



LIVE OAK ASSOCIATES, INC.

an Ecological Consulting Firm

October 17, 2019

Zachary Dahla
Raney Management
1501 Sports Drive
Sacramento, CA 95834

RE: Biological Resources Assessment Peer Review for the Shifler project, located in Yolo County, California (PN 2338-01).

Dear Mr. Dahla:

We have prepared this peer review of Teichert Materials' Biological Resources Assessment (2018), including the Wetland Delineation prepared by ECORP Consulting, Inc (2012), for APNs 025-120-032 (portion), 025-120-033, 025-760-001 (portion), and 025-430-002 for the approximately 319-acre Teichert Shifler Mining Project site. The 319-acre site is located at approximately three miles west of the City of Woodland in unincorporated Yolo County, California. As we understand it from the report provided, the project includes the construction of a mine, which will include realignment of two canals (Moore Canal and Magnolia Canal) and restoration of the site once mining operations are completed.

Background Review

Prior to a site visit to evaluate existing site conditions, LOA completed an appropriate background review. In addition to a review of the Biological Resources Assessment report prepared by Teichert Materials, sources of information relevant to the proposed project, the project site, and the site's vicinity were reviewed, including the project site plans, aerial photographs of the project site, U.S. Fish and Wildlife Service (USFWS) National Wetlands Inventory Maps, and the California Natural Diversity Database (CNDDDB) Rarefind 5 (CDFW 2019).

Existing Site Conditions

On September 26, 2019, LOA ecologist Katrina Krakow conducted a reconnaissance-level site visit to evaluate existing conditions of the site. During the site visit, habitats present on the site were verified, including potentially suitable habitat for any special status plant or animal species that are known to occur, or once to have occurred, regionally. During the site visit, the extent of potentially jurisdictional habitats present was also evaluated. LOA did not conduct focused or protocol-level surveys for rare species or a formal wetland delineation.

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The project site is irregular in shape and is approximately 319 acres bordered to the northeast, east, and south by agricultural land, bordered to the west by rural residential and agricultural land, and bordered to the north by Cache Creek and its associated riparian habitat and the Teichert Woodland Plant Site. The property mainly supports agricultural land with some oak woodland, with two canal channels running through the site (Moore and Magnolia Canals).

The habitat onsite is mainly farmed fields with tomatoes and disked fields being the most recent use. Along the edges of the site, the habitat is ruderal in nature and vegetation observed onsite reflects this, with few native plants present, including native oak species. A small corner of the site has been landscaped with oleander and oaks. Mid- to large-sized trees bound the site. Vegetation observed generally agreed with the 2018 report by Teichert Materials.

Wet features identified by the 2018 Teichert Materials report were confirmed while onsite. A small wetland/marsh exists onsite due to leaky infrastructure at the adjacent cemetery, and a man-made drainage ditch exists near this feature. The pond held very little water at the time of the site visit and an inlet/outlet culvert was observed as well. The canals onsite include the Moore Canal, which consists of a trapezoidal earthen channel lined with cement and the Magnolia Canal, which is an unlined earthen canal which goes through the oak woodland onsite and connects with the Moore Canal just south of the oak woodland.

Existing site conditions as observed by LOA during the September 2019 site visit are consistent with the existing site conditions found by Teichert Materials biologists during their site visits from 2012-2016.

Peer Review of Impacts and Mitigations

Impacts on Special Status Plants. Teichert Materials conducted rare plant surveys and concluded that the site does not support special status plants.

We concur with Teichert Materials' conclusions. However, four plant species occur in Figure 8 of the report which are not included within the occurrence table in Table 1-A; these species should be evaluated in the table: *chloropyron palmatum*, *Extriplex joaquinana*, *Puccinellia simplex*, and *Trifolium hydrophilum*.

Impacts on Special Status Animals. Teichert Materials concluded that the site supports habitat for Valley elderberry longhorn beetle, western pond turtle, white-tailed kite, northern harrier, Swainson's hawk, ferruginous hawk, merlin, burrowing owl, short-eared owl, loggerhead shrike, yellow-billed magpie, raptors, nesting birds, and bats. The report does not include the Yolo Habitat Conservation Plan/Natural Community Conservation Plan (Yolo Habitat Plan; 2018) in their evaluation of covered species; this should include referencing any necessary measures or conditions for each species.

However, six special status animal species occur in Figure 9 of the report which are not included within the occurrence table in Table 1-A; these species should be evaluated in the table: *Charadrius alexandrinus nivosus*, *Desmocerus californicus dimorphus*, *Oncorhynchus mykiss irideus pop. 11*, *Oncorhynchus tshawytscha pop. 6*, *Pogonichthys macrolepidotus*, and *Spirinchus thaleichthys*. Additionally, seven non-special status animals (*Bombus crotchii*,

Bombus occidentalis, *Cicindela hirticollis abrupta*, *Lindnerella occidentalis*, *Myotis ymanensis*, *Myrmosula pacifica*, and *Nycticorax nycticorax*) were included in Figure 9, but were not evaluated in Table 1-A. Although it is not necessary to include species which are not state or federally threatened or endangered or a state species of special concern, either none of these or all of the species reported in the CNDDDB should be evaluated for their potential to occur on the site. Note: *Bombus crotchii* and *Bombus occidentalis* were recently petitioned to be listed under the State Endangered Species Act in October of 2018 and the Commission submitted a Petition Evaluation report in April of 2019; therefore, this new information should be evaluated within Table 1-A as well.

Valley elderberry longhorn beetle. Teichert Materials concluded that Valley elderberry longhorn beetles are likely to occur onsite and established mitigation measures for this species.

We concur with Teichert Materials' conclusions, however, Table A-1 needs to reflect the positive occurrence of this species onsite, as Teichert Materials reports that exit holes in elderberries were observed onsite. Additionally, the report needs to include an evaluation of this species as it relates to the Yolo Habitat Plan (2018); this should include referencing any necessary measures or conditions for this species. The report should include AMM12 from the Yolo Habitat Plan.

Western pond turtle. Teichert Materials concluded that western pond turtles could occur onsite and established mitigation measures for this species.

We concur with Teichert Materials' conclusions; however, the report needs to include an evaluation of this species as it relates to the Yolo Habitat Plan (2018); this should include referencing any necessary measures or conditions for this species. The report should include AMM14 from the Yolo Habitat Plan.

White-tailed kite. Teichert Materials concluded that white-tailed kites could occur onsite and established measures for this species.

We concur with Teichert Materials' conclusions that white-tailed kites could occur onsite. However, mitigation measures should be separated from Swainson's hawk mitigation measures, and the report needs to clarify the 0.25-mile construction-free buffer is required by the Yolo Habitat Plan (2018). As with all preconstruction surveys, survey buffer distance requirements should include the language "to the extent practicable from publicly accessible areas" to avoid trespass. Additionally, the report needs to include an evaluation of this species as it relates to the Yolo Habitat Plan (2018); this should include referencing any necessary measures or conditions for this species. The report should include AMM16 from the Yolo Habitat Plan.

Northern harrier. Teichert Materials concluded that northern harriers could occur onsite and established measures for this species.

We concur with Teichert Materials' conclusions that northern harriers could occur onsite, however, the 500-foot construction-free buffer may be larger than necessary, and the minimum 200-foot buffer should be a maximum for this species. As with all preconstruction surveys,

survey buffer distance requirements should include the language “to the extent practicable from publicly accessible areas” to avoid trespass.

Swainson’s hawk. Teichert Materials concluded that Swainson’s hawks could occur onsite and established measures for this species.

We concur with Teichert Materials’ conclusions that Swainson’s hawks could occur onsite, however, this species should be separated from the analysis for white-tailed kite. The report needs to clarify the 0.25-mile (1,320-foot) construction-free buffer is required by the Yolo Habitat Plan (2018). As with all preconstruction surveys, survey buffer distance requirements should include the language “to the extent practicable from publicly accessible areas” to avoid trespass. Additionally, the report needs to include an evaluation of this species as it relates to the Yolo Habitat Plan (2018); this should include referencing any necessary measures or conditions for this species. The report should include AMM16 from the Yolo Habitat Plan.

Ferruginous hawk. Teichert Materials concluded that ferruginous hawks could occur onsite and did not establish measures for this species, as they concluded impacts to winter habitat are less-than-significant.

We concur with Teichert Materials’ conclusions; however, this species needs to be named as a species which may occur onsite under Section 5.2 of Teichert Materials’ report.

Merlin. Teichert Materials concluded that merlin could occur onsite and did not establish measures for this species, as they concluded impacts to winter habitat are less-than-significant.

We concur with Teichert Materials’ conclusions.

Burrowing owl. Teichert Materials concluded that burrowing owls could occur onsite and did not include a species overview and did not establish measures for this species.

We concur with Teichert Materials’ conclusions that burrowing owls could occur onsite, however, this species needs to be named as a species which may occur onsite under Section 5.2 of Teichert Materials’ report. A species overview (Section 5.2) and mitigation measures (Section 6.2) should also be included as a part of the report. Additionally, the report needs to include an evaluation of this species as it relates to the Yolo Habitat Plan (2018); this should include referencing any necessary measures or conditions for this species. The report should include AMM18 from the Yolo Habitat Plan.

Short-eared owl. Teichert Materials concluded that short-eared owls could occur onsite and established measures for this species.

We concur with Teichert Materials’ conclusions that short-eared owls could occur onsite, however, the 500-foot construction-free buffer may be larger than necessary, and the minimum 200-foot buffer should be a maximum for this species. As with all preconstruction surveys, survey buffer distance requirements should include the language “to the extent practicable from publicly accessible areas” to avoid trespass.

Other nesting raptors. Teichert Materials concluded that raptors have the potential to nest onsite; specifically, the report calls out the red-tailed hawk, red-shouldered hawk, American kestrel, great-horned owl, and barn owl as raptors that would that are known to nest near the project site. Mitigation measures were also established for nesting raptors.

We concur with Teichert Materials’ conclusions that raptors have the potential to nest onsite and the mitigation measures, however, a survey buffer of 500-feet exceeds the maximum suggested construction-free buffer of 300 feet; the survey buffer should equal the maximum construction-free buffer. A 300-foot construction-free buffer may be larger than necessary, and the minimum 200-foot buffer should be a maximum for these species. As with all preconstruction surveys, survey buffer distance requirements should include the language “to the extent practicable from publicly accessible areas” to avoid trespass.

Loggerhead shrike. Teichert Materials concluded that loggerhead shrikes could occur onsite and established measures for this species. As with all preconstruction surveys, survey buffer distance requirements should include the language “to the extent practicable from publicly accessible areas” to avoid trespass.

We concur with Teichert Materials’ conclusions that loggerheads could occur onsite, however, the 200-foot survey buffer and 200-foot construction-free buffer are larger than necessary; most small birds should have a 50-foot survey buffer and a 50-foot maximum construction-free buffer.

Yellow-billed magpie. Teichert Materials concluded that yellow-billed magpies could occur onsite and established measures for this species.

We concur with Teichert Materials’ conclusions that yellow-billed magpies could occur onsite, however, this species is not listed as endangered or threatened under the state (CDFW) or federally (USFWS), and is not listed as a species of special concern under CDFW, therefore, it does not need to be called out specifically, and mitigation measures would be the same as for other migratory birds.

Tricolored blackbird. Teichert Materials concluded that tricolored blackbirds could occur onsite and established measures for this species.

We concur with Teichert Materials’ conclusions that tricolored blackbirds could occur onsite, however, the report needs to clarify the 1,300-foot survey buffer and 1,300-foot construction-free buffer are required by the Yolo Habitat Plan (2018). As with all preconstruction surveys, survey buffer distance requirements should include the language “to the extent practicable from publicly accessible areas” to avoid trespass. Additionally, the report needs to include an evaluation of this species as it relates to the Yolo Habitat Plan (2018); this should include referencing any necessary measures or conditions for this species. The report should include AMM21 from the Yolo Habitat Plan.

Nesting birds protected under the Migratory Bird Treaty Act. Teichert Materials concluded that nesting birds protected under the Migratory Bird Treaty Act have the potential to nest onsite and established mitigation measures for nesting birds.

We concur with Teichert Materials’ conclusions that birds protected under the Migratory Bird Treaty Act have the potential to nest onsite, however, surveying 50 feet from the project site for non-raptor nesting birds would be adequate. A maximum of a 50-foot construction-free buffer would also be adequate, with the ability to reduce the buffer to 25 feet as a minimum if approved by a qualified biologist. As with all preconstruction surveys, survey buffer distance requirements should include the language “to the extent practicable from publicly accessible areas” to avoid trespass.

Bats. Teichert Materials concluded that the large trees onsite provide some potential for foliage-roosting bats (western red bat, silver-haired bat, and hoary bat) and established mitigation measures for roosting bats.

We concur with Teichert Materials’ conclusions, however, appropriate mitigation measures for surveys need to be included in the report. Additionally, appropriate measures for tree removal during the non-overwintering period (including the maternity season) following a negative survey need to be included in the report, including appropriate timing constraints for the efficiency of emergence surveys and humane eviction constraints need to be clear within the mitigation measures for roosting bats. Our suggested measures follow:

MM-16a. Prior to removal of any onsite trees, a qualified biologist shall conduct a pre-construction habitat assessment for roosting bats to identify trees with potentially suitable habitat. Once trees with potentially suitable habitat have been identified, those trees would be surveyed for roosting bats prior to construction activities. Roosting bat surveys require timing constraints due to the overwintering season. During the overwintering season (approximately October 16-February 29), emergence surveys have the potential to result in a false-negative, therefore, emergence surveys will not be conducted in the overwintering season. Instead, visual surveys, such as surveys from a man-lift may be necessary in this season. If active roosts are not found, then further action shall not be warranted. If either a maternity roost or hibernacula (structures used by bats for hibernation) is present, Mitigation Measures 16b and 16c shall be implemented.

MM-16b. If active bat maternity roosts or hibernacula are found in trees which will be removed as part of project construction, the project shall be redesigned to avoid the loss of the tree occupied by the roost to the extent feasible. If an active maternity roost is located and the project cannot be redesigned to avoid removal of the occupied tree, demolition shall commence before maternity colonies form (i.e., prior to April 15) or after young are volant (flying) (i.e., usually after August 15). Disturbance-free buffer zones, as determined by a qualified biologist, shall be observed during the maternity roost season (April 15 through August 15).

MM-16c. If a non-breeding and non-overwintering roosting bat(s) is found in a tree scheduled for removal, the individual(s) shall be safely evicted, under the direction of a qualified biologist by way of two-step removal with the first day of trimming succeeding in opening the roosting area to allow airflow through the cavity and/or canopy. Demolition shall then follow at least one night after initial disturbance for airflow. This action should allow bats to leave during darkness, thus increasing their chance of finding new roosts with a minimum of potential

predation during daylight. Trees with roosts that need to be removed shall first be disturbed at dusk, just prior to removal that same evening, to allow bats to escape during the darker hours.

Impacts on Oak Woodland. Teichert Materials concluded that 52 native valley oak trees occur onsite, 46 of which will be directly or indirectly impacted by the project.

We concur with Teichert Materials' conclusions, however, even though Yolo County does not have a tree preservation ordinance or policy, the Yolo County Oak Woodland Conservation and Enhancement Plan should be referenced here. In order to be consistent with this plan, we request adding to MM-17 language to include using only oaks of local genetic stock for mitigation plantings. The Oak Tree Survey Report also notes blue elderberry, cottonwood, tree of heaven, and almond trees onsite, and does not provide any measures for replacement; as a tree ordinance does not exist, it should be specifically noted that these non-oak species do not require permits or replacement plantings.

Consistency with Yolo Habitat Conservation Plan/Natural Community Conservation Plan (Yolo Habitat Plan): Teichert Materials introduces the Yolo Habitat Plan under their Regional and Local Regulations section (Section 2.3).

We concur with Teichert Materials that this document applies to the project, however, the Biological Resources Assessment does not discuss how the project may or may not be consistent with this document. A general discussion should be provided, including any required fees and/or mitigation measures and a species-specific discussion should be included for the species which may occur onsite and are also covered by the YHCP.

Consistency with Yolo County General Plan: Teichert Materials introduces the Yolo County General Plan under their Regional and Local Regulations section (Section 2.3) and includes specifics for Policy CO-2.22 which requires a 100-foot setback from the top of banks of all lakes, perennial ponds, rivers, creeks, sloughs, and perennial streams.

We concur with Teichert Materials that this document applies to the project, however, the Biological Resources Assessment does not discuss how the project may or may not be consistent with this document. Other policies also apply to this project, which were not addressed in the Biological Resources Report as well. A general discussion should be provided, including a summary of any goals or policies which the project may support or be inconsistent with. Any applicable setbacks should be discussed, such as is identified above; this setback would be helpful shown on a map.

Consistency with Yolo County Oak Woodland Conservation and Enhancement Plan: Teichert Materials introduces the Yolo County Oak Woodland Conservation and Enhancement Plan under their Regional and Local Regulations section (Section 2.3) and states that the document “includes oak woodland conservation policy recommendations for the 2030 General Plan”.

We concur with Teichert Materials that this document applies to the project, however, the Biological Resources Assessment does not discuss how the project may or may not be consistent

with this document, and does not define or summarize what any of the policy recommendations are. A general discussion should be provided, including a summary of any goals or policies which the project may support or be inconsistent with. Although an arborist report is included, it does not include the Assessment of Value of Oak Woodland with the plan's 21 criterion; this can be remedied by including the Oak Woodland Checklist provided in the Yolo County Oak Woodland Conservation and Enhancement Plan as a part of the Oak Tree Survey Report.

Consistency with the Swainson's Hawk Mitigation Program: Teichert Materials introduces the Swainson's Hawk Mitigation Program under their Regional and Local Regulations section (Section 2.3).

We concur with Teichert Materials that this document did apply to the project prior to implementation of the YHCP, however, as the YHCP has been implemented, the measures of the YHCP takes the place of the Swainson's Hawk Mitigation Program, which no longer applies.

Consistency with the Yolo Natural Heritage Program Joint Powers Agency: Teichert Materials introduces the Yolo Natural Heritage Program Joint Powers Agency within MM-15 for impacts to loss of foraging habitat for Swainson's hawk, white-tailed kite, and tricolored blackbird (Section 6.2.10).

We concur with Teichert Materials that this Agency did apply to the project prior to implementation of the YHCP, however, as the YHCP has been implemented, the measures of the YHCP takes the place of the Yolo Natural Heritage Program Joint Powers Agency, which no longer applies.

Soils: Teichert Materials identified the site as having four soil types in Section 4.2.

We concur with Teichert Materials these soils are present; however, the Biological Resources Assessment should define whether these soils are considered to be hydric, alkaline, or have any other edaphic characteristics.

Regulatory Issues

Wetlands and Waters of the U.S. Teichert Materials identified wetlands and waters of the U.S. onsite, and included the following in their discussion: seasonal wetland, marsh, pond, irrigation canals, and drainage ditch, and provided discussions and/or mitigations for each type in Section 6.1 of the Biological Resources Assessment report. The Biological Resources Assessment (2018) is consistent with the Wetland Delineation prepared by ECORP Consulting, Inc (2012).

We found the discussion and mitigation measures for the wetlands and Waters of the U.S. to be incomplete. The following are issues which need to be addressed for this topic:

1. Table 1 needs to be updated to identify which water types are jurisdictional and which are not. For example, the report talks about the drainage ditch not being jurisdictional, however, it is included in Table 1, which identifies Wetlands and Waters of the U.S.

2. USACE issued a preliminary wetland delineation in 2012 for the project site. Teichert Materials references USACE Regulatory Guidance Letter NO. 07-02 (USACE 2007) and the report states this letter “clarifies that construction (i.e., relocation) of an irrigation ditch is exempt from discharge permitting regulations under Section 404(f) of the Clean Water Act unless (1) construction of the canal would convert jurisdictional Waters of the U.S. to another use or (2) the construction would impair the flow or circulation of jurisdictional Waters of the U.S.”, then further reasoned that “The relocation of the canals on the Shifler Property are intended to continue to serve its current use and would neither convert nor impair the flow or circulation of said Waters of the U.S. In addition, pursuant to State Water Resources Control Board Water Quality Order NO. 2004-004-DWQ, discharges that are exempt from regulation pursuant to RGL 07-02 are generally waived from the requirement to obtain Waste Discharge Requirements under Porter-Cologne. Therefore, no mitigation measures are proposed for the relocation of the Moore and Magnolia Canals”.
 - a. The only time USACE Regulatory Guidance Letter NO. 07-02 (USACE 2007) mentions relocation is with regard to drainage ditches. Construction of a ditch or canal is different than relocating/realigning a canal. Therefore, Teichert Materials should confirm with the USACE whether this Guidance Letter applies to their project. If the Guidance Letter applies to the project, please confirm with the State Water Resources Control Board that Waste Discharge Requirements do not apply.
 - b. The report fails to cite the 2015 Clean Water Rule and how it may affect jurisdictional status of potential waters on the project site; please include a regulatory discussion on the 2015 Clean Water Rule.
 - c. A preliminary jurisdictional delineation occurred in 2012, which would assume jurisdiction of all aquatic features on the site. Should the project proceed using the existing preliminary delineation, acquisition of an Individual Permit would be needed to permit relocation of the canals, since impacts would clearly exceed the threshold of 300 linear feet of impact for a Nationwide 39 permit.
 - d. Magnolia Canal, although labelled on Figure 3, is not easily identified as a canal. Magnolia Canal was included in the preliminary Wetland Delineation and therefore assumed jurisdictional.
 - e. Please confirm whether or not either canal is a federally regulated canal under the Section 408 Corps of Engineers Program. If it is, a Section 408 permit would be required.
 - f. Although the body of the text within Teichert Materials’ report concluded there are no mitigation measures proposed for the relocation of the Moore and Magnolia Canals, MM-4 requires a Streambed Alteration Agreement from CDFW for this relocation. Please reorganize this section so the permitting requirements and procedures are clear.
3. Figure 3 of the Biological Resources Assessment report shows wetlands of the preliminary wetland delineation and habitats onsite and has some issues. (Figure 3 is also used as a

background for Figure 5 in Attachment B; changes suggested here would apply to this figure as well).

- a. Abbreviations of water types labeled on the map should be included in the legend.
 - b. The legend items should be adjusted, as multiple legend items cannot be easily identified or distinguished on the map with the current color assignments and naming.
 1. Moor Canal is currently identified as both Canal/Maintenance Road and Irrigation Canal. Please re-name “Canal/Maintenance Road” as “Canal Maintenance Road” to indicate only the road and change the Irrigation Canal color to a color that can also be easily identified for the Magnolia Canal, as the current yellow assignment is the same color as the Agriculture habitat.
 2. “Existing Landscaping” and “Conveyor/Gravel Road” are not distinguishable due to color choice; please re-evaluate the color choices for these legend items.
 - c. Due to the scale of the map, multiple legend items are small, such as “Existing Landscaping” and some of the water features. Please adequately label small features on the map in order to make them easy to find.
4. The report needs to include an evaluation of wetlands and waters as they relate to the Yolo Habitat Plan (2018); this should include referencing any necessary measures or conditions. The report should include AMM9 and AMM10 from the Yolo Habitat Plan.

LOA Summary and Recommendations

In general, LOA concurs with Teichert Materials’ assessment of the existing conditions of the site as well as their evaluation of potential impacts and the mitigations that they have provided to reduce potentially significant impacts to a less-than-significant level under CEQA. Therefore, our recommendations are fairly minor and include the following:

1. Include and evaluate *chloropyron palmatum*, *Extriplex joaquinana*, *Puccinellia simplex*, and *Trifolium hydrophilum* in Table 1-A.
2. Include and evaluate *Bombus crotchii*, *Bombus occidentalis*, *Charadrius alexandrinus nivosus*, *Desmocerus californicus dimorphus*, *Oncorhynchus mykiss irideus* pop. 11, *Oncorhynchus tshawytscha* pop. 6, *Pogonichthys macrolepidotus*, and *Spirinchus thaleichthys* in Table 1-A.
3. Revise the report to include the Yolo Habitat Plan (2018) in their evaluation of covered species; this should include referencing any necessary measures or conditions for each species.
4. Revise Table A-1 to reflect the positive occurrence of elderberry long-horn beetle onsite, as Teichert Materials reports that exit holes in elderberries were observed onsite.

5. Revise survey buffer distance requirements for all species to include the language “to the extent practicable from publicly accessible areas” to avoid trespass.
6. Separate white-tailed kite and Swainson’s hawk in the analysis and mitigations.
7. Re-evaluate the minimum construction-free buffer distances for all special status raptor species, the loggerhead shrike, and other nesting migratory birds.
8. Clarify that the minimum survey buffer and construction-free buffer distances for the tricolored blackbird are required by the Yolo Habitat Plan.
9. Add Ferruginous hawk to the list of species which may occur onsite under Section 5.2 of the report.
10. Add burrowing owl to the list of species which may occur onsite under Section 5.2 of the report and include a species overview (Section 5.2) and mitigation measures (Section 6.2).
11. Include appropriate mitigation measures for bat surveys and tree removal during the non-overwintering period. We have included suggested measures above.
12. Revise MM-17 in the report to reference the Yolo County Oak Woodland Conservation and Enhancement Plan and include language to include using only oaks of local genetic stock for mitigation plantings. Also, specifically address non-oak species do not require permits or replacement plantings.
13. Revise the report to include a discussion of the Yolo Habitat Conservation Plan which would include a discussion of any required fees and/or mitigation measures and a species-specific discussion for each of the Covered Species.
14. Revise the report to include a general discussion of the Yolo County General Plan, including a summary of any goals or policies which the project may support or be inconsistent with. Any applicable setbacks should be discussed.
15. Revise the report to include general discussion of the Yolo County Oak Woodland Conservation and Enhancement Plan, including a summary of any goals or policies which the project may support or be inconsistent with. Although an arborist report is included, it does not include the Assessment of Value of Oak Woodland with the plan’s 21 criterion; this can be remedied by including the Oak Woodland Checklist provided in the Yolo County Oak Woodland Conservation and Enhancement Plan as a part of the Oak Tree Survey Report.
16. Revise the report to define whether any soils are considered to be hydric, alkaline, or have any other edaphic characteristics.
17. Revise the Wetlands and Waters of the U.S. section to include revisions requested above, including:
 - a. Revisions to Table 1 and discussion for Table 1.

- b. Revisions regarding USACE Regulatory Guidance Letter NO. 07-02 (USACE 2007).
- c. Include a regulatory discussion of the 2015 Clean Water Rule.
- d. Should the preliminary jurisdictional delineation be used, include a discussion of the necessity of acquiring an Individual Permit.
- e. Adjust legend item for the Magnolia Canal for Figure 3.
- f. Confirm whether the canals are federally regulated and whether a Section 408 permit would be required.
- g. Please reorganize the waters section so the permitting requirements and procedures are clear.
- h. Revise Figure 3 of the report as discussed above to provide clarity and increase readability of the figure.
- i. Revise the report to include an evaluation of the wetlands and waters under the Yolo Habitat Plan and include measures and conditions within the Yolo Habitat Plan applicable to the project.

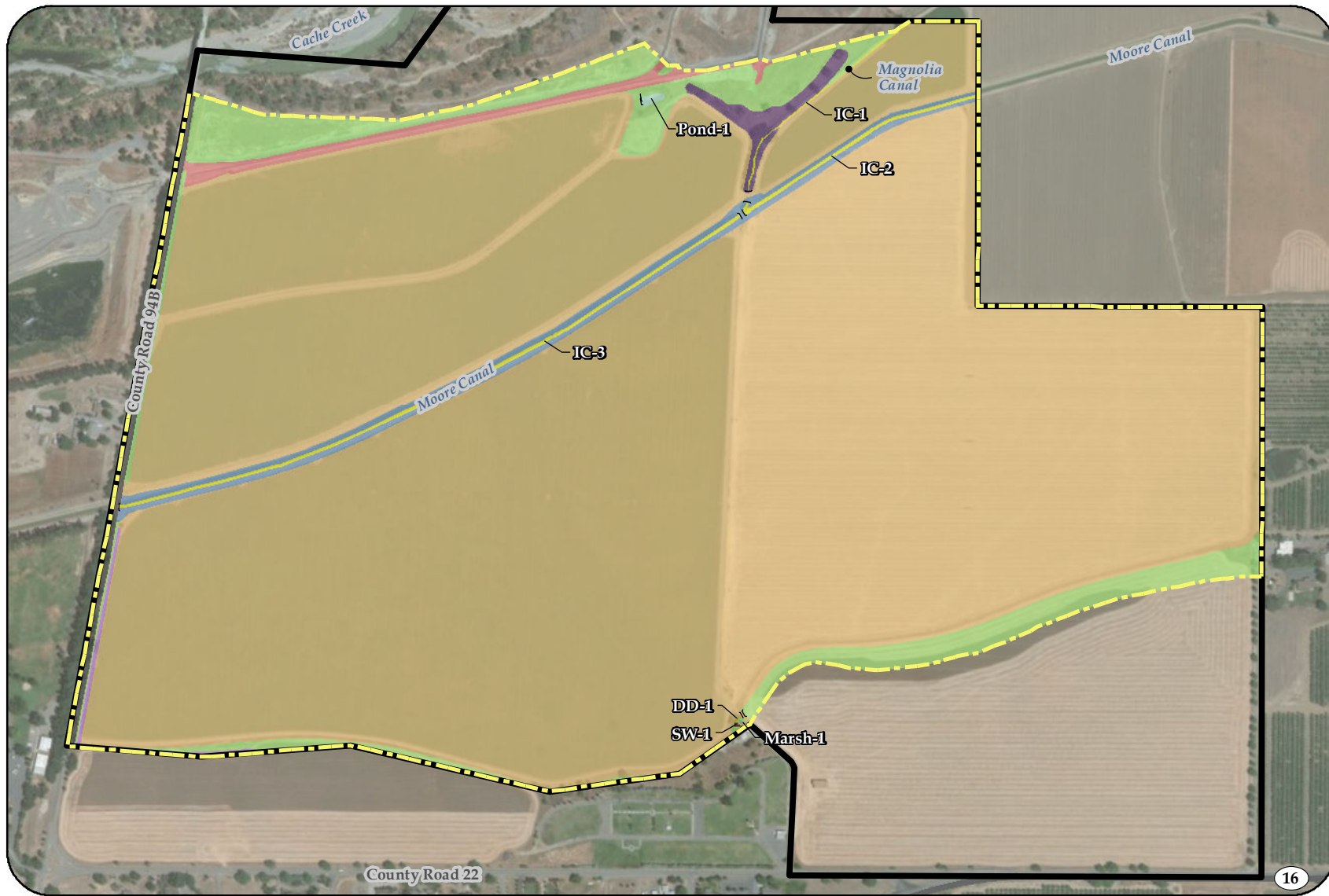
We have included referenced figures (Figures 3, 8, and 9 of the report and Figure 5 of Appendix B of the report) at the end of this letter.

We appreciate you considering Live Oak Associates, Inc. to provide ecological services for you on this project. If you wish to discuss any of our findings, conclusions, or recommendations, please feel free to contact me at 408-281-5889 or Rick Hopkins at 408-281-5885.

Sincerely,



Katrina Krakow
Project Manager
Staff Ecologist



LEGEND:

} Culvert

WETLANDS:

Seasonal Wetland

Seasonal Marsh

OTHER WATERS:

Pond

Irrigation Canal

Drainage Ditch

Agriculture

Annual Grassland/ Ruderal

Canal/ Maintenance Road

Conveyor/ Gravel Road

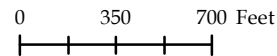
Existing Landscaping

Oak Woodland

Paved Road

Project Site

Shifler Property Boundary



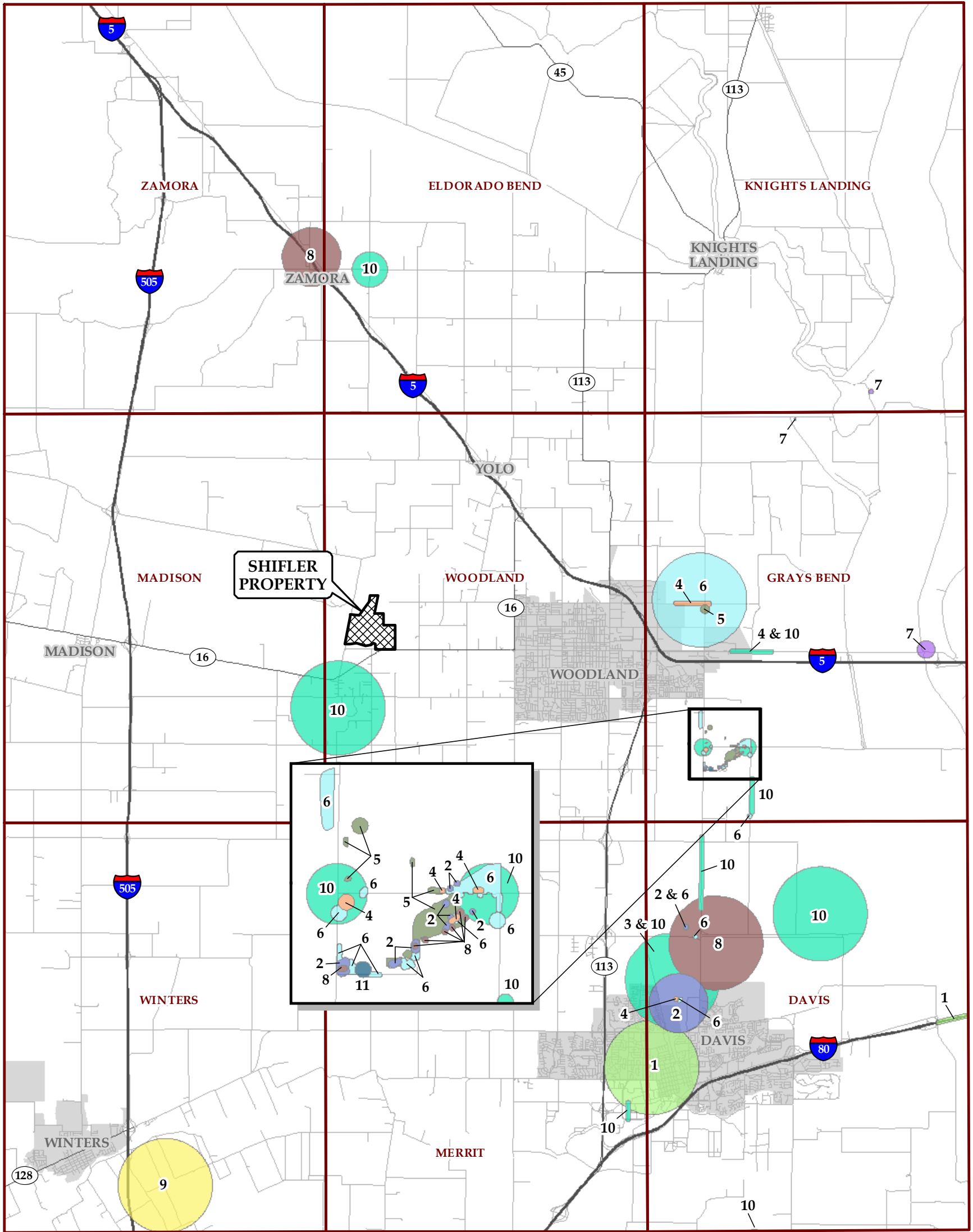
SOURCE:

- Existing Features Provided by Teichert (April 2016)
- Wetland Features Provided by ECORP (Sept. 2010)
- Aerial Provided by ESRI Basemaps (DG: July 8, 2016)

DISCLAIMER:

The data was mapped for planning purposes only.
No liability is assumed for the accuracy of the data shown.



FIGURE 3
EXISTING HABITATS, WETLANDS AND FEATURES
BIOLOGICAL RESOURCES ASSESSMENT
SHIFLER PROPERTY
TEICHERT MATERIALS
YOLO COUNTY, CALIFORNIA



CNDDDB SPECIAL STATUS PLANTS:

- | | | | |
|---|--|---|---|
|  | 1- <i>Astragalus tener</i> var. <i>ferrisiae</i> |  | 7- <i>Hibiscus lasiocarpus</i> var. <i>occidentalis</i> |
|  | 2- <i>Astragalus tener</i> var. <i>tener</i> |  | 8- <i>Lepidium latipes</i> var. <i>heckardii</i> |
|  | 3- <i>Atriplex cordulata</i> var. <i>cordulata</i> |  | 9- <i>Navarretia leucocephala</i> ssp. <i>bakeri</i> |
|  | 4- <i>Atriplex depressa</i> |  | 10- <i>Puccinellia simplex</i> |
|  | 5- <i>Chloropyron palmatum</i> |  | 11- <i>Trifolium hydrophilum</i> |
|  | 6- <i>Extriplex joaquinana</i> | | |

LEGEND:

-  Shifler Property Boundary
-  7.5' USGS Quad Boundaries



0 6,000 12,000 Feet

SOURCE:

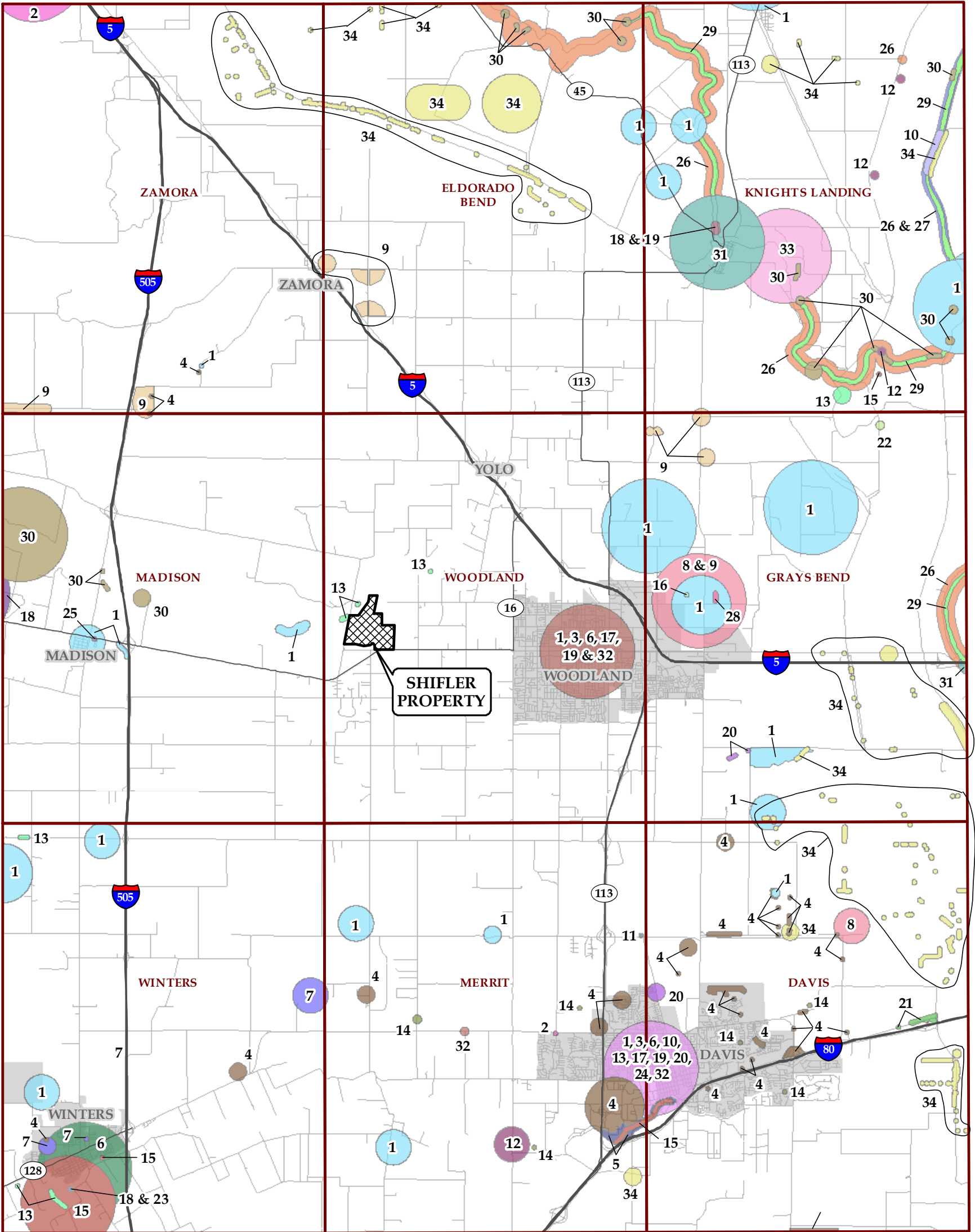
CNDDDB Provided by CDFW
(April 2018)

DISCLAIMER:

The data was mapped for planning purposes only. No liability is assumed for the accuracy of the data shown.

FIGURE 8

**CNDDDB OCCURRENCES OF
SPECIAL-STATUS PLANT SPECIES
BIOLOGICAL RESOURCES ASSESSMENT
SHIFLER PROPERTY
TEICHERT MATERIALS
YOLO COUNTY, CALIFORNIA**





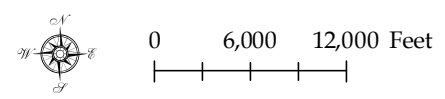
CNDDDB SPECIAL STATUS ANIMALS:

- | | | | |
|------------------------------------|--|---|---------------------------------|
| 1- Agelaius tricolor | 10- Cincinela hirticollis abrupta | 19- Lasiurus cinereus | 28- Plegadis chihi |
| 2- Ambystoma californiense | 11- Circus cyaneus | 20- Lepidurus packardi | 29- Pogonichthys macrolepidotus |
| 3- Antrozous pallidus | 12- Coccyzus americanus occidentalis | 21- Linderiella occidentalis | 30- Riparia riparia |
| 4- Athene cunicularia | 13- Desmocercus californicus dimorphus | 22- Melospiza melodia | 31- Spiranichus thaleichthys |
| 5- Bombus crotchii | 14- Elanus leucurus | 23- Myotis yumanensis | 32- Taxidea taxus |
| 6- Bombus occidentalis | 15- Emys marmorata | 24- Myrmosula pacifica | 33- Thaleichthys pacificus |
| 7- Branchinecta lynchi | 16- Falco columbarius | 25- Nycticorax nycticorax | 34- Thamnophis gigas |
| 8- Charadrius alexandrinus nivosus | 17- Lasionycteris noctivagans | 26- Oncorhynchus mykiss irideus pop. 11 | |
| 9- Charadrius montanus | 18- Lasiurus blossevillii | 27- Oncorhynchus tshawytscha pop. 6 | |

Swainson's hawk occurrences are not included due to the extremely large number of occurrences throughout the project vicinity.

LEGEND:

-  Shifler Property Boundary
-  7.5' USGS Quad Boundaries

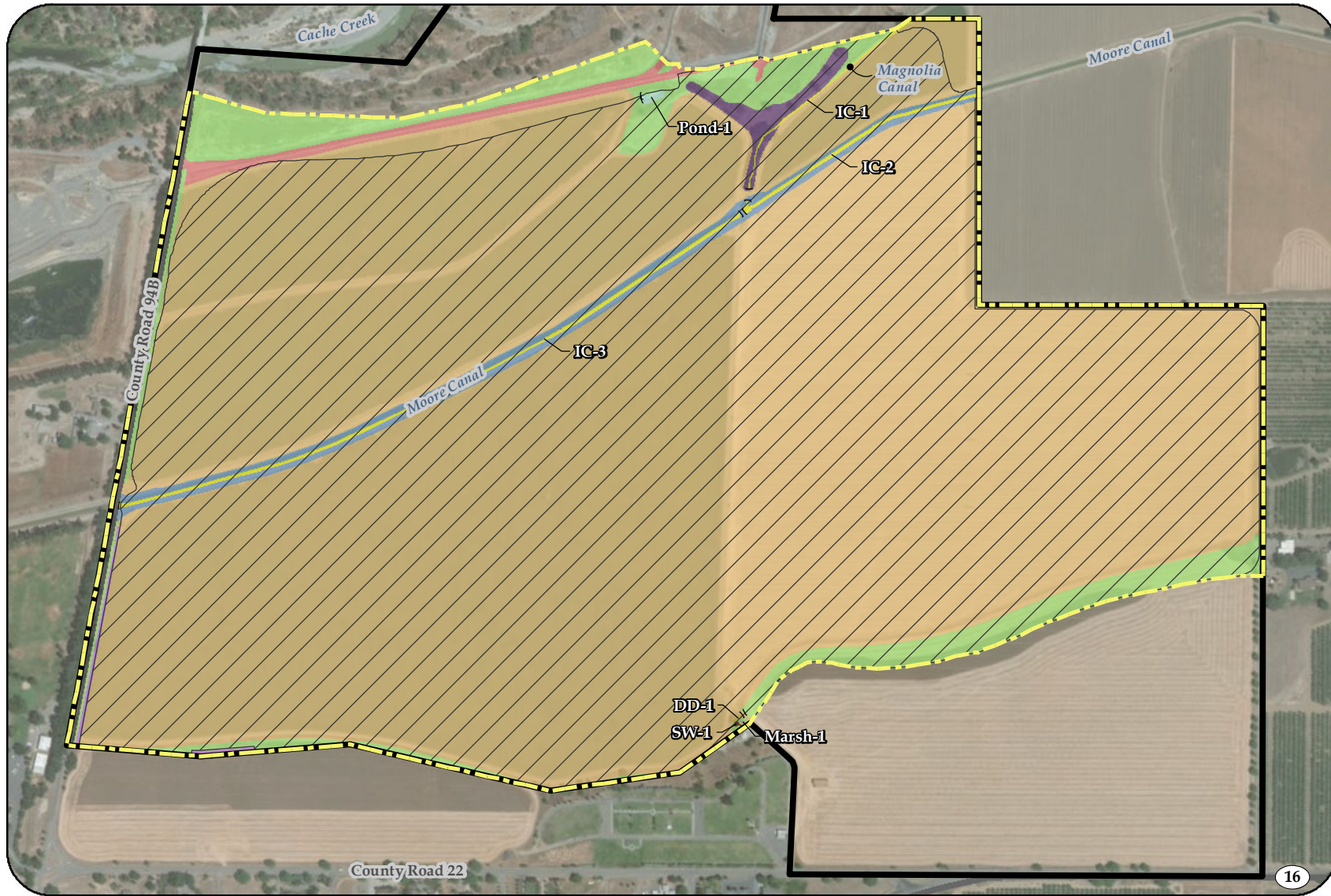


SOURCE:
CNDDDB Provided by CDFW (April 2018)

DISCLAIMER:
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FIGURE 9
CNDDDB OCCURRENCES OF SPECIAL-STATUS ANIMAL SPECIES
BIOLOGICAL RESOURCES ASSESSMENT
SHIFLER PROPERTY
TEICHERT MATERIALS
YOLO COUNTY, CALIFORNIA





LEGEND:

- Limits of Disturbance
- Culvert

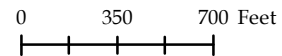
WETLANDS:

- Seasonal Wetland
- Seasonal Marsh

OTHER WATERS:

- Pond
- Irrigation Canal
- Drainage Ditch

- Agriculture
- Annual Grassland/ Ruderal
- Canal/ Maintenance Road
- Conveyor/ Gravel Road
- Existing Landscaping
- Oak Woodland
- Paved Road
- Project Site
- Shifler Property Boundary



SOURCE:

- Existing Features Provided by Teichert (April 2016)
- Wetland Features Provided by ECORP (Sept. 2010)
- Aerial Provided by ESRI Basemaps (DG: July 8, 2016)

DISCLAIMER:

*The data was mapped for planning purposes only.
No liability is assumed for the accuracy of the data shown.*

FIGURE 5
HABITATS AND WETLANDS
SHIFLER PROPERTY STUDY AREA
RARE PLANT SURVEY REPORT
TEICHERT MATERIALS
YOLO COUNTY, CALIFORNIA