

Wetland Delineation

For

Shifler Property

Yolo County, California

18 May 2012

Prepared For:

Teichert Aggregates

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Shifler Property**

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INTRODUCTION

On behalf of Teichert Aggregates, ECORP Consulting, Inc. (ECORP) conducted a wetland delineation of the 320±-acre Shifler Property, located south of Cache Creek, north of Highway 16, east of County Road 94B, and west of County Road 96 in Yolo County, California (Figure 1. *Project Site and Vicinity*). The site corresponds to an unsectioned portion of Township 10 North, and Range 1 East (MDBM) of the "Woodland, California" 7.5-minute quadrangle (U.S. Department of the Interior, Geological Survey 1981). The approximate center of the site is located at 38° 41' 02" North and 121° 51' 25" West within the Lower Cache Watershed (#18020110, U.S. Department of the Interior, Geological Survey 1978).

This report describes potential waters of the United States, including wetlands, identified within the site that may be regulated by the U.S. Army Corps of Engineers (USACE) pursuant to Section 404 of the Clean Water Act. The information presented in this report provides data required by the USACE Sacramento District's *Minimum Standards for Acceptance of Preliminary Wetland Delineations* (U.S. Army Corps of Engineers 2001). The potential waters of the U.S. boundaries depicted in this report represent a calculated estimation of the jurisdictional area within the site, and are subject to modification following the USACE verification process.

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Existing Site Conditions

The site is composed of relatively flat terrain at an elevation of approximately 100 to 110 feet above mean sea level. The majority of the site is comprised of agricultural fields, some of which were in tomato (*Lycopersicon esculentum*) cultivation at the time of the survey, and the remainder of which were freshly tilled. Moore Canal crosses the site from the southwest to the

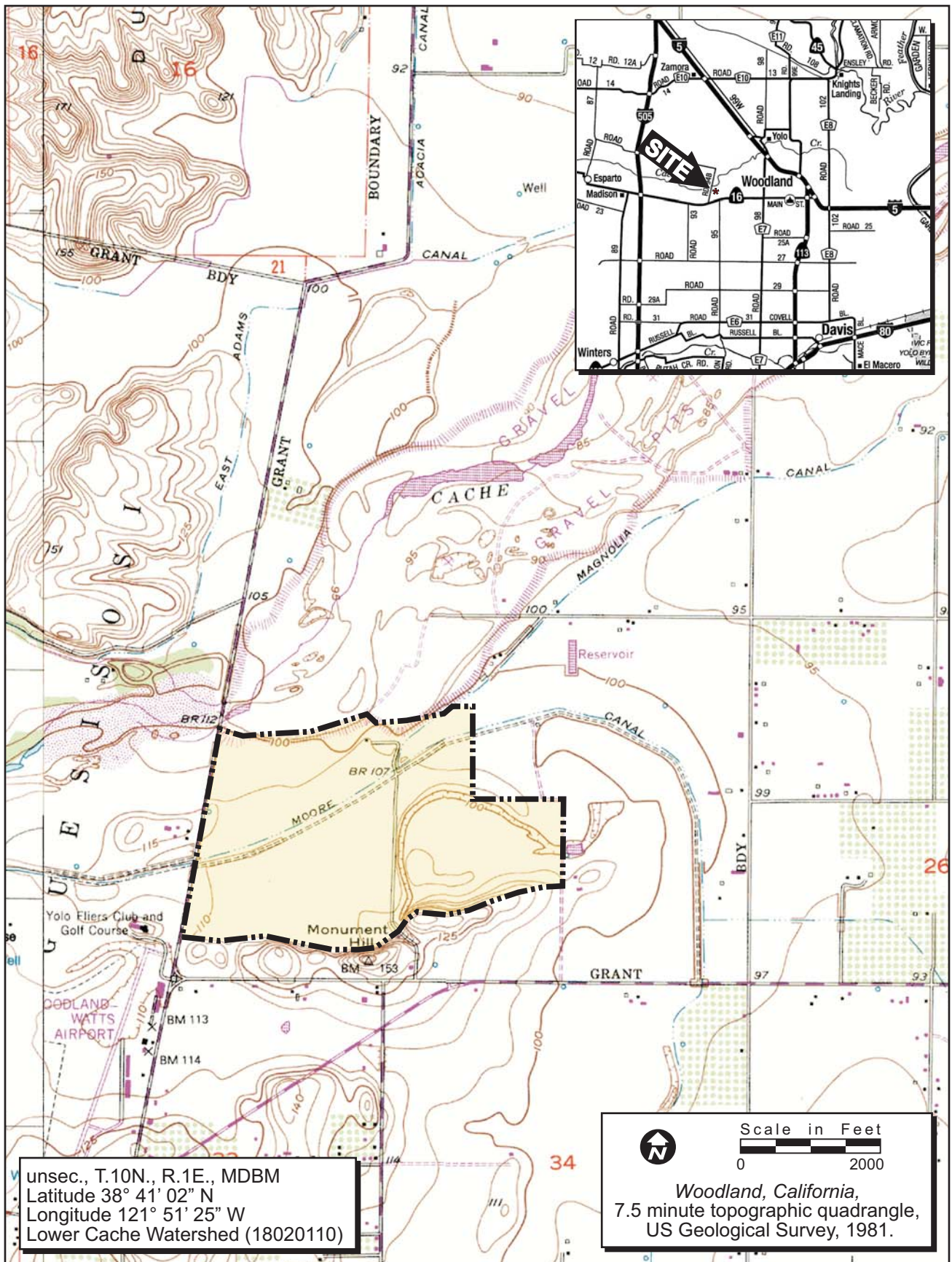


Figure 1. Project Site and Vicinity

2010-109 Shifler Property

northeast side of the site, and Magnolia Canal conveys water north from Moore Canal. A conveyor belt crosses from west to east through the northwestern portion of the site. To the north of the conveyor belt is a narrow strip of ruderal vegetation. In addition, ruderal vegetation is present along roadsides between fields, and in a small area projecting south into the western-most tomato field. Additional aquatic features on-site include a detention pond, a marsh, a seasonal wetland, and a small section of drainage ditch. These features are further described in the Results section.

Field surveys were conducted in mid September, when many plant species were past bloom, but most were still identifiable to species. The last rainfall before the site visit was on 8 September, just two days prior to the site visit, when 0.04 inches of rain fell (NOAA 2010). The last rain event prior to that was on 27 May 2010 (NOAA 2010).

The ruderal community on-site is composed primarily of non-native, naturalized Mediterranean grasses and a variety of other weedy species. Plant species observed in this community include wild oats (*Avena fatua*), soft brome (*Bromus hordeaceus*), red brome (*B. madritensis* ssp. *rubens*), Harding grass (*Phalaris aquatica*), Johnson grass (*Sorghum halepense*), bindweed (*Convolvulus arvensis*), pigweed amaranth (*Amaranthus albus*), prostrate amaranth (*A. blitoides*), lamb's quarters (*Chenopodium album*), mustard (*Hirschfeldia incana*), puncture vine (*Tribulus terrestris*), Canada horseweed (*Conyza canadensis*), curly dock (*Rumex crispus*), common purslane (*Portulaca oleraceus*), Devil's claw (*Proboscidea lutea*), horehound (*Marrubium vulgare*), narrow-leaved milkweed (*Asclepias fascicularis*), sunflower (*Helianthus annuus*), jimsonweed (*Datura wrightii*), milk thistle (*Silybum marianum*), broad leaved pepper grass (*Lepidium latifolium*), hairy willow herb (*Epilobium ciliatum*), wild radish (*Raphanus sativus*), turkey mullein (*Eremocarpus setigerus*), and prickly lettuce (*Lactuca serriola*). A variety of trees and shrubs are scattered sparsely throughout the community, including poison oak (*Toxicodendron diversilobum*), black walnut (*Juglans hindsii*), English walnut (*J. regia*), tree tobacco (*Nicotiana glauca*), tree of heaven (*Ailanthus altissima*), and valley oak (*Quercus lobata*).

No National Wetlands Inventory features have been mapped within the project area.

According to the *Soil Survey of Yolo County, California* (U.S. Department of Agriculture, Soil Conservation Service 1972), six soil units, or types, have been mapped within the site (Figure 2. *Natural Resources Conservation Service Soil Types*). These are: (BrA) Brentwood silty clay, 0 to 2% slopes; (Lm) Loamy alluvial land; (Rh) Riverwash; (SmD) Sehorn-Balcom complex 2-15% slopes; (SmF2) Sehorn-Balcom complex, 30-50% slopes, eroded; and (Ya) Yolo silt loam. (Rh) consists of listed hydric components, and (Lm) and (Ya) may contain hydric inclusions (U.S. Department of Agriculture, Soil Conservation Service 1992).

METHODS

This wetland delineation was conducted in accordance with the *Corps of Engineers Wetlands Delineation Manual* (Environmental Laboratory 1987) and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region* (Arid West Region Supplement) (U.S. Army Corps of Engineers 2008). The boundaries of potential waters of the U.S. were delineated through aerial photograph interpretation and standard field methodologies (i.e., paired data set analyses), and all wetland data were recorded on Arid West Region - Wetland Determination Data Forms (Attachment A). A color aerial photograph (1"=200' scale, Digital Globe 2009) was used to assist with mapping and ground-truthing (Attachment B). *Munsell Soil Color Charts* (Kollmorgen Instruments Co. 1990) and the *Soil Survey of Yolo County, California* (U.S. Department of Agriculture, Soil Conservation Service 1972) were used to aid in identifying hydric soils in the field. *The Jepson Manual* (Hickman, ed. 1993) was used for plant nomenclature and identification.

Field surveys were conducted on 10 September 2010 and 12 March 2012 by ECORP biologist Daria Snider. Ms. Snider walked the entire 320 ±-acre site to determine the location and extent of potential waters of the U.S. within the property. Six paired data point locations and one single point location were sampled to evaluate whether or not the vegetation, hydrology, and soils data supported a determination of wetland or non-wetland status. At each paired location, one point was located such that it was within the estimated wetland area, and the other point was situated outside the limits of the estimated wetland area. The data collected at the single point location was used to support a non-wetland determination. The total area of the wetlands and

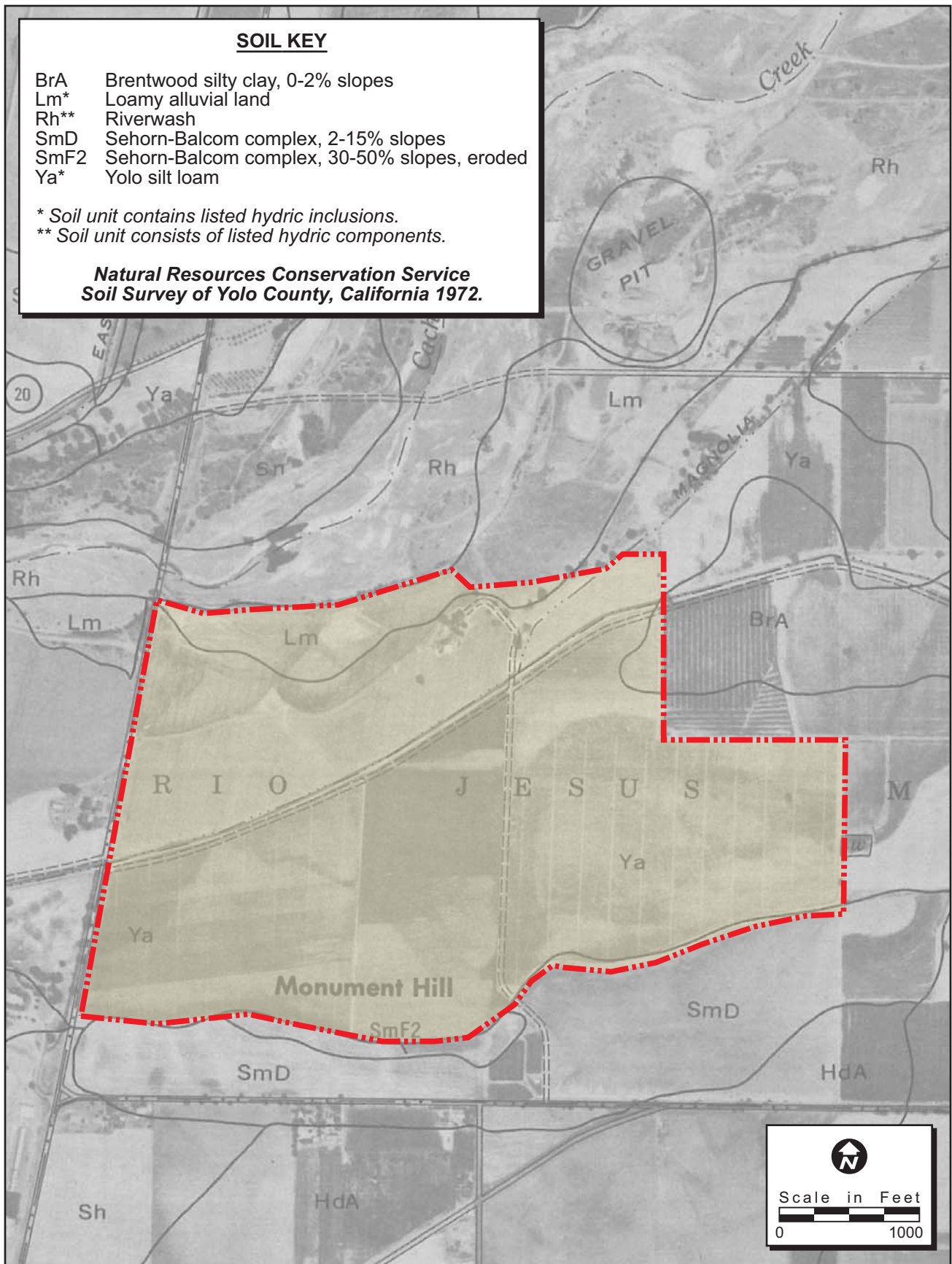


Figure 2. Natural Resources Conservation Service Soil Types

other waters within the site was recorded in the field using a post-processing capable global positioning system (GPS) unit with sub-meter accuracy (Trimble GeoXT).

Waters of the United States

This report describes potential waters of the U.S., including wetlands, which may be regulated by the USACE under Section 404 of the Clean Water Act. Wetlands are “those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions” [33 CFR 328.3(b), 51 FR 41250, November 13, 1986]. Wetlands can be perennial or intermittent, and isolated or adjacent to other waters.

Other waters are non-tidal, perennial, and intermittent watercourses and tributaries to such watercourses [33 CFR 328.3(a), 51 FR 41250, November 13, 1986]. The limit of USACE jurisdiction for non-tidal watercourses (without adjacent wetlands) is defined in 33 CFR 328.4(c)(1) as the “ordinary high water mark”. The ordinary high water mark is defined as the *“line on the shore established by the fluctuations of water and indicated by physical characteristics such as clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas”* [33 CFR 328.3(e), 51 FR 41250, November 13, 1986]. The bank-to-bank extent of the channel that contains the water-flow during a normal rainfall year generally serves as a good first approximation of the lateral limit of USACE jurisdiction. The upstream limits of other waters are defined as the point where the ordinary high water mark is no longer perceptible.

Routine Determinations

To be determined a wetland; the following three criteria should be met:

- A majority of dominant vegetation species are wetland associated species;
- Hydrologic conditions exist that result in periods of flooding, ponding, or saturation during the growing season; and

- Hydric soils are present.

Vegetation

Hydrophytic vegetation is defined as the sum total of macrophytic plant life that occurs in areas where the frequency and duration of inundation or soil saturation produce permanent or periodically saturated soils of sufficient duration to exert a controlling influence on the plant species present (Environmental Laboratory 1987). The definition of wetlands includes the phrase "a prevalence of vegetation typically adapted for life in saturated soil conditions." Prevalent vegetation is characterized by the dominant plant species comprising the plant community (Environmental Laboratory 1987). The dominance test is the basic hydrophytic vegetation indicator and was applied at each data point location. The "50/20 rule" was used to select the dominant plant species from each stratum of the community. The rule states that for each stratum in the plant community, dominant species are the most abundant plant species (when ranked in descending order of coverage and cumulatively totaled) that immediately exceed 50 percent of the total coverage for the stratum, plus any additional species that individually comprise 20 percent or more of the total cover in the stratum (HQUSACE 1992, U.S. Army Corps of Engineers 2006).

Dominant plant species observed at each data point were then classified according to their indicator status (probability of occurrence in wetlands) (Table 1), in accordance with the U.S. Fish and Wildlife Service's (USFWS) National List of Vascular Plant Species That Occur in Wetlands: California (Region 0) (Reed 1988). If the majority (greater than 50 percent) of the dominant vegetation on a site are classified as obligate (OBL), facultative wetland (FACW), or facultative (FAC), then the site was considered to be dominated by hydrophytic vegetation. Pursuant to the Arid West Region Supplement, plus (+) and minus (-) modifiers were not used (e.g., FAC-, FAC, and FAC+ plants are all considered to be FAC). Plant species not listed in Reed 1988 were assumed to be upland (UPL) species.

Table 1 – Classification of Wetland-Associated Plant Species¹

<u>Plant Species Classification</u>	<u>Abbreviation</u>	<u>Probability of Occurring in Wetland</u>
Obligate	OBL	>99%
Facultative Wetland	FACW	66-99%
Facultative	FAC	33-66%
Facultative Upland	FACU	1-33%
Upland	UPL	<1%
No indicator status	NI	Insufficient information to determine status
Plants That Are Not Listed (assumed upland species)	NL	Does not occur in wetlands in any region.

¹ Source: Reed 1988

In instances where indicators of hydric soil and wetland hydrology were present, but the plant community failed the dominance test, the vegetation was re-evaluated using the prevalence index. The prevalence index is a weighted-average wetland indicator status of all plant species in the sampling plot, where each indicator status category is given a numeric code (OBL=1, FACW=2, FAC=3, FACU=4, and UPL=5) and weighting is by abundance (percent cover). If the plant community failed the prevalence index, the presence/absence of plant morphological adaptations to prolonged inundation or saturation in the root zone was evaluated.

Soils

A hydric soil is defined as a soil that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part (USDA-NRCS 2003). Indicators that a hydric soil is present include, but are not limited to, histosols, histic epipedon, hydrogen sulfide, depleted below dark surface, sandy redox, loamy gleyed matrix, depleted matrix, redox dark surface, redox depressions, and vernal pools.

A soil pit was excavated to the depth needed to document an indicator, to confirm the absence of indicators, or until refusal at each data point. The soil was then examined for hydric soil indicators. Soil colors were determined while the soil was moist using the *Munsell Soil Color Charts* (Kollmorgen Instruments Co. 1990).

Hydrology

Wetlands, by definition, are seasonally or perennially inundated or saturated at or near (within 12 inches of) the soil surface. Primary indicators of wetland hydrology include, but are not limited to: visual observation of saturated soils, visual observation of inundation, surface soil cracks, inundation visible on aerial imagery, water-stained leaves, oxidized rhizospheres along living roots, aquatic invertebrates, water marks (secondary indicator in riverine environments), drift lines (secondary indicator in riverine environments), and sediment deposits (secondary indicator in riverine environments). The occurrence of one primary indicator is sufficient to conclude that wetland hydrology is present. If no primary indicators are observed, two or more secondary indicators are required to conclude wetland hydrology is present. Secondary indicators include, but are not limited to: drainage patterns, crayfish burrows, FAC-neutral test, and shallow aquitard. The occurrence of at least one primary indicator or two secondary indicators is required to confirm the presence of wetland hydrology.

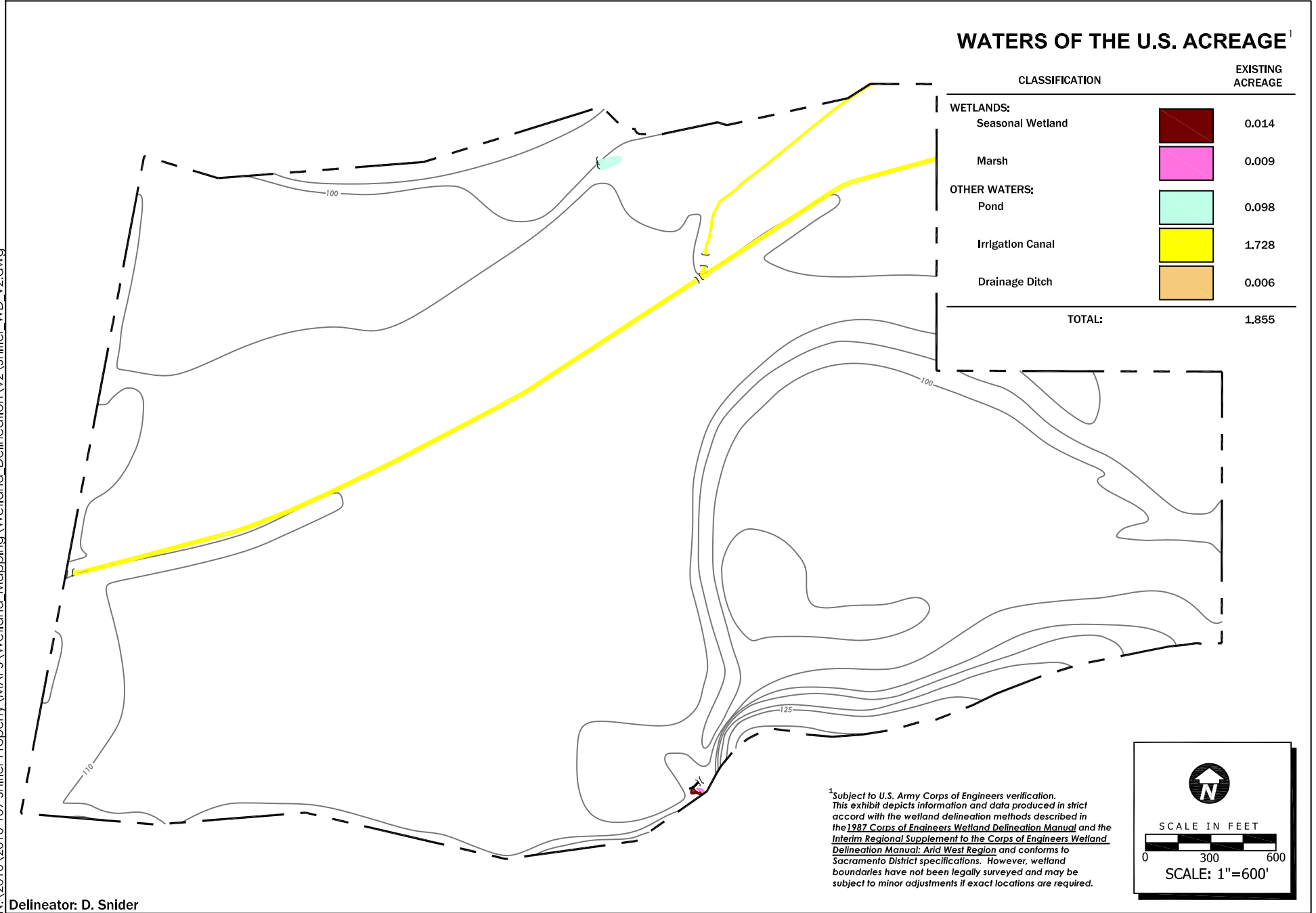
RESULTS

A total of 1.855 acres of potential waters of the U.S have been mapped for this site (Table 2). The wetland determination data forms are included in Attachment A, and a list of plant species observed on-site is included in Attachment C. A discussion of the wetlands and other waters is presented below, and wetland delineation maps are presented in Figure 3 and Attachment D.

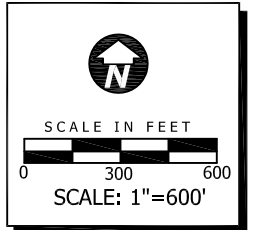
Type	Acreage¹
<i>Wetlands</i>	
Seasonal Wetland	0.014
Marsh	0.009
<i>Other Waters</i>	
Pond	0.098
Irrigation Canal	1.729
Drainage Ditch	<u>0.006</u>
Total:	1.855

¹ Acreages represent a calculated estimation and are subject to modification following the Corps' verification process.

N:\2010\2010-109 Shiffler Property\MAPS\Wetland_Mapping\Wetland_Delineation\2\Shiffler_WD_v2.dwg



¹Subject to U.S. Army Corps of Engineers verification. This exhibit depicts information and data produced in strict accord with the wetland delineation methods described in the 1987 Corps of Engineers Wetland Delineation Manual and the Interim Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region and conforms to Sacramento District specifications. However, wetland boundaries have not been legally surveyed and may be subject to minor adjustments if exact locations are required.



SCALE IN FEET
0 300 600
SCALE: 1"=600'

Delineator: D. Snider

Figure 3. Wetland Delineation

3/14/2012

Wetlands

Seasonal Wetland

One seasonal wetland was mapped in the southern portion of the site. This feature appears to receive the majority of its hydrology from runoff from the abutting marsh. The seasonal wetland differs from the marsh in the apparent duration of inundation or saturation, and the plant species that are present. The seasonal wetland is dominated by Italian ryegrass (*Lolium multiflorum*), Harding grass (*Phalaris aquatica*), curly dock, and prickly lettuce. Some old cattail (*Typha* species) stems are present, but appear to be relicts of prior years. Vegetation within the seasonal wetland was determined to be hydrophytic due to passage of the dominance test.

Indicators of wetland hydrology in the seasonal wetland included oxidized rhizospheres and soil saturation within 12 inches of the soil surface. The soil matrix color within the seasonal wetland was 2.5Y 4/2 with 2% redox concentrations colored 10YR4/6. The soil was determined to be hydric based on the present of field indicator F3 (depleted matrix). The soil matrix color in an adjacent upland area was 2.5Y4/2 without any redox features.

Marsh

One marsh was mapped along the southern boundary of the project site. The source of the hydrology for this feature is not clear, but it is likely due to a leak on the property to the south of the site. The marsh is dominated almost exclusively by narrow-leaved cattail (*Typha angustifolia*).

Indicators of wetland hydrology in the marsh included oxidized rhizospheres and soil saturation within 12 inches of the soil surface, and surface water present in portions of the feature. The soil matrix color within the marsh was 10YR4/2 with 2% redox concentrations colored 7.5YR4/6 from the surface to a depth of 8 inches. From 8 to 12 inches below the soil surface, the soil matrix color was 2.5YR4/2 without redox concentrations. The soil within this feature was determined to be hydric based on the presence of field indicator F3 (depleted matrix). The soil matrix color within an adjacent upland area was 10YR3/2 without redox features.

Other Waters

Pond

One excavated pond was mapped within the project area. Pond-1 is located in the northern portion of the site, and is primarily unvegetated. The edges of the pond are vegetated almost exclusively by broad-leaved pepper grass. Two other excavated basins are present on-site, one just north of Pond-1, and one in the southeastern corner of the site. Both of these features are dominated by upland plant species, and do not exhibit an Ordinary High Water Mark (see Data Point 7N in Attachment A).

The pond exhibited an Ordinary High Water Mark (OHWM), which was mapped based on the presence of live vegetation.

Irrigation Canal

Two named irrigation canals are present within the project area. IC-1 is Magnolia Canal, and IC-2 and IC-3 are Moore Canal. Both of these canals are named, dashed blue-line features on the "Woodland, California" USGS 7.5-minute quadrangle. Moore Canal is approximately 15 feet wide, and concrete-lined. It conveys water from west to east across the site. Magnolia Canal conveys water north from Moore Canal, is approximately 7 feet wide, and has a soil substrate. Neither of these features are vegetated, but both support some vegetation along the banks. Moore Canal, which is concrete-lined, has much less soil for vegetation establishment, and therefore supports less vegetation along the banks. Species found along Moore Canal include burhead (*Echinodorus berteroi*) and jungle rice (*Echinochloa colona*). Species found adjacent to Magnolia Canal include smartweed (*Polygonum* species), dallisgrass (*Paspalum dilatatum*), Johnson grass, yellow nutgrass (*Cyperus esculentus*), jungle rice, bearded sprangletop (*Leptochloa fascicularis*), and Bermuda grass (*Cynodon dactylon*).

The irrigation canals exhibit an OHWM, which is indicated variously by water marks, presence of vegetation, and the extent of scour.

Drainage Ditch

One drainage ditch was mapped on-site. This feature appears to convey water from one agricultural field to another, as well as collect runoff from the marsh and seasonal wetland. The drainage ditch is primarily unvegetated, but Harding grass and panicled willow herb (*Epilobium brachycarpum*) are present along the edges. The drainage ditch exhibits an OHWM. The OHWM was mapped based on presence of vegetation.

CONCLUSION / JURISDICTIONAL ASSESSMENT

Pursuant to the U.S. Environmental Protection Agency (USEPA) and USACE memorandum regarding Clean Water Act jurisdiction, issued following the United States Supreme Court's decision in the consolidated cases *Rapanos v. United States* and *Carabell v. United States* (herein referred to as *Rapanos*), the agencies will assert jurisdiction over the following waters: "traditionally navigable" waters (TNW), all wetlands adjacent to TNWs, non-navigable tributaries of TNWs that are "relatively permanent" (i.e., tributaries that typically flow year-round or have continuous flow at least seasonally), and wetlands that directly abut such tributaries (USEPA and USACE 2007).

Waters requiring a significant nexus determination by the USACE and USEPA to establish jurisdiction include non-navigable tributaries that are not relatively permanent, wetlands adjacent to non-navigable tributaries that are not relatively permanent, and wetlands adjacent to but do not directly abut a relatively permanent non-navigable tributary (USEPA and USACE 2007). The jurisdictional determination is a fact-based evaluation to establish whether a water has a significant nexus with a TNW. The significant nexus analysis will assess the flow characteristics and functions of the non-navigable tributary itself and the functions performed by all wetlands adjacent to the tributary to determine if they significantly affect the chemical, physical, and biological integrity of downstream TNWs (USEPA and USACE 2007).

Moore Canal, the largest waterway on-site, conveys water from Cache Creek, at an elevation of approximately 115 feet above MSL to Willow Slough, which it enters at an elevation of approximately 60 feet above MSL. Moore Canal appears to have been constructed on contour

through the Shifler project site, and continues on contour for several miles, until it reaches a subtle ridge just south of Gibson Road. Moore Canal follows this ridgeline for several miles until just before it empties into Willow Slough.

As discussed above, Moore Canal drains to Willow Slough, a tributary of the Sacramento River, which is a TNW. As Moore Canal is a Relatively Permanent Water tributary to a TNW, it is subject to Corps jurisdiction. During the site visit, Magnolia Canal was conveying water from Moore Canal to fields in the area. It does not appear that Magnolia Canal conveys water to any other drainageway. However, as it is connected to Moore Canal, it may be considered subject to Corps jurisdiction.

Marsh-1 and SW-1 are both tributary to DD-1, which appears to drain into the agricultural field to the west of these features. This field likely drains to Moore Canal, an RPW. Thus, SW-1, Marsh-1, and DD-1 are adjacent to, but do not directly abut, an RPW. Pond-1 appears to drain to the north, under the conveyor belt line, to Cache Creek, another RPW tributary to the Sacramento River. Therefore, Pond-1 would also be considered a feature adjacent to, but not abutting an RPW. These features (Pond-1, SW-1, Marsh-1, and DD-1) will likely require a significant nexus determination by the USACE and USEPA to establish jurisdiction.

A total of 1.855 acres of potential waters of the U.S. have been mapped on-site. These acreages represent a calculated estimation of the jurisdictional area within the site, and are subject to modification following the USACE verification process. Fill within jurisdictional features would require permitting pursuant to Section 404 and 401 of the federal Clean Water Act.

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LIST OF ATTACHMENTS

Attachment A – Wetland Determination Data Forms - Arid West Region

Attachment B – Aerial Photograph

Attachment C – Plant Species Observed On-Site

Attachment D – Wetland Delineation

Attachment E – Wetland Delineation Shape File (to be included with USACE submittal only)

Attachment F – USACE-Verified Wetland Map and Verification Letter (to be included in ECORP Consulting master copy only)

ATTACHMENT A

Wetland Determination Data Forms - Arid West Region

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Shifler Property City/County: Yolo County Sampling Date: 9/10/10
 Applicant/Owner: Teichert Aggregates State: CA Sampling Point: 1
 Investigator(s): Daria Snider Section, Township, Range: Section 27 + 28 / T10N / R1E
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): None Slope (%): _____
 Subregion (LRR): C Lat: _____ Long: _____ Datum: NAD83
 Soil Map Unit Name: Yolo silt loam NWI classification: None

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 <input checked="" type="checkbox"/> No _____ Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____ Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____
Remarks: <div style="font-size: 24px; margin-left: 20px;">Marsh</div>	

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
Total Cover: _____				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 = _____
Sapling/Shrub Stratum				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
Total Cover: _____				
Herb Stratum				Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> 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. <u>Typha angustifolia</u>	<u>100</u>	<input checked="" type="checkbox"/>	<u>Obl</u>	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
Total Cover: <u>100</u>				
Woody Vine Stratum				¹ Indicators of hydric soil and wetland hydrology must be present. Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
Total Cover: _____				
% Bare Ground in Herb Stratum <u>0</u> % Cover of Biotic Crust <u>0</u>				
Remarks:				

SOIL

Sampling Point: 1

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-8"	10YR 4/2	98	7.5YR 1/6	2%	C	RC	clay loam	
8-12"	2.5Y 4/2	100					mucky modified mineral	

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

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

Indicators for Problematic Hydric Soils³:

- 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)

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

³Indicators 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:

Secondary Indicators (2 or more required)

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)

- 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): 8"

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:

surface water present elsewhere in feature.
Water source for feature likely something leaking off-site.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Shifler Property City/County: Yolo County Sampling Date: 9/10/10
 Applicant/Owner: Teichert Aggregates State: CA Sampling Point: 2N
 Investigator(s): Daria Snider Section, Township, Range: Section 27 + 28/T10N/R1E
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): None Slope (%): _____
 Subregion (LRR): C Lat: _____ Long: _____ Datum: NAD83
 Soil Map Unit Name: Yolo silt loam NWI classification: None

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

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

Hydrophytic Vegetation Present? Yes <u>X</u> No _____ Hydric Soil Present? Yes _____ No <u>X</u> Wetland Hydrology Present? Yes _____ No <u>X</u>	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u>
Remarks: <p align="center" style="font-size: 1.2em;">Upland comparison to DPI.</p>	

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>1</u> (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
4. _____	_____	_____	_____	
Total Cover: _____				
Sapling/Shrub Stratum				Prevalence Index worksheet:
1. _____	_____	_____	_____	Total % Cover of: _____ Multiply by: _____
2. _____	_____	_____	_____	OBL species _____ x 1 = _____
3. _____	_____	_____	_____	FACW species _____ x 2 = _____
4. _____	_____	_____	_____	FAC species _____ x 3 = _____
5. _____	_____	_____	_____	FACU species _____ x 4 = _____
Total Cover: _____				UPL species _____ x 5 = _____
				Column Totals: _____ (A) _____ (B)
				Prevalence Index = B/A = _____
Herb Stratum				Hydrophytic Vegetation Indicators:
1. <u>Cyperus diactylon</u>	<u>100</u>	<u>✓</u>	<u>FAC</u>	<u>✓</u> Dominance Test is >50%
2. <u>Hierchfeldia incana</u>	<u>tr</u>		<u>N/L</u>	___ Prevalence Index is ≤3.0 ¹
3. <u>Bromus diandrus</u>	<u>tr</u>		<u>N/L</u>	___ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
4. <u>Carduus pycnocephalus</u>	<u>tr</u>		<u>N/L</u>	___ Problematic Hydrophytic Vegetation ¹ (Explain)
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
Total Cover: <u>100</u>				
Woody Vine Stratum				¹ Indicators of hydric soil and wetland hydrology must be present.
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
Total Cover: _____				
% Bare Ground in Herb Stratum <u>7</u>		% Cover of Biotic Crust <u>7</u>		Hydrophytic Vegetation Present? Yes <u>✓</u> No _____
Remarks:				

SOIL

Sampling Point: 20

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-7"	10YR 3/2	100					gravelly clay loam	

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

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

Indicators for Problematic Hydric Soils³:

- 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)

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

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

Restrictive Layer (if present):

Type: _____
Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks:

Refusal at 7". No hydric soil indicators detected.

HYDROLOGY

Wetland Hydrology Indicators:

Secondary Indicators (2 or more required)

Primary Indicators (any one indicator is sufficient)

- | | | |
|--|--|--|
| <input type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Salt Crust (B11) | <input type="checkbox"/> Water Marks (B1) (Riverine) |
| <input type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Biotic Crust (B12) | <input type="checkbox"/> Sediment Deposits (B2) (Riverine) |
| <input type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Aquatic Invertebrates (B13) | <input type="checkbox"/> Drift Deposits (B3) (Riverine) |
| <input type="checkbox"/> Water Marks (B1) (Nonriverine) | <input type="checkbox"/> Hydrogen Sulfide Odor (C1) | <input type="checkbox"/> Drainage Patterns (B10) |
| <input type="checkbox"/> Sediment Deposits (B2) (Nonriverine) | <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) | <input type="checkbox"/> Dry-Season Water Table (C2) |
| <input type="checkbox"/> Drift Deposits (B3) (Nonriverine) | <input type="checkbox"/> Presence of Reduced Iron (C4) | <input type="checkbox"/> Thin Muck Surface (C7) |
| <input type="checkbox"/> Surface Soil Cracks (B6) | <input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6) | <input type="checkbox"/> Crayfish Burrows (C8) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Other (Explain in Remarks) | <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) |
| <input type="checkbox"/> Water-Stained Leaves (B9) | | <input type="checkbox"/> Shallow Aquitard (D3) |
| | | <input type="checkbox"/> FAC-Neutral Test (D5) |

Field Observations:

Surface Water Present? Yes _____ No X Depth (inches): 7"
 Water Table Present? Yes _____ No X Depth (inches): 7"
 Saturation Present? (includes capillary fringe) Yes _____ No X Depth (inches): 7"

Wetland Hydrology Present? Yes _____ No X

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

Remarks:

No wetland hydrology indicators detected.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Shifler Property City/County: Yolo County Sampling Date: 9/10/10
 Applicant/Owner: Teichert Aggregates State: CA Sampling Point: 3
 Investigator(s): Daria Snider Section, Township, Range: Section 27 + 28 / T10N / R1E
 Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): Concave Slope (%): _____
 Subregion (LRR): C Lat: _____ Long: _____ Datum: NAD83
 Soil Map Unit Name: Yolo silt loam NWI classification: None

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

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

Hydrophytic Vegetation Present? Yes <u>X</u> No _____ Hydric Soil Present? Yes <u>X</u> No _____ Wetland Hydrology Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____
Remarks: <div style="font-size: 1.2em; font-family: cursive;">Seasonal wetland</div>	

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:																								
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)																								
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>1</u> (B)																								
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)																								
4. _____	_____	_____	_____																									
Total Cover: _____				Prevalence Index worksheet: <table style="width:100%; border-collapse: collapse;"> <tr> <td align="center" colspan="2">Total % Cover of:</td> <td align="center">Multiply by:</td> </tr> <tr> <td>OBL species _____</td> <td align="center">x 1 = _____</td> <td></td> </tr> <tr> <td>FACW species _____</td> <td align="center">x 2 = _____</td> <td></td> </tr> <tr> <td>FAC species _____</td> <td align="center">x 3 = _____</td> <td></td> </tr> <tr> <td>FACU species _____</td> <td align="center">x 4 = _____</td> <td></td> </tr> <tr> <td>UPL species _____</td> <td align="center">x 5 = _____</td> <td></td> </tr> <tr> <td>Column Totals: _____</td> <td align="center">(A)</td> <td align="center">_____ (B)</td> </tr> <tr> <td align="center" colspan="3">Prevalence Index = B/A = _____</td> </tr> </table>	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 = _____		
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 = _____																												
Sapling/Shrub Stratum																												
1. _____	_____	_____	_____																									
2. _____	_____	_____	_____																									
3. _____	_____	_____	_____																									
4. _____	_____	_____	_____																									
5. _____	_____	_____	_____																									
Total Cover: _____																												
Herb Stratum																												
1. <u>Lolium multiflorum</u>	<u>80</u>	<u>✓</u>	<u>Fac*</u>																									
2. <u>Phalaris aquatica</u>	<u>15</u>		<u>Fac*</u>																									
3. <u>Rumex crispus</u>	<u>5</u>		<u>Facw</u>																									
4. <u>Lactuca serriola</u>	<u>tr</u>		<u>Fac</u>																									
5. _____	_____	_____	_____																									
6. _____	_____	_____	_____																									
7. _____	_____	_____	_____																									
8. _____	_____	_____	_____																									
Total Cover: <u>100</u>																												
Woody Vine Stratum																												
1. _____	_____	_____	_____																									
2. _____	_____	_____	_____																									
Total Cover: _____																												
% Bare Ground in Herb Stratum <u>0</u> % Cover of Biotic Crust <u>0</u>																												
Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)																												
¹ Indicators of hydric soil and wetland hydrology must be present.																												
Hydrophytic Vegetation Present? Yes <u>X</u> No _____																												

Remarks:

Old cattail stalks present

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

Depth (inches)	Matrix		Redox Features			Loc ²	Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹			
0-12"	2.5Y 4/2	98	10YR 4/6	2	C	RC	clay loam	

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

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

- 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 Soils³:

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

³Indicators 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): 12"

Water Table Present? Yes No Depth (inches): 12"

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: Shifler Property City/County: Yolo County Sampling Date: 9/10/10
 Applicant/Owner: Teichert Aggregates State: CA Sampling Point: 40
 Investigator(s): Daria Snider Section, Township, Range: Section 27 + 28/T10N/R1E
 Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): None Slope (%): _____
 Subregion (LRR): C Lat: _____ Long: _____ Datum: NAD83
 Soil Map Unit Name: Yolo silt loam NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X 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 <u>X</u> Hydric Soil Present? Yes _____ No <u>X</u> Wetland Hydrology Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u>
Remarks: <p align="center" style="font-size: 1.2em;">Upland comparison to DP 3.</p>	

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A/B)
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
Total Cover: _____				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 = _____
Sapling/Shrub Stratum				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
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.
Total Cover: _____				
Herb Stratum				
1. <u>Carduus pinnatocephalus</u>	<u>50</u>	<u>✓</u>	<u>N/C</u>	
2. <u>Lolium multiflorum</u>	<u>10</u>		<u>Fac</u>	
3. <u>Bromus diandrus</u>	<u>10</u>		<u>N/C</u>	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	Hydrophytic Vegetation Present? Yes _____ No <u>X</u>
Total Cover: <u>70</u>				
Woody Vine Stratum				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
Total Cover: _____				
% Bare Ground in Herb Stratum <u>30</u> % Cover of Biotic Crust <u>0</u>				
Remarks:				

SOIL

Sampling Point: 40

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-12"	2.5Y 1/2	100					clay loam	

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

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

- 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 Soils³:

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

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

Restrictive Layer (if present):

Type: _____
Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks:

No hydric soil indicators detected.

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 X Depth (inches): 12"
 Water Table Present? Yes _____ No X Depth (inches): 12"
 Saturation Present? (includes capillary fringe) Yes _____ No X Depth (inches): 12"

Wetland Hydrology Present? Yes X No _____

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

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Shifler Property City/County: Yolo County Sampling Date: 9/10/10
 Applicant/Owner: Teichert Aggregates State: CA Sampling Point: 5N
 Investigator(s): Daria Snider Section, Township, Range: Section 27 + 28/T10N/R1E
 Landform (hillslope, terrace, etc.): Berm Local relief (concave, convex, none): None Slope (%): _____
 Subregion (LRR): C Lat: _____ Long: _____ Datum: NAD83
 Soil Map Unit Name: Yolo silt loam NWI classification: None

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

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

Hydrophytic Vegetation Present? Yes <u>X</u> No _____ Hydric Soil Present? Yes _____ No <u>X</u> Wetland Hydrology Present? Yes _____ No <u>X</u>	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u>
Remarks: <p align="center" style="font-size: 1.2em;">Upland comparison to DP 6.</p>	

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>2</u> (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
4. _____	_____	_____	_____	
Total Cover: _____				
Sapling/Shrub Stratum				
1. _____	_____	_____	_____	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 = _____
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
Total Cover: _____				
Herb Stratum				
1. <u>Phalaris aquatica</u>	<u>80</u>	<u>✓</u>	<u>FAC</u>	Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present.
2. <u>Lepidium latifolium</u>	<u>20</u>	<u>✓</u>	<u>FACW</u>	
3. <u>Hirschfeldia incana</u>	<u>tr</u>		<u>UPL</u>	
4. <u>Carduus pycnanophalus</u>	<u>tr</u>		<u>UPL</u>	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
Total Cover: <u>100</u>				
Woody Vine Stratum				
1. _____	_____	_____	_____	Hydrophytic Vegetation Present? Yes <u>X</u> No _____
2. _____	_____	_____	_____	
Total Cover: _____				
% Bare Ground in Herb Stratum <u>0</u> % Cover of Biotic Crust <u>0</u>				
Remarks:				

SOIL

Sampling Point: 5A

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-12"	2.5Y 3/2	100					silt loam	

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

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

- 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 Soils³:

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

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

Restrictive Layer (if present):

Type: _____
Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks:

No hydric soil indicators detected.

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 X Depth (inches): 12"
 Water Table Present? Yes _____ No X Depth (inches): 12"
 Saturation Present? (includes capillary fringe) Yes _____ No X Depth (inches): 12"

Wetland Hydrology Present? Yes _____ No X

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

Remarks:

No wetland hydrology indicators detected.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Shifler Property City/County: Yolo County Sampling Date: 9/10/10
 Applicant/Owner: Teichert Aggregates State: CA Sampling Point: 6
 Investigator(s): Daria Spitzer Section, Township, Range: Section 27 + 28/T10N/R1E
 Landform (hillslope, terrace, etc.): Constructed Basin Local relief (concave, convex, none): Concave Slope (%): _____
 Subregion (LRR): C Lat: _____ Long: _____ Datum: NAD83
 Soil Map Unit Name: Yolo silt loam NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X 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 <u>X</u> Hydric Soil Present? Yes _____ No _____ Wetland Hydrology Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____ <i>Waters</i>
Remarks: <div style="font-size: 2em; margin-left: 20px;">Pond</div>	

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: _____ (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)
4. _____	_____	_____	_____	
Total Cover: _____				
<u>Sapling/Shrub Stratum</u>				Prevalence Index worksheet:
1. _____	_____	_____	_____	Total % Cover of: _____ Multiply by: _____
2. _____	_____	_____	_____	OBL species _____ x 1 = _____
3. _____	_____	_____	_____	FACW species _____ x 2 = _____
4. _____	_____	_____	_____	FAC species _____ x 3 = _____
5. _____	_____	_____	_____	FACU species _____ x 4 = _____
Total Cover: _____				UPL species _____ x 5 = _____
<u>Herb Stratum</u>				Column Totals: _____ (A) _____ (B)
1. _____	_____	_____	_____	Prevalence Index = B/A = _____
2. _____	_____	_____	_____	Hydrophytic Vegetation Indicators:
3. _____	_____	_____	_____	___ Dominance Test is >50%
4. _____	_____	_____	_____	___ Prevalence Index is ≤3.0 ¹
5. _____	_____	_____	_____	___ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
6. _____	_____	_____	_____	___ Problematic Hydrophytic Vegetation ¹ (Explain)
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
Total Cover: _____				
<u>Woody Vine Stratum</u>				¹ Indicators of hydric soil and wetland hydrology must be present.
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
Total Cover: _____				
% Bare Ground in Herb Stratum _____ % Cover of Biotic Crust _____				Hydrophytic Vegetation Present? Yes _____ No <u>X</u>

Remarks:
 Feature is unvegetated, although sparse dead *Lepidium latifolium* is present.

SOIL

Sampling Point: 6

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)		Indicators for Problematic Hydric Soils³:
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 1 cm Muck (A9) (LRR C)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> 2 cm Muck (A10) (LRR B)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Reduced Vertic (F18)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Stratified Layers (A5) (LRR C)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> 1 cm Muck (A9) (LRR D)	<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Depressions (F8)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Vernal Pools (F9)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)		

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

Restrictive Layer (if present):
 Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes _____ No _____

Remarks:
No soil pit dug.

HYDROLOGY

Wetland Hydrology Indicators:	Secondary Indicators (2 or more required)
<u>Primary Indicators (any one indicator is sufficient)</u>	
<input checked="" type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water Marks (B1) (Riverine)
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Sediment Deposits (B2) (Riverine)
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Drift Deposits (B3) (Riverine)
<input type="checkbox"/> Water Marks (B1) (Nonriverine)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Sediment Deposits (B2) (Nonriverine)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Drift Deposits (B3) (Nonriverine)	<input type="checkbox"/> Thin Muck Surface (C7)
<input checked="" type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Biotic Crust (B12)	
<input type="checkbox"/> Aquatic Invertebrates (B13)	
<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	
<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	
<input type="checkbox"/> Presence of Reduced Iron (C4)	
<input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6)	
<input checked="" type="checkbox"/> Other (Explain in Remarks)	
<i>OHWM</i>	

Field Observations:

Surface Water Present? Yes No _____ Depth (inches): ~12"

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:
OHWM present + indicated by the edge of vegetation.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Shifler Property City/County: Yolo County Sampling Date: 9/10/10
 Applicant/Owner: Teichert Aggregates State: CA Sampling Point: 710
 Investigator(s): Daria Spidder Section, Township, Range: Section 27 + 28 / T10N / R1E
 Landform (hillslope, terrace, etc.): Constructed Basin Local relief (concave, convex, none): Concave Slope (%): _____
 Subregion (LRR): C Lat: _____ Long: _____ Datum: NAD83
 Soil Map Unit Name: Yolo silt loam NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X 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 <u>X</u> Hydric Soil Present? Yes _____ No <u>X</u> Wetland Hydrology Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u>
Remarks: <u>Suspect DP. This area appears to have been used as a detention pond in the past, but does not appear to be in use currently. Representative of two such constructed basins on the site.</u>	

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>1</u> (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A/B)
4. _____	_____	_____	_____	
Total Cover: _____				
<u>Sapling/Shrub Stratum</u>				
1. _____	_____	_____	_____	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 = _____
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
Total Cover: _____				
<u>Herb Stratum</u>				
1. <u>Phalaris paradoxa</u>	<u>35</u>	<u>✓</u>	<u>N/L</u>	Hydrophytic Vegetation Indicators: ___ Dominance Test is >50% ___ Prevalence Index is ≤3.0 ¹ ___ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ___ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present.
2. <u>Avena fatua</u>	<u>5</u>	_____	<u>N/L</u>	
3. <u>Bromus hordeaceus</u>	<u>5</u>	_____	<u>FACU</u>	
4. <u>Bromus diandrus</u>	<u>5</u>	_____	<u>N/L</u>	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
Total Cover: <u>50</u>				
<u>Woody Vine Stratum</u>				
1. _____	_____	_____	_____	Hydrophytic Vegetation Present? Yes _____ No <u>X</u>
2. _____	_____	_____	_____	
Total Cover: _____				
% Bare Ground in Herb Stratum <u>50</u> % Cover of <u>2</u> Crust <u>80</u>				
Remarks: _____				

SOIL

Sampling Point: 7N

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-10"	2.5Y 3/2	100					clay loam	

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) <input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) (LRR C) <input type="checkbox"/> 1 cm Muck (A9) (LRR D) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8) <input type="checkbox"/> Vernal Pools (F9)	Indicators for Problematic Hydric Soils³: <input type="checkbox"/> 1 cm Muck (A9) (LRR C) <input type="checkbox"/> 2 cm Muck (A10) (LRR B) <input type="checkbox"/> Reduced Vertic (F18) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> Other (Explain in Remarks)
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Restrictive Layer (if present):
 Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks:
Refusal at 10". NO hydric soil indicators detected.

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (any one indicator is sufficient)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) (Nonriverine) <input type="checkbox"/> Sediment Deposits (B2) (Nonriverine) <input type="checkbox"/> Drift Deposits (B3) (Nonriverine) <input checked="" type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Salt Crust (B11) <input type="checkbox"/> Biotic Crust (B12) <input type="checkbox"/> Aquatic Invertebrates (B13) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6) <input type="checkbox"/> Other (Explain in Remarks)	<u>Secondary Indicators (2 or more required)</u> <input type="checkbox"/> Water Marks (B1) (Riverine) <input type="checkbox"/> Sediment Deposits (B2) (Riverine) <input type="checkbox"/> Drift Deposits (B3) (Riverine) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5)
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Field Observations:

Surface Water Present? Yes _____ No X Depth (inches): 10"

Water Table Present? Yes _____ No X Depth (inches): 10"

Saturation Present? (includes capillary fringe) Yes _____ No X Depth (inches): 10"

Wetland Hydrology Present? Yes X No _____

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

Remarks:
A soil crust of some sort is present, but it is unclear if it is a biotic crust, or maybe chemical/pesticide residue.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Shifler Property City/County: Yolo County Sampling Date: 9/10/10
 Applicant/Owner: Teichert Aggregates State: CA Sampling Point: 8
 Investigator(s): Daria Snider Section, Township, Range: Section 27 + 28/T10N/R1E
 Landform (hillslope, terrace, etc.): Constructed channel Local relief (concave, convex, none): _____ Slope (%): _____
 Subregion (LRR): C Lat: _____ Long: _____ Datum: NAD83
 Soil Map Unit Name: Yolo silt loam NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X 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 <u>X</u> Hydric Soil Present? Yes _____ No <u>X</u> Wetland Hydrology Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? <u>waters</u> Yes <u>✓</u> No _____
Remarks: <p align="center"><u>Irrigation canal.</u></p>	

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: _____ (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)
4. _____	_____	_____	_____	
Total Cover: _____				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 = _____
<u>Sapling/Shrub Stratum</u>				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
Total Cover: _____				
<u>Herb Stratum</u>				Hydrophytic Vegetation Indicators: ___ Dominance Test is >50% ___ Prevalence Index is ≤3.0 ¹ ___ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ___ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present.
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
Total Cover: _____				
<u>Woody Vine Stratum</u>				Hydrophytic Vegetation Present? Yes _____ No <u>X</u>
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
Total Cover: _____				
% Bare Ground in Herb Stratum _____ % Cover of Biotic Crust _____				

Remarks:
Feature is unvegetated, but Echinodorus berteroi + Echinochloa colona occur on edges.

SOIL

Sampling Point: 8

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		

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

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

Indicators for Problematic Hydric Soils³:

- 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)

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

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No

Remarks:

No soil pit due to concrete substrate.

HYDROLOGY

Wetland Hydrology Indicators:

Secondary Indicators (2 or more required)

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)

OHWM

- 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): 12+ "

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:

OHWM present and indicated by water marks + presence of vegetation above OHWM.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Shifler Property City/County: Yolo County Sampling Date: 9/10/10
 Applicant/Owner: Teichert Aggregates State: CA Sampling Point: 9W
 Investigator(s): Daria Snider Section, Township, Range: Section 27 + 28 / T10N / R1E
 Landform (hillslope, terrace, etc.): Roadway Local relief (concave, convex, none): — Slope (%): —
 Subregion (LRR): C Lat: — Long: — Datum: NAD83
 Soil Map Unit Name: Yolo silt loam NWI classification: None

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

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

Hydrophytic Vegetation Present? Yes <u>—</u> No <u>X</u> Hydric Soil Present? Yes <u>—</u> No <u>X</u> Wetland Hydrology Present? Yes <u>—</u> No <u>X</u>	Is the Sampled Area within a Wetland? Yes <u>—</u> No <u>X</u>
Remarks: <p align="center"><u>Upland comparison to DP 8.</u></p>	

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: _____ (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)
4. _____	_____	_____	_____	
Total Cover: _____				
<u>Sapling/Shrub Stratum</u>				Prevalence Index worksheet:
1. _____	_____	_____	_____	Total % Cover of: _____ Multiply by: _____
2. _____	_____	_____	_____	OBL species _____ x 1 = _____
3. _____	_____	_____	_____	FACW species _____ x 2 = _____
4. _____	_____	_____	_____	FAC species _____ x 3 = _____
5. _____	_____	_____	_____	FACU species _____ x 4 = _____
Total Cover: _____				UPL species _____ x 5 = _____
<u>Herb Stratum</u>				Column Totals: _____ (A) _____ (B)
1. <u>Sida sp.</u>	<u>tr</u>	_____	<u>FACU</u>	Prevalence Index = B/A = _____
2. <u>Amaranthus blitoides</u>	<u>tr</u>	_____	<u>FACW</u>	
3. <u>Chenopodium album</u>	<u>tr</u>	_____	<u>FAC</u>	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
Total Cover: <u>tr</u>				
<u>Woody Vine Stratum</u>				Hydrophytic Vegetation Indicators:
1. _____	_____	_____	_____	<u>—</u> Dominance Test is >50%
2. _____	_____	_____	_____	<u>—</u> Prevalence Index is ≤3.0 ¹
Total Cover: _____				<u>—</u> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
<u>% Bare Ground in Herb Stratum</u> <u>~100%</u> <u>% Cover of Biotic Crust</u> <u>0</u>				<u>—</u> Problematic Hydrophytic Vegetation ¹ (Explain)
				¹ Indicators of hydric soil and wetland hydrology must be present.
				Hydrophytic Vegetation Present? Yes <u>—</u> No <u>X</u>

Remarks:
Mostly un-vegetated, apparently due to herbicide spraying.

SOIL

Sampling Point: 9W

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-12"	2.5Y 4/2	100					Sandy loam	

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) <input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) (LRR C) <input type="checkbox"/> 1 cm Muck (A9) (LRR D) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8) <input type="checkbox"/> Vernal Pools (F9)	Indicators for Problematic Hydric Soils³: <input type="checkbox"/> 1 cm Muck (A9) (LRR C) <input type="checkbox"/> 2 cm Muck (A10) (LRR B) <input type="checkbox"/> Reduced Vertic (F18) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> Other (Explain in Remarks)
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³Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):
 Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes _____ No

Remarks:
 No hydric soil indicators detected.

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (any one indicator is sufficient)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) (Nonriverine) <input type="checkbox"/> Sediment Deposits (B2) (Nonriverine) <input type="checkbox"/> Drift Deposits (B3) (Nonriverine) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Salt Crust (B11) <input type="checkbox"/> Biotic Crust (B12) <input type="checkbox"/> Aquatic Invertebrates (B13) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6) <input type="checkbox"/> Other (Explain in Remarks)	<u>Secondary Indicators (2 or more required)</u> <input type="checkbox"/> Water Marks (B1) (Riverine) <input type="checkbox"/> Sediment Deposits (B2) (Riverine) <input type="checkbox"/> Drift Deposits (B3) (Riverine) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5)
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Field Observations:

Surface Water Present? Yes _____ No Depth (inches): 12"

Water Table Present? Yes _____ No Depth (inches): 12"

Saturation Present? (includes capillary fringe) Yes _____ No Depth (inches): 12"

Wetland Hydrology Present? Yes _____ No

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

Remarks:
 No wetland hydrology indicators detected.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Shifler Property City/County: Yolo County Sampling Date: 9/10/10
 Applicant/Owner: Teichert Aggregates State: CA Sampling Point: 10
 Investigator(s): Daria Snider Section, Township, Range: Section 27 + 28/T10N/R1E
 Landform (hillslope, terrace, etc.): Constructed channel Local relief (concave, convex, none): _____ Slope (%): _____
 Subregion (LRR): C Lat: _____ Long: _____ Datum: NAD83
 Soil Map Unit Name: Yolo silt loam NWI classification: None

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

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

Hydrophytic Vegetation Present? Yes <u>_____</u> No <u>X</u> Hydric Soil Present? Yes <u>_____</u> No <u>X</u> Wetland Hydrology Present? Yes <u>X</u> No <u>_____</u>	Is the Sampled Area within a Wetland? <u>waters</u> Yes <u>X</u> No <u>_____</u>
Remarks: <div style="font-size: 1.2em; padding: 10px;"> Irrigation canal </div>	

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. _____	_____	_____	_____	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)
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
Total Cover: _____				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 = _____
<u>Sapling/Shrub Stratum</u>				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
Total Cover: _____				
<u>Herb Stratum</u>				Hydrophytic Vegetation Indicators: ___ Dominance Test is >50% ___ Prevalence Index is ≤3.0 ¹ ___ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ___ Problematic Hydrophytic Vegetation ¹ (Explain)
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
Total Cover: _____				
<u>Woody Vine Stratum</u>				¹ Indicators of hydric soil and wetland hydrology must be present.
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
Total Cover: _____				
% Bare Ground in Herb Stratum _____ % Cover of Biotic Crust _____				Hydrophytic Vegetation Present? Yes <u>_____</u> No <u>X</u>

Remarks:
 Channel is unvegetated, but banks support *Polygonum* sp., *Paspalum dilatatum*, *Sorghum halapense*, *Cyperus esculentus*, *Fichinochloa colona*, *Leptochloa fasciculata*, + *Cynodon dactylon*, etc.

SOIL

Sampling Point: 10

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)		Indicators for Problematic Hydric Soils ³ :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 1 cm Muck (A9) (LRR C)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> 2 cm Muck (A10) (LRR B)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Reduced Vertic (F18)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Stratified Layers (A5) (LRR C)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> 1 cm Muck (A9) (LRR D)	<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Depressions (F8)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Vernal Pools (F9)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)		

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

Restrictive Layer (if present): Type: _____ Depth (inches): _____	Hydric Soil Present? Yes _____ No _____
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Remarks:
No soil pit dug due to depth and speed of water.

HYDROLOGY

Wetland Hydrology Indicators:		Secondary Indicators (2 or more required)
Primary Indicators (any one indicator is sufficient)		
<input checked="" type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Water Marks (B1) (Riverine)
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Biotic Crust (B12)	<input type="checkbox"/> Sediment Deposits (B2) (Riverine)
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Drift Deposits (B3) (Riverine)
<input type="checkbox"/> Water Marks (B1) (Nonriverine)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Sediment Deposits (B2) (Nonriverine)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Drift Deposits (B3) (Nonriverine)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Thin Muck Surface (C7)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input checked="" type="checkbox"/> Other (Explain in Remarks) <i>OHUM</i>	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Shallow Aquitard (D3)
		<input type="checkbox"/> FAC-Neutral Test (D5)

Field Observations:	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____
Surface Water Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>18"</u>	
Water Table Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>surface</u>	
Saturation Present? (includes capillary fringe) Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>surface</u>	

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

Remarks:
OHUM present + indicated by extent of scar.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Shifler Property City/County: Yolo County Sampling Date: 9/10/10
 Applicant/Owner: Teichert Associates State: CA Sampling Point: 11N
 Investigator(s): Daria Spidler Section, Township, Range: Section 27 + 28 / T10N / R1E
 Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): — Slope (%): —
 Subregion (LRR): C Lat: — Long: — Datum: NAD83
 Soil Map Unit Name: — NWI classification: None

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

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

Hydrophytic Vegetation Present? Yes <u>X</u> No <u>—</u> Hydric Soil Present? Yes <u>—</u> No <u>X</u> Wetland Hydrology Present? Yes <u>—</u> No <u>X</u>	Is the Sampled Area within a Wetland? Yes <u>—</u> No <u>X</u>
Remarks: <p style="font-size: 1.2em; margin-left: 20px;">Upland comparison to DP 10.</p>	

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:														
1. <u>Quercus lobata</u>	<u>70</u>	<u>✓</u>	<u>Fac*</u>	Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A)														
2. _____				Total Number of Dominant Species Across All Strata: <u>1</u> (B)														
3. _____				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>75</u> (A/B)														
4. _____																		
Total Cover: <u>70</u>																		
Sapling/Shrub Stratum				Prevalence Index worksheet:														
1. <u>Sambucus nigra ssp. racemosa</u>	<u>20</u>	<u>✓</u>	<u>Fac</u>	<table style="width:100%; border: none;"> <tr> <td>___ Total % Cover of:</td> <td>___ Multiply by:</td> </tr> <tr> <td>OBL species _____</td> <td>x 1 = _____</td> </tr> <tr> <td>FACW species _____</td> <td>x 2 = _____</td> </tr> <tr> <td>FAC species _____</td> <td>x 3 = _____</td> </tr> <tr> <td>FACU species _____</td> <td>x 4 = _____</td> </tr> <tr> <td>UPL species _____</td> <td>x 5 = _____</td> </tr> <tr> <td>Column Totals: _____</td> <td>(A) _____ (B) _____</td> </tr> </table>	___ 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) _____
___ 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) _____																	
2. _____				Prevalence Index = B/A = _____														
3. _____																		
4. _____																		
5. _____																		
6. _____																		
7. _____																		
8. _____																		
Total Cover: <u>20</u>																		
Herb Stratum				Hydrophytic Vegetation Indicators:														
1. <u>Epilobium brachycarpum</u>	<u>10</u>	<u>✓</u>	<u>N/L</u>	<u>X</u> Dominance Test is >50%														
2. <u>Cynodon dactylon</u>	<u>10</u>	<u>✓</u>	<u>Fac</u>	___ Prevalence Index is ≤3.0 ¹														
3. _____				___ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)														
4. _____				___ Problematic Hydrophytic Vegetation ¹ (Explain)														
5. _____																		
6. _____																		
7. _____																		
8. _____																		
Total Cover: <u>20</u>																		
Woody Vine Stratum				Hydrophytic Vegetation Present?														
1. _____				Yes <u>X</u> No <u>—</u>														
2. _____																		
Total Cover: _____																		
% Bare Ground in Herb Stratum <u>80</u>		% Cover of Biotic Crust <u>7</u>																
Remarks:																		

SOIL

Sampling Point: 11N

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-12"	2.5 Y 2/2	100					clay loam	

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) <input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) (LRR C) <input type="checkbox"/> 1 cm Muck (A9) (LRR D) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8) <input type="checkbox"/> Vernal Pools (F9)	Indicators for Problematic Hydric Soils³: <input type="checkbox"/> 1 cm Muck (A9) (LRR C) <input type="checkbox"/> 2 cm Muck (A10) (LRR B) <input type="checkbox"/> Reduced Vertic (F18) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> Other (Explain in Remarks)
--	---	--

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

Restrictive Layer (if present):
 Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks:
No hydric soil indicators detected.

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (any one indicator is sufficient) <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) (Nonriverine) <input type="checkbox"/> Sediment Deposits (B2) (Nonriverine) <input type="checkbox"/> Drift Deposits (B3) (Nonriverine) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Salt Crust (B11) <input type="checkbox"/> Biotic Crust (B12) <input type="checkbox"/> Aquatic Invertebrates (B13) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6) <input type="checkbox"/> Other (Explain in Remarks)	Secondary Indicators (2 or more required) <input type="checkbox"/> Water Marks (B1) (Riverine) <input type="checkbox"/> Sediment Deposits (B2) (Riverine) <input type="checkbox"/> Drift Deposits (B3) (Riverine) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5)
---	---	--

Field Observations:

Surface Water Present? Yes _____ No X Depth (inches): 12"

Water Table Present? Yes _____ No X Depth (inches): 12"

Saturation Present? (includes capillary fringe) Yes _____ No X Depth (inches): 12"

Wetland Hydrology Present? Yes _____ No X

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

Remarks:
No wetland hydrology indicators present.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Shifler Property City/County: Yolo County Sampling Date: 9/10/10
 Applicant/Owner: Teichert Aggregates State: CA Sampling Point: 12
 Investigator(s): Daria Snider Section, Township, Range: Section 27 + 28 / T10N / R1E
 Landform (hillslope, terrace, etc.): Ditch Local relief (concave, convex, none): — Slope (%): —
 Subregion (LRR): C Lat: — Long: — Datum: NAD83
 Soil Map Unit Name: Yolo silt loam NWI classification: None

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

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

Hydrophytic Vegetation Present? Yes <u>—</u> No <u>X</u> Hydric Soil Present? Yes <u>X</u> No <u>—</u> Wetland Hydrology Present? Yes <u>X</u> No <u>—</u>	Is the Sampled Area within a Wetland? <u>waters</u> Yes <u>X</u> No <u>—</u>
Remarks: <u>Drainage ditch Not - feature dead-ends into recently-tilled field.</u>	

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: _____ (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)
4. _____	_____	_____	_____	
Total Cover: _____				
<u>Sapling/Shrub Stratum</u>				Prevalence Index worksheet:
1. _____	_____	_____	_____	Total % Cover of: _____ Multiply by: _____
2. _____	_____	_____	_____	OBL species _____ x 1 = _____
3. _____	_____	_____	_____	FACW species _____ x 2 = _____
4. _____	_____	_____	_____	FAC species _____ x 3 = _____
5. _____	_____	_____	_____	FACU species _____ x 4 = _____
Total Cover: _____				UPL species _____ x 5 = _____
<u>Herb Stratum</u>				Column Totals: _____ (A) _____ (B)
1. _____	_____	_____	_____	Prevalence Index = B/A = _____
2. _____	_____	_____	_____	Hydrophytic Vegetation Indicators:
3. _____	_____	_____	_____	___ Dominance Test is >50%
4. _____	_____	_____	_____	___ Prevalence Index is ≤3.0 ¹
5. _____	_____	_____	_____	___ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
6. _____	_____	_____	_____	___ Problematic Hydrophytic Vegetation ¹ (Explain)
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
Total Cover: _____				
<u>Woody Vine Stratum</u>				¹ Indicators of hydric soil and wetland hydrology must be present.
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
Total Cover: _____				Hydrophytic Vegetation Present? Yes <u>—</u> No <u>X</u>
% Bare Ground in Herb Stratum _____		% Cover of Biotic Crust _____		

Remarks:
Feature is primarily unvegetated, but Phalaris aquatica + Epilobium brachycarpum are present on banks.

SOIL

Sampling Point: 12

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-6"	2.5Y ² / ₂	100					mucky modified mineral	

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) (LRR C) <input type="checkbox"/> 1 cm Muck (A9) (LRR D) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input checked="" type="checkbox"/> Loamy Mucky Mineral (F1) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8) <input type="checkbox"/> Vernal Pools (F9)	Indicators for Problematic Hydric Soils³: <input type="checkbox"/> 1 cm Muck (A9) (LRR C) <input type="checkbox"/> 2 cm Muck (A10) (LRR B) <input type="checkbox"/> Reduced Vertic (F18) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> Other (Explain in Remarks)
--	--	--

Restrictive Layer (if present):
 Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (any one indicator is sufficient) <input type="checkbox"/> Surface Water (A1) <input checked="" type="checkbox"/> High Water Table (A2) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) (Nonriverine) <input type="checkbox"/> Sediment Deposits (B2) (Nonriverine) <input type="checkbox"/> Drift Deposits (B3) (Nonriverine) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Salt Crust (B11) <input type="checkbox"/> Biotic Crust (B12) <input type="checkbox"/> Aquatic Invertebrates (B13) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6) <input checked="" type="checkbox"/> Other (Explain in Remarks) OHWM	Secondary Indicators (2 or more required) <input type="checkbox"/> Water Marks (B1) (Riverine) <input type="checkbox"/> Sediment Deposits (B2) (Riverine) <input type="checkbox"/> Drift Deposits (B3) (Riverine) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5)
---	--	--

Field Observations:

Surface Water Present? Yes No Depth (inches): _____

Water Table Present? Yes No Depth (inches): 2"

Saturation Present? Yes No Depth (inches): Surface

Wetland Hydrology Present? Yes No

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

Remarks:
 OHWM present + indicated by change in veg.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Shifler Property City/County: Yolo County Sampling Date: 9/10/10
 Applicant/Owner: Teichert Aggregates State: CA Sampling Point: 13N
 Investigator(s): Daria Snider Section, Township, Range: Section 27 + 28 / T10N / R1E
 Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): _____ Slope (%): _____
 Subregion (LRR): C Lat: _____ Long: _____ Datum: NAD83
 Soil Map Unit Name: Yolo silt loam NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X 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 <u>X</u> Hydric Soil Present? Yes _____ No <u>X</u> Wetland Hydrology Present? Yes _____ No <u>X</u>	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u>
Remarks: <div style="font-size: 1.2em; margin-top: 10px;">Upland comparison to DP 12.</div>	

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>1</u> (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A/B)
4. _____	_____	_____	_____	
Total Cover: _____				
Sapling/Shrub Stratum				
1. _____	_____	_____	_____	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 = _____
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
Total Cover: _____				
Herb Stratum				
1. <u>Malva neglecta</u>	<u>10</u>	<u>✓</u>	<u>N/L</u>	Hydrophytic Vegetation Indicators: ___ Dominance Test is >50% ___ Prevalence Index is ≤3.0 ¹ ___ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ___ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present.
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
Total Cover: <u>10</u>				
Woody Vine Stratum				
1. _____	_____	_____	_____	Hydrophytic Vegetation Present? Yes _____ No <u>X</u>
2. _____	_____	_____	_____	
Total Cover: _____				
% Bare Ground in Herb Stratum <u>90</u>		% Cover of Biotic Crust <u>0</u>		
Remarks:				

SOIL

Sampling Point: 130

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-12"	2.5Y 3/2	100					crandy clay loam	

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

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

Indicators for Problematic Hydric Soils³:

- 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)

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

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No Y

Remarks:

No hydric soil indicators detected.

HYDROLOGY

Wetland Hydrology Indicators:

Secondary Indicators (2 or more required)

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)

- 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 X Depth (inches): 12"

Water Table Present? Yes _____ No X Depth (inches): 2"

Saturation Present? (includes capillary fringe) Yes _____ No X Depth (inches): 12"

Wetland Hydrology Present? Yes _____ No X

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

Remarks:

No wetland hydrology indicators detected.

ATTACHMENT B

Aerial Photograph



JOB NAME: Shifler Property - WD
 PROJECT NO: 2010-109
 MAP SCALE: 1"=200'
 DATE: 9/15/2010
 REVISION: 4/20/2012
 FILE NAME: Shifler_WD_v3.dwg

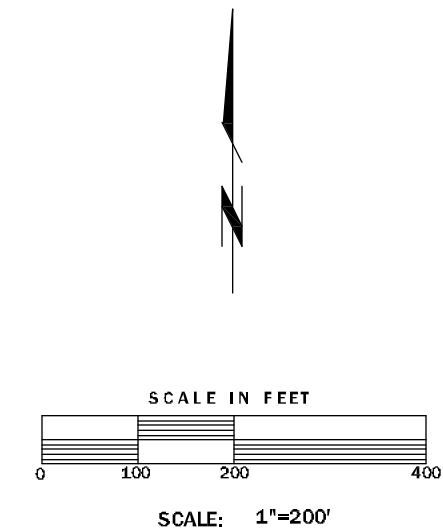


Project Boundary¹

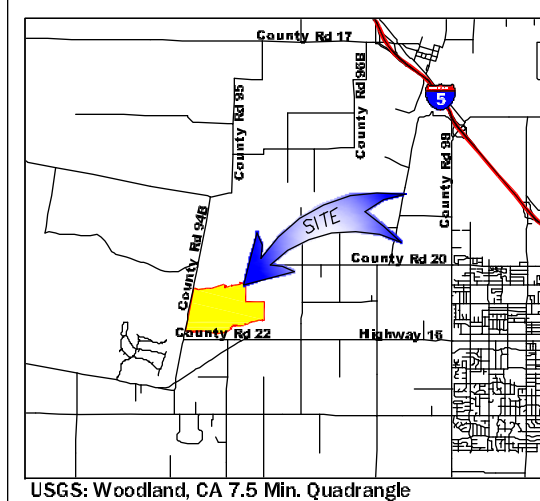
NOTES

Gross project acreage: ± 320.4
 Base data source: Teichert
 Aerial photo source: Digital Globe, September 2009

¹Boundary source:
 The project boundary extents depicted on this graphic have been provided by Teichert.



VICINITY MAP



SHIFLER PROPERTY

AERIAL PHOTOGRAPH

DATE: 9/15/2010	REVISION DATE: 4/20/2012	PROJECT NUMBER: 2010-109
CAD SPECIALIST: KO	SCALE: 1"=200'	MAP NAME: Shifler_WD_v3.dwg
MAP LOCATION: N:\2010\2010-109 Shifler Property\MAPS\Wetland\Mapppg\Wetland_Delineation\3		QA/QC:
WETLAND VERIFICATION LETTER DATE:		PM:

ECORP Consulting, Inc.
 ENVIRONMENTAL CONSULTANTS

Inland Empire 215 North 5th Street Redlands, CA 92374 Ph: (909) 307-6046	Northern California 2525 Warren Drive Rocklin, CA 95677 Ph: (916) 782-9100	San Diego Region 3914 Murphy Canyon Rd. Suite A232 San Diego, CA 92123 Ph: (619) 479-4040	Bay Area 1488 Harrison Street Suite 302 San Francisco, CA 94103 Ph: (415) 553-1101	Orange County 1801 Park Court Place Building 106, Ste 103 Santa Ana, CA 92701 Ph: (714) 648-0630
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ATTACHMENT C

Plant Species Observed On-Site

**Shifler Property
Wetland Delineation
Plant Species Observed On-Site**

Scientific Name	Common Name	Indicator Status
<i>Ailanthus altissima</i>	Tree-of-heaven	FACU
<i>Amaranthus albus</i>	Pigweed amaranth	FACU
<i>Amaranthus blitoides</i>	Prostrate amaranth	FACW
<i>Asclepias fascicularis</i>	Narrow-leaf milkweed	FAC
<i>Avena fatua</i>	Wild oat	N/L
<i>Bromus hordeaceus</i>	Soft brome	FACU-
<i>Bromus madritensis</i> ssp. <i>rubens</i>	Red brome	NI
<i>Chenopodium album</i>	Lamb's quarters	FAC
<i>Convolvulus arvensis</i>	Morning glory	N/L
<i>Conyza canadensis</i>	Canada horseweed	FAC
<i>Cynodon dactylon</i>	Bermuda grass	FAC
<i>Cyperus esculentus</i>	Yellow nutgrass	FACW
<i>Datura wrightii</i>	Jimson weed	N/L
<i>Echinochloa colona</i>	Jungle rice	FACW
<i>Echinodorus berteroi</i>	Burhead	OBL
<i>Epilobium brachycarpum</i>	Panicled willow-herb	N/L
<i>Epilobium ciliatum</i>	Hairy willow-herb	FACW
<i>Eremocarpus setigerus</i>	Turkey mullein	N/L
<i>Helianthus annuus</i>	Common sunflower	FAC-
<i>Hirschfeldia incana</i>	Mustard	N/L
<i>Juglans hindsii</i>	Black walnut	FAC
<i>Juglans regia</i>	English walnut	N/L
<i>Lactuca serriola</i>	Prickly lettuce	FAC
<i>Lepidium latifolium</i>	Broad-leaf pepper grass	FACW
<i>Leptochloa fascicularis</i>	Bearded sprangletop	OBL
<i>Lolium multiflorum</i>	Italian ryegrass	FAC*
<i>Lycopersicon esculentum</i>	Cultivated tomato	N/L
<i>Marrubium vulgare</i>	Common horehound	FAC
<i>Nicotiana glauca</i>	Tree tobacco	FAC
<i>Paspalum dilatatum</i>	Dallis grass	FAC
<i>Phalaris aquatica</i>	Harding grass	FAC+
<i>Proboscidea lutea</i>	Devil's claw	N/L
<i>Polygonum</i> species	Smartweed	- -
<i>Portulaca oleraceus</i>	Common purslane	FAC
<i>Quercus lobata</i>	Valley oak	FAC*
<i>Raphanus sativus</i>	Purple wild radish	N/L
<i>Rumex crispus</i>	Curly dock	FACW-
<i>Silybum marianum</i>	Milk thistle	N/L
<i>Sorghum halepense</i>	Johnson grass	FACU

**Shifler Property
Wetland Delineation
Plant Species Observed On-Site**

Scientific Name	Common Name	Indicator Status
<i>Toxicodendron diversilobum</i>	Poison oak	N/L
<i>Tribulus terrestris</i>	Puncture vine	N/L
<i>Typha angustifolia</i>	Narrow-leaf cattail	OBL
<i>Typha</i> species	Cattail	OBL

Indicator Status Codes

OBL = Obligate Wetland; occur almost always (estimated probability >99%) under natural conditions in wetlands.

FACW = Facultative Wetland; usually occur in wetlands (estimated probability 67%-99%) under natural conditions in wetlands.

FAC = Facultative; equally likely to occur in wetlands or non-wetlands (estimated probability 34%-66%).

FACU = Facultative Upland; usually occur in non-wetlands (estimated probability 67%-99%).

UPL = Obligate Upland; occur almost always (estimated probability >99%) in non-wetlands in the region specified.

N/L = Not Listed.

NI = No indicator was recorded for those species for which insufficient information was available to determine a status.

-- = May or may not occur in wetlands depending upon species.

A positive (+) sign indicates a frequency toward the higher (more frequently found in wetlands) end of the facultative categories.

A negative (-) sign indicates a frequency toward the lower (less frequently found in wetlands) end of the facultative categories.

An asterisk (*) indicates a tentative assignment based upon limited information or conflicting review.

ATTACHMENT D

Wetland Delineation



WETLANDS³

Seasonal Wetland				Marsh			
ID	EXISTING SQ. FEET	EXISTING ACREAGE		ID	EXISTING SQ. FEET	EXISTING ACREAGE	
SW-1	816	0.014		Marsh-1	404	0.009	

OTHER WATERS³

Pond				Irrigation Canal			
ID	EXISTING SQ. FEET	EXISTING ACREAGE		ID	EXISTING SQ. FEET	EXISTING ACREAGE	LINEAR FEET
Pond-1	4269	0.098		IC-1	8025	0.184	1149
				IC-2	19145	0.440	1235
				IC-3	48120	1.105	3207

Drainage Ditch

ID	EXISTING SQ. FEET	EXISTING ACREAGE	LINEAR FEET
DD-1	247	0.006	49

Waters of the U.S.

3 CRITERIA SAMPLE POINT	GPS COORDINATES LAT/LONG
△ 01	-121.857196 / 38.679875
△ 03	-121.857310 / 38.679859
△ 06	-121.857977 / 38.687946
△ 08	-121.857430 / 38.686244
△ 10	-121.857140 / 38.686723
△ 12	-121.857307 / 38.679947

Upland

3 CRITERIA SAMPLE POINT	GPS COORDINATES LAT/LONG
△ 02N	-121.857174 / 38.679884
△ 04N	-121.857337 / 38.679832
△ 05N	-121.858828 / 38.687710
△ 07N	-121.859030 / 38.688255
△ 09N	-121.857437 / 38.686223
△ 11N	-121.857133 / 38.686723
△ 13N	-121.857327 / 38.679952

WATERS OF THE U.S. ACREAGE¹

CLASSIFICATION	EXISTING ACREAGE
WETLANDS:	
Seasonal Wetland	0.014
Marsh	0.009
OTHER WATERS:	
Pond	0.098
Irrigation Canal	1.729
Drainage Ditch	0.006
TOTAL:	1.856

OTHER FEATURES

- △ Three Criteria Sample Point
- Project Boundary²
- } Culvert

NOTES

Gross project acreage: ± 320.4

Base data source: Telchert

Aerial photo source: Digital Globe, September 2009

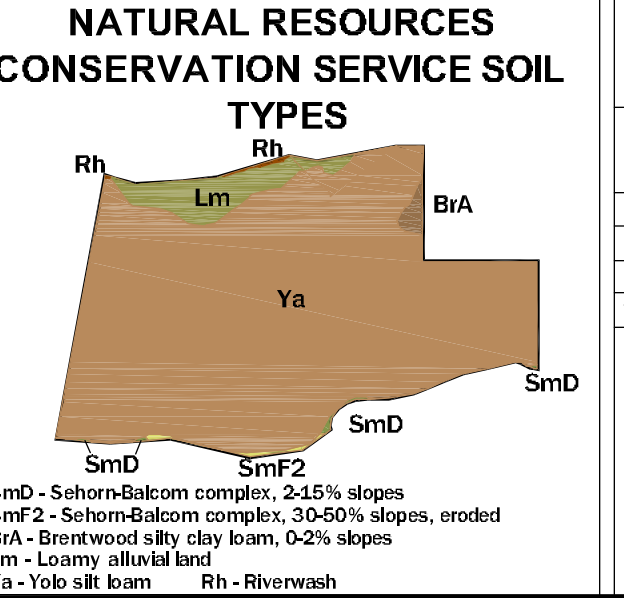
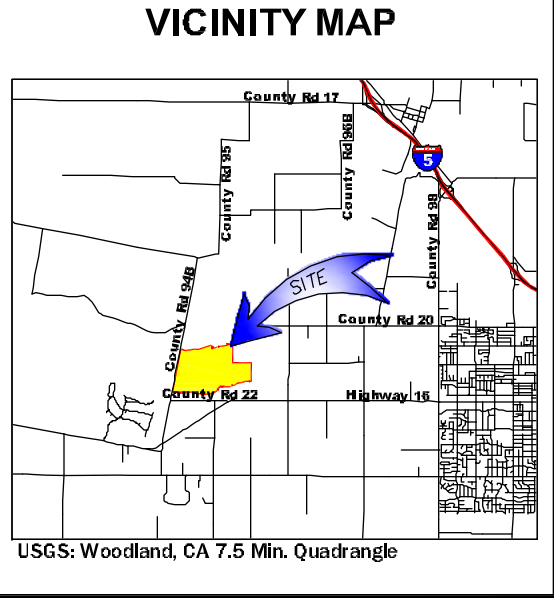
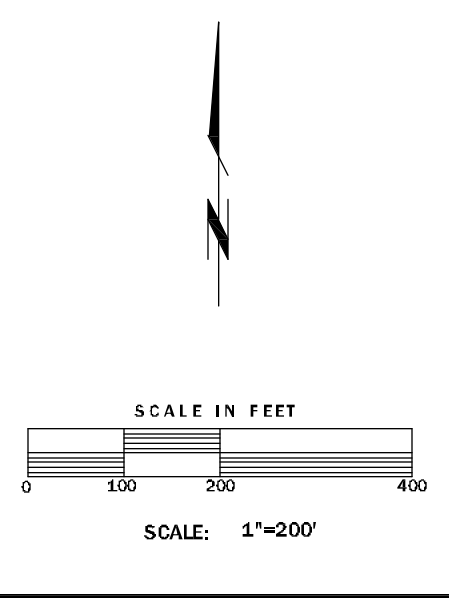
Topographic data source: Woodland USGS Topographic Quadrangle

Delineator: D. Snider

¹ Subject to U.S. Army Corps of Engineers verification. This exhibit depicts information and data produced in strict accord with the wetland delineation methods described in the 1987 Corps of Engineers Wetlands Delineation Manual and the Interim Regional Supplement to the Corps of Engineers Wetlands Delineation Manual: Arid West Region and conforms to Sacramento District specifications. However, wetland boundaries have not been legally surveyed and may be subject to minor adjustments if exact locations are required.

² Boundary source: The project boundary extents depicted on this graphic have been provided by Telchert Materials.

³ The acreage value for each feature has been rounded to the nearest 1/1000 decimal. Summation of these values may not equal the total potential Waters of the U.S. acreage reported.



SHIFLER PROPERTY

WETLAND DELINEATION¹

DATE: 9/15/2010 REVISION DATE: 4/20/2012 PROJECT NUMBER: 2010-109

CAD SPECIALIST: KO SCALE: 1"=200' MAP NAME: Shifler_WD_v3.dwg

MAP LOCATION: N:\2010\2010-109 Shifler Property\MAPS\Wetland\Maping\Wetland_Delineation\3 QA/QC:

WETLAND VERIFICATION LETTER DATE: PM:

ECORP Consulting, Inc.
 ENVIRONMENTAL CONSULTANTS

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 Orange County: 1801 Park Court Place, Building 16, Ste 103, Santa Ana, CA 92701, Ph: (714) 648-0530

ATTACHMENT E

Wetland Delineation Shape File (to be include with USACE submittal only)

ATTACHMENT F

USACE-Verified Wetland Map and Verification Letter (to be included in ECORP
Consulting master copy only)