed Soils (C6)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ 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? (includes capillary fringe) Yes _____ No _____ Depth (inches): _____

Wetland Hydrology Present? Yes ✓ No _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

In closed topographic depression.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Stonegate Property City/County: Chico/ Butte Sampling Date: 9/23/16

Applicant/Owner: Epick Homes, Inc. State: CA Sampling Point: 47b

Investigator(s): Meredith Branstad Section, Township, Range: Sec 31&32, Township 22North, Range 2E

Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): concave Slope (%): 1

Subregion (LRR): C Lat: 39.7238 Long: -121.7850 Datum: NAD 83

Soil Map Unit Name: Wafap-Hamslough Complex, 0 to 2 Percent Slopes NWI classification: Upland

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 ✓ No _____	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____ No ✓	
Wetland Hydrology Present?	Yes _____ No ✓	

Remarks:

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:	0		
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
Total Cover:	0		
Herb Stratum			
1. Hordeum marinum	55	Y	FAC
2. Festuca perennis	45	Y	FAC
3. Avena fatua	1	N	UPL
4.			
5.			
6.			
7.			
8.			
Total Cover:	101		
Woody Vine Stratum			
1.			
2.			
Total Cover:	0		

% Bare Ground in Herb Stratum _____ % Cover of Biotic Crust 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

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 ✓ No _____

Remarks:

SOIL

Sampling Point: 47b

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-4	5YR 3/3	96	2.5YR 4/6	2	C	PL	Clay loam	Prominent mottles
			Soft masses	2	C	M		

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✓

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Plowed Soils (C6)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ 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? (includes capillary fringe) Yes _____ No _____ Depth (inches): _____

Wetland Hydrology Present? Yes _____ No ✓

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

In topographic depression. No incised drainage patterns in soil, but expected to occur in storms based on swale topography.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Stonegate Property City/County: Chico/ Butte Sampling Date: 9/23/16

Applicant/Owner: Epick Homes, Inc. State: CA Sampling Point: 48a

Investigator(s): Meredith Branstad Section, Township, Range: Sec 31&32, Township 22North, Range 2E

Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): Concave Slope (%): 1

Subregion (LRR): C Lat: 39.7243 Long: -121.7847 Datum: NAD 83

Soil Map Unit Name: Redtough-Reedswale Complex, 0 to 2 Percent Slopes NWI classification: Wetland

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 ✓ No _____	**Is the Sampled Area within a Wetland?** Yes ✓ No _____
Hydric Soil Present?	Yes ✓ No _____	
Wetland Hydrology Present?	Yes ✓ No _____	

Remarks:

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:	0		
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
Total Cover:	0		
Herb Stratum			
1. Hordeum marinum	80	Y	FAC
2. Festuca perennis	15	N	FAC
3. Tritileia hyancinthina	4	N	FAC
4. Bromus hordeaceus	1	N	FACU
5.			
6.			
7.			
8.			
Total Cover:	100		
Woody Vine Stratum			
1.			
2.			
Total Cover:	0		

% Bare Ground in Herb Stratum 5 % Cover of Biotic Crust 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

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 ✓ No _____

Remarks:

SOIL

Sampling Point: 48a

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-4	7.5YR 3/2	90	2.5YR 4/8	6	C	M	loam	Prominent mottles
			soft masses	4	C	M		

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ✓ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ✓ No _____

Remarks:

In closed depression.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ✓ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Plowed Soils (C6)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ 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? (includes capillary fringe) Yes _____ No _____ Depth (inches): _____

Wetland Hydrology Present? Yes ✓ No _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

In topographic depression.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Stonegate Property City/County: Chico/ Butte Sampling Date: 9/23/16

Applicant/Owner: Epick Homes, Inc. State: CA Sampling Point: 49b

Investigator(s): Meredith Branstad Section, Township, Range: Sec 31&32, Township 22North, Range 2E

Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): concave Slope (%): _____

Subregion (LRR): C Lat: 39.7245 Long: -121.7848 Datum: NAD 83

Soil Map Unit Name: Redtough-Redswale Complex, 0 to 2 Percent Slopes NWI classification: Upland

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 ✓ No _____	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____ No ✓	
Wetland Hydrology Present?	Yes ✓ No _____	

Remarks:

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:	0		
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
Total Cover:	0		
Herb Stratum			
1. Eryngium vaseyi	5	N	FACW
2. Festuca perennis	40	Y	FAC
3. Hordeum marinum	35	Y	FAC
4. Elymus caput-medusae	20	Y	UPL
5.			
6.			
7.			
8.			
Total Cover:	100		
Woody Vine Stratum			
1.			
2.			
Total Cover:	0		

% Bare Ground in Herb Stratum _____ % Cover of Biotic Crust 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 67 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

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 ✓ No _____

Remarks:

SOIL

Sampling Point: 49b

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-4	7.5YR 2.5/3		5YR 4/6	10	C	M	loam	Prominent mottles
			Soft masses	3	C	M		

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✓

Remarks:

Not in closed depression.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Plowed Soils (C6)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ 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? (includes capillary fringe) Yes _____ No _____ Depth (inches): _____

Wetland Hydrology Present? Yes ✓ No _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

In topographic depression of swale confluence. No incised drainage patterns in soil, but expected to occur in storms based on swale topography.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Stonegate Property City/County: Chico/ Butte Sampling Date: 9/23/16

Applicant/Owner: Epick Homes, Inc. State: CA Sampling Point: 50b

Investigator(s): Meredith Branstad Section, Township, Range: Sec 31&32, Township 22North, Range 2E

Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): concave Slope (%): 1

Subregion (LRR): C Lat: 39.7250 Long: -121.7856 Datum: NAD 83

Soil Map Unit Name: Redtough-Redswale Complex, 0 to 2 Percent Slopes NWI classification: Upland

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 _____	No ✓	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____	No ✓	
Wetland Hydrology Present?	Yes _____	No ✓	

Remarks:

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:	0		
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
Total Cover:	0		
Herb Stratum			
1. Avena fatua	30	Y	UPL
2. Centauria solstitialis	5	N	UPL
3. Elymus caput-medusae	60	Y	UPL
4.			
5.			
6.			
7.			
8.			
Total Cover:	95		
Woody Vine Stratum			
1.			
2.			
Total Cover:	0		

% Bare Ground in Herb Stratum 10 % Cover of Biotic Crust 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species 95	x 5 = 475
Column Totals: 95 (A)	475 (B)

Prevalence Index = B/A = 5

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 _____ No ✓

Remarks:

SOIL

Sampling Point: 50b

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-4	5YR 3/4	100	None					

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✓

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Plowed Soils (C6)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ 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? (includes capillary fringe) Yes _____ No _____ Depth (inches): _____

Wetland Hydrology Present? Yes _____ No ✓

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

In topographic depression. No incised drainage patterns in soil, but expected to occur in storms based on swale topography.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Stonegate Property City/County: Chico/ Butte Sampling Date: 9/23/16

Applicant/Owner: Epick Homes, Inc. State: CA Sampling Point: 51b

Investigator(s): Meredith Branstad Section, Township, Range: Sec 31&32, Township 22North, Range 2E

Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): concave Slope (%): 1

Subregion (LRR): C Lat: 39.7257 Long: -121.7846 Datum: NAD 83

Soil Map Unit Name: Redtough-Redswale Complex, 0 to 2 Percent Slopes NWI classification: Upland

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 _____	No ✓	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____	No ✓	
Wetland Hydrology Present?	Yes ✓	No _____	

Remarks:

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:	0		
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
Total Cover:	0		
Herb Stratum			
1. Hordeum marinum	40	Y	FAC
2. Bromus hordeaceus	10	N	FACU
3. Festuca perennis	10	N	FAC
4. Elymus caput-medusae	10	N	UPL
5. Avena fatua	15	Y	UPL
6. Centromadia fitchii	5	N	FACU
7.			
8.			
Total Cover:	90		
Woody Vine Stratum			
1.			
2.			
Total Cover:	0		

% Bare Ground in Herb Stratum 5 % Cover of Biotic Crust 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species	x 1 =	
FACW species	x 2 =	
FAC species 50	x 3 =	150
FACU species 15	x 4 =	60
UPL species 25	x 5 =	125
Column Totals: 90 (A)		335 (B)

Prevalence Index = B/A = 3.7

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 _____ No ✓

Remarks:

SOIL

Sampling Point: 51b

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-4	7.5YR 2.5/3	98	Soft masses	2	C	M	loam	

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✓

Remarks:

Very cobbley.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Plowed Soils (C6)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ 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? (includes capillary fringe) Yes _____ No _____ Depth (inches): _____

Wetland Hydrology Present? Yes ✓ No _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Slight topographic depression. No incised drainage patterns in soil, but expected to occur in storms based on swale topography.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Stonegate Property City/County: Chico/ Butte Sampling Date: 9/23/16

Applicant/Owner: Epick Homes, Inc. State: CA Sampling Point: 52b

Investigator(s): Meredith Branstad Section, Township, Range: Sec 31&32, Township 22North, Range 2E

Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): concave Slope (%): 2

Subregion (LRR): C Lat: 39.7249 Long: -121.7868 Datum: NAD 83

Soil Map Unit Name: Redtough-Redswale Complex, 0 to 2 Percent Slopes NWI classification: Upland

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 _____	No ✓	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____	No ✓	
Wetland Hydrology Present?	Yes _____	No ✓	

Remarks:

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:	0		
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
Total Cover:	0		
Herb Stratum			
1. Bromus hordeaceus	40	Y	FACU
2. Elymus caput-medusae	30	Y	UPL
3. Festuca perennis	20	Y	FAC
4. Centromadia fitchii	8	N	FACU
5. Avena fatua	2	N	UPL
6.			
7.			
8.			
Total Cover:	100		
Woody Vine Stratum			
1.			
2.			
Total Cover:	0		

% Bare Ground in Herb Stratum 5 % Cover of Biotic Crust 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 37 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species	20	x 3 =	60
FACU species	48	x 4 =	192
UPL species	32	x 5 =	160
Column Totals:	100 (A)		412 (B)

Prevalence Index = B/A = 4.12

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 _____ No ✓

Remarks:

SOIL

Sampling Point: 52b

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-4	7.5YR 3/3	92	5YR 4/6	8	C	M	loam	Prominent mottles

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✓

Remarks:

Not in closed depression.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Plowed Soils (C6)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ 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? (includes capillary fringe) Yes _____ No _____ Depth (inches): _____

Wetland Hydrology Present? Yes _____ No ✓

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

In topographic swale. No incised drainage patterns in soil, but expected to occur in storms based on swale topography.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Stonegate Property City/County: Chico/ Butte Sampling Date: 10/07/2016

Applicant/Owner: Epick Homes, Inc. State: CA Sampling Point: 53b

Investigator(s): Meredith Branstad Section, Township, Range: Sec 31 & 32, Township 22North, Range 2E

Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): concave Slope (%): 1

Subregion (LRR): C Lat: 39.7143 Long: -121.7856 Datum: NAD83

Soil Map Unit Name: Redtough-Redswale Complex NWI classification: Upland

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 _____	No ✓	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____	No ✓	
Wetland Hydrology Present?	Yes _____	No ✓	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0 = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
Herb Stratum (Plot size: _____)			
1. Festuca perennis	40	Yes	FAC
2. Elymus caput-medusae	20	Yes	UPL
3. Triteleia hyacinthina	10	No	FAC
4. Avena fatua	10	No	UPL
5.			
6.			
7.			
8.			
	80 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	0 = Total Cover		

% Bare Ground in Herb Stratum 20 % Cover of Biotic Crust _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species	x 1 =	0
FACW species	x 2 =	0
FAC species 50	x 3 =	150
FACU species	x 4 =	0
UPL species 30	x 5 =	150
Column Totals: 80 (A)		300 (B)

Prevalence Index = B/A = 3.75

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, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes _____ No ✓

Remarks:

SOIL

Sampling Point: 53b

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-3	7.5YR 2.5/2	100	None					

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✓

Remarks:

Very cobbley, could not dig further

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ✓ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ 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? (includes capillary fringe) Yes _____ No _____ Depth (inches): _____

Wetland Hydrology Present? Yes _____ No ✓

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

In topographic depression. No incised drainage patterns in soil, but expected to occur in storms based on swale topography.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Stonegate Property City/County: Chico/ Butte Sampling Date: 10/07/2016

Applicant/Owner: Epick Homes, Inc. State: CA Sampling Point: 54b

Investigator(s): Meredith Branstad Section, Township, Range: Sec 31 & 32, Township 22North, Range 2E

Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): concave Slope (%): 1

Subregion (LRR): C Lat: 39.7144 Long: -121.7850 Datum: NAD83

Soil Map Unit Name: Redtough-Redswale Complex NWI classification: Upland

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 ✓	No _____	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____	No ✓	
Wetland Hydrology Present?	Yes ✓	No _____	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	0	= Total Cover	
Herb Stratum (Plot size: _____)			
1. Festuca perennis	75	Yes	FAC
2. Centaurea solstitialis	10	No	UPL
3. Avena fatua	5	No	UPL
4. Elymus caput-medusae	5	No	UPL
5. Triteleia hyacinthina	5	No	FAC
6. Lactuca serriola	1	No	FACU
7.			
8.			
	101	= Total Cover	
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	0	= Total Cover	

% Bare Ground in Herb Stratum 0 % Cover of Biotic Crust _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species _____	x 1 =	0
FACW species _____	x 2 =	0
FAC species _____	x 3 =	0
FACU species _____	x 4 =	0
UPL species _____	x 5 =	0
Column Totals: 0 (A)		0 (B)

Prevalence Index = B/A = NaN

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, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks:

SOIL

Sampling Point: 54b

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	7.5YR 2.5/2	98	soft masses	2	C	M	clay loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✓

Remarks:

very cobbly, insufficient redox reactions for F6.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ✓ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ 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? (includes capillary fringe) Yes _____ No _____ Depth (inches): _____

Wetland Hydrology Present? Yes ✓ No _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

In topographic depression. No incised drainage patterns in soil, but expected to occur in storms based on swale topography.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Stonegate Property City/County: Chico/ Butte Sampling Date: 10/07/2016

Applicant/Owner: Epick Homes, Inc. State: CA Sampling Point: 55b

Investigator(s): Meredith Branstad Section, Township, Range: Sec 31 & 32, Township 22North, Range 2E

Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): concave Slope (%): 2

Subregion (LRR): C Lat: 39.7139 Long: -121.7847 Datum: NAD83

Soil Map Unit Name: Redtough-Redswale Complex NWI classification: Upland

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 _____	No ✓	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____	No ✓	
Wetland Hydrology Present?	Yes _____	No ✓	

Remarks:

Disturbed by fire break

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0 = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
Herb Stratum (Plot size: _____)			
1. Elymus caput-medusae	40	Yes	UPL
2. Festuca perennis	20	Yes	FAC
3.			
4.			
5.			
6.			
7.			
8.			
	60 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	0 = Total Cover		

% Bare Ground in Herb Stratum 40 % Cover of Biotic Crust _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species	x 1 =	0
FACW species	x 2 =	0
FAC species 40	x 3 =	120
FACU species	x 4 =	0
UPL species 20	x 5 =	100
Column Totals: 60 (A)		220 (B)

Prevalence Index = B/A = 3.666666666

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, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes _____ No ✓

Remarks:

SOIL

Sampling Point: 55b

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	10YR 3/3	80	5YR 4/6	20	C	M	clay loam	prominent mottles

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✓

Remarks:

not in closed depression

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ✓ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ 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? (includes capillary fringe) Yes _____ No _____ Depth (inches): _____

Wetland Hydrology Present? Yes _____ No ✓

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

In topographic depression. No incised drainage patterns in soil, but expected to occur in storms based on swale topography.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Stonegate Property City/County: Chico/ Butte Sampling Date: 10/07/2016

Applicant/Owner: Epick Homes, Inc. State: CA Sampling Point: 56a

Investigator(s): Meredith Branstad Section, Township, Range: Sec 31 & 32, Township 22North, Range 2E

Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): concave Slope (%): 1

Subregion (LRR): C Lat: 39.7138 Long: -121.7840 Datum: NAD83

Soil Map Unit Name: Redtough-Redswale Complex NWI classification: Wetland

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 ✓ No _____	**Is the Sampled Area within a Wetland?** Yes ✓ No _____
Hydric Soil Present?	Yes ✓ No _____	
Wetland Hydrology Present?	Yes ✓ No _____	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0 = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
Herb Stratum (Plot size: _____)			
1. Hordeum marinum	50	Yes	FAC
2. Festuca perennis	30	Yes	FAC
3. Eryngium vaseyi	10	No	FACW
4. Avena fatua	5	No	UPL
5. Centromadia fitchii	5	No	FACU
6.			
7.			
8.			
	100 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	0 = Total Cover		

% Bare Ground in Herb Stratum 2 % Cover of Biotic Crust _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species	x 1 =	0
FACW species	x 2 =	0
FAC species	x 3 =	0
FACU species	x 4 =	0
UPL species	x 5 =	0
Column Totals: 0 (A)		0 (B)

Prevalence Index = B/A = NaN

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, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks:

SOIL

Sampling Point: 56a

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	7.5YR 2.5/2	93	5YR 4/6	7	C	M	loam	prominent mottles

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ✓ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ✓ **No** ___

Remarks:

very cobbly

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ✓ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ 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? (includes capillary fringe) Yes ___ No ___ Depth (inches): _____

Wetland Hydrology Present? Yes ✓ **No** ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

In topographic depression.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Stonegate Property City/County: Chico/ Butte Sampling Date: 10/07/2016

Applicant/Owner: Epick Homes, Inc. State: CA Sampling Point: 57a

Investigator(s): Meredith Branstad Section, Township, Range: Sec 31 & 32, Township 22North, Range 2E

Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): concave Slope (%): 4

Subregion (LRR): C Lat: 39.7135 Long: -121.7845 Datum: NAD83

Soil Map Unit Name: Redtough-Redswale Complex NWI classification: Wetland

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 ✓	No _____	**Is the Sampled Area within a Wetland?** Yes ✓ No _____
Hydric Soil Present?	Yes ✓	No _____	
Wetland Hydrology Present?	Yes ✓	No _____	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0 = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
Herb Stratum (Plot size: _____)			
1. Hordeum marinum	95	Yes	FAC
2. Croton setiger	3	No	UPL
3. Centromadia fitchii	2	No	FACU
4.			
5.			
6.			
7.			
8.			
	100 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	0 = Total Cover		

% Bare Ground in Herb Stratum _____ % Cover of Biotic Crust _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species _____	x 1 =	0
FACW species _____	x 2 =	0
FAC species _____	x 3 =	0
FACU species _____	x 4 =	0
UPL species _____	x 5 =	0
Column Totals: 0 (A)		0 (B)

Prevalence Index = B/A = NaN

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, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks:

SOIL

Sampling Point: 57a

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-6	5YR 3/3	95	soft masses	5	C	M	clay loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ✓ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ✓ No ___

Remarks:

In closed depression

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ✓ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ 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? (includes capillary fringe) Yes ___ No ___ Depth (inches): _____

Wetland Hydrology Present? Yes ✓ No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

In closed topographic depression

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Stonegate Property City/County: Chico/ Butte Sampling Date: 10/07/2016

Applicant/Owner: Epick Homes, Inc. State: CA Sampling Point: 58b

Investigator(s): Meredith Branstad Section, Township, Range: Sec 31 & 32, Township 22North, Range 2E

Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): concave Slope (%): 2

Subregion (LRR): C Lat: 39.7152 Long: -121.7843 Datum: NAD83

Soil Map Unit Name: Redtough-Redswale Complex NWI classification: Upland

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 _____	No ✓	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____	No ✓	
Wetland Hydrology Present?	Yes _____	No ✓	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0 = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
Herb Stratum (Plot size: _____)			
1. Erodium botrys	20	Yes	FACU
2. Elymus caput-medusae	15	Yes	UPL
3. Festuca perennis	15	Yes	FAC
4. Triteleia hyacinthina	5	No	FAC
5.			
6.			
7.			
8.			
	55 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	0 = Total Cover		

% Bare Ground in Herb Stratum 45 % Cover of Biotic Crust _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 33 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = 0
FACW species _____	x 2 = 0
FAC species 20	x 3 = 60
FACU species 20	x 4 = 80
UPL species 15	x 5 = 75
Column Totals: 55 (A)	215 (B)

Prevalence Index = B/A = 3.909090909

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, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes _____ No ✓

Remarks:

SOIL

Sampling Point: 58b

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-6	5YR 3/4	97	soft masses	3	C	M	soft loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✓

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ 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? (includes capillary fringe) Yes _____ No _____ Depth (inches): _____

Wetland Hydrology Present? Yes _____ No ✓

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Stonegate Property City/County: Chico/ Butte Sampling Date: 10/07/2016

Applicant/Owner: Epick Homes, Inc. State: CA Sampling Point: 59b

Investigator(s): Meredith Branstad Section, Township, Range: Sec 31 & 32, Township 22North, Range 2E

Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): concave Slope (%): 1

Subregion (LRR): C Lat: 39.7164 Long: -121.7846 Datum: NAD83

Soil Map Unit Name: Redtough-Redswale Complex NWI classification: Upland

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 _____	No ✓	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes ✓	No _____	
Wetland Hydrology Present?	Yes _____	No ✓	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	0	= Total Cover	
Herb Stratum (Plot size: _____)			
1. Bromus hordeaceus	40	Yes	FACU
2. Festuca perennis	40	Yes	FAC
3. Elymus caput-medusae	10	No	UPL
4. Eryngium vaseyi	5	No	FACW
5. Triteleia hyacinthina	2	No	FAC
6. Centromadia fitchii	1	No	FACU
7. Croton setiger	1	No	UPL
8.			
	99	= Total Cover	
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	0	= Total Cover	

% Bare Ground in Herb Stratum 5 % Cover of Biotic Crust _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	0
FACW species	5	x 2 =	10
FAC species	42	x 3 =	126
FACU species	41	x 4 =	164
UPL species	11	x 5 =	55
Column Totals:	99 (A)		355 (B)

Prevalence Index = B/A = 3.585858585

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, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes _____ No ✓

Remarks:

SOIL

Sampling Point: 59b

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	7.5YR 2.5/3	95	2.5YR 4/6	3	C	M	loam	Prominent mottles
			soft masses	2	C	M		

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ✓ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ✓ **No** _____

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ 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? (includes capillary fringe) Yes _____ No _____ Depth (inches): _____

Wetland Hydrology Present? Yes _____ **No** ✓

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

In closed topographic depression

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Stonegate Property City/County: Chico/ Butte Sampling Date: 10/07/2016

Applicant/Owner: Epick Homes, Inc. State: CA Sampling Point: 60a

Investigator(s): Meredith Branstad Section, Township, Range: Sec 31 & 32, Township 22North, Range 2E

Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): concave Slope (%): 1

Subregion (LRR): C Lat: 39.7252 Long: -121.7826 Datum: NAD83

Soil Map Unit Name: Redtough-Redswale Complex NWI classification: Wetland

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 ✓	No _____	**Is the Sampled Area within a Wetland?** Yes ✓ No _____
Hydric Soil Present?	Yes ✓	No _____	
Wetland Hydrology Present?	Yes ✓	No _____	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0 = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
Herb Stratum (Plot size: _____)			
1. Hordeum marinum	70	Yes	FAC
2. Festuca perennis	30	Yes	FAC
3.			
4.			
5.			
6.			
7.			
8.			
	100 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	0 = Total Cover		

% Bare Ground in Herb Stratum _____ % Cover of Biotic Crust _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species _____	x 1 =	0
FACW species _____	x 2 =	0
FAC species _____	x 3 =	0
FACU species _____	x 4 =	0
UPL species _____	x 5 =	0
Column Totals: 0 (A)		0 (B)

Prevalence Index = B/A = NaN

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, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks:

SOIL

Sampling Point: 60a

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	7.5YR 3/2	94	5YR 3/4	3	C	M	clay loam	distinct mottles
			soft masses	3	C	M		

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ✓ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ✓ **No** _____

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ✓ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ 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? (includes capillary fringe) Yes _____ No _____ Depth (inches): _____

Wetland Hydrology Present? Yes ✓ **No** _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

In topographic depression. No incised drainage patterns in soil, but expected to occur in storms based on swale topography.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Stonegate Property City/County: Chico/ Butte Sampling Date: 10/07/2016

Applicant/Owner: Epick Homes, Inc. State: CA Sampling Point: 60b

Investigator(s): Meredith Branstad Section, Township, Range: Sec 31 & 32, Township 22North, Range 2E

Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): concave Slope (%): 1

Subregion (LRR): C Lat: 39.7252 Long: -121.7826 Datum: NAD83

Soil Map Unit Name: Redtough-Redswale Complex NWI classification: Upland

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 _____	No ✓	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____	No ✓	
Wetland Hydrology Present?	Yes ✓	No _____	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0 = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
Herb Stratum (Plot size: _____)			
1. Hordeum marinum	70	Yes	FAC
2. Elymus caput-medusae	20	Yes	UPL
3. Festuca perennis	10	No	FAC
4.			
5.			
6.			
7.			
8.			
	100 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	0 = Total Cover		

% Bare Ground in Herb Stratum _____ % Cover of Biotic Crust _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species _____	x 1 =	0
FACW species _____	x 2 =	0
FAC species 80	x 3 =	240
FACU species _____	x 4 =	0
UPL species 20	x 5 =	100
Column Totals: 100 (A)		340 (B)

Prevalence Index = B/A = 3.4

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, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes _____ No ✓

Remarks:

SOIL

Sampling Point: 60b

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-4	7.5YR 2.5/3	98	5YR 3/4	2	C	M	clay loam	Faint mottles

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✓

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ✓ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ 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? (includes capillary fringe) Yes _____ No _____ Depth (inches): _____

Wetland Hydrology Present? Yes ✓ No _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

In topographic depression. No incised drainage patterns in soil, but expected to occur in storms based on swale topography.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Stonegate Property City/County: Chico/ Butte Sampling Date: 10/13/2016

Applicant/Owner: Epick Homes, Inc. State: CA Sampling Point: 61b

Investigator(s): Meredith Branstad Section, Township, Range: Sec 31 & 32, Township 22North, Range 2E

Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): concave Slope (%): 1

Subregion (LRR): C Lat: 39.7242 Long: -121.7785 Datum: NAD83

Soil Map Unit Name: Clearhayes-Hamslough Complex NWI classification: Upland

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 _____	No ✓	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____	No ✓	
Wetland Hydrology Present?	Yes _____	No ✓	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	0	= Total Cover	
Herb Stratum (Plot size: _____)			
1. Festuca perennis	45	Yes	FAC
2. Elymus caput-medusae	45	Yes	UPL
3. Bromus hordeaceus	10	No	FACU
4. Avena fatua	5	No	UPL
5. Centaurea solstitialis	2	No	UPL
6.			
7.			
8.			
	107	= Total Cover	
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	0	= Total Cover	

% Bare Ground in Herb Stratum _____ % Cover of Biotic Crust _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	0
FACW species		x 2 =	0
FAC species	45	x 3 =	135
FACU species	10	x 4 =	40
UPL species	52	x 5 =	260
Column Totals:	107 (A)		435 (B)

Prevalence Index = B/A = 4.065420560

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, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes _____ No ✓

Remarks:

SOIL

Sampling Point: 61b

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	7.5YR 2.5/3	95	soft masses	5	C	M	sandy cla	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ **No** ✓

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ✓ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ 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? (includes capillary fringe) Yes _____ No _____ Depth (inches): _____

Wetland Hydrology Present? Yes _____ **No** ✓

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

In topographic depression. No incised drainage patterns in soil, but expected to occur in storms based on swale topography.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Stonegate Property City/County: Chico/ Butte Sampling Date: 10/13/2016

Applicant/Owner: Epick Homes, Inc. State: CA Sampling Point: 62a

Investigator(s): Meredith Branstad Section, Township, Range: Sec 31 & 32, Township 22North, Range 2E

Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): concave Slope (%): <1

Subregion (LRR): C Lat: 39.7234 Long: -121.7790 Datum: NAD83

Soil Map Unit Name: Clearhayes-Hamslough Complex NWI classification: Wetland

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 ✓ No _____	**Is the Sampled Area within a Wetland?** Yes ✓ No _____
Hydric Soil Present?	Yes ✓ No _____	
Wetland Hydrology Present?	Yes ✓ No _____	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0 = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
Herb Stratum (Plot size: _____)			
1. Festuca perennis	85	Yes	FAC
2. Bromus hordeaceus	10	No	FACU
3. Avena fatua	2	No	UPL
4.			
5.			
6.			
7.			
8.			
	97 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	0 = Total Cover		

% Bare Ground in Herb Stratum 5 % Cover of Biotic Crust _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species	x 1 =	0
FACW species	x 2 =	0
FAC species	x 3 =	0
FACU species	x 4 =	0
UPL species	x 5 =	0
Column Totals: 0 (A)		0 (B)

Prevalence Index = B/A = NaN

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, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks:

SOIL

Sampling Point: 62a

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	7.5YR 2.5/2	93	5YR 4/4	2	C	M	clay loam	Distinct mottles
			7.5YR 4/6	5	C	M		Prominent mottles

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ✓ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ✓ **No** _____

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ✓ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ 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? (includes capillary fringe) Yes _____ No _____ Depth (inches): _____

Wetland Hydrology Present? Yes ✓ **No** _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

In topographic depression

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Stonegate Property City/County: Chico/ Butte Sampling Date: 10/13/2016

Applicant/Owner: Epick Homes, Inc. State: CA Sampling Point: 63b

Investigator(s): Meredith Branstad Section, Township, Range: Sec 31 & 32, Township 22North, Range 2E

Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): none Slope (%): 4

Subregion (LRR): C Lat: 39.7195 Long: -121.7783 Datum: NAD83

Soil Map Unit Name: Doemill-Jokerst Complex NWI classification: Upland

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 _____	No ✓	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____	No ✓	
Wetland Hydrology Present?	Yes _____	No ✓	

Remarks:

sparse vegetation, looks dark on aerial imagery

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	0	= Total Cover	
Herb Stratum (Plot size: _____)			
1. Lepidium nitidum	15	Yes	FAC
2. Plagiobothrys stipitatus	15	Yes	FACW
3. Erodium botrys	10	Yes	UPL
4. Elymus caput-medusae	10	Yes	UPL
5. Bromus hordeaceus	5	No	FACU
6. Avena fatua	5	No	UPL
7. Vulpia sp.	5	No	
8.			
	65	= Total Cover	
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	0	= Total Cover	

% Bare Ground in Herb Stratum 35 % Cover of Biotic Crust _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	0
FACW species	15	x 2 =	30
FAC species	15	x 3 =	45
FACU species	5	x 4 =	20
UPL species	25	x 5 =	125
Column Totals:	60 (A)		220 (B)

Prevalence Index = B/A = 3.666666666

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, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes _____ No ✓

Remarks:

All Vulpia species in NWPL are FACU or UPL, therefore lack of identification to species does not change results of prevalence index.

SOIL

Sampling Point: 63b

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-4	2.5YR 3/4	97	soft masses	3	C	M	loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✓

Remarks:

cobbles prevented deeper digging

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ 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? (includes capillary fringe) Yes _____ No _____ Depth (inches): _____

Wetland Hydrology Present? Yes _____ No ✓

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Stonegate Property City/County: Chico/ Butte Sampling Date: 10/13/2016

Applicant/Owner: Epick Homes, Inc. State: CA Sampling Point: 64b

Investigator(s): Meredith Branstad Section, Township, Range: Sec 31 & 32, Township 22North, Range 2E

Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): concave Slope (%): 2

Subregion (LRR): C Lat: 39.7195 Long: -121.7794 Datum: NAD83

Soil Map Unit Name: Doemill-Jokerst Complex NWI classification: Upland

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 _____	No ✓	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____	No ✓	
Wetland Hydrology Present?	Yes ✓	No _____	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	0	= Total Cover	
Herb Stratum (Plot size: _____)			
1. Vulpia sp.	40	Yes	FACU
2. Plagiobothrys stipitatus	5	Yes	FACW
3. Bromus hordeaceus	5	Yes	FACU
4. Brodeia elegans	5	Yes	FACU
5. Erodium botrys	5	Yes	FACU
6. Avena fatua	2	No	UPL
7. Elymus caput-medusae	2	No	UPL
8.			
	64	= Total Cover	
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	0	= Total Cover	

% Bare Ground in Herb Stratum 36 % Cover of Biotic Crust _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 20 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	0
FACW species	5	x 2 =	10
FAC species		x 3 =	0
FACU species	55	x 4 =	220
UPL species	4	x 5 =	20
Column Totals:	64 (A)		250 (B)

Prevalence Index = B/A = 3.90625

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, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes _____ No ✓

Remarks:

Lowest indicator for any Vulpia sp. in NWPL is FACU. This was assumed to be indicator for calculation purposes.

SOIL

Sampling Point: 64b

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-4	5YR 3/3	99	soft masses	1	C	M	loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✓

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ✓ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ✓ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ 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? (includes capillary fringe) Yes _____ No _____ Depth (inches): _____

Wetland Hydrology Present? Yes ✓ No _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Stonegate Property City/County: Chico/ Butte Sampling Date: 10/13/2016

Applicant/Owner: Epick Homes, Inc. State: CA Sampling Point: 65a

Investigator(s): Meredith Branstad Section, Township, Range: Sec 31 & 32, Township 22North, Range 2E

Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): concave Slope (%): 1

Subregion (LRR): C Lat: 39.7151 Long: -121.7821 Datum: NAD83

Soil Map Unit Name: Redtough-Redswale Complex NWI classification: Wetland

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 ✓ No _____	**Is the Sampled Area within a Wetland?** Yes ✓ No _____
Hydric Soil Present?	Yes ✓ No _____	
Wetland Hydrology Present?	Yes ✓ No _____	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0 = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
Herb Stratum (Plot size: _____)			
1. Festuca perennis	75	Yes	FAC
2. Rumex crispus	20	Yes	FAC
3. Hordeum marinum	5	No	FAC
4.			
5.			
6.			
7.			
8.			
	100 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	0 = Total Cover		

% Bare Ground in Herb Stratum _____ % Cover of Biotic Crust _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species _____	x 1 =	0
FACW species _____	x 2 =	0
FAC species _____	x 3 =	0
FACU species _____	x 4 =	0
UPL species _____	x 5 =	0
Column Totals: 0 (A)		0 (B)

Prevalence Index = B/A = NaN

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, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks:

SOIL

Sampling Point: 65a

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-12	10YR 2/2	75	5YR 4/6	25	C	M	sandy loam	Prominent mottles

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ✓ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ✓ **No** _____

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ✓ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ✓ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ 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? (includes capillary fringe) Yes _____ No _____ Depth (inches): _____

Wetland Hydrology Present? Yes ✓ **No** _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Stonegate Property City/County: Chico/ Butte Sampling Date: 10/13/2016

Applicant/Owner: Epick Homes, Inc. State: CA Sampling Point: 66a

Investigator(s): Meredith Branstad Section, Township, Range: Sec 31 & 32, Township 22North, Range 2E

Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): concave Slope (%): 1

Subregion (LRR): C Lat: 39.7159 Long: -121.7803 Datum: NAD83

Soil Map Unit Name: Doemill-Jokerst Complex NWI classification: Wetland

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 ✓	No _____	**Is the Sampled Area within a Wetland?** Yes ✓ No _____
Hydric Soil Present?	Yes ✓	No _____	
Wetland Hydrology Present?	Yes ✓	No _____	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	0	= Total Cover	
Herb Stratum (Plot size: _____)			
1. Hordeum marinum	55	Yes	FAC
2. Festuca perennis	30	Yes	FAC
3. Deschampsia danthonioides	5	No	FACW
4. Elymus caput-medusae	2	No	UPL
5.			
6.			
7.			
8.			
	92	= Total Cover	
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	0	= Total Cover	

% Bare Ground in Herb Stratum 8 % Cover of Biotic Crust _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species	x 1 =	0
FACW species	x 2 =	0
FAC species	x 3 =	0
FACU species	x 4 =	0
UPL species	x 5 =	0
Column Totals: 0 (A)		0 (B)

Prevalence Index = B/A = NaN

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, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks:

SOIL

Sampling Point: 66a

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-4	7.5YR 2.5/2	92	soft masses	8	C	M	clay loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ✓ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ✓ **No** _____

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ✓ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ✓ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ 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? (includes capillary fringe) Yes _____ No _____ Depth (inches): _____

Wetland Hydrology Present? Yes ✓ **No** _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

In topographic fold. No incised drainage patterns in soil, but expected to occur in storms based on swale topography.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Stonegate Property City/County: Chico/ Butte Sampling Date: 10/13/2016

Applicant/Owner: Epick Homes, Inc. State: CA Sampling Point: 67b

Investigator(s): Meredith Branstad Section, Township, Range: Sec 31 & 32, Township 22North, Range 2E

Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): concave Slope (%): 1

Subregion (LRR): C Lat: 39.7148 Long: -121.7789 Datum: NAD83

Soil Map Unit Name: Doemill-Jokerst Complex NWI classification: Upland

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 _____	No ✓	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____	No ✓	
Wetland Hydrology Present?	Yes ✓	No _____	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	0	= Total Cover	
Herb Stratum (Plot size: _____)			
1. Deschampsia danthonioides	15	Yes	FACW
2. Vulpia sp.	15	Yes	FACU
3. Plagiobothrys stipitatus	10	No	FACW
4. Avena fatua	5	No	UPL
5. Erodium botrys	5	No	UPL
6. Elymus caput-medusae	2	No	UPL
7.			
8.			
	52	= Total Cover	
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	0	= Total Cover	

% Bare Ground in Herb Stratum 48 % Cover of Biotic Crust _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	0
FACW species	25	x 2 =	50
FAC species		x 3 =	0
FACU species	15	x 4 =	60
UPL species	12	x 5 =	60
Column Totals:	52 (A)		170 (B)

Prevalence Index = B/A = 3.269230769

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, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes _____ No ✓

Remarks:

Lowest indicator for any Vulpia sp. in NWPL is FACU. This was assumed to be indicator for calculation purposes.

SOIL

Sampling Point: 67b

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-3	5YR 4/4	100	none					

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✓

Remarks:

rocks at 3 inches

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ✓ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ 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? (includes capillary fringe) Yes _____ No _____ Depth (inches): _____

Wetland Hydrology Present? Yes ✓ No _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

In slight topographic depression.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Stonegate Property City/County: Chico/ Butte Sampling Date: 10/13/2016

Applicant/Owner: Epick Homes, Inc. State: CA Sampling Point: 68A

Investigator(s): Meredith Branstad Section, Township, Range: Sec 31 & 32, Township 22North, Range 2E

Landform (hillslope, terrace, etc.): terrrace Local relief (concave, convex, none): concave Slope (%): 1

Subregion (LRR): C Lat: 39.7257 Long: -121.7879 Datum: NAD83

Soil Map Unit Name: Redsluff Gravelly Loam NWI classification: Wetland

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 ✓	No _____	**Is the Sampled Area within a Wetland?** Yes ✓ No _____
Hydric Soil Present?	Yes ✓	No _____	
Wetland Hydrology Present?	Yes ✓	No _____	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0 = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
Herb Stratum (Plot size: _____)			
1. Festuca perennis	75	Yes	FAC
2. Elymus caput-medusae	15	No	UPL
3. Hordeum marinum	10	No	FAC
4.			
5.			
6.			
7.			
8.			
	100 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	0 = Total Cover		

% Bare Ground in Herb Stratum 1 % Cover of Biotic Crust _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species	x 1 =	0
FACW species	x 2 =	0
FAC species	x 3 =	0
FACU species	x 4 =	0
UPL species	x 5 =	0
Column Totals: 0 (A)		0 (B)

Prevalence Index = B/A = NaN

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, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks:

SOIL

Sampling Point: 68A

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-5	7.5YR 2.5/2	92	2.5YR 3/6	3	C	M	clay loam	Prominent mottles
			soft masses	5	C	M		

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ✓ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ✓ **No** _____

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ✓ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ 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? (includes capillary fringe) Yes _____ No _____ Depth (inches): _____

Wetland Hydrology Present? Yes ✓ **No** _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Stonegate Property City/County: Chico/ Butte Sampling Date: 10/31/2016

Applicant/Owner: Epick Homes, Inc. State: CA Sampling Point: 69b

Investigator(s): Meredith Branstad Section, Township, Range: Sec 31 & 32, Township 22North, Range 2E

Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): concave Slope (%): 1

Subregion (LRR): C Lat: 39.7241 Long: -121.7890 Datum: NAD83

Soil Map Unit Name: Redtough-Redswale Complex NWI classification: Upland

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 _____	No ✓	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____	No _____	
Wetland Hydrology Present?	Yes ✓	No _____	

Remarks:

Recent rain and surface water made soil assessment impossible.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0 = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
Herb Stratum (Plot size: _____)			
1. Bromus hordeaceus	40	Yes	FACU
2. Elymus caput-medusae	20	No	UPL
3. Festuca perennis	15	No	FAC
4. Centaurea solstitialis	5	No	UPL
5.			
6.			
7.			
8.			
	80 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	0 = Total Cover		

% Bare Ground in Herb Stratum 20 % Cover of Biotic Crust _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species _____	x 1 =	0
FACW species _____	x 2 =	0
FAC species 15	x 3 =	45
FACU species 40	x 4 =	160
UPL species 25	x 5 =	125
Column Totals: 80 (A)		330 (B)

Prevalence Index = B/A = 4.125

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, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes _____ No ✓

Remarks:

SOIL

Sampling Point: 69b

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No _____

Remarks:

could not take soil sample due to inundation

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ✓ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ 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): <1

Water Table Present? Yes _____ No _____ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No _____ Depth (inches): _____

Wetland Hydrology Present? Yes ✓ No _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Rained 1" within last 3 days.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Stonegate Property City/County: Chico/ Butte Sampling Date: 10/31/2016

Applicant/Owner: Epick Homes, Inc. State: CA Sampling Point: 70b

Investigator(s): Meredith Branstad Section, Township, Range: Sec 31 & 32, Township 22North, Range 2E

Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): none Slope (%): <1

Subregion (LRR): C Lat: 39.7225 Long: -121.7885 Datum: NAD83

Soil Map Unit Name: Redtough-Redswale NWI classification: Upland

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 _____	No ✓	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____	No _____	
Wetland Hydrology Present?	Yes ✓	No _____	

Remarks:

Rain (approx. 1") within last 3 days made soil assessment impossible.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0 = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
Herb Stratum (Plot size: _____)			
1. Elymus caput-medusae	60	Yes	UPL
2. Bromus hordeaceus	25	Yes	FACU
3. Centaurea solstitialis	5	No	UPL
4.			
5.			
6.			
7.			
8.			
	90 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	0 = Total Cover		

% Bare Ground in Herb Stratum 10 % Cover of Biotic Crust _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species	x 1 =	0
FACW species	x 2 =	0
FAC species	x 3 =	0
FACU species 25	x 4 =	100
UPL species 65	x 5 =	325
Column Totals: 90 (A)		425 (B)

Prevalence Index = B/A = 4.722222222

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, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes _____ No ✓

Remarks:

SOIL

Sampling Point: 70b

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No _____

Remarks:

Soil data not possible due to inundation/saturation

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ✓ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ 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): 4

Saturation Present? (includes capillary fringe) Yes ✓ No _____ Depth (inches): 4

Wetland Hydrology Present? Yes ✓ No _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Rained 1" within last 3 days.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Stonegate Property City/County: Chico/ Butte Sampling Date: 10/31/2016

Applicant/Owner: Epick Homes, Inc. State: CA Sampling Point: 71b

Investigator(s): Meredith Branstad Section, Township, Range: Sec 31 & 32, Township 22North, Range 2E

Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): concave Slope (%): 1

Subregion (LRR): C Lat: 39.7220 Long: -121.7878 Datum: NAD83

Soil Map Unit Name: Redtough-Redswale Complex NWI classification: Upland

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 _____	No ✓	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____	No _____	
Wetland Hydrology Present?	Yes ✓	No _____	

Remarks:

Recent rain made soil assessment impossible.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	0	= Total Cover	
Herb Stratum (Plot size: _____)			
1. Festuca perennis	50	Yes	FAC
2. Bromus hordeaceus	40	Yes	FACU
3. Elymus caput-medusae	10	No	UPL
4. Centaurea solstitialis	2	No	UPL
5. Trieleia hyacinthina	2	No	FAC
6.			
7.			
8.			
	104	= Total Cover	
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	0	= Total Cover	

% Bare Ground in Herb Stratum _____ % Cover of Biotic Crust _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species _____	x 1 =	0
FACW species _____	x 2 =	0
FAC species 52	x 3 =	156
FACU species 40	x 4 =	160
UPL species 12	x 5 =	60
Column Totals: 104 (A)		376 (B)

Prevalence Index = B/A = 3.615384615

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, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes _____ No ✓

Remarks:

SOIL

Sampling Point: 71b

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No _____

Remarks:

could not take soil data due to saturation

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ✓ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ 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): 5

Saturation Present? (includes capillary fringe) Yes ✓ No _____ Depth (inches): 0

Wetland Hydrology Present? Yes ✓ No _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

In topographic depression but no signs of flow/drainage.
Rained 1" within last 3 days, probably cause of saturation.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Stonegate Property City/County: Chico/ Butte Sampling Date: 10/31/2016

Applicant/Owner: Epick Homes, Inc. State: CA Sampling Point: 72a

Investigator(s): Meredith Branstad Section, Township, Range: Sec 31 & 32, Township 22North, Range 2E

Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): concave Slope (%): 1

Subregion (LRR): C Lat: 39.7246 Long: -121.7900 Datum: NAD83

Soil Map Unit Name: Redtough-Redswale Complex NWI classification: Wetland

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 ✓	No _____	**Is the Sampled Area within a Wetland?** Yes ✓ No _____
Hydric Soil Present?	Yes ✓	No _____	
Wetland Hydrology Present?	Yes ✓	No _____	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	0	= Total Cover	
Herb Stratum (Plot size: _____)			
1. Festuca perennis	50	Yes	FAC
2. Hordeum marinum	30	Yes	FAC
3. Rumex crispus	20	No	FAC
4. Eryngium vaseyi	5	No	FACW
5.			
6.			
7.			
8.			
	105	= Total Cover	
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	0	= Total Cover	

% Bare Ground in Herb Stratum _____ % Cover of Biotic Crust _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species _____	x 1 =	0
FACW species _____	x 2 =	0
FAC species _____	x 3 =	0
FACU species _____	x 4 =	0
UPL species _____	x 5 =	0
Column Totals: 0 (A)		0 (B)

Prevalence Index = B/A = NaN

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, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks:

SOIL

Sampling Point: 72a

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-8	7.5YR 3/3	87	7.5YR 4/6	10	C	M	clay loam	distinct mottles
			soft masses	3	C	M		

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ✓ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ✓ **No** ___

Remarks:

In closed depression

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ✓ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ 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? (includes capillary fringe) Yes ___ No ✓ Depth (inches): _____

Wetland Hydrology Present? Yes ✓ **No** ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Stonegate Property City/County: Chico/ Butte Sampling Date: 3/28/2017

Applicant/Owner: Epick Homes, Inc. State: CA Sampling Point: 73a

Investigator(s): David Bise Section, Township, Range: Sec 31 & 32, Township 22N, Range 2E

Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): concave Slope (%): 1

Subregion (LRR): C Lat: 39° 42' 58.756" N Long: 121° 47' 10.103" W Datum: NAD83

Soil Map Unit Name: Hamslough Complex NWI classification: Wetland

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 ✓	No _____	**Is the Sampled Area within a Wetland?** Yes ✓ No _____
Hydric Soil Present?	Yes ✓	No _____	
Wetland Hydrology Present?	Yes ✓	No _____	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	0	= Total Cover	
Herb Stratum (Plot size: _____)			
1. Limnathes douglasii	10	No	OBL
2. Eryngium vaseyi	1	No	FACW
3. Eleocharis macrostacya	35	Yes	FACW
4. Festuca perenne	35	Yes	FAC
5. Lupinus bicolor	5	No	UPL
6.			
7.			
8.			
	86	= Total Cover	
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	0	= Total Cover	

% Bare Ground in Herb Stratum 14 % Cover of Biotic Crust _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = 0
FACW species _____	x 2 = 0
FAC species _____	x 3 = 0
FACU species _____	x 4 = 0
UPL species _____	x 5 = 0
Column Totals: 0 (A)	0 (B)

Prevalence Index = B/A = NaN

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, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks:

Point in a swale

SOIL

Sampling Point: 73a

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-8	7.5YR 4/2	93	2.5 YR 5/3	7	C	M	clay loam	distinct mottles

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ✓ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ✓ **No** ___

Remarks:

Within riverine feature.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ✓ Surface Water (A1)
- ___ High Water Table (A2)
- ✓ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ✓ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ✓ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ 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): 2

Water Table Present? Yes ✓ No ___ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ✓ No ___ Depth (inches): _____

Wetland Hydrology Present? Yes ✓ **No** ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Restrictive layer at 4 inches

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Stonegate Property City/County: Chico/ Butte Sampling Date: 3/28/2017

Applicant/Owner: Epick Homes, Inc. State: CA Sampling Point: 74a

Investigator(s): David Bise Section, Township, Range: Sec 31 & 32, Township 22N, Range 2E

Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): concave Slope (%): 1

Subregion (LRR): C Lat: 39° 43' 13.565" N Long: 121° 47' 6.154" W Datum: NAD83

Soil Map Unit Name: Hamslough Complex NWI classification: Wetland

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 ✓	No _____	**Is the Sampled Area within a Wetland?** Yes ✓ No _____
Hydric Soil Present?	Yes ✓	No _____	
Wetland Hydrology Present?	Yes ✓	No _____	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0 = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
Herb Stratum (Plot size: _____)			
1. Limnathes douglasii	10	No	OBL
2. Eryngium vaseyi	10	No	FACW
3. Eleocharis macrostacya	80	Yes	FACW
4.			
5.			
6.			
7.			
8.			
	100 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	0 = Total Cover		

% Bare Ground in Herb Stratum _____ % Cover of Biotic Crust _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = 0
FACW species _____	x 2 = 0
FAC species _____	x 3 = 0
FACU species _____	x 4 = 0
UPL species _____	x 5 = 0
Column Totals: 0 (A)	0 (B)

Prevalence Index = B/A = NaN

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, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks:

Point in swale.

SOIL

Sampling Point: 74a

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-8	7.5YR 4/2	93	2.5 YR 5/3	7	C	M	clay loam	distinct mottles

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ✓ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ✓ **No** _____

Remarks:

Within swale.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ✓ Surface Water (A1)
- ___ High Water Table (A2)
- ✓ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ✓ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ 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): 3

Water Table Present? Yes _____ No ✓ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ✓ No _____ Depth (inches): _____

Wetland Hydrology Present? **Yes** ✓ **No** _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Within swale.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Stonegate Property City/County: Chico/ Butte Sampling Date: 3/28/2017

Applicant/Owner: Epick Homes, Inc. State: CA Sampling Point: 75a

Investigator(s): David Bise Section, Township, Range: Sec 31 & 32, Township 22N, Range 2E

Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): concave Slope (%): 1

Subregion (LRR): C Lat: 39° 43' 16.630" N Long: 121° 47' 3.860" W Datum: NAD83

Soil Map Unit Name: Redtough Redswale Complex NWI classification: Wetland

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 ✓ No _____	**Is the Sampled Area within a Wetland?** Yes ✓ No _____
Hydric Soil Present?	Yes ✓ No _____	
Wetland Hydrology Present?	Yes ✓ No _____	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0 = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
Herb Stratum (Plot size: _____)			
1. Mimulus guttattus	1	No	OBL
2. Plagiobotrys stipitatus	5	No	FACW
3. Eleocharis macrostacya	85	Yes	FACW
4. Limnanthes douglasii	5	No	OBL
5.			
6.			
7.			
8.			
	96 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	0 = Total Cover		

% Bare Ground in Herb Stratum 4 % Cover of Biotic Crust _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = 0
FACW species _____	x 2 = 0
FAC species _____	x 3 = 0
FACU species _____	x 4 = 0
UPL species _____	x 5 = 0
Column Totals: 0 (A)	0 (B)

Prevalence Index = B/A = NaN

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, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks:

SOIL

Sampling Point: 75a

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-10	5 YR 3/2	90	2.5YR 4/6	10	D	M	clay loam	distinct mottles

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ✓ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ✓ No ___

Remarks:

Black concretions (5%)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ✓ Surface Water (A1)
- ___ High Water Table (A2)
- ✓ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ✓ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ✓ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ 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): 1

Water Table Present? Yes ✓ No ___ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ✓ No ___ Depth (inches): 8

Wetland Hydrology Present? Yes ✓ No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

In swale.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Stonegate Property City/County: Chico/ Butte Sampling Date: 3/28/2017

Applicant/Owner: Epick Homes, Inc. State: CA Sampling Point: 76a

Investigator(s): David Bise Section, Township, Range: Sec 31 & 32, Township 22N, Range 2E

Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): concave Slope (%): 1

Subregion (LRR): C Lat: 39° 43' 18.084" N Long: 121° 47' 6.442" W Datum: NAD83

Soil Map Unit Name: Redtough Redswale Complex NWI classification: Wetland

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 ✓ No _____	**Is the Sampled Area within a Wetland?** Yes ✓ No _____
Hydric Soil Present?	Yes ✓ No _____	
Wetland Hydrology Present?	Yes ✓ No _____	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0 = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
Herb Stratum (Plot size: _____)			
1. Brodiaea elegans	5	No	FACU
2. Senecio vulgaris	1	No	UPL
3. Eleocharis macrostacya	85	Yes	FACW
4. Ranunculus occidentalis	5	No	FAC
5.			
6.			
7.			
8.			
	96 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	0 = Total Cover		

% Bare Ground in Herb Stratum 4 % Cover of Biotic Crust _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = 0
FACW species _____	x 2 = 0
FAC species _____	x 3 = 0
FACU species _____	x 4 = 0
UPL species _____	x 5 = 0
Column Totals: 0 (A)	0 (B)

Prevalence Index = B/A = NaN

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, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks:

SOIL

Sampling Point: 76a

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-8	7.5YR 4/2	93	2.5YR 5/3	7	C	M	clay loam	distinct mottles

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ✓ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: clay layer

Depth (inches): 3

Hydric Soil Present? Yes ✓ No ___

Remarks:

In swale.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ✓ Surface Water (A1)
- ___ High Water Table (A2)
- ✓ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ✓ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ 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): 1

Water Table Present? Yes ✓ No ___ Depth (inches): 8

Saturation Present? (includes capillary fringe) Yes ✓ No ___ Depth (inches): 8

Wetland Hydrology Present? Yes ✓ No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Stonegate Property City/County: Chico/ Butte Sampling Date: 3/28/2017

Applicant/Owner: Epick Homes, Inc. State: CA Sampling Point: 77a

Investigator(s): David Bise Section, Township, Range: Sec 31 & 32, Township 22N, Range 2E

Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): concave Slope (%): 1

Subregion (LRR): C Lat: 39° 43' 18.343" N Long: 121° 47' 1.445" W Datum: NAD83

Soil Map Unit Name: Redtough Redswale Complex NWI classification: Wetland

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 ✓ No _____	**Is the Sampled Area within a Wetland?** Yes ✓ No _____
Hydric Soil Present?	Yes ✓ No _____	
Wetland Hydrology Present?	Yes ✓ No _____	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0 = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
Herb Stratum (Plot size: _____)			
1. Ranunculus occidentalis	2	No	FAC
2. Festuca perenne	45	Yes	FAC
3. Eleocharis macrostacya	45	Yes	FACW
4. Limnanthes douglasii	5	No	OBL
5. Mimulus guttatus	2	No	OBL
6.			
7.			
8.			
	99 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	0 = Total Cover		

% Bare Ground in Herb Stratum 1 % Cover of Biotic Crust _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = 0
FACW species _____	x 2 = 0
FAC species _____	x 3 = 0
FACU species _____	x 4 = 0
UPL species _____	x 5 = 0
Column Totals: 0 (A)	0 (B)

Prevalence Index = B/A = NaN

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, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks:

SOIL

Sampling Point: 77a

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-8	7.5YR 4/2	90	2.5YR 5/3	10	C	M	clay loam	distinct mottles

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ✓ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: clay layer

Depth (inches): 4

Hydric Soil Present? Yes ✓ No ___

Remarks:

In swale.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ✓ Surface Water (A1)
- ___ High Water Table (A2)
- ✓ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ✓ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ 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): 1

Water Table Present? Yes ✓ No ___ Depth (inches): 8

Saturation Present? (includes capillary fringe) Yes ✓ No ___ Depth (inches): 8

Wetland Hydrology Present? Yes ✓ No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Stonegate Property City/County: Chico/ Butte Sampling Date: 3/28/2017

Applicant/Owner: Epick Homes, Inc. State: CA Sampling Point: 78b

Investigator(s): David Bise Section, Township, Range: Sec 31 & 32, Township 22N, Range 2E

Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): concave Slope (%): 1

Subregion (LRR): C Lat: 39° 43' 18.626" N Long: 121° 47' 0.027" W Datum: NAD83

Soil Map Unit Name: Redtough Redswale Complex NWI classification: Wetland

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 _____	No ✓	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____	No ✓	
Wetland Hydrology Present?	Yes ✓	No _____	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0 = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
Herb Stratum (Plot size: _____)			
1. Triphysaria erianthus	55	Yes	UPL
2. Spergularia rubra	10	No	FAC
3. Lasthenia fremontii	10	No	OBL
4. Erodium botrys	10	No	UPL
5. Navarretia leucocephalus	10	No	OBL
6. Lepidium nitidum	1	No	FAC
7.			
8.			
	96 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	0 = Total Cover		

% Bare Ground in Herb Stratum 4 % Cover of Biotic Crust _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	20	x 1 =	20
FACW species	0	x 2 =	0
FAC species	11	x 3 =	33
FACU species	0	x 4 =	0
UPL species	65	x 5 =	325
Column Totals:	96 (A)		378 (B)

Prevalence Index = B/A = 3.9375

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, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes _____ No ✓

Remarks:

SOIL

Sampling Point: 78b

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-8	5 YR 3/4	100						

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ✓ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ **No** ✓

Remarks:

Tan sands at bottom of soil pit.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ✓ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ 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? (includes capillary fringe) Yes ✓ No _____ Depth (inches): _____

Wetland Hydrology Present? Yes ✓ **No** _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Stonegate Property City/County: Chico/ Butte Sampling Date: 3/28/2017

Applicant/Owner: Epick Homes, Inc. State: CA Sampling Point: 79b

Investigator(s): David Bise Section, Township, Range: Sec 31 & 32, Township 22N, Range 2E

Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): concave Slope (%): 1

Subregion (LRR): C Lat: 39° 43' 19.083" N Long: 121° 46' 57.062" W Datum: NAD83

Soil Map Unit Name: Redtough Redswale Complex NWI classification: Wetland

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 ✓	No _____	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____	No ✓	
Wetland Hydrology Present?	Yes ✓	No _____	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	0	= Total Cover	
Herb Stratum (Plot size: _____)			
1. Triphysaria eriantus	5	No	UPL
2. Lasthenia fremontii	5	No	OBL
3. Lupinus bicolor	1	No	UPL
4. Eleocharis macrostachya	75	Yes	FACW
5. Erodium botrys	5	No	UPL
6. Lepidium nitidum	1	No	FAC
7. Layia fremontii	1	No	UPL
8. Trifolium variegatum	1	No	FAC
	94	= Total Cover	
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	0	= Total Cover	

% Bare Ground in Herb Stratum 6 % Cover of Biotic Crust _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species _____	x 1 =	0
FACW species _____	x 2 =	0
FAC species _____	x 3 =	0
FACU species _____	x 4 =	0
UPL species _____	x 5 =	0
Column Totals: 0 (A)		0 (B)

Prevalence Index = B/A = NaN

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, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks:

SOIL

Sampling Point: 79b

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-8	5 YR 4/4	100				M	clay loam	
						M		

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✓

Remarks:

In closed depression.
Concretions at 2 inches, black.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ✓ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ✓ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ 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? (includes capillary fringe) Yes ✓ No _____ Depth (inches): 4

Wetland Hydrology Present? Yes ✓ No _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Stonegate Property City/County: Chico/ Butte Sampling Date: 3/28/2017

Applicant/Owner: Epick Homes, Inc. State: CA Sampling Point: 80a

Investigator(s): David Bise Section, Township, Range: Sec 31 & 32, Township 22N, Range 2E

Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): concave Slope (%): 1

Subregion (LRR): C Lat: 39° 43' 17.242" N Long: 121° 46' 52.570" W Datum: NAD83

Soil Map Unit Name: Redtough Redswale Complex NWI classification: Wetland

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 ✓	No _____	**Is the Sampled Area within a Wetland?** Yes ✓ No _____
Hydric Soil Present?	Yes ✓	No _____	
Wetland Hydrology Present?	Yes ✓	No _____	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	0	= Total Cover	
Herb Stratum (Plot size: _____)			
1. Triphysaria erianthus	45	Yes	UPL
2. Lasthenia fremontii	45	Yes	OBL
3. Achyrachaena mollis	1	No	FAC
4. Navarretia leucocephala	5	No	OBL
5. Trifolium variegatum	1	No	FAC
6. Lavia fremontii	1	No	UPL
7.			
8.			
	98	= Total Cover	
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	0	= Total Cover	

% Bare Ground in Herb Stratum 2 % Cover of Biotic Crust _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	50	x 1 =	50
FACW species	0	x 2 =	0
FAC species	2	x 3 =	6
FACU species	0	x 4 =	0
UPL species	46	x 5 =	230
Column Totals:	98 (A)		286 (B)

Prevalence Index = B/A = 2.918367346

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, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks:

SOIL

Sampling Point: 80a

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-8	7.5YR 3/1	93	2.5 YR 3/6	7	C	M	clay loam	distinct mottles

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ✓ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ✓ No ___

Remarks:

In closed depression. Black concretions.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ✓ Surface Water (A1)
- ___ High Water Table (A2)
- ✓ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ✓ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ 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): 1 in

Water Table Present? Yes ___ No ✓ Depth (inches): ___

Saturation Present? (includes capillary fringe) Yes ✓ No ___ Depth (inches): ___

Wetland Hydrology Present? Yes ✓ No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Shallow depression.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Stonegate Property City/County: Chico/ Butte Sampling Date: 3/28/2017

Applicant/Owner: Epick Homes, Inc. State: CA Sampling Point: 81b

Investigator(s): David Bise Section, Township, Range: Sec 31 & 32, Township 22N, Range 2E

Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): concave Slope (%): 1

Subregion (LRR): C Lat: 39° 43' 20.645" N Long: 121° 46' 53.808" W Datum: NAD83

Soil Map Unit Name: Redtough Redswale Complex NWI classification: Wetland

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 ✓	No _____	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____	No ✓	
Wetland Hydrology Present?	Yes ✓	No _____	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0 = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
Herb Stratum (Plot size: _____)			
1. Limnathes douglasii	15	No	OBL
2. Triphysaria erianthus	15	No	UPL
3. Eleocharis macrostacya	60	Yes	FACW
4. Erodium botrys	10	No	UPL
5. Lathenia fremontii	10	No	OBL
6.			
7.			
8.			
	110 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	0 = Total Cover		

% Bare Ground in Herb Stratum _____ % Cover of Biotic Crust _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = 0
FACW species _____	x 2 = 0
FAC species _____	x 3 = 0
FACU species _____	x 4 = 0
UPL species _____	x 5 = 0
Column Totals: 0 (A)	0 (B)

Prevalence Index = B/A = NaN

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, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks:

SOIL

Sampling Point: 81b

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-8	2.5YR 3/4	97	5YR 3/2	3	C	M	clay loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✓

Remarks:

No redox. Northern terminus of riverine feature.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ✓ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ✓ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ 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): 2

Water Table Present? Yes _____ No ✓ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ✓ No _____ Depth (inches): _____

Wetland Hydrology Present? Yes ✓ No _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Perched water table-top 2 inches.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Stonegate Property City/County: Chico/ Butte Sampling Date: 3/28/2017

Applicant/Owner: Epick Homes, Inc. State: CA Sampling Point: 82a

Investigator(s): David Bise Section, Township, Range: Sec 31 & 32, Township 22N, Range 2E

Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): concave Slope (%): 1

Subregion (LRR): C Lat: 39° 43' 11.159" N Long: 121° 46' 47.409" W Datum: NAD83

Soil Map Unit Name: Doemill-Jokerst Complex NWI classification: Wetland

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 ✓	No _____	**Is the Sampled Area within a Wetland?** Yes ✓ No _____
Hydric Soil Present?	Yes ✓	No _____	
Wetland Hydrology Present?	Yes ✓	No _____	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	0	= Total Cover	
Herb Stratum (Plot size: _____)			
1. Layia fremontii	10	No	UPL
2. Erodium botrys	1	No	UPL
3. Sidalcea calycosa	10	No	OBL
4. Trifolium variegatum	10	No	FAC
5. Lasthenia fremontii	25	Yes	OBL
6. Limnanthes douglasii	25	Yes	OBL
7. Geranium dissectum	2	No	FACU
8. Triphysaria erianthus	15	No	UPL
	98	= Total Cover	
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	0	= Total Cover	

% Bare Ground in Herb Stratum 2 % Cover of Biotic Crust _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species _____	x 1 =	0
FACW species _____	x 2 =	0
FAC species _____	x 3 =	0
FACU species _____	x 4 =	0
UPL species _____	x 5 =	0
Column Totals: 0 (A)		0 (B)

Prevalence Index = B/A = NaN

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, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks:

SOIL

Sampling Point: 82a

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2	5 YR 3/4	100					clay loam	
2-6	7.5 YR 4/2	90	5 YR 3/4	10	C	PL	clay loam	distinct redox

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ✓ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: clay layer

Depth (inches): 3

Hydric Soil Present? Yes ✓ No ___

Remarks:

In riverine feature.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ✓ Surface Water (A1)
- ___ High Water Table (A2)
- ✓ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ✓ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ 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): 1

Water Table Present? Yes ___ No ✓ Depth (inches): ___

Saturation Present? (includes capillary fringe) Yes ✓ No ___ Depth (inches): 6

Wetland Hydrology Present? Yes ✓ No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Riverine feature. Narrow channel, approximately 2-feet wide.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Stonegate Property City/County: Chico/ Butte Sampling Date: 3/28/2017

Applicant/Owner: Epick Homes, Inc. State: CA Sampling Point: 83a

Investigator(s): David Bise Section, Township, Range: Sec 31 & 32, Township 22N, Range 2E

Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): concave Slope (%): 1

Subregion (LRR): C Lat: 39° 43' 4.302" N Long: 121° 46' 44.219" W Datum: NAD83

Soil Map Unit Name: Doemill-Jokerst Complex NWI classification: Wetland

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 ✓	No _____	**Is the Sampled Area within a Wetland?** Yes ✓ No _____
Hydric Soil Present?	Yes ✓	No _____	
Wetland Hydrology Present?	Yes ✓	No _____	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	0	= Total Cover	
Herb Stratum (Plot size: _____)			
1. Lythrum hyssopifolium	2	No	OBL
2. Navarettia leucocephala	7	No	OBL
3. Triphysaria erianthus	5	No	UPL
4. Allium sp.	1	No	UPL
5. Limnanthes douglasii	10	No	OBL
6. Festuca perenne	50	Yes	FAC
7. Lasthena fremontii	10	No	OBL
8. Eleocharis macrostachya	10	No	FACW
	95	= Total Cover	
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	0	= Total Cover	

% Bare Ground in Herb Stratum 5 % Cover of Biotic Crust _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species _____	x 1 =	0
FACW species _____	x 2 =	0
FAC species _____	x 3 =	0
FACU species _____	x 4 =	0
UPL species _____	x 5 =	0
Column Totals: 0 (A)		0 (B)

Prevalence Index = B/A = NaN

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, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks:

SOIL

Sampling Point: 83a

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2	5 YR 3/4	100					clay loam	
2-7	7.5 YR 4/2	80	2.5 YR 3/4	20	C	M	clay loam	Distinct mottles

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ✓ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ✓ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: Clay layer

Depth (inches): 2

Hydric Soil Present? Yes ✓ No ___

Remarks:

In closed depression

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ✓ Surface Water (A1)
- ___ High Water Table (A2)
- ✓ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ✓ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ 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): 1

Water Table Present? Yes ___ No ✓ Depth (inches): ___

Saturation Present? (includes capillary fringe) Yes ✓ No ___ Depth (inches): 2

Wetland Hydrology Present? Yes ✓ No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Reduced iron reaction

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Stonegate Property City/County: Chico/ Butte Sampling Date: 3/28/2017

Applicant/Owner: Epick Homes, Inc. State: CA Sampling Point: 84a

Investigator(s): David Bise Section, Township, Range: Sec 31 & 32, Township 22N, Range 2E

Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): concave Slope (%): 1

Subregion (LRR): C Lat: 39° 42' 53.922" N Long: 121° 46' 51.053" W Datum: NAD83

Soil Map Unit Name: Doemill-Jokerst Complex NWI classification: Wetland

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 ✓	No _____	**Is the Sampled Area within a Wetland?** Yes ✓ No _____
Hydric Soil Present?	Yes ✓	No _____	
Wetland Hydrology Present?	Yes ✓	No _____	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	0	= Total Cover	
Herb Stratum (Plot size: _____)			
1. Triphysaria erianthus	10	No	UPL
2. Trifolium variegatum	10	No	FAC
3. Eleocharis macrostacya	20	Yes	FACW
4. Lupinus bicolor	1	No	UPL
5. Lasthenia fremontii	5	No	OBL
6. Festuca perenne	50	Yes	FAC
7. Sidalcea calycosa	1	No	OBL
8.			
	97	= Total Cover	
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	0	= Total Cover	

% Bare Ground in Herb Stratum 3 % Cover of Biotic Crust _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species _____	x 1 =	0
FACW species _____	x 2 =	0
FAC species _____	x 3 =	0
FACU species _____	x 4 =	0
UPL species _____	x 5 =	0
Column Totals: 0 (A)		0 (B)

Prevalence Index = B/A = NaN

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, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks:

SOIL

Sampling Point: 84a

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-8	7.5YR 3/2	97	7.5YR 5/6	3	C	M	clay loam	distinct mottles

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ✓ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ✓ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ✓ No ___

Remarks:

In closed depression. Concretions (black).

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ✓ Surface Water (A1)
- ___ High Water Table (A2)
- ✓ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ✓ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ 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): 1

Water Table Present? Yes ___ No ✓ Depth (inches): ___

Saturation Present? (includes capillary fringe) Yes ✓ No ___ Depth (inches): 8

Wetland Hydrology Present? Yes ✓ No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Reaction test positive for reduced iron.

Appendix D — List of Plants Observed on the Project Site

Plant Species Observed on the Stonegate Property

Species	Common Name	Wetland Indicator Status (WIS)
Achyrachaena mollis	Soft blow wives	UPL
Aira caryophyllea	Silver hairgrass	FACU
Alisma sp.	Water plantain	
Allium amplectens	Narrow leaved onion	UPL
Alopecurus saccatus	Pacific foxtail	OBL
Ambrosia psilostachya	Ragweed	FACU
Amsinckia menziesii	Fiddleneck	UPL
Andropogon virginicus var. *virginicus*	Broomsedge bluestem	FAC
Anthriscus caucalis	Bur chervil	UPL
Artemisia douglasiana	California mugwort	FAC
Asclepias speciosa	Showy milkweed	FAC
Athysanus pusillus	Athysanus	UPL
Avena barbata	Slender oat	UPL
Avena fatua	Wild oat	UPL
Baccharis salicifolia	Mule fat	FAC
Bidens frondosa	Devil's beggartick	FACW
Blennosperma nanum var. *nanum*	Common blennosperma	OBL
Brassica rapa	Common mustard	FACU
Briza minor	Annual quaking grass	FAC
Brodiaea californica	California brodiaea	UPL
Brodiaea elegans ssp. *elegans*	Harvest brodiaea	FACU
Brodiaea minor	Dwarf brodiaea	UPL
Bromus diandrus	Ripgut brome	UPL
Bromus hordeaceus	Soft chess	FACU
Bromus madritensis	Foxtail chess	UPL
Callitriche cf. *marginata*	California water starwort	OBL
Calochortus luteus	Yellow mariposa lily	UPL
Calycadenia truncata	Rosin weed	UPL
Cardamine oligosperma	Bitter cress	FAC
Carduus pycnocephalus ssp. *pycnocephalus*	Italian thistle	UPL
Centaurea solstitialis	Yellow star thistle	UPL
Cerastium glomeratum	Sticky chickweed	UPL
Chenopodium album	Lamb's quarters	FACU
Chlorogalum angustifolium	Narrow soaproot	UPL
Chlorogalum pomeridianum	Soap plant	UPL
Cicendia quadrangularis	Common microcalis	FAC
Cirsium vulgare	Bull thistle	FACU
Clarkia arcuata	Glandular clarkia	UPL
Clarkia purpurea ssp. *quadrivulnera*	Purple clarkia, Winecup clarkia	UPL
Claytonia perfoliata ssp. *perfoliata*	Miner's lettuce	FAC

Plant Species Observed on the Stonegate Property

Species	Common Name	Wetland Indicator Status (WIS)
Convolvulus arvensis	Orchard morningglory	UPL
Crassula aquatica	Annual pygmy weed	OBL
Croton setiger	Turkey-mullein	UPL
Cuscuta sp.	Dodder	UPL
Cynodon dactylon	Bermuda grass	FACU
Cyperus sp.	Nut-sedge	
Datisca glomerata	Durango root	FACW
Delphinium variegatum ssp. *variegatum*	Royal larkspur	UPL
Deschampsia danthonioides	Annual hairgrass	FACW
Dichelostemma capitatum ssp. *capitatum*	Wild hyacinth	FACU
Dichelostemma multiflorum	Many flowered brodiaea	UPL
Downingia bicornuta var. *bicornuta*	Doublehorn calicoflower	OBL
Downingia ornatissima var. *ornatissima*	Folded calicoflower	OBL
Eleocharis macrostachya	Common spikerush	OBL
Elymus caput-medusae	Medusa head	UPL
Elymus sp.	Wheatgrass	
Epilobium brachycarpum	Annual fireweed	UPL
Epllobium cleistogamum	Cleistogamous boisduvalia	OBL
Erodium botrys	Broad leaf filaree	FACU
Erodium cicutarium	Red stemmed filaree	UPL
Erodium moschatum	White stemmed filaree	UPL
Eryngium vaseyi	Button celery	FACW
Eschscholzia californica	California poppy	UPL
Eschscholzia lobbii	Frying pans	UPL
Festuca bromoides	Brome fescue	UPL
Festuca microstachys	Small fescue	UPL
Festuca myuros	Rattail sixweeks grass	UPL
Festuca perennis	Rye grass	UPL
Frangula californica ssp. *tomentella*	Hoary coffeeberry	UPL
Fraxinus latifolia	Oregon ash	FACW
Galium parisiense	Wall bedstraw	UPL
Galium triflorum	Fragrant bedstraw	FACU
Geranium dissectum	Cranesbill, Wild geranium	UPL
Geranium molle	Crane's bill geranium	UPL
Glyceria declinata	Waxy mannagrass	FACW
Grindelia camporum	Common gumplant	FACW
Heliotropium curassavicum var. *occulartum*	Alkali heliotrope	FACU
Hordeum marinum ssp. *gussoneanum*	Mediterranean barley	FAC
Hordeum murinum	Foxtail barley	FACU
Hypericum perforatum	Klamath weed	FACU

Plant Species Observed on the Stonegate Property

Species	Common Name	Wetland Indicator Status (WIS)
Hypochaeris glabra	Smooth cat's ear	UPL
Hypochaeris radicata	Hairy cat's ear	FACU
Juglans hindsii	Northern california black walnut	FAC
Juncus bufonius	Toad rush	FACW
Juncus effusus	Bog rush, Common rush	FACW
Juncus patens	Common rush	FACW
Lactuca serriola	Prickly lettuce	FACU
Lamium amplexicaule	Giraffe head	UPL
Lasthenia californica ssp. *californica*	California goldfields	FACU
Lasthenia fremontii	Fremont's goldfield	OBL
Lasthenia glaberrima	Smooth goldfield	OBL
Layia fremontii	Fremont layia	UPL
Lemna sp.	Duckweed	
Lepidium nitidum	Shining pepper grass	FAC
Leptosiphon bicolor	True babystars	UPL
Limnanthes douglasii ssp. *rosea*	Rosy douglas' meadowfoam	OBL
Limnanthes floccosa ssp. *californica*	Butte county meadowfoam	OBL
Lithophragma parviflorum var. *trifoliatum*	Prairie woodland star	UPL
Logfia gallica	Narrowleaf cottonroase	UPL
Lomatium caruifolium var. *denticulatum*	Caroway leaved lomatium	FACW
Lupinus bicolor	Annual lupine	UPL
Lupinus nanus	Sky lupine	UPL
Lysimachia arvensis	Scarlet pimpernel	FAC
Lythrum hyssopifolia	Hyssop loosestrife	OBL
Matricaria discoidea	Pineapple weed	FACU
Medicago polymorpha	Bur-clover	FACU
Mentha arvensis	American wild mint	FACW
Micropus californicus var. *californicus*	Q tips	FACU
Mimulus glaucescens	Shield bracted monkeyflower	OBL
Mimulus guttatus	Yellow monkey flower	OBL
Mimulus tricolor	Tricolor monkeyflower	OBL
Minuartia californica	California sandwort	FACU
Muhlenbergia rigens	Deergrass	FAC
Myosurus minimus	Common mousetail	OBL
Nasturtium officinale	Watercress	OBL
Navarretia leucocephala ssp. *minima*	Least navarretia	OBL
Navarretia tagetina	Marigold navarretia	FACW
Nemophila pedunculata	Littlefoot nemophila	FAC
Odontostomum hartwegii	Hartweg's odontostomum	UPL
Petrorhagia dubia	Hairypink	UPL

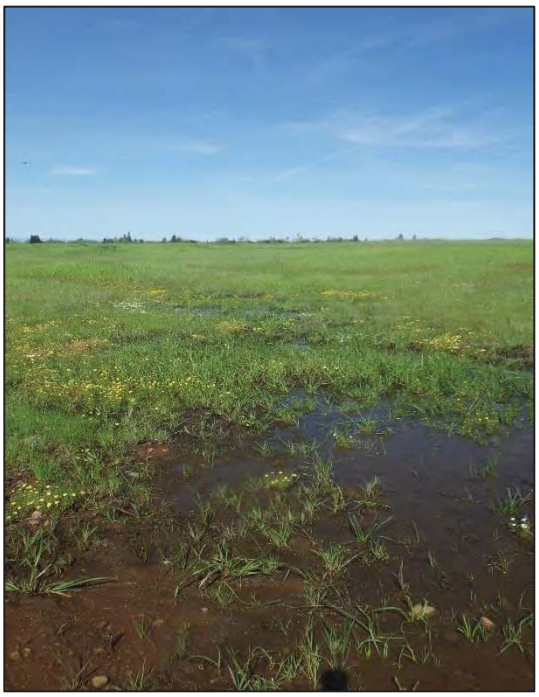
Plant Species Observed on the Stonegate Property

Species	Common Name	Wetland Indicator Status (WIS)
Pistacia chinensis	Chinese pistachio	UPL
Plagiobothrys nothofulvus	Rusty haired popcorn flower	FAC
Plagiobothrys stipitatus var. *micranthus*	Common vernal pool allocarya	FACW
Plantago erecta	California plantain	UPL
Plantago lanceolata	English plantain	FAC
Plectritis ciliosa	Long spurred plectritis	FACU
Poa bulbosa	Bulbous bluegrass	FACU
Poa secunda ssp. *secunda*	One sided bluegrass	FACU
Pogogyne zizyphoroides	Sacramento pogogyne	OBL
Polypogon monspeliensis	Rabbitfoot grass	FACW
Populus fremontii ssp. *fremontii*	Fremont cottonwood	UPL
Portulaca oleracea	Common purslane	FAC
Primula cf. *clevalandii*	Padre's shooting star	UPL
Psilocarphus brevissimus var. *brevissimus*	Wooly marbles	FACW
Psilocarphus tenellus	Slender wooly marbles	OBL
Quercus douglasii	Blue oak	UPL
Quercus lobata	Valley oak	FACU
Ranunculus arvensis	Corn buttercup	FACU
Ranunculus muricatus	Spiny buttercup	FACW
Ranunculus occidentalis var. *occidentalis*	Western cuttercup	FAC
Rubus armeniacus	Himalayan blackberry	FAC
Rumex crispus	Curly dock	FAC
Rumex pulcher	Fiddle dock	FAC
Rumex sp.	Dock	
Salix goodingii	Gooding's willow	FACW
Salix lasiolepis	Arroyo willow	FACW
Salix sp.	Willow	
Sambucus nigra ssp. *caerulea*	Blue elderberry	FACU
Sanicula bipinnatifida	Purple sanicle	UPL
Sanicula crassicaulis	Gamble weed	UPL
Scandix pecten-veneris	Shepherd's needle	UPL
Sedella pumila	Sierra mock stonecrop	FAC
Selaginella hansenii	Hansen's spike moss	UPL
Senecio vulgaris	Common groundsel	FACU
Sherardia arvensis	Blue fieldmadder	UPL
Sidalcea calycosa ssp *calycosa*	Annual checkerbloom	OBL
Silybum marianum	Blessed milkthistle	UPL
Sonchus asper ssp. *asper*	Sow thistle	FAC
Torilis arvensis	Field hedge parsley	UPL
Toxicodendron diversilobum	Poison-oak	FACU

Plant Species Observed on the Stonegate Property

Species	Common Name	Wetland Indicator Status (WIS)
Trichostema lanceolatum	Vinegarweed	FACU
Trifolium depauperatum var. *depauperatum*	Cowbag clover	FAC
Trifolium dubium	Shamrock clover	UPL
Trifolium hirtum	Rose clover	UPL
Trifolium microcephalum	Hairy clover	FAC
Trifolium subterraneum	Subterraneum clover	UPL
Trifolium variegatum var. *variegatum*	Variegated clover	FAC
Trifolium willdenowii	Tomcat clover	FACW
Triphysaria eriantha ssp. *eriantha*	Butter 'n' eggs	UPL
Triteleia hyacinthina	White brodiaea, fool's onion	FAC
Triteleia laxa	Ithuriel's spear	UPL
Typha angustifolia	Narrow leaf cattail	OBL
Verbascum blattaria	Moth mullein	UPL
Veronica peregrina ssp. *xalapensis*	Purslane speedwell	FAC
Vicia sativa ssp. *nigra*	Common vetch	FACU
Vicia villosa ssp. *varia*	Smooth vetch	UPL
Vicia villosa ssp. *villosa*	Hairy vetch	UPL
Vitis californica	California grape	FACU
Xanthium strumarium	Rough cockleburr	FAC
Zeltnera muhlenbergii	Muhlenberg's centaury	FAC

Appendix E — Representative Site Photographs



Description: Photo point 1 of riverine seasonal wetland looking north from the southern portion of the Site.
Date: March 23, 2016
Photographer: Charlotte Marks

Description: Photo point 2 looking southeast from the central portion of the Site.
Date: February 23, 2016
Photographer: Marisa Brilts

REPRESENTATIVE SITE PHOTOGRAPHS

Description: Photo point 3 looking northeast of depressional seasonal wetland within the northwestern portion of the Site.
Date: February 25, 2016
Photographer: Charlotte Marks

Description: Photo point 4 looking south at perennial drainage from the northeastern portion of the Site.
Date: February 25, 2016
Photographer: Charlotte Marks

Description: Photo point 5 looking west of ditch/canal from the southern portion of the Site.
Date: February 25, 2016
Photographer: Charlotte Marks

Description: Photo point 6 looking northwest of depressional perennial marsh from the southeastern portion of the Site.
Date: February 25, 2016
Photographer: Charlotte Marks

Description: Photo Point 7 looking north towards vernal pool within the western portion of the Site.
Date: February 15, 2016
Photographer: Charlotte Marks

Description: Photo Point 8 looking southeast of ditch/canal within the southeastern portion of the Site.
Date: February 29, 2016
Photographer: Kelly Bayne

REPRESENTATIVE SITE PHOTOGRAPHS

Description: Photo Point 9 looking northwest of nonnative annual grassland from southeastern portion of the Site.
Date: February 25, 2016
Photographer: Charlotte Marks

Description: Photo Point 10 looking west towards intermittent drainage from the southeastern portion of the Site.
Date: February 25, 2016
Photographer: Charlotte Marks

REPRESENTATIVE SITE PHOTOGRAPHS

Appendix F — Aquatic Resources Excel Spreadsheet

Waters_Name	State	Cowardin_Code	HGM_Code	Meas_Type	Amount	Units	Waters_Type	Latitude	Longitude	Local_Waterway
Ditch\Canal498	CALIFORNIA	R4SB		Area	0.039945	ACRE	DELINEATE	39.714339	-121.78043	
Ditch\Canal499	CALIFORNIA	R4SB		Area	0.047339	ACRE	DELINEATE	39.714123	-121.782857	
Ditch\Canal500	CALIFORNIA	R4SB		Area	0.052037	ACRE	DELINEATE	39.71385	-121.784372	
Ditch\Canal501	CALIFORNIA	R4SB		Area	0.051497	ACRE	DELINEATE	39.713816	-121.779622	
Ditch\Canal502	CALIFORNIA	R4SB		Area	0.066249	ACRE	DELINEATE	39.725086	-121.789938	
Ditch\Canal722	CALIFORNIA	R4SB		Area	0.133559	ACRE	DELINEATE	39.721921	-121.791474	
DPM197	CALIFORNIA	PEM1		Area	1.236191	ACRE	DELINEATE	39.714006	-121.780954	
DSW1	CALIFORNIA	PEM2		Area	0.061421	ACRE	DELINEATE	39.725733	-121.789101	
DSW2	CALIFORNIA	PEM2		Area	0.141075	ACRE	DELINEATE	39.72578	-121.782268	
DSW3	CALIFORNIA	PEM2		Area	0.086599	ACRE	DELINEATE	39.725767	-121.785837	
DSW4	CALIFORNIA	PEM2		Area	0.056286	ACRE	DELINEATE	39.725751	-121.78508	
DSW5	CALIFORNIA	PEM2		Area	0.008152	ACRE	DELINEATE	39.725544	-121.785887	
DSW6	CALIFORNIA	PEM2		Area	0.004511	ACRE	DELINEATE	39.725446	-121.788187	
DSW7	CALIFORNIA	PEM2		Area	0.041227	ACRE	DELINEATE	39.725396	-121.784798	
DSW8	CALIFORNIA	PEM2		Area	0.092019	ACRE	DELINEATE	39.725282	-121.78693	
DSW9	CALIFORNIA	PEM2		Area	0.015532	ACRE	DELINEATE	39.724785	-121.786738	
DSW11	CALIFORNIA	PEM2		Area	0.000741	ACRE	DELINEATE	39.724774	-121.789592	
DSW12	CALIFORNIA	PEM2		Area	0.000999	ACRE	DELINEATE	39.724737	-121.788488	
DSW13	CALIFORNIA	PEM2		Area	0.022781	ACRE	DELINEATE	39.724626	-121.788913	
DSW14	CALIFORNIA	PEM2		Area	0.00511	ACRE	DELINEATE	39.724618	-121.786914	
DSW15	CALIFORNIA	PEM2		Area	0.002804	ACRE	DELINEATE	39.724513	-121.787274	
DSW16	CALIFORNIA	PEM2		Area	0.003001	ACRE	DELINEATE	39.72451	-121.787237	
DSW17	CALIFORNIA	PEM2		Area	0.050739	ACRE	DELINEATE	39.724411	-121.788461	
DSW18	CALIFORNIA	PEM2		Area	0.006969	ACRE	DELINEATE	39.724408	-121.78695	
DSW19	CALIFORNIA	PEM2		Area	0.001308	ACRE	DELINEATE	39.724297	-121.781789	
DSW20	CALIFORNIA	PEM2		Area	0.012847	ACRE	DELINEATE	39.724287	-121.786699	
DSW21	CALIFORNIA	PEM2		Area	0.016817	ACRE	DELINEATE	39.724291	-121.789067	
DSW22	CALIFORNIA	PEM2		Area	0.003174	ACRE	DELINEATE	39.724282	-121.786417	
DSW23	CALIFORNIA	PEM2		Area	0.00399	ACRE	DELINEATE	39.724232	-121.787051	
DSW24	CALIFORNIA	PEM2		Area	0.001274	ACRE	DELINEATE	39.724207	-121.786866	
DSW25	CALIFORNIA	PEM2		Area	0.065612	ACRE	DELINEATE	39.724152	-121.785341	
DSW26	CALIFORNIA	PEM2		Area	0.00056	ACRE	DELINEATE	39.724148	-121.785902	
DSW27	CALIFORNIA	PEM2		Area	0.003846	ACRE	DELINEATE	39.72414	-121.786972	
DSW28	CALIFORNIA	PEM2		Area	0.022462	ACRE	DELINEATE	39.724086	-121.786441	
DSW29	CALIFORNIA	PEM2		Area	0.00165	ACRE	DELINEATE	39.724078	-121.785913	
DSW30	CALIFORNIA	PEM2		Area	0.003004	ACRE	DELINEATE	39.724052	-121.787029	
DSW31	CALIFORNIA	PEM2		Area	0.016462	ACRE	DELINEATE	39.72396	-121.783888	
DSW32	CALIFORNIA	PEM2		Area	0.002513	ACRE	DELINEATE	39.723935	-121.787014	
DSW34	CALIFORNIA	PEM2		Area	0.028046	ACRE	DELINEATE	39.723867	-121.783424	
DSW35	CALIFORNIA	PEM2		Area	0.006601	ACRE	DELINEATE	39.723833	-121.783671	
DSW36	CALIFORNIA	PEM2		Area	0.009648	ACRE	DELINEATE	39.723797	-121.790652	
DSW37	CALIFORNIA	PEM2		Area	0.006186	ACRE	DELINEATE	39.723723	-121.789327	
DSW38	CALIFORNIA	PEM2		Area	0.005143	ACRE	DELINEATE	39.723687	-121.781847	
DSW40	CALIFORNIA	PEM2		Area	0.005534	ACRE	DELINEATE	39.723584	-121.789733	
DSW42	CALIFORNIA	PEM2		Area	0.009244	ACRE	DELINEATE	39.723443	-121.783635	
DSW43	CALIFORNIA	PEM2		Area	0.001446	ACRE	DELINEATE	39.723425	-121.780931	
DSW44	CALIFORNIA	PEM2		Area	0.004914	ACRE	DELINEATE	39.72342	-121.789719	
DSW45	CALIFORNIA	PEM2		Area	0.012388	ACRE	DELINEATE	39.723306	-121.781532	
DSW46	CALIFORNIA	PEM2		Area	0.190122	ACRE	DELINEATE	39.7233	-121.78667	
DSW47	CALIFORNIA	PEM2		Area	0.003907	ACRE	DELINEATE	39.723292	-121.791482	
DSW48	CALIFORNIA	PEM2		Area	0.007245	ACRE	DELINEATE	39.723201	-121.783178	
DSW49	CALIFORNIA	PEM2		Area	0.002388	ACRE	DELINEATE	39.723107	-121.783966	
DSW50	CALIFORNIA	PEM2		Area	0.001766	ACRE	DELINEATE	39.723056	-121.778191	
DSW51	CALIFORNIA	PEM2		Area	0.004679	ACRE	DELINEATE	39.723063	-121.787228	
DSW52	CALIFORNIA	PEM2		Area	0.001337	ACRE	DELINEATE	39.722962	-121.778086	
DSW53	CALIFORNIA	PEM2		Area	0.023932	ACRE	DELINEATE	39.722965	-121.783208	
DSW54	CALIFORNIA	PEM2		Area	0.00623	ACRE	DELINEATE	39.722935	-121.783607	
DSW55	CALIFORNIA	PEM2		Area	0.001751	ACRE	DELINEATE	39.722917	-121.778104	
DSW56	CALIFORNIA	PEM2		Area	0.001171	ACRE	DELINEATE	39.722798	-121.77823	
DSW57	CALIFORNIA	PEM2		Area	0.138436	ACRE	DELINEATE	39.722696	-121.784571	
DSW58	CALIFORNIA	PEM2		Area	0.001277	ACRE	DELINEATE	39.722682	-121.782405	
DSW59	CALIFORNIA	PEM2		Area	0.002699	ACRE	DELINEATE	39.722682	-121.787087	
DSW60	CALIFORNIA	PEM2		Area	0.139983	ACRE	DELINEATE	39.722579	-121.786913	
DSW62	CALIFORNIA	PEM2		Area	0.017099	ACRE	DELINEATE	39.722499	-121.785336	
DSW63	CALIFORNIA	PEM2		Area	0.00248	ACRE	DELINEATE	39.722467	-121.781424	
DSW64	CALIFORNIA	PEM2		Area	0.011297	ACRE	DELINEATE	39.722346	-121.784401	
DSW65	CALIFORNIA	PEM2		Area	0.004521	ACRE	DELINEATE	39.722105	-121.783613	
DSW66	CALIFORNIA	PEM2		Area	0.041677	ACRE	DELINEATE	39.721992	-121.783724	
DSW67	CALIFORNIA	PEM2		Area	0.007322	ACRE	DELINEATE	39.721876	-121.789417	
DSW68	CALIFORNIA	PEM2		Area	0.008309	ACRE	DELINEATE	39.721876	-121.791359	
DSW69	CALIFORNIA	PEM2		Area	0.017717	ACRE	DELINEATE	39.721778	-121.78809	
DSW70	CALIFORNIA	PEM2		Area	0.001284	ACRE	DELINEATE	39.72173	-121.789974	
DSW71	CALIFORNIA	PEM2		Area	0.001206	ACRE	DELINEATE	39.721718	-121.78375	

Waters_Name	State	Cowardin_Code	HGM_Code	Meas_Type	Amount	Units	Waters_Type	Latitude	Longitude	Local_Waterway
DSW72	CALIFORNIA	PEM2		Area	0.026697	ACRE	DELINEATE	39.721667	-121.789495	
DSW73	CALIFORNIA	PEM2		Area	0.004122	ACRE	DELINEATE	39.721394	-121.781637	
DSW74	CALIFORNIA	PEM2		Area	0.00988	ACRE	DELINEATE	39.721344	-121.786967	
DSW75	CALIFORNIA	PEM2		Area	0.071517	ACRE	DELINEATE	39.721289	-121.785126	
DSW76	CALIFORNIA	PEM2		Area	0.045888	ACRE	DELINEATE	39.721216	-121.791348	
DSW77	CALIFORNIA	PEM2		Area	0.002108	ACRE	DELINEATE	39.721156	-121.781589	
DSW78	CALIFORNIA	PEM2		Area	0.000879	ACRE	DELINEATE	39.721129	-121.782004	
DSW79	CALIFORNIA	PEM2		Area	0.000885	ACRE	DELINEATE	39.721128	-121.781936	
DSW80	CALIFORNIA	PEM2		Area	0.004681	ACRE	DELINEATE	39.721126	-121.781436	
DSW81	CALIFORNIA	PEM2		Area	0.000925	ACRE	DELINEATE	39.721125	-121.784467	
DSW82	CALIFORNIA	PEM2		Area	0.003081	ACRE	DELINEATE	39.721068	-121.781238	
DSW84	CALIFORNIA	PEM2		Area	0.003657	ACRE	DELINEATE	39.72103	-121.779129	
DSW85	CALIFORNIA	PEM2		Area	0.001388	ACRE	DELINEATE	39.72095	-121.778959	
DSW86	CALIFORNIA	PEM2		Area	0.000998	ACRE	DELINEATE	39.720954	-121.782131	
DSW87	CALIFORNIA	PEM2		Area	0.000667	ACRE	DELINEATE	39.720959	-121.791481	
DSW88	CALIFORNIA	PEM2		Area	0.002784	ACRE	DELINEATE	39.720934	-121.782478	
DSW89	CALIFORNIA	PEM2		Area	0.005613	ACRE	DELINEATE	39.720824	-121.787691	
DSW90	CALIFORNIA	PEM2		Area	0.026842	ACRE	DELINEATE	39.720789	-121.785192	
DSW91	CALIFORNIA	PEM2		Area	0.001119	ACRE	DELINEATE	39.720769	-121.782403	
DSW92	CALIFORNIA	PEM2		Area	0.002263	ACRE	DELINEATE	39.720768	-121.782072	
DSW93	CALIFORNIA	PEM2		Area	0.003745	ACRE	DELINEATE	39.720755	-121.779389	
DSW94	CALIFORNIA	PEM2		Area	0.0083	ACRE	DELINEATE	39.720743	-121.782588	
DSW95	CALIFORNIA	PEM2		Area	0.099011	ACRE	DELINEATE	39.720712	-121.784229	
DSW96	CALIFORNIA	PEM2		Area	0.00152	ACRE	DELINEATE	39.720581	-121.78293	
DSW97	CALIFORNIA	PEM2		Area	0.004148	ACRE	DELINEATE	39.720511	-121.782419	
DSW98	CALIFORNIA	PEM2		Area	0.003714	ACRE	DELINEATE	39.720309	-121.784574	
DSW99	CALIFORNIA	PEM2		Area	0.001053	ACRE	DELINEATE	39.720211	-121.778161	
DSW100	CALIFORNIA	PEM2		Area	0.006988	ACRE	DELINEATE	39.720174	-121.781209	
DSW101	CALIFORNIA	PEM2		Area	0.029252	ACRE	DELINEATE	39.720151	-121.783559	
DSW102	CALIFORNIA	PEM2		Area	0.013283	ACRE	DELINEATE	39.720142	-121.784723	
DSW103	CALIFORNIA	PEM2		Area	0.001917	ACRE	DELINEATE	39.720014	-121.778086	
DSW104	CALIFORNIA	PEM2		Area	0.004694	ACRE	DELINEATE	39.719946	-121.777985	
DSW105	CALIFORNIA	PEM2		Area	0.001773	ACRE	DELINEATE	39.719922	-121.782367	
DSW106	CALIFORNIA	PEM2		Area	0.002001	ACRE	DELINEATE	39.719877	-121.782304	
DSW107	CALIFORNIA	PEM2		Area	0.009875	ACRE	DELINEATE	39.719869	-121.785009	
DSW108	CALIFORNIA	PEM2		Area	0.002945	ACRE	DELINEATE	39.71987	-121.786408	
DSW109	CALIFORNIA	PEM2		Area	0.000468	ACRE	DELINEATE	39.719742	-121.778172	
DSW110	CALIFORNIA	PEM2		Area	0.001826	ACRE	DELINEATE	39.719702	-121.779678	
DSW111	CALIFORNIA	PEM2		Area	0.001834	ACRE	DELINEATE	39.719703	-121.782141	
DSW112	CALIFORNIA	PEM2		Area	0.002418	ACRE	DELINEATE	39.719658	-121.781965	
DSW113	CALIFORNIA	PEM2		Area	0.011176	ACRE	DELINEATE	39.719659	-121.783319	
DSW114	CALIFORNIA	PEM2		Area	0.002074	ACRE	DELINEATE	39.719636	-121.779395	
DSW115	CALIFORNIA	PEM2		Area	0.001042	ACRE	DELINEATE	39.719619	-121.782616	
DSW116	CALIFORNIA	PEM2		Area	0.003165	ACRE	DELINEATE	39.719594	-121.782107	
DSW117	CALIFORNIA	PEM2		Area	0.01487	ACRE	DELINEATE	39.719421	-121.782324	
DSW118	CALIFORNIA	PEM2		Area	0.001523	ACRE	DELINEATE	39.719416	-121.782524	
DSW119	CALIFORNIA	PEM2		Area	0.001131	ACRE	DELINEATE	39.719384	-121.782579	
DSW120	CALIFORNIA	PEM2		Area	0.001933	ACRE	DELINEATE	39.719324	-121.778242	
DSW121	CALIFORNIA	PEM2		Area	0.001986	ACRE	DELINEATE	39.719271	-121.782401	
DSW122	CALIFORNIA	PEM2		Area	0.005786	ACRE	DELINEATE	39.719244	-121.78536	
DSW123	CALIFORNIA	PEM2		Area	0.089972	ACRE	DELINEATE	39.719147	-121.786926	
DSW124	CALIFORNIA	PEM2		Area	0.004351	ACRE	DELINEATE	39.719138	-121.785687	
DSW125	CALIFORNIA	PEM2		Area	0.038325	ACRE	DELINEATE	39.719029	-121.78462	
DSW126	CALIFORNIA	PEM2		Area	0.00081	ACRE	DELINEATE	39.719016	-121.779759	
DSW127	CALIFORNIA	PEM2		Area	0.001503	ACRE	DELINEATE	39.719007	-121.778668	
DSW128	CALIFORNIA	PEM2		Area	0.004456	ACRE	DELINEATE	39.718973	-121.786213	
DSW129	CALIFORNIA	PEM2		Area	0.001873	ACRE	DELINEATE	39.718934	-121.778698	
DSW130	CALIFORNIA	PEM2		Area	0.000817	ACRE	DELINEATE	39.718696	-121.77999	
DSW131	CALIFORNIA	PEM2		Area	0.003964	ACRE	DELINEATE	39.718651	-121.783826	
DSW132	CALIFORNIA	PEM2		Area	0.032995	ACRE	DELINEATE	39.718642	-121.786984	
DSW133	CALIFORNIA	PEM2		Area	0.00744	ACRE	DELINEATE	39.718518	-121.783252	
DSW134	CALIFORNIA	PEM2		Area	0.001898	ACRE	DELINEATE	39.718485	-121.782831	
DSW135	CALIFORNIA	PEM2		Area	0.003933	ACRE	DELINEATE	39.718432	-121.783948	
DSW136	CALIFORNIA	PEM2		Area	0.002302	ACRE	DELINEATE	39.718391	-121.78262	
DSW137	CALIFORNIA	PEM2		Area	0.000769	ACRE	DELINEATE	39.718335	-121.779567	
DSW138	CALIFORNIA	PEM2		Area	0.000905	ACRE	DELINEATE	39.718249	-121.783121	
DSW139	CALIFORNIA	PEM2		Area	0.00625	ACRE	DELINEATE	39.718247	-121.787037	
DSW140	CALIFORNIA	PEM2		Area	0.002406	ACRE	DELINEATE	39.71814	-121.783664	
DSW141	CALIFORNIA	PEM2		Area	0.007335	ACRE	DELINEATE	39.718074	-121.784807	
DSW142	CALIFORNIA	PEM2		Area	0.024356	ACRE	DELINEATE	39.717994	-121.786554	
DSW143	CALIFORNIA	PEM2		Area	0.070449	ACRE	DELINEATE	39.717942	-121.786971	
DSW144	CALIFORNIA	PEM2		Area	0.001439	ACRE	DELINEATE	39.717693	-121.78336	
DSW145	CALIFORNIA	PEM2		Area	0.006484	ACRE	DELINEATE	39.717548	-121.785421	

Waters_Name	State	Cowardin_Code	HGM_Code	Meas_Type	Amount	Units	Waters_Type	Latitude	Longitude	Local_Waterway
DSW147	CALIFORNIA	PEM2		Area	0.001149	ACRE	DELINEATE	39.717464	-121.779061	
DSW148	CALIFORNIA	PEM2		Area	0.013814	ACRE	DELINEATE	39.717427	-121.784744	
DSW149	CALIFORNIA	PEM2		Area	0.020654	ACRE	DELINEATE	39.717394	-121.786826	
DSW151	CALIFORNIA	PEM2		Area	0.002454	ACRE	DELINEATE	39.717314	-121.785058	
DSW152	CALIFORNIA	PEM2		Area	0.001949	ACRE	DELINEATE	39.717278	-121.783324	
DSW153	CALIFORNIA	PEM2		Area	0.006933	ACRE	DELINEATE	39.717276	-121.787027	
DSW154	CALIFORNIA	PEM2		Area	0.002915	ACRE	DELINEATE	39.717158	-121.783234	
DSW155	CALIFORNIA	PEM2		Area	0.003582	ACRE	DELINEATE	39.716761	-121.783439	
DSW156	CALIFORNIA	PEM2		Area	0.000939	ACRE	DELINEATE	39.716573	-121.783488	
DSW157	CALIFORNIA	PEM2		Area	0.002011	ACRE	DELINEATE	39.716096	-121.783377	
DSW158	CALIFORNIA	PEM2		Area	0.614115	ACRE	DELINEATE	39.716079	-121.781711	
DSW159	CALIFORNIA	PEM2		Area	0.003262	ACRE	DELINEATE	39.716	-121.784448	
DSW160	CALIFORNIA	PEM2		Area	0.001034	ACRE	DELINEATE	39.715977	-121.783299	
DSW161	CALIFORNIA	PEM2		Area	0.002261	ACRE	DELINEATE	39.715896	-121.783249	
DSW162	CALIFORNIA	PEM2		Area	0.000558	ACRE	DELINEATE	39.71566	-121.784997	
DSW163	CALIFORNIA	PEM2		Area	0.007009	ACRE	DELINEATE	39.715456	-121.785402	
DSW164	CALIFORNIA	PEM2		Area	0.022724	ACRE	DELINEATE	39.715409	-121.786955	
DSW165	CALIFORNIA	PEM2		Area	0.008218	ACRE	DELINEATE	39.715001	-121.784762	
DSW166	CALIFORNIA	PEM2		Area	0.002188	ACRE	DELINEATE	39.714774	-121.786677	
DSW167	CALIFORNIA	PEM2		Area	0.004621	ACRE	DELINEATE	39.714657	-121.786775	
DSW168	CALIFORNIA	PEM2		Area	0.002556	ACRE	DELINEATE	39.714643	-121.780907	
DSW169	CALIFORNIA	PEM2		Area	0.019706	ACRE	DELINEATE	39.714459	-121.781244	
DSW170	CALIFORNIA	PEM2		Area	0.001084	ACRE	DELINEATE	39.714447	-121.785825	
DSW171	CALIFORNIA	PEM2		Area	0.001128	ACRE	DELINEATE	39.714344	-121.786412	
DSW172	CALIFORNIA	PEM2		Area	0.004212	ACRE	DELINEATE	39.714343	-121.786974	
DSW173	CALIFORNIA	PEM2		Area	0.014161	ACRE	DELINEATE	39.714307	-121.780706	
DSW174	CALIFORNIA	PEM2		Area	0.033357	ACRE	DELINEATE	39.714223	-121.783226	
DSW175	CALIFORNIA	PEM2		Area	0.000916	ACRE	DELINEATE	39.714211	-121.785403	
DSW176	CALIFORNIA	PEM2		Area	0.011435	ACRE	DELINEATE	39.714151	-121.784025	
DSW177	CALIFORNIA	PEM2		Area	0.003974	ACRE	DELINEATE	39.714147	-121.78368	
DSW178	CALIFORNIA	PEM2		Area	0.002968	ACRE	DELINEATE	39.714066	-121.783992	
DSW179	CALIFORNIA	PEM2		Area	0.004092	ACRE	DELINEATE	39.714051	-121.784654	
DSW180	CALIFORNIA	PEM2		Area	0.005064	ACRE	DELINEATE	39.713937	-121.784857	
DSW181	CALIFORNIA	PEM2		Area	0.009995	ACRE	DELINEATE	39.71391	-121.786611	
DSW182	CALIFORNIA	PEM2		Area	0.001203	ACRE	DELINEATE	39.713875	-121.783564	
DSW183	CALIFORNIA	PEM2		Area	0.002308	ACRE	DELINEATE	39.713874	-121.786226	
DSW184	CALIFORNIA	PEM2		Area	0.000181	ACRE	DELINEATE	39.713847	-121.783316	
DSW185	CALIFORNIA	PEM2		Area	0.000336	ACRE	DELINEATE	39.713789	-121.782795	
DSW186	CALIFORNIA	PEM2		Area	0.002108	ACRE	DELINEATE	39.713771	-121.783301	
DSW187	CALIFORNIA	PEM2		Area	0.011658	ACRE	DELINEATE	39.713776	-121.786154	
DSW188	CALIFORNIA	PEM2		Area	0.029753	ACRE	DELINEATE	39.713705	-121.78211	
DSW189	CALIFORNIA	PEM2		Area	0.002123	ACRE	DELINEATE	39.713698	-121.78464	
DSW190	CALIFORNIA	PEM2		Area	0.003015	ACRE	DELINEATE	39.713647	-121.783302	
DSW191	CALIFORNIA	PEM2		Area	0.002095	ACRE	DELINEATE	39.713603	-121.783885	
DSW192	CALIFORNIA	PEM2		Area	0.017297	ACRE	DELINEATE	39.713517	-121.785311	
DSW193	CALIFORNIA	PEM2		Area	0.011323	ACRE	DELINEATE	39.713508	-121.782134	
DSW194	CALIFORNIA	PEM2		Area	0.000117	ACRE	DELINEATE	39.713499	-121.783823	
DSW195	CALIFORNIA	PEM2		Area	0.022304	ACRE	DELINEATE	39.71349	-121.784094	
DSW196	CALIFORNIA	PEM2		Area	0.009051	ACRE	DELINEATE	39.713403	-121.784253	
DSW482	CALIFORNIA	PEM2		Area	0.01047	ACRE	DELINEATE	39.723779	-121.778383	
DSW520	CALIFORNIA	PEM2		Area	0.011203	ACRE	DELINEATE	39.726071	-121.792251	
DSW521	CALIFORNIA	PEM2		Area	0.004008	ACRE	DELINEATE	39.72587	-121.787997	
DSW522	CALIFORNIA	PEM2		Area	0.02843	ACRE	DELINEATE	39.725743	-121.787917	
DSW523	CALIFORNIA	PEM2		Area	0.001326	ACRE	DELINEATE	39.725479	-121.788491	
DSW524	CALIFORNIA	PEM2		Area	0.003176	ACRE	DELINEATE	39.725221	-121.782594	
DSW525	CALIFORNIA	PEM2		Area	0.009274	ACRE	DELINEATE	39.725181	-121.783092	
DSW526	CALIFORNIA	PEM2		Area	0.00664	ACRE	DELINEATE	39.724893	-121.784622	
DSW527	CALIFORNIA	PEM2		Area	0.005214	ACRE	DELINEATE	39.724876	-121.784454	
DSW528	CALIFORNIA	PEM2		Area	0.002851	ACRE	DELINEATE	39.724819	-121.788385	
DSW529	CALIFORNIA	PEM2		Area	0.023142	ACRE	DELINEATE	39.724793	-121.782921	
DSW530	CALIFORNIA	PEM2		Area	0.038871	ACRE	DELINEATE	39.724562	-121.789917	
DSW531	CALIFORNIA	PEM2		Area	0.006515	ACRE	DELINEATE	39.724446	-121.788881	
DSW532	CALIFORNIA	PEM2		Area	0.00435	ACRE	DELINEATE	39.724307	-121.78468	
DSW533	CALIFORNIA	PEM2		Area	0.01554	ACRE	DELINEATE	39.723655	-121.785056	
DSW534	CALIFORNIA	PEM2		Area	0.005522	ACRE	DELINEATE	39.723375	-121.779022	
DSW535	CALIFORNIA	PEM2		Area	0.020863	ACRE	DELINEATE	39.723297	-121.788685	
DSW536	CALIFORNIA	PEM2		Area	0.002346	ACRE	DELINEATE	39.72329	-121.789566	
DSW537	CALIFORNIA	PEM2		Area	0.012629	ACRE	DELINEATE	39.723265	-121.788405	
DSW538	CALIFORNIA	PEM2		Area	0.003447	ACRE	DELINEATE	39.723125	-121.788571	
DSW539	CALIFORNIA	PEM2		Area	0.014091	ACRE	DELINEATE	39.723086	-121.790493	
DSW540	CALIFORNIA	PEM2		Area	0.000824	ACRE	DELINEATE	39.72271	-121.780627	
DSW541	CALIFORNIA	PEM2		Area	0.007727	ACRE	DELINEATE	39.722596	-121.789072	
DSW542	CALIFORNIA	PEM2		Area	0.000948	ACRE	DELINEATE	39.7225	-121.781348	

Waters_Name	State	Cowardin_Code	HGM_Code	Meas_Type	Amount	Units	Waters_Type	Latitude	Longitude	Local_Waterway
DSW543	CALIFORNIA	PEM2		Area	0.002957	ACRE	DELINEATE	39.722463	-121.788501	
DSW544	CALIFORNIA	PEM2		Area	0.020807	ACRE	DELINEATE	39.72246	-121.789518	
DSW545	CALIFORNIA	PEM2		Area	0.005005	ACRE	DELINEATE	39.722285	-121.789895	
DSW546	CALIFORNIA	PEM2		Area	0.005199	ACRE	DELINEATE	39.722081	-121.788574	
DSW548	CALIFORNIA	PEM2		Area	0.037639	ACRE	DELINEATE	39.721626	-121.780646	
DSW549	CALIFORNIA	PEM2		Area	0.009392	ACRE	DELINEATE	39.721581	-121.78893	
DSW550	CALIFORNIA	PEM2		Area	0.010262	ACRE	DELINEATE	39.721335	-121.790305	
DSW551	CALIFORNIA	PEM2		Area	0.013065	ACRE	DELINEATE	39.72128	-121.7893	
DSW552	CALIFORNIA	PEM2		Area	0.005418	ACRE	DELINEATE	39.721256	-121.790491	
DSW553	CALIFORNIA	PEM2		Area	0.063514	ACRE	DELINEATE	39.721073	-121.790025	
DSW554	CALIFORNIA	PEM2		Area	0.003031	ACRE	DELINEATE	39.720973	-121.790569	
DSW555	CALIFORNIA	PEM2		Area	0.027516	ACRE	DELINEATE	39.720891	-121.786916	
DSW556	CALIFORNIA	PEM2		Area	0.023793	ACRE	DELINEATE	39.720639	-121.786982	
DSW558	CALIFORNIA	PEM2		Area	0.006676	ACRE	DELINEATE	39.719998	-121.781278	
DSW559	CALIFORNIA	PEM2		Area	0.007349	ACRE	DELINEATE	39.71958	-121.781969	
DSW560	CALIFORNIA	PEM2		Area	0.004218	ACRE	DELINEATE	39.718951	-121.778921	
DSW561	CALIFORNIA	PEM2		Area	0.008564	ACRE	DELINEATE	39.718831	-121.781537	
DSW562	CALIFORNIA	PEM2		Area	0.003692	ACRE	DELINEATE	39.718754	-121.78641	
DSW563	CALIFORNIA	PEM2		Area	0.013452	ACRE	DELINEATE	39.718577	-121.786805	
DSW565	CALIFORNIA	PEM2		Area	0.0171	ACRE	DELINEATE	39.717425	-121.786441	
DSW566	CALIFORNIA	PEM2		Area	0.005432	ACRE	DELINEATE	39.717306	-121.785504	
DSW567	CALIFORNIA	PEM2		Area	0.018196	ACRE	DELINEATE	39.717054	-121.786593	
DSW568	CALIFORNIA	PEM2		Area	0.00386	ACRE	DELINEATE	39.716947	-121.784187	
DSW570	CALIFORNIA	PEM2		Area	0.008977	ACRE	DELINEATE	39.716789	-121.786674	
DSW571	CALIFORNIA	PEM2		Area	0.012193	ACRE	DELINEATE	39.716622	-121.786687	
DSW572	CALIFORNIA	PEM2		Area	0.003116	ACRE	DELINEATE	39.716495	-121.780952	
DSW573	CALIFORNIA	PEM2		Area	0.007344	ACRE	DELINEATE	39.716367	-121.786666	
DSW574	CALIFORNIA	PEM2		Area	0.011039	ACRE	DELINEATE	39.716327	-121.784067	
DSW575	CALIFORNIA	PEM2		Area	0.023763	ACRE	DELINEATE	39.716141	-121.786573	
DSW576	CALIFORNIA	PEM2		Area	0.002419	ACRE	DELINEATE	39.716036	-121.784072	
DSW577	CALIFORNIA	PEM2		Area	0.001641	ACRE	DELINEATE	39.715929	-121.78037	
DSW578	CALIFORNIA	PEM2		Area	0.000463	ACRE	DELINEATE	39.715769	-121.780856	
DSW579	CALIFORNIA	PEM2		Area	0.021081	ACRE	DELINEATE	39.715275	-121.782164	
DSW580	CALIFORNIA	PEM2		Area	0.010407	ACRE	DELINEATE	39.714203	-121.782778	
DSW581	CALIFORNIA	PEM2		Area	0.005575	ACRE	DELINEATE	39.71375	-121.784017	
DSW582	CALIFORNIA	PEM2		Area	0.004633	ACRE	DELINEATE	39.713463	-121.784537	
DSW583	CALIFORNIA	PEM2		Area	0.005705	ACRE	DELINEATE	39.713343	-121.784243	
DSW607	CALIFORNIA	PEM2		Area	0.004458	ACRE	DELINEATE	39.720949	-121.790959	
DSW608	CALIFORNIA	PEM2		Area	0.001458	ACRE	DELINEATE	39.720964	-121.790872	
DSW609	CALIFORNIA	PEM2		Area	0.041683	ACRE	DELINEATE	39.725428	-121.790274	
DSW610	CALIFORNIA	PEM2		Area	0.03801	ACRE	DELINEATE	39.72597	-121.790184	
DSW611	CALIFORNIA	PEM2		Area	0.004225	ACRE	DELINEATE	39.723469	-121.789349	
DSW612	CALIFORNIA	PEM2		Area	0.004374	ACRE	DELINEATE	39.723595	-121.788886	
DSW613	CALIFORNIA	PEM2		Area	0.004203	ACRE	DELINEATE	39.724829	-121.788547	
DSW614	CALIFORNIA	PEM2		Area	0.000356	ACRE	DELINEATE	39.717891	-121.783881	
DSW615	CALIFORNIA	PEM2		Area	0.000292	ACRE	DELINEATE	39.721982	-121.782677	
DSW616	CALIFORNIA	PEM2		Area	0.009248	ACRE	DELINEATE	39.714977	-121.781167	
DSW617	CALIFORNIA	PEM2		Area	0.009467	ACRE	DELINEATE	39.714987	-121.780809	
DSW618	CALIFORNIA	PEM2		Area	0.002593	ACRE	DELINEATE	39.723311	-121.780673	
DSW619	CALIFORNIA	PEM2		Area	0.003124	ACRE	DELINEATE	39.715182	-121.780658	
DSW620	CALIFORNIA	PEM2		Area	0.00342	ACRE	DELINEATE	39.71776	-121.780023	
DSW621	CALIFORNIA	PEM2		Area	0.009352	ACRE	DELINEATE	39.717901	-121.78001	
ED493	CALIFORNIA	POW		Area	0.026331	ACRE	DELINEATE	39.723279	-121.778555	
ED494	CALIFORNIA	POW		Area	0.27642	ACRE	DELINEATE	39.721328	-121.779799	
EP503	CALIFORNIA	POW		Area	0.003203	ACRE	DELINEATE	39.723291	-121.787727	
EP505	CALIFORNIA	POW		Area	0.004834	ACRE	DELINEATE	39.72325	-121.788985	
EP506	CALIFORNIA	POW		Area	0.004322	ACRE	DELINEATE	39.723144	-121.789855	
EP507	CALIFORNIA	POW		Area	0.003604	ACRE	DELINEATE	39.723052	-121.787689	
EP508	CALIFORNIA	POW		Area	0.004401	ACRE	DELINEATE	39.723034	-121.790727	
EP510	CALIFORNIA	POW		Area	0.002905	ACRE	DELINEATE	39.722506	-121.787701	
EP512	CALIFORNIA	POW		Area	0.004179	ACRE	DELINEATE	39.722392	-121.788983	
EP513	CALIFORNIA	POW		Area	0.004784	ACRE	DELINEATE	39.722015	-121.789843	
EP514	CALIFORNIA	POW		Area	0.005775	ACRE	DELINEATE	39.721883	-121.789	
EP515	CALIFORNIA	POW		Area	0.009485	ACRE	DELINEATE	39.721518	-121.790707	
EP517	CALIFORNIA	POW		Area	0.003288	ACRE	DELINEATE	39.721018	-121.790708	
EP518	CALIFORNIA	POW		Area	0.007614	ACRE	DELINEATE	39.720876	-121.788926	
EP519	CALIFORNIA	POW		Area	0.008275	ACRE	DELINEATE	39.720874	-121.789861	
ID495	CALIFORNIA	R4SB		Area	0.48233	ACRE	DELINEATE	39.715907	-121.780055	
PD496	CALIFORNIA	R2UB		Area	0.011853	ACRE	DELINEATE	39.722829	-121.779072	
PD497	CALIFORNIA	R2UB		Area	5.106408	ACRE	DELINEATE	39.721305	-121.780907	
RSW10	CALIFORNIA	PEM2		Area	0.01352	ACRE	DELINEATE	39.724779	-121.78873	
RSW477	CALIFORNIA	PEM2		Area	0.128426	ACRE	DELINEATE	39.72545	-121.783398	
RSW478	CALIFORNIA	PEM2		Area	0.015359	ACRE	DELINEATE	39.725302	-121.789678	

Waters_Name	State	Cowardin_Code	HGM_Code	Meas_Type	Amount	Units	Waters_Type	Latitude	Longitude	Local_Waterway
RSW480	CALIFORNIA	PEM2		Area	0.004846	ACRE	DELINEATE	39.724856	-121.782755	
RSW481	CALIFORNIA	PEM2		Area	0.225561	ACRE	DELINEATE	39.72429	-121.783895	
RSW483	CALIFORNIA	PEM2		Area	0.166754	ACRE	DELINEATE	39.722569	-121.786293	
RSW484	CALIFORNIA	PEM2		Area	0.062235	ACRE	DELINEATE	39.721391	-121.788061	
RSW485	CALIFORNIA	PEM2		Area	0.075017	ACRE	DELINEATE	39.720943	-121.790686	
RSW486	CALIFORNIA	PEM2		Area	0.010561	ACRE	DELINEATE	39.717429	-121.781571	
RSW487	CALIFORNIA	PEM2		Area	0.186123	ACRE	DELINEATE	39.717853	-121.784088	
RSW488	CALIFORNIA	PEM2		Area	0.042543	ACRE	DELINEATE	39.716684	-121.780605	
RSW489	CALIFORNIA	PEM2		Area	0.009502	ACRE	DELINEATE	39.716529	-121.780075	
RSW490	CALIFORNIA	PEM2		Area	0.130237	ACRE	DELINEATE	39.715545	-121.784014	
RSW491	CALIFORNIA	PEM2		Area	0.805617	ACRE	DELINEATE	39.714418	-121.781835	
RSW492	CALIFORNIA	PEM2		Area	0.73447	ACRE	DELINEATE	39.713693	-121.780447	
RSW601	CALIFORNIA	PEM2		Area	0.001387	ACRE	DELINEATE	39.724471	-121.786996	
RSW604	CALIFORNIA	PEM2		Area	0.009372	ACRE	DELINEATE	39.72346	-121.786961	
RSW605	CALIFORNIA	PEM2		Area	0.087148	ACRE	DELINEATE	39.716285	-121.786196	
RSW606	CALIFORNIA	PEM2		Area	0.016984	ACRE	DELINEATE	39.715185	-121.787074	
RSW630	CALIFORNIA	PEM2		Area	0.058961	ACRE	DELINEATE	39.722529	-121.791248	
RSW631	CALIFORNIA	PEM2		Area	0.016208	ACRE	DELINEATE	39.7229	-121.790705	
RSW632	CALIFORNIA	PEM2		Area	0.072554	ACRE	DELINEATE	39.722307	-121.790336	
RSW633	CALIFORNIA	PEM2		Area	0.010802	ACRE	DELINEATE	39.723283	-121.790254	
RSW634	CALIFORNIA	PEM2		Area	0.026293	ACRE	DELINEATE	39.721482	-121.790247	
RSW635	CALIFORNIA	PEM2		Area	0.034428	ACRE	DELINEATE	39.721888	-121.789845	
RSW636	CALIFORNIA	PEM2		Area	0.047238	ACRE	DELINEATE	39.722829	-121.78976	
RSW637	CALIFORNIA	PEM2		Area	0.001543	ACRE	DELINEATE	39.723508	-121.789744	
RSW638	CALIFORNIA	PEM2		Area	0.023249	ACRE	DELINEATE	39.721194	-121.789619	
RSW639	CALIFORNIA	PEM2		Area	0.001902	ACRE	DELINEATE	39.723351	-121.789618	
RSW640	CALIFORNIA	PEM2		Area	0.030605	ACRE	DELINEATE	39.723754	-121.789586	
RSW641	CALIFORNIA	PEM2		Area	0.003552	ACRE	DELINEATE	39.723385	-121.789467	
RSW642	CALIFORNIA	PEM2		Area	0.003251	ACRE	DELINEATE	39.721789	-121.789434	
RSW643	CALIFORNIA	PEM2		Area	0.027199	ACRE	DELINEATE	39.72254	-121.789235	
RSW644	CALIFORNIA	PEM2		Area	0.026613	ACRE	DELINEATE	39.721417	-121.789121	
RSW645	CALIFORNIA	PEM2		Area	0.01496	ACRE	DELINEATE	39.723614	-121.789091	
RSW646	CALIFORNIA	PEM2		Area	0.076075	ACRE	DELINEATE	39.7242	-121.789007	
RSW647	CALIFORNIA	PEM2		Area	0.019675	ACRE	DELINEATE	39.721923	-121.788979	
RSW648	CALIFORNIA	PEM2		Area	0.040531	ACRE	DELINEATE	39.7254	-121.788978	
RSW649	CALIFORNIA	PEM2		Area	0.002751	ACRE	DELINEATE	39.724511	-121.788895	
RSW650	CALIFORNIA	PEM2		Area	0.016929	ACRE	DELINEATE	39.722784	-121.788794	
RSW651	CALIFORNIA	PEM2		Area	0.008052	ACRE	DELINEATE	39.724452	-121.788751	
RSW652	CALIFORNIA	PEM2		Area	0.018451	ACRE	DELINEATE	39.721627	-121.788735	
RSW653	CALIFORNIA	PEM2		Area	0.030864	ACRE	DELINEATE	39.721747	-121.788296	
RSW654	CALIFORNIA	PEM2		Area	0.02634	ACRE	DELINEATE	39.725507	-121.788207	
RSW655	CALIFORNIA	PEM2		Area	0.004843	ACRE	DELINEATE	39.72593	-121.787982	
RSW656	CALIFORNIA	PEM2		Area	0.010266	ACRE	DELINEATE	39.721853	-121.787977	
RSW657	CALIFORNIA	PEM2		Area	0.005696	ACRE	DELINEATE	39.725796	-121.787974	
RSW658	CALIFORNIA	PEM2		Area	0.014331	ACRE	DELINEATE	39.717709	-121.786714	
RSW659	CALIFORNIA	PEM2		Area	0.009047	ACRE	DELINEATE	39.719462	-121.786709	
RSW660	CALIFORNIA	PEM2		Area	0.005264	ACRE	DELINEATE	39.724969	-121.786705	
RSW661	CALIFORNIA	PEM2		Area	0.001323	ACRE	DELINEATE	39.716734	-121.786688	
RSW662	CALIFORNIA	PEM2		Area	0.0017	ACRE	DELINEATE	39.71647	-121.786675	
RSW663	CALIFORNIA	PEM2		Area	0.001447	ACRE	DELINEATE	39.716884	-121.786637	
RSW664	CALIFORNIA	PEM2		Area	0.000726	ACRE	DELINEATE	39.716254	-121.786634	
RSW665	CALIFORNIA	PEM2		Area	0.00509	ACRE	DELINEATE	39.718645	-121.786575	
RSW666	CALIFORNIA	PEM2		Area	0.003219	ACRE	DELINEATE	39.717239	-121.786512	
RSW667	CALIFORNIA	PEM2		Area	0.003739	ACRE	DELINEATE	39.719785	-121.786489	
RSW668	CALIFORNIA	PEM2		Area	0.039661	ACRE	DELINEATE	39.718316	-121.786306	
RSW669	CALIFORNIA	PEM2		Area	0.003717	ACRE	DELINEATE	39.718869	-121.786304	
RSW670	CALIFORNIA	PEM2		Area	0.014647	ACRE	DELINEATE	39.720598	-121.786252	
RSW671	CALIFORNIA	PEM2		Area	0.012495	ACRE	DELINEATE	39.725319	-121.786221	
RSW672	CALIFORNIA	PEM2		Area	0.004442	ACRE	DELINEATE	39.719076	-121.786118	
RSW673	CALIFORNIA	PEM2		Area	0.009971	ACRE	DELINEATE	39.719472	-121.78596	
RSW674	CALIFORNIA	PEM2		Area	0.005889	ACRE	DELINEATE	39.722165	-121.785847	
RSW675	CALIFORNIA	PEM2		Area	0.019083	ACRE	DELINEATE	39.721333	-121.785818	
RSW676	CALIFORNIA	PEM2		Area	0.003601	ACRE	DELINEATE	39.725597	-121.785812	
RSW677	CALIFORNIA	PEM2		Area	0.035747	ACRE	DELINEATE	39.723678	-121.785747	
RSW678	CALIFORNIA	PEM2		Area	0.005227	ACRE	DELINEATE	39.722051	-121.78571	
RSW679	CALIFORNIA	PEM2		Area	0.017868	ACRE	DELINEATE	39.715678	-121.785532	
RSW680	CALIFORNIA	PEM2		Area	0.004444	ACRE	DELINEATE	39.717421	-121.785462	
RSW681	CALIFORNIA	PEM2		Area	0.069513	ACRE	DELINEATE	39.718373	-121.785399	
RSW682	CALIFORNIA	PEM2		Area	0.017429	ACRE	DELINEATE	39.715206	-121.785345	
RSW683	CALIFORNIA	PEM2		Area	0.005976	ACRE	DELINEATE	39.714838	-121.785226	
RSW684	CALIFORNIA	PEM2		Area	0.048484	ACRE	DELINEATE	39.724738	-121.785082	
RSW685	CALIFORNIA	PEM2		Area	0.014621	ACRE	DELINEATE	39.72098	-121.785049	
RSW686	CALIFORNIA	PEM2		Area	0.091937	ACRE	DELINEATE	39.72203	-121.785045	

Waters_Name	State	Cowardin_Code	HGM_Code	Meas_Type	Amount	Units	Waters_Type	Latitude	Longitude	Local_Waterway
RSW687	CALIFORNIA	PEM2		Area	0.230232	ACRE	DELINEATE	39.72088	-121.784858	
RSW688	CALIFORNIA	PEM2		Area	0.007188	ACRE	DELINEATE	39.719981	-121.784853	
RSW689	CALIFORNIA	PEM2		Area	0.010624	ACRE	DELINEATE	39.715141	-121.784788	
RSW690	CALIFORNIA	PEM2		Area	0.002246	ACRE	DELINEATE	39.714916	-121.784735	
RSW691	CALIFORNIA	PEM2		Area	0.001609	ACRE	DELINEATE	39.714789	-121.784702	
RSW692	CALIFORNIA	PEM2		Area	0.014467	ACRE	DELINEATE	39.725727	-121.784643	
RSW693	CALIFORNIA	PEM2		Area	0.002979	ACRE	DELINEATE	39.72023	-121.784598	
RSW694	CALIFORNIA	PEM2		Area	0.0562	ACRE	DELINEATE	39.723079	-121.784482	
RSW695	CALIFORNIA	PEM2		Area	0.006312	ACRE	DELINEATE	39.720424	-121.784446	
RSW696	CALIFORNIA	PEM2		Area	0.00261	ACRE	DELINEATE	39.726035	-121.784367	
RSW697	CALIFORNIA	PEM2		Area	0.016862	ACRE	DELINEATE	39.71713	-121.784228	
RSW698	CALIFORNIA	PEM2		Area	0.01509	ACRE	DELINEATE	39.721053	-121.784099	
RSW699	CALIFORNIA	PEM2		Area	0.005361	ACRE	DELINEATE	39.720402	-121.783989	
RSW700	CALIFORNIA	PEM2		Area	0.164604	ACRE	DELINEATE	39.725565	-121.78397	
RSW701	CALIFORNIA	PEM2		Area	0.017829	ACRE	DELINEATE	39.720047	-121.7839	
RSW702	CALIFORNIA	PEM2		Area	0.004125	ACRE	DELINEATE	39.72156	-121.783776	
RSW703	CALIFORNIA	PEM2		Area	0.004221	ACRE	DELINEATE	39.72183	-121.783744	
RSW704	CALIFORNIA	PEM2		Area	0.037023	ACRE	DELINEATE	39.722566	-121.783512	
RSW705	CALIFORNIA	PEM2		Area	0.009684	ACRE	DELINEATE	39.719897	-121.783454	
RSW706	CALIFORNIA	PEM2		Area	0.002483	ACRE	DELINEATE	39.719502	-121.783232	
RSW707	CALIFORNIA	PEM2		Area	0.039709	ACRE	DELINEATE	39.725223	-121.782448	
RSW708	CALIFORNIA	PEM2		Area	0.00643	ACRE	DELINEATE	39.72158	-121.781543	
RSW709	CALIFORNIA	PEM2		Area	0.007416	ACRE	DELINEATE	39.722086	-121.781485	
RSW710	CALIFORNIA	PEM2		Area	0.004741	ACRE	DELINEATE	39.721266	-121.7813	
RSW711	CALIFORNIA	PEM2		Area	0.005246	ACRE	DELINEATE	39.721154	-121.781198	
RSW712	CALIFORNIA	PEM2		Area	0.040743	ACRE	DELINEATE	39.720641	-121.781128	
RSW713	CALIFORNIA	PEM2		Area	0.020922	ACRE	DELINEATE	39.716331	-121.780942	
RSW714	CALIFORNIA	PEM2		Area	0.008774	ACRE	DELINEATE	39.719987	-121.780556	
RSW715	CALIFORNIA	PEM2		Area	0.00874	ACRE	DELINEATE	39.716937	-121.780485	
RSW716	CALIFORNIA	PEM2		Area	0.002807	ACRE	DELINEATE	39.71988	-121.780325	
RSW717	CALIFORNIA	PEM2		Area	0.059986	ACRE	DELINEATE	39.715892	-121.780226	
RSW718	CALIFORNIA	PEM2		Area	0.033031	ACRE	DELINEATE	39.71981	-121.779849	
RSW719	CALIFORNIA	PEM2		Area	0.004588	ACRE	DELINEATE	39.716382	-121.77957	
RSW720	CALIFORNIA	PEM2		Area	0.02636	ACRE	DELINEATE	39.71599	-121.779403	
RSW721	CALIFORNIA	PEM2		Area	0.001112	ACRE	DELINEATE	39.719851	-121.779297	
VP33	CALIFORNIA	PEM2		Area	0.038546	ACRE	DELINEATE	39.723908	-121.788951	
VP39	CALIFORNIA	PEM2		Area	0.026509	ACRE	DELINEATE	39.723668	-121.786698	
VP41	CALIFORNIA	PEM2		Area	0.003534	ACRE	DELINEATE	39.723567	-121.786881	
VP198	CALIFORNIA	PEM2		Area	0.019632	ACRE	DELINEATE	39.726055	-121.791957	
VP199	CALIFORNIA	PEM2		Area	0.053305	ACRE	DELINEATE	39.726019	-121.785423	
VP200	CALIFORNIA	PEM2		Area	0.00138	ACRE	DELINEATE	39.725963	-121.784443	
VP201	CALIFORNIA	PEM2		Area	0.006024	ACRE	DELINEATE	39.725922	-121.783907	
VP202	CALIFORNIA	PEM2		Area	0.129808	ACRE	DELINEATE	39.725888	-121.791425	
VP203	CALIFORNIA	PEM2		Area	0.008277	ACRE	DELINEATE	39.725672	-121.784014	
VP204	CALIFORNIA	PEM2		Area	0.008713	ACRE	DELINEATE	39.72556	-121.785286	
VP205	CALIFORNIA	PEM2		Area	0.004498	ACRE	DELINEATE	39.725512	-121.785446	
VP206	CALIFORNIA	PEM2		Area	0.022981	ACRE	DELINEATE	39.725328	-121.789545	
VP207	CALIFORNIA	PEM2		Area	0.000535	ACRE	DELINEATE	39.725303	-121.785514	
VP208	CALIFORNIA	PEM2		Area	0.028576	ACRE	DELINEATE	39.725128	-121.782275	
VP209	CALIFORNIA	PEM2		Area	0.068764	ACRE	DELINEATE	39.724963	-121.789351	
VP210	CALIFORNIA	PEM2		Area	0.010397	ACRE	DELINEATE	39.724942	-121.785842	
VP211	CALIFORNIA	PEM2		Area	0.010756	ACRE	DELINEATE	39.724887	-121.782579	
VP212	CALIFORNIA	PEM2		Area	0.016245	ACRE	DELINEATE	39.724823	-121.783811	
VP213	CALIFORNIA	PEM2		Area	0.002481	ACRE	DELINEATE	39.724573	-121.782099	
VP215	CALIFORNIA	PEM2		Area	0.001982	ACRE	DELINEATE	39.724558	-121.785528	
VP216	CALIFORNIA	PEM2		Area	0.021757	ACRE	DELINEATE	39.72455	-121.787049	
VP217	CALIFORNIA	PEM2		Area	0.021803	ACRE	DELINEATE	39.724437	-121.783168	
VP218	CALIFORNIA	PEM2		Area	0.000993	ACRE	DELINEATE	39.724427	-121.782502	
VP219	CALIFORNIA	PEM2		Area	0.001587	ACRE	DELINEATE	39.724421	-121.781956	
VP220	CALIFORNIA	PEM2		Area	0.003454	ACRE	DELINEATE	39.724401	-121.785563	
VP221	CALIFORNIA	PEM2		Area	0.002295	ACRE	DELINEATE	39.724213	-121.781431	
VP222	CALIFORNIA	PEM2		Area	0.006689	ACRE	DELINEATE	39.724173	-121.78265	
VP223	CALIFORNIA	PEM2		Area	0.002054	ACRE	DELINEATE	39.724066	-121.781376	
VP224	CALIFORNIA	PEM2		Area	0.148657	ACRE	DELINEATE	39.723914	-121.789758	
VP225	CALIFORNIA	PEM2		Area	0.002497	ACRE	DELINEATE	39.723936	-121.782258	
VP226	CALIFORNIA	PEM2		Area	0.000308	ACRE	DELINEATE	39.723915	-121.78211	
VP227	CALIFORNIA	PEM2		Area	0.002463	ACRE	DELINEATE	39.723884	-121.782443	
VP228	CALIFORNIA	PEM2		Area	0.010764	ACRE	DELINEATE	39.723845	-121.782546	
VP230	CALIFORNIA	PEM2		Area	0.003033	ACRE	DELINEATE	39.72365	-121.782608	
VP231	CALIFORNIA	PEM2		Area	0.00127	ACRE	DELINEATE	39.72362	-121.782538	
VP232	CALIFORNIA	PEM2		Area	0.000414	ACRE	DELINEATE	39.723608	-121.782276	
VP233	CALIFORNIA	PEM2		Area	0.000976	ACRE	DELINEATE	39.723524	-121.78246	
VP234	CALIFORNIA	PEM2		Area	0.007972	ACRE	DELINEATE	39.723469	-121.790755	

Waters_Name	State	Cowardin_Code	HGM_Code	Meas_Type	Amount	Units	Waters_Type	Latitude	Longitude	Local_Waterway
VP235	CALIFORNIA	PEM2		Area	0.010631	ACRE	DELINEATE	39.72337	-121.78492	
VP236	CALIFORNIA	PEM2		Area	0.029487	ACRE	DELINEATE	39.723348	-121.787882	
VP237	CALIFORNIA	PEM2		Area	0.00154	ACRE	DELINEATE	39.723257	-121.782454	
VP238	CALIFORNIA	PEM2		Area	0.016024	ACRE	DELINEATE	39.723227	-121.779139	
VP239	CALIFORNIA	PEM2		Area	0.002444	ACRE	DELINEATE	39.723186	-121.782179	
VP240	CALIFORNIA	PEM2		Area	0.003296	ACRE	DELINEATE	39.723177	-121.787791	
VP242	CALIFORNIA	PEM2		Area	0.001923	ACRE	DELINEATE	39.723062	-121.778612	
VP243	CALIFORNIA	PEM2		Area	0.004811	ACRE	DELINEATE	39.722957	-121.778312	
VP244	CALIFORNIA	PEM2		Area	0.000795	ACRE	DELINEATE	39.722952	-121.778227	
VP245	CALIFORNIA	PEM2		Area	0.002169	ACRE	DELINEATE	39.722947	-121.778167	
VP246	CALIFORNIA	PEM2		Area	0.002304	ACRE	DELINEATE	39.722869	-121.778514	
VP247	CALIFORNIA	PEM2		Area	0.002284	ACRE	DELINEATE	39.722845	-121.778038	
VP248	CALIFORNIA	PEM2		Area	0.027707	ACRE	DELINEATE	39.722795	-121.78826	
VP249	CALIFORNIA	PEM2		Area	0.000986	ACRE	DELINEATE	39.722761	-121.778302	
VP250	CALIFORNIA	PEM2		Area	0.018595	ACRE	DELINEATE	39.722773	-121.78702	
VP251	CALIFORNIA	PEM2		Area	0.002204	ACRE	DELINEATE	39.722735	-121.782282	
VP252	CALIFORNIA	PEM2		Area	0.002084	ACRE	DELINEATE	39.722714	-121.779106	
VP253	CALIFORNIA	PEM2		Area	0.001286	ACRE	DELINEATE	39.7227	-121.788448	
VP254	CALIFORNIA	PEM2		Area	0.001667	ACRE	DELINEATE	39.722676	-121.781859	
VP255	CALIFORNIA	PEM2		Area	0.001557	ACRE	DELINEATE	39.722646	-121.782829	
VP256	CALIFORNIA	PEM2		Area	0.028747	ACRE	DELINEATE	39.722642	-121.790928	
VP257	CALIFORNIA	PEM2		Area	0.004055	ACRE	DELINEATE	39.722609	-121.780901	
VP258	CALIFORNIA	PEM2		Area	0.016945	ACRE	DELINEATE	39.72253	-121.7806	
VP259	CALIFORNIA	PEM2		Area	0.004426	ACRE	DELINEATE	39.722475	-121.780825	
VP260	CALIFORNIA	PEM2		Area	0.017417	ACRE	DELINEATE	39.722481	-121.787044	
VP261	CALIFORNIA	PEM2		Area	0.010741	ACRE	DELINEATE	39.722451	-121.785887	
VP262	CALIFORNIA	PEM2		Area	0.034135	ACRE	DELINEATE	39.722417	-121.787208	
VP263	CALIFORNIA	PEM2		Area	0.009983	ACRE	DELINEATE	39.722403	-121.78932	
VP264	CALIFORNIA	PEM2		Area	0.020433	ACRE	DELINEATE	39.722386	-121.791449	
VP265	CALIFORNIA	PEM2		Area	0.004797	ACRE	DELINEATE	39.722365	-121.782569	
VP266	CALIFORNIA	PEM2		Area	0.011168	ACRE	DELINEATE	39.72231	-121.785788	
VP267	CALIFORNIA	PEM2		Area	0.002948	ACRE	DELINEATE	39.722276	-121.780331	
VP268	CALIFORNIA	PEM2		Area	0.052639	ACRE	DELINEATE	39.722215	-121.791287	
VP269	CALIFORNIA	PEM2		Area	0.001727	ACRE	DELINEATE	39.722184	-121.781934	
VP270	CALIFORNIA	PEM2		Area	0.018263	ACRE	DELINEATE	39.722183	-121.785558	
VP271	CALIFORNIA	PEM2		Area	0.016273	ACRE	DELINEATE	39.722143	-121.786428	
VP272	CALIFORNIA	PEM2		Area	0.003923	ACRE	DELINEATE	39.722086	-121.783219	
VP273	CALIFORNIA	PEM2		Area	0.058238	ACRE	DELINEATE	39.721873	-121.785873	
VP274	CALIFORNIA	PEM2		Area	0.003394	ACRE	DELINEATE	39.721815	-121.782018	
VP275	CALIFORNIA	PEM2		Area	0.0012	ACRE	DELINEATE	39.721808	-121.782862	
VP276	CALIFORNIA	PEM2		Area	0.001334	ACRE	DELINEATE	39.721803	-121.781514	
VP277	CALIFORNIA	PEM2		Area	0.00116	ACRE	DELINEATE	39.721763	-121.778281	
VP278	CALIFORNIA	PEM2		Area	0.001051	ACRE	DELINEATE	39.721768	-121.782937	
VP279	CALIFORNIA	PEM2		Area	0.004071	ACRE	DELINEATE	39.721749	-121.783277	
VP280	CALIFORNIA	PEM2		Area	0.064786	ACRE	DELINEATE	39.721704	-121.786557	
VP281	CALIFORNIA	PEM2		Area	0.001248	ACRE	DELINEATE	39.721668	-121.782326	
VP282	CALIFORNIA	PEM2		Area	0.003709	ACRE	DELINEATE	39.721648	-121.782549	
VP283	CALIFORNIA	PEM2		Area	0.003091	ACRE	DELINEATE	39.721599	-121.78325	
VP284	CALIFORNIA	PEM2		Area	0.034909	ACRE	DELINEATE	39.721573	-121.782723	
VP285	CALIFORNIA	PEM2		Area	0.015329	ACRE	DELINEATE	39.721566	-121.786893	
VP286	CALIFORNIA	PEM2		Area	0.022818	ACRE	DELINEATE	39.721472	-121.78702	
VP287	CALIFORNIA	PEM2		Area	0.010599	ACRE	DELINEATE	39.721458	-121.781881	
VP288	CALIFORNIA	PEM2		Area	0.088512	ACRE	DELINEATE	39.721351	-121.783828	
VP289	CALIFORNIA	PEM2		Area	0.023685	ACRE	DELINEATE	39.721312	-121.79145	
VP290	CALIFORNIA	PEM2		Area	0.003189	ACRE	DELINEATE	39.721336	-121.782328	
VP291	CALIFORNIA	PEM2		Area	0.012419	ACRE	DELINEATE	39.721319	-121.788635	
VP292	CALIFORNIA	PEM2		Area	0.001625	ACRE	DELINEATE	39.721272	-121.781702	
VP293	CALIFORNIA	PEM2		Area	0.001075	ACRE	DELINEATE	39.72119	-121.778209	
VP294	CALIFORNIA	PEM2		Area	0.009524	ACRE	DELINEATE	39.721195	-121.786684	
VP295	CALIFORNIA	PEM2		Area	0.01175	ACRE	DELINEATE	39.721172	-121.782331	
VP296	CALIFORNIA	PEM2		Area	0.001697	ACRE	DELINEATE	39.721162	-121.778031	
VP297	CALIFORNIA	PEM2		Area	0.00676	ACRE	DELINEATE	39.721152	-121.786802	
VP298	CALIFORNIA	PEM2		Area	0.004978	ACRE	DELINEATE	39.72113	-121.789594	
VP299	CALIFORNIA	PEM2		Area	0.001266	ACRE	DELINEATE	39.721099	-121.778493	
VP300	CALIFORNIA	PEM2		Area	0.021274	ACRE	DELINEATE	39.721113	-121.786499	
VP301	CALIFORNIA	PEM2		Area	0.002383	ACRE	DELINEATE	39.721026	-121.77885	
VP302	CALIFORNIA	PEM2		Area	0.049528	ACRE	DELINEATE	39.72093	-121.785961	
VP303	CALIFORNIA	PEM2		Area	0.003549	ACRE	DELINEATE	39.720837	-121.782862	
VP304	CALIFORNIA	PEM2		Area	0.0144	ACRE	DELINEATE	39.720828	-121.787948	
VP305	CALIFORNIA	PEM2		Area	0.000696	ACRE	DELINEATE	39.720807	-121.791526	
VP306	CALIFORNIA	PEM2		Area	0.024188	ACRE	DELINEATE	39.720711	-121.785497	
VP307	CALIFORNIA	PEM2		Area	0.001162	ACRE	DELINEATE	39.720693	-121.779355	
VP308	CALIFORNIA	PEM2		Area	0.098565	ACRE	DELINEATE	39.720611	-121.783822	

Waters_Name	State	Cowardin_Code	HGM_Code	Meas_Type	Amount	Units	Waters_Type	Latitude	Longitude	Local_Waterway
VP309	CALIFORNIA	PEM2		Area	0.0243	ACRE	DELINEATE	39.720562	-121.785805	
VP310	CALIFORNIA	PEM2		Area	0.00137	ACRE	DELINEATE	39.720464	-121.77919	
VP311	CALIFORNIA	PEM2		Area	0.004699	ACRE	DELINEATE	39.720425	-121.783027	
VP312	CALIFORNIA	PEM2		Area	0.000759	ACRE	DELINEATE	39.720324	-121.784003	
VP313	CALIFORNIA	PEM2		Area	0.121043	ACRE	DELINEATE	39.720251	-121.786933	
VP314	CALIFORNIA	PEM2		Area	0.001971	ACRE	DELINEATE	39.720203	-121.780264	
VP315	CALIFORNIA	PEM2		Area	0.055749	ACRE	DELINEATE	39.720195	-121.785915	
VP316	CALIFORNIA	PEM2		Area	0.001584	ACRE	DELINEATE	39.719931	-121.780412	
VP317	CALIFORNIA	PEM2		Area	0.003011	ACRE	DELINEATE	39.719889	-121.778096	
VP318	CALIFORNIA	PEM2		Area	0.006274	ACRE	DELINEATE	39.71984	-121.779387	
VP319	CALIFORNIA	PEM2		Area	0.001888	ACRE	DELINEATE	39.719831	-121.780235	
VP320	CALIFORNIA	PEM2		Area	0.002438	ACRE	DELINEATE	39.71982	-121.778556	
VP321	CALIFORNIA	PEM2		Area	0.001109	ACRE	DELINEATE	39.719813	-121.780438	
VP322	CALIFORNIA	PEM2		Area	0.004722	ACRE	DELINEATE	39.719802	-121.778661	
VP323	CALIFORNIA	PEM2		Area	0.00115	ACRE	DELINEATE	39.719778	-121.780078	
VP324	CALIFORNIA	PEM2		Area	0.040166	ACRE	DELINEATE	39.719788	-121.7859	
VP325	CALIFORNIA	PEM2		Area	0.003269	ACRE	DELINEATE	39.719769	-121.778824	
VP326	CALIFORNIA	PEM2		Area	0.001348	ACRE	DELINEATE	39.719748	-121.779918	
VP327	CALIFORNIA	PEM2		Area	0.001127	ACRE	DELINEATE	39.719712	-121.778371	
VP328	CALIFORNIA	PEM2		Area	0.013667	ACRE	DELINEATE	39.719686	-121.783756	
VP329	CALIFORNIA	PEM2		Area	0.00389	ACRE	DELINEATE	39.719685	-121.786533	
VP330	CALIFORNIA	PEM2		Area	0.004992	ACRE	DELINEATE	39.719545	-121.779815	
VP331	CALIFORNIA	PEM2		Area	0.004052	ACRE	DELINEATE	39.719463	-121.779758	
VP332	CALIFORNIA	PEM2		Area	0.001343	ACRE	DELINEATE	39.719426	-121.779169	
VP333	CALIFORNIA	PEM2		Area	0.136394	ACRE	DELINEATE	39.719309	-121.783265	
VP334	CALIFORNIA	PEM2		Area	0.002201	ACRE	DELINEATE	39.719225	-121.779832	
VP335	CALIFORNIA	PEM2		Area	0.012379	ACRE	DELINEATE	39.71922	-121.786024	
VP336	CALIFORNIA	PEM2		Area	0.027805	ACRE	DELINEATE	39.7192	-121.780035	
VP337	CALIFORNIA	PEM2		Area	0.101516	ACRE	DELINEATE	39.719181	-121.782607	
VP338	CALIFORNIA	PEM2		Area	0.044921	ACRE	DELINEATE	39.719171	-121.784263	
VP339	CALIFORNIA	PEM2		Area	0.006799	ACRE	DELINEATE	39.719152	-121.77961	
VP340	CALIFORNIA	PEM2		Area	0.003138	ACRE	DELINEATE	39.719111	-121.779334	
VP341	CALIFORNIA	PEM2		Area	0.001236	ACRE	DELINEATE	39.719084	-121.77982	
VP342	CALIFORNIA	PEM2		Area	0.053002	ACRE	DELINEATE	39.719022	-121.78506	
VP343	CALIFORNIA	PEM2		Area	0.00205	ACRE	DELINEATE	39.718963	-121.77911	
VP344	CALIFORNIA	PEM2		Area	0.000969	ACRE	DELINEATE	39.71896	-121.779663	
VP345	CALIFORNIA	PEM2		Area	0.00564	ACRE	DELINEATE	39.718842	-121.778437	
VP346	CALIFORNIA	PEM2		Area	0.002579	ACRE	DELINEATE	39.71884	-121.779369	
VP347	CALIFORNIA	PEM2		Area	0.002167	ACRE	DELINEATE	39.718835	-121.778876	
VP348	CALIFORNIA	PEM2		Area	0.001396	ACRE	DELINEATE	39.718836	-121.779532	
VP349	CALIFORNIA	PEM2		Area	0.000963	ACRE	DELINEATE	39.718821	-121.779161	
VP350	CALIFORNIA	PEM2		Area	0.001266	ACRE	DELINEATE	39.718746	-121.77943	
VP351	CALIFORNIA	PEM2		Area	0.002085	ACRE	DELINEATE	39.718733	-121.778944	
VP352	CALIFORNIA	PEM2		Area	0.010428	ACRE	DELINEATE	39.718727	-121.779659	
VP353	CALIFORNIA	PEM2		Area	0.001301	ACRE	DELINEATE	39.718659	-121.779346	
VP354	CALIFORNIA	PEM2		Area	0.000703	ACRE	DELINEATE	39.718601	-121.779821	
VP355	CALIFORNIA	PEM2		Area	0.134596	ACRE	DELINEATE	39.718598	-121.784821	
VP356	CALIFORNIA	PEM2		Area	0.0019	ACRE	DELINEATE	39.718484	-121.778848	
VP357	CALIFORNIA	PEM2		Area	0.000972	ACRE	DELINEATE	39.718482	-121.779078	
VP358	CALIFORNIA	PEM2		Area	0.003625	ACRE	DELINEATE	39.718424	-121.782677	
VP359	CALIFORNIA	PEM2		Area	0.001111	ACRE	DELINEATE	39.71839	-121.779924	
VP360	CALIFORNIA	PEM2		Area	0.00196	ACRE	DELINEATE	39.718314	-121.780024	
VP361	CALIFORNIA	PEM2		Area	0.001946	ACRE	DELINEATE	39.718298	-121.782725	
VP362	CALIFORNIA	PEM2		Area	0.017143	ACRE	DELINEATE	39.718298	-121.782941	
VP363	CALIFORNIA	PEM2		Area	0.00106	ACRE	DELINEATE	39.71826	-121.77915	
VP364	CALIFORNIA	PEM2		Area	0.002032	ACRE	DELINEATE	39.71826	-121.779748	
VP365	CALIFORNIA	PEM2		Area	0.001038	ACRE	DELINEATE	39.718225	-121.779824	
VP366	CALIFORNIA	PEM2		Area	0.002086	ACRE	DELINEATE	39.718213	-121.779891	
VP367	CALIFORNIA	PEM2		Area	0.005102	ACRE	DELINEATE	39.718213	-121.780136	
VP368	CALIFORNIA	PEM2		Area	0.003337	ACRE	DELINEATE	39.718203	-121.779038	
VP369	CALIFORNIA	PEM2		Area	0.001795	ACRE	DELINEATE	39.718201	-121.779115	
VP370	CALIFORNIA	PEM2		Area	0.002849	ACRE	DELINEATE	39.718192	-121.779794	
VP371	CALIFORNIA	PEM2		Area	0.003576	ACRE	DELINEATE	39.718166	-121.780057	
VP372	CALIFORNIA	PEM2		Area	0.011866	ACRE	DELINEATE	39.718129	-121.782997	
VP373	CALIFORNIA	PEM2		Area	0.004264	ACRE	DELINEATE	39.71812	-121.779582	
VP374	CALIFORNIA	PEM2		Area	0.006067	ACRE	DELINEATE	39.718102	-121.778893	
VP375	CALIFORNIA	PEM2		Area	0.001971	ACRE	DELINEATE	39.718066	-121.77865	
VP376	CALIFORNIA	PEM2		Area	0.001713	ACRE	DELINEATE	39.717933	-121.779162	
VP377	CALIFORNIA	PEM2		Area	0.004125	ACRE	DELINEATE	39.717925	-121.778907	
VP378	CALIFORNIA	PEM2		Area	0.003275	ACRE	DELINEATE	39.717879	-121.778842	
VP379	CALIFORNIA	PEM2		Area	0.00232	ACRE	DELINEATE	39.717723	-121.778999	
VP380	CALIFORNIA	PEM2		Area	0.009553	ACRE	DELINEATE	39.717693	-121.78281	
VP381	CALIFORNIA	PEM2		Area	0.003057	ACRE	DELINEATE	39.71757	-121.785044	

Waters_Name	State	Cowardin_Code	HGM_Code	Meas_Type	Amount	Units	Waters_Type	Latitude	Longitude	Local_Waterway
VP382	CALIFORNIA	PEM2		Area	0.012808	ACRE	DELINEATE	39.717508	-121.7834	
VP383	CALIFORNIA	PEM2		Area	0.00081	ACRE	DELINEATE	39.717426	-121.783192	
VP384	CALIFORNIA	PEM2		Area	0.002214	ACRE	DELINEATE	39.717397	-121.783227	
VP385	CALIFORNIA	PEM2		Area	0.001623	ACRE	DELINEATE	39.717346	-121.783151	
VP386	CALIFORNIA	PEM2		Area	0.006034	ACRE	DELINEATE	39.716803	-121.78451	
VP387	CALIFORNIA	PEM2		Area	0.007763	ACRE	DELINEATE	39.716585	-121.783422	
VP388	CALIFORNIA	PEM2		Area	0.003251	ACRE	DELINEATE	39.716576	-121.784388	
VP389	CALIFORNIA	PEM2		Area	0.001092	ACRE	DELINEATE	39.716457	-121.783347	
VP390	CALIFORNIA	PEM2		Area	0.012906	ACRE	DELINEATE	39.716335	-121.779887	
VP391	CALIFORNIA	PEM2		Area	0.028765	ACRE	DELINEATE	39.716287	-121.784487	
VP392	CALIFORNIA	PEM2		Area	0.003301	ACRE	DELINEATE	39.716116	-121.785082	
VP393	CALIFORNIA	PEM2		Area	0.010678	ACRE	DELINEATE	39.716095	-121.784599	
VP394	CALIFORNIA	PEM2		Area	0.024629	ACRE	DELINEATE	39.716048	-121.785223	
VP395	CALIFORNIA	PEM2		Area	0.005482	ACRE	DELINEATE	39.716035	-121.784701	
VP396	CALIFORNIA	PEM2		Area	0.007879	ACRE	DELINEATE	39.715806	-121.785154	
VP397	CALIFORNIA	PEM2		Area	0.000696	ACRE	DELINEATE	39.715655	-121.77872	
VP398	CALIFORNIA	PEM2		Area	0.008722	ACRE	DELINEATE	39.715609	-121.784248	
VP399	CALIFORNIA	PEM2		Area	0.002818	ACRE	DELINEATE	39.715601	-121.784967	
VP400	CALIFORNIA	PEM2		Area	0.001567	ACRE	DELINEATE	39.715532	-121.784618	
VP401	CALIFORNIA	PEM2		Area	0.008178	ACRE	DELINEATE	39.715453	-121.785931	
VP402	CALIFORNIA	PEM2		Area	0.004766	ACRE	DELINEATE	39.715446	-121.784666	
VP403	CALIFORNIA	PEM2		Area	0.036058	ACRE	DELINEATE	39.71544	-121.78349	
VP404	CALIFORNIA	PEM2		Area	0.00864	ACRE	DELINEATE	39.71539	-121.781469	
VP405	CALIFORNIA	PEM2		Area	0.005906	ACRE	DELINEATE	39.715376	-121.78484	
VP406	CALIFORNIA	PEM2		Area	0.008146	ACRE	DELINEATE	39.715181	-121.786036	
VP407	CALIFORNIA	PEM2		Area	0.025995	ACRE	DELINEATE	39.715153	-121.786293	
VP408	CALIFORNIA	PEM2		Area	0.010232	ACRE	DELINEATE	39.71513	-121.785873	
VP409	CALIFORNIA	PEM2		Area	0.006918	ACRE	DELINEATE	39.714958	-121.785301	
VP410	CALIFORNIA	PEM2		Area	0.031037	ACRE	DELINEATE	39.714912	-121.780956	
VP411	CALIFORNIA	PEM2		Area	0.012643	ACRE	DELINEATE	39.714917	-121.786599	
VP412	CALIFORNIA	PEM2		Area	0.008244	ACRE	DELINEATE	39.714882	-121.783646	
VP413	CALIFORNIA	PEM2		Area	0.003887	ACRE	DELINEATE	39.714857	-121.7796	
VP414	CALIFORNIA	PEM2		Area	0.041752	ACRE	DELINEATE	39.714865	-121.786034	
VP415	CALIFORNIA	PEM2		Area	0.004055	ACRE	DELINEATE	39.714844	-121.784726	
VP416	CALIFORNIA	PEM2		Area	0.009232	ACRE	DELINEATE	39.714828	-121.783244	
VP417	CALIFORNIA	PEM2		Area	0.01365	ACRE	DELINEATE	39.714736	-121.785601	
VP418	CALIFORNIA	PEM2		Area	0.048811	ACRE	DELINEATE	39.714621	-121.785039	
VP419	CALIFORNIA	PEM2		Area	0.004314	ACRE	DELINEATE	39.714613	-121.786176	
VP420	CALIFORNIA	PEM2		Area	0.00845	ACRE	DELINEATE	39.714579	-121.783445	
VP421	CALIFORNIA	PEM2		Area	0.062384	ACRE	DELINEATE	39.714581	-121.784651	
VP422	CALIFORNIA	PEM2		Area	0.012105	ACRE	DELINEATE	39.71458	-121.785905	
VP423	CALIFORNIA	PEM2		Area	0.001286	ACRE	DELINEATE	39.714553	-121.78612	
VP424	CALIFORNIA	PEM2		Area	0.031987	ACRE	DELINEATE	39.714504	-121.786852	
VP425	CALIFORNIA	PEM2		Area	0.037027	ACRE	DELINEATE	39.714476	-121.787274	
VP426	CALIFORNIA	PEM2		Area	0.000741	ACRE	DELINEATE	39.714471	-121.786648	
VP427	CALIFORNIA	PEM2		Area	0.003155	ACRE	DELINEATE	39.714462	-121.786176	
VP428	CALIFORNIA	PEM2		Area	0.021137	ACRE	DELINEATE	39.714451	-121.784155	
VP429	CALIFORNIA	PEM2		Area	0.014551	ACRE	DELINEATE	39.714449	-121.785463	
VP430	CALIFORNIA	PEM2		Area	0.035517	ACRE	DELINEATE	39.714434	-121.783673	
VP431	CALIFORNIA	PEM2		Area	0.000261	ACRE	DELINEATE	39.714413	-121.786466	
VP432	CALIFORNIA	PEM2		Area	0.000468	ACRE	DELINEATE	39.714375	-121.785586	
VP433	CALIFORNIA	PEM2		Area	0.001201	ACRE	DELINEATE	39.714371	-121.786753	
VP434	CALIFORNIA	PEM2		Area	0.002628	ACRE	DELINEATE	39.714361	-121.783491	
VP435	CALIFORNIA	PEM2		Area	0.002446	ACRE	DELINEATE	39.714345	-121.785911	
VP436	CALIFORNIA	PEM2		Area	0.000802	ACRE	DELINEATE	39.714332	-121.785452	
VP437	CALIFORNIA	PEM2		Area	0.000822	ACRE	DELINEATE	39.714318	-121.785526	
VP438	CALIFORNIA	PEM2		Area	0.000585	ACRE	DELINEATE	39.714318	-121.786138	
VP439	CALIFORNIA	PEM2		Area	0.002362	ACRE	DELINEATE	39.714288	-121.786101	
VP440	CALIFORNIA	PEM2		Area	0.000833	ACRE	DELINEATE	39.714287	-121.786055	
VP441	CALIFORNIA	PEM2		Area	0.008251	ACRE	DELINEATE	39.71426	-121.784631	
VP442	CALIFORNIA	PEM2		Area	0.001462	ACRE	DELINEATE	39.714245	-121.785744	
VP443	CALIFORNIA	PEM2		Area	0.000868	ACRE	DELINEATE	39.714245	-121.786146	
VP444	CALIFORNIA	PEM2		Area	0.010767	ACRE	DELINEATE	39.714244	-121.78632	
VP445	CALIFORNIA	PEM2		Area	0.006772	ACRE	DELINEATE	39.714242	-121.785977	
VP446	CALIFORNIA	PEM2		Area	0.000437	ACRE	DELINEATE	39.714228	-121.786122	
VP447	CALIFORNIA	PEM2		Area	0.000586	ACRE	DELINEATE	39.714213	-121.785823	
VP448	CALIFORNIA	PEM2		Area	0.042216	ACRE	DELINEATE	39.714204	-121.786809	
VP449	CALIFORNIA	PEM2		Area	0.001159	ACRE	DELINEATE	39.7142	-121.786144	
VP450	CALIFORNIA	PEM2		Area	0.003445	ACRE	DELINEATE	39.714197	-121.785547	
VP451	CALIFORNIA	PEM2		Area	0.000656	ACRE	DELINEATE	39.714172	-121.786273	
VP452	CALIFORNIA	PEM2		Area	0.003066	ACRE	DELINEATE	39.714151	-121.786029	
VP453	CALIFORNIA	PEM2		Area	0.000707	ACRE	DELINEATE	39.714097	-121.784651	
VP454	CALIFORNIA	PEM2		Area	0.005171	ACRE	DELINEATE	39.714089	-121.78494	

Waters_Name	State	Cowardin_Code	HGM_Code	Meas_Type	Amount	Units	Waters_Type	Latitude	Longitude	Local_Waterway
VP455	CALIFORNIA	PEM2		Area	0.002929	ACRE	DELINEATE	39.714082	-121.786568	
VP456	CALIFORNIA	PEM2		Area	0.025359	ACRE	DELINEATE	39.714056	-121.786694	
VP457	CALIFORNIA	PEM2		Area	0.003408	ACRE	DELINEATE	39.714045	-121.78432	
VP458	CALIFORNIA	PEM2		Area	0.002504	ACRE	DELINEATE	39.714042	-121.785602	
VP459	CALIFORNIA	PEM2		Area	0.002635	ACRE	DELINEATE	39.714027	-121.786489	
VP460	CALIFORNIA	PEM2		Area	0.013482	ACRE	DELINEATE	39.714019	-121.786361	
VP461	CALIFORNIA	PEM2		Area	0.00142	ACRE	DELINEATE	39.713991	-121.78651	
VP462	CALIFORNIA	PEM2		Area	0.006078	ACRE	DELINEATE	39.713981	-121.786067	
VP463	CALIFORNIA	PEM2		Area	0.003577	ACRE	DELINEATE	39.713926	-121.785521	
VP464	CALIFORNIA	PEM2		Area	0.020973	ACRE	DELINEATE	39.713901	-121.7865	
VP465	CALIFORNIA	PEM2		Area	0.024031	ACRE	DELINEATE	39.713892	-121.785263	
VP466	CALIFORNIA	PEM2		Area	0.03774	ACRE	DELINEATE	39.713858	-121.786342	
VP467	CALIFORNIA	PEM2		Area	0.013177	ACRE	DELINEATE	39.71385	-121.785992	
VP468	CALIFORNIA	PEM2		Area	0.001958	ACRE	DELINEATE	39.713777	-121.785592	
VP469	CALIFORNIA	PEM2		Area	0.034528	ACRE	DELINEATE	39.71372	-121.785902	
VP470	CALIFORNIA	PEM2		Area	0.013354	ACRE	DELINEATE	39.713694	-121.785695	
VP471	CALIFORNIA	PEM2		Area	0.00559	ACRE	DELINEATE	39.713669	-121.78281	
VP472	CALIFORNIA	PEM2		Area	0.016058	ACRE	DELINEATE	39.713672	-121.785548	
VP473	CALIFORNIA	PEM2		Area	0.001238	ACRE	DELINEATE	39.713654	-121.782745	
VP474	CALIFORNIA	PEM2		Area	0.001303	ACRE	DELINEATE	39.713586	-121.783725	
VP475	CALIFORNIA	PEM2		Area	0.001419	ACRE	DELINEATE	39.713544	-121.783852	
VP476	CALIFORNIA	PEM2		Area	0.001369	ACRE	DELINEATE	39.713526	-121.784929	
VP509	CALIFORNIA	PEM2		Area	0.005028	ACRE	DELINEATE	39.72251	-121.789982	
VP584	CALIFORNIA	PEM2		Area	0.008576	ACRE	DELINEATE	39.725895	-121.787654	
VP585	CALIFORNIA	PEM2		Area	0.001729	ACRE	DELINEATE	39.725784	-121.787244	
VP586	CALIFORNIA	PEM2		Area	0.003863	ACRE	DELINEATE	39.725161	-121.786601	
VP587	CALIFORNIA	PEM2		Area	0.003902	ACRE	DELINEATE	39.725063	-121.785341	
VP588	CALIFORNIA	PEM2		Area	0.001745	ACRE	DELINEATE	39.725027	-121.78807	
VP589	CALIFORNIA	PEM2		Area	0.003556	ACRE	DELINEATE	39.724762	-121.786493	
VP590	CALIFORNIA	PEM2		Area	0.010944	ACRE	DELINEATE	39.723822	-121.788084	
VP591	CALIFORNIA	PEM2		Area	0.007605	ACRE	DELINEATE	39.722341	-121.78773	
VP592	CALIFORNIA	PEM2		Area	0.008361	ACRE	DELINEATE	39.722231	-121.788221	
VP593	CALIFORNIA	PEM2		Area	0.008339	ACRE	DELINEATE	39.722065	-121.788383	
VP594	CALIFORNIA	PEM2		Area	0.003624	ACRE	DELINEATE	39.721735	-121.788546	
VP595	CALIFORNIA	PEM2		Area	0.003584	ACRE	DELINEATE	39.721335	-121.781365	
VP596	CALIFORNIA	PEM2		Area	0.005328	ACRE	DELINEATE	39.721208	-121.781229	
VP597	CALIFORNIA	PEM2		Area	0.001956	ACRE	DELINEATE	39.720595	-121.781222	
VP598	CALIFORNIA	PEM2		Area	0.004597	ACRE	DELINEATE	39.719768	-121.787041	
VP599	CALIFORNIA	PEM2		Area	0.002485	ACRE	DELINEATE	39.719444	-121.787063	
VP600	CALIFORNIA	PEM2		Area	0.016629	ACRE	DELINEATE	39.718011	-121.781884	
VP622	CALIFORNIA	PEM2		Area	0.009818	ACRE	DELINEATE	39.723244	-121.79033	
VP623	CALIFORNIA	PEM2		Area	0.010966	ACRE	DELINEATE	39.716674	-121.784908	
VP624	CALIFORNIA	PEM2		Area	0.011885	ACRE	DELINEATE	39.723645	-121.782071	
VP625	CALIFORNIA	PEM2		Area	0.011729	ACRE	DELINEATE	39.721695	-121.781867	
VP626	CALIFORNIA	PEM2		Area	0.00301	ACRE	DELINEATE	39.723823	-121.781268	
VP627	CALIFORNIA	PEM2		Area	0.004707	ACRE	DELINEATE	39.723861	-121.781193	
VP628	CALIFORNIA	PEM2		Area	0.003048	ACRE	DELINEATE	39.72211	-121.781172	
VP629	CALIFORNIA	PEM2		Area	0.015785	ACRE	DELINEATE	39.722311	-121.78083	

DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS, SACRAMENTO DISTRICT
1325 J STREET
SACRAMENTO CA 95814-2922

July 7, 2017

Regulatory Division (SPK-2006-00794)

Epick Homes, Inc.
Attn: Mr. Pete Giampaoli
901 Bruce Road, Suite 100
Chico, California 95928

Dear Mr. Giampaoli:

We are responding to your June 17, 2016, request for verification of an Aquatic Resource delineation for the Stonegate Property as amended or revised on July 21, 2016, December 5, 2016, February 22, 2017, and May 25, 2017. The approximately 320-acre project site is located on Crouch Creek and the Little Chico-Butte Creek Diversion, Latitude 39.72°, Longitude -121.784°, Chico, Butte County, California.

Based on available information, we concur with your aquatic resources delineation for the site, which consists of approximately 20.19 acres of streams and wetlands as depicted on the enclosed May 25, 2017, drawing titled, "Aquatic Resources Delineation Map." This verification letter does not constitute a determination of jurisdiction (JD). A jurisdictional determination is not required to process an application for a Department of the Army permit. If you do not require a JD for the site, your permit application may be processed sooner. You may request a JD for this site at any time prior to starting work in aquatic resources, including after a permit decision is made. To request a JD for this site, complete the enclosed *Request for Jurisdictional Determination Form* and return it to this office at the address listed below.

Please refer to identification number SPK-2006-00794 in any correspondence concerning this verification (other ID numbers have been assigned through time to portions of this review area and a permit application may be reviewed under one of these ID numbers). If you have any questions, please contact me by email at *James.T.Robb@usace.army.mil*, or telephone at (916) 557-7610. For program information or to complete our Customer Survey, visit our website at www.spk.usace.army.mil/Missions/Regulatory.aspx.

Sincerely,

James T. Robb
Wetlands Specialist

Enclosures

cc:

Mr. David Bise, Foothill Associates, dbise@foothill.com
Mr. Jason Brush, USEPA, Brush.Jason@epa.gov

Aquatic Resources

Depressional Seasonal Wetland

Label	Acres*	Latitude	Longitude
1	0.061	39.725733	-121.789101
2	0.141	39.72578	-121.782268
3	0.087	39.725767	-121.785837
4	0.056	39.725751	-121.78508
5	0.008	39.725544	-121.785887
6	0.005	39.725446	-121.788187
7	0.041	39.725396	-121.784798
8	0.092	39.725282	-121.78693
9	0.016	39.724785	-121.786738
11	0.001	39.724774	-121.789592
12	0.001	39.724737	-121.788488
13	0.023	39.724626	-121.788913
14	0.005	39.724618	-121.786914
15	0.003	39.724513	-121.787274
16	0.003	39.72451	-121.787237
17	0.051	39.724411	-121.788461
18	0.007	39.724408	-121.78695
19	0.001	39.724297	-121.781789
20	0.013	39.724287	-121.786699
21	0.017	39.724291	-121.789067
22	0.003	39.724282	-121.786417
23	0.004	39.724232	-121.787051
24	0.001	39.724207	-121.786866
25	0.066	39.724152	-121.785341
26	0.001	39.724148	-121.785902
27	0.004	39.72414	-121.786972
28	0.022	39.724086	-121.786441
29	0.002	39.724078	-121.785913
30	0.003	39.724052	-121.787029
31	0.016	39.72396	-121.783888
32	0.003	39.723935	-121.787014
34	0.028	39.723867	-121.783424
35	0.007	39.723833	-121.783671
36	0.010	39.723797	-121.790652
37	0.006	39.723723	-121.789327
38	0.005	39.723687	-121.781847
40	0.006	39.723584	-121.789733
42	0.009	39.723443	-121.783635
43	0.001	39.723425	-121.780931
44	0.005	39.72342	-121.789719
45	0.012	39.723306	-121.781532
46	0.190	39.7233	-121.78667
47	0.004	39.723292	-121.791482
48	0.007	39.723201	-121.783178
49	0.002	39.723107	-121.783966
50	0.002	39.723056	-121.778191
51	0.005	39.723063	-121.787228
52	0.001	39.722962	-121.778086
53	0.024	39.722965	-121.783208
54	0.006	39.722935	-121.783607
55	0.002	39.722917	-121.778104
56	0.001	39.722798	-121.77823
57	0.138	39.722696	-121.784571
58	0.001	39.722682	-121.782405
59	0.003	39.722682	-121.787087
60	0.140	39.722579	-121.786913
62	0.017	39.722499	-121.785336
63	0.002	39.722467	-121.781424
64	0.011	39.722346	-121.784401
65	0.005	39.722105	-121.783613
66	0.042	39.721992	-121.783724
67	0.007	39.721876	-121.789417
68	0.008	39.721876	-121.791359
69	0.018	39.721778	-121.78809
70	0.001	39.72173	-121.789974
71	0.001	39.721718	-121.78375
72	0.027	39.721667	-121.789495
73	0.004	39.721394	-121.781637
74	0.010	39.721344	-121.786967
75	0.072	39.721289	-121.785126
76	0.046	39.721216	-121.791348
77	0.002	39.721156	-121.781589
78	0.001	39.721129	-121.782004
79	0.001	39.721128	-121.781936
80	0.005	39.721126	-121.781436
81	0.001	39.721125	-121.784467
82	0.003	39.721068	-121.781238
84	0.004	39.72103	-121.779129
85	0.001	39.72095	-121.778959
86	0.001	39.720954	-121.782131
87	0.001	39.720959	-121.791481
88	0.003	39.720934	-121.782478
89	0.006	39.720824	-121.787691
90	0.027	39.720789	-121.785192
91	0.001	39.720769	-121.782403
92	0.002	39.720768	-121.782072
93	0.004	39.720755	-121.779389
94	0.008	39.720743	-121.782588
95	0.099	39.720712	-121.784229
96	0.002	39.720581	-121.78293
97	0.004	39.720511	-121.782419
98	0.004	39.720309	-121.784574
99	0.001	39.720211	-121.778161
100	0.007	39.720174	-121.781209
101	0.029	39.720151	-121.783559
102	0.013	39.720142	-121.784723
103	0.002	39.720014	-121.778086
104	0.005	39.719946	-121.777985
105	0.002	39.719922	-121.782367
106	0.002	39.719877	-121.782304
107	0.010	39.719869	-121.785009
108	0.003	39.71987	-121.786408
109	0.000	39.719742	-121.778172
110	0.002	39.719702	-121.779678
111	0.002	39.719703	-121.782141
112	0.002	39.719658	-121.781965
113	0.011	39.719659	-121.783319
114	0.002	39.719636	-121.779395
115	0.001	39.719619	-121.782616
116	0.003	39.719594	-121.782107
117	0.015	39.719421	-121.782324
118	0.002	39.719416	-121.782524
119	0.001	39.719384	-121.782579
120	0.002	39.719324	-121.778242
121	0.002	39.719271	-121.782401
122	0.006	39.719244	-121.78536
123	0.090	39.719147	-121.786926
124	0.004	39.719138	-121.785687
125	0.038	39.719029	-121.78462
126	0.001	39.719016	-121.779759
127	0.002	39.719007	-121.778668
128	0.004	39.718973	-121.786213
129	0.002	39.718934	-121.778698
130	0.001	39.718696	-121.77999
131	0.004	39.718651	-121.783826
132	0.033	39.718642	-121.786984
133	0.007	39.718518	-121.783252
134	0.002	39.718485	-121.782831
135	0.004	39.718432	-121.783948
136	0.002	39.718391	-121.78262
137	0.001	39.718335	-121.779567
138	0.001	39.718249	-121.783121
139	0.006	39.718237	-121.787037
140	0.002	39.71814	-121.783664
141	0.007	39.718074	-121.784807
142	0.024	39.717994	-121.786554
143	0.070	39.717942	-121.786971
144	0.001	39.717693	-121.78336
145	0.006	39.717548	-121.785421
146	0.001	39.717464	-121.779061
148	0.014	39.717427	-121.784744
149	0.021	39.717394	-121.786826
151	0.002	39.717314	-121.785058
152	0.002	39.717278	-121.783324
153	0.007	39.717276	-121.787027
154	0.003	39.717158	-121.783234
155	0.004	39.716761	-121.783439
156	0.001	39.716573	-121.783488
157	0.002	39.716096	-121.783377
158	0.614	39.716079	-121.781711
159	0.003	39.716	-121.784448
160	0.001	39.715977	-121.783299
161	0.002	39.715896	-121.783249
162	0.001	39.71566	-121.784997
163	0.007	39.715456	-121.785402
164	0.023	39.715409	-121.786955
165	0.008	39.715001	-121.784762
166	0.002	39.714774	-121.786677
167	0.005	39.714657	-121.786775
168	0.003	39.714643	-121.780907
169	0.020	39.714459	-121.781244
170	0.001	39.714447	-121.785825
171	0.001	39.714344	-121.786412
172	0.004	39.714343	-121.786974
173	0.014	39.714307	-121.780706
174	0.033	39.714223	-121.783226
175	0.001	39.714211	-121.785403
176	0.011	39.714151	-121.784025
177	0.004	39.714147	-121.78368
178	0.003	39.714066	-121.783992
179	0.004	39.714051	-121.784654
180	0.005	39.713937	-121.784857
181	0.010	39.71391	-121.786611
182	0.001	39.713875	-121.783564
183	0.002	39.713874	-121.786226
184	0.000	39.713847	-121.783316
185	0.000	39.713789	-121.782795
186	0.002	39.713771	-121.783301
187	0.012	39.713776	-121.786154
188	0.030	39.713705	-121.78211
189	0.002	39.713698	-121.78464
190	0.003	39.713647	-121.783302
191	0.002	39.713603	-121.783885
192	0.017	39.713517	-121.785311
193	0.011	39.713508	-121.782134
194	0.000	39.713499	-121.783823
195	0.022	39.71349	-121.784094
196	0.009	39.713403	-121.784253
482	0.010	39.723779	-121.778383
520	0.011	39.726071	-121.792251
521	0.004	39.72587	-121.787997
522	0.028	39.725743	-121.787917
523	0.001	39.725479	-121.788491
524	0.003	39.725221	-121.782594
525	0.009	39.725181	-121.783092
526	0.007	39.724893	-121.784622
527	0.005	39.724876	-121.784454
528	0.003	39.724819	-121.788385
529	0.023	39.724793	-121.782921
530	0.039	39.724562	-121.789917
531	0.007	39.724446	-121.788881
532	0.004	39.724307	-121.78468
533	0.016	39.723655	-121.785056
534	0.006	39.723375	-121.779022
535	0.021	39.723297	-121.788685
536	0.002	39.72329	-121.789566
537	0.013	39.723265	-121.788405
538	0.003	39.723125	-121.788571
539	0.014	39.723086	-121.790493
540	0.001	39.72271	-121.780627
541	0.008	39.722596	-121.789072
542	0.001	39.7225	-121.781348
543	0.003	39.722463	-121.788501
544	0.021	39.72246	-121.789518
545	0.005	39.722285	-121.789895
546	0.005	39.722081	-121.788574
548	0.038	39.721626	-121.780646
549	0.009	39.721581	-121.78893
550	0.010	39.721335	-121.790305
551	0.013	39.72128	-121.7893
552	0.005	39.721256	-121.790491
553	0.064	39.721073	-121.790025
554	0.003	39.720973	-121.790569
555	0.028	39.720891	-121.786916
556	0.024	39.720639	-121.786982
558	0.007	39.719998	-121.781278
559	0.007	39.71958	-121.781969
560	0.004	39.718951	-121.778921
561	0.009	39.718831	-121.781537
562	0.004	39.718754	-121.78641
563	0.013	39.718577	-121.786805
565	0.017	39.717425	-121.786441
566	0.005	39.717306	-121.785504
567	0.018	39.717054	-121.786593
568	0.004	39.716947	-121.784187
570	0.009	39.716789	-121.786674
571	0.012	39.716622	-121.786687
572	0.003	39.716495	-121.780952
573	0.007	39.716367	-121.786666
574	0.011	39.716327	-121.784067
575	0.024	39.716141	-121.786573
576	0.002	39.716036	-121.784072
577	0.002	39.715929	-121.78037
578	0.000	39.715769	-121.780856
579	0.021	39.715275	-121.782164
580	0.010	39.714203	-121.782778
581	0.006	39.71375	-121.784017
582	0.005	39.713463	-121.784537

Continued in next column

Depressional Seasonal Wetland (Cont.)

Label	Acres*	Latitude	Longitude
583	0.006	39.713343	-121.784243
607	0.004	39.720949	-121.790959
608	0.001	39.720964	-121.790872
609	0.042	39.725428	-121.790274
610	0.038	39.72597	-121.790184
611	0.004	39.723469	-121.789349
612	0.004	39.723595	-121.788886
613	0.004	39.724829	-121.788547
614	0.000	39.717891	-121.783881
615	0.000	39.721982	-121.782677
616	0.009	39.714977	-121.781167
617	0.009	39.714987	-121.780809
618	0.003	39.723311	-121.780673
619	0.003	39.715182	-121.780658
620	0.003	39.71776	-121.780023
621	0.009	39.717901	-121.78001
Subtotal:	4.023		

Depressional Perennial Marsh

Label	Acres*	Latitude	Longitude
197	1.236	39.714006	-121.780954
Subtotal:	1.236		

Vernal Pool

Label	Acres*	Latitude	Longitude
33	0.039	39.723908	-121.788951
39	0.027	39.723668	-121.786698
41	0.004	39.723567	-121.786881
198	0.020	39.726055	-121.791957
199	0.053	39.726019	-121.785423
200	0.001	39.725963	-121.784443
201	0.006	39.725922	-121.783907
202	0.130	39.725888	-121.791425
203	0.008	39.725672	-121.784014
204	0.009	39.72556	-121.785286
205	0.004	39.725512	-121.785446
206	0.023	39.725328	-121.789545
207	0.001	39.725303	-121.785514
208	0.029	39.725128	-121.782275
209	0.069	39.724963	-121.789351
210	0.010	39.724942	-121.785842
211	0.011	39.724887	-121.782579
212	0.016	39.724823	-121.783811
213	0.002	39.724573	-121.782099
215	0.002	39.724558	-121.785528
216	0.022	39.72455	-121.787049
217	0.022	39.724437	-121.783168
218	0.001	39.724427	-121.782502
219	0.002	39.724421	-121.781956
220	0.003	39.724401	-121.785563
221	0.002	39.724213	-121.781431
222	0.007	39.724173	-121.78265
223	0.002	39.724066	-121.781376
224	0.149	39.723914	-121.789758
225	0.002	39.723936	-121.782258
226	0.000	39.723915	-121.78211
227	0.002	39.723884	-121.782443
228	0.011	39.723845	-121.782546
230	0.003	39.72365	-121.782608
231	0.001	39.72362	-121.782538
232	0.000	39.723608	-121.782276
233	0.001	39.723524	-121.78246
234	0.008	39.723469	-121.790755
235	0.011	39.72337	-121.78492
236	0.029	39.723348	-121.787882
237	0.002	39.723257	-121.782454
238	0.016	39.723227	-121.779139
239	0.002	39.723186	-121.782179
240	0.003	39.723177	-121.787791
242	0.002	39.723062	-121.778612
243	0.005	39.722957	-121.778312
244	0.001	39.722952	-121.778227
245	0.002	39.722947	-121.778167
246	0.002	39.722869	-121.778514
247	0.002	39.722845	-121.778038
248	0.028	39.722795	-121.78826
249	0.001	39.722761	-121.778302
250	0.019	39.722773	-121.78702
251	0.002	39.722735	-121.782282
252	0.002	39.722714	-121.779106
253	0.001	39.7227	-121.788448
254	0.002	39.722676	-121.781859
255	0.002	39.722646	-121.782829
256	0.029	39.722642	-121.790928
257	0.004	39.722609	-121.780901
258	0.017	39.72253	-121.7806
259	0.004	39.722475	-121.780825
260	0.017	39.722481	-121.787044
261	0.011	39.722451	-121.785887
262	0.034	39.722417	-121.787208
263	0.010	39.722403	-121.78932
264	0.020	39.722386	-121.791449
265	0.005	39.722365	-121.782569
266	0.011	39.72231	-121.785788
267	0.003	39.722276	-121.780331
268	0.053	39.722215	-121.791287
269	0.002	39.722184	-121.781934
270	0.018	39.722183	-121.785558
271	0.016	39.722143	-121.786428
272	0.004	39.722086	-121.783219
273	0.058	39.721873	-121.785873
274	0.003	39.721815	-121.782018
275	0.001	39.721808	-121.782862
276	0.001	39.721803	-121.781514
277	0.001	39.721763	-121.78281
278	0.001	39.721768	-121.782937
279	0.004	39.721749	-121.783277
280	0.065	39.721704	-121.786557
281	0.001	39.721668	-121.782326
282	0.004	39.721648	-121.782549
283	0.003	39.721599	-121.78325
284	0.034	39.721573	-121.782723
285	0.015	39.721566	-121.786893
286	0.023	39.721472	-121.78702
287	0.011	39.721458	-121.781881
288	0.089	39.721351	-121.783828
289	0.024	39.721312	-121.79145
290	0.003	39.721336	-121.782328
291	0.012	39.721319	-121.788635
292	0.002	39.721272	-121.781702
293	0.001	39.72119	-121.778209
294	0.010	39.721195	-121.786684
295	0.012	39.721172	-121.782331
296	0.002	39.721162	-121.78031
297	0.007	39.721152	-121.786802
298	0.005	39.72113	-121.789594
299	0.001	39.721099	-121.778493
300	0.021	39.721113	-121.786499
301	0.002	39.721026	-121.77885
302	0.050	39.72093	-121.785961
303	0.002	39.720837	-121.782862
304	0.014	39.720828	-121.787948
305	0.001	39.720807	-121.791526
306	0.024	39.720711	-121.785497
307	0.001	39.720693	-121.779355
308	0.099	39.720611	-121.783822
309	0.024	39.720562	-121.785805
310	0.001	39.720464	-121.77919
311	0.005	39.720425	-121.783027
312	0.001	39.720324	-121.784003
313	0.121	39.720251	-121.786933
314	0.002	39.720203	-121.780264
315	0.056	39.720195	-121.785915
316	0.002	39.719931	-121.780412
317	0.003	39.719889	-121.778096
318	0.006	39.71984	-121.779387
319	0.002	39.719831	-121.780235
320	0.002	39.71982	-121.778556
321	0.001	39.719813	-121.780438
322	0.005	39.719802	-121.778661
323	0.001	39.719778	-121.780078
324	0.040	39.719788	-121.7859
325	0.002	39.719769	-121.778824
326	0.001	39.719748	-121.779918
327	0.001	39.719712	-121.778371
328	0.014	39.719686	-121.783756
329	0.004	39.719685	-121.786533
330	0.005	39.719545	-121.779815
331	0.004	39.719463	-121.779758
332	0.001	39.719426	-121.779169
333	0.136	39.719309	-121.783265
334	0.002	39.719225	-121.77832
335	0.012	39.71922	-121.786024
336	0.028	39.7192	-121.780035
337	0.102	39.719181	-121.782607
338	0.045	39.719171	-121.784263
339	0.007	39.719152	-121.77961
340	0.003	39.719111	-121.779334
341	0.001	39.719084	-121.77982
342	0.053	39.719022	-121.78506
343	0.002	39.718963	-121.77911
344	0.001	39.71896	-121.779663
345	0.006	39.718842	-121.778437
346	0.003	39.71884	-121.779369
347	0.002	39.718835	-121.778876
348	0.001	39.718836	-121.779532
349	0.001	39.718821	-121.779161
350	0.001	39.718746	-121.77943
351	0.002	39.718733	-121.778944
352	0.010	39.718727	-121.779659
353	0.001	39.718659	-121.779346
354	0.001	39.718601	-121.779821
355	0.135	39.718598	-121.784821
356	0.002	39.718484	-121.778848
357	0.001	39.718482	-121.779078
358	0.004	39.718424	-121.782677
359	0.001	39.71839	-121.779924
360	0.002	39.718314	-121.780024
361	0.002	39.718298	-121.782725
362	0.017	39.718298	-121.782941
363	0.001	39.71826	-121.77915
364	0.002	39.71826	-121.779748
365	0.001	39.718225	-121.779824
366	0.002	39.718213	-121.779891
367	0.005	39.718213	-121.780136
368	0.003	39.718203	-121.779038
369	0.002	39.718201	-121.779115
370	0.003	39.718192	-121.779794
371	0.004	39.718166	-121.780057
372	0.012	39.718129	-121.782997
373	0.004	39.71812	-121.779582
374	0.006	39.718102	-121.778893
375	0.002	39.718066	-121.77865
376	0.002	39.717933	-121.779162
377	0.004	39.717925	-121.778907
378	0.003	39.717879	-121.778842
379	0.002	39.717723	-121.778999
380	0.010	39.717693	-121.78281
381	0.003	39.71757	-121.785044
382	0.013	39.717508	-121.7834
383	0.001	39.717426	-121.783192
384	0.002	39.717397	-121.783227
385	0.002	39.717346	-121.783151
386	0.006	39.716803	-121.78451
387	0.008	39.716585	-121.783422
388	0.003	39.716576	-121.784388
389	0.001	39.716457	-121.783347
390	0.013	39.716335	-121.779887
391	0.029	39.716287	-121.784487
392	0.003	39.716116	-121.785082
393	0.011	39.716095	-121.784599
394	0.025	39.716048	-121.785223
395	0.005	39.716035	-121.784701
396	0.008	39.715806	-121.785154
397	0.001	39.715655	-121.77872
398	0.009	39.715609	-121.784248
399	0.003	39.715601	-121.784967
400	0.002	39.715532	-121.784618
401	0.008	39.715453	-121.785931
402	0.005	39.715446	-121.784666
403	0.036	39.71544	-121.78349
404	0.009	39.71539	-121.781469
405	0.006	39.715376	-121.78484
406	0.008	39.715181	-121.786036
407	0.026	39.715153	-121.786293
408	0.010	39.71513	-121.785873
409	0.007	39.714958	-121.785301
410	0.031	39.714912	-121.780956
411	0.013	39.714917	-121.786599
412	0.008	39.714882	-121.783646
413	0.004	39.714857	-121.7796
414	0.042	39.714865	-121.786034
415	0.004	39.714844	-121.784726
416	0.009	39.714828	-121.783244
417	0.014	39.714736	-121.785601
418	0.049	39.714621	-121.785039
419	0.004	39.714613	-121.786176
420	0.008	39.714579	-121.783445

Continued in next column

Vernal Pool (Cont.)

Label	Acres*	Latitude	Longitude
421	0.062	39.714581	-121.784651
422	0.012	39.71458	-121.785905
423	0.001	39.714553	-121.78612
424	0.032	39.714504	-121.786852
425	0.037	39.714476	-121.787274
426	0.001	39.714471	-121.786648
427	0.003	39.714462	-121.786176
428	0.021	39.714451	-121.784155
429	0.015	39.714449	-121.785463
430	0.036	39.714434	-121.783673
431	0.000	39.714413	-121.786466
432	0.000	39.714375	-121.785586
433	0.001	39.714371	-121.786753
434	0.003	39.714361	-121.783491
435	0.002	39.714345	-121.785911
436	0.001	39.714332	-121.785452
437	0.001	39.714318	-121.785526
438	0.001	39.714318	-121.786138
439	0.002	39.714288	-121.786101
440	0.001	39.714287	-121.786055
441	0.008	39.71426	-121.784631
442	0.001	39.714245	-121.785744
443	0.001	39.714245	-121.786146
444	0.011	39.714244	-121.78632
445	0.007	39.714242	-121.785977
446	0.000	39.714228	-121.786122
447	0.001	39.714213	-121.785823
448	0.042	39.714204	-121.786809
449	0.001	39.7142	-121.786144
450	0.003	39.714197	-121.785547
451	0.001	39.714172	-121.786273
452	0.003	39.714151	-121.786029
453	0.001	39.714097	-121.784651
454	0.005	39.714089	-121.78494
455	0.003	39.714082	-121.786568
456	0.025	39.714056	-121.786694
457	0.003	39.714045	-121.78432
458	0.003	39.714042	-121.785602
459	0.003	39.714027	-121.786489
460	0.013	39.714019	-121.786361
461	0.001	39.713991	-121.78651
462	0.006	39.713981	-121.786067
463	0.004	39.713926	-121.785521
464	0.021	39.713901	-121.7865
465	0.024	39.713892	-121.785263
466	0.038	39.713858	-121.786342
467	0.013	39.71385	-121.785992
468	0.002	39.713777	-121.785592
469	0.035	39.71372	-121.785902
470	0.013	39.713694	-121.785695
471	0.006	39.713669	-121.78281
472	0.016	39.713672	-121.785548
473	0.001	39.713654	-121.782745
474	0.001	39.713586	-121.783725
475	0.001	39.713544	-121.783852
476	0.001	39.713526	-121.784929
509	0.005	39.72251	-121.789982
584	0.009	39.725895	-121.787654
585	0.002	39.725784	-121.787244
586	0.004	39.725161	-121.786601
587	0.004	39.725063	-121.785341
588	0.002	39.725027	-121.78807
589	0.004	39.724762	-121.786493
590	0.001	39.723822	-121.788084
591	0.008	39.722341	-121.78773
592	0.008	39.722231	-121.788221
593	0.008	39.722065	-121.788383
594	0.004	39.721735	-121.788546
595	0.004	39.721335	-121.781365
596	0.005	39.721208	-121.781229
597	0.002	39.720595	-121.781222
598	0.005	39.719768	-121.787041
599	0.002	39.719444	-121.787063
600	0.017	39.718011	-121.781884
622	0.010	39.723244	-121.79033
623	0.011	39.716674	-121.784908
624	0.012	39.723645	-121.782071
625	0.012	39.721695	-121.781867
626	0.003	39.723823	-121.781268
627	0.005	39.723861	-121.781193
628	0.003	39.72211	-121.781172
629	0.016	39.722311	-121.78083
Subtotal:	3.833		

Riverine Seasonal Wetland

Label	Acres*	Length (Ft)	Latitude	Longitude
10	0.014	110	39.724779	-121.78873
477	0.128	604	39.72545	-121.783398
478	0.015	40	39.725302	-121.789678
480	0.005	64	39.724856	-121.782755
481	0.226	1150	39.72429	-121.783895
483	0.167	882	39.722569	-121.786293
484	0.062	624	39.721391	-121.788061
485	0.075	331	39.720943	-121.790686
486	0.011	122	39.717429	-121.781571
487	0.186	1438	39.717853	-121.784088
488	0.043	305	39.716684	-121.780605
489	0.010	205	39.716529	-121.780075
490	0.130	689	39.715545	-121.784014
491	0.806	487	39.714418	-121.781835
492	0.734	810	39.713693	-121.780447
601	0.001	25	39.724471	-121.786996
604	0.009	72	39.72346	-121.786961
605	0.041	334	39.716285	-121.786196
606	0.017	123	39.715185	-121.787074
630	0.059	191	39.722529	-121.791248
631	0.016	152	39.7229	-121.790705
632	0.073	488	39.722307	-121.790336
633	0.011	145	39.723283	-121.790254
634	0.026	218	39.721482	-121.790247
635	0.034	293	39.721888	-121.789845
636	0.047	307	39.722829	-121.78976
637	0.002	33	39.723508	-121.789744
638	0.023	165	39.721194	-121.789619
639	0.002	43	39.723351	-121.789618
640	0.031	105	39.723754	-121.789586
641	0.004	78	39.723385	-121.789467
642	0.003	27	39.721789	-121.789434
643	0.027	187	39.72254	-121.789235
644	0.027	126	39.721417	-121.789121
645	0.015	162	39.723614	-121.789091
646	0.076	293	39.7242	-121.789007
647	0.020	92	39.721923	-121.788979
648	0.041	280	39.7254	-121.788978
649	0.003	27	39.724511	-121.788895
650	0.017	198	39.722784	-121.788794
651	0.008	50	39.724452	-121.788751
652	0.018	104	39.721627	-121.788735
653	0.031	104	39.721747	-121.788296
654	0.026	185	39.725507	-121.788207
655	0.005	36	39.72593	-121.787982
656	0.010	50	39.721853	-121.787977
657	0.006	45	39.725796	-121.787974
658	0.014	174	39.717709	-121.786714
659	0.009	144	39.719462	-121.786709
660	0.005	117	39.724969	-121.786705
661	0.001	16	39.716734	-121.786688
662	0.002	39	39.71647	-121.786675
663	0.001	38	39.716884	-121.786637
664	0.001	32	39.716254	-121.786634
665	0.005	99	39.718645	-121.786575
666	0.003	67	39.717239	-121.786512
667	0.004	65	39.719785	-121.786489
668	0.040	259	39.718316	-121.786306
669	0.004	76	39.718869	-121.786304
670	0.015	212	39.720598	-121.786252
671	0.012	255	39.725319	-121.786221
672	0.004	69	39.719076	-121.786118
673	0.010	131	39.719472	-121.78596
674	0.006	95	39.722165	-121.785847
675	0.019	214	39.721333	-121.785818
676	0.004	35	39.725597	-121.7859
677	0.036	280	39.723678	-121.785747
678	0.005	73	39.722051	-121.785571
679	0.018	162	39.715678	-121.785532
680	0.004	61	39.717421	-121.785462
681	0.070	600	39.718373	-121.785399
682	0.017	152	39.715206	-121.785345
683	0.006	64	39.714838	-121.785226
684	0.048	543	39.724738	-121.785082
685	0.005	123	39.72098	-121.785049
686	0.092	695	39.72203	-121.785045
687	0.230	1320	39.72088	-121.784858
688	0.007	85	39.719981	-121.784853
689	0.011	105	39.715141	-121.784788
690	0.002	28	39.714916	-121.784735
691	0.002	17	39.71479	-121.784702
692	0.014	205	39.725727	-121.784643
693	0.003	43	39.72023	-121.784598
694	0.056	246	39.723079	-121.784482
695	0.006	88	39.720424	-121.784446
696	0.003	61	39.726035	-121.784367
697	0.017	97	39.71713	-121.784228
698	0.015	161	39.721053	-121.784099
699	0.005	47	39.720402	-121.783989
700	0.165	421	39.725565	-121.78397
701	0.018	216	39.720047	-121.7839
702	0.004	94	39.72156	-121.783776
703	0.004	66	39.72183	-121.783744
704	0.037	392	39.722566	-121.783512
705	0.010	108	39.719897	-121.783454
706	0.002	47	39.719502	-121.783232
707	0.040	341	39.725223	-121.782448
708	0.006	186	39.72158	-121.781543
709	0.007	211	39.722086	-121.781485
710	0.005	35	39.721266	-121.7813
711	0.005	39	39.721154	-121.781198
712	0.041	292	39.720641	-121.781128
713	0.021	125	39.716331	-121.780942
714	0.009	73	39.719987	-121.780556
715	0.009	56	39.716937	-121.780485
716	0.003	47	39.71988	-121.780325
717	0.060	474	39.715892	-121.780226
718	0.033	251	39.71981	-121.779849
719	0.005	53	39.716382	-121.77957
720	0.026	183	39.71599	-121.779403
721	0.001	15	39.719851	-121.779297
Subtotal:	4.738	24,247		

Ephemeral Drainage

Label	Acres*	Length (Ft)	Latitude	Longitude
493	0.026	446	39.723279	-121.778555
494	0.276	718	39.721328	-121.779799
Subtotal:	0.303	1,164		

Intermittent Drainage

Label	Acres*	Length (Ft)	Latitude	Longitude
495	0.482	1776	39.715907	-121.780055
Subtotal:	0.482	1,776		

Perennial Drainage

Label	Acres*	Length (Ft)	Latitude	Longitude
496	0.012	255	39.722829	-121.779072
497	5.106	5957	39.721305	-121.780907
Subtotal:	5.118	6,212		

Ditch/Canal

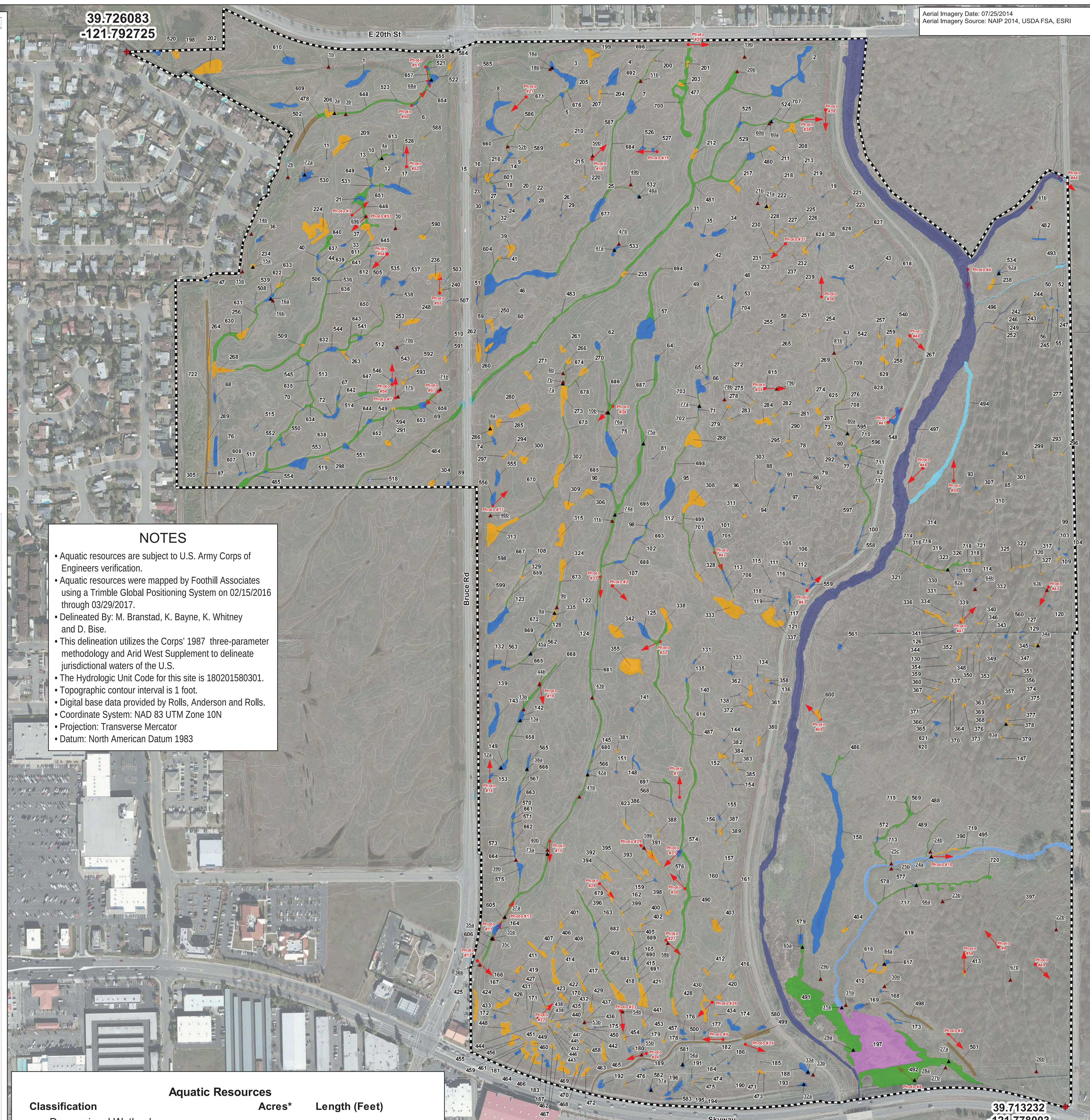
Label	Acres*	Length (Ft)	Latitude	Longitude
498	0.040	258	39.714339	-121.78043
499	0.047	119	39.714123	-121.782857
500	0.052	757	39.71385	-121.784372
501	0.051	194	39.713816	-121.779622
502	0.066	185	39.725086	-121.789938
722	0.134	819	39.721921	-121.791474
Subtotal:	0.391	2,332		

Excavated Pit

Label	Acres*	Latitude	Longitude
503	0.003	39.723291	-121.787727
505	0.005	39.72325	-121.788985
506	0.004	39.723144	-121.789855
507	0.004	39.723052	-121.787689
508	0.004	39.723034	-121.790727
510	0.003	39.722506	-121.787701
512	0.004	39.722392	-121.788983
513	0.005	39.722015	-121.789843
514	0.006	39.721883	-121.789
515	0.009	39.721518	-121.790707
517	0.003	39.721018	-121.790708
518	0.008	39.720876	-121.788926
519	0.008	39.720874	-121.789861
Subtotal:	0.067		

	Acres	Length (Ft)
TOTALS:	20.19	35,731

* Features shown as 0.000 Acres are <0.0005 Acres. Features calculated at 6 significant digits and rounded to 3 significant digits.



NOTES

- Aquatic resources are subject to U.S. Army Corps of Engineers verification.
- Aquatic resources were mapped by Foothill Associates using a Trimble Global Positioning System on 02/15/2016 through 03/29/2017.
- Delineated By: M. Branstad, K. Bayne, K. Whitney and D. Bise.
- This delineation utilizes the Corps' 1987 three-parameter methodology and Arid West Supplement to delineate jurisdictional waters of the U.S.
- The Hydrologic Unit Code for this site is 180201580301.
- Topographic contour interval is 1 foot.
- Digital base data provided by Rolls, Anderson and Rolls.
- Coordinate System: NAD 83 UTM Zone 10N
- Projection: Transverse Mercator
- Datum: North American Datum 1983

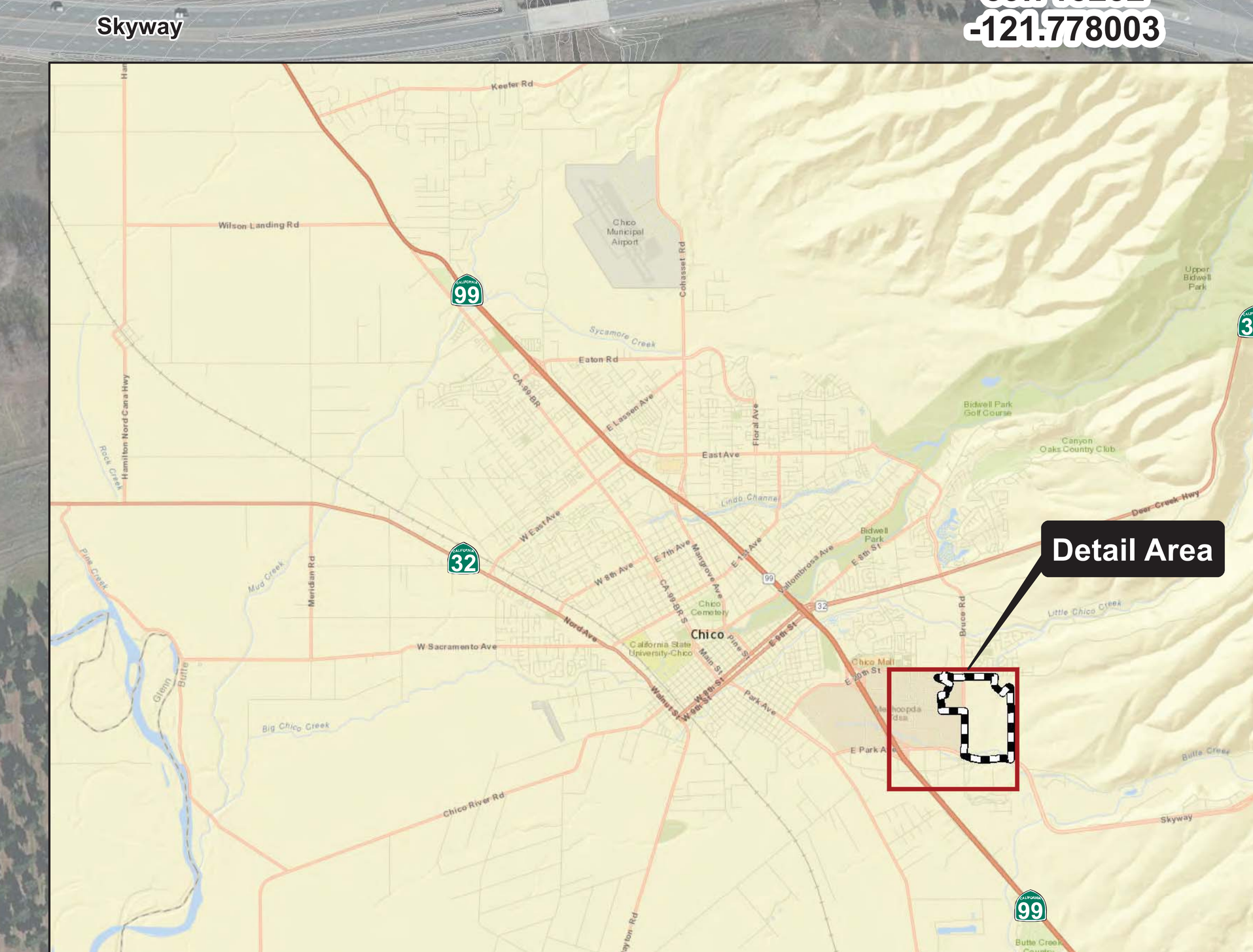
Aquatic Resources

Classification	Acres*	Length (Feet)
Depressional Wetlands		
Seasonal Wetland	4.02	n/a
Perennial Marsh	1.24	n/a
Vernal Pool	3.83	n/a
Riverine Wetlands		
Seasonal Wetland	4.74	24,247
Other Aquatic Resources		
Ephemeral Drainage	0.30	1,164
Intermittent Drainage	0.48	1,776
Perennial Drainage	5.12	6,212
Ditch/Canal	0.39	2,332
Excavated Pit	0.07	n/a
TOTAL:	**20.19**	**35,731**

*Acreages are calculated to six significant figures and subsequently rounded to two significant figures. Total acreage is based on the sum of these amounts at two significant figures.

Other Features

- Culvert
- Upland Data Point
- Wetland Data Point
- Photo Point and Direction
- Topographic Contour
- Study Area ±320 Acres



FOOTHILL ASSOCIATES
ENVIRONMENTAL CONSULTING • PLANNING • LANDSCAPE ARCHITECTURE

AQUATIC RESOURCES DELINEATION MAP

N

0 200 400 600 800 1,600
Feet
1 inch = 200 feet

Drawn By:	MUB
QA/QC:	AMP
Date:	06/14/2016
Revised:	05/25/2017

FIGURE 3

STONEGATE

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