Special-Status Wildlife with Potential to Occur

Scientific Name	Common Name	Status	Potential to Occur	Habitat
Invertebrates				
Branchinecta longiantenna	longhorn Fairy Shrimp	FE	Not Likely To Occur	Clear to turbid grassland pools within San Joaquin Vernal Pool Region
Branchinecta conservation	conservancy fairy shrimp	FE	Not Likely To Occur	Turbid water in vernal pools
Branchinecta lynchi	vernal Pool Fairy Shrimp	FT	Not Likely to Occur	Vernal pools, vernal swales, alkaline pools, and road-side ditches
Lepidurus packardi	vernal pool tadpole shrimp	FE	Not Likely To Occur	Clear, well vegetated vernal pools to turbid, alkali scald pools; generally in water deeper than 12 cm
Reptiles				
Actinemys marmorata pallida	Southwestern pond turtle	CSC	Low	Slow-moving waterways with upland habitat accessible for basking.
Anniella pulchra pulchra	silvery legless lizard	CSC	Moderate	Sandy or loose loamy soils with adequate soil moisture
Gambelia sila	blunt-nosed leopard lizard	FE, SE, SFP	Present (Observed in Valley Floor Conservation Lands 2013)	Arid grasslands, alkali flats, low elevation foothills, large washes; burrows of other species typically used for cover and sparse vegetation preferred
Masticophis flagellum ruddocki	San Joaquin coachwhip	CSC	High	Desert, prairie, scrublands, juniper-grassland, and other habitats in dry, open terrain
Phrynosoma blainvillii	coast horned lizard	CSC	High	Open areas with sandy soil and low vegetation, lowlands along sandy washes with scattered shrubs
Rana draytonii	California red-legged frog	FT	Not Likely To Occur	Standing deep ponds, pools, and streams; tall vegetation
Thamnophis hammondii	two-striped garter snake	CSC	Not Likely To Occur	In or near permanent fresh water, along streams with rocky beds bordered by riparian vegetation
Amphibians				

Ambystoma californiense	California tiger salamander	FT, STC	High	Burrows of small mammals within grassland or oak savannah with wetland breeding ponds up to one mile away
Spea hammondii	western spadefoot toad	CSC	Moderate	Open areas with sandy or gravelly soils within woodlands, grasslands, sandy washes, lowlands, and other habitats.
Birds				
Agelaius tricolor	tricolored blackbird	CSC	High	Nest in marshy areas and settle in areas with access to open water; forage in valley and foothill grassland and agricultural fields
Ammodramus savannarum	grasshopper sparrow	CSC	High	Open grasslands and prairies with patches of bare ground.
Aquila chrysaetos	golden eagle	SFP	Present	Partially or completely open country around mountains or hills within habitats ranging from desert to arctic
Asio flammeus	short-eared owl	CSC	Low (nesting)	Open country including tundra, prairie, grassland, sand dunes and other habitats; sufficient vegetation required for nesting
Asio otus	long-eared owl	CSC	Moderate	Combination of grassland for foraging and dense tall shrubs for nesting and roosting.
Athene cunicularia	Burrowing owl	CSC	Present	Open grasslands with sparse vegetation and few shrubs, gentle topography and well-drained soils
Buteo swainsonii	Swainson's hawk	ST	Present	Grasslands, sage flats, or swaths for nesting; nest within trees, often the only tree in the area
Charadrius montanus	mountain plover	CSC, FTC	Present (winter only)	Breeds onen plains at moderate elevations; winters in short-grass plains and fields, plowed fields, and sandy deserts.

Circus cyaneus	northern harrier	CSC	Present	Breeds in wide open habitats from tundra to prairie grasslands; nests on ground in grasses or wetland vegetation
Elanus leucurus	white-tailed kite	SFP	Moderate	Commonly found in savanna, woodlands, marshes, desert grassland, partially cleared lands and cultivated fields; avoids areas with excessive winter freeze
Gymnogyps californianus	California condor	FE, SE	Not Likely to Occur	Nest in caves on cliff faces in mountains; scavenge in habitats ranging from Pacific beaches to mountain forests and meadows
Haliaeetus leucocephalus	bald eagle	SE, FP	Not Likely To Occur	Nest in areas adjacent to large bodies of water; in winter can be seen in dry, open uplands near open water
Lanius ludovicianus	Loggerhead shrike	CSC	Present	Open country with scattered shrubs and trees
Pooecetes gramineus affinis	Oregon vesper sparrow	CSC	High (winter only)	Breeds in Oregon; most often found in hilly margins of Willamette Valley; dry, upland prairies and pastures; winters over much of California
Xanthocephalus xanthocephalus	yellow-headed Blackbird	CSC	Low	Breed and roost in freshwater wetlands with dense, emergent vegetation; forage in fields
Mammals				
Ammospermophilus nelsoni	San Joaquin antelope squirrel	ST	Present	Dry flat or rolling terrain on alluvial and loamy soils; grassy, sparsely shrubby ground
Antrozous pallidus	pallid bat	CSC	High (foraging)	Desert habitats with rocky outcrops for roosting
Corynorhinus townsendii	Townsend's big-eared bat	CSC	Low (foraging)	Pine forests and arid desert scrub habitats with caves nearby for roosting; may roost in abandoned buildings
Dipodomys ingens	giant kangaroo rat	FE, SE	Present	Arid gentle slopes and plains with variable vegetative cover and well-drained soils

Dipodomys nitratoides brevinasus	short-nosed kangaroo rat	CSC	High	Grasslands with scattered shrubs and desert shrub associations on loose soils
Dipodomys elephantinus	big-eared kangroo rat	CSC	Not Likely to Occur	Chaparral areas; most often under dense vegetation
Eumops perotis	western mastiff bat	CSC	Moderate (foraging)	Broad, open areas within dry desert washes, floodplains, grasslands, agricultural areas, and other habitats. Crevices in cliff faces, high buildings, trees or tunnels required for roosting
Onychomys torridus tularensis	Tulare grasshopper mouse	CSC	High	Arid shrubland communities in hot, arid grassland and shrubland associations.
Taxidea taxus	American badger	CSC	Present	Dry, open grasslands and brushlands with little groundcover.
Vulpes macrotis mutica	San Joaquin kit fox	FE/ST	Present	Loose-textured soils within grasslands; habitat converted for urban uses are still utilized if remnants of native habitat are present.

FE = Federally Endangered.	FT = Federally Threatened	SE = State Endangered	FTC = Federally Threatened Candidate
SFP = State Fully Protected	CSC = California Species of Special Concern	STC = State Threatened Candidate	ST = State Threatened

Photographic Log

Photo 1: Study Area 1 from the southern study area boundary looking northwest.

Photo 2: Study Area 2 looking west from southeast study area boundary.

Photo 3: View of Study Area 2 facing northwest.

Photo 4: View of Study Area 3 facing northeast.

Photo 5: Small drainage along eastern boundary of Study Area 3.

Photo 6: View of southern portion of Study Area 3 facing west.

Photo 7: View of Study Area 4 facing north.

Photo 8: Study Area 4 facing east/northeast from southern portion of study area.

Photo 9: Study Area 4 facing west from access road.

Photo 10: View of Study Area 4 facing west.

Photo 11: View of Study Area 5 facing west from eastern portion of study area.

Photo 12: Study Area 5 facing west/northwest.

Photo 13: View of Study Area 5 facing east.

Photo 14: Study Area 6 facing southeast.

Photo 15: Northwestern portion of Study Area 6 within Panoche Creek bed.

Photo 16: View facing east from wetland soil data point within Panoche Creek in Study Area 6.

Photo 17: View facing south from upland soil data point in Study Area 6.

Photo 18: View of central portion of Study Area 6 facing east.

Photo 19: View of Study Area 6 facing north.

Photo 20: View of well-maintained crop rows within Study Area 7.

Photo 21: View of Study Area 7 taken from Study Area 6 facing east.

Photo 22: Southern portion of Study Area 8 taken from central cleared portion of study area.

Photo 23: View of Panoche Creek located in northern portion of Study Area 8.

Photo 24: View of well-maintained almond orchards of Study Area 9.

Photo 25: View of Study Area 9 facing east.

Photo 26: View of southeast quarter of Study Area 10 facing north.

Photo 27: View of southwest quarter of Study Area 10 facing south.

Photo 28: View of southeast quarter of Study Area 10, facing south.

Photo 29: View of northeast quarter of Study Area 10 facing north.

Photo 30: View of northwest quarter of Study Area 10 facing north.

Photo 31: Northern portion of Study Area 11 facing west showing recreational area and orchards.

Photo 32: View of vineyards within southern portion of Study Area 11.

Photo 33: View of Study Area 12 facing east/southeast.

Photo 34: View of northern portion of Study Area 12 within almond orchards.

Photo 35: View of Study Area 12 facing west along West Panoche Road.

Photo 36: View of Study Area 13 facing west towards Panoche Substation.

Photo 37: Cleared area within central portion of Study Area 13.

Study Area	FAMILY	GENUS	SPECIES	COMMON NAME
Study Area 1	Amaranthaceae	*Amaranthus*	*blitoides*	procumbent pigweed
	Boraginaceae	*Amsinkia*	*intermedia*	common fiddleneck
	Brassicaceae	*Lepidium*	*nitidum*	shiny peppergrass
	Brassicaceae	*Caulanthus*	*californicua*	California jewel flower
	Chenopodiaceae	*Chenopodium*	*album*	lamb's quarter
	Chenopodiaceae	*Salsola*	*tragus*	Russian thistle
	Convolvulaceae	*Convolvulus*	*arvensis*	bindweed
	Euphorbiaceae	*Chamaesyce*	*ocellata ssp. ocellata*	prostrate spurge
	Euphorbiaceae	*Croton*	*setigerus*	dove weed
	Gerinaceae	*Erodium*	*cicutarium*	redstem filaree
	Malvaceae	*Malva*	*parviflora*	cheeseweed
	Poaceae	*Bromus*	*madritensis*	red brome
	Poaceae	*Hordeum*	*murinum ssp.*	barley
	Solanaceae	*Datura*	*wrightii*	Jimson weed
	Solanaceae	*Solanum*	*xanti*	nightshade
	Zygophyllaceae	*Tribulus*	*terrestris*	puncture vine
Study Area 2	Asteraceae	*Holocarpha*	*virgata* ssp. *Virgata*	tarplant
	Boraginaceae	*Amsinkia*	*intermedia*	common fiddleneck
	Brassicaceae	*Lepidium*	*nitidum*	shiny peppergrass
	Chenopodiaceae	*Atriplex*	*rosea*	tumbling orach
	Chenopodiaceae	*Atriplex*	*polycarpa*	allscale saltbush
	Chenopodiaceae	*Salsola*	*tragus*	Russian thistle
	Euphorbiaceae	*Chamaesyce*	*ocellata ssp. ocellata*	prostrate spurge
	Euphorbiaceae	*Croton*	*setigerus*	dove weed
	Gerinaceae	*Erodium*	*cicutarium*	redstem filaree
	Lamiaceae	*Trichostema*	*lanceolatum*	vinegar weed
	Poaceae	*Avena*	*fatua*	wild oat
	Poaceae	*Bromus*	*madritensis*	red brome
	Poaceae	*Bromus*	*hordeaceus*	soft chess
	Poaceae	*Distichlis*	*spicata*	salt grass
	Poaceae	*Hordeum*	*murinum ssp.*	barley
Study Area 3	Asteraceae	*Holocarpha*	*virgata* ssp. *Virgata*	tarplant
	Boraginaceae	*Amsinkia*	*intermedia*	common fiddleneck
	Brassicaceae	*Lepidium*	*nitidum*	shiny peppergrass
	Chenopodiaceae	*Atriplex*	*rosea*	tumbling orach
	Chenopodiaceae	*Atriplex*	*polycarpa*	allscale saltbush
	Chenopodiaceae	*Salsola*	*tragus*	Russian thistle
	Euphorbiaceae	*Chamaesyce*	*ocellata ssp. ocellata*	prostrate spurge
	Euphorbiaceae	*Croton*	*setigerus*	dove weed
	Gerinaceae	*Erodium*	*cicutarium*	redstem filaree
	Lamiaceae	*Trichostema*	*lanceolatum*	vinegar weed

Study Area	FAMILY	GENUS	SPECIES	COMMON NAME
	Polygonaceae	*Eriogonum*	*angulosum*	angle-stem wild buckwheat
	Poaceae	*Avena*	*fatua*	wild oat
	Poaceae	*Bromus*	*madritensis*	red brome
	Poaceae	*Bromus*	*hordeaceus*	soft chess
	Poaceae	*Distichlis*	*spicata*	salt grass
	Poaceae	*Hordeum*	*murinum ssp.*	barley
Study Area 4	Asteraceae	Ericameria	linearifolia	interior goldenbush
	Asteraceae	Deinandra	sp.	Potential rarity*
	Asteraceae	Guitierezia	californica	California matchweed
	Boraginaceae	Amsinkia	intermedia	common fiddleneck
	Boraginaceae	Phacelia	tanecetifolia	tansy phacelia
	Brassicaceae	Lepidium	nitidum	shiny peppergrass
	Ephedraceae	Ephedra	californicus	California ephedra
	Euphorbiaceae	Chamaesyce	ocellata ssp. ocellata	prostrate spurge
	Euphorbiaceae	Croton	setigerus	dove weed
	Gerinaceae	Erodium	cicutarium	redstem filaree
	Lamiaceae	Salvia	columbariae	chia
	Lamiaceae	Trichostema	lanceolatum	vinegar weed
	Polemoniaceae	Navarretia	sp. chk. for rare sp.*	
	Polygonaceae	Eriogonum	fasciculatum	California buckwheat
	Poaceae	Bromus	madritensis	red brome
	Poaceae	Schismus	arabicus	Mediterranean grass
	Poaceae	Poa	secunda ssp. secunda	one-sided blue grass
Study Area 5	Asteraceae	Centaurea	melitensis	tocalote
	Boraginaceae	Amsinkia	intermedia	common fiddleneck
	Brassicaceae	Lepidium	nitidum	shiny peppergrass
	Chenopodiaceae	Atriplex	rosea	tumbling orach
	Chenopodiaceae	Atriplex	polycarpa	allscale saltbush
	Euphorbiaceae	Chamaesyce	ocellata ssp. ocellata	prostrate spurge
	Euphorbiaceae	Croton	setigerus	dove weed
	Gerinaceae	Erodium	cicutarium	redstem filaree
	Plantaginaceae	Plantago	ovata	plantain
	Polygonaceae	Eriogonum	angulosum	angle-stem buckwheat
	Polygonaceae	Eriogonum	fasciculatum	California buckwheat
	Poaceae	Bromus	diandrus	ripgut brome
	Poaceae	Bromus	madritensis	red brome
	Poaceae	Schismus	arabicus	Mediterranean grass
	Poaceae	Poa	secunda ssp. secunda	one-sided blue grass
	Asteraceae	Gutierrezia	californica	california matchweed
	Asteraceae	*Isocoma*	*acradenia var.bracteosa*	alkali goldenbush
	Asteraceae	*Stephanomeria*	*pauciflora*	wirelettuce
	Boraginaceae	*Amsinkia*	*intermedia*	common fiddleneck
	Boraginaceae	*Heliotropium*	*curassavicum var. osculatum*	alkali heliotrope
	Chenopodiaceae	*Atriplex*	*rosea*	tumbling orach
	Chenopodiaceae	*Atriplex*	*polycarpa*	allscale saltbush

Study Area	FAMILY	GENUS	SPECIES	COMMON NAME
Study Area 6	Chenopodiaceae	*Salsola*	*tragus*	Russian thistle
	Euphorbiaceae	*Chamaesyce*	*ocellata ssp. ocellata*	prostrate spurge
	Euphorbiaceae	*Croton*	*setigerus*	dove weed
	Gerinaceae	*Erodium*	*cicutarium*	redstem filaree
	Plantaginaceae	*Plantago*	*ovata*	plantain
	Polygonaceae	*Eriogonum*	*angulosum*	angle-stem buckwheat
	Polygonaceae	*Eriogonum*	*fasciculatum*	California buckwheat
	Poaceae	*Bromus*	*diandrus*	ripgut brome
	Poaceae	*Bromus*	*madritensis*	red brome
	Poaceae	*Distichlis*	*spicata*	saltgrass
	Poaceae	*Hordeum*	*murinum ssp.*	wall barley
	Poaceae	*Polypogon*	*monspeliensis*	annual beard grass
	Poaceae	*Poa*	*secunda ssp. secunda*	one-sided blue grass
	Tamaricaceae	*Tamarix*	*ramosissima*	saltcedar
Study Area 7	Punicaceae	*Punica*	*granatum*	pomegranate
	Vitaceae	*Vitis*	*vinifera*	wine grape
Study Area 8	Amaranthaceae	Amaranthus	blitoides	procumbent pigweed
	Asteraceae	Baccharis	salicifolia ssp. salicifolia	mule fat
	Asteraceae	Isocoma	acradenia var.bracteosa	alkali goldenbush
	Asteraceae	Sonchus	oleraceus	common sow thistle
	Asteraceae	Xanthium	strumarium	cocklebur
	Boraginaceae	Amsinkia	intermedia	common fiddleneck
	Boraginaceae	Heliotropium	curassavicum var. osculatum	alkali heliotrope
	Chenopodiaceae	Atriplex	lentiformis	big saltbush
	Chenopodiaceae	Salsola	tragus	Russian thistle
	Euphorbiaceae	Chamaesyce	ocellata ssp. ocellata	prostrate spurge
	Euphorbiaceae	Croton	setigerus	dove weed
	Gerinaceae	Erodium	cicutarium	redstem filaree
	Poaceae	Bromus	diandrus	ripgut brome
	Poaceae	Bromus	madritensis	red brome
	Solanaceae	Datura	wrightii	Jimson weed
	Solanaceae	Nicotiana	glauca	tree tobacco
	Tamaricaceae	Tamarix	ramosissima	saltcedar
Study Area 9	Amaranthaceae	Amaranthus	blitoides	procumbent pigweed
	Boraginaceae	Amsinkia	intermedia	common fiddleneck
	Chenopodiaceae	Chenopodium	album	lamb's quarter
	Convolvulaceae	Convolvulus	arvensis	bindweed
	Euphorbiaceae	Chamaesyce	ocellata ssp. ocellata	prostrate spurge
	Gerinaceae	Erodium	cicutarium	redstem filaree
	Malvaceae	Malva	parviflora	cheeseweed
	Poaceae	Poa	annua	annual blue grass
	Poaceae	Bromus	madritensis	red brome
	Poaceae	Sporobolus	airoides	alkali sacaton
	Solanaceae	Solanum	xanti	nightshade

Study Area	FAMILY	GENUS	SPECIES	COMMON NAME
Study Area 10	Amaranthaceae	*Amaranthus*	*blitoides*	procumbent pigweed
	Asteraceae	*Ambrosia*	*acanthicarpa*	annual bur-sage
	Asteraceae	*Helianthus*	*californicus*	California sunflower
	Asteraceae	*Isocoma*	*acradenia var.bracteosa*	alkali goldenbush
	Boraginaceae	*Amsinkia*	*intermedia*	common fiddleneck
	Brassicaceae	*Hirschfeldia*	*incana*	summer mustard
	Brassicaceae	*Lepidium*	*nitidum*	shiny peppergrass
	Chenopodiaceae	*Chenopodium*	*album*	lamb's quarter
	Chenopodiaceae	*Chenopodium*	*sp.*	
	Chenopodiaceae	*Salsola*	*tragus*	Russian thistle
	Convolvulaceae	*Convolvulus*	*arvensis*	bindweed
	Euphorbiaceae	*Chamaesyce*	*ocellata ssp. ocellata*	prostrate spurge
	Euphorbiaceae	*Croton*	*setigerus*	dove weed
	Gerinaceae	*Erodium*	*cicutarium*	redstem filaree
	Malvaceae	*Malva*	*parviflora*	cheeseweed
	Myrtaceae	*Eucalyptus*	*camaldulensis*	red gum
	Palmae			Introduced Palm
	Poaceae	*Avena*	*fatua*	wild oats
	Poaceae	*Bromus*	*diandrus*	ripgut brome
	Poaceae	*Bromus*	*madritensis*	red brome
	Poaceae	*Distichilis*	*spicata*	saltgrass
	Poaceae	*Hordeum*	*murinum ssp.*	barley
	Solanaceae	*Datura*	*wrightii*	Jimson weed
	Solanaceae	*Nicotiana*	*glauca*	tree tobacco
	Solanaceae	*Solanum*	*xanti*	nightshade
	Zygophyllaceae	*Tribulus*	*terrestris*	puncture vine
Study Area 11	Amaranthaceae	*Amaranthus*	*blitoides*	procumbent pigweed
	Chenopodiaceae	*Chenopodium*	*album*	lamb's quarter
	Chenopodiaceae	*Salsola*	*tragus*	Russian thistle
	Convolvulaceae	*Cressa*	*truxilliensis*	alkali weed
	Euphorbiaceae	*Chamaesyce*	*ocellata ssp. ocellata*	prostrate spurge
	Gerinaceae	*Erodium*	*cicutarium*	redstem filaree
	Martyniaceae	*Proboscideae*	*lutea*	unicorn plant
	Poaceae	*Bromus*	*carinatus*	California brome
	Salicaceae	*Salix*	*goodingii*	Gooding's black willow
	Solanaceae	*Datura*	*wrightii*	Jimson weed
	Tamaricaceae	*Tamarix*	*ramosissima*	saltcedar
Area 12	Asteraceae	*Erigeron*	*canadensis*	horseweed
	Boraginaceae	*Amsinkia*	*intermedia*	common fiddleneck
	Chenopodiaceae	*Chenopodium*	*album*	lamb's quarter
	Chenopodiaceae	*Salsola*	*tragus*	Russian thistle
	Convolvulaceae	*Convolvulus*	*arvensis*	bindweed
	Euphorbiaceae	*Chamaesyce*	*ocellata ssp. ocellata*	prostrate spurge
	Euphorbiaceae	*Croton*	*setigerus*	dove weed
	Gerinaceae	*Erodium*	*cicutarium*	redstem filaree

Study Area	FAMILY	GENUS	SPECIES	COMMON NAME
Study A	Malvaceae	*Malva*	*parviflora*	cheeseweed
	Poaceae	*Avena*	*fatua*	wild oat
	Poaceae	*Cynodon*	*dactylon*	Bermuda grass
	Poaceae	*Hordeum*	*murinum ssp.*	barley
	Salicaceae	*Populus*	*freemontii*	Freemont cottonwood
	Solanaceae	*Datura*	*wrightii*	Jimson weed
	Solanaceae	*Solanum*	*xanti*	nightshade
	Zygophyllaceae	*Tribulus*	*terrestris*	puncture vine
Study Area 13	Amaranthaceae	*Amaranthus*	*blitoides*	procumbent pigweed
	Asteraceae	*Erigeron*	*canadensis*	horseweed
	Asteraceae	*Lactuca*	*serriola*	prickly lettuce
	Boraginaceae	*Amsinkia*	*intermedia*	common fiddleneck
	Brassicaceae	*Lepidium*	*nitidum*	shiny peppergrass
	Cactaceae	*Opuntia*	*ficus-indica*	Mission prickly pear
	Chenopodiaceae	*Atriplex*	*roseum*	tumbling orach
	Chenopodiaceae	*Chenopodium*	*album*	lamb's quarter
	Chenopodiaceae	*Salsola*	*tragus*	Russian thistle
	Convolvulaceae	*Convolvulus*	*arvensis*	bindweed
	Convolvulaceae	*Cressa*	*truxilliensis*	alkali weed
	Euphorbiaceae	*Chamaesyce*	*ocellata ssp. ocellata*	prostrate spurge
	Euphorbiaceae	*Croton*	*setigerus*	dove weed
	Gerinaceae	*Erodium*	*cicutarium*	redstem filaree
	Lamiaceae	*Trichostema*	*lanceolatum*	vinegar weed
	Malvaceae	*Malva*	*parviflora*	cheeseweed
	Onagraceaea	*Epilobium*	*sp.*	
	Poaceae	*Avena*	*fatua*	wild oat
	Poaceae	*Bromus*	*carinatus*	California brome
	Poaceae	*Bromus*	*madritensis*	red brome
	Poaceae	*Cynodon*	*dactylon*	Bermuda grass
	Poaceae	*Hordeum*	*murinum ssp.*	barley
	Salicaceae	*Populus*	*freemontii*	Freemont cottonwood
	Solanaceae	*Datura*	*wrightii*	Jimson weed
	Solanaceae	*Solanum*	*xanti*	nightshade
	Zygophyllaceae	*Tribulus*	*terrestris*	puncture vine

WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site: PVS Study Area 6 City/County: NA/Fresno Sampling Date: 9/18/2014

Applicant/Owner: PV2 State: CA Sampling Point: Wetland 1

Investigator(s): Russell Kokx, Morgan Edel, Julianne Wooten Section, Township, Range: S16, T15S, R12E

Landform (hillslope, terrace, etc.): dry creek bed Local relief (concave, convex, none): none Slope (%): 0

Subregion (LRR): _____ Lat: 36.626284° Long: -120.661358° Datum: NAD83

Soil Map Unit Name: Cerini-Anela-Fluvaquents, saline-Sodic association NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐

Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes	☒	No	☐	
Hydric Soil Present?	Yes	☐	No	☒	**Is the Sampled Area within a Wetland?** **Yes** ☐ **No** ☒
Wetland Hydrology Present?	Yes	☒	No	☐	

Remarks: Panoche Creek

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size:_____)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____			
2. _____			
3. _____			
4. _____			
50% = _____, 20% = _____		= Total Cover	
Sapling/Shrub Stratum (Plot size:_____)			
1. _____			
2. _____			
3. _____			
4. _____			
5. _____			
50% = _____, 20% = _____		= Total Cover	
Herb Stratum (Plot size:1 m)			
1. *Distichlis spicata*	25	yes	FAC
2. *Polypogon monspeliensis*	20	no	FACW
3. *Tamarix ramosissima*	5	no	FAC
4. _____			
5. _____			
6. _____			
7. _____			
8. _____			
50% = _____, 20% = _____		= Total Cover	
Woody Vine Stratum (Plot size:_____)			
1. _____			
2. _____			
50% = _____, 20% = _____		= Total Cover	
% Bare Ground in Herb Stratum 50	% Cover of Biotic Crust _____		

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC:	3	(A)
Total Number of Dominant Species Across All Strata:	_____	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	100	(A/B)

Prevalence Index worksheet:

Total % Cover of :		Multiply by:	
OBL species	_____	x1 =	_____
FACW species	20	x2 =	40
FAC species	30	x3 =	90
FACU species	_____	x4 =	_____
UPL species	_____	x5 =	_____
Column Totals:	50 (A)		130 (B)

Prevalence Index = B/A = 2.6

Hydrophytic Vegetation Indicators:

☒ Dominance Test is >50%

☒ Prevalence Index is ≤3.0[1]

☐ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ☒ **No** ☐

Remarks:

Project Site: PVS Study Area 6

SOIL

Sampling Point: Wetland 1

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (Moist)	%	Type[1]	Loc[2]	Texture	Remarks
4	2.5Y 5/4	100					loamy sand	

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

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

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type:

Depth (Inches):

Hydric Soils Present? **Yes** ☐ **No** ☒

Remarks: Point within Panoche Creek inundated only after storm event.

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

- ☒ Water Marks (B1) **(Riverine)**
- ☒ Sediment Deposits (B2) **(Riverine)**
- ☒ Drift Deposits (B3) **(Riverine)**
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	☐	No	☒	Depth (inches):
Water Table Present?	Yes	☐	No	☒	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes	☐	No	☒	Depth (inches):

Wetland Hydrology Present? **Yes** ☒ **No** ☐

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

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site: PVS Study Area 6 City/County: NA/Fresno Sampling Date: 9/18/2014

Applicant/Owner: PV2 State: CA Sampling Point: Upland 1

Investigator(s): Russell Kokx, Morgan Edel, Julianne Wooten Section, Township, Range: S16, T15S, R12E

Landform (hillslope, terrace, etc.): dry creek bed Local relief (concave, convex, none): none Slope (%): 0

Subregion (LRR): _____ Lat: 36.626357° Long: -120.661423° Datum: NAD83

Soil Map Unit Name: Cerini-Anela-Fluvaquents, saline-Sodic association NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐

Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes ☐	No ☒	**Is the Sampled Area within a Wetland?**	**Yes ☐ No ☒**
Hydric Soil Present?	Yes ☐	No ☒		
Wetland Hydrology Present?	Yes ☐	No ☒		

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size:_____)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Tamarix ramosissima*	30	yes	FAC
2.			
3.			
4.			
50% = _____, 20% = _____	30	= Total Cover	
Sapling/Shrub Stratum (Plot size:_____)			
1.			
2.			
3.			
4.			
5.			
50% = _____, 20% = _____		= Total Cover	
Herb Stratum (Plot size:i m)			
1. *Bromus madritensis*	20	no	FACU
2. *Erodium cicutarium*	10	no	FACU
3.			
4.			
5.			
6.			
7.			
8.			
50% = _____, 20% = _____		= Total Cover	
Woody Vine Stratum (Plot size:_____)			
1.			
2.			
50% = _____, 20% = _____		= Total Cover	
% Bare Ground in Herb Stratum 40	% Cover of Biotic Crust _____		

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC:	1	(A)
Total Number of Dominant Species Across All Strata:	3	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	33	(A/B)

Prevalence Index worksheet:

Total % Cover of :		Multiply by:	
OBL species	_____	x1 =	_____
FACW species	_____	x2 =	_____
FAC species	30	x3 =	90
FACU species	30	x4 =	120
UPL species	_____	x5 =	_____
Column Totals:	60 (A)		210 (B)

Prevalence Index = B/A = 3.5

Hydrophytic Vegetation Indicators:

☐ Dominance Test is >50%

☐ Prevalence Index is ≤3.0[1]

☐ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes ☐ No ☒**

Remarks:

Project Site: PVS Study Area 6

SOIL

Sampling Point: Upland 1

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (Moist)	%	Type[1]	Loc[2]	Texture	Remarks
8	10YR 4/4	100					sandy loam	

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

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

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type:

Depth (Inches):

Hydric Soils Present? **Yes** ☐ **No** ☒

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1) **(Nonriverine)**
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- ☐ Drift Deposits (B3) **(Nonriverine)**
- ☐ Surface Soil Cracks (B6)
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- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1) **(Riverine)**
- ☐ Sediment Deposits (B2) **(Riverine)**
- ☒ Drift Deposits (B3) **(Riverine)**
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	☐	No	☒	Depth (inches):
Water Table Present?	Yes	☐	No	☒	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes	☐	No	☒	Depth (inches):

Wetland Hydrology Present? **Yes** ☐ **No** ☒

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

Remarks: