made RPWs, the OHW zone was typically delineated using direct measure of OHWM indicators rather than the extent of the active floodplain because irrigation features with controlled flows do not support true active floodplains. Data forms are provided in **Appendix D**.

Jurisdictional Features

A total of 118 surface water conveyance features were evaluated to determine potential federal jurisdiction. **Table 1** summarizes the findings of this evaluation. Details related to the drainage features and locations are provided in the **Drainage Descriptions** section. A mapbook depicting the location of all drainage features evaluated can be found in **Appendix C**.

Table 1 - Summary of Potential Federally Jurisdictional Waters

	Potentially Jurisdictional	Not Jurisdictional	Total
Number of Drainages	20	98	118

A total of 20 features were identified as potentially subject to federal jurisdiction. All features within the Project area are man-made features constructed wholly within uplands that are used for agricultural irrigation (supply and drainage). Typically the head ditches used to irrigate individual fields, as well as the tail ditches used to drain individual fields, convey water for only a few days at a time (i.e., during periodic and infrequent irrigation events) and, therefore, do not meet the definition of a RPW (requiring flow year-round or continuous flow at least seasonally [e.g. typically three months]). The larger, IID-maintained, concrete-lined canals and lateral canals used to convey water to multiple fields convey water for most of the year and would likely be considered subject to federal jurisdiction under the RPW definition. Similarly, the larger IID-maintained drains that collect tail water from multiple fields convey water for most of the year and would likely be considered subject to federal jurisdiction under the same RPW definition.

CALIFORNIA DEPARTMENT OF FISH AND GAME JURISDICTION

The California Department of Fish and Game (CDFG) generally takes jurisdiction over all stream features, including drains and canals. The CDFG's jurisdiction extends from the top of bank to the opposite top of bank on these features, or to the limits of riparian vegetation if this vegetation extends beyond the top of the banks. Wetlands need to meet only one of the three ACOE criteria (wetland vegetation, wetland hydrology, and/or hydric soils) to be considered CDFG jurisdictional wetlands.

Under Section 1600 of the California Fish and Game Code, CDFG's jurisdiction includes "…bed, channel or bank of any river, stream or lake designated by the department in which there is any time an existing fish or wildlife resource or from which these resources derive benefit…" Canals, aqueducts, irrigation ditches, and other means of water conveyance can also be considered streams if they support aquatic life, riparian vegetation or stream dependent terrestrial benefit (Cylinder 1995).

Jurisdictional Features

Generally speaking, most canals, head ditches and tail ditches do not support riparian habitat. Larger drains, however, typically do support some riparian habitat and are often considered subject to CDFG jurisdiction. Guidance from Magdalena Rodriguez at CDFG (2011) indicated that several commonly

occurring water conveyance types would not be considered jurisdictional: concrete head ditches only conveying water to a single field, and small tail ditches draining only a single field.

Drainage features in the Project area were considered potentially jurisdictional if they exhibited a naturally occurring bed and bank, riparian vegetation potentially providing wildlife habitat, and/or evidence of regular flow.

A total of 118 surface water conveyance features in the Project area were evaluated for potential jurisdictional status**. Table 2** summarizes the findings of the evaluation. Detailed drainage descriptions and evaluations are provided in the **Drainage Descriptions** section.

Table 2 – Summary of Potential State Jurisdictional Waters

	Potentially Jurisdictional	**Not Jurisdictional**	**Total**
Number of Drainages	23	95	118

A total of 23 features were identified as potentially state jurisdictional. All features within the Campo Verde Project Area are man-made features constructed wholly within uplands; these features are used for agricultural irrigation (supply and drainage). Typically the head ditches used to irrigate individual fields, as well as the tail ditches used to drain individual fields, convey water for only a few days (during periodic and infrequent irrigation events) at a time and, therefore, do not meet CDFG's definition of a jurisdictional water. The larger, IID-maintained, concrete-lined canals and lateral canals used to convey water to multiple fields convey water for most of the year, sometimes support riparian vegetation and/or fisheries, and would likely be considered CDFG jurisdictional. Similarly, the larger IID-maintained drains that collect tail water from multiple fields convey water for most of the year and would likely be considered CDFG jurisdictional.

DRAINAGE DESCRIPTIONS

Drainage #1

Mapbook Pages: F-2
Photographs: 1
ACOE Jurisdiction: Potentially Jurisdictional
CDFG Jurisdiction: Potentially Jurisdictional
Feature Type: Lateral Canal
Riparian Vegetation: None
Substrate: Concrete

Dimensions (ft.)	
Bank-to-Bank	Channel/OHWM
8	4

Jurisdictional Evaluation:
Wormwood Lateral 7: Carries water from Wormwood Canal to multiple Head Ditches. No riparian vegetation is present. Likely carries water for most of the year. OHWM indicator was water staining.

Drainage #2

Mapbook Pages: E-2, F-2
Photographs: 2, 5
ACOE Jurisdiction: Not Jurisdictional
CDFG Jurisdiction: Not Jurisdictional
Feature Type: Tail Ditch
Riparian Vegetation: None
Substrate: Earthen

Dimensions (ft.)	
Bank-to-Bank	Channel/OHWM
2	0

Jurisdictional Evaluation:
Small Tail Ditch, drains a single field. Flows into Fig Drain (Drainage #6) via a box culvert and underground pipe. No riparian vegetation is present along feature. Tail ditches typically convey water only during periodic irrigation when excess irrigation water that is not absorbed by the field drains to them. They are typically dry (non-RPW).

Drainage #3 (Reserved – No conveyance assigned this number)

Drainage #4

Mapbook Pages: E-2, F-2
Photographs: 3, 4
ACOE Jurisdiction: Not Jurisdictional
CDFG Jurisdiction: Not Jurisdictional
Feature Type: Head Ditch
Riparian Vegetation: None
Substrate: Concrete/Earthen

Dimensions (ft.)	
Bank-to-Bank	Channel/OHWM
6	4

Jurisdictional Evaluation:
Head Ditch, carries water from Wormwood Lateral 7 (Drainage #1; via Gate 94) to irrigate a single field. No riparian vegetation is present. Head Ditches typically convey water for only a few days at a time (during periodic and infrequent irrigation events). They are typically dry (non-RPW).

Drainage #5

Mapbook Pages: E-2
Photographs: 6
ACOE Jurisdiction: Not Jurisdictional
CDFG Jurisdiction: Not Jurisdictional
Feature Type: Tail Ditch
Riparian Vegetation: None
Substrate: Earthen

Dimensions (ft.)	
Bank-to-Bank	Channel/OHWM
8	0

Jurisdictional Evaluation:
Small Tail Ditch, drains a single field. Flows into Fig Drain (Drainage #6). No riparian vegetation is present along feature. Tail ditches typically convey water only during periodic irrigation when excess irrigation water that is not absorbed by the field drains to them. They are typically dry (non-RPW).

Drainage #6

Mapbook Pages: E-1, E-2
Photographs: 7, 8, 17, 18
ACOE Jurisdiction: Potentially Jurisdictional
CDFG Jurisdiction: Potentially Jurisdictional
Feature Type: Drain
Riparian Vegetation: Yes
Substrate: Earthen

Dimensions (ft.)	
Bank-to-Bank	Channel/OHWM
80	25

Jurisdictional Evaluation:
Fig Drain: Large drain, collects tail-water from several Tail Ditches. Riparian vegetation is present along much of the feature. Likely flows for most of the year, if not year-round. OHWM indicators include presence of bed and bank, change in vegetation cover and change in slope. Drains to Fig Lagoon then the New River, and eventually to the Salton Sea.

Drainage #7

Mapbook Pages: E-2, F-2
Photographs: 9
ACOE Jurisdiction: Not Jurisdictional
CDFG Jurisdiction: Not Jurisdictional
Feature Type: Tail Ditch
Riparian Vegetation: Limited
Substrate: Earthen

Dimensions (ft.)	
Bank-to-Bank	Channel/OHWM
6	4

Jurisdictional Evaluation:
Tail Ditch, drains a single field. Flows into Fig Drain (Drainage #6). Limited riparian vegetation is present along feature. Tail ditches typically convey water only during periodic irrigation when excess irrigation water that is not absorbed by the field drains to them. They are typically dry (non-RPW).

Drainage #8

Mapbook Pages: F-1 F-2
Photographs: 10

ACOE Jurisdiction: Potentially Jurisdictional
CDFG Jurisdiction: Potentially Jurisdictional
Feature Type: Canal
Riparian Vegetation: None
Substrate: Concrete

Dimensions (ft.)	
Bank-to-Bank	Channel/OHWM
14	10

Jurisdictional Evaluation:
Wormwood Canal: Carries water to multiple lateral canals and Head Ditches. Limited riparian vegetation is present along much of the feature. Likely carries water year-round. OHWM indicator was water staining.

Drainage #9

Mapbook Pages: E-1 E-2, F-1
Photographs: 12
ACOE Jurisdiction: Not Jurisdictional
CDFG Jurisdiction: Not Jurisdictional
Feature Type: Head Ditch
Riparian Vegetation: None
Substrate: Concrete

Dimensions (ft.)	
Bank-to-Bank	Channel/OHWM
6	4

Jurisdictional Evaluation:
Head Ditch, carries water from Wormwood Canal (Drainage #8; via Gate 92) to irrigate two fields. No riparian vegetation is present. Head Ditches typically convey water for only a few days at a time (during periodic and infrequent irrigation events). They are typically dry (non-RPW).

Drainage #10

Mapbook Pages: E-1, E-2
Photographs: 14
ACOE Jurisdiction: Not Jurisdictional
CDFG Jurisdiction: Not Jurisdictional
Feature Type: Tail Ditch
Riparian Vegetation: Limited
Substrate: Earthen

Dimensions (ft.)	
Bank-to-Bank	Channel/OHWM
12	10

Jurisdictional Evaluation:
Tail Ditch, drains two fields. Flows into Fig Drain (Drainage #6) via Drainage #14. No riparian vegetation is present along feature. Tail ditches typically convey water only during periodic irrigation when excess irrigation water that is not absorbed by the field drains to them. They are typically dry (non-RPW).

Drainage #11A

Mapbook Pages: F-1
Photographs: 162
ACOE Jurisdiction: Potentially Jurisdictional
CDFG Jurisdiction: Potentially Jurisdictional
Feature Type: Head Ditch/Wetland
Riparian Vegetation: Yes
Substrate: Earthen

Dimensions (ft.)	
Bank-to-Bank	Channel/OHWM
25	20

Jurisdictional Evaluation:
Apparently defunct Head Ditch with wetland vegetation, carried water from Wormwood Canal (Drainage #8; via Gate 90) to irrigate a single field. Wetland/riparian vegetation is present. This segment appears to be collecting water leaking from nearby canals and head ditches. Delineation was based on the extent of hydrophytic vegetation (outside the limits of inundation/saturation).

Drainage #11B

Mapbook Pages: E-1, F-1
Photographs: 15
ACOE Jurisdiction: Not Jurisdictional
CDFG Jurisdiction: Potentially Jurisdictional
Feature Type: Head Ditch
Riparian Vegetation: Limited
Substrate: Earthen

Dimensions (ft.)	
Bank-to-Bank	Channel/OHWM
10	4

Jurisdictional Evaluation:
Apparently defunct Head Ditch, carried water from Wormwood Canal (Drainage #8; via Gate 90) to irrigate a single field. Limited riparian vegetation is present. Head Ditches typically convey water for only a few days at a time (during periodic and infrequent irrigation events). They are typically dry (non-RPW).

Drainage #12

Mapbook Pages: F-1
Photographs: 11, 13
ACOE Jurisdiction: Not Jurisdictional
CDFG Jurisdiction: Not Jurisdictional
Feature Type: Head Ditch
Riparian Vegetation: None; arrow weed scrub adjacent
Substrate: Concrete

Dimensions (ft.)	
Bank-to-Bank	Channel/OHWM
6	4

Jurisdictional Evaluation:
Head Ditch, carries water from Wormwood Canal (Drainage #8; via Gate 90A) to irrigate a single field. No riparian vegetation is present in feature, some arrow weed scrub is present adjacent to feature. Head Ditches typically convey water for only a few days at a time (during periodic and infrequent irrigation events). They are typically dry (non-RPW).

Drainage #13

Mapbook Pages: E-1
Photographs: 16
ACOE Jurisdiction: Not Jurisdictional
CDFG Jurisdiction: Not Jurisdictional
Feature Type: Tail Ditch
Riparian Vegetation: None
Substrate: Earthen

Dimensions (ft.)	
Bank-to-Bank	Channel/OHWM
5	2

Jurisdictional Evaluation:
Tail Ditch, drains a single field. Flows into Fig Drain (Drainage #6) via Drainage #14. No riparian vegetation is present along feature. Tail ditches typically convey water only during periodic irrigation when excess irrigation water that is not absorbed by the field drains to them. They are typically dry (non-RPW).

Drainage #14

Mapbook Pages: E-1
Photographs: 19
ACOE Jurisdiction: Not Jurisdictional
CDFG Jurisdiction: Potentially Jurisdictional
Feature Type: Tail Ditch
Riparian Vegetation: Limited
Substrate: Earthen

Dimensions (ft.)	
Bank-to-Bank	Channel/OHWM
6	4

Jurisdictional Evaluation:
Tail Ditch, drains several fields. Flows into Fig Drain (Drainage #6). Limited riparian vegetation is present along feature. Tail ditches typically convey water only during periodic irrigation when excess irrigation water that is not absorbed by the field drains to them. They are typically dry (non-RPW).

Drainage #15

Mapbook Pages: E-1, E-2
Photographs: 20
ACOE Jurisdiction: Not Jurisdictional
CDFG Jurisdiction: Not Jurisdictional
Feature Type: Tail Ditch
Riparian Vegetation: None
Substrate: Earthen

Dimensions (ft.)	
Bank-to-Bank	Channel/OHWM
6	4

Jurisdictional Evaluation:
Tail Ditch, drains a single field. Flows into Fig Drain (Drainage #6) via Drainage #14. No riparian vegetation is present along feature. Tail ditches typically convey water only during periodic irrigation when excess irrigation water that is not absorbed by the field drains to them. They are typically dry (non-RPW).

Drainage #16

Mapbook Pages: E-1, E-2
Photographs: 21
ACOE Jurisdiction: Potentially Jurisdictional
CDFG Jurisdiction: Potentially Jurisdictional
Feature Type: Drain
Riparian Vegetation: Yes
Substrate: Earthen

Dimensions (ft.)	
Bank-to-Bank	Channel/OHWM
30	10

Jurisdictional Evaluation:
Diehl Drain: Large drain, collects tail-water from several Tail Ditches. Riparian vegetation is present along much of the feature. Likely flows for most of the year, if not year-round. OHWM indicators include presence of bed and bank, change in vegetation cover and change in slope. Drains to Fig Drain, then to Fig Lagoon, the New River, and eventually to the Salton Sea.

Drainage #17

Mapbook Pages: E-1
Photographs: 22
ACOE Jurisdiction: Not Jurisdictional
CDFG Jurisdiction: Not Jurisdictional
Feature Type: Tail Ditch
Riparian Vegetation: None
Substrate: Earthen

Dimensions (ft.)	
Bank-to-Bank	Channel/OHWM
4	2

Jurisdictional Evaluation:
Tail Ditch, drains a single field. Flows into Diehl Drain (Drainage #16). No riparian vegetation is present along feature. Tail ditches typically convey water only during periodic irrigation when excess irrigation water that is not absorbed by the field drains to them. They are typically dry (non-RPW).

Drainage #18

Mapbook Pages: E-1
Photographs: 23
ACOE Jurisdiction: Not Jurisdictional

CDFG Jurisdiction: Not Jurisdictional
Feature Type: Head Ditch
Riparian Vegetation: None
Substrate: Concrete

Dimensions (ft.)	
Bank-to-Bank	Channel/OHWM
6	4

Jurisdictional Evaluation:
Head Ditch, carries water from Fig Canal (Drainage #22; via Gate 9) to irrigate a single field. No riparian vegetation is present. Head Ditches typically convey water for only a few days at a time (during periodic and infrequent irrigation events). They are typically dry (non-RPW).

Drainage #19

Mapbook Pages: E-2
Photographs: 24
ACOE Jurisdiction: Not Jurisdictional
CDFG Jurisdiction: Not Jurisdictional
Feature Type: Tail Ditch
Riparian Vegetation: None
Substrate: Earthen

Dimensions (ft.)	
Bank-to-Bank	Channel/OHWM
4	2

Jurisdictional Evaluation:
Tail Ditch, drains a single field. Flows into Diehl Drain (Drainage #16). No riparian vegetation is present along feature. Tail ditches typically convey water only during periodic irrigation when excess irrigation water that is not absorbed by the field drains to them. They are typically dry (non-RPW).

Drainage #20

Mapbook Pages: E-2
Photographs: 25
ACOE Jurisdiction: Not Jurisdictional
CDFG Jurisdiction: Not Jurisdictional
Feature Type: Head Ditch
Riparian Vegetation: None
Substrate: Concrete

Dimensions (ft.)	
Bank-to-Bank	Channel/OHWM
6	4

Jurisdictional Evaluation:
Head Ditch, carries water from Fig Canal (Drainage #22; via Gate 2A) to irrigate a single field. No riparian vegetation is present. Head Ditches typically convey water for only a few days at a time (during periodic and infrequent irrigation events). They are typically dry (non-RPW).

Drainage #21

Mapbook Pages: E-2
Photographs: 26
ACOE Jurisdiction: Not Jurisdictional
CDFG Jurisdiction: Not Jurisdictional
Feature Type: Tail Ditch
Riparian Vegetation: None
Substrate: Earthen

Dimensions (ft.)	
Bank-to-Bank	Channel/OHWM
4	2

Jurisdictional Evaluation:
Tail Ditch, drains a single field. Flows into Fig Drain (Drainage #6). No riparian vegetation is present along feature. Tail ditches typically convey water only during periodic irrigation when excess irrigation water that is not absorbed by the field drains to them. They are typically dry (non-RPW).

Drainage #22

Mapbook Pages: D-2, E-1, E-2
Photographs: 40, 41
ACOE Jurisdiction: Potentially Jurisdictional
CDFG Jurisdiction: Potentially Jurisdictional
Feature Type: Canal
Riparian Vegetation: None
Substrate: Concrete

Dimensions (ft.)	
Bank-to-Bank	Channel/OHWM
14	10

Jurisdictional Evaluation:
Fig Canal: Flows from Fern Canal (via Gate Fig), carries water to multiple lateral canals and Head Ditches. No riparian vegetation is present along much of the feature. Likely carries water year-round. OHWM indicator was water staining.

Drainage #23

Mapbook Pages: E-2
Photographs: 42
ACOE Jurisdiction: Not Jurisdictional
CDFG Jurisdiction: Not Jurisdictional
Feature Type: Head Ditch
Riparian Vegetation: None
Substrate: Concrete

Dimensions (ft.)	
Bank-to-Bank	Channel/OHWM
6	4

Jurisdictional Evaluation:
Head Ditch, carries water from Fig Canal (Drainage #22; via Gate 1) to irrigate a single field. No riparian vegetation is present. Head Ditches typically convey water for only a few days at a time (during periodic and infrequent irrigation events). They are typically dry (non-RPW).

Drainage #24

Mapbook Pages: E-2
Photographs: 43
ACOE Jurisdiction: Not Jurisdictional
CDFG Jurisdiction: Not Jurisdictional
Feature Type: Tail Ditch
Riparian Vegetation: None
Substrate: Earthen

Dimensions (ft.)	
Bank-to-Bank	Channel/OHWM
6	3

Jurisdictional Evaluation:
Tail Ditch, drains a single field. Flows into Diehl Drain (Drainage #16). No riparian vegetation is present along feature. Tail ditches typically convey water only during periodic irrigation when excess irrigation water that is not absorbed by the field drains to them. They are typically dry (non-RPW).

Drainage #25

Mapbook Pages: D-2, E-2
Photographs: 44
ACOE Jurisdiction: Not Jurisdictional
CDFG Jurisdiction: Not Jurisdictional
Feature Type: Head Ditch
Riparian Vegetation: None
Substrate: Concrete

Dimensions (ft.)	
Bank-to-Bank	Channel/OHWM
6	4

Jurisdictional Evaluation:
Head Ditch, carries water from Fig Canal (Drainage #22; via Gate 5) to irrigate a single field. No riparian vegetation is present. Head Ditches typically convey water for only a few days at a time (during periodic and infrequent irrigation events). They are typically dry (non-RPW).

Drainage #26

Mapbook Pages: D-2, E-2
Photographs: 45
ACOE Jurisdiction: Not Jurisdictional
CDFG Jurisdiction: Not Jurisdictional
Feature Type: Tail Ditch
Riparian Vegetation: None
Substrate: Earthen

Dimensions (ft.)	
Bank-to-Bank	Channel/OHWM
6	3

Jurisdictional Evaluation:
Tail Ditch, drains a single field. Flows into Wixom Drain (Drainage #27). No riparian vegetation is present along feature. Tail ditches typically convey water only during periodic irrigation when excess irrigation water that is not absorbed by the field drains to them. They are typically dry (non-RPW).

Drainage #27

Mapbook Pages: D-1, D-2
Photographs: 46, 47, 50, 51, 146, 147
ACOE Jurisdiction: Potentially Jurisdictional
CDFG Jurisdiction: Potentially Jurisdictional
Feature Type: Drain
Riparian Vegetation: Yes
Substrate: Earthen

Dimensions (ft.)	
Bank-to-Bank	Channel/OHWM
25	12

Jurisdictional Evaluation:
Wixom Drain: Large drain, collects tail-water from several Tail Ditches. Riparian vegetation is present along much of the feature. Likely flows for most of the year, if not year-round. OHWM indicators include presence of bed and bank, change in vegetation cover and change in slope. Drains to Wetland (Drainage #63), then to Fig Lagoon, the New River, and eventually to the Salton Sea.

Drainage #28 (Reserved – No conveyance assigned this number)

Drainage #29

Mapbook Pages: D-1, D-2
Photographs: 49
ACOE Jurisdiction: Not Jurisdictional
CDFG Jurisdiction: Not Jurisdictional
Feature Type: Tail Ditch
Riparian Vegetation: None
Substrate: Earthen

Dimensions (ft.)	
Bank-to-Bank	Channel/OHWM
6	3

Jurisdictional Evaluation:
Small Tail Ditch, drains a single field. Flows into Wixom Drain (Drainage #27). No riparian vegetation is present along feature. Tail ditches typically convey water only during periodic irrigation when excess irrigation water that is not absorbed by the field drains to them. They are typically dry (non-RPW).

Drainage #30

Mapbook Pages: E-1
Photographs: 52, 53
ACOE Jurisdiction: Not Jurisdictional
CDFG Jurisdiction: Not Jurisdictional
Feature Type: Head Ditch
Riparian Vegetation: None
Substrate: Concrete

Dimensions (ft.)	
Bank-to-Bank	Channel/OHWM
6	4

Jurisdictional Evaluation:
Head Ditch, carries water from Fig Canal (Drainage #22; via Gate 10) to irrigate a single field. No riparian vegetation is present. Head Ditches typically convey water for only a few days at a time (during periodic and infrequent irrigation events). They are typically dry (non-RPW).

Drainage #31

Mapbook Pages: D-1, D-2
Photographs: 54, 55
ACOE Jurisdiction: Not Jurisdictional
CDFG Jurisdiction: Not Jurisdictional
Feature Type: Head Ditch
Riparian Vegetation: None
Substrate: Concrete

Dimensions (ft.)	
Bank-to-Bank	Channel/OHWM
6	4

Jurisdictional Evaluation:
Head Ditch, carries water from Fern Canal (Drainage #33; via Gate 7) to irrigate a single field. No riparian vegetation is present. Head Ditches typically convey water for only a few days at a time (during periodic and infrequent irrigation events). They are typically dry (non-RPW).

Drainage #32

Mapbook Pages: D-1
Photographs: 57
ACOE Jurisdiction: Not Jurisdictional
CDFG Jurisdiction: Not Jurisdictional
Feature Type: Head Ditch
Riparian Vegetation: None
Substrate: Concrete

Dimensions (ft.)	
Bank-to-Bank	Channel/OHWM
6	4

Jurisdictional Evaluation:
Head Ditch, carries water from Fern Canal (Drainage #33; via Gate 12) to irrigate a single field. No riparian vegetation is present. Head Ditches typically convey water for only a few days at a time (during periodic and infrequent irrigation events). They are typically dry (non-RPW).

Drainage #33

Mapbook Pages: D-1, D-2, D-3
Photographs: 56
ACOE Jurisdiction: Potentially Jurisdictional
CDFG Jurisdiction: Potentially Jurisdictional
Feature Type: Canal
Riparian Vegetation: None
Substrate: Concrete

Dimensions (ft.)	
Bank-to-Bank	Channel/OHWM
16	12

Jurisdictional Evaluation:
Fern Canal: Flows from Westside Main (Drainage #91; via Gate Fern), carries water to multiple lateral canals and Head Ditches. No riparian vegetation is present along much of the feature. Likely carries water year-round. OHWM indicator was water staining.

Drainage #34

Mapbook Pages: D-1
Photographs: 60
ACOE Jurisdiction: Not Jurisdictional
CDFG Jurisdiction: Not Jurisdictional
Feature Type: Tail Ditch
Riparian Vegetation: None
Substrate: Earthen

Dimensions (ft.)	
Bank-to-Bank	Channel/OHWM
8	2

Jurisdictional Evaluation:
Tail Ditch, drains a single field. Flows into Dixie 3C Drain (Drainage #58). No riparian vegetation is present along feature. Tail ditches typically convey water only during periodic irrigation when excess irrigation water that is not absorbed by the field drains to them. They are typically dry (non-RPW).

Drainage #35

Mapbook Pages: C-2
Photographs: 61
ACOE Jurisdiction: Not Jurisdictional
CDFG Jurisdiction: Not Jurisdictional
Feature Type: Tail Ditch
Riparian Vegetation: None
Substrate: Earthen

Dimensions (ft.)	
Bank-to-Bank	Channel/OHWM
5	2

Jurisdictional Evaluation:
Tail Ditch, drains a single field. Flows into Dixie 3C Drain (Drainage #58) via a culvert. No riparian vegetation is present along feature. Tail ditches typically convey water only during periodic irrigation when excess irrigation water that is not absorbed by the field drains to them. They are typically dry (non-RPW).

Drainage #36

Mapbook Pages: C-2
Photographs: 62
ACOE Jurisdiction: Not Jurisdictional
CDFG Jurisdiction: Not Jurisdictional
Feature Type: Head Ditch
Riparian Vegetation: None
Substrate: Concrete

Dimensions (ft.)	
Bank-to-Bank	Channel/OHWM
6	4

Jurisdictional Evaluation:
Head Ditch, carries water from Fern Canal (Drainage #33; via Gate 14) to irrigate a single field. No riparian vegetation is present. Head Ditches typically convey water for only a few days at a time (during periodic and infrequent irrigation events). They are typically dry (non-RPW).

Drainage #37

Mapbook Pages: C-2, C-3
Photographs: 63
ACOE Jurisdiction: Not Jurisdictional
CDFG Jurisdiction: Not Jurisdictional
Feature Type: Tail Ditch
Riparian Vegetation: None
Substrate: Earthen

Dimensions (ft.)	
Bank-to-Bank	Channel/OHWM
5	2

Jurisdictional Evaluation:
Tail Ditch, drains a single field. Flows into Dixie 3A Drain (Drainage #49). No riparian vegetation is present along feature. Tail ditches typically convey water only during periodic irrigation when excess irrigation water that is not absorbed by the field drains to them. They are typically dry (non-RPW).

Drainage #38

Mapbook Pages: D-1
Photographs: 65

ACOE Jurisdiction: Not Jurisdictional
CDFG Jurisdiction: Not Jurisdictional
Feature Type: Head Ditch
Riparian Vegetation: None
Substrate: Concrete

Dimensions (ft.)	
Bank-to-Bank	Channel/OHWM
6	4

Jurisdictional Evaluation:
Head Ditch, carries water from Fern Canal (Drainage #33; via Gate 13A) to irrigate a single field. No riparian vegetation is present. Head Ditches typically convey water for only a few days at a time (during periodic and infrequent irrigation events). They are typically dry (non-RPW).

Drainage #39

Mapbook Pages: C-3, D-1
Photographs: 64
ACOE Jurisdiction: Not Jurisdictional
CDFG Jurisdiction: Not Jurisdictional
Feature Type: Head Ditch
Riparian Vegetation: None
Substrate: Concrete

Dimensions (ft.)	
Bank-to-Bank	Channel/OHWM
5	3

Jurisdictional Evaluation:
Head Ditch, carries water from Fern Canal (Drainage #33; via Gate 11) to irrigate a single field. Connected to Feature #40. No riparian vegetation is present. Head Ditches typically convey water for only a few days at a time (during periodic and infrequent irrigation events). They are typically dry (non-RPW).

Drainage #40

Mapbook Pages: D-1, D-2
Photographs: 66
ACOE Jurisdiction: Not Jurisdictional
CDFG Jurisdiction: Not Jurisdictional
Feature Type: Head Ditch
Riparian Vegetation: None
Substrate: Concrete/Earthen

Dimensions (ft.)	
Bank-to-Bank	Channel/OHWM
5	3

Jurisdictional Evaluation:
Defunct Head Ditch, formerly carried water from Fern Canal (Drainage #33; via Gate 11) to irrigate a single field. Connected to Feature #39. No riparian vegetation is present Head Ditches typically convey

water for only a few days at a time (during periodic and infrequent irrigation events). They are typically dry (non-RPW).

Drainage #41

Mapbook Pages: C-3, D-2
Photographs: 67
ACOE Jurisdiction: Not Jurisdictional
CDFG Jurisdiction: Not Jurisdictional
Feature Type: Tail Ditch
Riparian Vegetation: None
Substrate: Earthen

Dimensions (ft.)	
Bank-to-Bank	Channel/OHWM
4	2

Jurisdictional Evaluation:
Small Tail Ditch, drains a single field. Flows into Dixie 3A Drain (Drainage #49). No riparian vegetation is present along feature. Tail ditches typically convey water only during periodic irrigation when excess irrigation water that is not absorbed by the field drains to them. They are typically dry (non-RPW).

Drainage #42

Mapbook Pages: C-3, D-2
Photographs: 68
ACOE Jurisdiction: Not Jurisdictional
CDFG Jurisdiction: Not Jurisdictional
Feature Type: Tail Ditch
Riparian Vegetation: None
Substrate: Earthen

Dimensions (ft.)	
Bank-to-Bank	Channel/OHWM
6	3

Jurisdictional Evaluation:
Tail Ditch, drains a single field. Flows into Dixie 3A Drain (Drainage #49). No riparian vegetation is present along feature. Tail ditches typically convey water only during periodic irrigation when excess irrigation water that is not absorbed by the field drains to them. They are typically dry (non-RPW).

Drainage #43

Mapbook Pages: D-1, D-2
Photographs: 69
ACOE Jurisdiction: Not Jurisdictional
CDFG Jurisdiction: Not Jurisdictional
Feature Type: Head Ditch
Riparian Vegetation: None
Substrate: Concrete

Dimensions (ft.)	
Bank-to-Bank	Channel/OHWM
6	4

Jurisdictional Evaluation:
Head Ditch, carries water from Fern Canal (Drainage #33; via Gate 8) to irrigate a single field. No riparian vegetation is present. Head Ditches typically convey water for only a few days at a time (during periodic and infrequent irrigation events). They are typically dry (non-RPW).

Drainage #44

Mapbook Pages: D-2
Photographs: 70
ACOE Jurisdiction: Not Jurisdictional
CDFG Jurisdiction: Not Jurisdictional
Feature Type: Tail Ditch
Riparian Vegetation: None
Substrate: Earthen

Dimensions (ft.)	
Bank-to-Bank	Channel/OHWM
5	3

Jurisdictional Evaluation:
Tail Ditch, drains a single field. Flows into Dixie 3A Drain (Drainage #49). No riparian vegetation is present along feature. Tail ditches typically convey water only during periodic irrigation when excess irrigation water that is not absorbed by the field drains to them. They are typically dry (non-RPW).

Drainage #45

Mapbook Pages: D-2, D-3
Photographs: 71
ACOE Jurisdiction: Not Jurisdictional
CDFG Jurisdiction: Not Jurisdictional
Feature Type: Tail Ditch
Riparian Vegetation: None
Substrate: Earthen

Dimensions (ft.)	
Bank-to-Bank	Channel/OHWM
5	3

Jurisdictional Evaluation:
Tail Ditch, drains a single field. Flows into Dixie 3A Drain (Drainage #49). No riparian vegetation is present along feature. Tail ditches typically convey water only during periodic irrigation when excess irrigation water that is not absorbed by the field drains to them. They are typically dry (non-RPW).

Drainage #46

Mapbook Pages: D-3
Photographs: 72
ACOE Jurisdiction: Not Jurisdictional

CDFG Jurisdiction: Not Jurisdictional
Feature Type: Head Ditch
Riparian Vegetation: None
Substrate: Concrete

Dimensions (ft.)	
Bank-to-Bank	Channel/OHWM
6	4

Jurisdictional Evaluation:
Head Ditch, carries water from Westside Main (Drainage #91; via unnumbered gate); Unclear if this feature is used for field irrigation or to control overflow from canal system. No riparian vegetation is present. Head Ditches typically convey water for only a few days at a time (during periodic and infrequent irrigation events); overflow control patterns may be different. They are typically dry (non-RPW).

Drainage #47

Mapbook Pages: D-2, D-3
Photographs: 73
ACOE Jurisdiction: Not Jurisdictional
CDFG Jurisdiction: Not Jurisdictional
Feature Type: Head Ditch
Riparian Vegetation: None
Substrate: Concrete/Earthen

Dimensions (ft.)	
Bank-to-Bank	Channel/OHWM
6	4

Jurisdictional Evaluation:
Head Ditch, carries water from Drainage #46, via Gate 11A, to irrigate two fields. No riparian vegetation is present. Head Ditches typically convey water for only a few days at a time (during periodic and infrequent irrigation events). They are typically dry (non-RPW). Southeastern spur of feature is earthen, rest of feature is concrete.

Drainage #48

Mapbook Pages: D-2, D-3
Photographs: 74, 75
ACOE Jurisdiction: Not Jurisdictional
CDFG Jurisdiction: Not Jurisdictional
Feature Type: Tail Ditch
Riparian Vegetation: None
Substrate: Earthen

Dimensions (ft.)	
Bank-to-Bank	Channel/OHWM
5	2

Jurisdictional Evaluation:
Isolated Tail Ditch, drains a single field. No riparian vegetation is present along feature. Tail ditches typically convey water only during periodic irrigation when excess irrigation water that is not absorbed by the field drains to them. They are typically dry (non-RPW).

Drainage #49

Mapbook Pages: C-1, C-2, C-3, C-4, D-2
Photographs: 76, 77
ACOE Jurisdiction: Potentially Jurisdictional
CDFG Jurisdiction: Potentially Jurisdictional
Feature Type: Drain
Riparian Vegetation: Yes
Substrate: Earthen

Dimensions (ft.)	
Bank-to-Bank	Channel/OHWM
50	35

Jurisdictional Evaluation:
Dixie 3A Drain: Large drain, collects tail-water from several Tail Ditches. Riparian vegetation is present along much of the feature. Likely flows for most of the year, if not year-round. OHWM indicators include presence of bed and bank, change in vegetation cover and change in slope. Drains to the New River and eventually to the Salton Sea.

Drainage #50

Mapbook Pages: C-3
Photographs: 78
ACOE Jurisdiction: Potentially Jurisdictional
CDFG Jurisdiction: Potentially Jurisdictional
Feature Type: Wetland (Defunct Drain)
Riparian Vegetation: Yes
Substrate: Earthen

Dimensions (ft.)	
Bank-to-Bank	Channel/OHWM
30	15

Jurisdictional Evaluation:
Defunct Drain, now a wetland; water backs up from Dixie 3A Drain (Feature #49). Riparian/wetland vegetation is present along feature. Likely saturated/inundated for most of the year, if not year-round. Delineated based on extend of riparian vegetation or top of bank (larger than saturated/indundated area).

Drainage #51

Mapbook Pages: C-2, C-3
Photographs: 79
ACOE Jurisdiction: Not Jurisdictional
CDFG Jurisdiction: Not Jurisdictional
Feature Type: Tail Ditch
Riparian Vegetation: None
Substrate: Earthen

Dimensions (ft.)	
Bank-to-Bank	Channel/OHWM
6	4

Jurisdictional Evaluation:
Tail Ditch, drains a single field. Flows into Dixie 3A Drain (Drainage #49). No riparian vegetation is present along feature. Tail ditches typically convey water only during periodic irrigation when excess irrigation water that is not absorbed by the field drains to them. They are typically dry (non-RPW).

Drainage #52

Mapbook Pages: C-2, C-3
Photographs: 80
ACOE Jurisdiction: Not Jurisdictional
CDFG Jurisdiction: Not Jurisdictional
Feature Type: Head Ditch
Riparian Vegetation: None
Substrate: Concrete

Dimensions (ft.)	
Bank-to-Bank	Channel/OHWM
6	4

Jurisdictional Evaluation:
Head Ditch, carries water from Fern Canal (Drainage #33), via Drainage #77, to irrigate a single field. No riparian vegetation is present. Head Ditches typically convey water for only a few days at a time (during periodic and infrequent irrigation events). They are typically dry (non-RPW).

Drainage #53

Mapbook Pages: C-2
Photographs: 81
ACOE Jurisdiction: Not Jurisdictional
CDFG Jurisdiction: Not Jurisdictional
Feature Type: Tail Ditch
Riparian Vegetation: Limited
Substrate: Earthen

Dimensions (ft.)	
Bank-to-Bank	Channel/OHWM
5	2

Jurisdictional Evaluation:
Tail Ditch, drains a single field. Flows into Dixie 3A Drain (Drainage #49), via a culvert. Limited riparian vegetation is present along feature. Tail ditches typically convey water only during periodic irrigation when excess irrigation water that is not absorbed by the field drains to them. They are typically dry (non-RPW).

Drainage #54

Mapbook Pages: C-2, C-3
Photographs: 82
ACOE Jurisdiction: Not Jurisdictional
CDFG Jurisdiction: Not Jurisdictional

Feature Type: Tail Ditch
Riparian Vegetation: None
Substrate: Earthen

Dimensions (ft.)	
Bank-to-Bank	Channel/OHWM
6	3

Jurisdictional Evaluation:
Tail Ditch, drains a single field. Drains into culverts at both ends. No riparian vegetation is present along feature. Tail ditches typically convey water only during periodic irrigation when excess irrigation water that is not absorbed by the field drains to them. They are typically dry (non-RPW).

Drainage #55

Mapbook Pages: C-1, C-2, C-3
Photographs: 83, 86
ACOE Jurisdiction: Not Jurisdictional
CDFG Jurisdiction: Not Jurisdictional
Feature Type: Head Ditch
Riparian Vegetation: None
Substrate: Concrete

Dimensions (ft.)	
Bank-to-Bank	Channel/OHWM
7	5

Jurisdictional Evaluation:
Head Ditch, carries water from Westside Main (Drainage #91) to irrigate a two fields. No riparian vegetation is present. Head Ditches typically convey water for only a few days at a time (during periodic and infrequent irrigation events). They are typically dry (non-RPW).

Drainage #56

Mapbook Pages: C-1, C-2
Photographs: 84, 143
ACOE Jurisdiction: Not Jurisdictional
CDFG Jurisdiction: Not Jurisdictional
Feature Type: Tail Ditch
Riparian Vegetation: None
Substrate: Earthen

Dimensions (ft.)	
Bank-to-Bank	Channel/OHWM
10	6

Jurisdictional Evaluation:
Tail Ditch, drains a single field. Flows into Dixie 3A Drain (Drainage #49) at several locations. No riparian vegetation is present along feature. Tail ditches typically convey water only during periodic irrigation when excess irrigation water that is not absorbed by the field drains to them. They are typically dry (non-RPW).

Drainage #57

Mapbook Pages: C-1, C-2
Photographs: 85
ACOE Jurisdiction: Potentially Jurisdictional
CDFG Jurisdiction: Potentially Jurisdictional
Feature Type: Drain
Riparian Vegetation: Yes
Substrate: Earthen

Dimensions (ft.)	
Bank-to-Bank	Channel/OHWM
50	25

Jurisdictional Evaluation:
Westside Drain: Large drain, collects tail-water from several Tail Ditches. Riparian vegetation is present along much of the feature. Likely flows for most of the year, if not year-round. OHWM indicators include presence of bed and bank, change in vegetation cover and change in slope. Drains to Dixie 3A Drain (Drainage #49) then to the New River and eventually to the Salton Sea.

Drainage #58

Mapbook Pages: C-2, D-1
Photographs: 58, 59, 88, 145
ACOE Jurisdiction: Potentially Jurisdictional
CDFG Jurisdiction: Potentially Jurisdictional
Feature Type: Drain
Riparian Vegetation: Yes
Substrate: Earthen

Dimensions (ft.)	
Bank-to-Bank	Channel/OHWM
50	25

Jurisdictional Evaluation:
Dixie 3C Drain: Large drain, collects tail-water from several Tail Ditches. Riparian vegetation is present along much of the feature. Likely flows for most of the year, if not year-round. OHWM indicators include presence of bed and bank, change in vegetation cover and change in slope. Drains to Dixie 3A Drain (Drainage #49) then to the New River and eventually to the Salton Sea.

Drainage #59

Mapbook Pages: C-1, C-2
Photographs: 89
ACOE Jurisdiction: Not Jurisdictional
CDFG Jurisdiction: Not Jurisdictional
Feature Type: Head Ditch
Riparian Vegetation: None
Substrate: Concrete

Dimensions (ft.)	
Bank-to-Bank	Channel/OHWM
6	4

Jurisdictional Evaluation:
Head Ditch, carries water from unnumbered Fern Lateral Canal (Drainage #61; via Gate 25) to irrigate a single field. No riparian vegetation is present. Head Ditches typically convey water for only a few days at a time (during periodic and infrequent irrigation events). They are typically dry (non-RPW).

Drainage #60

Mapbook Pages: C-1
Photographs: 92
ACOE Jurisdiction: Not Jurisdictional
CDFG Jurisdiction: Not Jurisdictional
Feature Type: Head Ditch
Riparian Vegetation: None
Substrate: Concrete

Dimensions (ft.)	
Bank-to-Bank	Channel/OHWM
6	4

Jurisdictional Evaluation:
Head Ditch, carries water from unnumbered Fern Lateral Canal (Drainage #61; via Gate 26) to irrigate a single field. No riparian vegetation is present. Head Ditches typically convey water for only a few days at a time (during periodic and infrequent irrigation events). They are typically dry (non-RPW).

Drainage #61

Mapbook Pages: C-1
Photographs: 90
ACOE Jurisdiction: Potentially Jurisdictional
CDFG Jurisdiction: Potentially Jurisdictional
Feature Type: Lateral Canal
Riparian Vegetation: None
Substrate: Concrete

Dimensions (ft.)	
Bank-to-Bank	Channel/OHWM
8	6

Jurisdictional Evaluation:
Unnumbered Fern Lateral: Carries water from Fern Canal to multiple Head Ditches. No riparian vegetation is present. Likely carries water for most of the year. OHWM indicator was water staining.

Drainage #62

Mapbook Pages: C-1, C-2
Photographs: 93
ACOE Jurisdiction: Not Jurisdictional
CDFG Jurisdiction: Not Jurisdictional

Feature Type: Tail Ditch
Riparian Vegetation: None
Substrate: Earthen

Dimensions (ft.)	
Bank-to-Bank	Channel/OHWM
8	4

Jurisdictional Evaluation:
Tail Ditch, drains a single field. Flows into Dixie 3A Drain (Drainage #49) via a culvert. No riparian vegetation is present along feature. Tail ditches typically convey water only during periodic irrigation when excess irrigation water that is not absorbed by the field drains to them. They are typically dry (non-RPW).

Drainage #63 (Reserved – No conveyance assigned this number)

Drainage #64

Mapbook Pages: F-1, F-2
Photographs: 95, 96
ACOE Jurisdiction: Potentially Jurisdictional
CDFG Jurisdiction: Potentially Jurisdictional
Feature Type: Drain
Riparian Vegetation: Yes
Substrate: Earthen

Dimensions (ft.)	
Bank-to-Bank	Channel/OHWM
35	20

Jurisdictional Evaluation:
Wormwood 7 Drain: Large drain, collects tail-water from several Tail Ditches. Riparian vegetation is present along much of the feature. Likely flows for most of the year, if not year-round. OHWM indicators include presence of bed and bank, change in vegetation cover and change in slope. Drains to the New River and eventually to the Salton Sea.

Drainage #65

Mapbook Pages: F-1
Photographs: 97
ACOE Jurisdiction: Not Jurisdictional
CDFG Jurisdiction: Not Jurisdictional
Feature Type: Head Ditch
Riparian Vegetation: None
Substrate: Concrete

Dimensions (ft.)	
Bank-to-Bank	Channel/OHWM
6	3

Jurisdictional Evaluation:
Head Ditch, carries water from Wormwood Canal (Drainage #8; via Drainage #11 and an unnumbered Gate) to irrigate a single field. No riparian vegetation is present Head Ditches typically convey water for

only a few days at a time (during periodic and infrequent irrigation events). They are typically dry (non-RPW).

Drainage #66

Mapbook Pages: E-1
Photographs: 98
ACOE Jurisdiction: Not Jurisdictional
CDFG Jurisdiction: Not Jurisdictional
Feature Type: Tail Ditch
Riparian Vegetation: None
Substrate: Earthen

Dimensions (ft.)	
Bank-to-Bank	Channel/OHWM
5	2

Jurisdictional Evaluation:
Tail Ditch, drains a single field. Flows into Fig Drain (Drainage #6). No riparian vegetation is present along feature. Tail ditches typically convey water only during periodic irrigation when excess irrigation water that is not absorbed by the field drains to them. They are typically dry (non-RPW).

Drainage #67

Mapbook Pages: E-1
Photographs: 99
ACOE Jurisdiction: Not Jurisdictional
CDFG Jurisdiction: Not Jurisdictional
Feature Type: Tail Ditch
Riparian Vegetation: None
Substrate: Earthen

Dimensions (ft.)	
Bank-to-Bank	Channel/OHWM
6	4

Jurisdictional Evaluation:
Tail Ditch, drains a single field. Flows into Fig Drain (Drainage #6). No riparian vegetation is present along feature. Tail ditches typically convey water only during periodic irrigation when excess irrigation water that is not absorbed by the field drains to them. They are typically dry (non-RPW).

Drainage #68

Mapbook Pages: E-1
Photographs: 100
ACOE Jurisdiction: Not Jurisdictional
CDFG Jurisdiction: Not Jurisdictional
Feature Type: Tail Ditch
Riparian Vegetation: None
Substrate: Earthen

Dimensions (ft.)	
Bank-to-Bank	Channel/OHWM
5	2

Jurisdictional Evaluation:
Isolated Tail Ditch, drains a single field. No riparian vegetation is present along feature. Tail ditches typically convey water only during periodic irrigation when excess irrigation water that is not absorbed by the field drains to them. They are typically dry (non-RPW).

Drainage #69 (Reserved – No conveyance assigned this number)

Drainage #70 (Reserved – No conveyance assigned this number)

Drainage #71 (Reserved – No conveyance assigned this number)

Drainage #72

Mapbook Pages: D-1
Photographs: 104
ACOE Jurisdiction: Not Jurisdictional
CDFG Jurisdiction: Not Jurisdictional
Feature Type: Head Ditch
Riparian Vegetation: None
Substrate: Concrete

Dimensions (ft.)	
Bank-to-Bank	Channel/OHWM
7	5

Jurisdictional Evaluation:
Head Ditch, carries water to irrigate a single field. No riparian vegetation is present. Head Ditches typically convey water for only a few days at a time (during periodic and infrequent irrigation events). They are typically dry (non-RPW).

Drainage #73

Mapbook Pages: D-1
Photographs: 105
ACOE Jurisdiction: Not Jurisdictional
CDFG Jurisdiction: Not Jurisdictional
Feature Type: Tail Ditch
Riparian Vegetation: None
Substrate: Earthen

Dimensions (ft.)	
Bank-to-Bank	Channel/OHWM
2	1

Jurisdictional Evaluation:
Small, isolated Tail Ditch, drains a single field. No riparian vegetation is present along feature. Tail ditches typically convey water only during periodic irrigation when excess irrigation water that is not absorbed by the field drains to them. They are typically dry (non-RPW).

Drainage #74

Mapbook Pages: D-1
Photographs: 106
ACOE Jurisdiction: Not Jurisdictional
CDFG Jurisdiction: Not Jurisdictional
Feature Type: Head Ditch
Riparian Vegetation: None
Substrate: Concrete

Dimensions (ft.)	
Bank-to-Bank	Channel/OHWM
6	4

Jurisdictional Evaluation:
Head Ditch, carries water from Fern Canal (Drainage #33) via Gate 15 to irrigate a single field. No riparian vegetation is present Head Ditches typically convey water for only a few days at a time (during periodic and infrequent irrigation events). They are typically dry (non-RPW).

Drainage #75 (Reserved – No conveyance assigned this number)

Drainage #76

Mapbook Pages: C-2
Photographs: 107
ACOE Jurisdiction: Not Jurisdictional
CDFG Jurisdiction: Not Jurisdictional
Feature Type: Head Ditch
Riparian Vegetation: None
Substrate: Concrete

Dimensions (ft.)	
Bank-to-Bank	Channel/OHWM
6	4

Jurisdictional Evaluation:
Head Ditch, carries water from Drainage #77 to Drainage #52. Does not irrigate any fields; only serves as a connector. No riparian vegetation is present Head Ditches typically convey water for only a few days at a time (during periodic and infrequent irrigation events). They are typically dry (non-RPW). Likely has flow pattern identical to Drainage #52.

Drainage #77

Mapbook Pages: C-2
Photographs: 108
ACOE Jurisdiction: Not Jurisdictional
CDFG Jurisdiction: Not Jurisdictional
Feature Type: Head Ditch
Riparian Vegetation: None

Substrate: Concrete

Dimensions (ft.)	
Bank-to-Bank	Channel/OHWM
6	4

Jurisdictional Evaluation:
Head Ditch, carries water from Fern Canal (Drainage #33) to irrigate a single field. No riparian vegetation is present. Head Ditches typically convey water for only a few days at a time (during periodic and infrequent irrigation events). They are typically dry (non-RPW).

Drainage #78

Mapbook Pages: C-1
Photographs: 109
ACOE Jurisdiction: Not Jurisdictional
CDFG Jurisdiction: Not Jurisdictional
Feature Type: Road Ditch
Riparian Vegetation: Limited
Substrate: Earthen

Dimensions (ft.)	
Bank-to-Bank	Channel/OHWM
6	4

Jurisdictional Evaluation:
Road Ditch, carries surface runoff from Interstate-8. Flows to Westside Drain (Drainage #57). Limited riparian vegetation is present. Typically only flows during and immediately after precipitation events (non-RPW).

Drainage #79

Mapbook Pages: C-1, C-2
Photographs: 110
ACOE Jurisdiction: Not Jurisdictional
CDFG Jurisdiction: Not Jurisdictional
Feature Type: Tail Ditch
Riparian Vegetation: None
Substrate: Earthen

Dimensions (ft.)	
Bank-to-Bank	Channel/OHWM
5	2

Jurisdictional Evaluation:
Tail Ditch, drains a single field. Flows into Westside Drain (Drainage #57). No riparian vegetation is present along feature. Tail ditches typically convey water only during periodic irrigation when excess irrigation water that is not absorbed by the field drains to them. They are typically dry (non-RPW).

Drainage #80

Mapbook Pages: B-2, C-2
Photographs: 111
ACOE Jurisdiction: Not Jurisdictional

CDFG Jurisdiction: Not Jurisdictional
Feature Type: Tail Ditch
Riparian Vegetation: None
Substrate: Earthen

Dimensions (ft.)	
Bank-to-Bank	Channel/OHWM
10	6

Jurisdictional Evaluation:
Tail Ditch, drains a single field. Flows into Westside Drain (Drainage #57). No riparian vegetation is present along feature. Tail ditches typically convey water only during periodic irrigation when excess irrigation water that is not absorbed by the field drains to them. They are typically dry (non-RPW).

Drainage #81

Mapbook Pages: C-2
Photographs: 112
ACOE Jurisdiction: Not Jurisdictional
CDFG Jurisdiction: Not Jurisdictional
Feature Type: Head Ditch
Riparian Vegetation: None
Substrate: Concrete

Dimensions (ft.)	
Bank-to-Bank	Channel/OHWM
6	4

Jurisdictional Evaluation:
Head Ditch, carries water from Forget Me Not Canal (Drainage #115; via Gate 2) to irrigate a single field. No riparian vegetation is present. Head Ditches typically convey water for only a few days at a time (during periodic and infrequent irrigation events). They are typically dry (non-RPW).

Drainage #82

Mapbook Pages: C-2
Photographs: 113
ACOE Jurisdiction: Not Jurisdictional
CDFG Jurisdiction: Not Jurisdictional
Feature Type: Head Ditch
Riparian Vegetation: None
Substrate: Concrete

Dimensions (ft.)	
Bank-to-Bank	Channel/OHWM
6	4

Jurisdictional Evaluation:
Head Ditch, carries water from Forget Me Not Canal (Drainage #115; via Gate 1) to irrigate a single field. No riparian vegetation is present. Head Ditches typically convey water for only a few days at a time (during periodic and infrequent irrigation events). They are typically dry (non-RPW).

Drainage #83

Mapbook Pages: C-2
Photographs: 114
ACOE Jurisdiction: Not Jurisdictional
CDFG Jurisdiction: Not Jurisdictional
Feature Type: Tail Ditch
Riparian Vegetation: None
Substrate: Earthen

Dimensions (ft.)	
Bank-to-Bank	Channel/OHWM
12	1

Jurisdictional Evaluation:
Small Tail Ditch, drains a single field. Flows into Westside Drain (Drainage #57). No riparian vegetation is present along feature. Tail ditches typically convey water only during periodic irrigation when excess irrigation water that is not absorbed by the field drains to them. They are typically dry (non-RPW).

Drainage #84

Mapbook Pages: C-2, C-3
Photographs: 115
ACOE Jurisdiction: Not Jurisdictional
CDFG Jurisdiction: Not Jurisdictional
Feature Type: Tail Ditch
Riparian Vegetation: None
Substrate: Earthen

Dimensions (ft.)	
Bank-to-Bank	Channel/OHWM
4	1

Jurisdictional Evaluation:
Small Tail Ditch, drains a single field. Flows into Westside Drain (Drainage #57) via a culvert. No riparian vegetation is present along feature. Tail ditches typically convey water only during periodic irrigation when excess irrigation water that is not absorbed by the field drains to them. They are typically dry (non-RPW).

Drainage #85

Mapbook Pages: C-3
Photographs: 116
ACOE Jurisdiction: Not Jurisdictional
CDFG Jurisdiction: Not Jurisdictional
Feature Type: Tail Ditch
Riparian Vegetation: None
Substrate: Earthen

Dimensions (ft.)	
Bank-to-Bank	Channel/OHWM
3	1

Jurisdictional Evaluation:
Small Tail Ditch, drains a single field. Flows into a culvert, unclear where culvert drains to – possibly Dixie 3A Drain (Drainage #49). No riparian vegetation is present along feature. Tail ditches typically convey water only during periodic irrigation when excess irrigation water that is not absorbed by the field drains to them. They are typically dry (non-RPW).

Drainage #86

Mapbook Pages: C-3
Photographs: 117
ACOE Jurisdiction: Not Jurisdictional
CDFG Jurisdiction: Not Jurisdictional
Feature Type: Head Ditch
Riparian Vegetation: None
Substrate: Concrete

Dimensions (ft.)	
Bank-to-Bank	Channel/OHWM
6	4

Jurisdictional Evaluation:
Head Ditch, carries water to irrigate a single field. No riparian vegetation is present. Head Ditches typically convey water for only a few days at a time (during periodic and infrequent irrigation events). They are typically dry (non-RPW).

Drainage #87

Mapbook Pages: C-3
Photographs: 118
ACOE Jurisdiction: Not Jurisdictional
CDFG Jurisdiction: Not Jurisdictional
Feature Type: Head Ditch
Riparian Vegetation: None
Substrate: Concrete

Dimensions (ft.)	
Bank-to-Bank	Channel/OHWM
6	4

Jurisdictional Evaluation:
Head Ditch, carries water to irrigate a single field. No riparian vegetation is present. Head Ditches typically convey water for only a few days at a time (during periodic and infrequent irrigation events). They are typically dry (non-RPW).

Drainage #88

Mapbook Pages: C-3
Photographs: 119
ACOE Jurisdiction: Not Jurisdictional
CDFG Jurisdiction: Not Jurisdictional
Feature Type: Tail Ditch
Riparian Vegetation: None
Substrate: Earthen

Dimensions (ft.)	
Bank-to-Bank	Channel/OHWM
8	2

Jurisdictional Evaluation:
Tail Ditch, drains a single field. Flows into Dixie 3A Drain (Drainage #49). No riparian vegetation is present along feature. Tail ditches typically convey water only during periodic irrigation when excess irrigation water that is not absorbed by the field drains to them. They are typically dry (non-RPW).

Drainage #89

Mapbook Pages: C-3
Photographs: 120
ACOE Jurisdiction: Not Jurisdictional
CDFG Jurisdiction: Not Jurisdictional
Feature Type: Head Ditch
Riparian Vegetation: None
Substrate: Concrete

Dimensions (ft.)	
Bank-to-Bank	Channel/OHWM
6	4

Jurisdictional Evaluation:
Head Ditch (possibly defunct), carries water to irrigate a single field. No riparian vegetation is present. Head Ditches typically convey water for only a few days at a time (during periodic and infrequent irrigation events). They are typically dry (non-RPW).

Drainage #90

Mapbook Pages: D-2, D-3
Photographs: 121
ACOE Jurisdiction: Potentially Jurisdictional
CDFG Jurisdiction: Potentially Jurisdictional
Feature Type: Drain
Riparian Vegetation: Yes
Substrate: Earthen

Dimensions (ft.)	
Bank-to-Bank	Channel/OHWM
30	18

Jurisdictional Evaluation:
Dixie 3B Drain: Large drain, collects tail-water from several Tail Ditches. Riparian vegetation is present along much of the feature. Likely flows for most of the year, if not year-round. OHWM indicators include presence of bed and bank, change in vegetation cover and change in slope. Drains to the Dixie 3A Drain then to the New River and eventually to the Salton Sea.

Drainage #91

Mapbook Pages: A-1, D-3
Photographs: 122
ACOE Jurisdiction: Potentially Jurisdictional
CDFG Jurisdiction: Potentially Jurisdictional

Feature Type: Canal
Riparian Vegetation: Yes
Substrate: Earthen

Dimensions (ft.)	
Bank-to-Bank	Channel/OHWM
150	120

Jurisdictional Evaluation:
Westside Main: Flows from the All-American Canal, carries water to multiple Canals, Lateral Canals and Head Ditches. Some riparian vegetation is present along much of the feature; mostly arrow weed. Carries water year-round. OHWM indicators included water staining and change in vegetation.

Drainage #92

Mapbook Pages: D-2, D-3
Photographs: 123
ACOE Jurisdiction: Not Jurisdictional
CDFG Jurisdiction: Not Jurisdictional
Feature Type: Tail Ditch
Riparian Vegetation: None
Substrate: Earthen

Dimensions (ft.)	
Bank-to-Bank	Channel/OHWM
4	1

Jurisdictional Evaluation:
Small Tail Ditch, drains a single field. Flows into Wixom Drain (Drainage #27). No riparian vegetation is present along feature. Tail ditches typically convey water only during periodic irrigation when excess irrigation water that is not absorbed by the field drains to them. They are typically dry (non-RPW).

Drainage #93

Mapbook Pages: D-3
Photographs: 124
ACOE Jurisdiction: Not Jurisdictional
CDFG Jurisdiction: Not Jurisdictional
Feature Type: Head Ditch
Riparian Vegetation: None
Substrate: Concrete

Dimensions (ft.)	
Bank-to-Bank	Channel/OHWM
10	6

Jurisdictional Evaluation:
Head Ditch, carries water to irrigate a single field. No riparian vegetation is present. Head Ditches typically convey water for only a few days at a time (during periodic and infrequent irrigation events). They are typically dry (non-RPW).

Drainage #94

Mapbook Pages: E-2, D-2
Photographs: 125
ACOE Jurisdiction: Not Jurisdictional
CDFG Jurisdiction: Not Jurisdictional
Feature Type: Tail Ditch
Riparian Vegetation: None
Substrate: Earthen

Dimensions (ft.)	
Bank-to-Bank	Channel/OHWM
4	1

Jurisdictional Evaluation:
Small isolated Tail Ditch, drains a single field. Tail ditches typically convey water only during periodic irrigation when excess irrigation water that is not absorbed by the field drains to them. They are typically dry (non-RPW).

Drainage #95

Mapbook Pages: D-2
Photographs: 126
ACOE Jurisdiction: Not Jurisdictional
CDFG Jurisdiction: Not Jurisdictional
Feature Type: Head Ditch
Riparian Vegetation: None (*Atriplex* scrub adjacent to feature)
Substrate: Concrete

Dimensions (ft.)	
Bank-to-Bank	Channel/OHWM
6	4

Jurisdictional Evaluation:
Head Ditch, carries water from Fern Canal (Dranage #33, via Gate 1B) to irrigate a single field. No riparian vegetation is present Head Ditches typically convey water for only a few days at a time (during periodic and infrequent irrigation events). They are typically dry (non-RPW).

Drainage #96

Mapbook Pages: D-2
Photographs: No Picture
ACOE Jurisdiction: Not Jurisdictional
CDFG Jurisdiction: Not Jurisdictional
Feature Type: Head Ditch
Riparian Vegetation: None
Substrate: Concrete

Dimensions (ft.)	
Bank-to-Bank	Channel/OHWM
6	4

Jurisdictional Evaluation:
Head Ditch, carries water from Fern Canal (Dranage #33, via Gate 3) to irrigate a single field; possibly defunct. No riparian vegetation is present Head Ditches typically convey water for only a few days at a time (during periodic and infrequent irrigation events). They are typically dry (non-RPW).

Drainage #97

Mapbook Pages: D-2, E-2
Photographs: 127
ACOE Jurisdiction: Not Jurisdictional
CDFG Jurisdiction: Not Jurisdictional
Feature Type: Tail Ditch
Riparian Vegetation: None
Substrate: Earthen

Dimensions (ft.)	
Bank-to-Bank	Channel/OHWM
6	2

Jurisdictional Evaluation:
Tail Ditch, drains a single field. Flows to Wixom Drain (Drainage #27). Tail ditches typically convey water only during periodic irrigation when excess irrigation water that is not absorbed by the field drains to them. They are typically dry (non-RPW).

Drainage #98

Mapbook Pages: D-2, E-2
Photographs: 128
ACOE Jurisdiction: Not Jurisdictional
CDFG Jurisdiction: Not Jurisdictional
Feature Type: Head Ditch
Riparian Vegetation: None
Substrate: Concrete/Earthen

Dimensions (ft.)	
Bank-to-Bank	Channel/OHWM
8	3

Jurisdictional Evaluation:
Head Ditch, carries water from Fig Canal (Dranage #22, via Gate 3) to irrigate a single field. No riparian vegetation is present. Head Ditches typically convey water for only a few days at a time (during periodic and infrequent irrigation events). They are typically dry (non-RPW).

Drainage #99

Mapbook Pages: E-2
Photographs: 129
ACOE Jurisdiction: Not Jurisdictional
CDFG Jurisdiction: Not Jurisdictional
Feature Type: Head Ditch
Riparian Vegetation: None
Substrate: Concrete

Dimensions (ft.)	
Bank-to-Bank	Channel/OHWM
6	4

Jurisdictional Evaluation:
Head Ditch, carries water from Fig Canal (Dranage #22, via Gate 2) to irrigate a single field. No riparian vegetation is present. Head Ditches typically convey water for only a few days at a time (during periodic and infrequent irrigation events). They are typically dry (non-RPW).

Drainage #100

Mapbook Pages: E-2, F-2
Photographs: 130
ACOE Jurisdiction: Not Jurisdictional
CDFG Jurisdiction: Not Jurisdictional
Feature Type: Tail Ditch
Riparian Vegetation: None
Substrate: Earthen

Dimensions (ft.)	
Bank-to-Bank	Channel/OHWM
2	1

Jurisdictional Evaluation:
Small Tail Ditch, drains a single field. Flows to Fig Drain (Drainage #6). Tail ditches typically convey water only during periodic irrigation when excess irrigation water that is not absorbed by the field drains to them. They are typically dry (non-RPW).

Drainage #101

Mapbook Pages: E-2
Photographs: 131
ACOE Jurisdiction: Not Jurisdictional
CDFG Jurisdiction: Not Jurisdictional
Feature Type: Tail Ditch
Riparian Vegetation: None
Substrate: Earthen

Dimensions (ft.)	
Bank-to-Bank	Channel/OHWM
4	1

Jurisdictional Evaluation:
Small Tail Ditch, drains a single field. Flows to Diehl Drain (Drainage #16). Tail ditches typically convey water only during periodic irrigation when excess irrigation water that is not absorbed by the field drains to them. They are typically dry (non-RPW).

Drainage #102

Mapbook Pages: E-2
Photographs: 132
ACOE Jurisdiction: Not Jurisdictional

CDFG Jurisdiction: Not Jurisdictional
Feature Type: Head Ditch
Riparian Vegetation: None
Substrate: Concrete

Dimensions (ft.)	
Bank-to-Bank	Channel/OHWM
6	4

Jurisdictional Evaluation:
Head Ditch, carries water from Fig Canal (Dranage #22, via Gate 4) to irrigate a two fields (drainage splits). No riparian vegetation is present. Head Ditches typically convey water for only a few days at a time (during periodic and infrequent irrigation events). They are typically dry (non-RPW).

Drainage #103

Mapbook Pages: E-2
Photographs: 133
ACOE Jurisdiction: Not Jurisdictional
CDFG Jurisdiction: Not Jurisdictional
Feature Type: Tail Ditch
Riparian Vegetation: None
Substrate: Earthen

Dimensions (ft.)	
Bank-to-Bank	Channel/OHWM
2	1

Jurisdictional Evaluation:
Small isolated Tail Ditch, drains a single field. Tail ditches typically convey water only during periodic irrigation when excess irrigation water that is not absorbed by the field drains to them. They are typically dry (non-RPW).

Drainage #104

Mapbook Pages: E-2
Photographs: 134
ACOE Jurisdiction: Not Jurisdictional
CDFG Jurisdiction: Not Jurisdictional
Feature Type: Head Ditch
Riparian Vegetation: None
Substrate: Concrete

Dimensions (ft.)	
Bank-to-Bank	Channel/OHWM
6	4

Jurisdictional Evaluation:
Head Ditch, carries water from Fig Canal (Dranage #22, via Gate 6) to irrigate a single field. No riparian vegetation is present. Head Ditches typically convey water for only a few days at a time (during periodic and infrequent irrigation events). They are typically dry (non-RPW).

Drainage #105

Mapbook Pages: D-2, E-2
Photographs: 135
ACOE Jurisdiction: Not Jurisdictional
CDFG Jurisdiction: Not Jurisdictional
Feature Type: Head Ditch
Riparian Vegetation: None
Substrate: Concrete

Dimensions (ft.)	
Bank-to-Bank	Channel/OHWM
6	4

Jurisdictional Evaluation:
Head Ditch, carries water from Fig Canal (Dranage #22, via Gate 7) to irrigate a single field. No riparian vegetation is present. Head Ditches typically convey water for only a few days at a time (during periodic and infrequent irrigation events). They are typically dry (non-RPW).

Drainage #106

Mapbook Pages: D-1, E-1
Photographs: 136
ACOE Jurisdiction: Not Jurisdictional
CDFG Jurisdiction: Not Jurisdictional
Feature Type: Tail Ditch
Riparian Vegetation: None
Substrate: Earthen

Dimensions (ft.)	
Bank-to-Bank	Channel/OHWM
6	5

Jurisdictional Evaluation:
Tail Ditch, drains a single field. Flows to Wixom Drain (Drainage #27). Tail ditches typically convey water only during periodic irrigation when excess irrigation water that is not absorbed by the field drains to them. They are typically dry (non-RPW).

Drainage #107

Mapbook Pages: D-1, E-1
Photographs: 137
ACOE Jurisdiction: Not Jurisdictional
CDFG Jurisdiction: Potentially Jurisdictional
Feature Type: Head Ditch
Riparian Vegetation: Yes
Substrate: Earthen

Dimensions (ft.)	
Bank-to-Bank	Channel/OHWM
6	4

Jurisdictional Evaluation:
Earthen Head Ditch, carries water from Fig Canal (Dranage #22, via Gate 8) to irrigate a single field. Riparian vegetation (arrow weed) is present. Head Ditches typically convey water for only a few days at a time (during periodic and infrequent irrigation events). They are typically dry (non-RPW).

Drainage #108

Mapbook Pages: D-1, E-1
Photographs: 138
ACOE Jurisdiction: Not Jurisdictional
CDFG Jurisdiction: Not Jurisdictional
Feature Type: Tail Ditch
Riparian Vegetation: None
Substrate: Earthen

Dimensions (ft.)	
Bank-to-Bank	Channel/OHWM
8	3

Jurisdictional Evaluation:
Tail Ditch, drains a single field. Flows to Wixom Drain (Drainage #27). Tail ditches typically convey water only during periodic irrigation when excess irrigation water that is not absorbed by the field drains to them. They are typically dry (non-RPW).

Drainage #109

Mapbook Pages: E-1
Photographs: 139
ACOE Jurisdiction: Not Jurisdictional
CDFG Jurisdiction: Not Jurisdictional
Feature Type: Tail Ditch
Riparian Vegetation: None
Substrate: Earthen

Dimensions (ft.)	
Bank-to-Bank	Channel/OHWM
2	1

Jurisdictional Evaluation:
Small Tail Ditch, drains a single field. Flows to Diehl Drain (Drainage #16). Tail ditches typically convey water only during periodic irrigation when excess irrigation water that is not absorbed by the field drains to them. They are typically dry (non-RPW).

Drainage #110

Mapbook Pages: B-1, B-2
Photographs: 140
ACOE Jurisdiction: Potentially Jurisdictional
CDFG Jurisdiction: Potentially Jurisdictional
Feature Type: Drain
Riparian Vegetation: Yes
Substrate: Earthen

Dimensions (ft.)	
Bank-to-Bank	Channel/OHWM
30	15

Jurisdictional Evaluation:
Forget Me Not Drain 1: Large drain, collects tail-water from several Tail Ditches. Riparian vegetation is present along much of the feature. Likely flows for most of the year, if not year-round. OHWM indicators include presence of bed and bank, change in vegetation cover and change in slope. Drains to eventually to New River.

Drainage #111

Mapbook Pages: A-1
Photographs: 141, 142
ACOE Jurisdiction: Potentially Jurisdictional
CDFG Jurisdiction: Potentially Jurisdictional
Feature Type: Drain
Riparian Vegetation: Yes
Substrate: Earthen

Dimensions (ft.)	
Bank-to-Bank	Channel/OHWM
40	20

Jurisdictional Evaluation:
Dixie 4 Drain: Large drain, collects tail-water from several Tail Ditches. Riparian vegetation is present along much of the feature. Likely flows for most of the year, if not year-round. OHWM indicators include presence of bed and bank, change in vegetation cover and change in slope. Drains eventually to New River.

Drainage #112 (Reserved – No conveyance assigned this number)

Drainage #113

Mapbook Pages: F-1, F-2
Photographs: 10
ACOE Jurisdiction: Not Jurisdictional
CDFG Jurisdiction: Not Jurisdictional
Feature Type: Head Ditch
Riparian Vegetation: None
Substrate: Concrete

Dimensions (ft.)	
Bank-to-Bank	Channel/OHWM
6	4

Jurisdictional Evaluation:
Earthen Head Ditch, carries water from Wormwood Canal (Dranage #8, via Gate 88) to irrigate a single field. No riparian vegetation is present. Head Ditches typically convey water for only a few days at a time (during periodic and infrequent irrigation events). They are typically dry (non-RPW).

Drainage #114

Mapbook Pages: A-1
Photographs: 148
ACOE Jurisdiction: Potentially Jurisdictional
CDFG Jurisdiction: Potentially Jurisdictional
Feature Type: Canal
Riparian Vegetation: None
Substrate: Concrete

Dimensions (ft.)	
Bank-to-Bank	Channel/OHWM
20	12

Jurisdictional Evaluation:
Foxglove Canal: Flows from the Westside Main Canal (Drainage #91), carries water to multiple Lateral Canals and Head Ditches. Some riparian vegetation is present along much of the feature; mostly arrow weed. Carries water year-round. OHWM indicator was water staining.

Drainage #115

Mapbook Pages: B-1, B-2
Photographs: 149
ACOE Jurisdiction: Potentially Jurisdictional
CDFG Jurisdiction: Potentially Jurisdictional
Feature Type: Canal
Riparian Vegetation: None
Substrate: Concrete

Dimensions (ft.)	
Bank-to-Bank	Channel/OHWM
10	6

Jurisdictional Evaluation:
Forget Me Not Canal: Flows from the Westside Main Canal (Drainage #91), carries water to multiple Lateral Canals and Head Ditches. Some riparian vegetation is present along much of the feature; mostly arrow weed. Carries water year-round. OHWM indicator was water staining.

Drainage #116

Mapbook Pages: B-1, B-2
Photographs: 150
ACOE Jurisdiction: Not Jurisdictional
CDFG Jurisdiction: Not Jurisdictional
Feature Type: Lateral Canal
Riparian Vegetation: None
Substrate: Concrete

Dimensions (ft.)	
Bank-to-Bank	Channel/OHWM
8	4

Jurisdictional Evaluation:
Forget Me Not Lateral 1: Flows from the Forget Me Not Canal (Drainage #115; via Gate Lat 1), carries water to one or two Head Ditches. No riparian vegetation. Carries water only when the Head Ditches it serves are in use (only a few days at a time, during periodic and infrequent irrigation events).

Drainage #117 (Reserved – No conveyance assigned this number)

Drainage #118

Mapbook Pages: B-2
Photographs: 152
ACOE Jurisdiction: Not Jurisdictional
CDFG Jurisdiction: Not Jurisdictional
Feature Type: Tail Ditch
Riparian Vegetation: None
Substrate: Earthen

Dimensions (ft.)	
Bank-to-Bank	Channel/OHWM
8	2

Jurisdictional Evaluation:
Small Tail Ditch, drains a single field. Flows to Forget Me Not Drain 1 (Drainage #110; via a culvert). Tail ditches typically convey water only during periodic irrigation when excess irrigation water that is not absorbed by the field drains to them. They are typically dry (non-RPW).

Drainage #119

Mapbook Pages: B-1, B-2
Photographs: 153
ACOE Jurisdiction: Not Jurisdictional
CDFG Jurisdiction: Not Jurisdictional
Feature Type: Head Ditch
Riparian Vegetation: None
Substrate: Concrete

Dimensions (ft.)	
Bank-to-Bank	Channel/OHWM
6	4

Jurisdictional Evaluation:
Concrete Head Ditch, carries water from Forget Me Not Canal (Dranage #115, via Gate 7) to irrigate a single field. No riparian vegetation is present. Head Ditches typically convey water for only a few days at a time (during periodic and infrequent irrigation events). They are typically dry (non-RPW).

Drainage #120 (Reserved – No conveyance assigned this number)

Drainage #121

Mapbook Pages: B-1
Photographs: 155
ACOE Jurisdiction: Not Jurisdictional
CDFG Jurisdiction: Not Jurisdictional
Feature Type: Tail Ditch

Riparian Vegetation: None
Substrate: Earthen

Dimensions (ft.)	
Bank-to-Bank	Channel/OHWM
8	2

Jurisdictional Evaluation:
Small Tail Ditch, drains a single field. Flows to Forget Me Not Drain 1 (Drainage #110). Tail ditches typically convey water only during periodic irrigation when excess irrigation water that is not absorbed by the field drains to them. They are typically dry (non-RPW).

Drainage #122

Mapbook Pages: B-1
Photographs: 156
ACOE Jurisdiction: Not Jurisdictional
CDFG Jurisdiction: Not Jurisdictional
Feature Type: Head Ditch
Riparian Vegetation: None
Substrate: Earthen/Concrete

Dimensions (ft.)	
Bank-to-Bank	Channel/OHWM
6	4

Jurisdictional Evaluation:
Earthen/concrete Head Ditch, carries water to irrigate a single field. No riparian vegetation is present. Head Ditches typically convey water for only a few days at a time (during periodic and infrequent irrigation events). They are typically dry (non-RPW).

Drainage #123

Mapbook Pages: B-1
Photographs: 157
ACOE Jurisdiction: Not Jurisdictional
CDFG Jurisdiction: Not Jurisdictional
Feature Type: Tail Ditch
Riparian Vegetation: None
Substrate: Earthen

Dimensions (ft.)	
Bank-to-Bank	Channel/OHWM
12	10

Jurisdictional Evaluation:

Small Tail Ditch, drains a single field. Tail ditches typically convey water only during periodic irrigation when excess irrigation water that is not absorbed by the field drains to them. They are typically dry (non-RPW).

Drainage #124

Mapbook Pages: A-1, B-1
Photographs: 158
ACOE Jurisdiction: Not Jurisdictional
CDFG Jurisdiction: Not Jurisdictional
Feature Type: Head Ditch
Riparian Vegetation: None
Substrate: Earthen

Dimensions (ft.)	
Bank-to-Bank	Channel/OHWM
10	4

Jurisdictional Evaluation:
Earthen Head Ditch, carries water from Foxglove Canal (Feature #114; via Gate Lat 1 and Gate 17) to irrigate a single field. No riparian vegetation is present. Head Ditches typically convey water for only a few days at a time (during periodic and infrequent irrigation events). They are typically dry (non-RPW).

Drainage #125

Mapbook Pages: B-1
Photographs: 159
ACOE Jurisdiction: Not Jurisdictional
CDFG Jurisdiction: Not Jurisdictional
Feature Type: Tail Ditch
Riparian Vegetation: None
Substrate: Earthen

Dimensions (ft.)	
Bank-to-Bank	Channel/OHWM
4	2

Jurisdictional Evaluation:

Small Tail Ditch, drains a single field. Flows into earthen Head Ditch (Drainage #124). Tail ditches typically convey water only during periodic irrigation when excess irrigation water that is not absorbed by the field drains to them. They are typically dry (non-RPW).

Drainage #126

Mapbook Pages: B-1
Photographs: 160
ACOE Jurisdiction: Not Jurisdictional
CDFG Jurisdiction: Not Jurisdictional
Feature Type: Tail Ditch
Riparian Vegetation: None
Substrate: Earthen

Dimensions (ft.)	
Bank-to-Bank	Channel/OHWM
4	3

Jurisdictional Evaluation:

Small Tail Ditch, drains a single field. Flows into earthen Head Ditch (Drainage #124). Tail ditches typically convey water only during periodic irrigation when excess irrigation water that is not absorbed by the field drains to them. They are typically dry (non-RPW).

Drainage #127

Mapbook Pages: A-1
Photographs: 161
ACOE Jurisdiction: Not Jurisdictional
CDFG Jurisdiction: Not Jurisdictional
Feature Type: Head Ditch
Riparian Vegetation: None
Substrate: Concrete

Dimensions (ft.)	
Bank-to-Bank	Channel/OHWM
6	4

Jurisdictional Evaluation:
Concrete Head Ditch, carries water from Foxglove Canal (Feature #114; via Gate Lat 1 and Gate 19) to irrigate a single field. No riparian vegetation is present Head Ditches typically convey water for only a few days at a time (during periodic and infrequent irrigation events). They are typically dry (non-RPW).

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Appendix A
Drainage Data Table

Feature ID	Type	Coordinates (UTM, NAD 83 Zone 11N, m)		Jurisdictional Status		Riparian Vegetation	Substrate	Length (within Study Area; mi)	Trapezoidal Dimensions (ft)	
		Start	End	CDFG	ACOE				Bank to Bank	Channel Bottom
1	Lateral Canal	622704, 3623199	622692, 3624229	Y	Y	None	Concrete	0.64	8	4
2	Tail Ditch	622699, 3623253	621900, 3623248			None	Earthen	0.50	2	0
4	Head Ditch	622694, 3623657	621751, 3623858			None	Concrete/Earthen	0.65	6	4
5	Tail Ditch	621882, 3623282	621920, 3623575			None	Earthen	0.19	8	0
6	Drain	621880, 3623187	621601, 3625177	Y	Y	Yes	Earthen	1.30	80	25
7	Tail Ditch	622673, 3624191	621969, 3624169			Limited	Earthen	0.61	6	4
8	Canal	622767, 3624212	622667, 3624948	Y	Y	None	Concrete	0.51	14	10
9	Head Ditch	622661, 3624934 622261, 3624926	622263, 3625094 622267, 3624232			None	Concrete	0.35 0.43	6	4
10	Tail Ditch	622290, 3625091	622295, 3624217			Limited	Earthen	0.54	12	10
11A	Head Ditch	622677, 3624933	622677, 3625015	Y	Y	Yes	Earthen	0.05	25	20
11B	Head Ditch	622677, 3625015	622154, 3625155	Y		Limited	Earthen	0.42	10	4
12	Head Ditch	622667, 3624953	622666, 3625112			None	Concrete	0.10	6	4
13	Tail Ditch	621711, 3624584	621669, 3625066			None	Earthen	0.30	5	2
14	Tail Ditch	622292, 3624594	621711, 3624584	Y		Limited	Earthen	0.36	6	4
15	Tail Ditch	621713, 3624214	621711, 3624584			None	Earthen	0.23	6	4

Feature ID	Type	Coordinates (UTM, NAD 83 Zone 11N, m)		Jurisdictional Status		Riparian Vegetation	Substrate	Length (within Study Area; mi)	Trapezoidal Dimensions (ft)	
		Start	End	CDFG	ACOE				Bank to Bank	Channel Bottom
16	Drain	621117, 3624546	621117, 3624280	Y	Y	Yes	Earthen	0.90	30	10
17	Tail Ditch	621439, 3624627	621442, 3625001			None	Earthen	0.33	4	2
18	Head Ditch	621107, 3624605	621102, 3624999			None	Concrete	0.24	6	4
19	Tail Ditch	621122, 3623500	621123, 3623259			None	Earthen	0.15	4	2
20	Head Ditch	621095, 3623240	621500, 3623502			None	Concrete	0.41	6	4
21	Tail Ditch	621849, 3223249	621903, 3623490			None	Earthen	0.16	4	2
22	Canal	621082, 3624546	621082, 3624279	Y	Y	None	Concrete	1.39	14	10
23	Head Ditch	620878, 3623254	621062, 3623240			None	Concrete	0.12	6	4
24	Tail Ditch	620935, 3623766 620932, 3623719 621070, 3623719	621070, 3623767 621070, 3623722 621124, 3623783			None	Earthen	0.08 0.09 0.07	6	3
25	Head Ditch	621083, 3623802	620319, 3623789			None	Concrete	0.48	6	4
26	Tail Ditch	621075, 3624177	620290, 3624169			None	Earthen	0.29	6	3
27	Drain	620295, 3623723 620290, 3625180 620525, 3623312	620289, 3625300 620263, 3625180 620526, 3623244	Y	Y	Yes	Earthen	0.98 0.02 0.04	25	12

Feature ID	Type	Coordinates (UTM, NAD 83 Zone 11N, m)		Jurisdictional Status		Riparian Vegetation	Substrate	Length (within Study Area; mi)	Trapezoidal Dimensions (ft)	
		Start	End	CDFG	ACOE				Bank to Bank	Channel Bottom
29	Tail Ditch	620256, 3625214 620270, 3624423	620240, 3624205 620295, 3624423			None	Earthen	0.64 0.02	6	3
30	Head Ditch	621060, 3625118 621059, 3625102 621108, 3624604	621007, 3625001 621078, 3625102 621082, 3624604			None	Concrete	0.08 0.01 0.02	6	4
31	Head Ditch	619682, 3624175	619645, 3625204			None	Concrete	0.65	6	4
32	Head Ditch	619244, 3624430	619249, 3624483			None	Concrete	0.04	6	4
33	Canal	620126, 3623742	620462, 3623310	Y	Y	None	Concrete	1.59	16	12
34	Tail Ditch	619645, 3624436	619626, 3625206			None	Earthen	0.48	8	2
35	Tail Ditch	618878, 3625191	618924, 3625205			None	Earthen	0.03	5	2
36	Head Ditch	618928, 3624816	618845, 3624816			None	Concrete	0.05	6	4
37	Tail Ditch	618835, 3624805	618813, 3624414			None	Earthen	0.25	5	2
38	Head Ditch	619221, 3624432	619220, 3624483			None	Concrete	0.03	6	4
39	Head Ditch	219215, 3624396	619237, 3624397			None	Concrete	0.23	5	3
40	Head Ditch	619244, 3624010	619215, 3624396			None	Concrete/Earthen	0.24	5	3
41	Tail Ditch	619235, 3624014	618877, 3623614			None	Earthen	0.48	4	2

Feature ID	Type	Coordinates (UTM, NAD 83 Zone 11N, m)		Jurisdictional Status		Riparian Vegetation	Substrate	Length (within Study Area; mi)	Trapezoidal Dimensions (ft)	
		Start	End	CDFG	ACOE				Bank to Bank	Channel Bottom
42	Tail Ditch	619252, 3624302	618844, 3623613			None	Earthen	0.69	6	3
43	Head Ditch	619611, 3624385	619653, 3623634			None	Concrete	0.47	6	4
44	Tail Ditch	619654, 3623962	619668, 3623664			None	Earthen	0.46	5	3
45	Tail Ditch	619684, 3622387	619607, 3623092			None	Earthen	0.47	5	3
46	Head Ditch	620357, 3622228	619689, 3622365			None	Concrete	0.44	6	4
47	Head Ditch	620350, 3622281	619716, 3623956			None	Concrete/Earthen	1.31	6	4
48	Tail Ditch	620451, 3622339	620433, 3623212			None	Earthen	0.54	5	2
49	Drain	619668, 3623225	617902, 3626975	Y	Y	Yes	Earthen	3.35	50	35
50	Wetland	n/a	n/a	Y	Y	Yes	Earthen	n/a	30	15
51	Tail Ditch	618516, 3624455 618451, 3625199	618462, 3625080 618438, 3624870			None	Earthen	0.56 0.22	6	4
52	Head Ditch	618709, 3625206	618827, 3624450			None	Concrete	0.52	6	4
53	Tail Ditch	618047, 3625195	618406, 3625198			Limited	Earthen	0.22	5	2
54	Tail Ditch	618036, 3624421	618032, 3625192			None	Earthen	0.48	6	3
55	Head Ditch	617580, 3624403	617876, 3626867			None	Concrete	1.77	7	5

Feature ID	Type	Coordinates (UTM, NAD 83 Zone 11N, m)		Jurisdictional Status		Riparian Vegetation	Substrate	Length (within Study Area; mi)	Trapezoidal Dimensions (ft)	
		Start	End	CDFG	ACOE				Bank to Bank	Channel Bottom
56	Tail Ditch	618265, 3625216 618378, 3625339 618237, 3625487 618235, 3625842	617899, 3626857 618408, 3625350 618258, 3625487 618254, 3625843			None	Earthen	1.26 0.02 0.01 0.01	10	6
57	Drain	617911, 3626885	617573, 3625206	Y	Y	Yes	Earthen	1.22	50	25
58	Drain	619626, 3625206	618652, 3625781	Y	Y	Yes	Earthen	0.32	50	25
59	Head Ditch	618638, 3626583	618647, 3625801			None	Concrete	0.49	6	4
60	Head Ditch	618599, 3626896	618573, 3626568			None	Concrete	0.23	6	4
61	Lateral Canal	618707, 3626582	618591, 3626983	Y	Y	None	Concrete	0.29	8	6
62	Tail Ditch	617935, 3626889	618454, 3625231			None	Earthen	1.19	8	4
64	Drain	622760, 3624958	622750, 3623216	Y	Y	Yes	Earthen	1.09	35	20
65	Head Ditch	622601, 3625193	622604, 3625122			None	Concrete	0.04	6	3
66	Tail Ditch	621634, 3625177	621614, 3625099			None	Earthen	0.06	5	2

Feature ID	Type	Coordinates (UTM, NAD 83 Zone 11N, m)		Jurisdictional Status		Riparian Vegetation	Substrate	Length (within Study Area; mi)	Trapezoidal Dimensions (ft)	
		Start	End	CDFG	ACOE				Bank to Bank	Channel Bottom
67	Tail Ditch	621118, 3625025	621625, 3625037			None	Earthen	0.31	6	4
68	Tail Ditch	621103, 3625116	621104, 3625044			None	Earthen	0.04	5	2
72	Head Ditch	620258, 3625300	620258, 3625249			None	Concrete	0.03	7	5
73	Tail Ditch	619872, 3625252	619872, 3625302			None	Earthen	0.03	2	1
74	Head Ditch	619584, 3625244	619825, 3625243			None	Concrete	0.15	6	4
76	Head Ditch	618808, 3625171	618838, 3625287			None	Concrete	0.08	6	4
77	Head Ditch	618645, 3625749 618688, 3625284	618646, 3625719 618698, 3625234			None	Concrete	0.02 0.03	6	4
78	Road Ditch	617551, 3626842	617603, 3626784			Limited	Earthen	0.05	6	4
79	Tail Ditch	617599, 3626779	617575, 3626018			None	Earthen	0.49	5	2
80	Tail Ditch	616825, 3625981	617613, 3625998			None	Earthen	0.49	10	6
81	Head Ditch	617568, 3625616	617597, 3625617			None	Concrete	0.02	6	4
82	Head Ditch	617573, 3625233	617596, 3625234			None	Concrete	0.01	6	4

Feature ID	Type	Coordinates (UTM, NAD 83 Zone 11N, m)		Jurisdictional Status		Riparian Vegetation	Substrate	Length (within Study Area; mi)	Trapezoidal Dimensions (ft)	
		Start	End	CDFG	ACOE				Bank to Bank	Channel Bottom
83	Tail Ditch	617568, 3625599	617621, 3625600			None	Earthen	0.03	12	1
84	Tail Ditch	617611, 3625181	617617, 3624424			None	Earthen	0.47	4	1
85	Tail Ditch	617640, 3624382	617641, 3624336			None	Earthen	0.03	3	1
86	Head Ditch	618031, 3624383	618032, 3624342			None	Concrete	0.03	6	4
87	Head Ditch	618050, 3624377	618051, 3624342			None	Concrete	0.02	6	4
88	Tail Ditch	618602, 3624413	618603, 3624351			None	Earthen	0.04	8	2
89	Head Ditch	618629, 3624386	618629, 3624351			None	Concrete	0.02	6	4
90	Drain	619261, 3622990	619598, 3622357	Y	Y	Yes	Earthen	0.09	30	18
91	Canal	619572, 3622316 615150, 3626451	620475, 3622202 615223, 3626330	Y	Y	Yes	Earthen	0.57 0.09	150	120
92	Tail Ditch	620526, 3623244	620540, 3622734			None	Earthen	0.37	4	1
93	Head Ditch	620507, 3622744	620540, 3622745			None	Concrete	0.02	10	6
94	Tail Ditch	620845, 3623188	620521, 3623198			None	Earthen	0.20	4	1

Feature ID	Type	Coordinates (UTM, NAD 83 Zone 11N, m)		Jurisdictional Status		Riparian Vegetation	Substrate	Length (within Study Area; mi)	Trapezoidal Dimensions (ft)	
		Start	End	CDFG	ACOE				Bank to Bank	Channel Bottom
95	Head Ditch	620071, 3623238	620458, 3623242			None	Concrete	0.24	6	4
96	Head Ditch	620237, 3623804	620126, 3623796			None	Concrete	0.05	6	4
97	Tail Ditch	620838, 3623784	620291, 3623776			None	Earthen	0.34	6	2
98	Head Ditch	620546, 3623313	620846, 3623235			None	Concrete/Earthen	0.24	8	3
99	Head Ditch	621095, 3623240	621361, 3623179			None	Concrete	0.20	6	4
100	Tail Ditch	621879, 3623215	622677, 3623222			Yes	Earthen	0.50	30	15
101	Tail Ditch	621878, 3623519	621121, 3623510			None	Earthen	0.47	4	1
102	Head Ditch	621687, 3623849 621440, 3623584	621165, 3623786 621442, 3623526			None	Concrete	0.26 0.04	6	4
103	Tail Ditch	621140, 3623815	621173, 3624183			None	Earthen	0.23	2	1
104	Head Ditch	621082, 3624206	621636, 3624209			None	Concrete	0.34	6	4
105	Head Ditch	620315, 3624199	621082, 3624206			None	Concrete	0.48	6	4
106	Tail Ditch	621047, 3624588	620294, 3624582			None	Earthen	0.04	6	5

Feature ID	Type	Coordinates (UTM, NAD 83 Zone 11N, m)		Jurisdictional Status		Riparian Vegetation	Substrate	Length (within Study Area; mi)	Trapezoidal Dimensions (ft)	
		Start	End	CDFG	ACOE				Bank to Bank	Channel Bottom
107	Head Ditch	620316, 3624600 621082, 3624610	620349, 3624600 621031, 3624608	Y		Yes	Earthen	0.02 0.03	6	4
108	Tail Ditch	620291, 3624584	621051, 3624993			None	Earthen	0.47	8	3
109	Tail Ditch	621117, 3624584	621614, 3624744			None	Earthen	0.36	2	1
110	Drain	616770, 3626469	616774, 3626007	Y	Y	Yes	Earthen	0.29	30	15
111	Drain	615213, 3626452	615356, 3626332	Y	Y	Yes	Earthen	0.12	40	20
113	Head Ditch	622695, 3624226	622668, 3624901			None	Concrete	0.43	6	4
114	Canal	615185, 3626452	615292, 3626331	Y	Y	None	Concrete	0.10	20	12
115	Canal	616806, 3626469	616811, 3625944	Y	Y	None	Concrete	0.33	10	6
116	Lateral Canal	617204, 3626068	616814, 3625979			None	Concrete	0.29	8	4
118	Tail Ditch	616763, 3625983	616785, 3625951			None	Earthen	0.03	8	2
119	Head Ditch	616819, 3626468	616813, 3625996			None	Concrete	0.30	6	4
121	Tail Ditch	616018, 3626387	616771, 3626394			None	Earthen	0.47	8	2

Feature ID	Type	Coordinates (UTM, NAD 83 Zone 11N, m)		Jurisdictional Status		Riparian Vegetation	Substrate	Length (within Study Area; mi)	Trapezoidal Dimensions (ft)	
		Start	End	CDFG	ACOE				Bank to Bank	Channel Bottom
122	Head Ditch	616009, 3626338	616738, 3626403			None	Concrete/Earthen	0.49	6	4
123	Tail Ditch	615609, 3626376	615986, 3626462			None	Earthen	0.28	12	10
124	Head Ditch	615227, 3626385	615974, 3626393			None	Earthen	0.46	10	4
125	Tail Ditch	615597, 3626458	615599, 3626389			None	Earthen	0.04	4	2
126	Tail Ditch	615592, 3626387	615604, 3626334			None	Earthen	0.03	4	3
127	Head Ditch	615245, 3626452	615339, 3626385			None	Concrete	0.07	6	4

Appendix B
Photographs

Drainage #1 – Photo 1

Drainage #2 – Photo 2

Drainage #2 – Photo 5

Drainage #4 – Photo 3

Drainage #4 – Photo 4

Drainage #5 – Photo 6

Drainage #6 – Photo 7

Drainage #6 – Photo 8

Drainage #6 – Photo 17

Drainage #6 – Photo 18

Drainage #7 – Photo 9

Drainage #8 – Photo 10

Drainage #9 – Photo 12

Drainage #10 – Photo 14

Drainage 11A – Photo 162

Drainage #11B – Photo 15

Drainage #12 – Photo 11

Drainage #12 – Photo 13

Drainage #13 – Photo 16

Drainage #14 – Photo 19

Drainage #15 – Photo 20

Drainage #16 – Photo 21

Drainage #17 – Photo 22

Drainage #18 – Photo 23

Drainage #19 – Photo 24

Drainage #20 – Photo 25

Drainage #21 – Photo 26

Drainage #22 – Photo 40

Drainage #22 – Photo 41

Drainage #23 – Photo 42

Drainage #24 – Photo 43

Drainage #25 – Photo 44

Drainage #26 – Photo 45

Drainage #27 – Photo 46

Drainage #27 – Photo 47

Drainage #27 – Photo 50

Drainage #27 – Photo 51

Drainage #27 – Photo 146

Drainage #27 – Photo 147

Drainage #29 – Photo 49

Drainage #30 – Photo 52

Drainage #30 – Photo 53

Drainage #31 – Photo 54

Drainage #31 – Photo 55

Drainage #32 – Photo 57

Drainage #33 – Photo 56

Drainage #34 – Photo 60

Drainage #35 – Photo 61

Drainage #36 – Photo 62

Drainage #37 – Photo 63

Drainage #38 – Photo 65

Drainage #39 – Photo 64

Drainage #40 – Photo 66

Drainage #41 – Photo 67

Drainage #42 – Photo 68

Drainage #43 – Photo 69

Drainage #44 – Photo 70

Drainage #45 – Photo 71

Drainage #46 – Photo 72

Drainage #47 – Photo 73

Drainage #48 – Photo 74

Drainage #48 – Photo 75

Drainage #49 – Photo 76

Drainage #49 – Photo 77

Drainage #50 – Photo 78

Drainage #50 – Photo 144

Drainage #51 – Photo 79

Drainage #52 – Photo 80

Drainage #53 – Photo 81

Drainage #54 – Photo 82

Drainage #55 – Photo 83

Drainage #55 – Photo 86

Drainage #56 – Photo 84

Drainage #56 – Photo 143

Drainage #57 – Photo 85

Drainage #58 – Photo 58

Drainage #58 – Photo 59

Drainage #58 – Photo 88

Drainage #58 – Photo 145

Drainage #59 – Photo 89

Drainage #60 – Photo 92

Drainage #61 – Photo 90

Drainage #62 – Photo 93

Drainage #64 – Photo 95

Drainage #64 – Photo 96

Drainage #65 – Photo 97

Drainage #66 – Photo 98

Drainage #67 – Photo 99

Drainage #68 – Photo 100

Drainage #72 – Photo 104

Drainage #73 – Photo 105

Drainage #74 – Photo 106

Drainage #76 – Photo 107

Drainage #77 – Photo 108

Drainage #78 – Photo 109

Drainage #79 – Photo 110

Drainage #80 – Photo 111

Drainage #81 – Photo 112

Drainage #82 – Photo 113

Drainage #83 – Photo 114

Drainage #84 – Photo 115

Drainage #85 – Photo 116

Drainage #86 – Photo 117

Drainage #87 – Photo 118

Drainage #88 – Photo 119

Drainage #89 – Photo 120

Drainage #90 – Photo 121

Drainage #91 – Photo 122

Drainage #92 – Photo 123

Drainage #93 – Photo 124

Drainage #94 – Photo 125

Drainage #95 – Photo 126

Drainage #96 – No Photo – refer to Drainage #95 (Photo 126) for similar feature

Drainage #97 – Photo 127

Drainage #98 – Photo 128

Drainage #99 – Photo 129

Drainage #100 – Photo 130

Drainage #101 – Photo 131

Drainage #102 – Photo 132

Drainage #103 – Photo 133

Drainage #104 – Photo 134

Drainage #105 – Photo 135

Drainage #106 – Photo 136

Drainage #107 – Photo 137

Drainage #108 – Photo 138

Drainage #109 – Photo 139

Drainage #110 – Photo 140

Drainage #111 – Photo 141

Drainage #111 – Photo 142

Drainage #113 – Photo 10

Drainage #114 – Photo 148

Drainage #115 – Photo 149

Drainage #116 – Photo 150

Drainage #118 – Photo 152

Drainage #119 – Photo 153

Drainage #121 – Photo 155

Drainage #122 – Photo 156

Drainage #123 – Photo 157

Drainage #124 – Photo 158

Drainage #125 – Photo 159

Drainage #126 – Photo 160

Drainage #127 – Photo 161

Appendix C
Drainage Mapbook

MAP SHEET INDEX

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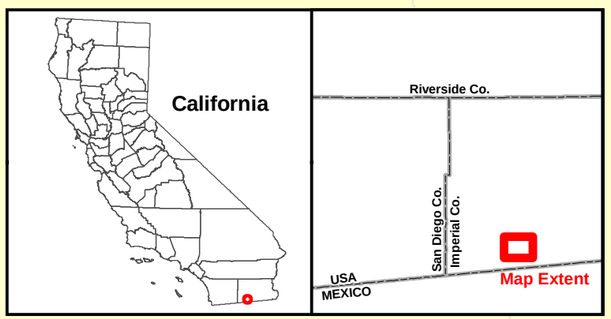
Proposed Gen-tie
Gen-tie Alternative
Interstate
Major Road
Road
International Boundary
Map Sheet Boundary
Approximate Campo Verde Solar Site
200 Foot Buffer of Campo Verde Boundary
Unincorporated City

Jurisdictional Land Ownership

Bureau of Land Management Land



Campo Verde Solar Project
Drainage Mapbook

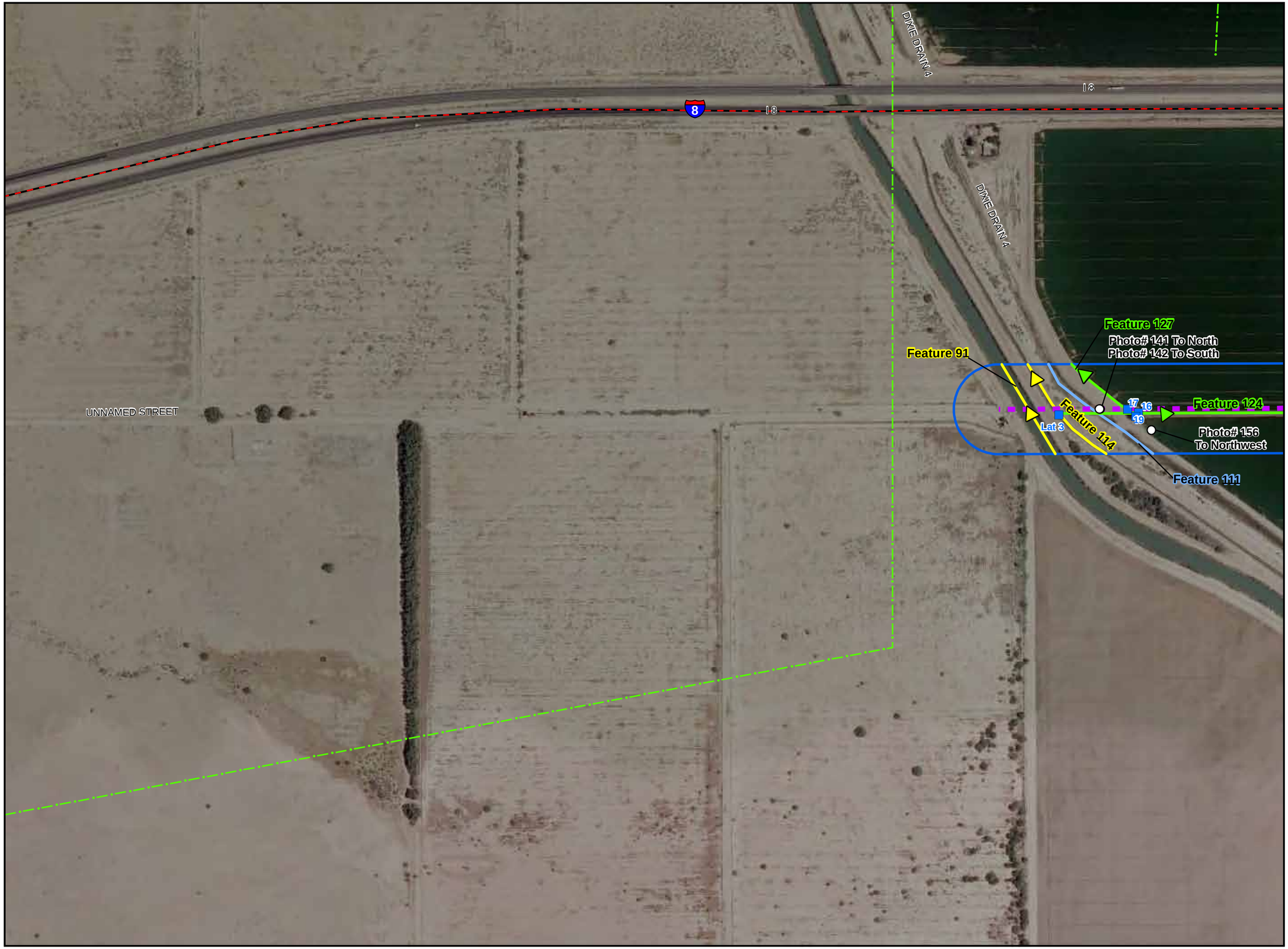
0 0.5 1
Miles

State Plane Coordinate System
California Zone 6, NAD 83
Lambert Conformal Conic Projection
1983 North American Datum
Linear Unit: Foot US

01-17-12

Campo Verde Solar Site

Surface Water Conveyance



Legend

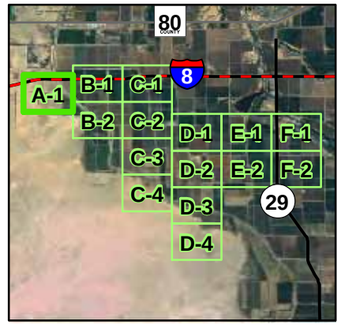
- Photo Location
- Culvert
- Gate
- Proposed Gen-tie
- Gen-tie Alternative
- Existing 500 kV Transmission Line
- Existing 230 kV Transmission Line
- Interstate
- Major Road
- International Boundary

Surface Water Conveyance Feature

- Canal (with Flow Direction)
- Drain (with Flow Direction)
- Head Ditch (with Flow Direction)
- Tail Ditch (with Flow Direction)
- Road Ditch(with Flow Direction)
- Wetland
- Approximate Campo Verde Facility Boundary
- 200 Foot Buffer of Campo Verde Boundary
- Bureau of Land Management Land

0 400 800

Feet



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01-17-12

Campo Verde Solar Site

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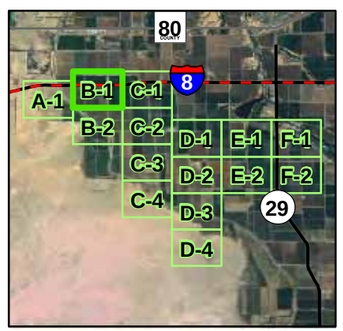
0 400 800

Feet



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01-17-12

STEVENS

I 8

8

Feature 125

Photo# 154 To North

Photo# 155 To South

Feature 123

Feature 124

Feature 126

Photo# 152 To West

Photo# 153 To West

Feature 121

Feature 122

Photo# 150 To West

Photo# 151 To West

JEFFREY

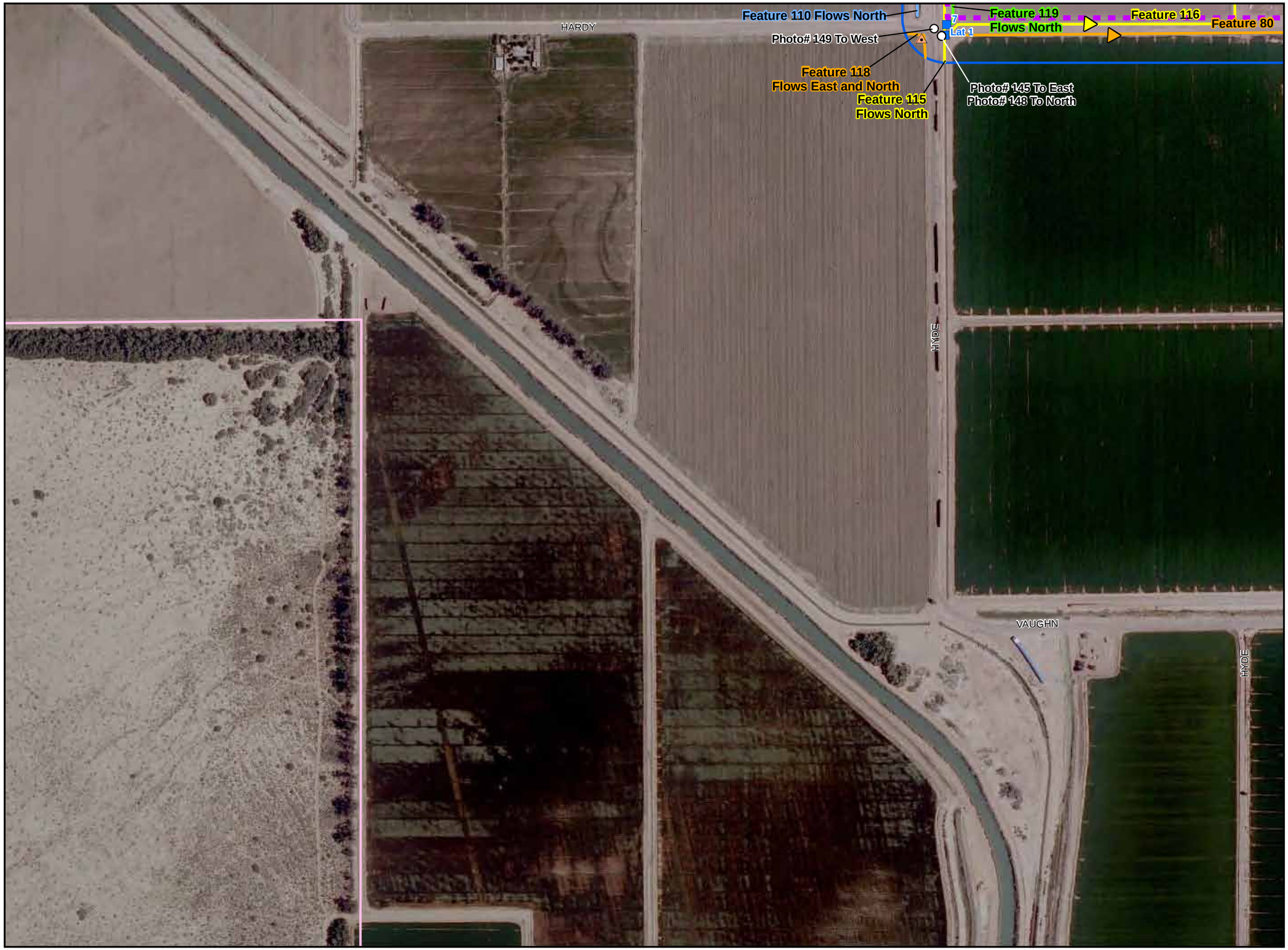
Feature 110

Feature 115

Feature 119

HYDE

Feature 116



Campo Verde Solar Site

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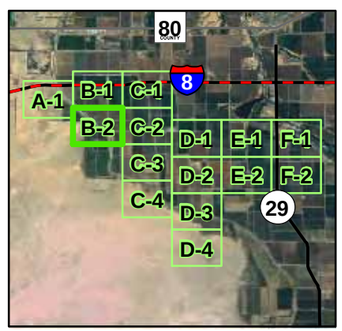
0 400 800

Feet



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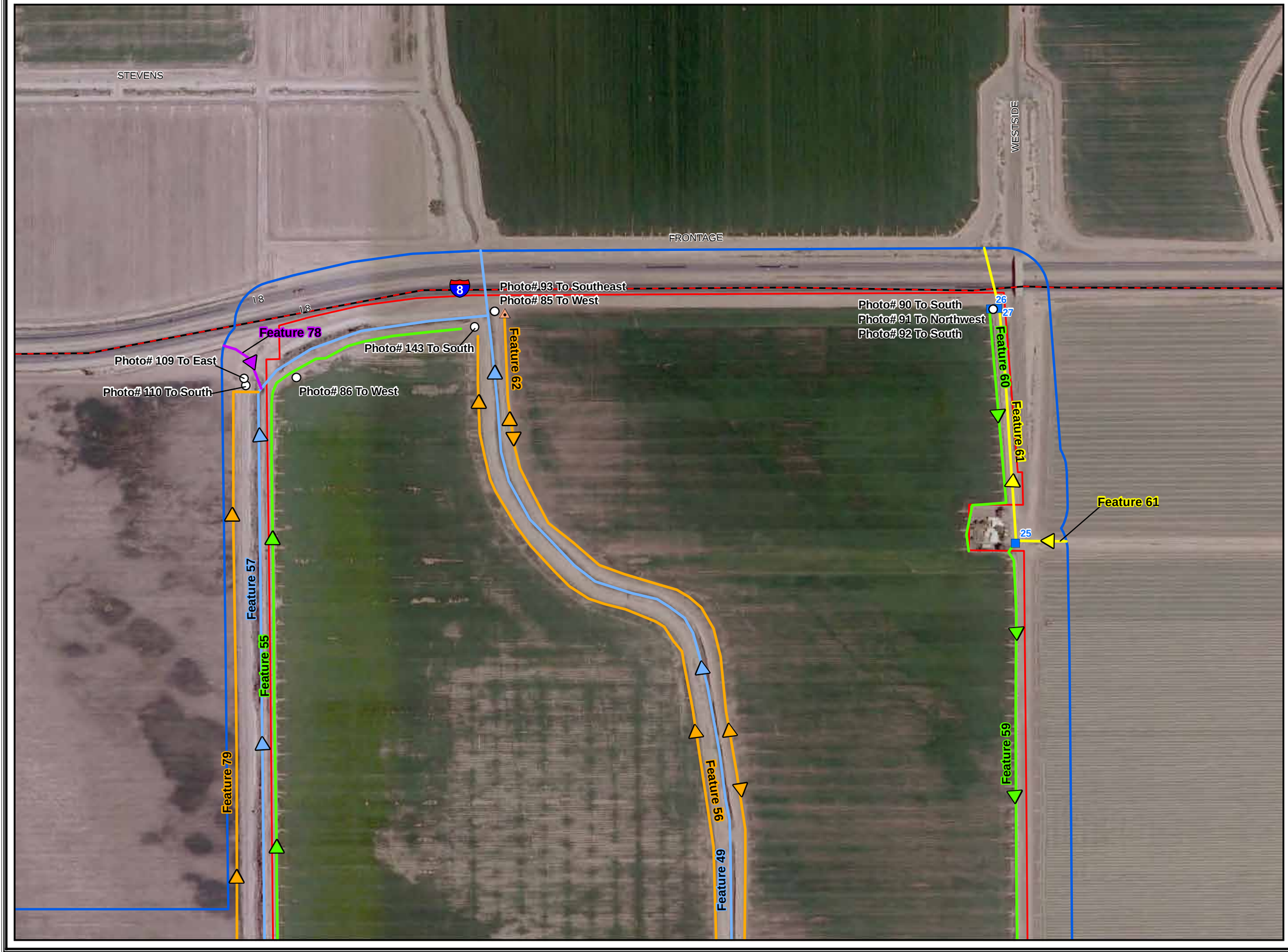
Campo Verde Solar Site

Surface Water Conveyance



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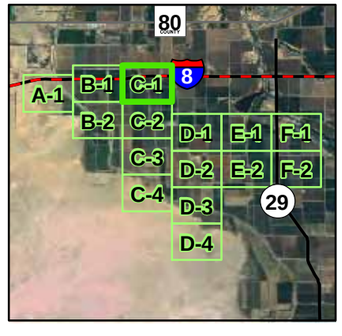
0 400 800

Feet



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Campo Verde Solar Site

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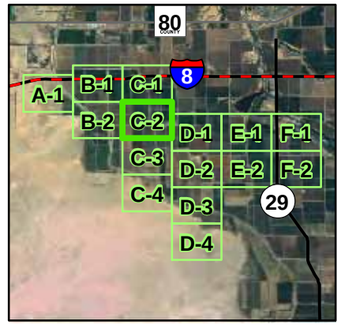
Feet



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01-17-12

Feature 80
Photo# 111 To West
Feature 57
Feature 81
Photo# 112 To West
Photo# 114 To West
Feature 83
Feature 55
Feature 82
Photo# 113 To West
Photo# 115 To South
Feature 84
VAUGHN
Feature 53
Feature 54
Feature 49
Feature 56
Feature 62
Feature 59
Photo# 88 To West
Photo# 89 To North
Feature 58
Feature 77
WESTSIDE
Photo# 87 To North
Photo# 84
Feature 77
Feature 76
Photo# 81 To West
Photo# 108 To North
Photo# 80 To Northwest
Feature 35
Photo# 107 To North
Feature 52
Feature 51
Feature 51
WESTSIDE
Photo# 79 To North
Photo# 63 To South
Feature 36
Feature 37

Campo Verde Solar Site

Surface Water Conveyance

Feature 84
Feature 55
Feature 54
Feature 49
Feature 51
Feature 52
Feature 37
Feature 39
Feature 89
Feature 50
Feature 86
Feature 87
Feature 88
Feature 85
Feature 41
Feature 42

Photo# 83 To North
Photo# 116 To South

Photo# 82 To North
Photo# 117 To South
Photo# 118 To South
Photo# 144 To East

Photo# 78 To West

Photo# 119 To South
Photo# 120 To South

DIEHL
WESTSIDE

Legend

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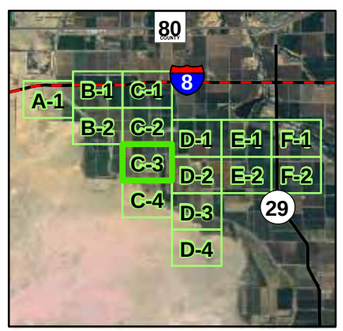
0 400 800
Feet



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01-17-12

Campo Verde Solar Site

Surface Water Conveyance

Legend

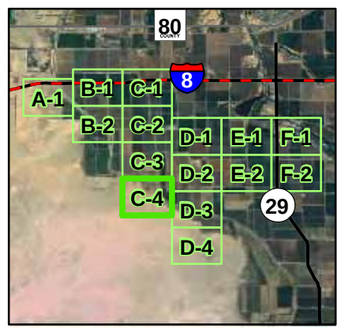
- Photo Location
- Culvert
- Gate
- Proposed Gen-tie
- Gen-tie Alternative
- Existing 500 kV Transmission Line
- Existing 230 kV Transmission Line
- Interstate
- Major Road
- International Boundary

Surface Water Conveyance Feature

- Canal (with Flow Direction)
- Drain (with Flow Direction)
- Head Ditch (with Flow Direction)
- Tail Ditch (with Flow Direction)
- Road Ditch(with Flow Direction)
- Wetland
- Approximate Campo Verde Facility Boundary
- 200 Foot Buffer of Campo Verde Boundary
- Bureau of Land Management Land

0 400 800

Feet



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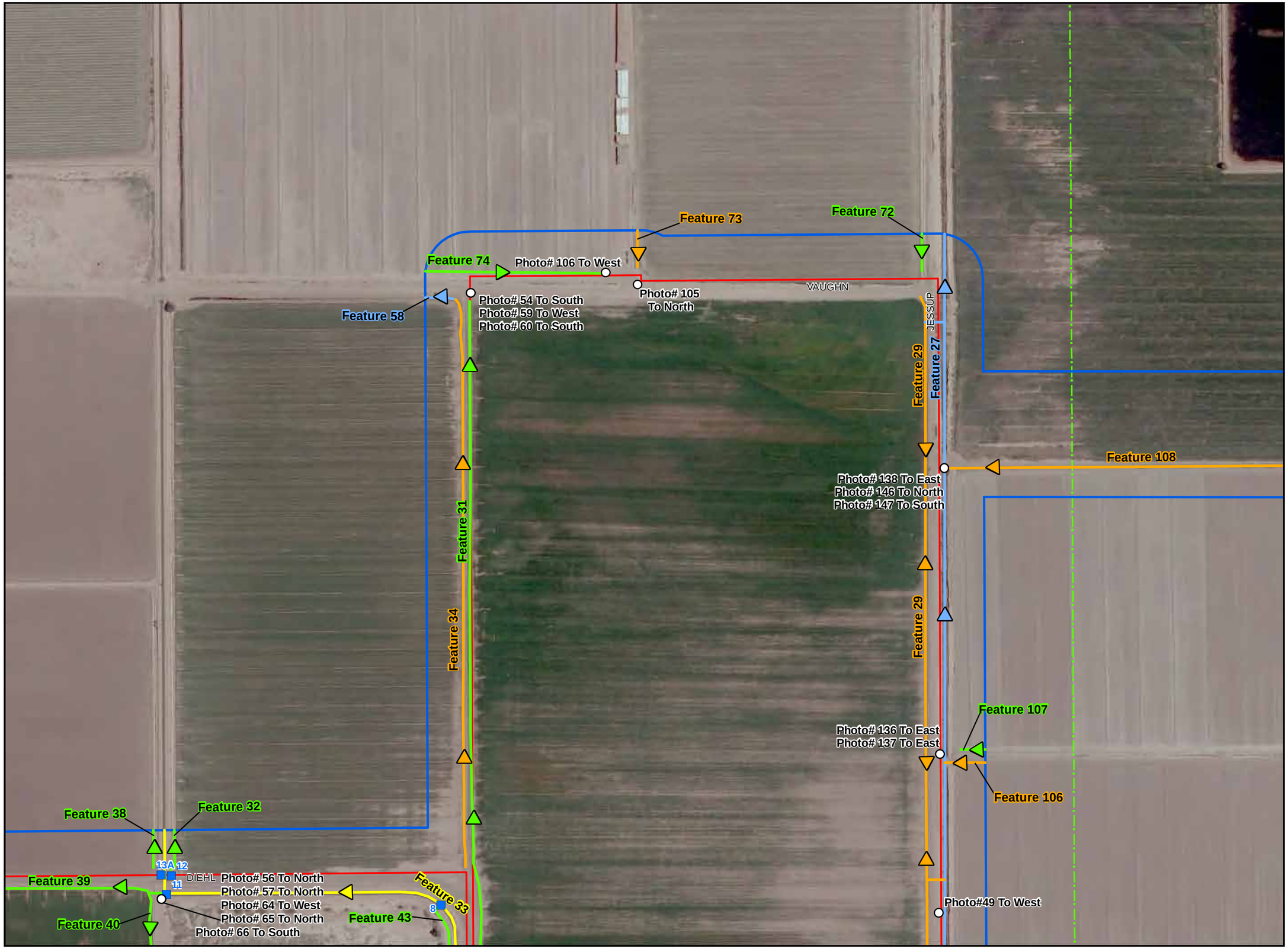
01-17-12

Campo Verde Solar Site

Surface Water Conveyance



Legend

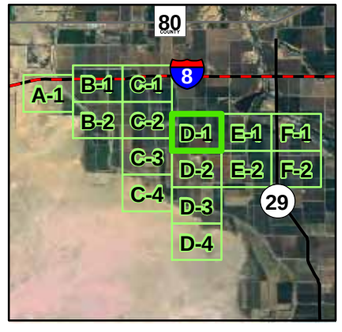
- Photo Location
- Culvert
- Gate
- Proposed Gen-tie
- Gen-tie Alternative
- Existing 500 kV Transmission Line
- Existing 230 kV Transmission Line
- Interstate
- Major Road
- International Boundary

Surface Water Conveyance Feature

- Canal (with Flow Direction)
- Drain (with Flow Direction)
- Head Ditch (with Flow Direction)
- Tail Ditch (with Flow Direction)
- Road Ditch(with Flow Direction)
- Wetland
- Approximate Campo Verde Facility Boundary
- 200 Foot Buffer of Campo Verde Boundary
- Bureau of Land Management Land

0 400 800

Feet



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Campo Verde Solar Site

Surface Water Conveyance

Feature 42
Feature 40
Feature 41
Photo# 66 To South
Photo# 67 To West
Photo# 68 To North
Photo# 69 To North
Photo# 70 To North
Feature 43
Feature 44
Feature 45
Feature 49
WESTSIDE
Photo# 121 To South
Photo# 55 To North
7
Feature 31
Feature 33
DIEHL
Photo# 48 To East
Feature 29
JESSUP
Photo# 46 To South
Photo# 47 To North
Feature 105
Feature 26
Feature 47
Feature 96
3
Feature 27
Feature 97
Feature 25
Feature 33
Feature 27
Feature 95
Fern
1B
Fig
Feature 22
Feature 98
Photo# 75 To South
Photo# 125 To East
Feature 94
WIXOM
Feature 48
LIEBERT
Feature 92

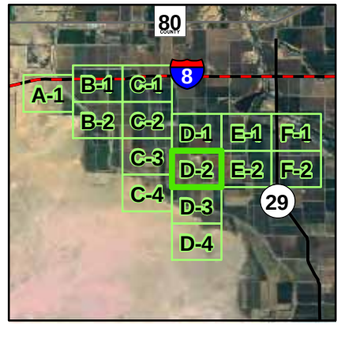
Legend

- Photo Location
- Culvert
- Gate
- Proposed Gen-tie
- Gen-tie Alternative
- Existing 500 kV Transmission Line
- Existing 230 kV Transmission Line
- Interstate
- Major Road
- International Boundary

Surface Water Conveyance Feature

- Canal (with Flow Direction)
- Drain (with Flow Direction)
- Head Ditch (with Flow Direction)
- Tail Ditch (with Flow Direction)
- Road Ditch(with Flow Direction)
- Wetland
- Approximate Campo Verde Facility Boundary
- 200 Foot Buffer of Campo Verde Boundary
- Bureau of Land Management Land

0 400 800
Feet



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Campo Verde Solar Site

Surface Water Conveyance

Legend

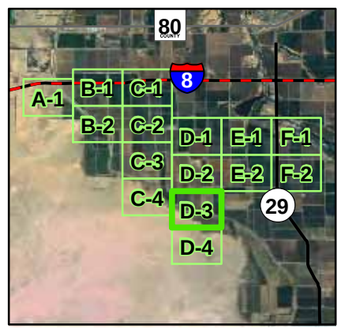
- Photo Location
- Culvert
- Gate
- Proposed Gen-tie
- Gen-tie Alternative
- Existing 500 kV Transmission Line
- Existing 230 kV Transmission Line
- Interstate
- Major Road
- International Boundary

Surface Water Conveyance Feature

- Canal (with Flow Direction)
- Drain (with Flow Direction)
- Head Ditch (with Flow Direction)
- Tail Ditch (with Flow Direction)
- Road Ditch(with Flow Direction)
- Wetland
- Approximate Campo Verde Facility Boundary
- 200 Foot Buffer of Campo Verde Boundary
- Bureau of Land Management Land

0 400 800

Feet



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Campo Verde Solar Site

Surface Water Conveyance

Legend

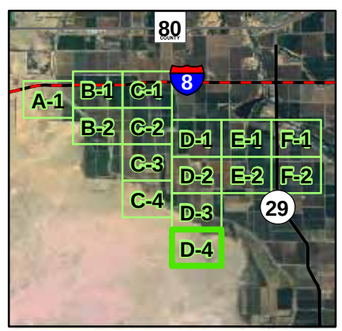
- Photo Location
- Culvert
- Gate
- Proposed Gen-tie
- Gen-tie Alternative
- Existing 500 kV Transmission Line
- Existing 230 kV Transmission Line
- Interstate
- Major Road
- International Boundary

Surface Water Conveyance Feature

- Canal (with Flow Direction)
- Drain (with Flow Direction)
- Head Ditch (with Flow Direction)
- Tail Ditch (with Flow Direction)
- Road Ditch(with Flow Direction)
- Wetland
- Approximate Campo Verde Facility Boundary
- 200 Foot Buffer of Campo Verde Boundary
- Bureau of Land Management Land

0 400 800

Feet



Southwest Powerlink (SWPL)

Imperial Valley Substation

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Campo Verde Solar Site

Surface Water Conveyance

DERRICK

Feature 68

Feature 66

Feature 11B

Feature 30

Feature 108

Feature 67

Photo# 22 To Southeast

Photo# To 99 West

Photo# 16 To South

Feature 6

Feature 13

Feature 17

Feature 10

Feature 9

Photo# 17 To North
Photo# 18 To South

Photo# 14 To South

Feature 18

Feature 17

Feature 16

Photo# 21 To Southwest

Feature 22

Feature 107

Photo# 23 To North

Feature 109

Feature 109

Feature 14

Feature 106
Flows West

Photo# 139 To East

Photo# 19 To East
Photo# 20 To South

Feature 15

Legend

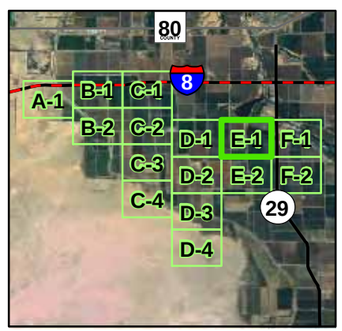
- Photo Location
- Culvert
- Gate
- Proposed Gen-tie
- Gen-tie Alternative
- Existing 500 kV Transmission Line
- Existing 230 kV Transmission Line
- Interstate
- Major Road
- International Boundary

Surface Water Conveyance Feature

- Canal (with Flow Direction)
- Drain (with Flow Direction)
- Head Ditch (with Flow Direction)
- Tail Ditch (with Flow Direction)
- Road Ditch(with Flow Direction)
- Wetland
- Approximate Campo Verde Facility Boundary
- 200 Foot Buffer of Campo Verde Boundary
- Bureau of Land Management Land

0 400 800

Feet



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Campo Verde Solar Site

Surface Water Conveyance

Photo# 134 To East
Photo# 135 To West
Feature 105
Feature 26
76
Feature 104
Photo# 45 To West
Feature 103
Feature 22
Feature 25
5
4
Photo# 43 To West
Photo# 44 To West
Feature 97
Feature 24
Feature 24
DERRICK
Feature 16
Feature 102
Feature 15
Feature 9
Feature 10
Feature 7
DIEHL
Photo# 9 To East
Feature 102
Photo# 4 To North
Feature 4
Photo# 24 To South
Photo# 121 To East
Feature 102
Feature 101
Photo# 26 To South
Feature 19
Feature 6
Feature 5
Feature 22
Feature 21
Feature 98
Feature 23
3
1
2
2A
Feature 20
Photo# 25 To West
Feature 2
Photo# 5 To East
Photo# 6 To North
Photo# 7 To North
Photo# 8 To North
WIXOM
Feature 100
Photo# 40 To West
Photo# 41 To North
Photo# 129 To South
Feature 99
Feature 94
VOGEL

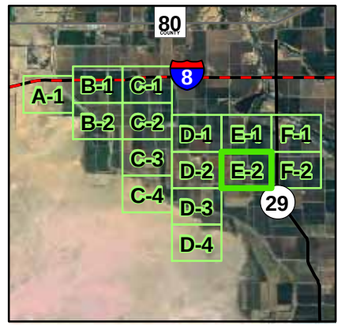
Legend

- Photo Location
- Culvert
- Gate
- Proposed Gen-tie
- Gen-tie Alternative
- Existing 500 kV Transmission Line
- Existing 230 kV Transmission Line
- Interstate
- Major Road
- International Boundary

Surface Water Conveyance Feature

- Canal (with Flow Direction)
- Drain (with Flow Direction)
- Head Ditch (with Flow Direction)
- Tail Ditch (with Flow Direction)
- Road Ditch(with Flow Direction)
- Wetland
- Approximate Campo Verde Facility Boundary
- 200 Foot Buffer of Campo Verde Boundary
- Bureau of Land Management Land

0 400 800
Feet



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Campo Verde Solar Site

Surface Water Conveyance

DREW

29

COUNTY HWY 29

Feature 65

Feature 11B

Photo# 15 To West

Photo# 97 To North

Feature 12

Feature 11A

90A

Feature 9

90

92

Photo# 11 To North
Photo# 12 To West
Photo# 13 To North
Photo# 96 To East

Feature 64

Feature 113

Feature 8

Legend

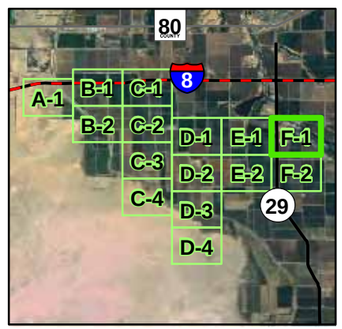
- Photo Location
- Culvert
- Gate
- Proposed Gen-tie
- Gen-tie Alternative
- Existing 500 kV Transmission Line
- Existing 230 kV Transmission Line
- Interstate
- Major Road
- International Boundary

Surface Water Conveyance Feature

- Canal (with Flow Direction)
- Drain (with Flow Direction)
- Head Ditch (with Flow Direction)
- Tail Ditch (with Flow Direction)
- Road Ditch(with Flow Direction)
- Wetland
- Approximate Campo Verde Facility Boundary
- 200 Foot Buffer of Campo Verde Boundary
- Bureau of Land Management Land

0 400 800

Feet



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Campo Verde Solar Site

Surface Water Conveyance

Legend

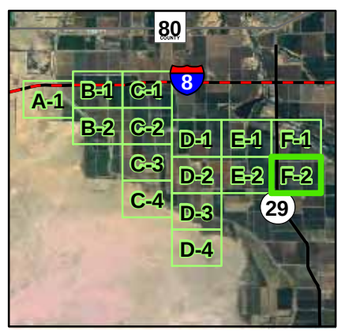
- Photo Location
- Culvert
- Gate
- Proposed Gen-tie
- Gen-tie Alternative
- Existing 500 kV Transmission Line
- Existing 230 kV Transmission Line
- Interstate
- Major Road
- International Boundary

Surface Water Conveyance Feature

- Canal (with Flow Direction)
- Drain (with Flow Direction)
- Head Ditch (with Flow Direction)
- Tail Ditch (with Flow Direction)
- Road Ditch(with Flow Direction)
- Wetland
- Approximate Campo Verde Facility Boundary
- 200 Foot Buffer of Campo Verde Boundary
- Bureau of Land Management Land

0 400 800

Feet



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Appendix D
OHWM Data Sheets

Project: Campo Verde
Project Number:
Stream: Feature 90 – Dixie 3-B Drain
Investigator(s):

Date: 10/26/11 **Time:** 1436
Town: **State:** CA
Photo begin file# See report **Photo end file#**

Y ☐ / N ☒ Do normal circumstances exist on the site?

Y ☒ / N ☐ Is the site significantly disturbed?

Location Details: Campo Verde Facility Buffer
Projection: See table in report **Datum:**
Coordinates:

Notes: Lg. Ag drain
Wetlands entirely w/i active floodplain. Linear + narrow.
Assume JD + avoid.

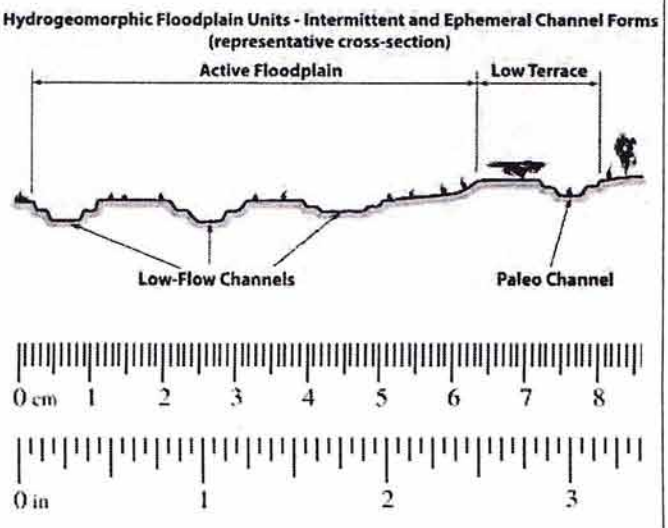
Brief site description:
Active floodplain = 18 feet

Checklist of resources (if available):

- ☒ Aerial photography
  Dates:
- ☐ Topographic maps
  Scale:
- ☐ Geologic maps
- ☐ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☒ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
- ☐ Clinometer / level
- ☐ History of recent effective discharges
- ☐ Results of flood frequency analysis
- ☐ Most recent shift-adjusted rating
- ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

The dominant Wentworth size class that imparts a characteristic texture to each zone of a channel cross-section is recorded in the average sediment texture field under the characteristics section for the zone of interest.

Millimeters (mm)	Inches (in)	Wentworth size class	
10.08	256	Boulder	
		Cobble	Gravel
2.56	64	Pebble	
0.157	4	Granule	
0.079	2.00	Very coarse sand	
0.039	1.00	Coarse sand	
0.020	0.50	Medium sand	Sand
1/2 0.0098	0.25	Fine sand	
1/4 0.005	0.125	Very fine sand	
1/8 0.0025	0.0625	Coarse silt	
1/16 0.0012	0.031	Medium silt	
1/32 0.00061	0.0156	Fine silt	Silt
1/64 0.00031	0.0078	Very fine silt	
1/128 0.00015	0.0039	Clay	Mud



☒ **Walk the channel and floodplain within the study area to get an impression of the vegetation and geomorphology present at the site. Record any potential anthropogenic influences on the channel system in "Notes" above.**

☒ **Locate the low-flow channel (lowest part of the channel). Record observations.**

Characteristics of the low-flow channel:

Average sediment texture: Fine silt

Total veg cover: 15 % Tree: 5 % Shrub: 5 % Herb: 5 %

Community successional stage:

- ☐ NA
- ☒ Mid (herbaceous, shrubs, saplings)
- ☐ Early (herbaceous & seedlings)
- ☐ Late (herbaceous, shrubs, mature trees)

Dominant species present: Tamarix, arrowweed

Other:
- ☒ Typha
- ☐
- ☐
- ☐

☒ **Walk away from the low-flow channel along cross-section. Record characteristics of the low-flow/active floodplain boundary.**

Characteristics used to delineate the low-flow/active floodplain boundary:

- ☒ Change in total veg cover ☐ Tree ☐ Shrub ☒ Herb
- ☐ Change in overall vegetation maturity
- ☐ Change in dominant species present
- ☒ Other
  - ☒ Presence of bed and bank
  - ☐ Drift and/or debris
  - ☒ Other: Change in slope
  - ☐ Other:

☒ N/A **Continue walking the channel cross-section. Record observations below.**

Characteristics of the low-flow channel:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %

Community successional stage:

- ☐ NA
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Early (herbaceous & seedlings)
- ☐ Late (herbaceous, shrubs, mature trees)

Dominant species present: _____

Other:
- ☐
- ☐
- ☐
- ☐

☒ **Continue walking the channel cross-section. Record indicators of the active floodplain/low terrace boundary.**

Characteristics used to delineate the active floodplain/ low terrace boundary:

- ☐ Change in average sediment texture
- ☒ Change in total veg cover ☒ Tree ☐ Shrub ☒ Herb
- ☐ Change in overall vegetation maturity
- ☒ Change in dominant species present
- ☒ Other ☒ Presence of bed and bank
  - ☐ Drift and/or debris
  - ☒ Other: change in slope
  - ☐ Other: _____

☒ **Walk the active floodplain/low terrace boundary both upstream and downstream of the cross-section to verify that the indicators used to identify the transition are consistently associated the transition in both directions.**

Consistency of indicators used to delineate the active floodplain/low terrace boundary:

- Y ☐ N ☐ Change in average sediment texture absent
- Y ☒ N ☐ Change in total veg cover ☒ Tree ☐ Shrub ☒ Herb
- Y ☐ N ☐ Change in overall vegetation maturity absent
- Y ☒ N ☐ Change in dominant species present
- Y ☒ N ☐ Other: Y ☒ N ☐ Presence of bed and bank
  - Y ☐ N ☐ Drift and/or debris
  - Y ☒ N ☐ Other: change in slope
  - Y ☐ N ☐ Other: _____

☐ N/A **If the characteristics used to delineate the active floodplain/low terrace boundary were NOT consistently associated with the transition in both the upstream and downstream directions, repeat all steps above.**

☐ N/A **Continue walking the channel cross-section. Record characteristics of the low terrace.**

Characteristics of the low terrace:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____% Shrub: _____% Herb: _____%

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Dominant species present: _____

Other: ☐ _____

☐ _____

☐ _____

☐ _____

☒ **If characteristics used to delineate the active floodplain/low terrace boundary were deemed reliable, acquire boundary.**

Active floodplain/low terrace boundary acquired via:

- ☒ Mapping on aerial photograph
- ☒ Digitized on computer
- ☒ GPS
- ☒ Other: Field measurement

Project: Campo Verde
Project Number:
Stream: Feature 91 - Westside Main
Investigator(s): PFG / SWG

Date: 10/26/11 **Time:** 1627
Town: **State:** CA
Photo begin file# See report **Photo end file#**

Y ☐ / N ☒ Do normal circumstances exist on the site?

Y ☒ / N ☐ Is the site significantly disturbed?

Location Details: Campo Verde Facility Buffer and Gen-tie Crossing

Projection: See table in report **Datum:**
Coordinates:

Notes: Very large main canal - unlined
Active ag lands.

Brief site description:

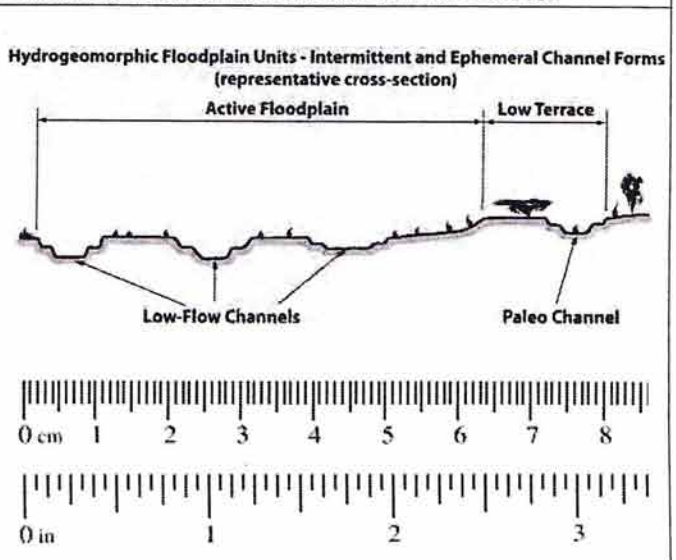
OHWM = 120 ft.

Checklist of resources (if available):

- ☒ Aerial photography
  Dates:
- ☐ Topographic maps
  Scale:
- ☐ Geologic maps
- ☐ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☒ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
- ☐ Clinometer / level
- ☐ History of recent effective discharges
- ☐ Results of flood frequency analysis
- ☐ Most recent shift-adjusted rating
- ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

The dominant Wentworth size class that imparts a characteristic texture to each zone of a channel cross-section is recorded in the average sediment texture field under the characteristics section for the zone of interest.

Millimeters (mm)	Inches (in)	Wentworth size class	
10.08	256	Boulder	
2.56	64	Cobble	Gravel
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	
0.020	0.50	Coarse sand	
0.0098	0.25	Medium sand	Sand
0.005	0.125	Fine sand	
0.0025	0.0625	Very fine sand	
0.0012	0.031	Coarse silt	
0.00061	0.0156	Medium silt	Silt
0.00031	0.0078	Fine silt	
0.00015	0.0039	Very fine silt	
		Clay	Mud



☒ **Walk the channel and floodplain within the study area to get an impression of the vegetation and geomorphology present at the site. Record any potential anthropogenic influences on the channel system in "Notes" above.**

☒ **Locate the low-flow channel (lowest part of the channel). Record observations.**

Characteristics of the low-flow channel:

Average sediment texture: unknown

Total veg cover: 0 % Tree: ____% Shrub: ____% Herb: ____%

Community successional stage:

☒ NA ☐ Mid (herbaceous, shrubs, saplings)

☐ Early (herbaceous & seedlings) ☐ Late (herbaceous, shrubs, mature trees)

Dominant species present: n/a

Other: ☐ ☐ ☐ ☐

☒ N/A **Walk away from the low-flow channel along cross-section. Record characteristics of the low-flow/active floodplain boundary.**

Characteristics used to delineate the low-flow/active floodplain boundary:

☐ Change in total veg cover ☐ Tree ☐ Shrub ☐ Herb

☐ Change in overall vegetation maturity

☐ Change in dominant species present

☐ Other ☐ Presence of bed and bank

☐ Drift and/or debris

☐ Other: _____

☐ Other: _____

☒ N/A **Continue walking the channel cross-section. Record observations below.**

Characteristics of the low-flow channel:

Average sediment texture: _____

Total veg cover: ____% Tree: ____% Shrub: ____% Herb: ____%

Community successional stage:

☐ NA ☐ Mid (herbaceous, shrubs, saplings)

☐ Early (herbaceous & seedlings) ☐ Late (herbaceous, shrubs, mature trees)

Dominant species present: _____

Other: ☐ ☐ ☐ ☐

☒ N/A

Continue walking the channel cross-section. Record indicators of the active floodplain/low terrace boundary.

Characteristics used to delineate the active floodplain/ low terrace boundary:

- ☐ Change in average sediment texture
- ☐ Change in total veg cover ☐ Tree ☐ Shrub ☐ Herb
- ☐ Change in overall vegetation maturity
- ☐ Change in dominant species present
- ☐ Other ☐ Presence of bed and bank
  - ☐ Drift and/or debris
  - ☐ Other: _____
  - ☐ Other: _____

☐ N/A

Walk the active floodplain/low terrace boundary both upstream and downstream of the cross-section to verify that the indicators used to identify the transition are consistently associated the transition in both directions.

Consistency of indicators used to delineate the active floodplain/low terrace boundary:

- Y ☐ N ☐ Change in average sediment texture
- Y ☐ N ☐ Change in total veg cover ☐ Tree ☐ Shrub ☐ Herb
- Y ☐ N ☐ Change in overall vegetation maturity
- Y ☐ N ☐ Change in dominant species present
- Y ☐ N ☐ Other: Y ☐ N ☐ Presence of bed and bank
  - Y ☐ N ☐ Drift and/or debris
  - Y ☐ N ☐ Other: _____
  - Y ☐ N ☐ Other: _____

☐ N/A

If the characteristics used to delineate the active floodplain/low terrace boundary were NOT consistently associated with the transition in both the upstream and downstream directions, repeat all steps above.

☐ N/A

Continue walking the channel cross-section. Record characteristics of the low terrace.

Characteristics of the low terrace:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Dominant species present: _____

_____

_____

Other: ☐ _____

☐ _____

☐ _____

☐ _____

☒

If characteristics used to delineate the ~~active floodplain/low terrace boundary~~ were deemed reliable, acquire boundary. OHWM

Active floodplain/low terrace boundary acquired via:

- ☒ Mapping on aerial photograph
- ☒ Digitized on computer
- ☒ GPS
- ☒ Other: Field measurement of staining, dest. of veg

Project: Campo Verde
Project Number:
Stream: Feature 58 – Dixie 3-C Drain
Investigator(s): PFG/SWG

Date: 10/26/11 **Time:** 1546
Town: **State:** CA
Photo begin file# See report **Photo end file#**

Y ☐ / N ☒ Do normal circumstances exist on the site?

Y ☒ / N ☐ Is the site significantly disturbed?

Location Details:

Projection: See table in report. **Datum:**
Coordinates:

Notes:

Lg ag drain
Wetlands contained entirely w/i active floodplain. Narrow and linear. Assume JD + avoid

Brief site description:

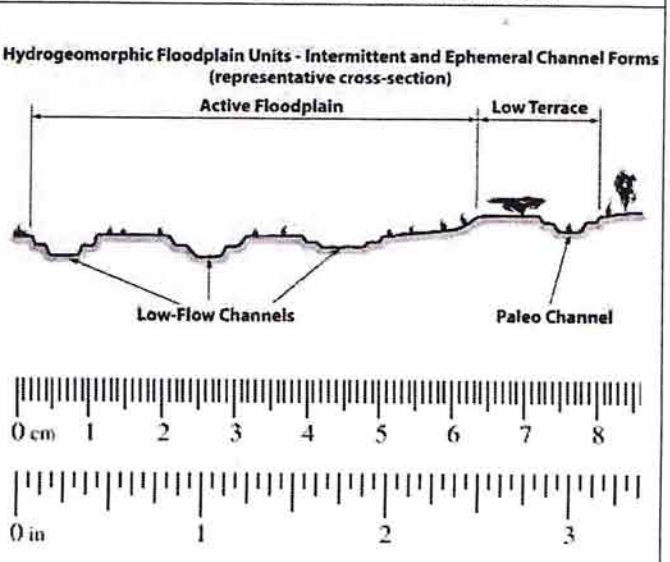
Active floodplain = 25 ft.

Checklist of resources (if available):

- ☒ Aerial photography
  Dates:
- ☐ Topographic maps
  Scale:
- ☐ Geologic maps
- ☐ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☒ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
- ☐ Clinometer / level
- ☐ History of recent effective discharges
- ☐ Results of flood frequency analysis
- ☐ Most recent shift-adjusted rating
- ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

The dominant Wentworth size class that imparts a characteristic texture to each zone of a channel cross-section is recorded in the average sediment texture field under the characteristics section for the zone of interest.

Millimeters (mm)	Inches (in)	Wentworth size class	
10.08	256	Boulder	
2.56	64	Cobble	Gravel
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	Sand
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	
1/32 0.00061	0.0156	Medium silt	Silt
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



☒ **Walk the channel and floodplain within the study area to get an impression of the vegetation and geomorphology present at the site. Record any potential anthropogenic influences on the channel system in "Notes" above.**

☒ **Locate the low-flow channel (lowest part of the channel). Record observations.**

Characteristics of the low-flow channel:

Average sediment texture: Fine silt

Total veg cover: 5 % Tree: ____% Shrub: ____% Herb: 5 %

Community successional stage:

- ☐ NA
- ☒ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Dominant species present: Phragmites, grasses

Other:
- ☐
- ☐
- ☐
- ☐

☒ **Walk away from the low-flow channel along cross-section. Record characteristics of the low-flow/active floodplain boundary.**

Characteristics used to delineate the low-flow/active floodplain boundary:

- ☒ Change in total veg cover ☒ Tree ☐ Shrub ☒ Herb
- ☐ Change in overall vegetation maturity
- ☒ Change in dominant species present
- ☒ Other
  - ☒ Presence of bed and bank
  - ☐ Drift and/or debris
  - ☒ Other: change in slope
  - ☐ Other: ____

☒ N/A **Continue walking the channel cross-section. Record observations below.**

Characteristics of the low-flow channel:

Average sediment texture: ____

Total veg cover: ____% Tree: ____% Shrub: ____% Herb: ____%

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Dominant species present: ____

Other:
- ☐
- ☐
- ☐
- ☐

☐ **Continue walking the channel cross-section. Record indicators of the active floodplain/low terrace boundary.**

Characteristics used to delineate the active floodplain/ low terrace boundary:

- ☐ Change in average sediment texture
- ☒ Change in total veg cover ☒ Tree ☐ Shrub ☒ Herb
- ☐ Change in overall vegetation maturity
- ☐ Change in dominant species present
- ☒ Other
  - ☒ Presence of bed and bank
  - ☐ Drift and/or debris
  - ☒ Other: change in slope
  - ☐ Other: _____

☒ **Walk the active floodplain/low terrace boundary both upstream and downstream of the cross-section to verify that the indicators used to identify the transition are consistently associated the transition in both directions.**

Consistency of indicators used to delineate the active floodplain/low terrace boundary:

- Y ☐ N ☐ Change in average sediment texture
- Y ☒ N ☐ Change in total veg cover ☒ Tree ☐ Shrub ☒ Herb
- Y ☐ N ☐ Change in overall vegetation maturity
- Y ☐ N ☐ Change in dominant species present
- Y ☒ N ☐ Other:
  - Y ☒ N ☐ Presence of bed and bank
  - Y ☐ N ☐ Drift and/or debris
  - Y ☒ N ☐ Other: change in slope
  - Y ☐ N ☐ Other: _____

☐ N/A **If the characteristics used to delineate the active floodplain/low terrace boundary were NOT consistently associated with the transition in both the upstream and downstream directions, repeat all steps above.**

☐ N/A **Continue walking the channel cross-section. Record characteristics of the low terrace.**

Characteristics of the low terrace:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Dominant species present: _____

Other:

- ☐ _____
- ☐ _____
- ☐ _____
- ☐ _____

☒ **If characteristics used to delineate the active floodplain/low terrace boundary were deemed reliable, acquire boundary.**

Active floodplain/low terrace boundary acquired via:

- ☒ Mapping on acrial photograph
- ☒ Digitized on computer
- ☒ GPS
- ☒ Other: Field measurement

Project: Campo Verde
Project Number:
Stream: Feature 57 – Westside Drain
Investigator(s): PFG / SWG

Date: 10/26/11 **Time:** 1527
Town: **State:** CA
Photo begin file# See report **Photo end file#**

Y ☐ / N ☒ Do normal circumstances exist on the site?

Y ☒ / N ☐ Is the site significantly disturbed?

Location Details: Campo Verde Facility
Projection: See table in report **Datum:**
Coordinates:

Notes: Active lg. ag. drain
Wetlands contained entirely w/i active floodplain. Narrow + linear.
Assume JD + avoid.

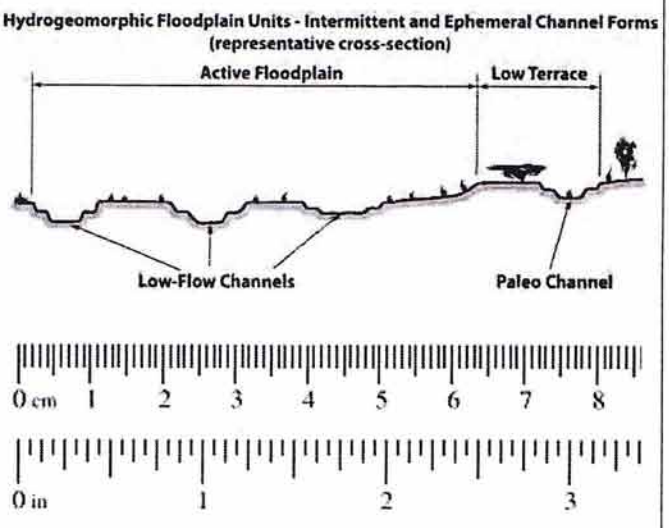
Brief site description:
Active floodplain = 25 ft.

Checklist of resources (if available):

- ☒ Aerial photography
  Dates:
- ☐ Topographic maps
  Scale:
- ☐ Geologic maps
- ☐ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☒ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
- ☐ Clinometer / level
- ☐ History of recent effective discharges
- ☐ Results of flood frequency analysis
- ☐ Most recent shift-adjusted rating
- ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

The dominant Wentworth size class that imparts a characteristic texture to each zone of a channel cross-section is recorded in the average sediment texture field under the characteristics section for the zone of interest.

Millimeters (mm)	Inches (in)	Wentworth size class	
10.08	256	Boulder	
		Cobble	Gravel
2.56	64	Pebble	
0.157	4	Granule	
0.079	2.00		
0.039	1.00	Very coarse sand	
		Coarse sand	
0.020	0.50	Medium sand	Sand
1/2 0.0098	0.25	Fine sand	
1/4 0.005	0.125	Very fine sand	
1/8 0.0025	0.0625		
		Coarse silt	
1/16 0.0012	0.031	Medium silt	
1/32 0.00061	0.0156	Fine silt	Silt
1/64 0.00031	0.0078	Very fine silt	
1/128 0.00015	0.0039		
		Clay	Mud



☒ **Walk the channel and floodplain within the study area to get an impression of the vegetation and geomorphology present at the site. Record any potential anthropogenic influences on the channel system in "Notes" above.**

☒ **Locate the low-flow channel (lowest part of the channel). Record observations.**

Characteristics of the low-flow channel:

Average sediment texture: Fine silt

Total veg cover: 30 % Tree: ____% Shrub: ____% Herb: ____%

Community successional stage:

- ☐ NA
- ☒ Mid (herbaceous, shrubs, saplings)
- ☐ Early (herbaceous & seedlings)
- ☐ Late (herbaceous, shrubs, mature trees)

Dominant species present: Typha, phragmites, juncus, tamarix

Other: ☐ ☐ ☐ ☐

☒ **Walk away from the low-flow channel along cross-section. Record characteristics of the low-flow/active floodplain boundary.**

Characteristics used to delineate the low-flow/active floodplain boundary:

- ☒ Change in total veg cover ☐ Tree ☒ Shrub ☒ Herb
- ☐ Change in overall vegetation maturity
- ☐ Change in dominant species present
- ☒ Other
  - ☒ Presence of bed and bank
  - ☐ Drift and/or debris
  - ☒ Other: Change in slope
  - ☐ Other: _____

☒ N/A **Continue walking the channel cross-section. Record observations below.**

Characteristics of the low-flow channel:

Average sediment texture: _____

Total veg cover: ____% Tree: ____% Shrub: ____% Herb: ____%

Community successional stage:

- ☐ NA
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Early (herbaceous & seedlings)
- ☐ Late (herbaceous, shrubs, mature trees)

Dominant species present: _____

Other: ☐ ☐ ☐ ☐

☒ **Continue walking the channel cross-section. Record indicators of the active floodplain/low terrace boundary.**

Characteristics used to delineate the active floodplain/ low terrace boundary:

- ☐ Change in average sediment texture
- ☒ Change in total veg cover ☐ Tree ☒ Shrub ☐ Herb
- ☐ Change in overall vegetation maturity
- ☐ Change in dominant species present
- ☒ Other ☒ Presence of bed and bank
  - ☐ Drift and/or debris
  - ☒ Other: change in slope
  - ☐ Other: _____

☒ **Walk the active floodplain/low terrace boundary both upstream and downstream of the cross-section to verify that the indicators used to identify the transition are consistently associated the transition in both directions.**

Consistency of indicators used to delineate the active floodplain/low terrace boundary:

- Y ☐ N ☐ Change in average sediment texture absent
- Y ☒ N ☐ Change in total veg cover ☐ Tree ☒ Shrub ☐ Herb
- Y ☐ N ☐ Change in overall vegetation maturity
- Y ☐ N ☐ Change in dominant species present
- Y ☒ N ☐ Other: Y ☒ N ☐ Presence of bed and bank
  - Y ☐ N ☐ Drift and/or debris
  - Y ☒ N ☐ Other: change in slope
  - Y ☐ N ☐ Other: _____

☐ N/A **If the characteristics used to delineate the active floodplain/low terrace boundary were NOT consistently associated with the transition in both the upstream and downstream directions, repeat all steps above.**

☐ N/A **Continue walking the channel cross-section. Record characteristics of the low terrace.**

Characteristics of the low terrace:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____% Shrub: _____% Herb: _____%

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Dominant species present: _____

Other:

- ☐ _____
- ☐ _____
- ☐ _____
- ☐ _____

☒ **If characteristics used to delineate the active floodplain/low terrace boundary were deemed reliable, acquire boundary.**

Active floodplain/low terrace boundary acquired via:

- ☒ Mapping on aerial photograph
- ☒ Digitized on computer
- ☒ GPS
- ☒ Other: Field measurement

Project: Campo Verde
Project Number:
Stream: Feature 49 – Dixie 3-A Drain
Investigator(s): PFG/SWY

Date: 10/26/11 **Time:** 1515
Town: **State:** CA
Photo begin file# See report **Photo end file#**

Y ☐ / N ☒ Do normal circumstances exist on the site?

Y ☒ / N ☐ Is the site significantly disturbed?

Location Details: Campo Verde Facility
Projection: See table **Datum:**
Coordinates: in report

Notes: Lg. ag drain
Intermittent wetlands contained entirely w/i active floodplain. Narrow + linear. Assume JD + avoid.

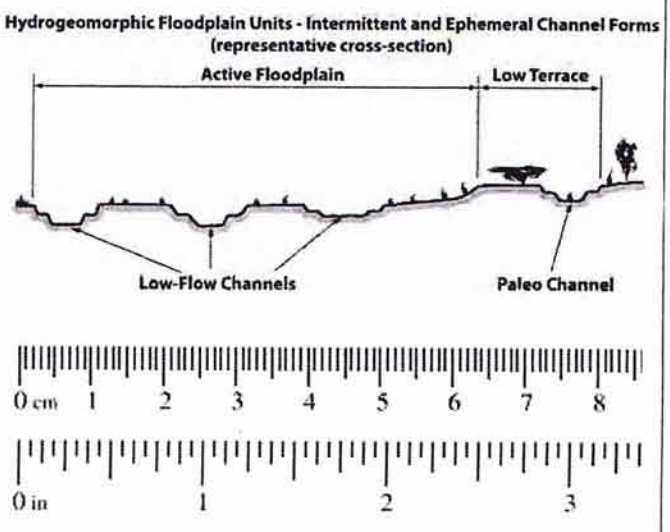
Brief site description:
Active floodplain = 35 ft.

Checklist of resources (if available):

- ☒ Aerial photography
  Dates:
- ☐ Topographic maps
  Scale:
- ☐ Geologic maps
- ☐ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☒ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
- ☐ Clinometer / level
- ☐ History of recent effective discharges
- ☐ Results of flood frequency analysis
- ☐ Most recent shift-adjusted rating
- ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

The dominant Wentworth size class that imparts a characteristic texture to each zone of a channel cross-section is recorded in the average sediment texture field under the characteristics section for the zone of interest.

Millimeters (mm)	Inches (in)	Wentworth size class	
10.08	256	Boulder	
2.56	64	Cobble	Gravel
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	Sand
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	
1/32 0.00061	0.0156	Medium silt	Silt
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



☒ **Walk the channel and floodplain within the study area to get an impression of the vegetation and geomorphology present at the site. Record any potential anthropogenic influences on the channel system in "Notes" above.**

☒ **Locate the low-flow channel (lowest part of the channel). Record observations.**

Characteristics of the low-flow channel:

Average sediment texture: Fine silt

Total veg cover: 0 % Tree: ____% Shrub: ____% Herb: ____%

Community successional stage:

- ☒ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Dominant species present: n/a

Other: ☐ ☐ ☐ ☐

☒ **Walk away from the low-flow channel along cross-section. Record characteristics of the low-flow/active floodplain boundary.**

Characteristics used to delineate the low-flow/active floodplain boundary:

- ☒ Change in total veg cover ☒ Tree ☐ Shrub ☒ Herb
- ☐ Change in overall vegetation maturity
- ☐ Change in dominant species present
- ☒ Other
  - ☒ Presence of bed and bank
  - ☐ Drift and/or debris
  - ☒ Other: change in slope
  - ☐ Other: ____

☒ N/A **Continue walking the channel cross-section. Record observations below.**

Characteristics of the low-flow channel:

Average sediment texture: ____

Total veg cover: ____% Tree: ____% Shrub: ____% Herb: ____%

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Dominant species present: ____

Other: ☐ ☐ ☐ ☐

☒ **Continue walking the channel cross-section. Record indicators of the active floodplain/low terrace boundary.**

Characteristics used to delineate the active floodplain/ low terrace boundary:

- ☐ Change in average sediment texture
- ☒ Change in total veg cover ☒ Tree ☐ Shrub ☒ Herb
- ☐ Change in overall vegetation maturity
- ☐ Change in dominant species present
- ☒ Other ☒ Presence of bed and bank
  - ☐ Drift and/or debris
  - ☒ Other: change in slope
  - ☐ Other: _____

☒ **Walk the active floodplain/low terrace boundary both upstream and downstream of the cross-section to verify that the indicators used to identify the transition are consistently associated the transition in both directions.**

Consistency of indicators used to delineate the active floodplain/low terrace boundary:

- Y ☐ N ☐ Change in average sediment texture absent
- Y ☒ N ☐ Change in total veg cover ☒ Tree ☐ Shrub ☒ Herb
- Y ☐ N ☐ Change in overall vegetation maturity absent
- Y ☐ N ☐ Change in dominant species present absent
- Y ☒ N ☐ Other: Y ☒ N ☐ Presence of bed and bank
  - Y ☐ N ☐ Drift and/or debris
  - Y ☒ N ☐ Other: change in slope
  - Y ☐ N ☐ Other: _____

☐ N/A **If the characteristics used to delineate the active floodplain/low terrace boundary were NOT consistently associated with the transition in both the upstream and downstream directions, repeat all steps above.**

☐ N/A **Continue walking the channel cross-section. Record characteristics of the low terrace.**

Characteristics of the low terrace:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Dominant species present: _____

Other:

- ☐ _____
- ☐ _____
- ☐ _____
- ☐ _____

☒ **If characteristics used to delineate the active floodplain/low terrace boundary were deemed reliable, acquire boundary.**

Active floodplain/low terrace boundary acquired via:

- ☒ Mapping on aerial photograph
- ☒ Digitized on computer
- ☒ GPS
- ☒ Other: Field measurement

Project: Campo Verde
Project Number:
Stream: Feature 61 – Lat
Investigator(s): PFG/SWG

Date: 10/26/11 **Time:** 1506
Town: **State:** CA
Photo begin file# See report **Photo end file#**

Y ☐ / N ☒ Do normal circumstances exist on the site?

Y ☒ / N ☐ Is the site significantly disturbed?

Location Details: Campo Verde Facility
Projection: See table in report **Datum:**
Coordinates:

Notes:
Concrete lateral canal.
Active ag lands

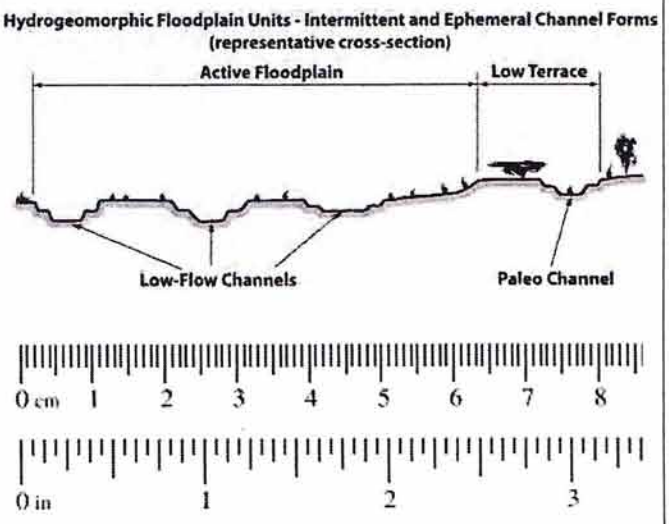
Brief site description:
OHWM = 6 ft.

Checklist of resources (if available):

- ☒ Aerial photography
  Dates:
- ☐ Topographic maps
  Scale:
- ☐ Geologic maps
- ☐ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☒ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
- ☐ Clinometer / level
- ☐ History of recent effective discharges
- ☐ Results of flood frequency analysis
- ☐ Most recent shift-adjusted rating
- ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

The dominant Wentworth size class that imparts a characteristic texture to each zone of a channel cross-section is recorded in the average sediment texture field under the characteristics section for the zone of interest.

Millimeters (mm)	Inches (in)	Wentworth size class	
10.08	256	Boulder	
		Cobble	Gravel
2.56	64		
0.157	4	Pebble	
		Granule	
0.079	2.00		
0.039	1.00	Very coarse sand	
		Coarse sand	
0.020	0.50		
		Medium sand	Sand
1/2 0.0098	0.25		
		Fine sand	
1/4 0.005	0.125		
		Very fine sand	
1/8 0.0025	0.0625		
		Coarse silt	
1/16 0.0012	0.031		
		Medium silt	Silt
1/32 0.00061	0.0156		
		Fine silt	
1/64 0.00031	0.0078		
		Very fine silt	
1/128 0.00015	0.0039		
		Clay	Mud



☒ **Walk the channel and floodplain within the study area to get an impression of the vegetation and geomorphology present at the site. Record any potential anthropogenic influences on the channel system in "Notes" above.**

☒ **Locate the low-flow channel (lowest part of the channel). Record observations.**

Characteristics of the low-flow channel:

Average sediment texture: concrete

Total veg cover: 0 % Tree: ____% Shrub: ____% Herb: ____%

Community successional stage:

☒ NA ☐ Mid (herbaceous, shrubs, saplings)

☐ Early (herbaceous & seedlings) ☐ Late (herbaceous, shrubs, mature trees)

Dominant species present: n/a

Other: ☐ ☐ ☐ ☐

☒ N/A **Walk away from the low-flow channel along cross-section. Record characteristics of the low-flow/active floodplain boundary.**

Characteristics used to delineate the low-flow/active floodplain boundary:

☐ Change in total veg cover ☐ Tree ☐ Shrub ☐ Herb

☐ Change in overall vegetation maturity

☐ Change in dominant species present

☐ Other ☐ Presence of bed and bank

☐ Drift and/or debris

☐ Other: _____

☐ Other: _____

☒ N/A **Continue walking the channel cross-section. Record observations below.**

Characteristics of the low-flow channel:

Average sediment texture: _____

Total veg cover: ____% Tree: ____% Shrub: ____% Herb: ____%

Community successional stage:

☐ NA ☐ Mid (herbaceous, shrubs, saplings)

☐ Early (herbaceous & seedlings) ☐ Late (herbaceous, shrubs, mature trees)

Dominant species present: _____

Other: ☐ ☐ ☐ ☐

☒ N/A

Continue walking the channel cross-section. Record indicators of the active floodplain/low terrace boundary.

Characteristics used to delineate the active floodplain/ low terrace boundary:

- ☐ Change in average sediment texture
- ☐ Change in total veg cover ☐ Tree ☐ Shrub ☐ Herb
- ☐ Change in overall vegetation maturity
- ☐ Change in dominant species present
- ☐ Other
  - ☐ Presence of bed and bank
  - ☐ Drift and/or debris
  - ☐ Other: _____
  - ☐ Other: _____

☒ N/A

Walk the active floodplain/low terrace boundary both upstream and downstream of the cross-section to verify that the indicators used to identify the transition are consistently associated the transition in both directions.

Consistency of indicators used to delineate the active floodplain/low terrace boundary:

- Y ☐ N ☐ Change in average sediment texture
- Y ☐ N ☐ Change in total veg cover ☐ Tree ☐ Shrub ☐ Herb
- Y ☐ N ☐ Change in overall vegetation maturity
- Y ☐ N ☐ Change in dominant species present
- Y ☐ N ☐ Other:
  - Y ☐ N ☐ Presence of bed and bank
  - Y ☐ N ☐ Drift and/or debris
  - Y ☐ N ☐ Other: _____
  - Y ☐ N ☐ Other: _____

☐ N/A

If the characteristics used to delineate the active floodplain/low terrace boundary were NOT consistently associated with the transition in both the upstream and downstream directions, repeat all steps above.

☐ N/A

Continue walking the channel cross-section. Record characteristics of the low terrace.

Characteristics of the low terrace:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Dominant species present: _____

Other:

- ☐ _____
- ☐ _____
- ☐ _____
- ☐ _____

☒

If characteristics used to delineate the active ~~floodplain/low terrace boundary~~ were deemed reliable, acquire boundary. GHWM

Active floodplain/low terrace boundary acquired via:

- ☒ Mapping on aerial photograph
- ☒ Digitized on computer
- ☒ GPS
- ☒ Other: Field measurement of water staining

Project: Campo Verde
Project Number:
Stream: Feature 33
Investigator(s): PFG / SWG

Date: 10/26/11 **Time:** 1457
Town: **State:** CA
Photo begin file# See report **Photo end file#**

Y ☐ / N ☒ Do normal circumstances exist on the site?

Y ☒ / N ☐ Is the site significantly disturbed?

Location Details:
Campo Verde Facility
Projection: Seattle **Datum:**
Coordinates: in report

Notes:
Concrete lined canal
Active ag lands

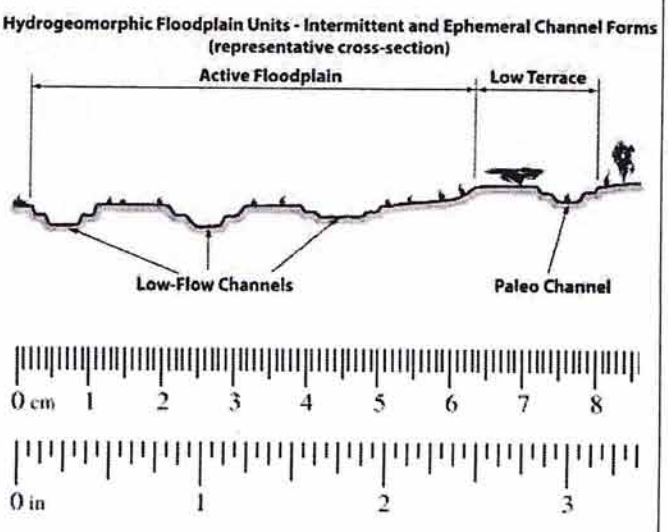
Brief site description:
OHWM = 16 ft.

Checklist of resources (if available):

- ☒ Aerial photography
  Dates:
- ☐ Topographic maps
  Scale:
- ☐ Geologic maps
- ☐ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☒ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
- ☐ Clinometer / level
- ☐ History of recent effective discharges
- ☐ Results of flood frequency analysis
- ☐ Most recent shift-adjusted rating
- ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

The dominant Wentworth size class that imparts a characteristic texture to each zone of a channel cross-section is recorded in the average sediment texture field under the characteristics section for the zone of interest.

Millimeters (mm)	Inches (in)	Wentworth size class	
10.08	256	Boulder	
2.56	64	Cobble	Gravel
0.157	4	Pebble	Gravel
0.079	2.00	Granule	Gravel
0.039	1.00	Very coarse sand	Sand
0.020	0.50	Coarse sand	Sand
1/2 0.0098	0.25	Medium sand	Sand
1/4 0.005	0.125	Fine sand	Sand
1/8 0.0025	0.0625	Very fine sand	Sand
1/16 0.0012	0.031	Coarse silt	Silt
1/32 0.00061	0.0156	Medium silt	Silt
1/64 0.00031	0.0078	Fine silt	Silt
1/128 0.00015	0.0039	Very fine silt	Silt
		Clay	Mud



☒ **Walk the channel and floodplain within the study area to get an impression of the vegetation and geomorphology present at the site. Record any potential anthropogenic influences on the channel system in "Notes" above.**

☒ **Locate the low-flow channel (lowest part of the channel). Record observations.**

Characteristics of the low-flow channel:

Average sediment texture: concrete

Total veg cover: 0 % Tree: ____% Shrub: ____% Herb: ____%

Community successional stage:

☒ NA ☐ Mid (herbaceous, shrubs, saplings)

☐ Early (herbaceous & seedlings) ☐ Late (herbaceous, shrubs, mature trees)

Dominant species present: n/a

Other: ☐ ☐ ☐ ☐

☒ N/A **Walk away from the low-flow channel along cross-section. Record characteristics of the low-flow/active floodplain boundary.**

Characteristics used to delineate the low-flow/active floodplain boundary:

☐ Change in total veg cover ☐ Tree ☐ Shrub ☐ Herb

☐ Change in overall vegetation maturity

☐ Change in dominant species present

☐ Other ☐ Presence of bed and bank

☐ Drift and/or debris

☐ Other: _____

☐ Other: _____

☒ N/A **Continue walking the channel cross-section. Record observations below.**

Characteristics of the low-flow channel:

Average sediment texture: _____

Total veg cover: ____% Tree: ____% Shrub: ____% Herb: ____%

Community successional stage:

☐ NA ☐ Mid (herbaceous, shrubs, saplings)

☐ Early (herbaceous & seedlings) ☐ Late (herbaceous, shrubs, mature trees)

Dominant species present: _____

Other: ☐ ☐ ☐ ☐

☒ N/A

Continue walking the channel cross-section. Record indicators of the active floodplain/low terrace boundary.

Characteristics used to delineate the active floodplain/ low terrace boundary:

- ☐ Change in average sediment texture
- ☐ Change in total veg cover ☐ Tree ☐ Shrub ☐ Herb
- ☐ Change in overall vegetation maturity
- ☐ Change in dominant species present
- ☐ Other ☐ Presence of bed and bank
  - ☐ Drift and/or debris
  - ☐ Other: _____
  - ☐ Other: _____

☐ N/A

Walk the active floodplain/low terrace boundary both upstream and downstream of the cross-section to verify that the indicators used to identify the transition are consistently associated the transition in both directions.

Consistency of indicators used to delineate the active floodplain/low terrace boundary:

- Y ☐ N ☐ Change in average sediment texture
- Y ☐ N ☐ Change in total veg cover ☐ Tree ☐ Shrub ☐ Herb
- Y ☐ N ☐ Change in overall vegetation maturity
- Y ☐ N ☐ Change in dominant species present
- Y ☐ N ☐ Other: Y ☐ N ☐ Presence of bed and bank
  - Y ☐ N ☐ Drift and/or debris
  - Y ☐ N ☐ Other: _____
  - Y ☐ N ☐ Other: _____

☐ N/A

If the characteristics used to delineate the active floodplain/low terrace boundary were NOT consistently associated with the transition in both the upstream and downstream directions, repeat all steps above.

☐ N/A

Continue walking the channel cross-section. Record characteristics of the low terrace.

Characteristics of the low terrace:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Dominant species present: _____

_____

_____

Other: ☐ _____

☐ _____

☐ _____

☐ _____

☒

If characteristics used to delineate the ~~active floodplain/low terrace boundary~~ were deemed reliable, acquire boundary. OHWM

Active floodplain/low terrace boundary acquired via:

- ☒ Mapping on aerial photograph
- ☒ Digitized on computer
- ☒ GPS
- ☐ Other: Field measurement of water staining

Project: Campo Verde
Project Number:
Stream: Feature 27 - Wixom Drain
Investigator(s): PFG / SWY

Date: 10/26/11 **Time:** 1444
Town: **State:** CA
Photo begin file# PG449N, 4525 **Photo end file#**

Y ☐ / N ☒ Do normal circumstances exist on the site?

Y ☒ / N ☐ Is the site significantly disturbed?

Location Details:
Campo Verde Facility
Projection: See table in report **Datum:**
Coordinates:

Notes:
Lg. ag. drain.
Sm wetlands contained entirely w/i low-flow channel for northern ~1,200 ft.
Narrow + linear. Assume JD + avoid

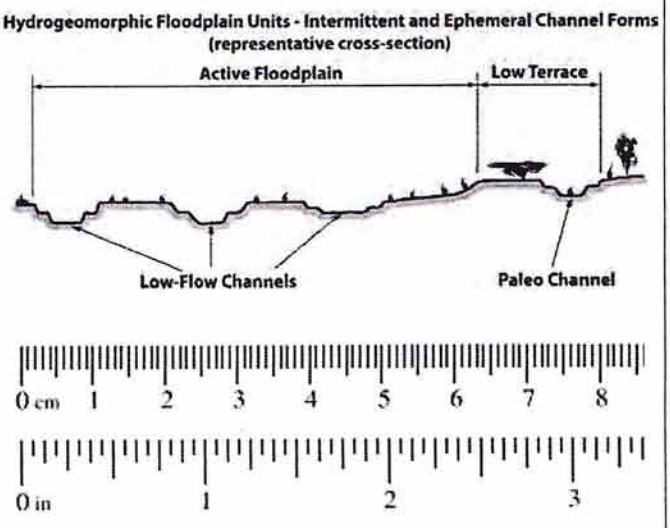
Brief site description:
Active floodplain = 12

Checklist of resources (if available):

- ☒ Aerial photography
  Dates:
- ☐ Topographic maps
  Scale:
- ☐ Geologic maps
- ☐ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☒ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
- ☐ Clinometer / level
- ☐ History of recent effective discharges
- ☐ Results of flood frequency analysis
- ☐ Most recent shift-adjusted rating
- ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

The dominant Wentworth size class that imparts a characteristic texture to each zone of a channel cross-section is recorded in the average sediment texture field under the characteristics section for the zone of interest.

Millimeters (mm)	Inches (in)	Wentworth size class	
10.08	256	Boulder	
2.56	64	Cobble	Gravel
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	Sand
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	
1/32 0.00061	0.0156	Medium silt	Silt
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



☒ **Walk the channel and floodplain within the study area to get an impression of the vegetation and geomorphology present at the site. Record any potential anthropogenic influences on the channel system in "Notes" above.**

☒ **Locate the low-flow channel (lowest part of the channel). Record observations.**

Characteristics of the low-flow channel:

Average sediment texture: Fine silt

Total veg cover: 0 % Tree: ____% Shrub: ____% Herb: ____%

Community successional stage:

☒ NA ☐ Mid (herbaceous, shrubs, saplings)

☐ Early (herbaceous & seedlings) ☐ Late (herbaceous, shrubs, mature trees)

Dominant species present: n/a

Other: ☐ ☐ ☐ ☐

☒ **Walk away from the low-flow channel along cross-section. Record characteristics of the low-flow/active floodplain boundary.**

Characteristics used to delineate the low-flow/active floodplain boundary:

☒ Change in total veg cover ☒ Tree ☐ Shrub ☒ Herb

☐ Change in overall vegetation maturity

☐ Change in dominant species present

☒ Other ☒ Presence of bed and bank

☐ Drift and/or debris

☒ Other: change in slope

☐ Other:

☐ N/A **Continue walking the channel cross-section. Record observations below.**

Characteristics of the low-flow channel:

Average sediment texture: ____

Total veg cover: ____% Tree: ____% Shrub: ____% Herb: ____%

Community successional stage:

☐ NA ☐ Mid (herbaceous, shrubs, saplings)

☐ Early (herbaceous & seedlings) ☐ Late (herbaceous, shrubs, mature trees)

Dominant species present: ____

Other: ☐ ☐ ☐ ☐

☒ **Continue walking the channel cross-section. Record indicators of the active floodplain/low terrace boundary.**

Characteristics used to delineate the active floodplain/ low terrace boundary:

- ☐ Change in average sediment texture
- ☒ Change in total veg cover ☒ Tree ☐ Shrub ☒ Herb
- ☐ Change in overall vegetation maturity
- ☐ Change in dominant species present
- ☐ Other
  - ☐ Presence of bed and bank
  - ☐ Drift and/or debris
  - ☐ Other: _____
  - ☐ Other: _____

☒ **Walk the active floodplain/low terrace boundary both upstream and downstream of the cross-section to verify that the indicators used to identify the transition are consistently associated the transition in both directions.**

Consistency of indicators used to delineate the active floodplain/low terrace boundary:

- Y ☐ N ☐ Change in average sediment texture absent
- Y ☒ N ☐ Change in total veg cover ☒ Tree ☐ Shrub ☒ Herb
- Y ☐ N ☐ Change in overall vegetation maturity absent
- Y ☐ N ☐ Change in dominant species present absent
- Y ☐ N ☐ Other:
  - Y ☒ N ☐ Presence of bed and bank
  - Y ☐ N ☐ Drift and/or debris
  - Y ☒ N ☐ Other: change in slope
  - Y ☐ N ☐ Other: _____

☐ N/A **If the characteristics used to delineate the active floodplain/low terrace boundary were NOT consistently associated with the transition in both the upstream and downstream directions, repeat all steps above.**

☐ N/A **Continue walking the channel cross-section. Record characteristics of the low terrace.**

Characteristics of the low terrace:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____% Shrub: _____% Herb: _____%

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Dominant species present: _____

Other:

- ☐ _____
- ☐ _____
- ☐ _____
- ☐ _____

☒ **If characteristics used to delineate the active floodplain/low terrace boundary were deemed reliable, acquire boundary.**

Active floodplain/low terrace boundary acquired via:

- ☒ Mapping on aerial photograph
- ☒ Digitized on computer
- ☒ GPS
- ☒ Other: Field measurement

Project: Campo Verde
Project Number:
Stream: Feature 22 – Fig Canal
Investigator(s):

Date: 10/26/11 **Time:** 1417
Town: **State:** CA
Photo begin file# **Photo end file#**
See report

Y ☐ / N ☒ Do normal circumstances exist on the site?

Y ☒ / N ☐ Is the site significantly disturbed?

Location Details:
Campo Verde Facility
Projection: See table **Datum:**
Coordinates: in report

Notes:
Concrete lined canal
Orlwn = 10

Brief site description:
Active ag land

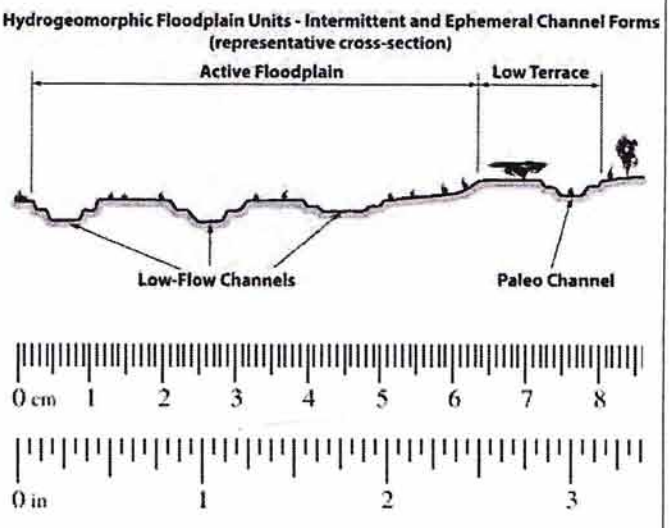
Checklist of resources (if available):

☒ Aerial photography
Dates:
☐ Topographic maps
Scale:
☐ Geologic maps
☐ Vegetation maps
☐ Soils maps
☐ Rainfall/precipitation maps
☐ Existing delineation(s) for site
☒ Global positioning system (GPS)
☐ Other studies

☐ Stream gage data
Gage number:
Period of record:
☐ Clinometer / level
☐ History of recent effective discharges
☐ Results of flood frequency analysis
☐ Most recent shift-adjusted rating
☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

The dominant Wentworth size class that imparts a characteristic texture to each zone of a channel cross-section is recorded in the average sediment texture field under the characteristics section for the zone of interest.

Millimeters (mm)	Inches (in)	Wentworth size class	
10.08	256	Boulder	
2.56	64	Cobble	Gravel
0.157	4	Pebble	Gravel
0.079	2.00	Granule	Gravel
0.039	1.00	Very coarse sand	Sand
0.020	0.50	Coarse sand	Sand
1/2 0.0098	0.25	Medium sand	Sand
1/4 0.005	0.125	Fine sand	Sand
1/8 0.0025	0.0625	Very fine sand	Sand
1/16 0.0012	0.031	Coarse silt	Silt
1/32 0.00061	0.0156	Medium silt	Silt
1/64 0.00031	0.0078	Fine silt	Silt
1/128 0.00015	0.0039	Very fine silt	Silt
		Clay	Mud



☒ **Walk the channel and floodplain within the study area to get an impression of the vegetation and geomorphology present at the site. Record any potential anthropogenic influences on the channel system in "Notes" above.**

☒ **Locate the low-flow channel (lowest part of the channel). Record observations.**

Characteristics of the low-flow channel:

Average sediment texture: Concrete

Total veg cover: 0 % Tree: ____% Shrub: ____% Herb: ____%

Community successional stage:

☒ NA ☐ Mid (herbaceous, shrubs, saplings)

☐ Early (herbaceous & seedlings) ☐ Late (herbaceous, shrubs, mature trees)

Dominant species present: n/a

Other: ☐ ☐ ☐ ☐

☒ N/A **Walk away from the low-flow channel along cross-section. Record characteristics of the low-flow/active floodplain boundary.**

Characteristics used to delineate the low-flow/active floodplain boundary:

☐ Change in total veg cover ☐ Tree ☐ Shrub ☐ Herb

☐ Change in overall vegetation maturity

☐ Change in dominant species present

☐ Other ☐ Presence of bed and bank

☐ Drift and/or debris

☐ Other: _____

☐ Other: _____

☐ N/A **Continue walking the channel cross-section. Record observations below.**

Characteristics of the low-flow channel:

Average sediment texture: _____

Total veg cover: ____% Tree: ____% Shrub: ____% Herb: ____%

Community successional stage:

☐ NA ☐ Mid (herbaceous, shrubs, saplings)

☐ Early (herbaceous & seedlings) ☐ Late (herbaceous, shrubs, mature trees)

Dominant species present: _____

Other: ☐ ☐ ☐ ☐

☒ N/A

Continue walking the channel cross-section. Record indicators of the active floodplain/low terrace boundary.

Characteristics used to delineate the active floodplain/ low terrace boundary:

- ☐ Change in average sediment texture
- ☐ Change in total veg cover ☐ Tree ☐ Shrub ☐ Herb
- ☐ Change in overall vegetation maturity
- ☐ Change in dominant species present
- ☐ Other ☐ Presence of bed and bank
  - ☐ Drift and/or debris
  - ☐ Other: _____
  - ☐ Other: _____

☐ N/A

Walk the active floodplain/low terrace boundary both upstream and downstream of the cross-section to verify that the indicators used to identify the transition are consistently associated the transition in both directions.

Consistency of indicators used to delineate the active floodplain/low terrace boundary:

- Y ☐ N ☐ Change in average sediment texture
- Y ☐ N ☐ Change in total veg cover ☐ Tree ☐ Shrub ☐ Herb
- Y ☐ N ☐ Change in overall vegetation maturity
- Y ☐ N ☐ Change in dominant species present
- Y ☐ N ☐ Other: Y ☐ N ☐ Presence of bed and bank
  - Y ☐ N ☐ Drift and/or debris
  - Y ☐ N ☐ Other: _____
  - Y ☐ N ☐ Other: _____

☐ N/A

If the characteristics used to delineate the active floodplain/low terrace boundary were NOT consistently associated with the transition in both the upstream and downstream directions, repeat all steps above.

☐ N/A

Continue walking the channel cross-section. Record characteristics of the low terrace.

Characteristics of the low terrace:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____% Shrub: _____% Herb: _____%

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Dominant species present: _____

_____

_____

Other: ☐ _____

☐ _____

☐ _____

☐ _____

☒ OHWM

If characteristics used to delineate the ~~active floodplain/low terrace boundary~~ were deemed reliable, acquire boundary.

Active floodplain/low terrace boundary acquired via:

- ☒ Mapping on aerial photograph
- ☒ Digitized on computer
- ☒ GPS
- ☒ Other: Field measurement of waterstaining

Project: Campo Verde
Project Number:
Stream: Feature 16 – Dichl Drain
Investigator(s): PFG/SY

Date: 10/26/11 **Time:** 1404
Town: **State:** CA
Photo begin file# See report **Photo end file#**

Y ☐ / N ☒ Do normal circumstances exist on the site?

Y ☒ / N ☐ Is the site significantly disturbed?

Location Details: Campo Verde Facility
Projection: see table **Datum:**
Coordinates: Report

Notes:
Lg. ag drain.
Flows into Fig Lagoon North of project area

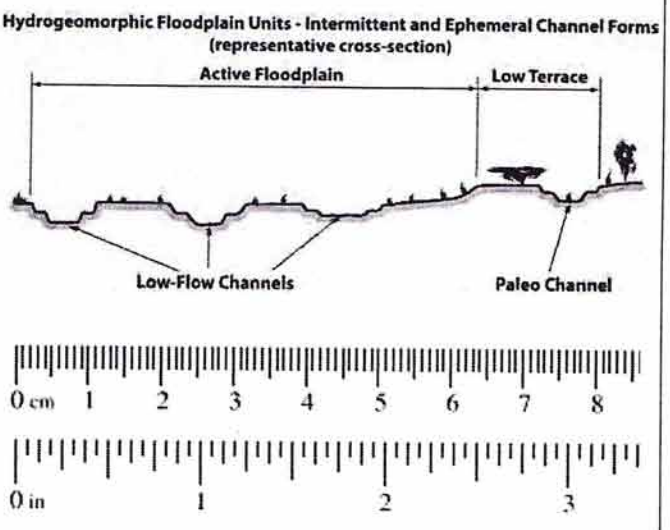
Brief site description:
Active floodplain = 10ft

Checklist of resources (if available):

- ☒ Aerial photography
  Dates:
- ☐ Topographic maps
  Scale:
- ☐ Geologic maps
- ☐ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☒ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
- ☐ Clinometer / level
- ☐ History of recent effective discharges
- ☐ Results of flood frequency analysis
- ☐ Most recent shift-adjusted rating
- ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

The dominant Wentworth size class that imparts a characteristic texture to each zone of a channel cross-section is recorded in the average sediment texture field under the characteristics section for the zone of interest.

Millimeters (mm)	Inches (in)	Wentworth size class	
10.08	256	Boulder	
2.56	64	Cobble	Gravel
0.157	4	Pebble	Gravel
0.079	2.00	Granule	Gravel
0.039	1.00	Very coarse sand	Sand
0.020	0.50	Coarse sand	Sand
1/2 0.0098	0.25	Medium sand	Sand
1/4 0.005	0.125	Fine sand	Sand
1/8 0.0025	0.0625	Very fine sand	Sand
1/16 0.0012	0.031	Coarse silt	Silt
1/32 0.00061	0.0156	Medium silt	Silt
1/64 0.00031	0.0078	Fine silt	Silt
1/128 0.00015	0.0039	Very fine silt	Silt
		Clay	Mud



☒ **Walk the channel and floodplain within the study area to get an impression of the vegetation and geomorphology present at the site. Record any potential anthropogenic influences on the channel system in "Notes" above.**

☒ **Locate the low-flow channel (lowest part of the channel). Record observations.**

Characteristics of the low-flow channel:

Average sediment texture: Fine silt

Total veg cover: 0 % Tree: ____% Shrub: ____% Herb: ____%

Community successional stage:

- ☒ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Dominant species present: n/a

Other: ☐ ☐ ☐ ☐

☒ **Walk away from the low-flow channel along cross-section. Record characteristics of the low-flow/active floodplain boundary.**

Characteristics used to delineate the low-flow/active floodplain boundary:

- ☒ Change in total veg cover ☐ Tree ☐ Shrub ☒ Herb
- ☐ Change in overall vegetation maturity
- ☐ Change in dominant species present
- ☒ Other
  - ☒ Presence of bed and bank
  - ☐ Drift and/or debris
  - ☒ Other: change in slope
  - ☐ Other: ____

☐ N/A **Continue walking the channel cross-section. Record observations below.**

Characteristics of the low-flow channel:

Average sediment texture: ____

Total veg cover: ____% Tree: ____% Shrub: ____% Herb: ____%

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Dominant species present: ____

Other: ☐ ☐ ☐ ☐

☒ **Continue walking the channel cross-section. Record indicators of the active floodplain/low terrace boundary.**

Characteristics used to delineate the active floodplain/ low terrace boundary:

- ☐ Change in average sediment texture
- ☒ Change in total veg cover ☐ Tree ☐ Shrub ☒ Herb
- ☐ Change in overall vegetation maturity
- ☐ Change in dominant species present
- ☒ Other ☒ Presence of bed and bank
  - ☐ Drift and/or debris
  - ☒ Other: change in slope
  - ☐ Other: _____

☒ **Walk the active floodplain/low terrace boundary both upstream and downstream of the cross-section to verify that the indicators used to identify the transition are consistently associated the transition in both directions.**

Consistency of indicators used to delineate the active floodplain/low terrace boundary:

- Y ☐ N ☐ Change in average sediment texture absent
- Y ☒ N ☐ Change in total veg cover ☐ Tree ☐ Shrub ☒ Herb
- Y ☐ N ☐ Change in overall vegetation maturity absent
- Y ☐ N ☐ Change in dominant species present absent
- Y ☐ N ☐ Other: Y ☒ N ☐ Presence of bed and bank
  - Y ☐ N ☐ Drift and/or debris
  - Y ☒ N ☐ Other: change in slope
  - Y ☐ N ☐ Other: _____

☐ N/A **If the characteristics used to delineate the active floodplain/low terrace boundary were NOT consistently associated with the transition in both the upstream and downstream directions, repeat all steps above.**

☐ N/A **Continue walking the channel cross-section. Record characteristics of the low terrace.**

Characteristics of the low terrace:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Dominant species present: _____

Other: ☐ _____

☐ _____

☐ _____

☐ _____

☒ **If characteristics used to delineate the active floodplain/low terrace boundary were deemed reliable, acquire boundary.**

Active floodplain/low terrace boundary acquired via:

- ☒ Mapping on aerial photograph
- ☒ Digitized on computer
- ☒ GPS
- ☒ Other: Field Measurement

Project: Campo Verde | **Date:** 10/26/11 | **Time:** 1354
Project Number: | **Town:** | **State:** CA
Stream: Fig Drain | **Photo begin file#** | **Photo end file#**
Investigator(s): PFG/SY | See report

Y ☐ / N ☒ Do normal circumstances exist on the site?

Y ☒ / N ☐ Is the site significantly disturbed?

Location Details: Campo Verde Facility

Projection: See table in report **Datum:**

Coordinates:

Notes: lg. agr. drain
Flows to Fig Lagoon N of project area

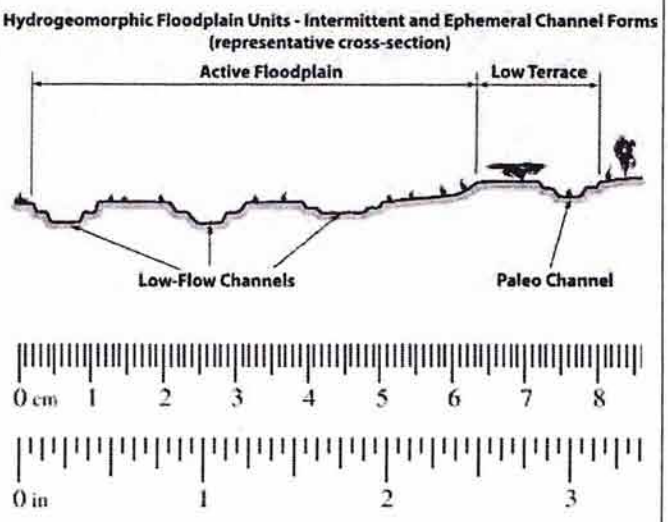
Brief site description:
Active floodplain = 25 ft.

Checklist of resources (if available):

- ☒ Aerial photography
  Dates:
- ☐ Topographic maps
  Scale:
- ☐ Geologic maps
- ☐ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☒ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
- ☐ Clinometer / level
- ☐ History of recent effective discharges
- ☐ Results of flood frequency analysis
- ☐ Most recent shift-adjusted rating
- ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

The dominant Wentworth size class that imparts a characteristic texture to each zone of a channel cross-section is recorded in the average sediment texture field under the characteristics section for the zone of interest.

Millimeters (mm)	Inches (in)	Wentworth size class	
10.08	256	Boulder	
		Cobble	Gravel
2.56	64	Pebble	
0.157	4	Granule	
0.079	2.00	Very coarse sand	
0.039	1.00	Coarse sand	
0.020	0.50	Medium sand	Sand
1/2 0.0098	0.25	Fine sand	
1/4 0.005	0.125	Very fine sand	
1/8 0.0025	0.0625	Coarse silt	
1/16 0.0012	0.031	Medium silt	Silt
1/32 0.00061	0.0156	Fine silt	
1/64 0.00031	0.0078	Very fine silt	
1/128 0.00015	0.0039	Clay	Mud



☒ **Walk the channel and floodplain within the study area to get an impression of the vegetation and geomorphology present at the site. Record any potential anthropogenic influences on the channel system in "Notes" above.**

☒ **Locate the low-flow channel (lowest part of the channel). Record observations.**

Characteristics of the low-flow channel:

Average sediment texture: Fine silt

Total veg cover: 0 % Tree: ____% Shrub: ____% Herb: ____%

Community successional stage:

☒ NA ☐ Mid (herbaceous, shrubs, saplings)

☐ Early (herbaceous & seedlings) ☐ Late (herbaceous, shrubs, mature trees)

Dominant species present: n/a

Other: ☐ ☐ ☐ ☐

☒ **Walk away from the low-flow channel along cross-section. Record characteristics of the low-flow/active floodplain boundary.**

Characteristics used to delineate the low-flow/active floodplain boundary:

☒ Change in total veg cover ☐ Tree ☒ Shrub ☒ Herb

☐ Change in overall vegetation maturity

☐ Change in dominant species present

☒ Other ☒ Presence of bed and bank

☐ Drift and/or debris

☒ Other: change in slope

☐ Other: ____

☒ **Continue walking the channel cross-section. Record observations below.**

N/A

Characteristics of the low-flow channel:

Average sediment texture: ____

Total veg cover: ____% Tree: ____% Shrub: ____% Herb: ____%

Community successional stage:

☐ NA ☐ Mid (herbaceous, shrubs, saplings)

☐ Early (herbaceous & seedlings) ☐ Late (herbaceous, shrubs, mature trees)

Dominant species present: ____

Other: ☐ ☐ ☐ ☐

☒ **Continue walking the channel cross-section. Record indicators of the active floodplain/low terrace boundary.**

Characteristics used to delineate the active floodplain/ low terrace boundary:

- ☐ Change in average sediment texture
- ☒ Change in total veg cover ☐ Tree ☒ Shrub ☒ Herb
- ☐ Change in overall vegetation maturity
- ☐ Change in dominant species present
- ☒ Other ☒ Presence of bed and bank
  - ☐ Drift and/or debris
  - ☒ Other: change in slope
  - ☐ Other: _____

☒ **Walk the active floodplain/low terrace boundary both upstream and downstream of the cross-section to verify that the indicators used to identify the transition are consistently associated the transition in both directions.**

Consistency of indicators used to delineate the active floodplain/low terrace boundary:

- Y ☐ N ☐ Change in average sediment texture absent
- Y ☒ N ☐ Change in total veg cover ☐ Tree ☒ Shrub ☒ Herb
- Y ☐ N ☐ Change in overall vegetation maturity absent
- Y ☐ N ☐ Change in dominant species present absent
- Y ☒ N ☐ Other: Y ☒ N ☐ Presence of bed and bank
  - Y ☐ N ☐ Drift and/or debris
  - Y ☒ N ☐ Other: change in slope
  - Y ☐ N ☐ Other: _____

☐ N/A **If the characteristics used to delineate the active floodplain/low terrace boundary were NOT consistently associated with the transition in both the upstream and downstream directions, repeat all steps above.**

☐ N/A **Continue walking the channel cross-section. Record characteristics of the low terrace.**

Characteristics of the low terrace:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Dominant species present: _____

_____

_____

Other: ☐ _____

☐ _____

☐ _____

☐ _____

☒ **If characteristics used to delineate the active floodplain/low terrace boundary were deemed reliable, acquire boundary.**

Active floodplain/low terrace boundary acquired via:

- ☒ Mapping on aerial photograph
- ☒ Digitized on computer
- ☒ GPS
- ☒ Other: Field measurement

Project: Campo Verde
Project Number:
Stream: Feature 1 - Wormwood Lat 7
Investigator(s): PFG/SW4

Date: 10/26/11 **Time:** 1345
Town: **State:** CA
Photo begin file# See report **Photo end file#**

Y ☐ / N ☒ Do normal circumstances exist on the site?

Y ☒ / N ☐ Is the site significantly disturbed?

Location Details: Campo Verde Facility
Projection: See table in report **Datum:**
Coordinates:

Notes: OHWM = 4ft
No veg; concrete lined
Active Ag.

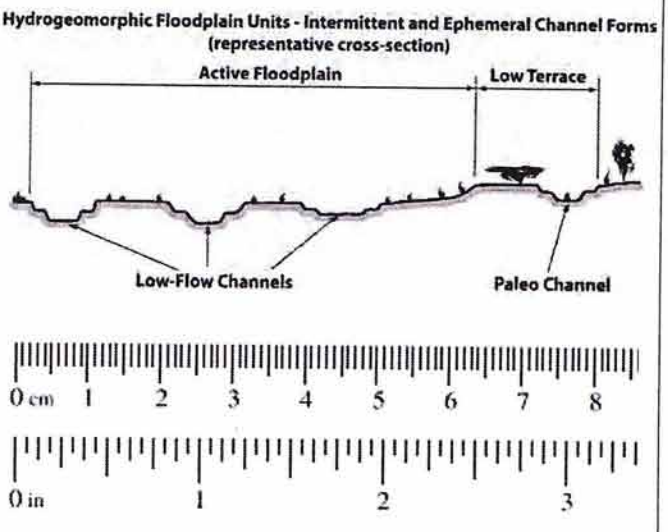
Brief site description:
Wormwood Lat 7

Checklist of resources (if available):

- ☒ Aerial photography
  Dates:
- ☐ Topographic maps
  Scale:
- ☐ Geologic maps
- ☐ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☒ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
- ☐ Clinometer / level
- ☐ History of recent effective discharges
- ☐ Results of flood frequency analysis
- ☐ Most recent shift-adjusted rating
- ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

The dominant Wentworth size class that imparts a characteristic texture to each zone of a channel cross-section is recorded in the average sediment texture field under the characteristics section for the zone of interest.

Millimeters (mm)	Inches (in)	Wentworth size class	
10.08	256	Boulder	
2.56	64	Cobble	Gravel
0.157	4	Pebble	Gravel
0.079	2.00	Granule	Gravel
0.039	1.00	Very coarse sand	Sand
0.020	0.50	Coarse sand	Sand
1/2 0.0098	0.25	Medium sand	Sand
1/4 0.005	0.125	Fine sand	Sand
1/8 0.0025	0.0625	Very fine sand	Sand
1/16 0.0012	0.031	Coarse silt	Silt
1/32 0.00061	0.0156	Medium silt	Silt
1/64 0.00031	0.0078	Fine silt	Silt
1/128 0.00015	0.0039	Very fine silt	Silt
		Clay	Mud



☒ **Walk the channel and floodplain within the study area to get an impression of the vegetation and geomorphology present at the site. Record any potential anthropogenic influences on the channel system in "Notes" above.**

☒ **Locate the low-flow channel (lowest part of the channel). Record observations.**

Characteristics of the low-flow channel:

Average sediment texture: concrete

Total veg cover: 0 % Tree: ____% Shrub: ____% Herb: ____%

Community successional stage:

☒ NA ☐ Mid (herbaceous, shrubs, saplings)

☐ Early (herbaceous & seedlings) ☐ Late (herbaceous, shrubs, mature trees)

Dominant species present: n/a

Other: ☐ ☐ ☐ ☐

☒ N/A **Walk away from the low-flow channel along cross-section. Record characteristics of the low-flow/active floodplain boundary.**

Characteristics used to delineate the low-flow/active floodplain boundary:

☐ Change in total veg cover ☐ Tree ☐ Shrub ☐ Herb

☐ Change in overall vegetation maturity

☐ Change in dominant species present

☐ Other ☐ Presence of bed and bank

☐ Drift and/or debris

☐ Other: _____

☐ Other: _____

☒ **Continue walking the channel cross-section. Record observations below.**

Characteristics of the low-flow channel:

Average sediment texture: concrete

Total veg cover: 0 % Tree: ____% Shrub: ____% Herb: ____%

Community successional stage:

☒ NA ☐ Mid (herbaceous, shrubs, saplings)

☐ Early (herbaceous & seedlings) ☐ Late (herbaceous, shrubs, mature trees)

Dominant species present: n/a

Other: ☐ ☐ ☐ ☐

☒ N/A **Continue walking the channel cross-section. Record indicators of the active floodplain/low terrace boundary.**

Characteristics used to delineate the active floodplain/ low terrace boundary:

- ☐ Change in average sediment texture
- ☐ Change in total veg cover ☐ Tree ☐ Shrub ☐ Herb
- ☐ Change in overall vegetation maturity
- ☐ Change in dominant species present
- ☐ Other ☐ Presence of bed and bank
  - ☐ Drift and/or debris
  - ☐ Other: _____
  - ☐ Other: _____

☒ N/A **Walk the active floodplain/low terrace boundary both upstream and downstream of the cross-section to verify that the indicators used to identify the transition are consistently associated the transition in both directions.**

Consistency of indicators used to delineate the active floodplain/low terrace boundary:

- Y ☐ N ☐ Change in average sediment texture
- Y ☐ N ☐ Change in total veg cover ☐ Tree ☐ Shrub ☐ Herb
- Y ☐ N ☐ Change in overall vegetation maturity
- Y ☐ N ☐ Change in dominant species present
- Y ☐ N ☐ Other: Y ☐ N ☐ Presence of bed and bank
  - Y ☐ N ☐ Drift and/or debris
  - Y ☐ N ☐ Other: _____
  - Y ☐ N ☐ Other: _____

☐ **If the characteristics used to delineate the active floodplain/low terrace boundary were NOT consistently associated with the transition in both the upstream and downstream directions, repeat all steps above.**

☒ N/A **Continue walking the channel cross-section. Record characteristics of the low terrace.**

Characteristics of the low terrace:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Dominant species present: _____

_____

_____

Other: ☐ _____

☐ _____

☐ _____

☐ _____

☒ **If characteristics used to delineate the ~~active floodplain/low terrace boundary~~ were deemed reliable, acquire boundary.** OHWM

Active floodplain/low terrace boundary acquired via:

- ☒ Mapping on aerial photograph
- ☒ Digitized on computer
- ☒ GPS
- ☒ Other: Field measurement of water staining

Project: Campo Verde
Project Number:
Stream: Feature 8 - Wormwood Canal
Investigator(s): PFG / SWY

Date: 10/26/11 **Time:** 1255
Town: **State:** CA
Photo begin file# **Photo end file#**
See photo in ppt.

Y ☐ / N ☒ Do normal circumstances exist on the site?

Y ☒ / N ☐ Is the site significantly disturbed?

Location Details: Campo Verde Facility

Projection: See table in report **Datum:**
Coordinates:

Notes: OHWM = 10 feet
No vegetation, concrete lined, active ag

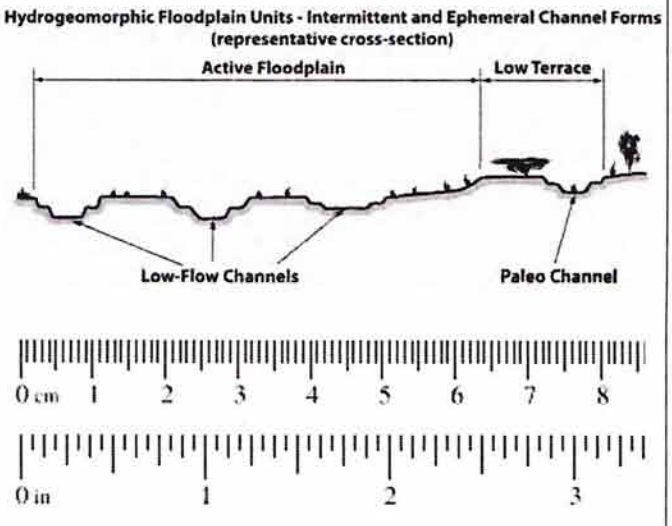
Brief site description:
Wormwood Canal

Checklist of resources (if available):

- ☒ Aerial photography
  Dates:
- ☐ Topographic maps
  Scale:
- ☐ Geologic maps
- ☐ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☒ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
- ☐ Clinometer / level
- ☐ History of recent effective discharges
- ☐ Results of flood frequency analysis
- ☐ Most recent shift-adjusted rating
- ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

The dominant Wentworth size class that imparts a characteristic texture to each zone of a channel cross-section is recorded in the average sediment texture field under the characteristics section for the zone of interest.

Millimeters (mm)	Inches (in)	Wentworth size class	
10.08	256	Boulder	
		Cobble	Gravel
2.56	64		
0.157	4	Pebble	
		Granule	
0.079	2.00	Very coarse sand	
0.039	1.00		
		Coarse sand	
0.020	0.50	Medium sand	Sand
1/2 0.0098	0.25		
		Fine sand	
1/4 0.005	0.125	Very fine sand	
1/8 0.0025	0.0625	Coarse silt	
1/16 0.0012	0.031		
		Medium silt	
1/32 0.00061	0.0156	Fine silt	Silt
1/64 0.00031	0.0078		
		Very fine silt	
1/128 0.00015	0.0039		
		Clay	Mud



☒ **Walk the channel and floodplain within the study area to get an impression of the vegetation and geomorphology present at the site. Record any potential anthropogenic influences on the channel system in "Notes" above.**

☒ **Locate the low-flow channel (lowest part of the channel). Record observations.**

Characteristics of the low-flow channel:

Average sediment texture: Concrete

Total veg cover: 0 % Tree: ____% Shrub: ____% Herb: ____%

Community successional stage:

☒ NA ☐ Mid (herbaceous, shrubs, saplings)

☐ Early (herbaceous & seedlings) ☐ Late (herbaceous, shrubs, mature trees)

Dominant species present: NA

Other: ☐ ☐ ☐ ☐

☒ NA **Walk away from the low-flow channel along cross-section. Record characteristics of the low-flow/active floodplain boundary.**

Characteristics used to delineate the low-flow/active floodplain boundary:

☐ Change in total veg cover ☐ Tree ☐ Shrub ☐ Herb

☐ Change in overall vegetation maturity

☐ Change in dominant species present

☐ Other ☐ Presence of bed and bank

☐ Drift and/or debris

☐ Other: ____

☐ Other: ____

☒ **Continue walking the channel cross-section. Record observations below.**

Characteristics of the low-flow channel:

Average sediment texture: Concrete

Total veg cover: 0 % Tree: ____% Shrub: ____% Herb: ____%

Community successional stage:

☒ NA ☐ Mid (herbaceous, shrubs, saplings)

☐ Early (herbaceous & seedlings) ☐ Late (herbaceous, shrubs, mature trees)

Dominant species present: NA

Other: ☐ ☐ ☐ ☐

☒ NA

Continue walking the channel cross-section. Record indicators of the active floodplain/low terrace boundary.

Characteristics used to delineate the active floodplain/ low terrace boundary:

- ☐ Change in average sediment texture
- ☐ Change in total veg cover ☐ Tree ☐ Shrub ☐ Herb
- ☐ Change in overall vegetation maturity
- ☐ Change in dominant species present
- ☐ Other ☐ Presence of bed and bank
  - ☐ Drift and/or debris
  - ☐ Other: _____
  - ☐ Other: _____

☒ NA

Walk the active floodplain/low terrace boundary both upstream and downstream of the cross-section to verify that the indicators used to identify the transition are consistently associated the transition in both directions.

Consistency of indicators used to delineate the active floodplain/low terrace boundary:

- Y ☐ N ☐ Change in average sediment texture
- Y ☐ N ☐ Change in total veg cover ☐ Tree ☐ Shrub ☐ Herb
- Y ☐ N ☐ Change in overall vegetation maturity
- Y ☐ N ☐ Change in dominant species present
- Y ☐ N ☐ Other: Y ☐ N ☐ Presence of bed and bank
  - Y ☐ N ☐ Drift and/or debris
  - Y ☐ N ☐ Other: _____
  - Y ☐ N ☐ Other: _____

☐

If the characteristics used to delineate the active floodplain/low terrace boundary were NOT consistently associated with the transition in both the upstream and downstream directions, repeat all steps above.

☒ NA

Continue walking the channel cross-section. Record characteristics of the low terrace.

Characteristics of the low terrace:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____% Shrub: _____% Herb: _____%

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Dominant species present: _____

_____

_____

Other: ☐ _____

☐ _____

☐ _____

☐ _____

☒

If characteristics used to delineate the ~~active floodplain~~/low terrace boundary were deemed reliable, acquire boundary. OHWM

Active floodplain/low terrace boundary acquired via:

- ☒ Mapping on aerial photograph
- ☒ Digitized on computer
- ☒ GPS
- ☒ Other: Field measurement ~~of~~ water staining

Project: Camps Verde
Project Number:
Stream: Feature 64 - Wormwood 7 Drain
Investigator(s): PEG / SWY

Date: 10/26/11 **Time:** 1315
Town: **State:** CA
Photo begin file# **Photo end file#**
See photos in report

Y ☐ / N ☒ Do normal circumstances exist on the site?

Y ☒ / N ☐ Is the site significantly disturbed?

Location Details: Camps Verde Facility Buffer

Projection: See table in **Datum:**
Coordinates: drainage report

Notes: Large ag drain, drains many fields, wetlands along much of drain; narrow and linear - assume FD + avuls. Flows into New River approximately 740 meters to NE of project boundary.

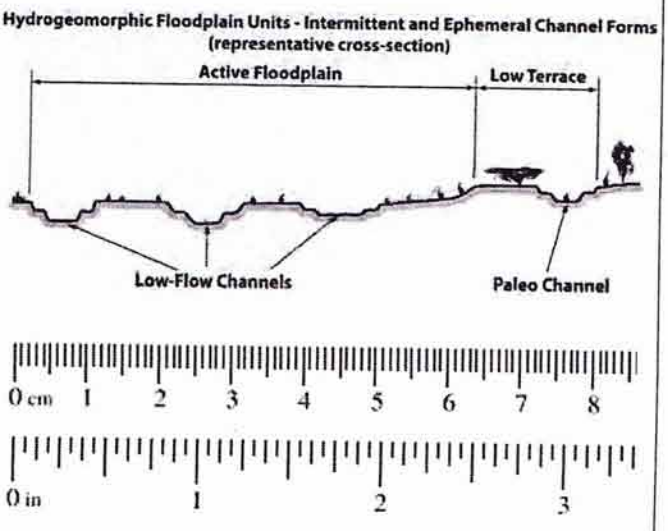
Brief site description:
Active floodplain 20 feet

Checklist of resources (if available):

- ☒ Aerial photography
  Dates:
- ☐ Topographic maps
  Scale:
- ☐ Geologic maps
- ☐ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☒ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
- ☐ Clinometer / level
- ☐ History of recent effective discharges
- ☐ Results of flood frequency analysis
- ☐ Most recent shift-adjusted rating
- ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

The dominant Wentworth size class that imparts a characteristic texture to each zone of a channel cross-section is recorded in the average sediment texture field under the characteristics section for the zone of interest.

Millimeters (mm)	Inches (in)	Wentworth size class	
10.08	256	Boulder	
2.56	64	Cobble	Gravel
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	Sand
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	
1/32 0.00061	0.0156	Medium silt	Silt
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



☒ **Walk the channel and floodplain within the study area to get an impression of the vegetation and geomorphology present at the site. Record any potential anthropogenic influences on the channel system in "Notes" above.**

☒ **Locate the low-flow channel (lowest part of the channel). Record observations.**

Characteristics of the low-flow channel:

Average sediment texture: Fine Silt

Total veg cover: 0 % Tree: ____% Shrub: ____% Herb: ____%

Community successional stage:

☒ NA ☐ Mid (herbaceous, shrubs, saplings)

☐ Early (herbaceous & seedlings) ☐ Late (herbaceous, shrubs, mature trees)

Dominant species present: N/A

Other: ☐ ☐ ☐ ☐

☒ **Walk away from the low-flow channel along cross-section. Record characteristics of the low-flow/active floodplain boundary.**

Characteristics used to delineate the low-flow/active floodplain boundary:

☒ Change in total veg cover ☐ Tree ☐ Shrub ☒ Herb

☐ Change in overall vegetation maturity

☐ Change in dominant species present

☒ Other ☒ Presence of bed and bank

☐ Drift and/or debris

☒ Other: Change in slope

☐ Other: ____

☒ **Continue walking the channel cross-section. Record observations below.**

N/A

Characteristics of the low-flow channel:

Average sediment texture: ____

Total veg cover: ____% Tree: ____% Shrub: ____% Herb: ____%

Community successional stage:

☐ NA ☐ Mid (herbaceous, shrubs, saplings)

☐ Early (herbaceous & seedlings) ☐ Late (herbaceous, shrubs, mature trees)

Dominant species present: ____

Other: ☐ ☐ ☐ ☐

☒ **Continue walking the channel cross-section. Record indicators of the active floodplain/low terrace boundary.**

Characteristics used to delineate the active floodplain/ low terrace boundary:

- ☐ Change in average sediment texture
- ☒ Change in total veg cover ☐ Tree ☐ Shrub ☒ Herb
- ☐ Change in overall vegetation maturity
- ☐ Change in dominant species present
- ☒ Other ☒ Presence of bed and bank
  - ☐ Drift and/or debris
  - ☒ Other: Steep bank
  - ☐ Other: _____

☒ **Walk the active floodplain/low terrace boundary both upstream and downstream of the cross-section to verify that the indicators used to identify the transition are consistently associated the transition in both directions.**

Consistency of indicators used to delineate the active floodplain/low terrace boundary:

- Y ☐ N ☐ Change in average sediment texture
- Y ☒ N ☐ Change in total veg cover ☐ Tree ☐ Shrub ☒ Herb
- Y ☐ N ☐ Change in overall vegetation maturity absent
- Y ☐ N ☐ Change in dominant species present
- Y ☒ N ☐ Other: Y ☒ N ☐ Presence of bed and bank
  - Y ☐ N ☐ Drift and/or debris
  - Y ☒ N ☐ Other: Steep bank
  - Y ☐ N ☐ Other: _____

☐ NA **If the characteristics used to delineate the active floodplain/low terrace boundary were NOT consistently associated with the transition in both the upstream and downstream directions, repeat all steps above.**

☐ NA **Continue walking the channel cross-section. Record characteristics of the low terrace.**

Characteristics of the low terrace:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____% Shrub: _____% Herb: _____%

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Dominant species present: _____

Other:

- ☐ _____
- ☐ _____
- ☐ _____
- ☐ _____

☒ **If characteristics used to delineate the active floodplain/low terrace boundary were deemed reliable, acquire boundary.**

Active floodplain/low terrace boundary acquired via:

- ☒ Mapping on aerial photograph
- ☒ Digitized on computer
- ☒ GPS
- ☒ Other: Field measurement

Project: Campo Verde Solar Project
Project Number:
Stream: Foxglove Canal, #114
Investigator(s): SY / PFG

Date: 12/7/11
Town: El Centro, CA
Photo begin file# See pdf.

Time: 1228
State:
Photo end file#

Y ☐ / N ☒ Do normal circumstances exist on the site?

Y ☒ / N ☐ Is the site significantly disturbed?

Location Details: Near BLM ROW Geotic Alt Buffer

Projection: See pdf. **Datum:**
Coordinates:

Notes:
No vegetation; concrete canal

OHWM = 12'

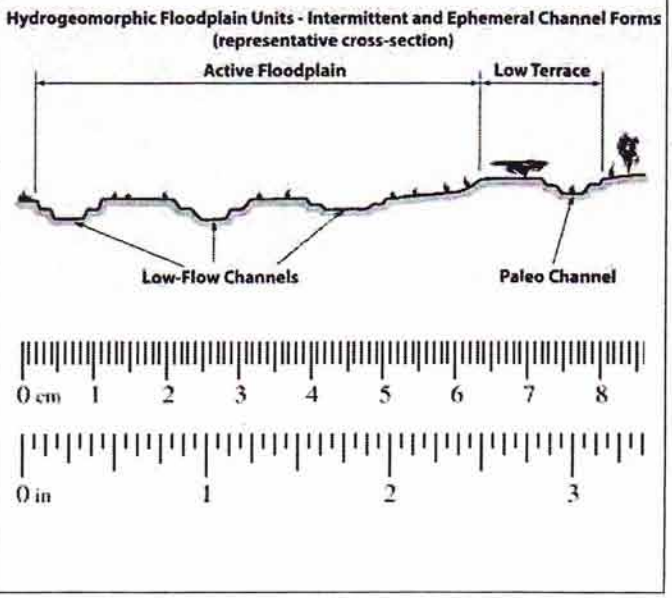
Brief site description:
Active agricultural lands - canal excavated in uplands.

Checklist of resources (if available):

- ☒ Aerial photography
  Dates:
- ☐ Topographic maps
  Scale:
- ☐ Geologic maps
- ☒ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☒ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
- ☐ Clinometer / level
- ☐ History of recent effective discharges
- ☐ Results of flood frequency analysis
- ☐ Most recent shift-adjusted rating
- ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

The dominant Wentworth size class that imparts a characteristic texture to each zone of a channel cross-section is recorded in the average sediment texture field under the characteristics section for the zone of interest.

Millimeters (mm)	Inches (in)	Wentworth size class	
10.08	256	Boulder	
		Cobble	Gravel
2.56	64		
0.157	4	Pebble	
		Granule	
0.079	2.00	Very coarse sand	
0.039	1.00	Coarse sand	
0.020	0.50	Medium sand	Sand
1/2 0.0098	0.25	Fine sand	
1/4 0.005	0.125	Very fine sand	
1/8 0.0025	0.0625	Coarse silt	
1/16 0.0012	0.031	Medium silt	
1/32 0.00061	0.0156	Fine silt	Silt
1/64 0.00031	0.0078	Very fine silt	
1/128 0.00015	0.0039	Clay	Mud



☒ **Walk the channel and floodplain within the study area to get an impression of the vegetation and geomorphology present at the site. Record any potential anthropogenic influences on the channel system in "Notes" above.**

☒ **Locate the low-flow channel (lowest part of the channel). Record observations.**

Characteristics of the low-flow channel:

Average sediment texture: concrete

Total veg cover: 0 % Tree: ____% Shrub: ____% Herb: ____%

Community successional stage:

- ☒ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Dominant species present: none

Other:

- ☐ _____
- ☐ _____
- ☐ _____
- ☐ _____

☒ **Walk away from the low-flow channel along cross-section. Record characteristics of the low-flow/active floodplain boundary.**

Characteristics used to delineate the low-flow/active floodplain boundary:

- ☐ Change in total veg cover ☐ Tree ☐ Shrub ☐ Herb
- ☐ Change in overall vegetation maturity
- ☐ Change in dominant species present
- ☒ Other
  - ☒ Presence of bed and bank
  - ☐ Drift and/or debris
  - ☒ Other: Staining
  - ☐ Other: _____

☒ **Continue walking the channel cross-section. Record observations below.**

Characteristics of the low-flow channel:

Average sediment texture: concrete

Total veg cover: 0 % Tree: ____% Shrub: ____% Herb: ____%

Community successional stage:

- ☒ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Dominant species present: none

Other:

- ☐ _____
- ☐ _____
- ☐ _____
- ☐ _____

☒ N/A **Continue walking the channel cross-section. Record indicators of the active floodplain/low terrace boundary.**

Characteristics used to delineate the active floodplain/ low terrace boundary:

- ☐ Change in average sediment texture
- ☐ Change in total veg cover ☐ Tree ☐ Shrub ☐ Herb
- ☐ Change in overall vegetation maturity
- ☐ Change in dominant species present
- ☐ Other ☐ Presence of bed and bank
  - ☐ Drift and/or debris
  - ☐ Other: _____
  - ☐ Other: _____

☒ N/A **Walk the active floodplain/low terrace boundary both upstream and downstream of the cross-section to verify that the indicators used to identify the transition are consistently associated the transition in both directions.**

Consistency of indicators used to delineate the active floodplain/low terrace boundary:

- Y ☐ N ☐ Change in average sediment texture
- Y ☐ N ☐ Change in total veg cover ☐ Tree ☐ Shrub ☐ Herb
- Y ☐ N ☐ Change in overall vegetation maturity
- Y ☐ N ☐ Change in dominant species present
- Y ☐ N ☐ Other: Y ☐ N ☐ Presence of bed and bank
  - Y ☐ N ☐ Drift and/or debris
  - Y ☐ N ☐ Other: _____
  - Y ☐ N ☐ Other: _____

☒ N/A **If the characteristics used to delineate the active floodplain/low terrace boundary were NOT consistently associated with the transition in both the upstream and downstream directions, repeat all steps above.**

☒ N/A **Continue walking the channel cross-section. Record characteristics of the low terrace.**

Characteristics of the low terrace:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____% Shrub: _____% Herb: _____%

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Dominant species present: _____

_____

_____

Other: ☐ _____

☐ _____

☐ _____

☐ _____

☐ **If characteristics used to delineate the active floodplain/low terrace boundary were deemed reliable, acquire boundary.**

Active floodplain/low terrace boundary acquired via:

- ☐ Mapping on aerial photograph
- ☐ Digitized on computer
- ☐ GPS
- ☒ Other: Field measurement of OHWM

Indicators: Staining

Project: Campo Verde Solar Project
Project Number:
Stream: Forget Me Not Canal, #115
Investigator(s): SY / PEG

Date: 12/7/11 **Time:** 1238
Town: El Centro **State:** CA
Photo begin file# See rpt. **Photo end file#**

Y ☐ / N ☒ Do normal circumstances exist on the site?

Y ☒ / N ☐ Is the site significantly disturbed?

Location Details: Non-BLM ROW Generic Alternative
Projection: See rpt. **Datum:**
Coordinates:

Notes:

No vegetation; concrete canal

OHWM = 6

Brief site description:

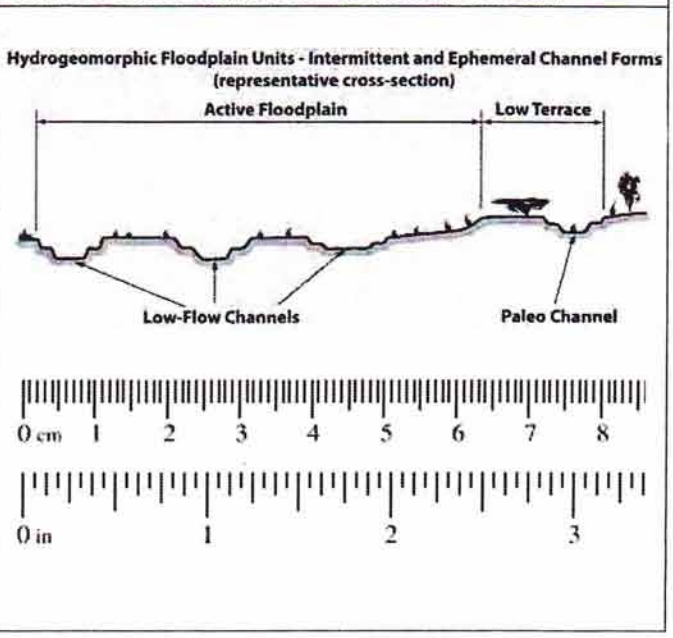
Active agricultural land - canal excavated in uplands

Checklist of resources (if available):

- ☒ Aerial photography
  Dates:
- ☐ Topographic maps
  Scale:
- ☐ Geologic maps
- ☒ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☒ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
- ☐ Clinometer / level
- ☐ History of recent effective discharges
- ☐ Results of flood frequency analysis
- ☐ Most recent shift-adjusted rating
- ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

The dominant Wentworth size class that imparts a characteristic texture to each zone of a channel cross-section is recorded in the average sediment texture field under the characteristics section for the zone of interest.

Millimeters (mm)	Inches (in)	Wentworth size class	
10.08	256	Boulder	
		Cobble	Gravel
2.56	64		
0.157	4	Pebble	
		Granule	
0.079	2.00		
0.039	1.00	Very coarse sand	
		Coarse sand	
0.020	0.50		
		Medium sand	Sand
1/2 0.0098	0.25		
		Fine sand	
1/4 0.005	0.125		
		Very fine sand	
1/8 0.0025	0.0625		
		Coarse silt	
1/16 0.0012	0.031		
		Medium silt	
1/32 0.00061	0.0156		Silt
		Fine silt	
1/64 0.00031	0.0078		
		Very fine silt	
1/128 0.00015	0.0039		
		Clay	Mud



☒ **Walk the channel and floodplain within the study area to get an impression of the vegetation and geomorphology present at the site. Record any potential anthropogenic influences on the channel system in "Notes" above.**

☒ **Locate the low-flow channel (lowest part of the channel). Record observations.**

Characteristics of the low-flow channel:

Average sediment texture: Concrete

Total veg cover: 0 % Tree: ____% Shrub: ____% Herb: ____%

Community successional stage:

- ☒ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Dominant species present: none

Other:

- ☐ _____
- ☐ _____
- ☐ _____
- ☐ _____

☒ **Walk away from the low-flow channel along cross-section. Record characteristics of the low-flow/active floodplain boundary.**

Characteristics used to delineate the low-flow/active floodplain boundary:

- ☐ Change in total veg cover ☐ Tree ☐ Shrub ☐ Herb
- ☐ Change in overall vegetation maturity
- ☐ Change in dominant species present
- ☒ Other
  - ☒ Presence of bed and bank
  - ☐ Drift and/or debris
  - ☒ Other: water staining
  - ☐ Other: _____

☒ **Continue walking the channel cross-section. Record observations below.**

Characteristics of the low-flow channel:

Average sediment texture: concrete

Total veg cover: 0 % Tree: ____% Shrub: ____% Herb: ____%

Community successional stage:

- ☒ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Dominant species present: none

Other:

- ☐ _____
- ☐ _____
- ☐ _____
- ☐ _____

☒ N/A **Continue walking the channel cross-section. Record indicators of the active floodplain/low terrace boundary.**

Characteristics used to delineate the active floodplain/ low terrace boundary:

- ☐ Change in average sediment texture
- ☐ Change in total veg cover ☐ Tree ☐ Shrub ☐ Herb
- ☐ Change in overall vegetation maturity
- ☐ Change in dominant species present
- ☐ Other
  - ☐ Presence of bed and bank
  - ☐ Drift and/or debris
  - ☐ Other: _____
  - ☐ Other: _____

☒ N/A **Walk the active floodplain/low terrace boundary both upstream and downstream of the cross-section to verify that the indicators used to identify the transition are consistently associated the transition in both directions.**

Consistency of indicators used to delineate the active floodplain/low terrace boundary:

- Y ☐ N ☐ Change in average sediment texture
- Y ☐ N ☐ Change in total veg cover ☐ Tree ☐ Shrub ☐ Herb
- Y ☐ N ☐ Change in overall vegetation maturity
- Y ☐ N ☐ Change in dominant species present
- Y ☐ N ☐ Other:
  - Y ☐ N ☐ Presence of bed and bank
  - Y ☐ N ☐ Drift and/or debris
  - Y ☐ N ☐ Other: _____
  - Y ☐ N ☐ Other: _____

☒ N/A **If the characteristics used to delineate the active floodplain/low terrace boundary were NOT consistently associated with the transition in both the upstream and downstream directions, repeat all steps above.**

☒ N/A **Continue walking the channel cross-section. Record characteristics of the low terrace.**

Characteristics of the low terrace:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____% Shrub: _____% Herb: _____%

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Dominant species present: _____

_____

_____

Other:

- ☐ _____
- ☐ _____
- ☐ _____
- ☐ _____

☒ **If characteristics used to delineate the active floodplain/low terrace boundary were deemed reliable, acquire boundary.**

Active floodplain/low terrace boundary acquired via:

- ☐ Mapping on aerial photograph
- ☐ Digitized on computer
- ☐ GPS
- ☒ Other: Field measurement of OHWM

Indicators: staining

Project: Campo Verde Solar Project
Project Number:
Stream: Forget Me Not 1 Drain, #110
Investigator(s): SY / PFG

Date: 12/7/11 **Time:** 1249
Town: El Centro **State:** CA
Photo begin file# See GPS **Photo end file#**

Y ☐ / N ☒ Do normal circumstances exist on the site?

Y ☒ / N ☐ Is the site significantly disturbed?

Location Details:
Non-BLM ROW Gen-tie Alt.
Projection: **Datum:**
Coordinates: See GPS.

Notes:
Ag drain, drains several fields
Drains eventually to New River
OHWM = 15'

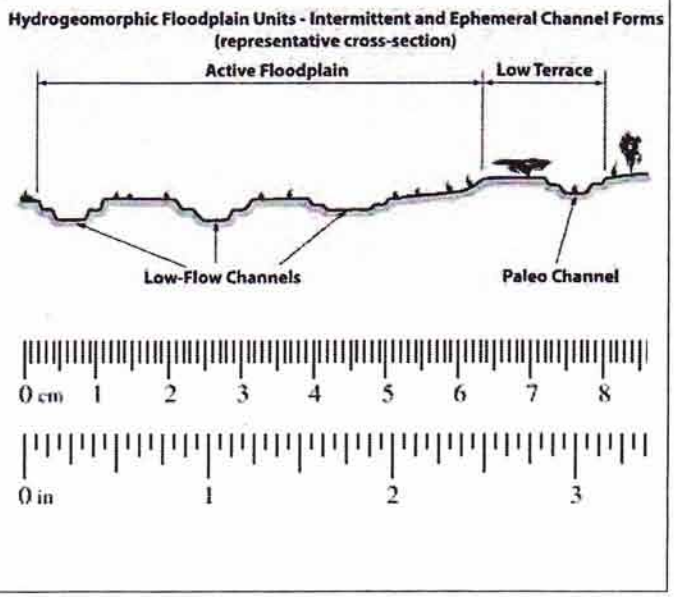
Brief site description:
Active agricultural lands – excavated in uplands.

Checklist of resources (if available):

- ☒ Aerial photography
  Dates:
- ☐ Topographic maps
  Scale:
- ☐ Geologic maps
- ☒ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☒ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
- ☐ Clinometer / level
- ☐ History of recent effective discharges
- ☐ Results of flood frequency analysis
- ☐ Most recent shift-adjusted rating
- ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

The dominant Wentworth size class that imparts a characteristic texture to each zone of a channel cross-section is recorded in the average sediment texture field under the characteristics section for the zone of interest.

Millimeters (mm)	Inches (in)	Wentworth size class	
10.08	256	Boulder	
2.56	64	Cobble	Gravel
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	Sand
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	
1/32 0.00061	0.0156	Medium silt	Silt
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



☒ **Walk the channel and floodplain within the study area to get an impression of the vegetation and geomorphology present at the site. Record any potential anthropogenic influences on the channel system in "Notes" above.**

☒ **Locate the low-flow channel (lowest part of the channel). Record observations.**

Characteristics of the low-flow channel:

Average sediment texture: silt

Total veg cover: 90 % Tree: 0 % Shrub: 50 % Herb: 40 %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☒ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Dominant species present: Tamarisk, arrow weed, typha, phragmites

Other: ☐ ☐ ☐ ☐

☒ **Walk away from the low-flow channel along cross-section. Record characteristics of the low-flow/active floodplain boundary.**

Characteristics used to delineate the low-flow/active floodplain boundary:

- ☒ Change in total veg cover ☐ Tree ☒ Shrub ☒ Herb
- ☐ Change in overall vegetation maturity
- ☐ Change in dominant species present
- ☒ Other
  - ☒ Presence of bed and bank
  - ☐ Drift and/or debris
  - ☐ Other: _____
  - ☐ Other: _____

☒ **Continue walking the channel cross-section. Record observations below.**

Characteristics of the low-flow channel:

Average sediment texture: silt

Total veg cover: 90 % Tree: 0 % Shrub: 50 % Herb: 40 %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☒ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Dominant species present: Tamarisk, arrow weed, typha, phragmites

Other: ☐ ☐ ☐ ☐

☒ **Continue walking the channel cross-section. Record indicators of the active floodplain/low terrace boundary.**

Characteristics used to delineate the active floodplain/ low terrace boundary:

- ☐ Change in average sediment texture
- ☒ Change in total veg cover ☐ Tree ☒ Shrub ☒ Herb
- ☐ Change in overall vegetation maturity
- ☒ Change in dominant species present
- ☒ Other ☒ Presence of bed and bank
  - ☐ Drift and/or debris
  - ☐ Other: _____
  - ☐ Other: _____

☒ **Walk the active floodplain/low terrace boundary both upstream and downstream of the cross-section to verify that the indicators used to identify the transition are consistently associated the transition in both directions.**

Consistency of indicators used to delineate the active floodplain/low terrace boundary:

- Y ☐ N ☐ Change in average sediment texture
- Y ☒ N ☐ Change in total veg cover ☐ Tree ☒ Shrub ☐ Herb
- Y ☐ N ☐ Change in overall vegetation maturity
- Y ☒ N ☐ Change in dominant species present
- Y ☒ N ☐ Other: Y ☒ N ☐ Presence of bed and bank
  - Y ☐ N ☐ Drift and/or debris
  - Y ☐ N ☐ Other: _____
  - Y ☐ N ☐ Other: _____

☐ N/A **If the characteristics used to delineate the active floodplain/low terrace boundary were NOT consistently associated with the transition in both the upstream and downstream directions, repeat all steps above.**

☐ N/A **Continue walking the channel cross-section. Record characteristics of the low terrace.**

Characteristics of the low terrace:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____% Shrub: _____% Herb: _____%

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Dominant species present: _____

_____

_____

Other: ☐ _____

☐ _____

☐ _____

☐ _____

☒ **If characteristics used to delineate the active floodplain/low terrace boundary were deemed reliable, acquire boundary.**

Active floodplain/low terrace boundary acquired via:

- ☐ Mapping on aerial photograph
- ☐ Digitized on computer
- ☐ GPS
- ☒ Other: Field measurement at Datum

Indicators: change in veg, bed + bank, staining

Project: Campo Verde Solar Project
Project Number:
Stream: #110 Dixie 4 Drain
Investigator(s): SK, PFG

Date: 12/7/11 **Time:** 1318
Town: El Centro **State:** CA
Photo begin file# See Rpt **Photo end file#**

Y ☐ / N ☒ Do normal circumstances exist on the site?

Y ☒ / N ☐ Is the site significantly disturbed?

Location Details:
Non-BLM ROW Gentie Alt.
Projection: See rpt. **Datum:**
Coordinates:

Notes:

Agricultural drain - drains multiple fields.
Flows eventually to New River

OHWM = 20

Brief site description:

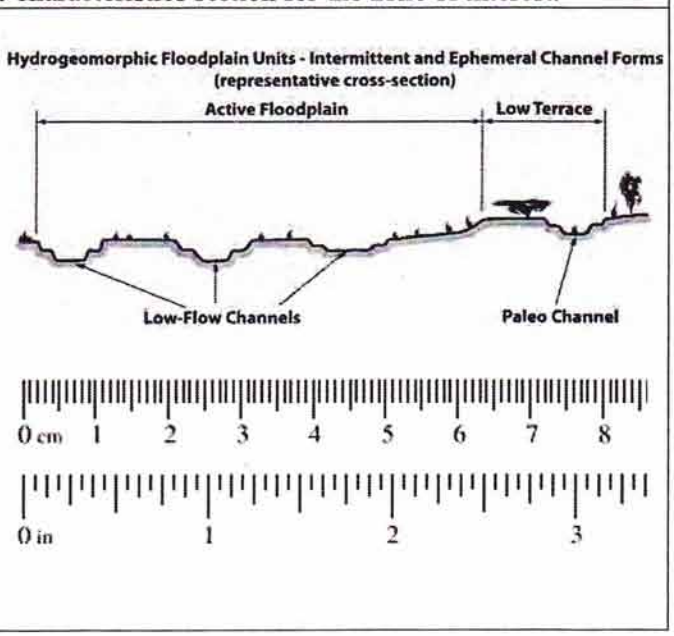
Active agricultural lands; excavated entirely in uplands

Checklist of resources (if available):

- ☒ Aerial photography
  Dates:
- ☐ Topographic maps
  Scale:
- ☐ Geologic maps
- ☒ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☒ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
- ☐ Clinometer / level
- ☐ History of recent effective discharges
- ☐ Results of flood frequency analysis
- ☐ Most recent shift-adjusted rating
- ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

The dominant Wentworth size class that imparts a characteristic texture to each zone of a channel cross-section is recorded in the average sediment texture field under the characteristics section for the zone of interest.

Millimeters (mm)	Inches (in)	Wentworth size class	
10.08	256	Boulder	
2.56	64	Cobble	Gravel
0.157	4	Pebble	
0.079	2.00	Granule	
0.039	1.00	Very coarse sand	
0.020	0.50	Coarse sand	
1/2 0.0098	0.25	Medium sand	Sand
1/4 0.005	0.125	Fine sand	
1/8 0.0025	0.0625	Very fine sand	
1/16 0.0012	0.031	Coarse silt	
1/32 0.00061	0.0156	Medium silt	Silt
1/64 0.00031	0.0078	Fine silt	
1/128 0.00015	0.0039	Very fine silt	
		Clay	Mud



☒ **Walk the channel and floodplain within the study area to get an impression of the vegetation and geomorphology present at the site. Record any potential anthropogenic influences on the channel system in "Notes" above.**

☐ **Locate the low-flow channel (lowest part of the channel). Record observations.**

Characteristics of the low-flow channel:

Average sediment texture: Silt

Total veg cover: 80 % Tree: 0 % Shrub: 55 % Herb: 25 %

Community successional stage:

☐ NA ☒ Mid (herbaceous, shrubs, saplings)
☐ Early (herbaceous & seedlings) ☐ Late (herbaceous, shrubs, mature trees)

Dominant species present: Arrow weed, typha, tamarisk

Other: ☐ ☐ ☐ ☐

☒ **Walk away from the low-flow channel along cross-section. Record characteristics of the low-flow/active floodplain boundary.**

Characteristics used to delineate the low-flow/active floodplain boundary:

☒ Change in total veg cover ☐ Tree ☒ Shrub ☒ Herb
☐ Change in overall vegetation maturity
☒ Change in dominant species present
☒ Other ☒ Presence of bed and bank
☐ Drift and/or debris
☒ Other: staining
☐ Other:

☒ **Continue walking the channel cross-section. Record observations below.**

Characteristics of the low-flow channel:

Average sediment texture: Silt

Total veg cover: 80 % Tree: 0 % Shrub: 55 % Herb: 25 %

Community successional stage:

☐ NA ☒ Mid (herbaceous, shrubs, saplings)
☐ Early (herbaceous & seedlings) ☐ Late (herbaceous, shrubs, mature trees)

Dominant species present: Arrow weed, typha, tamarisk

Other: ☐ ☐ ☐ ☐

☒ **Continue walking the channel cross-section. Record indicators of the active floodplain/low terrace boundary.**

Characteristics used to delineate the active floodplain/ low terrace boundary:

- ☐ Change in average sediment texture
- ☒ Change in total veg cover ☐ Tree ☒ Shrub ☒ Herb
- ☐ Change in overall vegetation maturity
- ☒ Change in dominant species present
- ☐ Other ☒ Presence of bed and bank
  - ☐ Drift and/or debris
  - ☒ Other: staining
  - ☐ Other: _____

☒ **Walk the active floodplain/low terrace boundary both upstream and downstream of the cross-section to verify that the indicators used to identify the transition are consistently associated the transition in both directions.**

Consistency of indicators used to delineate the active floodplain/low terrace boundary:

- Y ☐ N ☐ Change in average sediment texture
- Y ☒ N ☐ Change in total veg cover ☐ Tree ☒ Shrub ☒ Herb
- Y ☐ N ☐ Change in overall vegetation maturity
- Y ☒ N ☐ Change in dominant species present
- Y ☒ N ☐ Other:
  - Y ☒ N ☐ Presence of bed and bank
  - Y ☐ N ☐ Drift and/or debris
  - Y ☒ N ☐ Other: staining
  - Y ☐ N ☐ Other: _____

☒ N/A **If the characteristics used to delineate the active floodplain/low terrace boundary were NOT consistently associated with the transition in both the upstream and downstream directions, repeat all steps above.**

☒ N/A **Continue walking the channel cross-section. Record characteristics of the low terrace.**

Characteristics of the low terrace:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____% Shrub: _____% Herb: _____%

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Dominant species present: _____

Other:

- ☐ _____
- ☐ _____
- ☐ _____
- ☐ _____

☒ **If characteristics used to delineate the active floodplain/low terrace boundary were deemed reliable, acquire boundary.**

Active floodplain/low terrace boundary acquired via:

- ☐ Mapping on aerial photograph
- ☐ Digitized on computer
- ☐ GPS
- ☒ Other: Field measurement at OHWM

Indicators: staining, change in veg, soil + bank

APPENDIX 3 – AVIAN SURVEY REPORT

Campo Verde Solar
Avian Survey Report 2011-2012

May 2012

Prepared for:

First Solar
1111 Broadway, Fourth Floor
Oakland, California 94607

Prepared by:
Heritage Environmental Consultants
2870 Emporia Court
Denver, CO 80238

HERITAGE
ENVIRONMENTAL
CONSULTANTS, LLC

Introduction

The Campo Verde Solar Project is a proposed 1,990 acre solar photovoltaic (PV) energy-generating facility (solar energy facility site) located in Imperial County approximately 7 miles southwest of the community of El Centro, California.

The Project would use First Solar PV modules that are generally non-reflective and convert sunlight into direct current (DC) electricity. The DC output of multiple rows of PV modules is collected through one or more combiner boxes and directed to an inverter that converts the DC electricity to alternating current (AC) electricity. From the inverter, the generated energy flows to a transformer where it is stepped up to distribution level voltage (approximately 34.5 kV). Multiple transformers are connected in parallel via 34.5 kV lines to the Project substation, where the power will be stepped up to 230 kV.

The Project will be interconnected to the regional transmission system via a new gen-tie line constructed to the Imperial Valley Substation. This interconnection will be accomplished via one of three potential options – two requiring rights-of-way across federal lands managed by the Bureau of Land Management (BLM) and one located entirely on private lands (**Figure 1**).

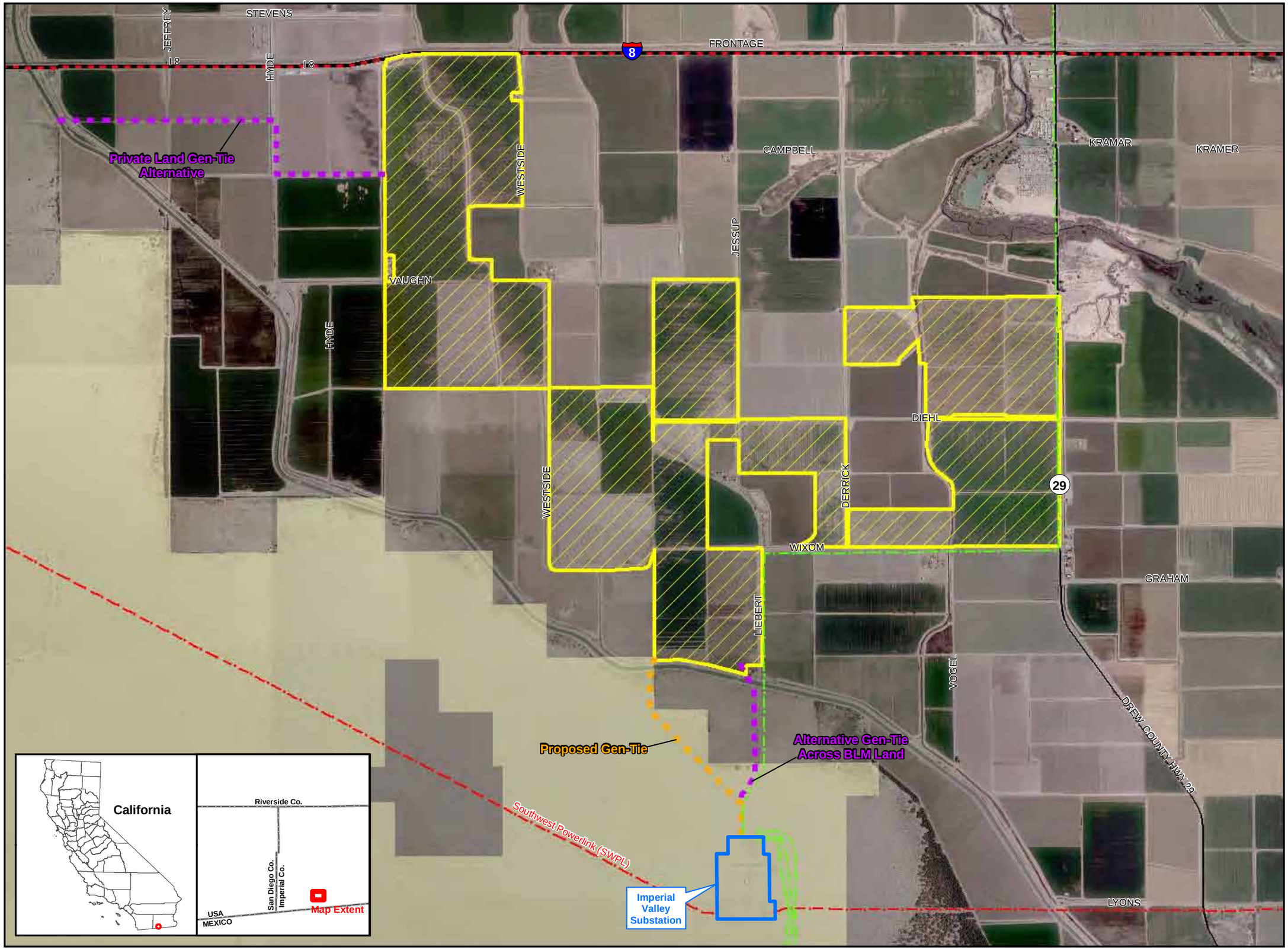
The two gen-tie line alternatives that would cross BLM lands would originate at the Project substation/switchyard at the southern end of the Project site and would go south to the Imperial Valley Substation. Either of these two alternatives would be built as a double-circuit 230 kV line.

- The Alternative Gen-Tie across BLM land would follow the existing IID S-line and would be approximately 0.75 miles long (including about 0.4 miles of BLM land) crossing fallow agricultural land and native desert.

- The Proposed Gen-Tie Alternative would follow existing roads and would cross about one mile native desert (all BLM land). Both of these options are located entirely within a BLM-designated utility corridor.

The Private Land Gen-tie Alternative being considered is to develop a single-circuit 230 kV line originating on the western side of the Project site. It would cross approximately 1.75 miles of private lands to the west and would utilize available capacity on a line that has an approved right-of-way to the Imperial Valley Substation.

The BLM El Centro Field Office requested that avian use and abundance surveys be conducted to provide baseline data to be used in the National Environmental Policy Act (NEPA) analysis. The survey methodology was designed specifically for the Campo Verde Project based on the protocol provided and approved by the BLM (BLM 2010).



Legend

- Existing 500 kV Transmission Line
- Existing 230 kV Transmission Line
- Proposed Gen-Tie
- Gen-Tie Alternative
- Interstate
- Major Road
- County Boundary
- Campo Verde Solar Site

Jurisdictional Land Ownership

- Bureau of Land Management Land

0 1,000 2,000 3,000
Feet

0 0.25 0.5 0.75
Miles

State Plane Coordinate System
California Zone 6, NAD 83
Lambert Conformal Conic Projection
1983 North American Datum
Linear Unit: Foot US

CAMPO VERDE SOLAR PROJECT

FIGURE 1 - PROJECT LOCATION

Map Extent: Imperial County, California

Date: 04.25.12 | Author: djb

...Maps\Avian and Mountain Plover Report Figure 1_Project Location

Methods

Avian use surveys were performed by qualified biologists experienced in the identification of North American birds by sight and sound. Point-count stations were located along four transects placed throughout the proposed Campo Verde Project Area (**Figure 2**). Transect locations were designed to sample all habitat types present within the Project Area with a focus on areas most likely to contain a high abundance and/or diversity of birds, while maintaining adequate spatial coverage of the entire Solar Facility Site and proposed Gen-tie Line corridors. Each transect was 1,250-meters in length with point-count locations spaced every 250-meters along transects. A total of 24 point-count stations were sampled during each survey event; with a total of four survey events during the winter survey season (December to January) and four survey events during the spring survey season (March to April).

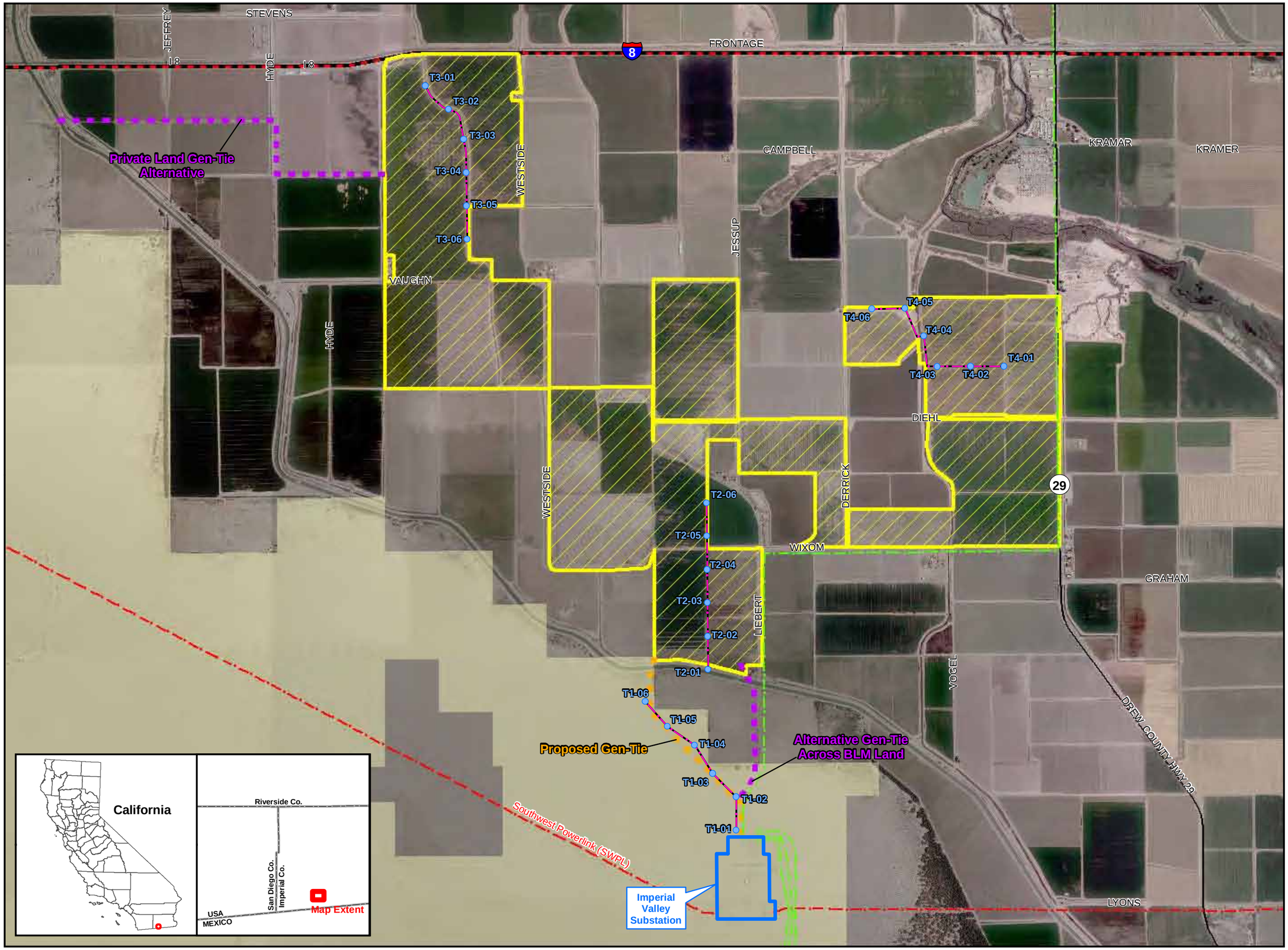
At each point count station, biologists recorded all birds seen or heard within a 100-meter radius over a 10-minute sampling period. Pairs or groups of birds were recorded as single detections to avoid issues resulting from statistical dependence. Both detections and individuals are reported here. Birds seen or heard outside of the 100-meter radius were recorded as incidental observations and contributed to the overall Campo Verde Solar Project species list, but were excluded from quantitative analyses. Birds that were seen or heard along transects, but between point-count stations, were also recorded as incidental observations. Point counts were generally performed within three and one-half hours of sunrise. Surveys were not performed during inclement weather conditions (more than light or intermittent rain, winds greater than 15 miles-per-hour).

Results

Winter Surveys

Winter survey events occurred during four weeks in December and January (surveys were performed on December 6 and 20, 2011 and January 5 and 24, 2012). A total of 24 points were sampled during each survey event. Weather was generally conducive to avian surveys; temperatures ranged between 33-67˚ F and winds ranged between 0-5 miles per hours (mph). Surveys began at sunrise each day (~0625-0645) and were completed approximately 3.5 hours later (~1000-1015).

A total of 628 detections (6.54 detections per point) and 1,990 individuals (20.73 individuals per point) were recorded during the surveys, comprised of 47 species (**Appendix A**). On average 3.31 species were recorded per point. All metrics remained relatively consistent week to week. **Table 1** presents summary statistics broken down by each survey week.



Legend

- Avian Point-Count Station
- Avian Survey Transect
- Existing 500 kV Transmission Line
- Existing 230 kV Transmission Line
- Proposed Gen-Tie
- Gen-Tie Alternative
- Interstate
- Major Road
- County Boundary
- Campo Verde Solar Site

Jurisdictional Land Ownership

- Bureau of Land Management Land

0 1,000 2,000 3,000
Feet

0 0.25 0.5 0.75
Miles

State Plane Coordinate System
California Zone 6, NAD 83
Lambert Conformal Conic Projection
1983 North American Datum
Linear Unit: Foot US

CAMPO VERDE SOLAR PROJECT

FIGURE 2 - AVIAN TRANSECTS & POINT-COUNT STATIONS

Map Extent: Imperial County, California

Date: 04.25.12 | Author: djb

...Maps\Avian Survey Report Figure 2

Table 1 – Summary of Winter Survey Results

Survey Date	Detections	Detections per Point	Individuals	Individuals per Point	Species	Species per Point
December 6, 2011	174	7.25	570	23.75	24	3.46
December 20, 2011	142	5.92	551	22.96	25	3.04
January 5, 2012	137	5.71	410	17.08	20	3.25
January 24, 2011	175	7.29	459	19.13	25	3.50
WINTER TOTAL	628	6.54	1,990	20.73	47	3.31

Western Meadowlark (*Sturnella neglecta*) was the most frequently detected species (165 total detection; 1.72 detections per point). Other frequently detected species include Savannah Sparrow (*Passerculus sandwichensis*; 160 detections, 1.67 detections per point), Horned Lark (*Eremophila alpestris*; 61 detections, 0.64 detections per point), Killdeer (*Charadrius vociferus*; 30 detections, 0.31 detections per point), and Yellow-rumped Warbler (*Setophaga coronata*; 27 detections, 0.28 detections per point). The most widespread species included Western Meadowlark (54 points, 56.25%), Savannah Sparrow (52 points, 54.17%), and Horned Lark (34 points, 35.42%). Savannah Sparrows were by far the most numerous species during the winter survey (524 observed; 26.3% of all individuals observed). Other numerous species included Horned Lark (347 observed, 17.4% of all individuals observed), Red-winged Blackbird (*Agelaius phoeniceus*; 235 observed, 11.8% of all individuals observed) and Western Meadowlark (227 observed, 11.4% of all individuals observed).

The most common species (as described above) are common agricultural associates. Native habitats (primarily Creosote Bush Scrub and Stabilized Desert Dunes) exhibited relatively low avian abundance and diversity when compared to the overall project metrics: 79 detections (3.29 detections per point), 110 individuals (4.58 individuals per point), and 32 total species observed (2.17 species per point). In native habitats, Blue-gray Gnatcatchers (*Polioptila caerulea*) were the most frequently detected species (22 detections, 0.92 detections per point), the most widespread species (12 points, 50.0%), and the most numerous species (24 individuals, 21.8% of all individuals observed).

Two special status species were observed during the surveys (not including California Species of Concern). Burrowing Owl (*Athene cunicularia*), which was previously known to occur and breed in the Project Area, is a State-Endangered species. This species was recorded as an incidental observation during the winter surveys (this species was not recorded at any point-count stations). Observations of this species during winter surveys further confirm the species' year-round status in and around the Project Area.

Loggerhead Shrikes (*Lanius ludovicianus*), a BLM Sensitive Species, were observed at four (4) points during the winter surveys (5 detections, 5 individuals). Four (4) of these observations occurred in agricultural habitat on private lands, one (1) of these detections occurred in native habitat on BLM lands.

Spring Survey

Spring survey events occurred on four weeks in March and April (Surveys were performed on March 8, 14 and 21 and April 5, 2012). A total of 24 points were sampled during each survey event. Weather was generally conducive to avian surveys; Temperatures ranged between 35-73˚ F and winds ranged between 0-15 miles per hours (mph), though were generally less than 5 mph. Surveys began at sunrise each day (~0600-0700) and were completed approximately 3-3.5 hours later (~0930-1100).

A total of 868 detections (9.04 detections per point) and 2,739 individuals (28.53 individuals per point) were recorded during the spring surveys, comprised of 53 species (**Appendix A**). On average 4.82 species were recorded per point. **Table 2** presents summary statistics broken down by each survey week.

Table 2 – Summary of Spring Survey Results

Survey Date	Detections	Detections per Point	Individuals	Individuals per Point	Species	Species per Point
March 8, 2012	195	8.13	685	28.54	35	4.71
March 14, 2012	214	8.92	851	35.46	28	4.63
March 21, 2012	220	9.17	555	23.13	33	4.88
April 5, 2012	239	9.96	648	27.00	28	5.08
Spring TOTAL	868	9.04	2,739	28.53	53	4.82

Red-winged Blackbird was the most frequently detected species (197 total detection; 2.05 detections per point). Other frequently detected species include Western Meadowlark (*Sturella neglecta*; 170 detections, 1.77 detections per point), Savannah Sparrow (65 detections, 0.68 detections per point), Unidentified Swallow (Hirundininae sp.; 52 detections; 0.54 detections per point), and Long-billed Curlew (*Numenius americanus*; 47 detections, 0.49 detections per point). Western Meadowlark was the most widespread having been observed at 63 points (65.63%). Other widespread species include Red-winged Blackbird (56 points, 58.33%), Unidentified Swallow (31 points, 32.29%), Northern Rough-winged Swallow (*Stelgidopteryx serripennis*; 29 points, 30.21%), Savannah Sparrow (27 points, 28.13%), and Horned Lark (27 points, 28.13%). Red-winged Blackbirds were by far the most numerous species during the spring survey (969 observed; 34.69% of all individuals observed). Other numerous species included Long-billed Curlew (386 observed, 13.82% of all individuals observed) and Western Meadowlark (208 observed, 7.45% of all individuals observed.

As was observed in the winter surveys, the most common species were common agricultural associates. Native habitats (primarily Creosote Bush Scrub and Stabilized Desert Dunes), which were sampled at least in proportion to availability, exhibited relatively low avian abundance and diversity when compared to the overall project metrics: 85 detections (3.54 detections per point), 241 individuals (10.04 individuals per point), and 23 total species observed (2.88 species per point). In native habitats, Unidentified Swallows were the most frequently detected species (13 detections, 0.54 detections per point) and the most widespread species (10 points, 41.67%). Red-winged Blackbirds were the most numerous species (143 individuals, 59.34% of all individuals observed).

One (1) special status species was observed during the spring surveys (not including California Species of Concern). Burrowing Owl (*Athene cunicularia*), which was previously known to occur and breed in the Project Area, is a State-Endangered species. This species was recorded at seven (7) points (7 detections, 10 individuals).

Conclusions

Species observed generally conformed to avian communities that have been observed in and around the Campo Verde Project Area during other field efforts and were primarily representative of avian communities typically associated with agricultural habitats. Special status species that were recorded were all species expected or previously known to occur in and around the Campo Verde Project Area before the avian surveys.

Avian abundance and diversity was generally low in the Campo Verde Project Area during the winter surveys, particularly in native habitats, which would be crossed by the proposed Gen-tie line. As expected, avian abundance and diversity were higher during spring surveys. There were 9.04 detections per point during spring compared to 6.54 detections per point during winter. There were 53 species (4.82 species per point) in spring compared to 47 species (3.31 species per point) in winter.

A total of 88 species have been observed in the Campo Verde Project Area including species incidentally observed during the avian surveys as well as other survey efforts (**Appendix A**).

Appendix A – Campo Verde Avian Species List

Common Name	Scientific Name	Recorded During Winter Avian Surveys	Recorded During Spring Avian Surveys	Status[1]
American Avocet	*Recurvirostra Americana*			
Abert's Towhee	*Pipilo aberti*	X	X	
American Coot	*Fulica americana*			
American Kestrel	*Falco sparverius*	X	X	
American Pipit	*Anthus rubescens*			
Anna's Hummingbird	*Calypte anna*			
Bank Swallow	*Riparia riparia*			
Barn Swallow	*Hirundo rustica*		X	
Belted Kingfisher	*Megaceryle alcyon*			
Black Phoebe	*Sayornis nigricans*	X	X	
Black-necked Stilt	*Himantopus mexicanus*			
Black-tailed Gnatcatcher	*Polioptila melanura*			
Blue Grosbeak	*Passerina caerulea*			
Blue-gray Gnatcatcher	*Polioptila caerulea*	X	X	
Brewer's Blackbird	*Euphagus cyanocephalus*		X	
Brown-headed Cowbird	*Molothrus ater*			
Burrowing Owl	*Athene cunicularia*		X	SE, SS
California Gull	*Larus californicus*		X	
Canada Goose	*Branta canadensis*	X		
Cattle Egret	*Bubulcus ibis*	X	X	
Cliff Swallow	*Petrochelidon pyrrhonota*		X	
Common Grackle	*Quiscalus quiscula*		X	
Common Ground Dove	*Columbia passerina*		X	
Common Moorhen	*Gallinula chloropus*			
Common Raven	*Corvus corax*	X	X	
Common Yellowthroat	*Geothlypis trichas*		X	
Cooper's Hawk	*Accipiter cooperii*		X	
Crissal Thrasher	*Toxostoma crissale*		X	
Double-crested Cormorant	*Phalacrocorax auritus*	X		
European Starling	*Sturnus vulgaris*	X	X	
Ferruginous Hawk	*Buteo regalis*			
Gambel's Quail	*Callipepla gambelii*		X	
Great Blue Heron	*Ardea herodias*	X		
Great Egret	*Ardea alba*	X	X	
Great-tailed Grackle	*Quiscalus mexicanus*			

Common Name	Scientific Name	Recorded During Winter Avian Surveys	Recorded During Spring Avian Surveys	Status[1]
Greater Roadrunner	*Geococcyx californianus*			
Greater Yellowlegs	*Tringa melanoleuca*	X	X	
Green Heron	*Butorides virescens*			
Horned Lark	*Eremophila alpestris*	X	X	
House Finch	*Carpodacus mexicanus*	X	X	
House Sparrow	*Passer domesticus*	X		
House Wren	*Troglodytes aedon*	X		
Killdeer	*Charadrius vociferus*	X	X	
Lark Sparrow	*Chondestes grammacus*	X	X	
Least Sandpiper	*Calidris minutilla*	X		
Loggerhead Shrike	*Lanius ludovicianus*	X	X	SS, SC
Long-billed Curlew	*Numenius americanus*	X	X	
Long-billed Dowitcher	*Limnodromus scolopaceus*		X	
Mallard	*Anas platyrhynchos*	X	X	
Mountain Plover	*Charadirius montanus*	X		
Mourning Dove	*Zenaida macroura*	X	X	
Northern Flicker	*Colaptes auratus*			
Northern Harrier	*Circus cyaneus*	X		
Northern Mockingbird	*Mimus polyglottos*			
Northern Rough-winged Swallow	*Stelgidpteryx serripennis*		X	
Northern Shoveler	*Anas clypeata*	X		
Orange-crowned Warbler	*Oreothlypis celata*	X		
Prairie Falcon	*Falco mexicanus*	X		SC
Red-tailed Hawk	*Buteo jamaicensis*	X	X	
Red-winged Blackbird	*Agelaius phoeniceus*	X	X	
Ring-billed Gull	*Larus delawarensis*		X	
Rock Dove	*Columbia livia*		X	
Rufous-crowned Sparrow	*Aimophila ruficeps*	X	X	
Rough-legged Hawk	*Buteo lagopus*			
Savannah Sparrow	*Passerculus sandwichensis*	X	X	
Say's Phoebe	*Sayornis saya*	X	X	
Snowy Egret	*Egretta thula*	X	X	
Snowy Plover	*Charadrius nivosus*	X		
Song Sparrow	*Melospiza melodia*		X	
Tree Swallow	*Tachycineta bicolor*		X	
Turkey Vulture	*Cathartes aura*	X	X	
Unidentified Bird	*Aves* sp.	X	X	
Unidentified Calidris Sandpiper	*Calidris* sp.	X		

Common Name	Scientific Name	Recorded During Winter Avian Surveys	Recorded During Spring Avian Surveys	Status[1]
Unidentified Duck	*Anatinae* sp.		X	
Unidentified Hawk	*Accipitridae* sp.	X		
Unidentified Sparrow	*Eberizidae* sp.	X	X	
Unidentified Swallow	*Hirundinidae* sp.	X	X	
Vesper Sparrow	*Pooecetes gramineus*	X	X	
Verdin	*Aurparus flaviceps*	X	X	
Violet-green Swallow	*Tachycineta thalassina*	X	X	
Western Kingbird	*Tyrannus verticalis*		X	
Western Meadowlark	*Sturnella neglecta*	X	X	
Western Tanager	*Piranga ludovciana*			
White-crowned Sparrow	*Zonotrichia leucophrys*		X	
White-faced Ibis	*Plegadis chihi*		X	
White-tailed Kite	*Elanus leucurus*		X	
White-throated Swift	*Aeronautes saxatalis*	X		
White-winged Dove	*Zenaida asiatica*			
Yellow-rumped Warbler (Audubon's)	*Dendroica coronata audubonii*	X	X	

Footnotes

[1]BGEPA = Protected under the Bald and Golden Eagle Protection Act; SC = CDFG Species of Concern, SE = State-endangered; SS = BLM Sensitive Species; FE = Federally-endangered; All species, except Rock Dove and European Starling, are protected under the Migratory Bird Treaty Act.

APPENDIX 4 – MOUNTAIN PLOVER SURVEY REPORT

HERITAGE
ENVIRONMENTAL
CONSULTANTS, LLC

May 2, 2012

Geary Hund
United States Fish and Wildlife Service
Carlsbad Field Office
6010 Hidden Valley Road, Suite 101
Carlsbad, California 92009

Re: Post Survey Notification of Focused Survey Results for the Mountain Plover on the Campo Verde Solar Energy Project

Dear Geary,

This letter summarizes the results of the 2012 winter surveys for Mountain Plover (*Charadrius montanus*) conducted within the Campo Verde Solar Project survey area. The Campo Verde Solar Project is a proposed 1,990 acre solar photovoltaic (PV) energy-generating facility (solar energy facility site) located in Imperial County approximately 7 miles southwest of the community of El Centro, California. The Project will be interconnected to the regional transmission system via a new gen-tie line constructed to the Imperial Valley Substation. This interconnection will be accomplished via one of three potential options – two requiring rights-of-way across federal lands managed by the Bureau of Land Management (BLM) and one located entirely on private lands (**Figure 1**).

The BLM El Centro Field Office suggested that First Solar conduct protocol Mountain Plover surveys to provide baseline data to be used in BLM's Section 7 consultation with the U.S. Fish and Wildlife Service (Service) in case the species is proposed for listing prior to project initiation. The survey guidance (USFWS 2011) was developed by the Service's Carlsbad Field Office and provided to Heritage Environmental Consultants by the BLM.

Methods

Mountain Plovers are known to winter in the Imperial Valley, commonly foraging and roosting in agricultural fields in different stages of cropping cycles. They prefer alfalfa fields (less than 9.84 inches in height, or mowed); Bermuda grass (less than 9.84 inches in height, dormant, mowed, or burned); actively grazed fields; fallow fields; and bare fields (tilled, plowed, or furrowed; Andres and Stone 2009).

Qualified biologists experienced in the identification of North American birds by sight and sound, including Mountain Plover detection and identification, performed the winter surveys. Suitable habitat was identified in the survey area by driving to each field and assessing vegetation height. Observation points were set up so that each field could be

sufficiently observed from one point (**Figure 2**). A total of 18 observation points were established. Two observers were typically present at each observation point; one biologist observed a single field (never more than 100 acres; typically ranging from 40-80 acres) while the other biologist observed the opposite field. Spotting scopes and binoculars were used to scan each field for a minimum of 20 minutes and up to 45 minutes per field per observer per field visit.

A total of three surveys were conducted during February 2012, separated by a minimum of five days. Surveys were conducted between the hours of 8 a.m. and 4 p.m. and avoided periods of excessive or abnormal heat, wind, rain, fog, or other inclement weather. Surveys were not conducted if winds exceeded 15 miles per hour. No more than 600 acres were surveyed per biologist per day.

Existing Conditions

The entire survey area (approximately 1,990 acres) is agricultural land consisting of alfalfa, Bermuda grass, Sudan grass and tilled fields in various stages. The fields surveyed ranged in size from 20 acres to 200+ acres (larger fields were subdivided into smaller observation blocks for the survey; see Table 1).

Survey Results

Survey events occurred on three separate occasions in February (surveys were performed on February 7 and 8, February 15, 16 and 17, and February 21, 22 and 23, 2012). A total of 18 observation points were sampled (sometimes less if habitat became unsuitable between survey events). Weather was generally conducive to Mountain Plover surveys. **Table 1 – Mountain Plover Winter Survey Results** provides general survey information.

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Table 1 – Mountain Plover Winter Survey Results

Date	Observation Point	Field Surveyed	Field Size (Acres)	Habitat	Start/Stop Time[1]	Temp (°F)	Wind Speed (mph)	Sky	MOPL
Survey Number 1									
02/07/12	M01	M01 East	80	Alfalfa (15-20") UNSUITABLE	N/S	64	0	Cloudy	n/a
		M01 West	40	Alfalfa (15-20") UNSUITABLE	N/S	-	-	-	n/a
	M02	M02 East	80	Alfalfa (15-20") UNSUITABLE	N/S	-	-	-	n/a
		M02 West	40	Alfalfa (15-20") UNSUITABLE	N/S	-	-	-	n/a
	M03	M03 West	70	Alfalfa (20-25") UNSUITABLE	N/S	-	-	-	n/a
	M04	M04 East	80	Bermuda (3-5")	1310/1355	-	-	-	None
	M05	M05 South	80	Bermuda (3-5")	1400/1445	-	-	-	None
		M05 Northeast	60	Bermuda (3-5")	1400/1445	-	-	-	None
	M06	M06 East	70	Alfalfa (10-15") UNSUITABLE	N/S	-	-	-	n/a
		M06 West	100	Sudan/Bermuda (0-7")	1455/1540	-	-	-	None

Acres Surveyed (per biologist): 240/260
Acres Surveyed (per hour/per biologist): 96/104

02/08/12	M07	M07 East	80	Sudan (5-10”)	741/826	55	<5	Mostly Cloudy	None
		M07 West	20	Bermuda (3-15”)	741/826	-	-	-	None
	M08	M08 East	50	Alfalfa (10-25”) UNSUITABLE	N/S	-	-	-	n/a
		M08 West	50	Alfalfa (10-20”) UNSUITABLE	N/S	-	-	-	n/a
	M09	M09 East	40	Bermuda (burned; 0-3”)	837/922	60	<5	Partly Cloudy	None
		M09 West	40	Alfalfa (10-20”) UNSUITABLE	N/S	-	-	-	n/a
	M10	M10 East	40	Alfalfa (10-20”) UNSUITABLE	N/S	-	-	-	n/a
		M10 West	60	Alfalfa (10-20”) UNSUITABLE	N/S	-	-	-	n/a
	M11	M11 East	80	Sudan (8-10”)	936/1021	-	-	-	None
	M12	M12 East	80	Sudan (8-10”)	936/1021	-	-	-	None
	M13	M13 East	80	Sudan (8-10”)	837/922	-	-	-	None
		M13 Northwest	40	Sudan (36-48”) UNSUITABLE	N/S	-	-	-	n/a
	M14	M14 East	80	Fallow/Bermuda (0-10”)	1028/1113	-	-	-	None
		M14 West	80	Fallow (0”)	1028/1113	-	-	-	None
	M15	M15 North	80	Sudan (8-10”)	1155/1240	69	<5	Mostly Clear	None
		M15 South	80	Sudan (8-10”)	1155/1240	-	-	-	None
	M16	M16 East	20	Fallow (0”)	1244/1329	-	-	-	None
		M16 West	60	Sudan (8-10”)	1244/1329	-	-	-	None
	M17	M17 East	60	Fallow (0”)	1332/1417	-	-	-	None
		M17 West	60	Sudan (8-10”)	1332/1417	-	-	-	None
	M18	M18 East	60	Sudan (8-10”)	1419/1504	72	<5	Clear	None
		M18 West	40	Sudan (8-10”)	1419/1504	-	-	-	None

Acres Surveyed (per biologist): 480/520
Acres Surveyed (per hour/per biologist): 64/69

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Survey Number 2									
02/15/12	M01	M01 East	80	Alfalfa (15-20") UNSUITABLE	N/S	67	10	Clear	n/a
		M01 West	40	Alfalfa (15-20") UNSUITABLE	N/S	-	-	-	n/a
	M02	M02 East	80	Alfalfa (15-20") UNSUITABLE	N/S	-	-	-	n/a
		M02 West	40	Alfalfa (15-20") UNSUITABLE	N/S	-	-	-	n/a
	M03	M03 West	70	Alfalfa (20-25") UNSUITABLE	N/S	-	10-20	-	n/a
Acres Surveyed (per biologist): 0 **Acres Surveyed (per hour/per biologist): 0**									
02/16/12	M04	M04 South	80	Bermuda (3-5")	1255/1355	65	10-15	Mostly Clear	None
	M05	M05 Northeast	60	Bermuda (3-5")	1330/1405	-	-	-	None
		M05 South	80	Bermuda (3-5")	1330/1405	-	-	-	None
	M06	M06 East	70	Alfalfa (15-20") UNSUITABLE	N/S	-	-	-	n/a
		M06 West	100	Sudan/Bermuda (0-7 burned/10-15)	1410/1440	-	-	-	None
	M07	M07 West	20	Bermuda (3-5")	1445/1515	-	-	-	None
		M07 East	80	Sudan (5-10")	1445/1515	-	-	-	None
	M08	M08 East	50	Alfalfa (10-25") UNSUITABLE	N/S	-	-	-	n/a
		M08 West	50	Alfalfa (10-20") UNSUITABLE	N/S	-	-	-	n/a
	M09	M09 West	40	Alfalfa (10-20") UNSUITABLE	N/S	-	-	-	n/a
		M09 East	40	Bermuda (burned; 0-3")	1524/1555	-	-	-	None
	M10	M10 West	60	Alfalfa (10-20") UNSUITABLE	N/S	-	-	-	n/a
		M10 East	40	Alfalfa (3-7")	1524/1555	63	5-15	Partly Cloudy	None
Acres Surveyed (per biologist): 320/360 **Acres Surveyed (per hour/per biologist): 107/120**									

2/17/12	M11	M11 East	80	Sudan (8-10”)	810/855	52	<5	Clear	None
	M12	M12 East	80	Sudan (8-10”)	810/155	-	-	-	None
	M13	M13 Northwest	40	Sudan (36-48”) UNSUITABLE	N/S	-	-	-	n/a
		M13 East	80	Sudan (8-10”)	901/932	-	-	-	None
	M14	M14 East	80	Fallow/Sudan (0-10”)	937/1022	-	-	-	None
		M14 West	80	Fallow/Burned (0”)	937/1022	-	-	-	None
	M15	M15 North	80	Sudan (8-10”)	1025/1110	-	-	-	None
		M15 South	80	Sudan (8-10”)	1025/1110	68	5	Clear	None
	M16	M16 East	20	Fallow (0”)	1158/1243	72	5	Clear	73 MOPL on 2/16
		M16 West	60	Sudan (8-10”)	1158/1243	-	-	-	None
	M17	M17 East	60	Sudan (8-10”)	1245/1330	-	-	-	None
		M17 West	60	Sudan (8-10”)	1245/1330	-	-	-	None
	M18	M18 East	60	Sudan (8-10”)	1332/1417	-	-	-	None
		M18 West	40	Sudan (8-10”)	1332/1417	73	5	Clear	None
Acres Surveyed (per biologist): 460/480 **Acres Surveyed (per hour/per biologist): 77/80**									
Survey Number 3									
02/21/12	M03	M3 West	70	Alfalfa (12-20”) UNSUITABLE	N/S	73	0-5	Clear	n/a
	M04	M4 South	80	Bermuda (6”)	1255/1344	-	-	-	None
	M05	M5 Northeast	60	Bermuda (3-10”)	1355/1440	-	-	-	None
		M5 South	80	Bermuda (6-8”)	1355/1440	-	-	-	None
	M06	M6 West	100	Alfalfa (burned, 0-8”)	1452/1537	-	-	-	None
		M6 East	70	Alfalfa (10-15”) UNSUITABLE	N/S	-	-	-	n/a
Acres Surveyed (per biologist): 240/260 **Acres Surveyed (per hour/per biologist): 87/94**									

02/22/11	M01	M1 East	80	Alfalfa (cut)	753/838	53	0	Clear	None
	M02	M2 East	80	Alfalfa (cut)	754/839	-	-	-	None
	M07	M7 East	80	Sudan (6-12”)	851/936	-	-	-	None
		M7 West	20	Bermuda (3-15”)	851/936	-	-	-	None
	M08	M8 West	50	Alfalfa (20-24”) UNSUITABLE	N/S	-	-	-	n/a
		M8 East	50	Alfalfa (12-36”) UNSUITABLE	N/S	-	-	-	n/a
	M09	M09 West	40	Alfalfa (10-16”) UNSUITABLE	N/S	-	-	-	n/a
		M09 East	40	Alfalfa (3-6”)	953/1038	-	-	-	None
	M10	M10 East	40	Alfalfa (12-24”) UNSUITABLE	N/S	-	-	-	n/a
		M10 West	60	Alfalfa (12-24”) UNSUITABLE	N/S	-	-	-	n/a
	M11	M11 East	80	Sudan (5-10”)	1103/1148	-	-	-	None
	M12	M12 East	80	Sudan (10-12”)	1104/1149	-	-	-	None
	M13	M13 Northwest	40	Sudan (36-48”) UNSUITABLE	N/S	-	-	-	n/a
		M13 East	80	Sudan (8-10”)	1252/1337	-	-	-	None
	M14	M14 East	80	Fallow (0-4”)	1417/1502	-	-	-	None
		M14 West	80	Fallow/Burned (<3”)	1417/1502	-	-	-	None
	M15	M15 North	80	Sudan (6-10”)	1510/1555	-	-	-	None
		M15 South	80	Sudan (6-10”)	1510/1555	83	5	Clear	None
Acres Surveyed (per biologist): 460/520 **Acres Surveyed (per hour/per biologist): 58/65**									
2/23/12	M02	M02 West	40	Alfalfa (cut)	804/850	55	0	Clear	None
	M01	M01 West	40	Alfalfa (cut)	802/847	-	-	-	None
	M16	M16 West	60	Sudan (6-12”)	904/949	-	-	-	None
		M16 East	20	Fallow (0”)	904/949	-	-	-	None
	M17	M17 West	60	Sudan (6-12”)	953/1038	-	-	-	None
		M17 East	60	Sudan (6-12”)	953/1058	-	-	-	None
	M18	M18 West	40	Sudan (6-12”)	1046/1131	-	-	-	None
		M18 East	60	Sudan (6-12”)	1046/1131	-	-	-	None
Acres Surveyed (per biologist): 180/200 **Acres Surveyed (per hour/per biologist): 51/57**									

Survey Totals	
Average Acres Surveyed (per biologist/2 or 3 day survey): 750-930 **Average Acres Surveyed (per hour/per biologist): 65-90** **Total Acres Surveyed per Survey: 1,500-1,860**	

[1] N/S = Not surveyed due to unsuitable habitat.

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The majority of the survey area represented suitable Mountain Plover habitat during the surveys; fields that did not represent suitable habitat throughout the survey included M03 East, M06 East, M08 East, M08 West, M09 West, M10 West and M13 Northwest. Fields M01 East, M01 West, M02 East, M02 West, and M10 East were unsuitable during at least one (but not all) survey events. Fields M11 East, M12 East, M13 East, M14 East, M15 North, M15 South, M16 West, M17 East, M17 West, M18 East, and M18 West all represented very marginal habitat but were surveyed to be conservative.

Mountain Plovers were observed once during the survey; approximately 73 were observed foraging in field M16 East on February 15, 2012. This field was fallow (no vegetation) at the time of this observation. Mountain Plovers have also been observed in and adjacent to the project area during other survey efforts on several occasions (e.g. Avian Use and Abundance Surveys). On January 24, 2012, approximately 100 Mountain Plovers were observed outside of the project area in the field immediately north of M06E; on the same date, 282 were observed in the field immediately south of M06E.

If you have any questions concerning the contents of this notification letter, please contact me.

Sincerely,

Patrick Golden
Senior Biologist, Principal

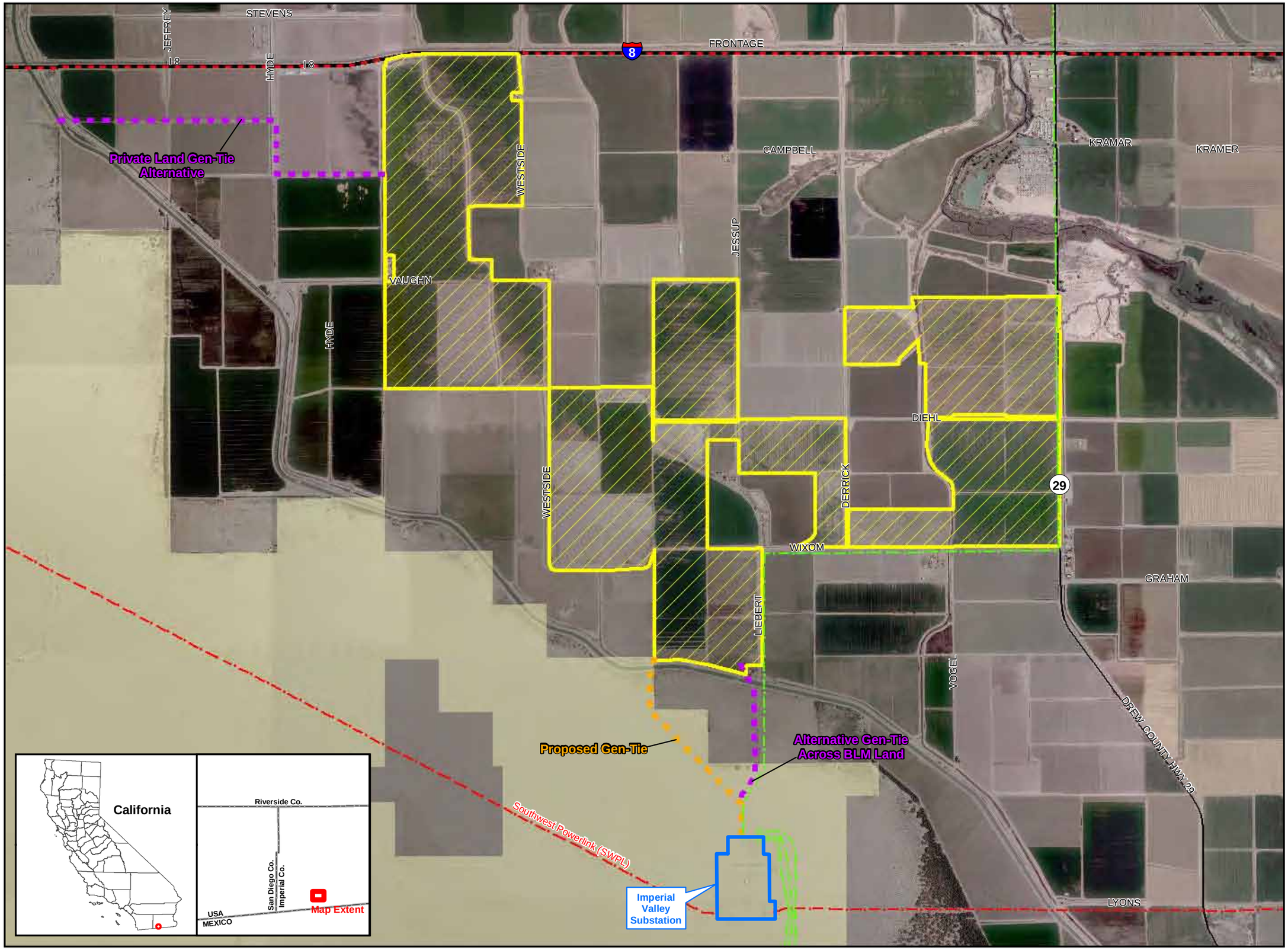
cc: James Cook, First Solar
Kim Marzden, BLM, Renewable Energy Coordination Office
Sharon Tyson, BLM, El Centro Field Office
Magdalena Rodriquez, California Department of Fish and Game

Attachments

References Cited

Andres, B.A. and K.L. Stone. 2009. Conservation Plan for the Mountain Plover *Charadrius montanus*), Version 1.0. Manomet Center for Conservation Sciences, Manoment, Massachusetts.

U.S. Fish and Wildlife Service. 2011. Interim Survey Guidance for Wintering Mountain Plover (*Charadrius montanus*) in the Imperial Valley. Unpublished guidance. 1 page.



Legend

- Existing 500 kV Transmission Line
- Existing 230 kV Transmission Line
- Proposed Gen-Tie
- Gen-Tie Alternative
- Interstate
- Major Road
- County Boundary
- Campo Verde Solar Site

Jurisdictional Land Ownership

- Bureau of Land Management Land

0 1,000 2,000 3,000
Feet

0 0.25 0.5 0.75
Miles

State Plane Coordinate System
California Zone 6, NAD 83
Lambert Conformal Conic Projection
1983 North American Datum
Linear Unit: Foot US

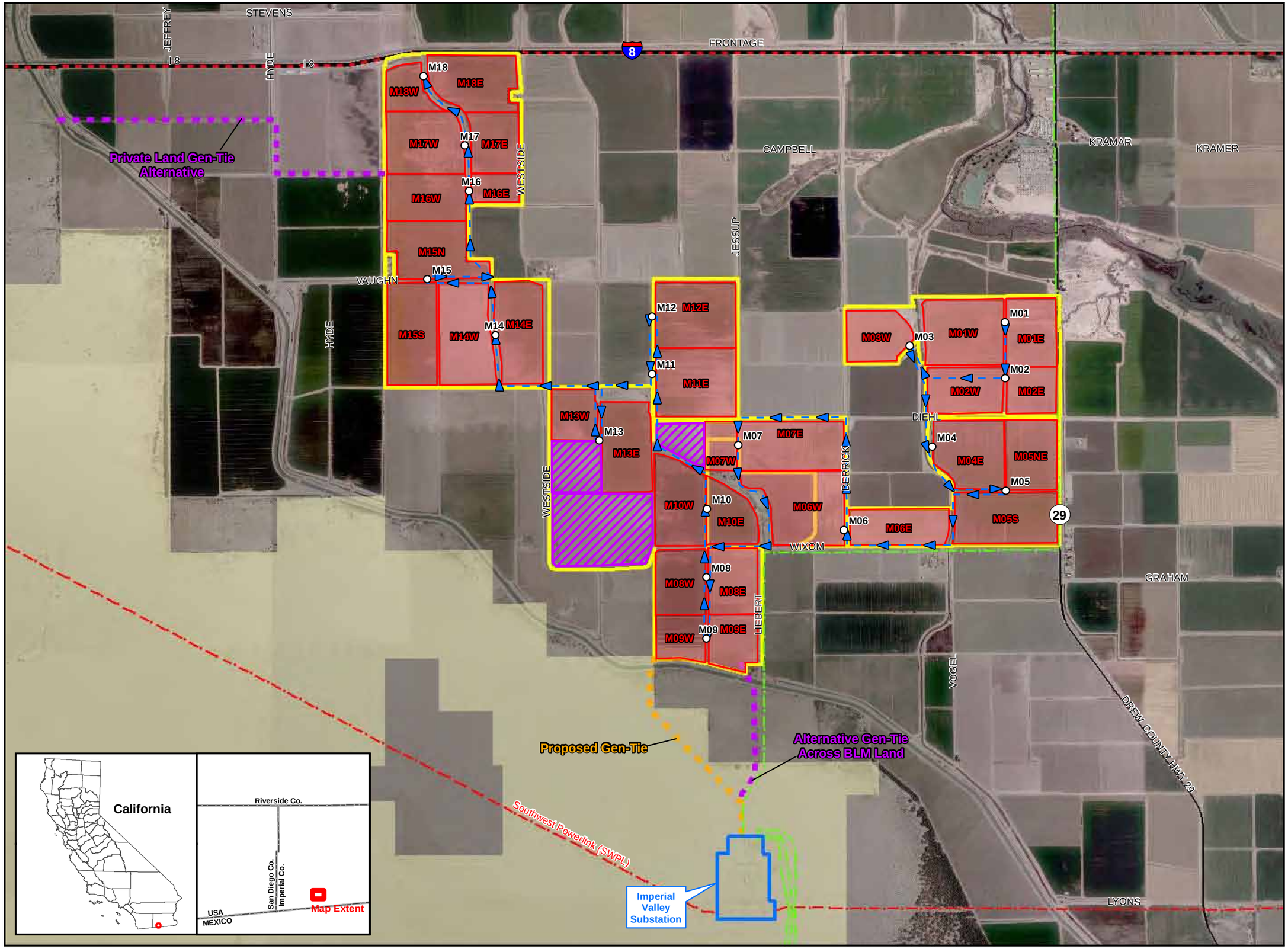
CAMPO VERDE SOLAR PROJECT

FIGURE 1 - PROJECT LOCATION

Map Extent: Imperial County, California

Date: 04.25.12 | Author: djb

...Maps\Avian and Mountain Plover Report Figure 1_Project Location



Legend

- Mountain Plover Survey Point
- Mountain Plover Survey Route
- Existing 500 kV Transmission Line
- Existing 230 kV Transmission Line
- Proposed Gen-Tie
- Gen-Tie Alternative
- Interstate
- Major Road
- County Boundary
- Mountain Plover Field Survey Area
- Unsuitable Habitat
- Campo Verde Solar Site

Jurisdictional Land Ownership

- Bureau of Land Management Land

0 1,000 2,000 3,000
Feet

0 0.25 0.5 0.75
Miles

State Plane Coordinate System
California Zone 6, NAD 83
Lambert Conformal Conic Projection
1983 North American Datum
Linear Unit: Foot US

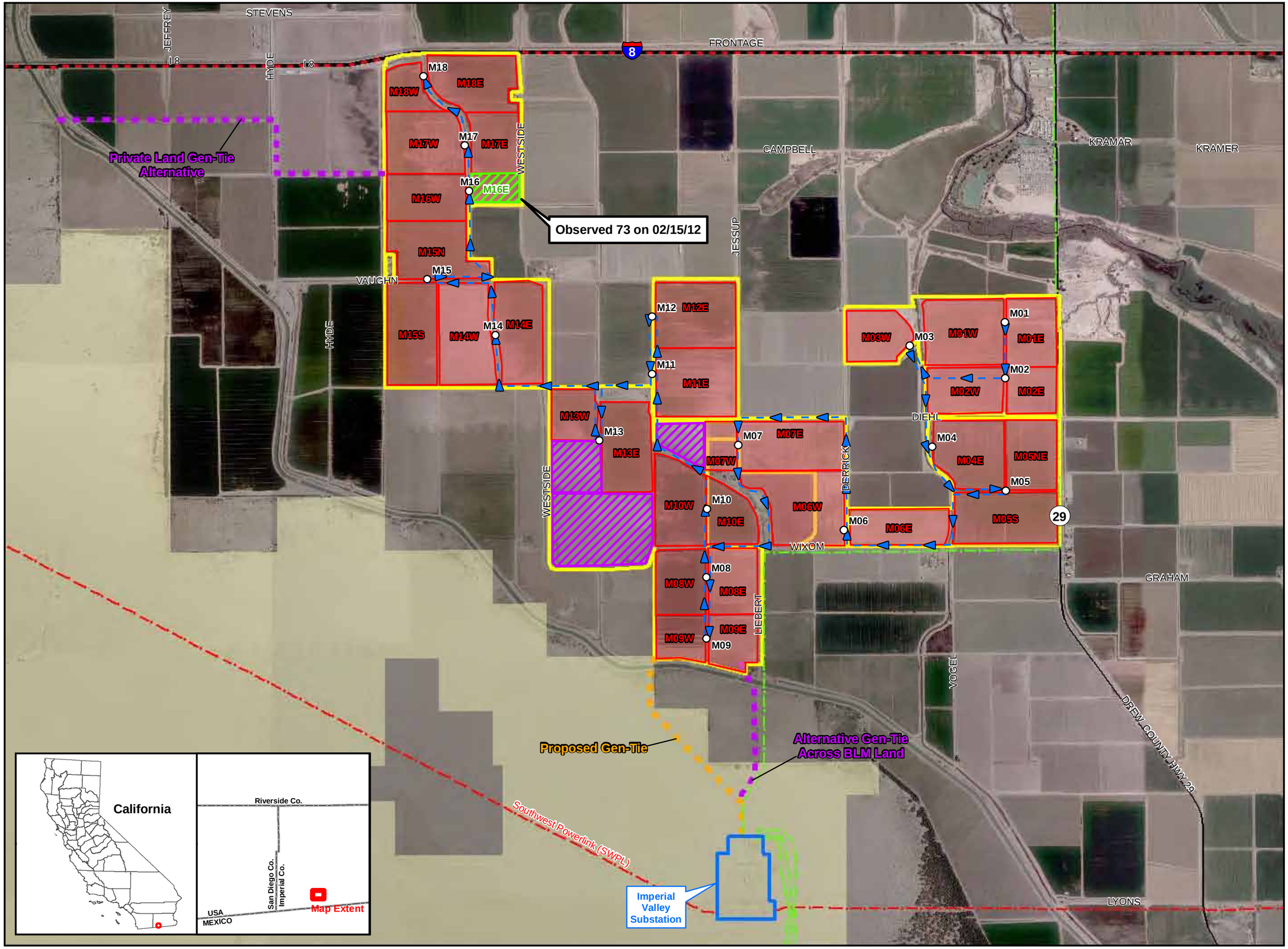
CAMPO VERDE SOLAR PROJECT

FIGURE 2 - MOUNTAIN PLOVER SURVEY POINTS

Map Extent: Imperial County, California

Date: 04.25.12		Author: djb

...Maps\Avian Survey Report Figure 2



Legend

- Mountain Plover Survey Point
- Mountain Plover Survey Route
- Existing 500 kV Transmission Line
- Existing 230 kV Transmission Line
- Proposed Gen-Tie
- Gen-Tie Alternative
- Interstate
- Major Road
- County Boundary
- Mountain Plover Field Survey Area
- Mountain Plover Field Survey Area With Detections
- Unsuitable Habitat
- Campo Verde Solar Site

Jurisdictional Land Ownership

- Bureau of Land Management Land

0 1,000 2,000 3,000
Feet

0 0.25 0.5 0.75
Miles

State Plane Coordinate System
California Zone 6, NAD 83
Lambert Conformal Conic Projection
1983 North American Datum
Linear Unit: Foot US

CAMPO VERDE SOLAR PROJECT

FIGURE 3 - MOUNTAIN PLOVER OBSERVATIONS

Map Extent: Imperial County, California

Date: 04.25.12		Author: djb

...Maps\Avian Survey Report Figure 2

APPENDIX 5 – RARE PLANT SURVEY REPORT

Results for Spring 2012 Rare Plant Surveys

Survey Dates:

Table 1: Campo Verde Special Status Plant Survey Dates and Personnel	
Dates	**Staff**
October 23-24, 2011	John Messina; Brenda McMillan
March 3-4, 30-31, 2012	John Messina; Tyler Morrison

A total of 36 species were observed during the site surveys of the BLM lands. The low number of species observed on the BLM lands reflects relatively small acreage of the gen-tie corridor area. An additional 11 species were observed on the private lands during the vegetation mapping of those areas.

Table 2 VEGETATION COMMUNITIES WITHIN THE CAMPO VERDE PROJECT AREA			
Vegetation Community	BLM-Lands Acreage[1]	Private Lands Acreage[1]	Total Project Acreage[1]
Desert Scrub Communities			
Creosote bush-white bursage scrub	42.9/1.8/44.7	2.0/3.7/5.7	44.9/5.5/50.4
Stabilized desert dunes	0/23.8/23.8	0/0.2/0.2	0/24.0/24.0
Quailbush scrub	0 / 0 / 0	34.1/26.4/60.5	34.1/26.4/60.5
Alkali goldenbush scrub	0/0/0	16.0/0/16.0	16.0/0/16.0
Desert Scrub Communities Total	42.9/25.6/68.5	52.1/30.3/82.4	95.0/55.9/150.9
Riparian and Wetland Communities			
Arrow weed thicket	0/0.2/0.2	6.4/11.3/17.7	6.4/11.5/17.9
Tamarisk thicket	0 / 0 / 0	0/6.5/6.5	0/6.5/6.5
Cattail marsh	0 / 0 / 0	0/0.6/0.6	0/0.6/0.6
Common reed marsh	0 / 0 / 0	5.0/9.6/14.6	5.0/9.6/14.6
Open water w/arrow weed thicket	0.7/0/0.7	3.0/0/3.0	3.7/0/3.7
Disturbed wetland	0 / 0 / 0	0/16.6/16.6	0/16.6/16.6
Riparian and Wetland Communities Total	0.7/0.2/0.9	14.4/44.6/59.0	15.1/44.8/59.9
Non-Native Communities			
Athel tamarisk type woodland	0/0.8/0.8	0/2.1/2.1	0/2.9/2.9
Active agriculture	0/6.0/6.0/	0/3788.3/3788.3	0/3794.3/3794.3
Fallow agriculture	0/0.3/0.3	0/141.1/141.1	0/141.4/141.4
Developed	0/2.2/2.2	0/121.5.121.5	0/123.7/123.7
Non-Native Communities Total	0/9.3/9.3	0/4053.0/4053.0	0/4062.3/4062.3
Grand Totals	43.6/35.1/78.7	66.5/4127.9/4194.4	110.1/4163.0/4273.1
[1] undisturbed community acreage/disturbed community acreage/total community acreage			

Special Status Plants

BLM Lands

Table 3 lists all the Special Status Plants that are known from the vicinity of the Campo Verde Project area. Surveys of the BLM lands were conducted in October

2011 and March 2012. The fall surveys were conducted to capture fall-blooming ephemeral species and woody perennial species (trees and shrubs), which may not bloom in the fall but would have been observable during this survey window.

The March 2012 surveys were conducted to capture early spring ephemeral blooming species as well as the aforementioned woody perennial species, many of which bloom during the spring. Many of the special status species have a long blooming period that extends from the fall through the spring encompassing both the fall and spring survey periods and would have been detectable, if present during both of these surveys.

No Special Status Plants were observed on the BLM lands during either the October or March surveys. This area of Imperial County experienced very little summer/fall rainfall. As a result, there was no evidence that any fall blooming, ephemeral species germinated during the fall 2011. Because of the low amount of rainfall, fall blooming Special Status Plants that could be present onsite may not have been observable. Despite this, approximately one-half of the Campo Verde Project area on the BLM lands was surveyed in November 2010 for the Centinela Solar Energy Project (Heritage 2011); no Special Status Species were observed in this area at that time and fall blooming species were present in this area in 2010 either.

Though other portions of the Sonoran Desert had reported low representation of spring blooming ephemerals during spring of 2012, the BLM lands within the Campo Verde Project area exhibited a good representation of the very common spring blooming annuals and herbaceous perennials in early March. High cover of plantain, narrow-leaf cryptantha, as well as lesser coverage of desert lily, basket evening-primrose (*Oenothera deltoides* ssp. *deltoides*) desert sunflower (*Geraea canescens*), and desert dandelion (*Malacothrix glabrata*) indicate that rainfall was sufficient for germination of these early ephemeral species and suggests that conditions were sufficient for germination of early-spring ephemeral special status plant species if present.

Most of the Special Status Species assessed in this report are either not expected to occur or would have a low potential to occur, within the BLM lands. The majority of the species are not expected to occur because of lack of appropriate habitat, or lack of known or historical populations from the vicinity. Species with a low potential for occurrence have suitable habitat present within the Campo Verde Project area on BLM lands, but due to the relatively small amount of habitat, the proximity to agricultural fields, the Imperial Valley substation, and several existing transmission lines, their potential for occurrence is much less likely.

<u>Federally and State Listed Endangered, Threatened and Rare Species</u>

Three federally and/or state listed species are known from the vicinity of the Campo Verde Project area: Peirson's milk vetch (*Astragalus magdalenae* var. *peirsonii*) a federally threatened species, a state endangered species; Algodones Dunes sunflower (*Helianthus niveus* ss. *tephrodes*), a California state listed endangered

species; and Wiggins' croton (*Croton wigginsii*) is a California state listed rare species. Below is a brief discussion of these species, additional information is included in **Table 3**.

Peirson's milk vetch is a federally threatened species, a state endangered species and BLM sensitive species. This species occurs in desert dunes and is known from fewer than 10 occurrences (CNPS 2011). This species was not observed during the March 2012 surveys which coincided with this species traditional flowering period (January – May). This species is not expected to occur within the Campo Verde Project area due to the marginal habitat of the desert dunes (along the Preferred Gen Tie route).

Algodones Dunes sunflower is a California state listed endangered species and a California Native Plant Society's (CNPS) Rare Plant Rank 1.2 (Rare, Threatened or Endangered in California, and elsewhere/fairly endangered in California) species. This species was not observed during the survey which coincided with its blooming period (September – May). There is very marginal suitable habitat (desert dunes) within the project area on BLM lands. As mentioned previously, these dunes are the result of human created windbreaks. This species is also only known from the Algodones Dunes; the site is well outside of the known range of this species. This species was not observed during the October 2011 or the March 2012 surveys both of which coincided with this species traditional blooming period (September – May). As such, this species is not expected to occur within the Campo Verde Project area on the BLM or private lands.

Wiggins' croton is a California state listed rare species and a BLM sensitive species that was historically considered restricted to the Algodones Dunes on East Mesa, though this species has recently been reported near Plaster City. Individuals of croton previously observed around the IV Substation adjacent to the Campo Verde project area are California croton (*Croton californicus*) (John Messina pers obs). No individuals in the genus *Croton* were observed within the Campo Verde Project area during the October 2011 or the March 2012 the latter of which coincided with this species traditional flowering period (March-May). Wiggins' croton is not expected to occur within the BLM lands Campo Verde Project area.

<u>BLM Sensitive Species</u>

A total of 10 BLM sensitive species are known from the Campo Verde Project area: Peirson's milk vetch and Wiggins' croton mentioned in the previous subsection, chaparral sand verbena (*Abronia villosa* var. *aurita*), Peirson's pincushion (*Chaenactis carphoclinia* var. *peirsonii*), flat-seeded spurge (*Chamaesyce platysperma*), Wolf's cholla (*Cylindropuntia wolfii*), Mountain Springs bush lupine (*Lupinus excubitus* var. *medius*), giant Spanish needle (*Palafoxia arida* var. *gigantea*), sand food (*Pholisma sonorae*) and Orcutt's woody-aster (*Xylorhiza orcuttii*).

Below is a brief discussion of these species, additional information is included in **Table 3**.

No BLM sensitive species were observed during either the October 2011 or March 2012 surveys. The October 2011 and March 2012 surveys both coincided with the blooming periods of chaparral sand verbena, and flat-seeded spurge. The March 2012 survey coincided with the blooming periods of Peirson's pincushion, Wolf's cholla, Mountain Springs bush lupine, giant Spanish needle, sand food, and Orcutt's woody-aster.

Chaparral sand verbena is a BLM Sensitive Species, a CNPS Rare Plant Rank 1B.1 species, and a CNDDB special plant. This annual occurs in sandy areas including desert dunes. This species was not observed during the March surveys, which coincided with its traditional flowering period (January – September). Marginal dune habitat occurs along the Preferred Gen Tie route just north of the IV Substation, but this species is not expected to occur within the project area.

Peirson's pincushion is a BLM Sensitive Species, a CNPS Rare Plant Rank 1B.3 species, and a CNDDB special plant. This annual grows in sandy areas. This species was not observed during the March surveys, which coincided with its traditional flowering period (March - April). Most reported occurrences of this species are not close to the site. As such this species has a low potential for occurrence within the project area.

Flat-seeded spurge is a BLM Sensitive Species, a CNPS Rare Plant Rank 1B.2 species, and a CNDDB special plant. This annual occurs in sandy areas but is only known from a few historical locations. The March survey coincided with this species traditional blooming period (February – September) but due to its rarity is not expected to occur within the project area.

Wolf's cholla is a BLM Sensitive Species, a CNPS Rare Plant Rank 4.3 species, and a CNDDB special plant. Wolf's cholla is a small, multi-branched cactus with cylindrical stem segments. This species is known from Pinto Wash south of the Project area. This species was not observed during the October 2011 or the March 2012 surveys the latter of which coincided with this species traditional blooming period (March-May). As such, this species is not expected to occur within the Campo Verde Project area on the BLM or private lands.

Mountain Springs bush lupine is a BLM Sensitive Species, a CNPS Rare Plant Rank 1B.3 species, and a CNDDB special plant. This perennial shrub blooms from March – May, which coincides with the March surveys. This species was not observed during the surveys and is not expected to occur within the Campo Verde Project area as the project area is well east of the reported range of this species (i.e. Mountain Springs Grade).

Giant Spanish needles is a BLM sensitive species, a CDFG special plant and a CNPS Rare Plant Rank 1B.3 species. This species occurs in desert dunes. There is marginal dune habitat within the project area, specifically along the Proposed Gen Tie route on the BLM lands. This species was not observed during the March

surveys, which were conducted during the traditional flowering period of this species (March – May). This species is not expected to occur within the Campo Verde Project area as most of the reported localities for this species are in the Algodones Dunes of East Mesa.

Sand food is a BLM sensitive species, a CDFG special plant and a CNPS Rare Plant Rank 1B.2 species. This herbaceous perennial is parasitic on other desert shrub species generally occurring in very sandy areas. Though this species was not observed during the surveys, which coincided with this species traditional flowering period (March – May), there is a low to moderate potential for its occurrence within the Campo Verde Project area especially in the sandy areas along the Proposed Gen-Tie route since it is a parasitic plant and the flowers are not always present.

Orcutt's woody-aster is a BLM sensitive species, a CDFG special plant and a CNPS Rare Plant Rank 1B.2 species. This herbaceous perennial was not observed during the March 2012 surveys, which coincided with this species traditional blooming period (March – April). Rocky canyons and sandy washes are its typical habitat which are absent from the project area. As such this species is not expected to occur within the project area.

California Department of Fish and Game (CNDDB) Special Plants

The remaining 37 plants assessed for the Campo Verde Project are CDFG Special Plants and are contained within the CNPS Inventory. All of these plants are assessed in Table 3. Those species with the highest potential for occurrence or with reported occurrences near the Campo Verde Project area are discussed below. The remaining species are discussed in **Table 3**.

Brown turbans (*Malperia tenuis*) is a CNPS Rare Plant Rank 2.3 species and CNDDB special plant. This species occurs in Sonoran Desert scrub and is known from the Yuha Basin. This inconspicuous species is very difficult to observe. Though no individuals were observed during the March survey, which coincided with its traditional flowering period (March-April), this species would still have a low-moderate potential for occurrence due to its very inconspicuous nature.

Parish's desert-thorn (*Lycium parishii*) is a CNPS Rare Plant Rank 2.3 species and CNDDB special plant. One individual of desert thorn (*Lycium* sp.) was observed during the October 2011 survey along the Preferred Gen-Tie route just north of the IV Substation. This individual was not in flower during this survey and could not be identified. Attempts to relocate this individual during the March survey were not successful. This species would have a low potential for occurrence within the project area.

Thurber's pilostyles is a CNPS Rare Plant Rank 4.3 species (Plants of limited distribution/not very endangered in California) and a CNDDB special plant. Thurber's pilostyles is a parasitic plant of the genus *Psorothamnus.* This species is known from Pinto Wash south of the Project area. Several individuals of white dalea

(*Psorothamnus emoryi*) were observed along the southern portion of the Proposed Gen-Tie route just north of the IV Substation. No individuals of Thurber's pilostyles were observed on these individuals though this species may not have been observable at the time of the survey as this parasitic flower is usually only present in January and February. However, this species would have a low potential for occurrence within the BLM lands portion of the Campo Verde Project area due to the small population size of its host.

Utah vine milkweed (*Funastrum utahense*) is a CNPS Rare Plant Rank 4.2 species. This species is an herbaceous vine that grows on other desert shrubs and was not observed during either survey. Utah vine milkweed would have a low to moderate potential for occurrence within the Campo Verde Project area on BLM lands.

California satintail (*Imperata brevifolia*) is a CNPS Rare Plant Rank 2.1 species (Rare, Threatened or Endangered in California, more common elsewhere/seriously endangered in California) and a CNDDB special plant. This tall perennial grass occurs in riparian scrub and mesic habitats, which are not present along the gen-tie corridors on the BLM lands. This species was not observed during the October 2011 or the March 2012 surveys both of which coincided with this species traditional blooming period (September-May). As such, these species are not expected to occur within the Campo Verde Project area on the BLM or private lands.

Abram's spurge (*Chamaesyce abramsiana*) is known from several historical locations from the vicinity of the Campo Verde Project area. Abram's spurge is a CNPS 2.2 species (Rare, Threatened or Endangered in California, more common elsewhere/fairly endangered in California) and a CNDDB special plant that is a fall/winter blooming species (September – November). This species was not observed during the October 2011 survey, which though conducted during this species traditional flowering period (September-November) may be inconclusive due to the lack of summer/fall precipitation in the Campo Verde project area. Despite this, Abram's spurge is not expected to occur within the project area given the lack of known populations near the project site and because much of the suitable habitat is adjacent to agricultural activities, a substation and transmission line corridors.

Little-leaf elephant tree (*Bursera microphylla*), fairy duster (*Calliandra eriophylla*), crucifixion thorn tree (*Castela emoryi*) are all CNPS Rare Plant Rank 2.3 and CNDDB special plants. All are perennial trees or shrubs and would have been observable during the time of the survey during both the October 2011 and March 2012 surveys. The March 2012 surveys coincided with the traditional flowering period of the fairy duster. No individuals of these species were observed during the surveys. In addition, preferred habitats for these species are typically more rocky or gravelly bajadas or playas that are not present within the Campo Verde Project area. As such the little-leaf elephant tree, fairy duster, and crucifixion thorn tree are not expected to occur within the BLM lands Campo Verde Project area.

The remainder of the species in **Table 3** either have a very low potential for occurrence or are not expected to occur within the Campo Verde Project area on BLM lands because of the absence of suitable habitat of the site is outside of the known range of these species. Please refer to Table 3 for a description of these species and the probability for their occurrence within the Campo Verde Project area.

Additional CDFG CNDDB Special Plants Not Surveyed For During Fall and Spring Surveys

In addition to the Utah vine milkweed, several other species may not have been detectable during the October 2011 and March 2012 surveys because these surveys were conducted outside of the traditional flowering periods of these species making positive identification not possible. These species include: Watson's amaranth (*Amaranthus watsonii*) a CNPS Rare Plant Rank 4.3 and CDFG Special Plant, which blooms August-September; Las Animas colubrine (*Colubrina californica*) a CNPS Rare Plant Rank 4.3 and CDFG Special Plant which blooms from April – June; curly herissantia (*Herissantia crispa*), a CNPS Rare Plant Rank 2.3 and CDFG Special Plant that blooms from August-September; Baja California ipomopsis (*Ipomopsis effusa*), a CNPS Rare Plant Rank 2.1 and CDFG Special Plant, which blooms April-June; desert unicorn plant (*Proboscidea althaeifolia*), a CNPS Rare Plant Rank 4.3 and CDFG Special Plant, which blooms May-August; desert spike-moss (*Selaginella eremophila*) a CNPS Rare Plant Rank 2.2 and CDFG Special Plant, a non-flowering plant that is most conspicuous from May-July. Most of these species would have a low potential for occurrence within the Campo Verde Project area while others are not expected to occur due to lack of suitable habitat (e.g. Las Animas colubrine, desert spike moss, Orcutt's wood-aster), or the project site is outside of the species reported known range e.g. curly herissantia.

Hairy stickleaf is a CNPS Rare Plant Rank 2.3 species and CNDDB special plant.

Non-BLM Lands

No Special Status species are expected to occur within the small areas of disturbed native habitat on the private lands because they were previously disturbed, are surrounded by existing agricultural activities, are small and relatively linear, and are isolated from large areas of native habitats by surrounding agricultural fields and other disturbances. Some of these fallow fields appear to have high levels of soil salinity as evidenced by the formation of hard or brittle salt crusts that have formed when saline surface waters evaporate. High saline soil levels are likely to inhibit seed germination and seedling survival. This was evidenced by the lack of seedling germination during the October and March surveys. No seedlings were evident though the soils still had a high amount of soil moisture, which was further evidenced by the mud-cracked polygons and curls detached from the underlying sediments which indicates periodic inundation. These areas were either bare or supported Quailbush. There was no evidence of any ephemeral species in this area

neither during the October 2011 or the March 2012 surveys. Small saplings of Quailbush were relatively common away from the areas of salt crust, suggesting that even this saline-tolerant species could not tolerate the most extreme saline conditions in this patch. As such it is assumed that no special status plant species are likely to occur in the high saline fallow fields despite the presence of a mostly monoculture of Quailbush.

In several of the other fallow fields these saline soil indicators are absent, and soil water conditions are likely to be sufficient to support native plant species, including special status plant species if present. These fields mostly supported Quailbush and dense remnant patches (from last year) of five-hook bassia, a common agricultural weed. The soils are finer (more clay and silt) than the coarse sandy soils of the native desert scrub habitats on BLM lands yet there was very little indication of seedling recruitment and no evidence of any native ephemeral species. Several seedlings of five-hook bassia and Russian thistle (*Salsola tragus*) were just starting to germinate during the second March survey suggesting that soil water was available. The presence of large (1-2 foot tall) five-hook bassia from the previous season (which by many accounts was below normal precipitation year) suggests that these areas are likely to exhibit germination and growth of five-hook bassia, but that conditions are just now (April) becoming favorable. Finer texture soils have a higher water holding capacity than coarse texture soils so the absence of very common desert ephemeral species in these fields suggests that environmental conditions are not suitable (e.g. soil texture, salinity levels as evidenced by the Quailbush or competition from non-natives like the five-hook bassia). The high presence of Quailbush in these fields and the relative absence of Quailbush from the native desert scrub communities suggests that soil salinity is likely the primary cause for the absence of native ephemeral species from these fallow fields. The lack of the common ephemeral species strongly suggests that special status species are not likely to be present either.

Thirteen of the special status species addressed for the BLM lands are not expected to occur on a majority of the private lands within the Campo Verde Project area because these areas are under various stages of agricultural use. The only disturbed native upland habitat consists primarily of fallow fields in various stages of succession, with the sole dominant native species being Quailbush with varying densities of non-native agricultural weeds. The saline condition of these soils, inferred from the dominance of Quailbush, also reduces the likelihood for the presence of these species.

The remaining species, California satintail, is not expected to occur in the project area but has a low to moderate potential for occurrence in a side tributary of the New River on the private lands immediately along the northeastern boundary of the solar facility within the project's buffer area. This species was not observed along that tributary though a focused survey was not conducted due to health hazards posed by pollutants in the New River.

Table 3: Special Status Plant Species Occurring or Potentially Occurring Within the Campo Verde Facility and Gen-tie Line Corridors		
Species Name	**Sensitivity Status**	**Potential for Occurrence**
Pygmy lotus (*Acmispon haydonii*)	CNPS Rare Plant Rank 1B.3	Occurs in rocky Sonoran Desert scrub. Herbaceous perennial; blooms January – June. Known from In-Ko-Pah Gorge quad (CNPS 2011). Suitable habitat (i.e., rocky/gravelly desert scrub) absent. Site outside of current known range of species and well below reported lower elevational range (520m) (CNPS 2011). This species was not observed during the March 2012 surveys which were conducted during this species traditional blooming period. This species is not expected to occur within the Campo Verde project area.
Chaparral sand verbena (*Abronia villosa* var. *aurita*)	BLM: Sensitive CDFG: Special Plant CNPS Rare Plant Rank 1B.1	Occurs in sandy floodplains or flats in generally, inland arid areas of sage scrub and open chaparral and desert dunes (Reiser 2001; CNPS 2011). Annual; blooms January – September (CNPS 2011). Known from Calexico, Seeley, and Superstition Mountains quads (CNPS, 2010). Marginal dune habitat present within native habitats in Campo Verde project area. This species was not observed during the March 2012 surveys which were conducted during this species traditional blooming period. This species is not expected to occur within the Campo Verde project area.
Watson's amaranth (*Amaranthus watsonii)*	CDFG: Special Plant CNPS Rare Plant Rank 4.3	Occurs in Sonoran Desert Scrub. Annual; blooms August – September. Not observed but survey occurred outside of traditional blooming period. Suitable habitat present within native desert scrub in Campo Verde project area. Known from Calexico and Heber quads (CNPS 2011). Low to moderate potential for occurrence within desert scrub habitats. Surveys for this species will be conducted in appropriate habitat within its blooming season in 2012.
Salton milk vetch (*Astragalus crotalariae*)	CDFG: Special Plant CNPS Rare Plant Rank 4.3	Occurs in sandy or gravelly Sonoran Desert scrub habitat and is known from the Superstition Mountains quad. This herbaceous perennial blooms from January to April (CNPS 2011). Potential habitat present within Campo Verde project area. This species was not observed during the March 2012 surveys which were conducted during this species traditional blooming period. This species is not expected to occur within the Campo Verde project area.
Harwood's milk vetch (*Astragalus insularis* var. *harwoodii*)	CDFG: Special Plant CNPS Rare Plant Rank: 2.2	Occurs in Sonoran Desert scrub with gravelly, sandy washes or dunes (Reiser, 2001). Annual; blooms January-May (CNPS 2011). Known from southwest of Plaster City between S-80 and I-80 (URS 2010). Also known from In-Ko-Pah Gorge and Coyote Wells quads (CNPS 2011). Habitat (sandy dunes) present within native desert scrub in survey. Known from Coyote Wells quad (CNPS 2011). This species was not observed during the March 2012 surveys which were conducted during this species traditional blooming period. This species is not expected to occur within the Campo Verde project area.
Borrego milk vetch (*Astragalus lentiginosus* var. *borreganus*)	CDFG: Special Plant CNPS Rare Plant Rank 4.3	Occurs in sandy Sonoran Desert scrub habitat and is known from the Shell Reef quad in upper Borrego Valley and from the Algodones Dunes on East Mesa. This herbaceous perennial blooms from February to May (CNPS 2011). Potential habitat present This species was not observed during the March 2012 surveys which were conducted during this species traditional blooming period. This species is not expected to occur within the Campo Verde project area.
Peirson's milk vetch (*Astragalus magdalenae* var. *peirsonii*)	USFWS: Threatened CDFG: Endangered BLM: Sensitive CNPS Rare Plant	Occurs in desert dunes habitat, this species is known from fewer than 10 occurrences. Known from Algodones Dunes on East Mesa and upper Borrego Valley. A herbaceous perennial that blooms from December to April (CNPS 2011). Marginal dune habitat present.

Table 3: Special Status Plant Species Occurring or Potentially Occurring Within the Campo Verde Facility and Gen-tie Line Corridors		
	Rank 1B.2	This species was not observed during the March 2012 surveys which were conducted during this species traditional blooming period. This species is not expected to occur within the Campo Verde project area.
Desert ayenia (*Ayenia compacta*)	CDFG: Special Plant CNPS Rare Plant Rank: 2.3	Occurs in rocky Sonoran Desert scrub. An herbaceous perennial that blooms from March to April (CNPS 2011). Closest reported populations include Jacumba and Sweeney Pass. This species not expected to occur in the Campo Verde project area due to the lack of suitable habitat, i.e., rocky areas. Known populations are well west of the corridor in the rocky mountains above the Yuha Basin. This species was not observed during the March 2012 surveys which were conducted during this species traditional blooming period. This species is not expected to occur within the Campo Verde project area.
Little-leaf elephant (*Bursera microphylla*)	CDFG: Special Plant CNPS Rare Plant Rank: 2.3	Occurs in alluvial fan scrub (Reiser 2001) and rocky areas in Sonoran Desert scrub. Deciduous tree; blooms June-July (CNPS 2011). Not observed within Campo Verde project area during survey. Distinctive tree species would have been observed during surveys if present. Nearest location in In-Ko-Pah Gorge, Sweeney Pass and Arroyo Tapiado quads (CNPS, 2011). Alluvial fan scrub habitat and rocky scrub absent in the Campo Verde project area. Closest sites are in rocky desert foothills to west of site. Species is not expected to occur within project area.
Fairy duster (*Calliandra eriophylla*)	CDFG: Special Plant CNPS Rare Plant Rank 2.3	Occurs in Sonoran Desert scrub primarily on rocky hillsides and bajadas (Reiser, 2001; CNPS 2011). Deciduous shrub; blooms January – March (CNPS 2011). One CNDDB occurrence south of the Campo Verde project area which is also likely the Yuha Basin Quad location reported by CNPS (2011). Most occurrences of this species in East Mesa of Imperial County (CNPS 2011). Not observed during the March 2012 surveys which were conducted during this species traditional flowering period. Not expected to occur due to absence of suitable habitat in Campo Verde project area.
Crucifixion thorn (*Castela emoryi*)	CDFG: Special Plant CNPS Rare Plant Rank 2.3	Occurs in playas and gravelly areas in Sonoran Desert scrub. Deciduous shrub; blooms April – July (CNPS 2011). Not observed during the surveys. Distinctive shrub species would have been observed if present. Not expected to occur. Suitable habitat (i.e., playas and gravelly areas) absent in Campo Verde project area. Known from Yuha Basin and Coyote Wells quads (CNPS 2011).
Peirson's pincushion (*Chaenactis carphoclinia* var. *peirsonii*)	BLM: Sensitive CDFG: Special Plant CNPS Rare Plant Rank 1B.3	Occurs in sandy Sonoran Desert scrub. Annual; blooms March-April. Known only from the eastern Santa Rosa Mountains with closest reported location from the Borrego Mountain SE quad (CNPS 2011). Suitable habitat present in Campo Verde project area. This species was not observed during the March 2012 surveys which were conducted during this species traditional blooming period. This species is not expected to occur within the Campo Verde project area.
Abram's spurge (*Chamaesyce abramsiana*)	CDFG: Special Plant CNPS Rare Plant Rank 2.2	Occurs in sandy Sonoran Desert scrub. Annual; blooms September – November (CNPS 2011). Suitable habitat present in Campo Verde project area. Historical collections known from Calexico, Heber and Brawley quads (CNPS, 2011). Not observed during focused survey for this species in October 2011which was conducted during this species' traditional flowering period. However, late summer and fall rains may have been insufficient for seeds to germinate this year. Low potential to occur in native desert scrub habitats in Campo Verde project area.
Arizona spurge	CDFG: Special Plant	Occurs in sandy Sonoran Desert scrub. Known from the In-Ko-Pah

Table 3: Special Status Plant Species Occurring or Potentially Occurring Within the Campo Verde Facility and Gen-tie Line Corridors		
(*Chamaesyce arizonica*)	CNPS Rare Plant Rank 2.3	Gorge Quad, this species is undocumented in Imperial County. This herbaceous perennial blooms from March to April (CNPS 2011). Not expected to occur within Campo Verde project area. Though suitable habitat is present, Campo Verde project area is outside of this species current known range. This species was not observed during the March 2012 surveys which were conducted during this species traditional blooming period. This species is not expected to occur within the Campo Verde project area.
Flat-seeded spurge (*Chamaesyce platysperma*)	BLM: Sensitive CDFG: Special Plant CNPS Rare Plant Rank 1B.2	Occurs in desert dunes and sandy Sonoran Desert scrub. Known in California from only four herbarium collections and one collection from Imperial County in 1987 (CNPS 2011). Annual; blooms February – September. Known from Superstition Mountain and Kane Springs quads in Imperial County (CNPS 2011). Not expected to occur within Campo Verde project area. Though marginal suitable habitat for this species exists, species is very rare in Imperial County. This species was not observed during the March 2012 surveys which were conducted during this species traditional blooming period. This species is not expected to occur within the Campo Verde project area.
Sand evening primrose (*Chylismia arenaria*)	CDFG: Special Plant CNPS Rare Plant Rank 2.2	Occurs in sandy or rocky Sonoran Desert scrub. This annual/herbaceous perennial blooms from November–May and is reported from the Quartz Peak quad in the Chocolate Mountains (CNPS 2011). Though suitable habitat is present the reported occurrences of this species are distant from the Campo Verde project area. Low potential for occurrence. This species was not observed during the March 2012 surveys which were conducted during this species traditional blooming period. This species is not expected to occur within the Campo Verde project area.
Las Animas colubrina (*Colubrina californica*)	CNPS Rare Plant Rank 2.3	Occurs in Sonoran Desert scrub (CNPS 2001) often localized around springs and mesic rocky canyon bottoms (Reiser 2001). This deciduous shrub blooms from April-June and is reported from Picacho Peak and Quartz Peak in the Chocolate Mountains (CNPS, 2001). Suitable habitat lacking and site is outside known current distribution. Not expected to occur within Campo Verde project area. Surveys for this species will be conducted in appropriate habitat within its blooming season in 2012.
Spiny abrojo (*Condalia globosa* var. *pubescens*)	CDFG: Special Plant CNPS Rare Plant Rank 4.2	Occurs in Sonoran Desert scrub. This deciduous shrub blooms from March-May. This species is reported from Imperial County but no quad data is available (CNPS 2011). Suitable habitat is present in the Campo Verde project area. This species was not observed during the March 2012 surveys which were conducted during this species traditional blooming period. This species is not expected to occur within the Campo Verde project area.
Wiggins croton (*Croton wigginsii*)	BLM: Sensitive CDFG Rare CNPS Rare Plant Rank 2.2	Occurs in desert dunes and Sonoran Desert scrub. Shrub; blooms March – May. CNPS reports species restricted to Algodones Dunes and all CNPS locations are on the East Mesa (CNPS 2011). Known from near Plaster City between S-80 and I-80 (URS, 2010). Marginal suitable habitat present (i.e. desert dunes), but dunes are result of human creation and site and is outside of species range. This species was not observed during the March 2012 surveys which were conducted during this species traditional blooming period. This species is not expected to occur within the Campo Verde project area.
Ribbed cryptantha (*Cryptantha costata*)	CDFG: Special Plant CNPS Rare Plant Rank: 4.3	Occurs in desert sand dunes and sandy desert scrub. Annual; blooms February – May (CNPS 2011). Reiser (2001) reports an old historical collection from Pinto Wash. Marginal suitable habitat within Campo Verde project area. This species was not observed during the March 2012 surveys which were conducted during this

Table 3: Special Status Plant Species Occurring or Potentially Occurring Within the Campo Verde Facility and Gen-tie Line Corridors		
		species traditional blooming period. This species is not expected to occur within the Campo Verde project area.
Wolf's cholla (*Cylindropuntia wolfii*)	BLM: Sensitive CDFG: Special Plant CNPS Rare Plant Rank 4.3	Occurs in Sonoran Desert scrub, usually on alluvial fans or rocky slopes (Reiser 2001). Stem succulent that blooms from March-May. Known from San Diego and Imperial counties and Baja, California (CNPS 2011). Known from Pinto Wash south of the IV substation. This species was not observed during the March 2012 surveys which were conducted during this species traditional flowering period. This species is not expected to occur within Campo Verde project area.
Glandular ditaxis (*Ditaxis claryana*)	CDFG: Special Plant CNPS Rare Plant Rank 2.2	Occurs in sandy Sonoran Desert scrub. Herbaceous perennial; blooms October – March. Known from Algodones Dunes. Ogliby and Iris quads are closest reported populations (CNPS 2011). Not observed during the October 2011 or the March 2012 surveys were both conducted during this species traditional blooming period. This species is not expected to occur, as Campo Verde project area is outside of known range.
California ditaxis (*Ditaxis serrata* var. *californica*)	CDFG: Special Plant CNPS Rare Plant Rank 3.2	Sonoran Desert scrub. Herbaceous perennial, blooms March-December. Nearest known occurrence Clark Lake Quad in northern Anza Borrego State Park. Most of the other locations reported along the I-10 corridor between Indio and Blythe (CNPS 2011). Not observed during the October 2011 or the March 2012 surveys both of which were conducted during this species traditional flowering period. This species is not expected to occur within the Campo Verde project area.
Rock nettle (*Eucnide rupestris*)	CDFG: Special Plant CNPS Rare Plant Rank 2.2	Sonoran Desert scrub. Annual; blooms December – April. Known from Mount Signal and Coyote Wells quads (CNPS 2011). CNDDB occurrence in Yuha Basin (likely CNPS Coyote Wells quad location). Suitable habitat present in Campo Verde project area. This species was not observed during the March 2012 surveys which were conducted during this species traditional blooming period. This species is not expected to occur within the Campo Verde project area.
Utah vine milkweed (*Funastrum utahense*)	CDFG: Special Plant CNPS Rare Plant Rank: 4.2	Occurs in sandy or gravelly Sonoran Desert Scrub. Herbaceous, perennial growing on desert shrubs; blooms April – June (CNPS 2011). Known from southwest of Plaster City between S-80 and I-80 (URS 2010). Suitable habitat present in Campo Verde project area. Known from Yuha Basin south of S80. Low to moderate potential for occurrence. Surveys for this species will be conducted in appropriate habitat within its blooming season in 2012.
Algodones Dunes sunflower (*Helianthus niveus* ssp. *tephrodes*)	CDFG: Endangered CNPS Rare Plant Rank 1B.2	Occurs in desert dunes and is restricted to the Algodones Dunes of East Mesa. This herbaceous perennial blooms from September-May. Not observed during October 2011 survey or the March 2012 surveys and not expected to occur in Campo Verde project area. . Marginal suitable habitat present (i.e. desert dunes), but dunes are result of human creation and site and is outside of species range.
Curly herissantia (*Herissantia crispa*)	CDFG: Special Plant CNPS Rare Plant Rank 2.3	Occurs in Sonoran Desert scrub. Annual- herbaceous perennial; Blooms August – September. Only known from two locations in California, both in San Diego County (Pinto Wash and Mountain Springs Grade) (CNPS 2011). Not known from Imperial County. Suitable habitat present in Campo Verde project area. However, site is well below reported lower elevational range (700m) (CNPS 2011). Not expected to occur due to species known range. Surveys for this species will be conducted in appropriate habitat within its blooming season in 2012.
Pink velvet mallow (*Horsfordia alata*)	CDFG: Special Plant CNPS Rare Plant Rank 4.3	Occurs in rocky Sonoran Desert scrub. This perennial shrub blooms almost year round from February-December. This species is reported from Imperial County but no quad data is available (CNPS

Table 3: Special Status Plant Species Occurring or Potentially Occurring Within the Campo Verde Facility and Gen-tie Line Corridors		
		2011). Suitable habitat (rocky desert scrub) is absent from Campo Verde project area. This species was not observed during the March 2012 surveys which were conducted during this species traditional blooming period. This species is not expected to occur within the Campo Verde project area.
Newberry's velvet mallow (*Horsfordia newberryi*)	CDFG: Special Plant CNPS Rare Plant Rank 4.3	Occurs in rocky Sonoran Desert scrub. This perennial shrub blooms almost year round from February-December. This species is reported from the Carrizo Mountain Quad (CNPS 2011). Suitable habitat i.e. rocky areas, is absent in the Campo Verde project area. This species was not observed during the March 2012 surveys which were conducted during this species traditional blooming period. This species is not expected to occur within the Campo Verde project area.
California satintail (*Imperata brevifolia*)	CDFG: Special Plant CNPS Rare Plant Rank 2.1	Riparian scrub; desert scrub. Herbaceous perennial; blooms September – May (CNPS 2011). CNDDB occurrence immediately east of Campo Verde project area between Greeson Wash and New River. Not observed during October 2011survey. Not expected to occur in the BLM lands Campo Verde project area due to the lack of suitable habitat. This species is not expected to occur in the project area as all of the riparian scrub habitats within the project area are associated with irrigation canals and drains that are frequently cleared of vegetation. This species is not expected to occur within the
Baja California ipomopsis (*Ipomopsis effusa*)	CDFG: Special Plant CNPS Rare Plant Rank 2.1	Occurs in washes in Sonoran desert scrub. Annual; blooms April – June. Only known location in California from Pinto Wash west of the site. Considered a waif in California, more common in Baja, California (CNPS 2011). Suitable habitat present in Campo Verde project area. Not expected in the Campo Verde project area due to known range and rarity in California. Surveys for this species will be conducted in appropriate habitat within its blooming season in 2012.
Slender-leaved ipomopsis (*Ipomopsis tenuifolia*)	CDFG: Special Plant CNPS Rare Plant Rank 2.3	Occurs in rocky/gravelly Sonoran Desert scrub. Herbaceous perennial; blooms March – May. Known from In-Ko-Pah Gorge and Jacumba quads (CNPS 2011). Suitable habitat, (i.e., rocky/gravelly desert scrub) absent. Site outside of known current range of species. This species was not observed during the March 2012 surveys which were conducted during this species traditional blooming period. This species is not expected to occur within the Campo Verde project area.
Mountain Springs bush lupine (*Lupinus excubitus* var. *medius*)	BLM: Sensitive CDFG: Special Plant CNPS Rare Plant Rank 1B.3	Occurs in Sonoran Desert scrub. Perennial shrub; blooms March – May. Known from In-Ko-Pah Gorge and surrounding quads of desert transition areas (CNPS 2011). Marginal habitat (species range is more in desert transition habitats). Site outside of current species known range and well below reported lower elevational range (425m) (CNPS 2011). This species was not observed during the March 2012 surveys which were conducted during this species traditional blooming period. This species is not expected to occur within the Campo Verde project area.
Parish's desert-thorn (*Lycium parishii*)	CDFG: Special Plant CNPS Rare Plant Rank: 2.3	Occurs in Sonoran Desert scrub with sandy plains and washes. Shrub; blooms March – April. Known from In-Ko-Pah Gorge and Carrizo Mountain quads (CNPS 2011). Reported south of Hwy 98. Suitable habitat present. This species was not observed during the March 2012 surveys which were conducted during this species traditional blooming period. This species is not expected to occur within the Campo Verde project area.
Coulter's lyrepod	CDFG: Special Plant	Occurs in rocky or gravelly Sonoran Desert scrub. This herbaceous

Table 3: Special Status Plant Species Occurring or Potentially Occurring Within the Campo Verde Facility and Gen-tie Line Corridors		
(*Lyrocarpa coulteri*)	CNPS Rare Plant Rank 4.3	perennial; blooms January – June (Reiser 2001; CNPS 2001). Reiser (2001) reports this species from a number of rocky desert canyons in eastern San Diego County. Suitable habitat (i.e., rocky/boulders) absent. This species was not observed during the March 2012 surveys which were conducted during this species traditional blooming period. This species is not expected to occur within the Campo Verde project area.
Brown turbans (*Malperia tenuis*)	CDFG: Special Plant CNPS Rare Plant Rank: 2.3	Occurs in sandy, Sonoran Desert scrub. Annual, blooms March – April (CNPS 2011). Several CNDDB locations in Yuha Basin which correspond to CNPS locations for the Mount Signal, Painted Gorge and Yuha Basin quads (CNPS 2011). Suitable habitat present. This species was not observed during the March 2012 surveys which were conducted during this species traditional blooming period. This species would still have a low to moderate potential to occur within the Campo Verde project area due to its inconspicuous nature.
Hairy stickleaf (*Mentzelia hirsutissima*)	CDFG: Special Plant CNPS Rare Plant Rank: 2.3	Occurs in Sonoran Desert Scrub on rocky hillsides and desert mesas (Reiser 2001; CNPS 2011). Annual; blooms March – May. Known from Mount Signal quad (CNPS 2011). Rocky hillsides absent but desert mesas present. Most of this species' localities in the desert transition areas to the east of the site including localities from In-Ko-Pah Gorge and Sweeny Pass quads (CNPS 2011). This species was not observed during the March 2012 surveys which were conducted during this species traditional blooming period. This species is not expected to occur within the Campo Verde project area.
Creamy blazing star (*Mentzelia tridentata*)	CDFG: Special Plant CNPS Rare Plant Rank 1B.3	Occurs in rocky, gravelly and sandy desert scrub. Annual; blooms March – May. Known from In-Ko-Pah Gorge quad (CNPS 2011). Suitable sandy scrub habitat present in Campo Verde project area. However, site outside of known range in California and well below lower elevational limit (700 meters) reported for this species (CNPS 2011). This species was not observed during the March 2012 surveys which were conducted during this species traditional blooming period. This species is not expected to occur within the Campo Verde project area.
Slender-lobed four o'clock (*Mirabilis tenuiloba*)	CDFG: Special Plant CNPS Rare Plant Rank: 4.3	Occurs in Sonoran Desert Scrub. A herbaceous perennial that blooms March – May. This species is reported from the 17 Palms Quad (CNPS 2011). Suitable desert scrub habitat present in Campo Verde project area. This species was not observed during the March 2012 surveys which were conducted during this species traditional blooming period. This species is not expected to occur within the Campo Verde project area...
Slender wooly-heads (*Nemacaulis denudata* var. *gracilis*)	CDFG: Special Plant CNPS Rare Plant Rank: 2.2	Occurs in desert dunes and Sonoran Desert scrub. Annual; blooms March – May. Known from Coyote Wells quad. Most of locations for this species are in Algodones Dunes of East Mesa (CNPS 2011). Marginal dune habitat present. This species was not observed during the March 2012 surveys which were conducted during this species traditional blooming period. This species is not expected to occur within the Campo Verde project area.
Giant Spanish-needle (*Palafoxia arida* var. *gigantea*)	BLM: Sensitive CDFG: Special Plant CNPS Rare Plant Rank 1B.3	Occurs in desert dunes. Annual- herbaceous perennial; blooms March – May. Known from Algodones Dunes on the East Mesa (CNPS 2011). Marginal desert dune habitat present. Site is well west of reported range of species. This species was not observed during the March 2012 surveys which were conducted during this species traditional blooming period. This species is not expected to occur within the Campo Verde project area.
Sand food (*Pholisma sonorae*)	BLM: Sensitive CDFG: Special Plant CNPS Rare Plant	Occurs in desert dunes and sandy Sonoran Desert scrub. This herbaceous perennial is parasitic on native desert shrubs and blooms from March – May. This species is known from the Holtville

Table 3: Special Status Plant Species Occurring or Potentially Occurring Within the Campo Verde Facility and Gen-tie Line Corridors		
	Rank 1B.2	West Quad just east of the corridors and most of the locations are in the Algodones Dunes of the East Mesa (CNPS 2011). Suitable habitat (sandy areas and dunes) is marginal. Surveys for this species will be conducted in appropriate habitat within its blooming season in 2012.This species was not observed during the March 2012 surveys which were conducted during this species traditional blooming period. This species would have a low to moderate potential for occurrence, as a parasitic plant, it is not always observable and there are numerous host plants present.
Thurber's pilostyles (*Pilostyles thurberi*)	CDFG: Special Plant CNPS Rare Plant Rank: 4.3	Herbaceous perennial parasitic on *Psorothamnus emoryi* a few individuals were observed within the project area; blooms January. Known from Plaster City and Mount Signal (Reiser 2001). Known from southwest of Plaster City between S-80 and I-80 (URS 2010). Known from Pinto Wash south of the IV Substation. Not observed during the surveys which were not conducted during this species traditional blooming period. Three to five individuals of its host *Psorothamnus emoryi were* observed along the Proposed Gen-Tie route just north of the IV substation. Though no individuals of Thurber's pilostyles were observed on these individuals, the flowers of Thurber's pilostyles may have already been absent. There is a low to moderate potential for this species to occur, and if it does it would be at very low numbers given the population size of its host.
Desert unicorn-plant (*Proboscidea althaeifolia*)	CDFG: Special Plant CNPS Rare Plant Rank 4.3	Occurs in sandy, Sonoran Desert scrub. Herbaceous perennial; blooms May – August (CNPS 2011). There are no CNPS or CNDDB locations for this species in the vicinity of the project. Suitable habitat present, low to moderate potential for occurrence within Campo Verde project area. Surveys for this species will be conducted in appropriate habitat within its blooming season in 2012.
Desert spike-moss (*Selaginella eremophila*)	CDFG: Special Plant CNPS Rare Plant Rank: 2.2	Occurs in rocky or gravelly terrain in Sonoran Desert scrub (Reiser 2001; CNPS 2011). Herbaceous perennial is most conspicuous in May-July (CNPS 2011). Closest reported populations in rocky desert scrub of In-Ko-Pah and Sweeney Pass quads (CNPS 2011). Not expected to occur within Campo Verde project area due to the lack of suitable habitat. Surveys for this species will be conducted in appropriate habitat within its blooming season in 2012.
Dwarf germander (*Teucrium cubense* ssp. *depressum*)	CDFG: Special Plant CNPS Rare Plant Rank: 2.2	Occurs in sandy washes, streams and wet soils, Sonoran Desert scrub. Annual; blooms March – May (September- November if fall rains occur). Known from Coyote Wells quad (CNPS 2011). Not observed or expected in Campo Verde project area. Suitable habitat (i.e., sandy washes) absent. Not observed during surveys. October 2001 survey and March 2012 surveys conducted during this species traditional blooming period. This species is not expected to occur within the Campo Verde Project area.
Mecca aster (*Xylorhiza cognata*)	CDFG: Special Plant CNPS Rare Plant Rank 1B.2	Occurs in Sonoran Desert scrub. This species is known from 17 Palms Quad. This herbaceous perennial blooms from January-June. Most of the reported occurrences are in the Indio and Mecca Hills surrounding Palm Springs and Indio (CNPS 2011). Suitable habitat present, but site may also be at limits of known species range. This species was not observed during the March 2012 surveys which were conducted during this species traditional blooming period. This species is not expected to occur within the Campo Verde project area.
Orcutt's woody-aster (*Xylorhiza orcuttii*)	BLM: Sensitive CDFG: Special Plant CNPS Rare Plant Rank: 1B.2	Occurs in Sonoran Desert scrub in rocky canyons and sandy washes (Reiser 2001). Herbaceous perennial; blooms March – April (CNPS 2011). Closest reported localities are Carrizo and Borrego Mountain quads, areas of rocky terrain. Suitable habitat absent. This species was not observed during the March 2012 surveys which were

Table 3: Special Status Plant Species Occurring or Potentially Occurring Within the Campo Verde Facility and Gen-tie Line Corridors		
		conducted during this species traditional blooming period. This species is not expected to occur within the Campo Verde project area.

Sensitivity Status Codes used in this table:
USFWS: Endangered- Plant taxa that are listed as threatened under the Federal Endangered Species Act
CDFG: Endangered- Plant taxa that are listed as endangered with extinction under the California Endangered Species Act
Special Plant: Plant taxa that are inventoried by the CNDDB
BLM: Sensitive- Plants that are designated by the State Director for special management consideration.
CNPS: Rare Plant Rank 1: Rare, Threatened or Endangered in California and elsewhere
Rare Plant Rank 2: Rare, Threatened or Endangered in California, more common elsewhere
Rare Plant Rank 3: Plants for which more information is needed
Rare Plant Rank 4: Plants of Limited Distribution
Threat extension: .1- Seriously endangered in California
2- Fairly endangered in California
3- Not very endangered in California