

A P P E N D I X E

BIOLOGICAL RESOURCES

- S J M S C P M I N O R A M E N D M E N T
- W E T L A N D D E L I N E A T I O N
- B I O L O G I C A L R E S O U R C E A S S E S S M E N T



APPENDIX E
BIOLOGICAL RESOURCES

E. I: SJMSCP Minor Amendment

CORDES RANCH SPECIFIC PLAN EIR
APPENDIX E: BIOLOGICAL RESOURCES



US Fish & Wildlife Service
Sacramento Fish and Wildlife Office
2800 Cottage Way, Room W-2605
Sacramento, CA 95825-1846
(916) 414-6600
FAX (916) 414-6612



CA Dept. of Fish & Game
1701 Nimbus Road
Rancho Cordova, CA 95670
(916) 358-2919
FAX (916) 358-2912

March 4, 2004

RECEIVED
MAR 05 2004
San Joaquin
Council of Governments

Julia E. Greene
Executive Director
San Joaquin Council of Governments
555 Weber Street
Stockton, California 95202

Subject: Proposal for a Minor Amendment to the San Joaquin County Multi-Species Habitat Conservation and Open Space Plan Annual Report, San Joaquin County, California

Dear Ms. Greene:

On January 29, 2004 the U.S. Fish and Wildlife Service and the California Department of Fish and Game (Agencies) received a proposal to amend the San Joaquin County Multi-Species Habitat Conservation and Open Space Plan (SJMSCP). The proposal consists of a Minor Amendment to the SJMSCP as described in Section 8.8.4, that would allow the 1,850 acre Cordes Ranch to participate in SJMSCP, receive Incidental Take coverage, and mitigate the conversion of 1,850 acres of open space lands to non-open uses. The mix of habitats present on the Cordes Ranch are approximately 30 % natural, 70 % agricultural, and a small amount of existing urban.

The proposed Minor Amendment for Cordes Ranch meets the requirements of Sections 8.2 and 8.8.4 of the SJMSCP. Therefore, we concur with the proposal and recommend that the Cordes Ranch be allowed to participate in the SJMSCP. Cordes Ranch is located in an "un-mapped" area of San Joaquin County immediately west of and adjacent to the City of Tracy. As such, the 1,850 acres must be subtracted from the 5,340 acres of "un-mapped" contingency acres described in Section 8.2.1 (10) of SJMSCP.

Thank you for meeting with the Agencies to discuss the Annual Report. We look forward to working with you toward successful implementation of the SJMSCP. Please contact Laura Valoppi of the U.S.

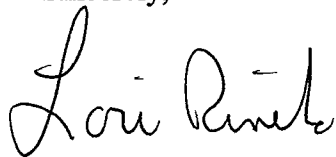
Julia E. Greene

March 4, 2004

2

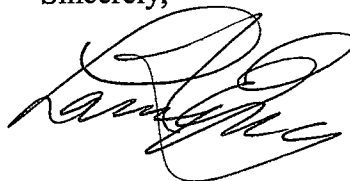
Fish and Wildlife Service at (916) 414-6600 or Dan Gifford of the California Department of Fish and Game at (916) 209-369-8851 if you have any questions.

Sincerely,

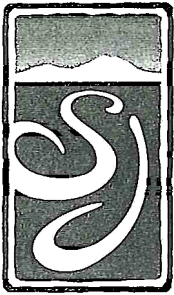


Lori Rinek
Division Chief, Endangered Species Program
Sacramento Fish & Wildlife Office

Sincerely,



Dr. Larry Eng, PhD.
Assistant Regional Manager
California Department of Fish and Game



S J C O G, I N C.

555 E. Weber Avenue • Stockton, California 95202

209.468.3913 • 209.468.1084 (fax)

Gloryanna Rhodes
CHAIR

Gary Giovanetti
VICE CHAIR

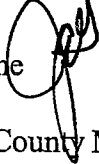
Julia E. Greene
PRESIDENT

Member Agencies
CITIES OF
ESCALON,
LATHROP,
LODI,
MANTECA,
RIPON,
STOCKTON,
TRACY,
AND
THE COUNTY OF
SAN JOAQUIN

Memorandum

DATE: January 29, 2004

TO: SJMSCP Permittees

FROM: Julia E. Greene 

SUBJECT: San Joaquin County Multi-Species Habitat Conservation and Open Space Plan Minor Amendment Request

This memorandum serves as notification to inform the Permittees that SJCOG, Inc. has submitted to the Permitting Agencies a request for a *Minor Amendment* as described in Section 8.8.4(D) of the San Joaquin County Multi-Species Habitat Conservation and Open Space Plan.

A request letter to the Permitting Agencies is attached which describes the *Minor Amendment*. A public hearing by the SJCOG, Inc. to consider the *Minor Amendment* is anticipated to occur on April 22, 2004.

If you have any questions, please give me a call at (209) 468-3913.



S J C O G , I N C .

555 E. Weber Avenue • Stockton, California 95202

209.468.3913 • 209.468.1084 (fax)

January 29, 2004

Gloryanna Rhodes
CHAIR

Gary Giovanetti
VICE CHAIR

Julia E. Greene
PRESIDENT

Member Agencies

CITIES OF
ESCALON,
LATHROP,
LODI,
MANTECA,
RIPON,
STOCKTON,
TRACY,
AND
THE COUNTY OF
SAN JOAQUIN

Ms. Cay Goude
Assistant Field Supervisor
U.S. Fish and Wildlife Service
2800 Cottage Way, W-2605
Sacramento, CA 95825

Dr. Larry Eng, PhD.
Assistant Regional Manager
California Department of Fish and Game
1701 Nimbus Road, Suite A
Rancho Cordova, CA 95670

Subject: San Joaquin County Multi-Species Habitat Conservation and Open Space Plan Minor Amendment Request – Cordes Ranch Project

Dear Ms. Goude and Dr. Eng:

SJCOG, Inc. requests the Permitting Agencies to review the enclosed “minor amendment” submittal to allow the Cordes Ranch Project to participate in the San Joaquin County Multi-Species Habitat Conservation and Open Space Plan (SJMSCP).

The Cordes Ranch Project (project formerly known as *Old River/Northwest Tracy Specific Plan*) consists of approximately 1,850 acres, which is located to the west of Tracy, east of the I-205 and I-580 intersection, north of I-580, and generally south of I-205 with the exception of a 188 acre portion located to the north of I-205 – see *Figures 1 and 2*. The project proposes to convert open-space lands to establish a planned unit development consisting of office, commercial and industrial developments (see *Figure 3*). The project is proposed to be annexed into the City of Tracy.

According to the SJMSCP Land Use Map, the majority of the project site is located in the “unmapped” land use area (see *Figure 4*). For those unmapped land uses which have an effect on the SJMSCP Covered Species and levels of Incidental Take which are greater than, but not significantly than, those described in the SJMSCP originally adopted, coverage of the proposed land use activity or action may be permitted subject to a *Minor Amendment*.

Minor Amendments are amendments to the SJMSCP of a minor or technical nature. Requests for amendments are submitted to the Permitting Agencies by SJCOG, Inc. with a description of 1) the proposed amendment; 2) an explanation of why the amendment is necessary or desirable; and 3) a description of why the JPA believes the effects of the proposed *Minor Amendment* are more beneficial than or not significantly different from those described in the SJMSCP as originally adopted. In accordance to Section 8.8.4(D) of the SJMSCP, the Permitting Agencies shall respond within thirty (30) calendar days of receipt of the request.

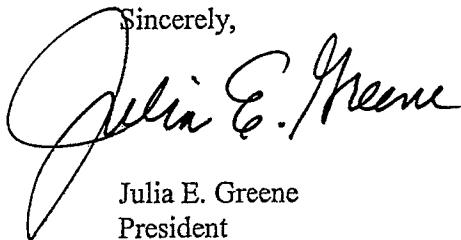
The proposed amendment would allow the Cordes Ranch Project to participate in the SJMSCP as a form of habitat mitigation for the conversion of open space lands. In reference to the SJMSCP Vegetation Map, the conversion of habitat lands consist of approximately 38% natural lands, 68% agricultural lands, and 2% urban lands (see Figure 5). The project site is located in the *Central/Southwest Transitional Zone*.

The amendment is desirable since the development properties that form the project site are located immediately adjacent to other, similar habitat lands in the Tracy area which has been mapped as "urban" on the SJMSCP Planned Land Use Map (see Figure 4). The mitigation fee payments received would be utilized to purchase conservation easements in accordance to the protocols established in the SJMSCP for the *Central/Southwest Transitional Zone*.

SJCOG, Inc. believes that the Cordes Ranch Project activities are not significantly different from the "SJMSCP permitted activities" established in Section 8.2 of the SJMSCP. The project area is "unmapped" on the SJMSCP Land Use Map since it is located in the County and was not part of the City of Tracy's urban expansion area during the establishment of the map. As mentioned above, the City of Tracy is proposing to annex the project area. SJCOG, Inc. recommends that the converted open space acreages be subtracted from the allocated habitat type acreages as established in the biological opinion.

I thank you for your efforts in assisting on the implementation of the San Joaquin County Multi-Species Habitat Conservation and Open Space Plan. If you have any questions, please feel free to call me at any time.

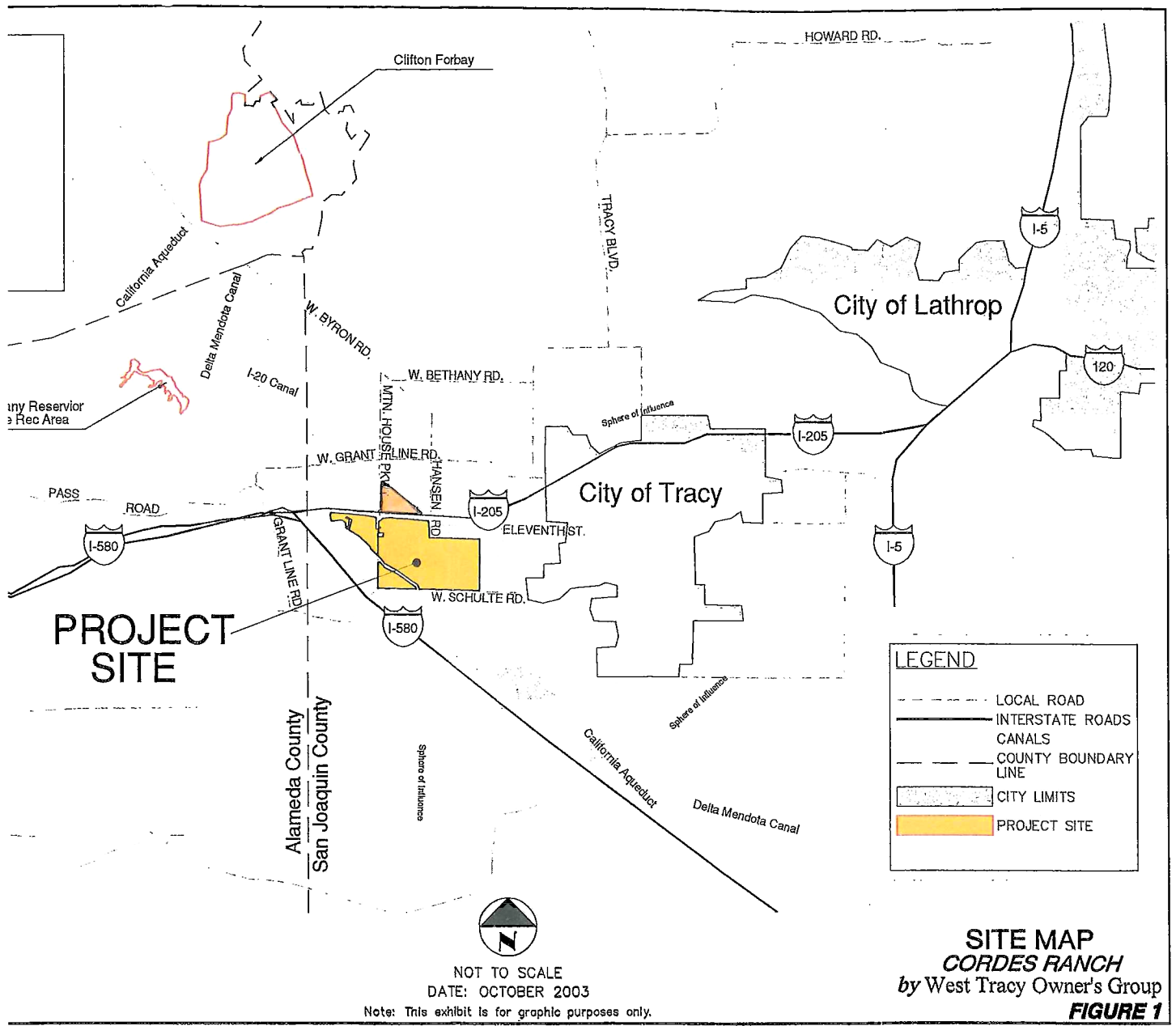
Sincerely,

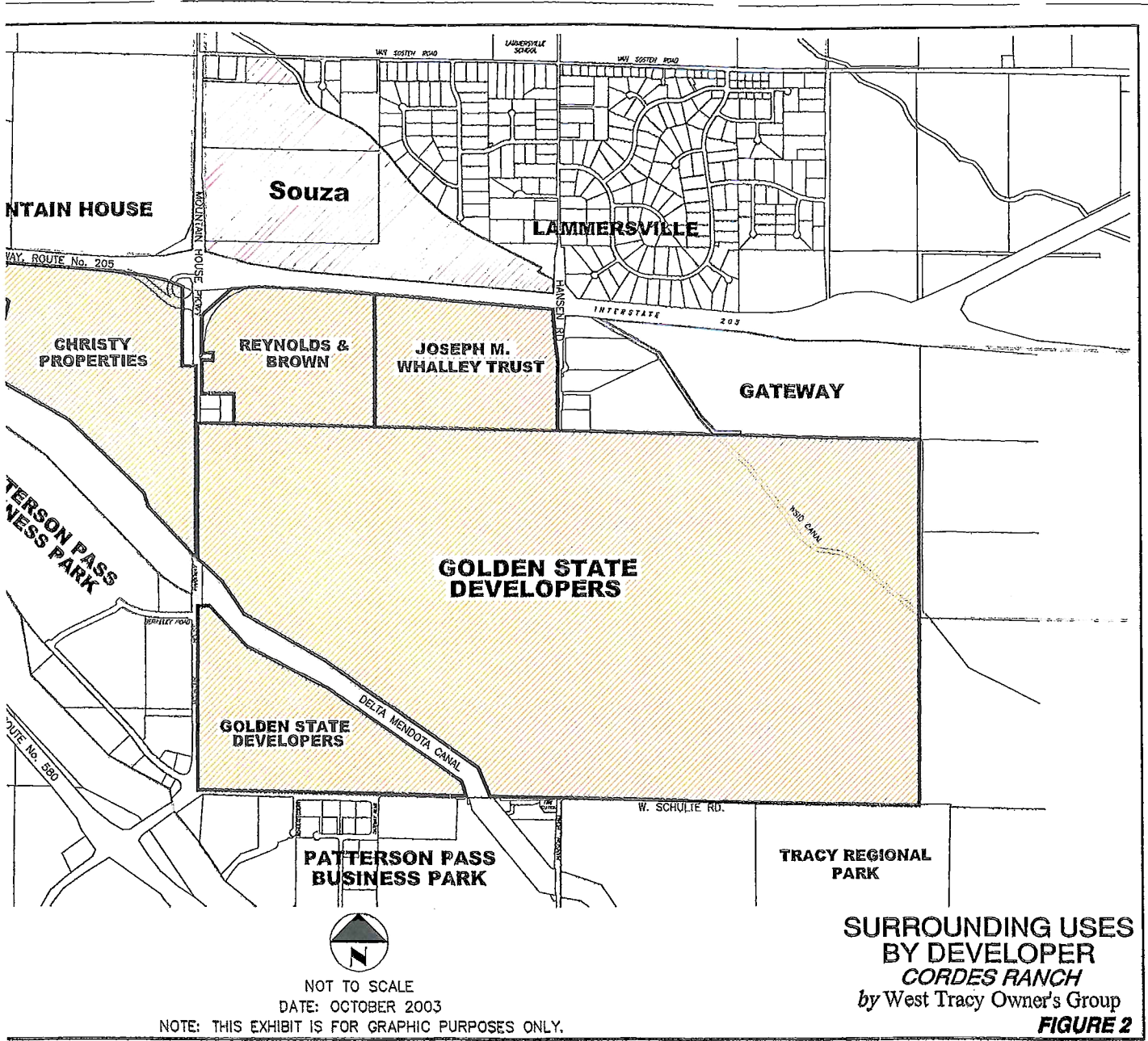
A handwritten signature in cursive script that reads "Julia E. Greene". The signature is written in black ink and is positioned to the right of the word "Sincerely,".

Julia E. Greene
President

Enclosures

cc: Adam Zerrenner, USFWS
Dan Gifford, CDFG
Tom Terpstra, Herum Crabtree Brown





NOT TO SCALE
 DATE: OCTOBER 2003

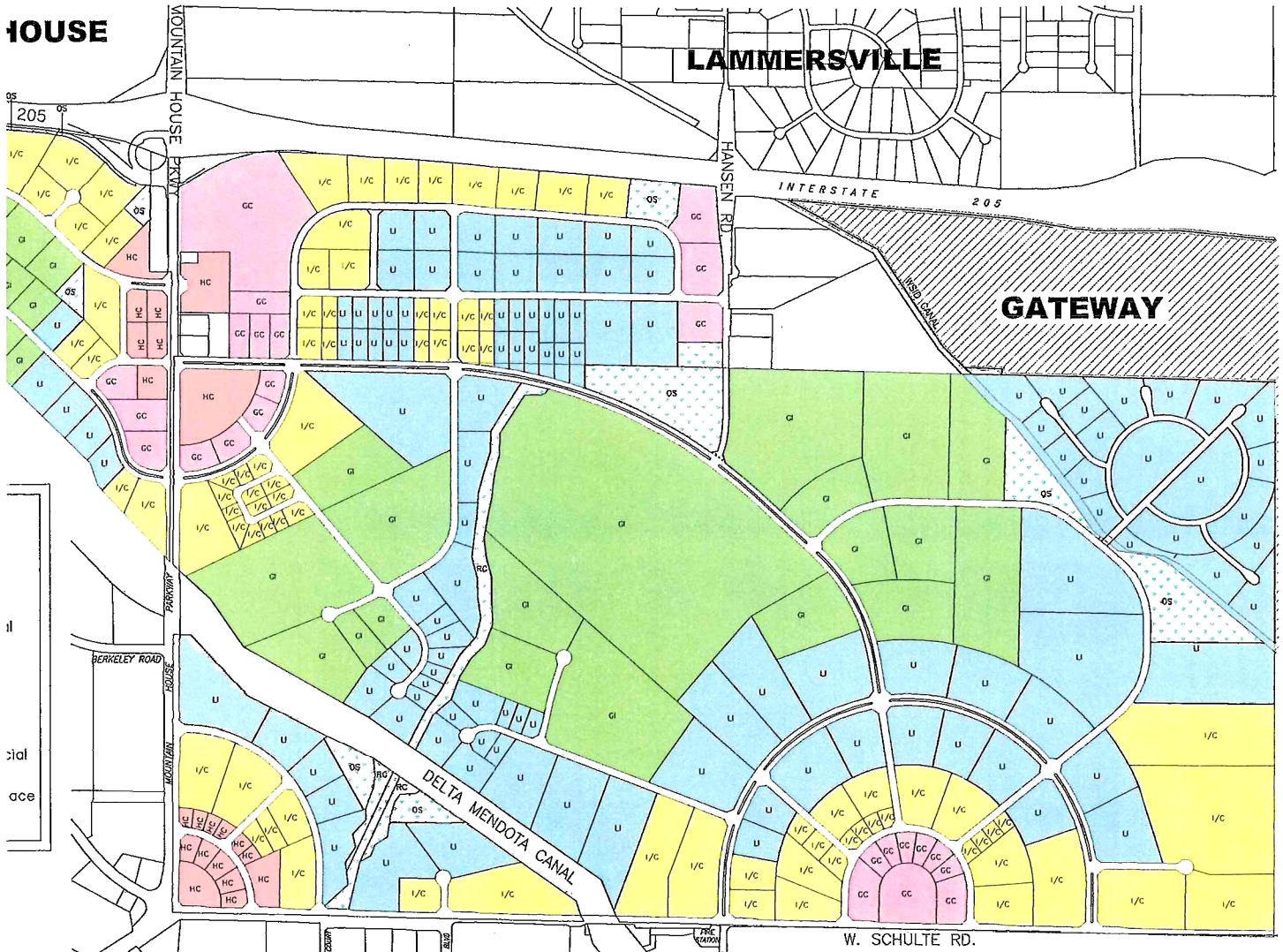
NOTE: THIS EXHIBIT IS FOR GRAPHIC PURPOSES ONLY.

**SURROUNDING USES
 BY DEVELOPER
 CORDES RANCH
 by West Tracy Owner's Group
 FIGURE 2**

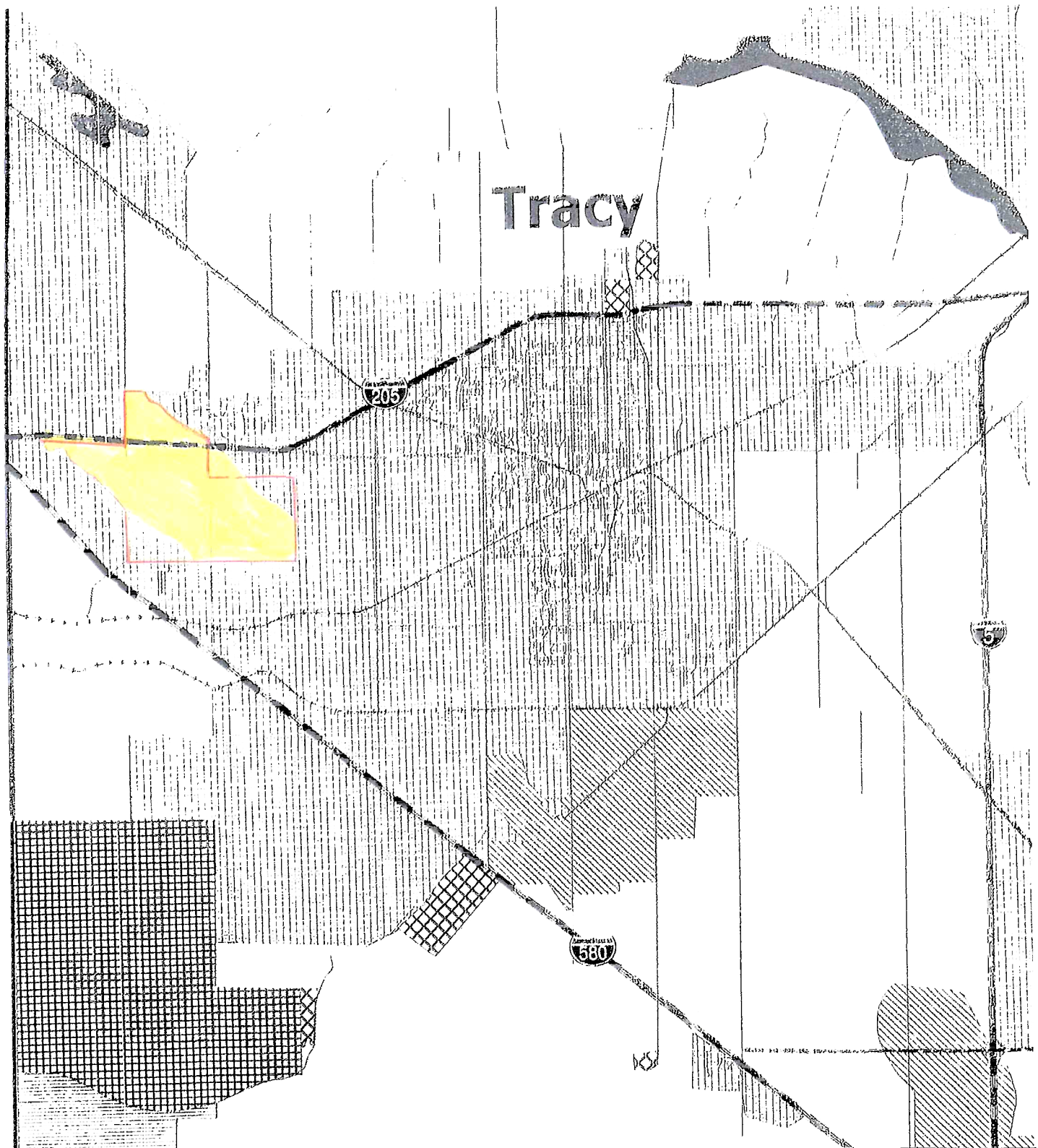
HOUSE

LAMMERSVILLE

GATEWAY



**PROPOSED LAND-USE
DESIGNATION MAP
CORDES RANCH
by West Tracy Owner's Group
FIGURE 3**



SJMSCP Land Use Map

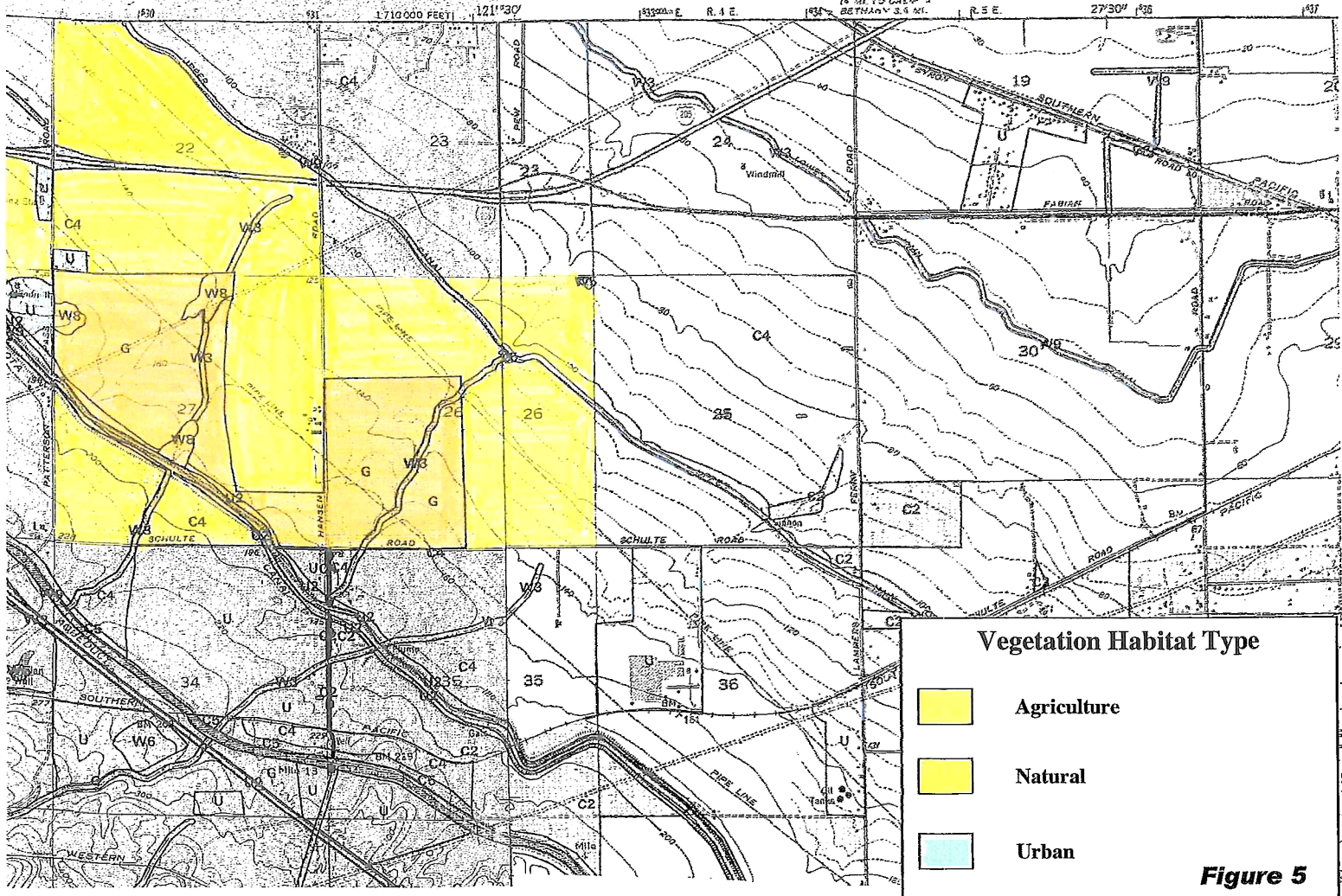
-  Unmapped Land Use Area
-  Cordes Ranch Project Boundary

FIGURE 4

MIDWAY QUADRANGLE
CALIFORNIA
7.5 MINUTE SERIES (TOPOGRAPHIC)
NEAR ALTAMONT 18 QUADRANGLE

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

ST



APPENDIX E
BIOLOGICAL RESOURCES

E.2: Wetland Delineation

CORDES RANCH SPECIFIC PLAN EIR
APPENDIX E: BIOLOGICAL RESOURCES

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Cordes Ranch City/County: Tracy / San Joaquin Sampling Date: 9/20 + 4/20/11
 Applicant/Owner: Crossroads Business Center (CBC) State: CA Sampling Point: 1
 Investigator(s): Jim Martin Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): none Slope (%): <5
 Subregion (LRR): LRR-C Lat: 37.741696 Long: -121.543111 Datum: NGVD
 Soil Map Unit Name: Copay clay, 0 to 2 percent slopes NWI classification: Not mapped - upland
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/> Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/>
Remarks: <p align="center"><u>No indicators-outside drainage path of realigned channel.</u></p>	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. _____				Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0%</u> (A/B)
2. _____				
3. _____				
4. _____				
_____ = Total Cover				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species <u>10</u> x 4 = <u>40</u> UPL species <u>90</u> x 5 = <u>450</u> Column Totals: <u>100</u> (A) <u>490</u> (B) Prevalence Index = B/A = <u>4.9</u>
Sapling/Shrub Stratum (Plot size: _____) 1. _____ 2. _____ 3. _____ 4. _____ 5. _____				
_____ = Total Cover				
Herb Stratum (Plot size: <u>1m²</u>) 1. <u>Avena fatua</u> <u>75</u> <u>Y</u> <u>NL</u> 2. <u>Hordeum murinum</u> <u>15</u> _____ <u>U</u> 3. <u>Bromus hordeaceus</u> <u>5</u> _____ <u>FACW</u> 4. <u>Cirsium vulgare</u> <u>5</u> _____ <u>FACW</u> 5. <u>Centaurea setifida</u> <u><1</u> _____ <u>NL</u> 6. _____ 7. _____ 8. _____				
<u>100</u> = Total Cover				
Woody Vine Stratum (Plot size: _____) 1. _____ 2. _____				
_____ = Total Cover				
% Bare Ground in Herb Stratum <u>0</u>		% Cover of Biotic Crust <u>0</u>		Hydrophytic Vegetation Indicators: ___ Dominance Test is >50% ___ Prevalence Index is ≤3.0 ¹ ___ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ___ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Remarks: <p align="center"><u>No strong indicators.</u></p>				

SOIL

Sampling Point: 1

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
12	10YR 4/2-3							

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

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

Indicators for Problematic Hydric Soils³:

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

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

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

Restrictive Layer (if present):

Type: _____
Depth (inches): _____

Hydric Soil Present? Yes _____ No

Remarks:

No strong indicators - no mottling, dark chroma or concretions. Heavy sand content.

HYDROLOGY

Wetland Hydrology Indicators:

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

Secondary Indicators (2 or more required)

- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (B1) (Nonriverine)
- Sediment Deposits (B2) (Nonriverine)
- Drift Deposits (B3) (Nonriverine)
- Surface Soil Cracks (B6)
- Inundation Visible on Aerial Imagery (B7)
- Water-Stained Leaves (B9)

- Salt Crust (B11)
- Biotic Crust (B12)
- Aquatic Invertebrates (B13)
- Hydrogen Sulfide Odor (C1)
- Oxidized Rhizospheres along Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Tilled Soils (C6)
- Thin Muck Surface (C7)
- Other (Explain in Remarks)

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

Field Observations:

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

Wetland Hydrology Present? Yes _____ No

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

Remarks:

No strong indicators

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Gardes Ranch City/County: Tracy/San Joaquin Sampling Date: 6/20 + 9/20/11
 Applicant/Owner: CBC State: CA Sampling Point: 2
 Investigator(s): Jim Martin Section, Township, Range: Midway Quad, Section 21, T25, R4E
 Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): none Slope (%): < 2%
 Subregion (LRR): LRR-C Lat: 37.741459 Long: -121.543336 Datum: NAD83
 Soil Map Unit Name: Capay clay, 0 to 2 percent slopes NWI classification: not mapped - upland
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____ Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____ Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____
Remarks: <p align="center"><i>Transitional indicators, but meets general tests in proximity to clear wetland drainage.</i></p>	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1.				Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)
2.				Total Number of Dominant Species Across All Strata: <u>1</u> (B)
3.				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)
4.				
_____ = Total Cover				
Sapling/Shrub Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Prevalence Index worksheet:
1.				Total % Cover of: _____ Multiply by: _____
2.				OBL species <u>0</u> x 1 = <u>0</u>
3.				FACW species <u>20</u> x 2 = <u>40</u>
4.				FAC species <u>60</u> x 3 = <u>180</u>
5.				FACU species <u>20</u> x 4 = <u>80</u>
_____ = Total Cover				UPL species <u>0</u> x 5 = <u>0</u>
				Column Totals: <u>100</u> (A) <u>300</u> (B)
				Prevalence Index = B/A = <u>3</u>
Herb Stratum (Plot size: <u>1 m²</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Indicators:
1. <u>Lolium perenne</u>	<u>50</u>	<u>Y</u>	<u>FAC</u>	<input checked="" type="checkbox"/> Dominance Test is >50%
2. <u>Gynodon dactylon</u>	<u>10</u>		<u>FAC</u>	<input checked="" type="checkbox"/> Prevalence Index is ≤3.0 ¹
3. <u>Artemisia tridentata</u>	<u>15</u>		<u>FACW</u>	____ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
4. <u>Bromus hordeaceus</u>	<u>10</u>		<u>FACU</u>	____ Problematic Hydrophytic Vegetation ¹ (Explain)
5. <u>Cirsium vulgare</u>	<u>10</u>		<u>FACU</u>	
6. <u>Rumex crispus</u>	<u><5</u>		<u>FACW</u>	
7. <u>Pichris echinoides</u>	<u><5</u>		<u>FAC</u>	
8. _____				
<u>100</u> = Total Cover				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Present?
1.				Yes <input checked="" type="checkbox"/> No _____
2.				
_____ = Total Cover				
% Bare Ground in Herb Stratum <u>0</u> % Cover of Biotic Crust <u>0</u>				
Remarks: <p align="center"><i>Transitional facultative species dominates vicinity, but meets both Dominance Test and Prevalence Index.</i></p>				

SOIL

Sampling Point: 2

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
	10YR 3/2							Concretions on roots

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

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

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes No

Remarks: Darker soils in top 2 inches with concretions. Sandstone substrate may be limiting factor in formation of darker chroma.

HYDROLOGY

Wetland Hydrology Indicators:

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

Field Observations:

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

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

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

Wetland Hydrology Present? Yes No

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

Remarks: Soil was still moist at 12 inches during inspection on 9/28/11.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Cordes Ranch City/County: Troy/San Joaquin Sampling Date: 6/28 + 9/20/11
 Applicant/Owner: CBC State: CA Sampling Point: 3
 Investigator(s): Jim Martin Section, Township, Range: Midway Quad, Section 21, T05, R4E
 Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): none Slope (%): < 2%
 Subregion (LRR): LRR-C Lat: 37.741365 Long: -121.543524 Datum: NAD
 Soil Map Unit Name: Copay clay, 0 to 2 percent slopes NWI classification: not mapped - hybrid
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____ Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____ Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____
Remarks: <p align="center"><u>Clear wetland indicators.</u></p>	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>2</u> (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)
4. _____	_____	_____	_____	
_____ = Total Cover				
Sapling/Shrub Stratum (Plot size: _____)				
1. _____	_____	_____	_____	Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species <u>55</u> x 1 = <u>55</u> FACW species _____ x 2 = _____ FAC species <u>45</u> x 3 = <u>135</u> FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: <u>100</u> (A) <u>190</u> (B) Prevalence Index = B/A = <u>1.9</u>
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
_____ = Total Cover				
Herb Stratum (Plot size: <u>1m²</u>)				
1. <u>Juncus effusus</u>	<u>55</u>	<u>Y</u>	<u>OBL</u>	Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> Dominance Test is >50% <input checked="" type="checkbox"/> Prevalence Index is ≤3.0 ¹ _____ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) _____ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. <u>Panicum echinoides</u>	<u>30</u>	<u>Y</u>	<u>FAC</u>	
3. <u>Cynodon dactylon</u>	<u>10</u>	_____	<u>FAC</u>	
4. <u>Koeleria perenne</u>	<u><10</u>	_____	<u>FAC</u>	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
<u>100</u> = Total Cover				
Woody Vine Stratum (Plot size: _____)				
1. _____	_____	_____	_____	Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____
2. _____	_____	_____	_____	
_____ = Total Cover				
% Bare Ground in Herb Stratum <u>0</u>		% Cover of Biotic Crust <u>10%</u>		
Remarks:				

SOIL

Sampling Point: 3

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
14	10YR 2/1+							

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

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

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

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

Restrictive Layer (if present):

Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes No

Remarks:
 Large cracking to several inches in widths. Much darker chroma

HYDROLOGY

Wetland Hydrology Indicators:

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

Field Observations:

Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): _____	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): _____	
Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): _____	

(includes capillary fringe)

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

Remarks:
 Strong indicators even though edge of low flow elevations in floodplain downstream of drainage channel.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Cordes Ranch City/County: Tracy/San Joaquin Sampling Date: 6/28/11
 Applicant/Owner: CBC State: CA Sampling Point: 4
 Investigator(s): Jim Martin Section, Township, Range: Midway Quad, Section 28, T25, R4E
 Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): none Slope (%): <5%
 Subregion (LRR): UP-C Lat: 37.731379 Long: -121.531663 Datum: _____
 Soil Map Unit Name: Copy clay, 0 to 2 percent slopes NWI classification: near PUBF
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes _____ No _____ Hydric Soil Present? Yes _____ No _____ Wetland Hydrology Present? Yes _____ No _____	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/>
Remarks:	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>3</u> (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0%</u> (A/B)
4. _____	_____	_____	_____	
_____ = Total Cover				
Sapling/Shrub Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Prevalence Index worksheet:
1. _____	_____	_____	_____	Total % Cover of: _____ Multiply by: _____
2. _____	_____	_____	_____	OBL species <u>0</u> x 1 = <u>—</u>
3. _____	_____	_____	_____	FACW species <u>0</u> x 2 = <u>—</u>
4. _____	_____	_____	_____	FAC species <u>0</u> x 3 = <u>—</u>
5. _____	_____	_____	_____	FACU species <u>0</u> x 4 = <u>—</u>
_____ = Total Cover				UPL species <u>100</u> x 5 = <u>500</u>
				Column Totals: <u>100</u> (A) <u>500</u> (B)
				Prevalence Index = B/A = <u>5</u>
Herb Stratum (Plot size: <u>1m²</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Indicators:
1. <u>Avena fatua</u>	<u>30</u>	<u>Y</u>	<u>NL</u>	<input type="checkbox"/> Dominance Test is >50%
2. <u>Bromus diandrus</u>	<u>30</u>	<u>Y</u>	<u>U</u>	<input type="checkbox"/> Prevalence Index is ≤3.0 ¹
3. <u>Brassica nigra</u>	<u>10</u>	_____	_____	<input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
4. <u>Hordeum murinum</u>	<u>30</u>	<u>Y</u>	<u>U</u>	<input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
<u>100</u> = Total Cover				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Present?
1. _____	_____	_____	_____	Yes _____ No <input checked="" type="checkbox"/>
2. _____	_____	_____	_____	
_____ = Total Cover				
% Bare Ground in Herb Stratum <u>0</u> % Cover of Biotic Crust <u>0</u>				
Remarks: <u>No hydrophytic vegetation indicators. Nearby burned areas mapped as PUBF on NWI maps show no discrete indicators either. Ponds for irrigation purposes that are no longer in use, presumably.</u>				

SOIL

Sampling Point: 4

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
<u>10</u>	<u>10 YR 3/2</u>							

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

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

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

Indicators for Problematic Hydric Soils³:

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

Restrictive Layer (if present):

Type: _____
Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks: Some concretions in top 2 inches with organic matter. Hardpan (sandstone bedrock?) at 10 inches.

HYDROLOGY

Wetland Hydrology Indicators:

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

Field Observations:

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

Wetland Hydrology Present? Yes _____ No X

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

Remarks: No hydrologic indicators. Two burms were installed parallel to MHP (shown as PUBF on NWI mapping), but no indicators were present within these features. Assume surface runoff volume not large enough to support wetland indicators.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Cordus Ranch City/County: Tracy/San Joaquin Sampling Date: 9/20/11
 Applicant/Owner: CPC State: CA Sampling Point: 5
 Investigator(s): Jim Martin Section, Township, Range: Midway Quad, Section 27, T25, R4E
 Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): none Slope (%): <2%
 Subregion (LRR): LRR-C Lat: 37.736444 Long: -121.519325 Datum: NAD
 Soil Map Unit Name: Coarse clay, 0 to 2 percent slopes NWI classification: near PEMch

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

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

Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/> Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/>
Remarks: <p align="center"><u>No strong indicators on outer edge of basin-tailwater pond.</u></p>	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>/</u>				
2. <u>/</u>				
3. <u>/</u>				
4. <u>/</u>				
_____ = Total Cover				
Sapling/Shrub Stratum (Plot size: _____)				
1. <u>/</u>				
2. <u>/</u>				
3. <u>/</u>				
4. <u>/</u>				
5. <u>/</u>				
_____ = Total Cover				
Herb Stratum (Plot size: _____)				
1. <u>Raphanus sativus</u>	<u>50</u>	<u>Y</u>	<u>NL</u>	
2. <u>Bromus hordeaceus</u>	<u>30</u>	<u>Y</u>	<u>FACU-</u>	
3. <u>Lolium multiflorum</u>	<u>20</u>	<u>Y</u>	<u>NL</u>	
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
<u>100</u> = Total Cover				
Woody Vine Stratum (Plot size: _____)				
1. <u>/</u>				
2. <u>/</u>				
_____ = Total Cover				
% Bare Ground in Herb Stratum <u>0</u> % Cover of Biotic Crust <u>0</u>				
Remarks:				

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

Prevalence Index worksheet:
 Total % Cover of: _____ Multiply by: _____
 OBL species 0 x 1 = _____
 FACW species 0 x 2 = _____
 FAC species 20 x 3 = 60
 FACU species 30 x 4 = 120
 UPL species 50 x 5 = 250
 Column Totals: 100 (A) 430 (B)
 Prevalence Index = B/A = 4.3

Hydrophytic Vegetation Indicators:
 ___ Dominance Test is >50%
 ___ Prevalence Index is ≤3.0¹
 ___ Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
 ___ Problematic Hydrophytic Vegetation¹ (Explain)

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

Hydrophytic Vegetation Present? Yes _____ No

SOIL

Sampling Point: 5

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
14	10YR 3/2							

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

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

- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5) (LRR C)
- 1 cm Muck (A9) (LRR D)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)

- Sandy Redox (S5)
- Stripped Matrix (S6)
- Loamy Mucky Mineral (F1)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)
- Vernal Pools (F9)

Indicators for Problematic Hydric Soils³:

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

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

Restrictive Layer (if present):

Type: _____
Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks:

No strong indicators.

HYDROLOGY

Wetland Hydrology Indicators:

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

- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (B1) (Nonriverine)
- Sediment Deposits (B2) (Nonriverine)
- Drift Deposits (B3) (Nonriverine)
- Surface Soil Cracks (B6)
- Inundation Visible on Aerial Imagery (B7)
- Water-Stained Leaves (B9)

- Salt Crust (B11)
- Biotic Crust (B12)
- Aquatic Invertebrates (B13)
- Hydrogen Sulfide Odor (C1)
- Oxidized Rhizospheres along Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Tilled Soils (C6)
- Thin Muck Surface (C7)
- Other (Explain in Remarks)

Secondary Indicators (2 or more required)

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

Field Observations:

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

Wetland Hydrology Present? Yes _____ No X

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

Remarks:

No indicators at SPS, but flows indicated by drift deposits in nearby man-made ditch that receives runoff from tailwater pond and conveys to Hanson Pond.

APPENDIX E

BIOLOGICAL RESOURCES

Biological Resource Assessment

CORDES RANCH SPECIFIC PLAN EIR
APPENDIX E: BIOLOGICAL RESOURCES

BIOLOGICAL RESOURCE ASSESSMENT

for the

Cordes Ranch Specific Plan Project

Tracy, California

prepared for

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December 2012

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A. Background and Methods

This Biological Resource Assessment (BRA) was prepared by Environmental Collaborative under contract with The Planning Center/DCE to provide a biological resource assessment of the proposed Cordes Ranch Specific Plan. The Cordes Ranch Specific Plan identifies proposed infrastructure, land use, and design guidelines for an approximately 1,780 acre area (Specific Plan Area), located directly adjacent to the City Limits of Tracy, and within San Joaquin County, California. The Specific Plan Area is bordered by Interstate 205 to the north, Schulte Road to the south, a portion of Mountain House Parkway to the west, and then extends northwest, north of the Delta Mendota Canal to I-205. The Specific Plan envisions the development of approximately 1,462 net acres of the Specific Plan Area with commercial, office, and manufacturing, warehouse, and distribution uses. This BRA provides a general description of the existing biological and wetland resources in the Specific Plan Area vicinity and an assessment of the potential impacts of implementing the proposed Project, together with information on regulations that serve to protect sensitive biological resources and wetland resources.

The assessment of potential impacts on biological and wetland resources contained in this BRA involved review of available information and mapping of known resources on the Specific Plan Area and vicinity, and completion of reconnaissance level surveys by the BRA biologist, James Martin, Principal Biologist with Environmental Collaborative. Literature review included: past surveys and mapping prepared for the Specific Plan Area and vicinity; the *San Joaquin County Multi-Species Habitat Conservation and Open Space Plan*,¹ records maintained by the California Natural Diversity Data Base (CNDDB) of the California Department of Fish and Wildlife (CDFW) showing known occurrences of special-status species and sensitive natural communities; and mapping prepared as part of the National Wetland Inventory; among other documents. In addition, an assessment of the extent of potential jurisdictional wetlands was conducted and a *Biological Resource Assessment* was prepared for this analysis. These consist of the following:

- A *Revised Wetland Delineation*² was prepared in 2001 by Moore Biological Consultants encompassing about 1,280 acres of the current Specific Plan Area.
- A *Preliminary Wetland Delineation*³ of the GBC Investments Parcel in the northwestern portion of the Cordes Ranch site was conducted in 2012 by Moore Biological Consultants. The report summarizes vegetation, soils, and hydrologic information on the parcel, and concludes that an approximately 2-acre seasonal wetland is present.

Field reconnaissance surveys of the Specific Plan Area were conducted by the BRA biologist on April 20, June 28, and September 28, 2011. An aerial photograph was used as a base to determine the extent of existing development, agricultural use, and vegetation types such as grasslands and riparian habitat. The reconnaissance surveys served to characterize existing habitat in the Project Area, the potential for occurrence of special-status species, and accuracy of information contained in past surveys and mapping of the Specific Plan Area and vicinity. A preliminary wetland assessment was also conducted during the field reconnaissance surveys, together with a peer review of conclusions reached in the 2001 *Revised Wetland Delineation* and the 2012 *Preliminary Wetland Delineation*. No detailed field surveys were conducted as part of the field reconnaissance surveys.

¹ San Joaquin Council of Governments, 1999, *San Joaquin County Multi-Species Habitat Conservation and Open Space Plan*.

² Moore Biological Consultants, 2001, *Revised Wetland Delineation, 1289+/- Acre Crossroads Business Center, San Joaquin County, California*, prepared for Golden State Developers, Inc., April.

³ Moore Biological Consultants, 2012, "*GBC Investments Parcel*", Tracy, California: *Preliminary Wetland Delineation*, letter report submitted to Mr. Greg Christensen, President, Christy Concrete Projects, Inc. and Mr. Rick Woodward, Commercial Real Estate Services, June 8.

B. Regulatory Setting

Local, State, and federal regulations have been enacted to provide for the protection and management of sensitive biological and wetland resources. This section outlines the key local, State, and federal regulations that apply to these resources.

1. Federal and State Regulations

On the federal level, the US Fish and Wildlife Service (USFWS) is responsible for protection of terrestrial and freshwater organisms through implementation of the federal Endangered Species Act (ESA) and the Migratory Bird Treaty Act. The National Marine Fisheries Service (NOAA Fisheries) is responsible for protection of anadromous fish and marine wildlife. The U.S. Army Corps of Engineers (USACE) has primary responsibility for protecting wetlands under Section 404 of the Clean Water Act (CWA). The USACE also regulates navigable waters under Section 10 (33 U.S.C. 403) of the Rivers and Harbors Act.

At the State level, the California Department of Fish and Wildlife (CDFW) is responsible for administration of the California Endangered Species Act (CESA), and for protection of streams and water bodies through the Streambed Alteration Agreement process under Section 1600 of the California Fish and Game Code. Certification from the California Regional Water Quality Control Board (RWQCB) is also required when a proposed activity may result in discharge into navigable waters, pursuant to Section 401 of the CWA and EPA Section 404(b)(1) Guidelines. The RWQCB also has jurisdiction over waters of the State not regulated by the USACE under the Porter-Cologne Act. The following discusses in more detail how State and federal regulations address special-status species, wetlands and other sensitive natural communities.

a. Special-Status Species

Special-status species are plants and animals that are legally protected under CESA and/or the ESA, the Migratory Bird Treaty Act, the California Fish and Game Code (sections 3503, 3503.5, 3511, 3513, 3515, and 4700), or other regulations.⁴ In addition, pursuant to CEQA Guidelines Section 15380, special-status species also include other species that are considered rare enough by the scientific community and trustee agencies to warrant special consideration, particularly with regard to protection of isolated populations, nesting or denning locations, communal roosts and other essential habitat. Species with legal protection under the federal ESA and CESA often represent major constraints to development, particularly when they are wide ranging or highly sensitive to habitat disturbance and where proposed development would result in a “take” of these species. “Take” as defined by the federal ESA means to “harass, harm, pursue, hunt, shoot, kill, trap, capture, or collect” a threatened or endangered species. “Harm” is further defined by the USFWS to include the killing or harming of wildlife due to significant obstruction of essential behavior patterns (i.e. breeding, feeding, or sheltering) through significant habitat modifications or degradation. The CDFW may also consider the loss of listed species habitat as “take,” although this policy lacks statutory authority and case law support under the CESA.

b. Wetlands and Other Waters of the United States

Although definitions vary to some degree, wetlands are generally considered to be areas that are periodically or permanently inundated by surface or ground water, and support vegetation adapted to life in saturated soil. Wetlands

⁴ Special-status species include: designated (rare, threatened, or endangered) and candidate species for listing by the CDFW; designated (threatened or endangered) and candidate species for listing by the USFWS and NOAA Fisheries; species considered to be rare or endangered under the conditions of Section 15380 of the California Environmental Quality Act Guidelines, such as those identified on lists 1A, 1B, and 2 in the *Inventory of Rare and Endangered Plants of California* by the California Native Plant Society (CNPS); and possibly other species which are considered sensitive due to limited distribution or lack of adequate information to permit listing or rejection for state or federal status, such as those included on list 3 in the CNPS *Inventory* or identified as “California Species of Special Concern (SSC) by the CDFW. Species designated as a SSC have no legal protective status under the California Endangered Species Act but are of concern to the CDFW because of severe decline in breeding populations and other factors.

are recognized as important features on a regional and national level due to their high inherent value to fish and wildlife, use as storage areas for storm and flood waters, and water recharge, filtration and purification functions. Technical standards for delineating wetlands have been developed by the USACE and the USFWS, which generally define wetlands through consideration of three criteria: hydrology, soils and vegetation.

The Clean Water Act (CWA) was enacted to address water pollution, establishing regulations and permit requirements regarding construction activities that affect storm water, dredge and fill material operations, and water quality standards. This regulatory program requires that discharges to surface waters be controlled under the National Pollutant Discharge Elimination System permit program which apply to sources of water runoff, private developments, and public facilities.

Under Section 404 of the CWA, the USACE is responsible for regulating the discharge of fill material into waters of the United States. The term “waters” includes wetlands and non-wetland bodies of water that meet specific criteria as defined in the Code of Federal Regulations. All three of the identified technical criteria must be met for an area to be identified as a wetland under USACE jurisdiction, unless the area has been modified by human activity. In general, a permit must be obtained before fill can be placed in wetlands or other waters of the United States. The type of permit is determined by the USACE depending on the amount of acreage and the purpose of the proposed fill.

Certain activities in wetlands or “other waters” are automatically authorized, or granted a nationwide permit which allows filling where impacts are considered minor. Eligibility for a nationwide permit simplifies the permit review process. Nationwide permits cover construction and fill of waters of the U.S. for a variety of routine activities such as minor road crossings, utility line crossings, streambank protection, recreational facilities and outfall structures. To qualify for a nationwide permit, a project must demonstrate that it has no more than a minimal adverse effect on the aquatic ecosystem, including species listed under the ESA. This typically means that there will be no net loss of either habitat acreage or habitat value, resulting in appropriate mitigation where fill activities are proposed.

The USACE assumes discretionary approval over proposed projects where impacts are considered significant, requiring adequate mitigation and permit approval. To provide compliance with the Environmental Protection Agency's Section 404(b)(1) Guidelines, an applicant must demonstrate that the proposed discharge is unavoidable and is the least environmentally damaging practicable alternative that will achieve the overall project purpose. The 1990 Memorandum of Agreement between the EPA and USACE concerning the Determination of Mitigation under the Guidelines prioritizes mitigation, with the first priority to avoid impacts, the second to minimize impacts, and the third to provide compensatory mitigation for unavoidable impacts.

Jurisdictional authority of the CDFW over wetland areas is established under Section 1600 of the Fish and Game Code, which pertains to activities that would disrupt the natural flow or alter the channel, bed, or bank of any lake, river, or stream. The Fish and Game Code stipulates that it is unlawful to substantially divert or obstruct the natural flow or substantially change the bed, channel or bank of any river, stream or lake without notifying the CDFW, incorporating necessary mitigation, and obtaining a Streambed Alteration Agreement. The Wetlands Resources Policy of the CDFW states that the Fish and Game Commission will strongly discourage development in or conversion of wetlands, unless, at a minimum, project mitigation assures there will be no net loss of either wetland habitat values or acreage. The CDFW is also responsible for commenting on projects requiring USACE permits under the Fish and Wildlife Coordination Act of 1958.

In addition, the RWQCB is responsible for upholding state water quality standards. Pursuant to Section 401 of the CWA, projects that apply for a USACE permit for discharge of dredge or fill material, and projects that qualify for a Nationwide Permit must obtain water quality certification from the RWQCB. The RWQCB is also responsible for regulating wetlands under the Porter-Cologne Act, which may include hydrologically isolated wetlands no longer regulated by the Corps under Section 404 of the Clean Water Act. Recent federal Supreme Court rulings have limited the limits of Corps jurisdiction, but the RWQCB in some cases continues to exercise jurisdiction over these features.

c. Sensitive Natural Communities

In addition to species-oriented management, protecting habitat on an ecosystem-level is increasingly recognized as vital to the protection of natural diversity in the State. This is considered the most effective means of providing long-term protection of ecologically viable habitat, and can include whole watersheds, ecosystems and sensitive natural communities. Providing functional habitat connectivity between natural areas is essential to sustaining healthy wildlife populations and allowing for the continued dispersal of native plant and animal species.

Although sensitive natural communities have no protected legal status under the State or federal Endangered Species Acts, they are provided some level of protection under CEQA. The CEQA Guidelines identify potential impacts on a sensitive natural community as one of six significance criteria, listed in Section D of this BRA. As an example, a discretionary project that is constructed on any riparian habitat, native grassland, valley oak woodland, or other sensitive natural community would normally be considered to have a significant effect on the environment. Further loss of a sensitive natural community could be interpreted as substantially diminishing habitat, depending on its relative abundance, quality and degree of past disturbance, and the anticipated impacts to the specific community type. Where determined to be significant under CEQA, the potential impact would require mitigation through avoidance, minimization of disturbance or loss, or some type of compensatory mitigation when unavoidable.

2. Local Regulations

Several goals and policies in the Conservation Element of the City of Tracy General Plan pertain to the protection of sensitive biological and wetland resources. This section describes the key policy documents and regulations that are applicable to the proposed project on the local level. Specifically, this section summarizes the relevant open space and conservation elements of the City of Tracy General Plan, together with a summary of the San Joaquin county Multi-Species Habitat Conservation and Open Space Plan. Chapter 7.08 of the City of Tracy Municipal Code pertains to alteration or removal of street trees, which are not present in the Specific Plan Area and therefore do not apply.

a. City of Tracy General Plan

The Tracy General Plan, updated in 2011, provides a comprehensive long-term plan for the physical development of areas within the City and its sphere of influence, including the Specific Plan Area. The Open Space and Conservation Element of the Tracy General Plan contains numerous goals related to the protection of the natural environment, biological diversity, and sensitive biological resources. The goals and policies most relevant to the Specific Plan Area are listed below in **Table 1**.

b. San Joaquin County Multi-Species Habitat Conservation and Open Space Plan

The Specific Plan Area is located within the Central/Southwest Transition Zone designated by the San Joaquin County Multi-Species Habitat Conservation and Open Space Plan (SJMSCP). The SJMSCP was adopted in 2001 and is intended to provide a strategy for conserving agricultural lands and wildlife habitat while accommodating a growing population and property rights of individual landowners. The SJMSCP has established an assessment process for conversion of land to non-open space uses when such conversion might affect the plant and animal species covered by the SJMSCP. The SJMSCP addresses 97 special-status plant, fish and wildlife species in 52 vegetative communities. Species of concern known to or potentially occurring in the Specific Plan Area and covered by the SJMSCP include but are not limited to San Joaquin kit fox, Swainson's hawk, western pond turtle, and burrowing owl. Sensitive species that have even a remote potential for occurrence in the Specific Plan Area, such as California tiger salamander and California red-legged frog, are also addressed under the SJMSCP.

The ultimate goal of the SJMSCP is to provide 100,241 acres of habitat preserves over the projected 50-year lifetime of the SJMSCP. Most of the land for these preserves would be designated as conservation easements over existing agricultural lands in the areas covered by the SJMSCP. Only a portion of the Specific Plan Area (generally southwest of the Delta-Mendota Canal and northeast of the Upper Main Canal) is located within the Urban Expansion Line designated by the SJMSCP. However, a Minor Amendment allowing the entire Specific Plan Area to participate in the SJMSCP, receive Incidental Take coverage, and mitigate the conversion of open space lands to non-open uses was

reviewed and approved by the CDFW and USFWS in 2004.⁵ Participation in the SJMSCP includes payment of a fee for each acre of land converted to urban use and compliance with Incidental Take Minimization Measures defined in Section 5.2 of the SJMSCP. The Incidental Take Minimization Measures pertinent to the Specific Plan Area include pre-construction surveys for covered species, as well as measures to prevent and control ground squirrel occupation of the area early in the planning process.

TABLE 1 GENERAL PLAN POLICIES RELEVANT TO BIOLOGICAL RESOURCES

Goal/Policy No.	Goal/Policy Content
Objective CIR-1.8	Minimize transportation-related energy use and impacts on the environment.
Policy P1	Transportation projects shall avoid disrupting sensitive environmental resources.
Open Space and Conservation Element	
<i>Goal OSC-1</i>	The protection of rare, endangered and threatened plant and animal species.
Objective OSC-1.1	Preserve habitats that may support rare, endangered or threatened plant and animal species.
Policy P1	New development shall meet all federal, State and regional regulations for habitat and species protection.
Policy P3	New development should incorporate native, drought tolerant vegetation into landscape plans and reduce the use of invasive, non-native plant species.
<i>Goal OSC-5</i>	Efficient use of resources throughout the City of Tracy.

Source: City of Tracy General Plan, 2011.

C. Existing Conditions

1. Vegetation and Wildlife Habitat

The Specific Plan Area is located in the rolling grassland hills of southwestern San Joaquin County, between 80 and 200 feet elevation. Most of the Specific Plan Area has been extensively altered by past and on-going agricultural practices, primarily irrigated farming, dryland farming and cattle grazing. There are a number of existing buildings and structures within the Specific Plan Area including the following: eleven existing residences and associated structures; a PG&E gas facility; two public roadways (Mountain House Parkway and Hansen Road); and a cell tower installation and related equipment building. But most of the area remains undeveloped and is dominated by non-native grasslands and ruderal (weedy) cover. The Delta-Mendota Canal, Mountain House Parkway, Hansen Road, Schulte Road, and Interstate 205 have intercepted and disrupted natural drainage patterns in some locations. Man-made drainage ditches and channels have been installed in some locations to route surface runoff adjacent to roadways and along field margins, and under the Delta-Mendota Canal. Below is a description of vegetation and wildlife characteristic of the Specific Plan Area.

a. Grasslands and Agricultural Fields

Non-native grasslands and dryland farming occupy most of the Specific Plan Area. Cropping patterns vary both seasonally and annually, which subsequently affects the cover types. The grassland cover is composed of non-native grasses and forbs, such as wild oat (*Avena fatua*), soft chess (*Bromus mollis*), dove weed (*Eremocarpus setigerus*), bindweed

⁵ U.S. Fish and Wildlife Service and California Department of Fish & Game, 2004, *Proposal for a Minor Amendment to the San Joaquin Multi-Species Habitat Conservation and Open Space Plan Annual Report, San Joaquin County, California*, letter to Julia E. Greene, Executive Director, San Joaquin Council of Governments, from Lori Rinek, Division Chief, Endangered Species Program, USFWS and Dr. Larry Eng, Assistant Regional Manager, CDFG, dated March 4.

(*Convolvulus arvensis*), and other non-native annuals. A number of ruderal (weedy) species occur in the grassland, such as black mustard (*Brassica nigra*), bull thistle (*Cirsium vulgare*), wild radish (*Raphanus sativa*), cocklebur (*Xanthium strumarium*), prickly ox-tongue (*Picris echioides*), bur clover (*Medicago polymorpha*), yellow-star thistle (*Centaurea solstitialis*). Some roadside ditches and canals are routinely treated with herbicides, which prevents establishment of any plant cover and eliminates habitat value for most wildlife.

The grasslands and areas of ruderal cover support smaller mammals, reptiles, and birds, and are used as foraging habitat for raptors and larger mammals. Field and roadway margins are particularly important for wildlife in agricultural areas as they tend to provide less disturbed conditions. Species such as California vole, California ground squirrel, pocket gopher, black-tailed jackrabbit, and gopher snake are able to forage and expand their range as crops mature. Raptors such as American kestrel, marsh hawk, red-tailed hawk, barn owl, and great-horned owl forage in the fields and margins where prey populations are present. Several special-status species known from the Specific Plan Area vicinity, such as the Swainson's hawk, burrowing owl, and other raptors, are dependent on the remaining grassland habitat where prey is abundant. These species often utilize the agricultural fields when protective cover and forage opportunities are available. While areas of intensively managed fields generally have limited habitat value, some species of wildlife have become adapted to resources provided by agricultural crops, including Swainson's hawk. As crops are harvested and rotated, the abundance of rodents and other prey populations, and the foraging activity of mammalian, reptilian, and avian predatory species also changes. Field and roadway margins are particularly important for wildlife in agricultural areas as they tend to provide less disturbed conditions.

b. Landscaped Areas

Ornamental trees, shrubs and groundcovers have been planted around the existing rural residences and developed parcels adjacent to the Specific Plan Area. These consist of primarily non-native species such as pines, eucalyptus, palms, and fruit trees.

The trees and dense shrubs provide nest locations, roosting substrate, and cover for wildlife, particularly birds. Typical bird species which may frequent landscaped areas include: mourning dove, northern mockingbird, magpie, crow, American robin, house finch, European starling, and house sparrow. Raptors may use the trees for nesting, and several species of bats may utilize barns and abandoned structures for roosting.

c. Riparian Scrub and Woodland

The upper segment of the central drainage supports the only significant native vegetation in the Specific Plan Area, dominated by a stand of native willows (*Salix* spp.) that extend down the corridor where sufficient surface water is present. Other species associated with this drainage include umbrella sedge (*Cyperus eragrostis*), cattail (*Typha latifolia*), buttercup (*Ranunculus muricatus*), and scattered Fremont cottonwood (*Populus fremontii*).

The riparian scrub provides important cover for wildlife in an area that is otherwise dominated by open grassland and agricultural fields. The dense willow shrubs provide roosting and nesting substrate for birds, as well as protective cover California ground squirrel, black-tailed jackrabbit. The aquatic habitat of the drainage provides drinking water to wildlife when surface water is present.

d. Freshwater Marsh and Seasonal Wetlands

Several locations in the Specific Plan Area support freshwater marsh and potential seasonal wetlands. The largest of these features is a seasonal wetland occupying approximately two acres in the northwestern portion of the Specific Plan Area. This seasonal wetland is characterized by non-native, transitional wetland species such as perennial ryegrass (*Lolium perenne*), heliotrope (*Heliotropium curassavicum*), rabbitsfoot grass (*Polygomon monspeliensis*), hyssop loosestrife (*Lythrum hyssopifolium*), curly dock (*Rumex crispus*), and prickly ox-tongue, bordered by black mustard, wild oats and other grassland species. Transitional wetland species also occur at a man-made basin (approximately 0.30 acre in total) along the south side of I-205 and west of the Hanson Road, and at several seasonal ponds that have formed along the west side of the Delta-Mendota Canal where surface drainage was interrupted by construction of the canal. Vegetation associated with

most of these features consists of non-native perennial ryegrass, curly dock, rabbitsfoot grass, and hyssop loosestrife. But one seasonal pond along the west side of the Delta-Mendota Canal closest to South Mountain House Parkway supports a dense stand of native cattail.

Although the scattered locations supporting freshwater marsh and potential seasonal wetland habitat are limited in extent, they do provide important cover, nesting substrate, and foraging habitat for many species of wildlife. Areas supporting cattails and other dense vegetation are most likely used by several species of birds, such as red-winged blackbird, egrets, and herons, and seasonal open water habitat is most likely used by ducks and other migratory waterfowl.

2. Wetlands

The extent of potential jurisdictional wetlands and regulated “other waters of the U.S.” in the Specific Plan Area were determined based on the 2001 *Revised Wetland Delineation* and the 2012 *Preliminary Wetland Delineation* prepared by Moore Biological Consultant, together with the results of a preliminary wetland assessment conducted during preparation of this BRA. Based on this information, a total estimated 5.12 acres of potential jurisdictional waters occur in the Specific Plan Area. This must be confirmed through preparation of an updated wetland delineation encompassing the entire Specific Plan Area and verification by the USACE. But the past studies conducted in 2001 and 2012, together with the preliminary wetland assessment conducted as part of the BRA provides sufficient information to evaluate potential impacts under CEQA. **Table 2** provides a summary of these various potential jurisdictional waters and **Figure 1** shows their location in the Specific Plan Area. These consist of:

- Jurisdictional “other waters of the U.S.” mapped along the central drainage channel in the 2001 *Revised Wetland Delineation*, and continuing to the east along a man-made ditch that then turns north at Hansen Road and eventually passes under I-205.
- A man-made basin of approximately 0.30 acres in size occurs along the man-made ditch on the south side of I-205 and west of the Hansen Road overcrossing, and supports seasonal wetland species. Although man-made, this feature may be considered jurisdictional given it is now part of the hydrologic extension of the central drainage channel.
- A potential seasonal wetland area of approximately 2.00 acres in the northwestern corner of the Specific Plan Area, as mapped in *the 2012 Preliminary Wetland Delineation*, supporting a cover of primarily non-native transitional wetland species.

Table 2: Summary of Potential Waters on the Cordes Ranch Site

Potential Jurisdictional Water	Estimated Acreage
Potential Jurisdictional Wetlands (W)	
Seasonal Wetland in Northwest Corner (ESW-1)	2.00
Seasonal Wetland at Hanson Road Basin (ESW-2)	0.30
Other Waters of the United States (OW)	
Confirmed W-1 from 2001 <i>Revised Wetland Delineation</i>	2.56
Extension of W-1 Channel (EW-1 and EW-2)	0.26
Total Waters (W+OW)	5.12

Source: Moore Biological Consultants, 2001 and 2012, and Environmental Collaborative.

3. Special-Status Species

The CNDDDB records and other information sources indicate that occurrences of several plant and animal species with special-status have been recorded from or are suspected to occur in the Tracy vicinity. Several of these have been reported from within or near the Specific Plan Area, most of which are associated with the grassland habitat. A few species have been reported from agricultural areas and field margins, primarily nesting locations for burrowing owl and Swainson's hawk, and other bird species. **Figure 2** shows the known occurrences of special-status species on or in the vicinity of the Specific Plan Area, as mapped by the CNDDDB. Below is a summary of the special-status plant and animal species suspected to occur in the Tracy vicinity and/or the Specific Plan Area.

a. Plant Species

Based on recorded geographic range, plant species with special-status which are known or suspected from the Tracy vicinity include: large-flowered fiddleneck (*Amsinkia grandiflora*), big tarplant (*Blepharizonia plumosa* ssp. *plumosa*), slough thistle (*Cirsium crassicaule*), delta button celery (*Eryngium racemosum*), Mason's lilaeopsis (*Lilaeopsis masonii*), Sanford's arrowhead (*Sagittaria sanfordii*), wright's trichocoronis (*Trichocoronia wrightii* var. *wrightii*), and caper-fruited tropidocarpum (*Tropidocarpum capparideum*), among others. Most of these are considered rare (list 1B) by the California Native Plant Society in the *Inventory of Rare and Endangered Plants of California* (see subsection 1.a for definition of terms), with varied State and federal listing status.

While the above-referenced species may occur in certain areas of Tracy, They are not expected to occur in the Specific Plan Area. Due to the extent of past and on-going disturbance from agricultural production, canal maintenance, and other development activities, the potential for occurrence of species-status plant species in the Specific Plan area is generally considered to be low. As indicated in **Figure 2**, general occurrences of caper-fruited tropidocarpum and big tarplant extend over the southern edge of the Specific Plan Area, but these are presumably extirpated (locally extinct) as a result of existing development and agricultural practices.

b. Animal Species

A number of bird, mammal, reptile, fish, and insect species with special-status are known or suspected from the Tracy vicinity. These include: tricolored blackbird (*Agelaius tricolor*), Cooper's hawk (*Accipiter cooperi*), sharp-shinned hawk (*Accipiter striatus*), golden eagle (*Aquila chrysaetos*), burrowing owl (*Athene cunicularia*), Ferruginous hawk (*Buteo regalis*), Swainson's hawk (*Buteo swainsoni*), northern harrier (*Circus cyaneus*), white-tailed kite (*Elanus caeruleus*), California horned lark (*Eremophila alpestris actia*), prairie falcon (*Falco mexicanus*), loggerhead shrike (*Lanius ludovicianus*), California mastiff bat (*Eumops perotis californicus*), red bat (*Lasiurus blossevilli*), pale big-eared bat (*Plecotus townsendii pallescens*), Townsend's western big-eared bat (*Plecotus townsendii townsendii*), San Joaquin kit fox (*Vulpes macrotis mutica*), silvery legless lizard (*Anniella pulchra pulchra*), western pond turtle (*Emys marmorata*), San Joaquin whipsnake (*Masticophis flagellum ruddockei*), coast horned lizard (*Phrynosoma coronatum frontale*), California tiger salamander (*Ambystoma californiense*), California red-legged frog (*Rana aurora draytonii*), and western spadefoot (*Scaphiopus hammondi*).

Of this list of 24 species, only six have been mapped as occurring in or near the Specific Plan Area by the CNDDDB, as indicated in **Figure 2**.⁶ Most of the CNDDDB records from the vicinity of the Specific Plan Area are limited to sightings of burrowing owl, Swainson's hawk, and San Joaquin kit fox. Several records of California horned lark, California red-legged frog, and coast horned lizard have been reported from the undeveloped lands to the west and north of the Specific Plan Area, and there remains a potential for their occurrence where suitable habitat is present. The following provides a brief summary of the species with known occurrences in the western Tracy vicinity, and conclusions regarding their potential for occurrence in the Specific Plan Area.

⁶ Because many of these species have no legal protective status under the State or federal Endangered Species Acts, occurrence information is not typically monitored by the CNDDDB. Roost and nesting habitat for these unlisted species is still afforded some level of protection as part of CEQA review, the federal Migratory Bird Treaty Act, and regulations of the CDFW.

Special-Status Mammals

San Joaquin Kit Fox (*Vulpes macrotis mutica*) - Federal status: Endangered; State status: Threatened. San Joaquin kit fox is known to occur in western San Joaquin County. It occurs in annual grasslands and alkali scrub communities with suitable prey base and loose-textured sandy soils where dens can be enlarged from California ground squirrel burrows. Several occurrences of this species have been reported from the west Tracy vicinity in past studies, although most are from west of I-580. As indicated in **Figure 2**, occurrences of San Joaquin kit fox have been reported just outside the Specific Plan Area, between the Delta-Mendota Canal and the California Aqueduct and to the west of the California Aqueduct. Suitable grassland foraging habitat occurs in portions of the Specific Plan Area where ground squirrels are abundant.

Roosting Bats – Federal status: none; State status: Species of Special Concern. A number of special-status bat species are known or suspected from the Tracy vicinity, including: California mastiff bat (*Eumops perotis californicus*), red bat (*Lasiurus blossevilli*), pale big-eared bat (*Plecotus townsendii pallescens*), and Townsend's western big-eared bat (*Plecotus townsendii townsendii*). Most of these are considered to be Species of Special Concern by the CDFW and are classified as High Priority species in the region by the Western Bat Working Group. Most of these species are typically known to roost in colonies established in abandoned buildings, caves, and crevices. Preferred cave and mine habitat for most of these species is absent in the Specific Plan Area, and most of the existing structures appear to be occupied and unsuitable for roosting by sensitive bat species. However, a detailed assessment of the few open barns and older structures was not performed as part of the BRA, and there remains a remote potential that they may be used for roosting by one or more special-status bat species.

Amphibians and Reptiles

California Red-legged Frog (*Rana aurora draytonii*) - Federal status: Threatened; State status: Species of Special Concern. California red-legged frog is generally restricted to riparian habitats in California and northern Baja California. According to descriptions by the USFWS, California red-legged frog was presumed extirpated from the floor of the Central Valley by 1960. As indicated in **Figure 2**, occurrences of this subspecies have been reported by the CNDDDB to the west of the Specific Plan Area between the Delta-Mendota Canal and the California Aqueduct. A general occurrence of California red-legged frog also extends over the southern portion of the Specific Plan Area. In general, suitable breeding and retreat habitat for this subspecies is generally absent in the Specific Plan Area due to the seasonal nature of the surface water features and lack of protective cover. The upper end of the central drainage now supports dense willow riparian habitat that reportedly is supported by runoff from commercial activities to the south. The dense willows do provide suitable protective cover for California red-legged frog, and larger man-made pools along the west side of the Delta-Mendota Canal do appear to provide marginal breeding habitat. However, existing development to the southwest generally separates these locations of suitable habitat from known occurrences of California red-legged frog and limit the potential for dispersal into the Specific Plan Area. Although the potential for occurrence of California red-legged frog in the Specific Plan Area appears remote, no protocol habitat assessment or surveys were conducted as part of the BRA.

California Tiger Salamander (*Ambystoma californiense*) - Federal status: Threatened; State status: Species of Special Concern. California tiger salamander is commonly found in temporary (minimum of three to four months) or permanent water sources (*i.e.*, vernal pool, ephemeral pool, or human-made ponds) surrounded by upland grassland habitats that support small mammal burrows. Their range is restricted to the Central Valley and Coast Range of California from Butte County south to Santa Barbara County. The CNDDDB records numerous occurrences of this species in the rolling hills west of I-580, between Tracy and Livermore, but none within at least two miles of the Specific Plan Area, as indicated in **Figure 2**. The California Aqueduct, I-580, and the Delta-Mendota Canal, each of which constitutes a significant barrier for dispersal to the east, separate the known occurrences of California tiger salamander from the Specific Plan Area. Marginally suitable breeding habitat is present in seasonal ponds and wetlands in the Specific Plan Area where water is retained long enough through the spring months to allow for metamorphosis. But

these are man-made features created where water ponds along the west side of the Delta-Mendota Canal, or the agricultural tailing pond at the downstream end of the central drainage. Suitable upland retreat habitat is present in the surrounding grassland habitat adjacent to these features. However, the major barriers to migration from known occurrences of California tiger salamander to the west of I-580 most likely preclude occurrence of this species in the Specific Plan Area. Although the potential for occurrence of California tiger salamander in the Specific Plan Area appears remote, no protocol habitat assessment or surveys were conducted as part of the BRA.

Coast Horned Lizard (*Phrynosoma coronatum frontale*) - Federal status: None; State status: Species of Special Concern. This lizard requires loose sandy soil in which it can rapidly dig in order to avoid predators. The soils of the Specific Plan Area are generally too heavy for this type of digging by horned lizards. Tilling as part of typical agricultural practices over much of the Specific Plan Area further limit habitat suitability and this species is presumed absent from the Specific Plan Area.

San Joaquin Whipsnake (*Masticophis flagellum ruddocki*) - Federal Status: None; State Status: Species of Special Concern. San Joaquin whipsnake occurs on the west side of the San Joaquin Valley and on the valley floor in Kern County in sparse grasslands and saltbush scrub communities with little or no trees. The whipsnake requires the presence of mammal burrows for refuge, temperature regulation, and possibly egg-laying. San Joaquin whipsnakes are unlikely to be present in the Specific Plan Area due to the lack of suitable grassland and saltbrush scrub habitat.

Silvery Legless Lizard (*Anniella pulchra pulchra*) - Federal Status: None; State Status: Species of Special Concern. This lizard is found in sandy or loose loamy soils under the sparse vegetation of beaches, chaparral, pine-oak woodland, or under sycamores, cottonwoods, or oaks that grow on stream terraces. Their adaptation for burrowing, which requires soils with a high sand fraction, makes legless lizards vulnerable to ground disturbing activities such as agriculture. Suitable habitat for this species is generally absent within the Specific Plan Area, and it is assumed to be absent.

Western Spadefoot (*Spea hammondi*) - Federal status: None; State status: Species of Special Concern. Western spadefoot is a toad that inhabits grassland habitats of central California and the southern California coast. It requires temporary pools of water that lack predators such as fish, bullfrogs, or crayfish, for egg laying. The extent of past and on-going disturbance due to agricultural tilling limits the potential for occurrence of this species in the Specific Plan Area, but there remains a remote possibility that it may be present where grassland habitat remains in proximity to seasonal wetlands and drainages.

Western Pond Turtle (*Emys marmorata*) - Federal status: None; State status: Species of Special Concern. Western pond turtle is a medium-sized brown or olive-colored aquatic turtle, and is found west of the Sacramento-San Joaquin Delta, and southward to northern Baja California, except in desert areas. The pond turtle is normally found in and along riparian areas. The irrigation ditches and agricultural ponds in the Specific Plan Area generally do not provide habitat for this species because they are dry for much of the year.

Special-Status Birds

Burrowing Owl (*Athene cunicularia*) - Federal status: None; State status: Species of Special Concern. Burrowing owls are small, terrestrial owls of open country. Burrowing Owls favor flat, open grassland or gentle slopes and sparse-shrubland ecosystems, typically with sparse or nonexistent tree or shrub canopies. This owl species uses burrows of California ground squirrel for nesting and retreat, and forages in surrounding areas of open grasslands and pastureland typical of the Specific Plan Area. As indicated in **Figure 2**, burrowing owl have been reported throughout the Specific Plan Area and vicinity, with individuals reported along the east side of South Hansen Road, the east side of South Mountain House Parkway, and near the terminus of the central drainage. Individual burrowing owls were also

observed along the banks of the Delta-Mendota Canal in the northwestern portion of the Specific Plan Area during the field reconnaissance surveys conducted during preparation of this BRA.

California Horned Lark (*Eremophila alpestris actia*) - Federal status: None; State status: Species of Special Concern. This subspecies is a widespread breeder along the coast and in the Central Valley of California, and represents the only subspecies that breeds in the region. This species may breed in suitable habitat within the Specific Plan Area, such as fallow fields and open grasslands. No active nests were detected, but systematic nesting surveys were not conducted as part of the BRA and there remains a possibility that new nests could be established in the future in the Specific Plan Area.

Cooper's Hawk (*Accipiter cooperii*) - Federal status: None; State status: None. Cooper's hawk is protected under the federal Migratory Bird Treaty Act and California Fish and Wildlife Code as a raptor. It typically prefers landscapes where wooded areas occur in patches and groves which facilitates the ambush hunting tactics employed by this species. It is sometimes found in areas of dense landscaping, in addition to natural woodland habitat. Suitable nesting habitat for this species is generally absent, but individuals may occasionally forage in the Specific Plan Area, or pass through during periods of migration.

Ferruginous Hawk (*Buteo regalis*) - Federal status: None; State status: Species of Special Concern. This species winters in open habitats throughout central and southern California. The fallow agricultural fields and open grassland habitat within the Specific Plan Area could provide suitable wintering foraging habitat for individuals of this species.

Golden Eagle (*Aquila chrysaetos*) - Federal status: None; State status: Species of Special Concern, Protected. Golden eagles are an uncommon permanent resident and migrant in California. The home range of breeding pairs of eagles may include a number of alternate nests, usually located on cliffs, in large trees, or on high-tension towers. Eagles, their nests, and eggs are fully protected in California by the CDFW. In addition, Golden eagles and their nests are federally protected under the Bald Eagle Protection Act and the Migratory Bird Treaty Act. No golden eagle nests, were observed in the Specific Plan Area during field reconnaissance surveys conducted as part of the BRA, and it is unlikely that new nests of this species would be established in the future due to the intensity of human activity. However, the open grasslands and agricultural fields could provide suitable foraging habitat for this species.

Loggerhead Shrike (*Lanius ludovicianus*) - Federal status: None; State status: Species of Special Concern. Loggerhead shrikes prefer open habitats interspersed with shrubs, trees, poles, fences, or other perches from which they can hunt. Nests are built in densely vegetated shrubs or trees, often containing thorns, which offer protection from predators and upon which prey items are impaled. They breed between early February and late March with the peak of breeding between mid-March and late June. Most of the Specific Plan Area provides suitable foraging habitat for loggerhead shrike, and individuals were observed during the field reconnaissance surveys conducted as part of the BRA. No active nests were detected, but no systematic nesting surveys were conducted as part of the BRA and there remains a possibility that one or more nests could occur or that new nests could be established in the future within the Specific Plan Area.

Northern Harrier (*Circus cyaneus*) - Federal status: None; State status: Species of Special Concern. Northern Harrier is commonly found in open grasslands, agricultural areas, and marshes. Nests are built on the ground in areas where dense cover is present to provide cover and protection. Suitable nesting habitat for this species is generally absent within the Specific Plan Area due to routine tilling and extensive grazing. Most of the Specific Plan Area provides suitable foraging habitat for northern harrier, and individuals were observed during the field reconnaissance surveys conducted as part of the BRA. No active nests were detected, but no systematic nesting surveys were conducted as part of the BRA and there remains a remote possibility that one or more nests could occur or that new nests could be established in the future within the Specific Plan Area.

Prairie Falcon (*Falco mexicanus*) - Federal status: None; State status: Species of Special Concern. This large falcon is found in grasslands, deserts, and other open habitats in southwestern North America. Though the Specific Plan Area provides suitable foraging habitat for this species, sheltered cliffs that are required for nesting are absent. Prairie Falcons nesting in nearby areas, as well as wintering or migrant falcons could use the Specific Plan Area for foraging.

Sharp-shinned Hawk (*Accipiter striatus*) - Federal status: None; State status: None. Sharp-shinned hawk is protected under the federal Migratory Bird Treaty Act and California Fish and Wildlife code as a raptor. This species is typically found in dense woodland or riparian habitats bordering open areas. Nest areas are usually within 90 meters of a water source and located in dense stands of even-aged trees on north facing slopes. Sharp-shinned hawks most likely pass through the Specific Plan Area in spring and fall, during periods of migration. However, suitable nesting habitat is generally absent due to the lack of woodland and riparian habitat.

Swainson's Hawk (*Buteo swainsoni*) - Federal status: None; State status: Threatened. The preferred breeding habitat of this raptor consists of large trees, which serve as nesting locations, proximate to extensive areas of grassland and/or open fields, which serve as foraging habitat. Foraging habitats in the Central Valley include alfalfa, disked and fallow fields, and dryland pasture. Most of the Swainson's hawk occurrence records are for nests in trees along Old River, although this species has been known to nest in isolated trees along roadways and in fields. These include nest locations approximately one mile from the Specific Plan Area along South Lammers Road, West Von Sosten Road, and north of West Grant Line Road, as indicated in **Figure 2**. No active nests have been reported by the CNDDDB within the Specific Plan Area or were detected, but much of the Specific Plan Area provides suitable foraging habitat for Swainson's hawk and there remains a possibility that one or more nests could occur or that new nests could be established in the future within the Specific Plan Area.

Tricolored Blackbird (*Agelaius tricolor*) - Federal status: None; State Status: Species of Special Concern. Tricolored blackbirds are found almost exclusively in the Central Valley, and central and southern coastal areas of California. This species typically nests in tall, dense, stands of cattails or tules, but also nests in blackberry, thickets of wild rose, and tall herbs. Nesting colonies are typically located near standing or flowing freshwater. Tricolored blackbirds form large, often multi-species, flocks during the non-reproductive period and range more widely than during the reproductive season. Suitable nesting habitat for tricolored blackbird is generally absent within the Specific Plan Area and there are no colonies reported in the immediate vicinity by the CNDDDB as indicated in **Figure 2**. However, suitable foraging habitat exists for this species throughout the agricultural and ruderal habitats.

White-tailed Kite (*Elanus leucurus*) - Federal status: None; State status: Fully Protected. This species prefers habitats with low ground cover and variable tree growth. Kite nests are built near the tops of oaks, willows, or other dense broad-leafed deciduous trees in partially cleared or cultivated fields, grassy foothills, marsh, riparian, woodland, and savannah. White-tailed Kites have been observed within the Specific Plan Area. No active nests were detected, but no systematic nesting surveys were conducted as part of the BRA and there remains a possibility that one or more nests could occur or that new nests could be established in the future within the Specific Plan Area.

4. Sensitive Natural Communities

Sensitive natural communities -- natural community types considered to have a high inventory priority with the CNDDDB because of their rarity -- are absent from the Specific Plan Area. The small stand of willow-dominated riparian scrub at the upper end of the central drainage lacks the aerial extent and species diversity to represent a sensitive natural community, and the scattered seasonal wetland features are dominated by non-native species. Areas that qualify as jurisdictional wetlands are still important biologically, and are regulated by State and/or federal resource agencies, as discussed above.

D. Standards of Significance

Based on Section 15065 and the Environmental Checklist in Appendix G of the CEQA Guidelines, a proposed project could be considered to have significant impacts to biological and wetland resources if it would have:

1. A substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, regulations, or by the CDFW or USFWS.
2. A substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the CDFW or USFWS.
3. A substantial adverse effect on federally protected wetlands as defined by Section 404 of the CWA through direct removal, filling, hydrological interruption, or other means.
4. Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.
5. Conflict with any applicable land use plans, policies, regulations, or ordinances, of an agency with jurisdiction over the project, adopted for the purpose of protecting biological resources or avoiding and mitigating impacts to biological resources.
6. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or State habitat conservation plan.

E. Project Impact Analysis

1. Special-Status Species

a. Plant Species

Proposed development is not expected to affect any populations of special-status plant species. No specific occurrences of special-status species have been reported from the Specific Plan Area, according to the records maintained by the CNDDDB. Although no systematic surveys have been conducted over the remaining natural habitat areas in the Specific Plan Area, past and on-going disturbance such as agricultural practices, canal and roadway construction and maintenance, and other development activities, have generally eliminated the potential for occurrence of special-status plant species in the Specific Plan Area.

Participation in the SJMSCP would address any potential impacts on special-status plant species, in the remote instance that one or more occurrences are present in the Specific Plan Area. This would include compliance with Incidental Take Minimization Measures defined in Section 5.2 of the SJMSCP, which would include conducting preconstruction surveys and salvage measures in the unlikely event of any occurrences of special-status plant species being present in the Specific Plan Area. For the above reasons, potential impacts of the Project on special-status species would be considered less than significant.

b. Animal Species

Development of the Specific Plan Area would result in the conversion of an estimated 1,728 acres of existing grassland and agricultural habitat to urban development, eliminating its suitability for numerous special-status animal species. This includes foraging habitat for Swainson's hawk, burrowing owl and numerous other bird species, possible nesting habitat for burrowing owl, and possible foraging and dispersal habitat for San Joaquin kit fox, among others. Suitable grassland and agricultural habitat occurs for all of these species in the Specific Plan Area.

With the exception of the central drainage corridor to be preserved and enhanced as an open space feature, Project implementation would result in regrading of almost the entire Specific Plan Area, eliminating existing vegetative cover and resident populations of common invertebrates and vertebrate species that serve as prey to special-status species.

New roadways, structures, and landscaping would occupy most of the Specific Plan Area, and the increase in human activity, noise, and night-time lighting would significantly impair future dispersal and use by special-status animal species. Tree, shrub, and groundcover plantings would eventually become established as part of enhancement along the central drainage, street frontages, the 35-acre Central Green, and other park features in the Specific Plan Area. Birds and other wildlife adapted to urbanized areas would eventually utilize the nesting and foraging substrate provided by new landscaping as it matures. However, these areas would not be suitable for continued use by most of the existing wildlife species that currently occupy the Specific Plan Area and are dependent on large, open areas of grassland and agricultural cover as habitat. This includes the special-status animal species known or suspected to occur in the Specific Plan Area and vicinity.

The Specific Plan Area is located within Central/Southwest Transition Zone of the SJMSCP. The SJMSCP compensates for conversions of open space to urban development and the expansion of existing urban boundaries, among other activities, for public and private activities. All of the special-status animal species known or suspected to possibly occur in the Specific Plan Area are covered under the take and compensatory mitigation provisions of the SJMSCP. Project applicants have two options if their project is located in a jurisdiction participating in the SJMSCP and would have significant impacts on special-status species: mitigating through participation under the SJMSCP, or negotiating directly with the State and/or federal permitting agencies to secure incidental take authorizations.

If a project applicant opts for coverage through participation in the SJMSCP, then the following options are available, unless their activities are otherwise exempted: pay the applicable fee; dedicate, as conservation easements or fee title, habitat lands; purchase approved mitigation bank credits; or, propose an alternative mitigation plan. Participation in the SJMSCP under the fee payment option would require payment of fees based on valuation of each acre of land converted to urban use as well as compliance with Incidental Take Minimization Measures defined in Section 5.2 of the SJMSCP. The Incidental Take Minimization Measures pertinent to the Specific Plan Area include pre-construction surveys for covered species, as well as measures to prevent and control ground squirrel occupation of the area early in the planning process. If participating in the fee payment option, the Project applicant would be required to pay fees when permits for ground disturbance (such as grading and/or issuance of building permits) are issued, as set forth in the SJMSCP, and to implement recommendations (called “minimization measures”) as required by an SJCOG appointed qualified biologist on a case-by-case basis throughout the Cordes Ranch Specific Plan Area prior to ground disturbance of that area. For the above reasons, without mitigation, the potential impacts of the Project on special-status animal species would be *significant*.

Impact BIO-1: Proposed development would result in a significant impact on special-status animal species known or with potential to utilize the existing habitat in the Specific Plan Area.

Mitigation Measure BIO-1: To mitigate the potential adverse impacts on special-status species, and provide for the incidental take of State and/or federally listed species, the applicant shall either: 1) participate in the SJMSCP and comply with all required Incidental Take Minimization Measures or 2) secure incidental take authorizations for State and/or federally-listed species directly from the CDFW and USFWS, respectively. Participation in the SJMSCP shall include compliance with all relevant Incidental Take Minimization Measures pertinent to the Specific Plan Area, including pre-construction surveys for covered species to confirm presence or absence and provide for their relocation, if necessary. Issuance of grading and construction permits should be contingent on providing evidence of either 1) compliance with the SJMSCP or 2) a 2081 Permit from the CDFW and Biological Opinion from the USFWS to the City of Tracy Development Services Director to ensure compliance with applicable regulations and ensure adequate compensatory mitigation has been provided.

Significance After Mitigation: Implementation of the mitigation above would reduce potential impacts on special-status animal species to a *less-than-significant* level.

c. Nesting Birds

No evidence of any tree nesting activity was observed during the field reconnaissance surveys conducted as part of this BRA, but systematic surveys were not conducted and new nests could be established in trees and dense scrub vegetation, or in burrows for burrowing owl. If nests are established in the future, ground disturbance and vegetation removal could inadvertently result in the destruction of a nest in active use, which would be a violation of the Migratory Bird Treaty Act and CDFW Code. The Migratory Bird Treaty Act (16 USC 703) prohibits the taking, hunting, killing, selling, purchasing, etc. of migratory birds, parts of migratory birds, and their eggs and nests. Most native bird species within the Specific Plan Area and vicinity are covered by the Migratory Bird Treaty Act. Section 3503.5 of the CDFW Code specifically protects the nests and eggs of raptors and essentially overlaps with the Migratory Bird Treaty Act. Potential impacts on any nests in active use are considered to be a *potentially significant* impact.

Impact BIO-2: Proposed development could result in inadvertent loss of bird nests in active use, which would be a violation of the Migratory Bird Treaty Act and CDFW Code.

Mitigation Measure BIO-2: To avoid the potential for disturbance of nesting birds on or near the Specific Plan Area, schedule the initiation of any vegetation removal and grading for the period of September 1 through February 15. If construction work cannot be scheduled during this period, a qualified biologist shall conduct pre-construction surveys for nesting birds according to the following guidelines:

- The preconstruction surveys shall be conducted by the qualified biologist no later than 14 days prior to the start of vegetation removal or initiating Project grading.
- If birds protected under the Migratory Bird Treaty Act are found nesting, then appropriate construction buffers shall be established to avoid disturbance of the nests until such time that the young have fledged. The size of the nest buffer shall be determined by the biologist in consultation with CDFW, and shall be based on the nesting species, its sensitivity to disturbance, and expected types of disturbance. Typically, these buffers range from 75 to 250 feet from the nest location.
- Nesting activities shall be monitored periodically by a qualified biologist to determine when construction activities in the buffer area can resume.
- Once the qualified biologist has determined that young birds have successfully fledged, a monitoring report shall be prepared and submitted to the City of Tracy Development Services for review and approval prior to initiating construction activities within the buffer area. The monitoring report shall summarize the results of the nest monitoring, describe construction restrictions currently in place, and confirm that construction activities can proceed within the buffer area without jeopardizing the survival of the young birds. Construction within the designated buffer area shall not proceed until the written authorization is received by the applicant from the Development Services Director.
- The above provisions are in addition to the preconstruction surveys to confirm presence or absence of nesting Swainson's hawk, burrowing owl, and other special-status species as required under the Incidental Take Minimization Measures of the SJMSCP.

Significance After Mitigation: Implementation of the mitigation above would reduce potential impacts on nesting birds to a *less-than-significant* level.

2. Riparian Habitat or Other Sensitive Natural Community

Based on field observations, no well-developed riparian habitat or other areas that qualify as sensitive natural communities occur in the Specific Plan Area. The scattered areas of jurisdictional waters are regulated by State and/or federal resource agencies, as discussed under Subsection C.4, but are not considered sensitive natural communities as defined by the CNDDB. *No impacts* on sensitive natural communities are anticipated as a result of the Project.

3. Wetlands

As currently proposed, direct modifications to potential jurisdictional wetlands and other waters of the U.S. would result in the elimination of the two seasonal wetland features, new crossings, pipe outfalls, and regrading of segments of the central drainage channel, and culverting of the man-made drainage ditch that conveys surface flows from the central drainage channel to I-205. The Specific Plan (see Figure 3.1 of the Specific Plan) would include structures and parking over the potential two-acre seasonal wetland in the northwestern portion of the Specific Plan Area, and a reconstructed series of detention basins and redesign of stormwater flows that would eliminate the man-made basin at the southwest corner of the I-205 and Hansen Road overcrossing. A detailed wetland delineation would have to be prepared and verified by the Corps to confirm the extent of jurisdictional waters, but based on the preliminary wetland assessment it appears that an estimated 2.86 acres of jurisdictional wetlands and other waters of the U.S. would be filled or modified as a result of Project implementation.

Indirect impacts to wetlands and aquatic habitat typically result from the increased potential for erosion and water quality degradation associated with urban development. Creation of impervious surfaces tends to magnify the volume of runoff and potential for urban pollutants, with perhaps the greatest potential damage resulting from sedimentation during the construction phase of a project and from new non-point discharge of automobile by-products, fertilizers and herbicides. However, implementation of adequate erosion control measures typically required as part of the RWQCB Water Quality Certification would serve to address potential indirect impacts on wetlands and water quality.

Proposed modifications to jurisdictional wetlands and waters would require authorization from the Corps, RWQCB and CDFW. Because authorizations are still required from jurisdictional agencies and no plans have been prepared to address direct and indirect impacts on potential jurisdictional wetlands and other waters of the U.S., this is considered a *significant* impact.

Impact BIO-3: Fill and modifications to jurisdictional wetlands and other waters would require authorization from the Corps and RWQCB while bridge crossings and pipe outfalls along the central drainage would require authorizations from the CDFW (Streambed Alteration Agreement).

Mitigation Measure BIO-3: To mitigate potential impacts on jurisdictional wetlands and other waters the following measures shall be implemented.

- A formal wetland delineation shall be prepared by a qualified wetland consultant and submitted to the Corps for verification to confirm the extent of jurisdictional wetlands and other waters of U.S. in the Specific Plan Area.
- Where verified waters of the U.S. are present and cannot be avoided, authorization for modifications to these features shall be obtained from the Corps through the Section 404 permitting process. Similarly, a Section 401 Certification shall be obtained from the RWQCB where waters of the U.S. are directly affected by the Project. All conditions required as part of the authorizations by the Corps and RWQCB shall be implemented as part of the Project.
- A CDFW Streambed Alteration Agreement shall also be obtained where necessary under applicable laws and regulations for any proposed Project activities that would affect the bed or banks of the central drainage and other features regulated by the CDFW in the Specific Plan Area. The applicant who is proposing to construct these improvements as part of an individual site-specific development proposal shall submit a notification form to the CDFW, shall obtain all legally-required agreements, and implement any conditions contained within that agreement.
- The acreage of waters of the U.S. and any riparian scrub habitat along the central drainage that would be removed by the Project shall be replaced or restored/enhanced on a “no-net loss basis” in accordance with Corps, RWQCB, and CDFW regulations, to the extent required by applicable laws and regulations.
- A detailed mitigation plan shall be prepared by a qualified wetland consultant for any jurisdictional wetlands or waters of the U.S. affected by proposed development, with replacement provided at a

minimum 1:1 ratio or as required by the regulatory agencies. The plan shall clearly identify the total wetlands and other jurisdictional areas affected by proposed improvements, as well as wetlands to be created, restored, or enhanced as part of the wetland mitigation. This shall preferably be accomplished on-site through adjustments to the proposed limits of development, with any replacement wetlands consolidated to the degree possible to improve existing habitat values. The plan shall specify performance criteria, maintenance and long-term management responsibilities, monitoring requirements, and contingency measures, and shall adhere to all applicable requirements and conditions imposed by the regulatory agencies.

- Consultation or incidental take permitting may be required under the California and federal Endangered Species Acts (as discussed above under Mitigation Measures BIO-1). To the extent required under applicable laws and regulations, an applicant for an individual site-specific development shall obtain all legally required permits or other authorizations from the USFWS and CDFW for the potential “take” of protected species under the Endangered Species Acts, either through participation in the SJMSCP or through separate incidental take authorizations.
- Temporary orange construction fencing shall be installed around the boundary of all delineated jurisdictional waters to the extent that they are being preserved so that they are not disturbed during construction. The fencing shall be placed a minimum of 25 feet out from the boundary of the wetland but may need to be adjusted if construction and/or restoration activities are to be conducted within this area. Grading, trail construction and restoration work within the wetland buffer zones shall be conducted in a way that avoids or minimizes disturbance of existing wetlands to be preserved in accordance with any conditions imposed by the regulatory agencies.
- Written evidence shall be provided to the City of Tracy Development Services that the applicant has secured all authorizations required by the Corps, RWQCB, and CDFW in connection with the individual, site-specific development proposal prior to issuance of a grading permit for that individual development at issue to ensure compliance with applicable regulations.

Significance After Mitigation: Implementation of the above mitigation measures, together with documentation submitted to City of Tracy Development Services regarding issuance of permits and any conditions required, would reduce the potential impacts on jurisdictional wetlands and waters to *less than significant*.

4. Wildlife Habitat and Movement Corridors

The Project would have a substantial impact on the existing agricultural and grassland cover in the Specific Plan Area, and the associated wildlife habitat functions and values. Opportunities for terrestrial wildlife movement beyond the Specific Plan Area are currently limited by I-205 to the north and the California Aqueduct to the west, and the Delta-Mendota Canal and existing industrial and commercial development to the southwest. Accordingly, the California Aqueduct and I-205 already pose substantial impediments to terrestrial wildlife movement, but both have locations where wildlife can move under or over these barriers, and I-205 is passable by wildlife late at night when traffic volumes are relatively low. However, wildlife currently have only limited obstructions for movement within the Specific Plan Area itself and to undeveloped lands to the east and southeast. Proposed development would encompass all but the central drainage channel and around the detention basins along the northern edge of the Specific Plan Area. Due to the extent of development and changes in habitat conditions, the proposed Project would permanently alter the suitability of much of the Specific Plan Area as natural habitat and a movement corridor for a number of terrestrial wildlife species, such as coyote, gray fox, long-tailed weasel, black-tailed jackrabbit, burrowing owl, and Swainson’s hawk, among many other species.

As described above, trees, shrubs and groundcover plantings would eventually become established as part of enhancement along the central drainage and other park and open space features throughout the Specific Plan Area. The vegetative cover provided by larger park areas, such as the enhanced corridor along the central drainage and the Central

Green, however, would be fragmented by roadways and structures, with limited opportunities for wildlife to move between these features and other enhanced areas in the Specific Plan Area. For the above reasons, this loss of movement opportunities for common terrestrial wildlife would be *significant*.

Impact BIO-4: The proposed Project would have a *significant and unavoidable* adverse impact on wildlife habitat and movement opportunities across the Specific Plan Area. Mitigation Measure BIO-1 would address the loss of suitable habitat for special-status species, and provide adequate compensatory mitigation for these species. However, no feasible measures are available to mitigate adverse impacts on wildlife movement opportunities on more common terrestrial wildlife without a substantial reduction in the extent of development and retention of existing grassland and agricultural cover in the Specific Plan Area.

5. Conflicts with Relevant Plans and Ordinances

Without implementation of the above mitigation, the Project and its effects on biological and wetland resources could be viewed as conflicting with City of Tracy General Plan Objective OSC-1.1, which focuses on preserving habitat for special-status species. A detailed discussion of the potential impacts of the proposed Project on special-status species is provided under Impact BIO-1.

However, while habitat would be impacted, the Project otherwise generally conforms to the General Plan policies by: (1) incorporating sustainability measures that help reduce transplantation-related energy use and impacts on the environment; (2) incorporating native, drought-tolerant vegetation into landscape plans; (3) adhering to all federal, State and local laws and regulations for species protection; and (4) facilitating species preservation efforts by participating in the SJMSCP. For the above reasons, the Project's impacts in this regard would be less-than-significant.

6. Conflicts with Adopted Habitat Conservation Plans

The Specific Plan Area is located within the sphere of influence of the SJMSCP. Applicants pursuing site-specific development under the Specific Plan would have the option of participating in the SJMSCP to address potential impacts on special-status species associated with conversion of existing habitat to urban uses. By participating in the SJMSCP, the applicant would be required to comply with all relevant conditions of the use agreement, including the Incidental Take Minimization Measures defined in Section 5.2 of the SJMSCP. As a result, no significant conflicts are anticipated and *no impact* would occur.

F. Cumulative Impact Analysis

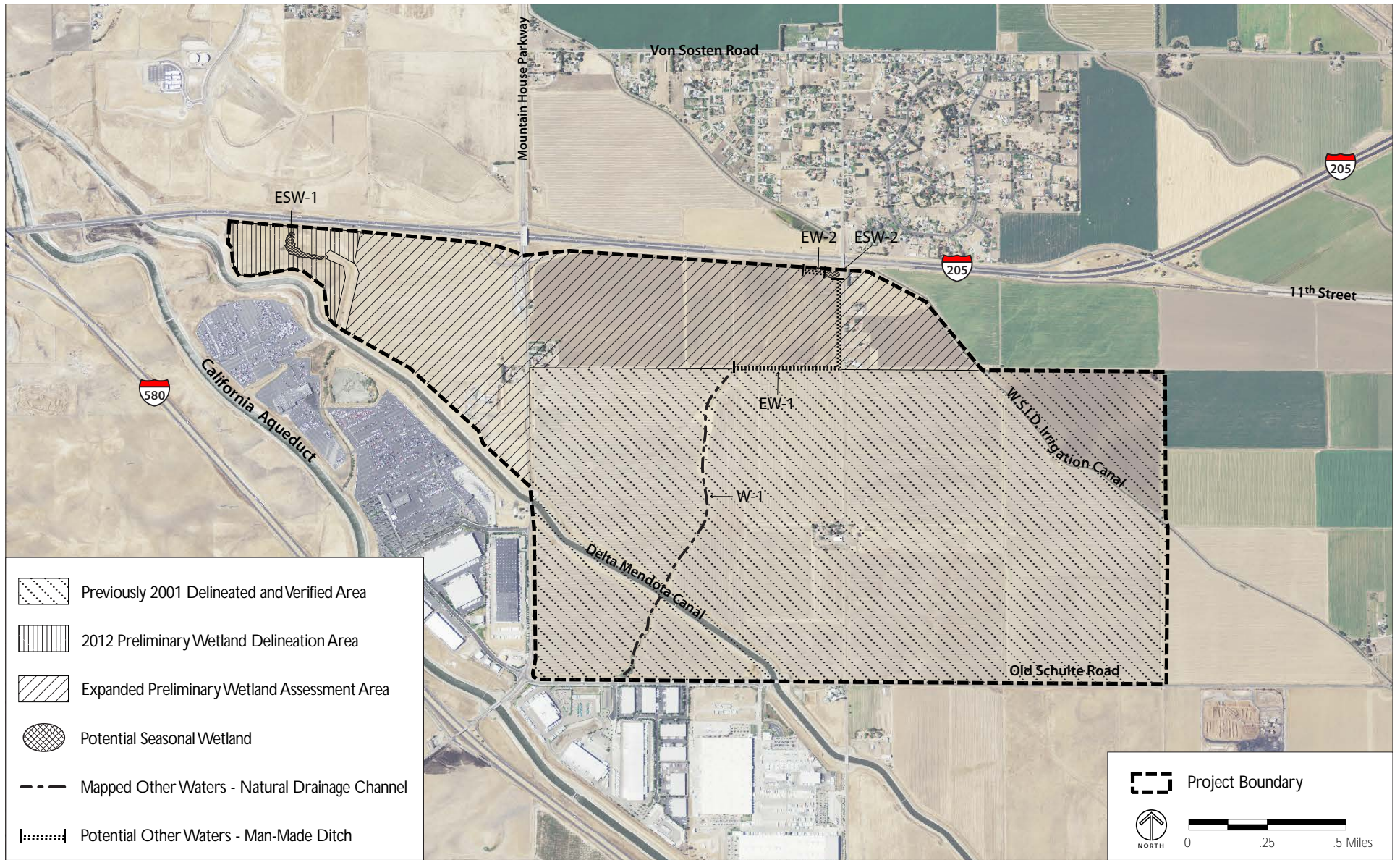
The cumulative impacts analysis for biological and wetland resources considered the larger-context of future development of the City of Tracy as envisioned by the General Plan and relied upon the projections of the General Plan and General Plan EIR, as well as other approved projects in the surrounding area of San Joaquin County, such as the Mountain House Project. Cumulative impacts on biological and wetland resources would be those impacts that result from incremental changes that degrade habitat or affect other biological resources within the Tracy area.

Cumulative Development of the cumulative projects could result in adverse impacts either directly or indirectly to special-status species, and impact other biological and wetlands resources. However, the implementation of the SJMSCP would help to reduce these impacts on special-status species to the extent that applicants participate in the SJMSCP. If applicants choose not to participate in the SJMSCP, each project would be required to mitigate its impacts, to the extent feasible, which would include compliance with applicable federal, State and local laws and regulations.

To some degree, cumulative development contributes to an incremental reduction in the amount of existing wildlife habitat, particularly for birds and larger mammals. Habitat for species intolerant of human disturbance can be lost as development encroaches into previously undeveloped areas, disrupting or eliminating movement corridors and fragmenting the remaining suitable habitat retained within parks, conservation easement areas, private open space, or undeveloped properties. Grading associated with construction activities generally increases erosion and sedimentation,

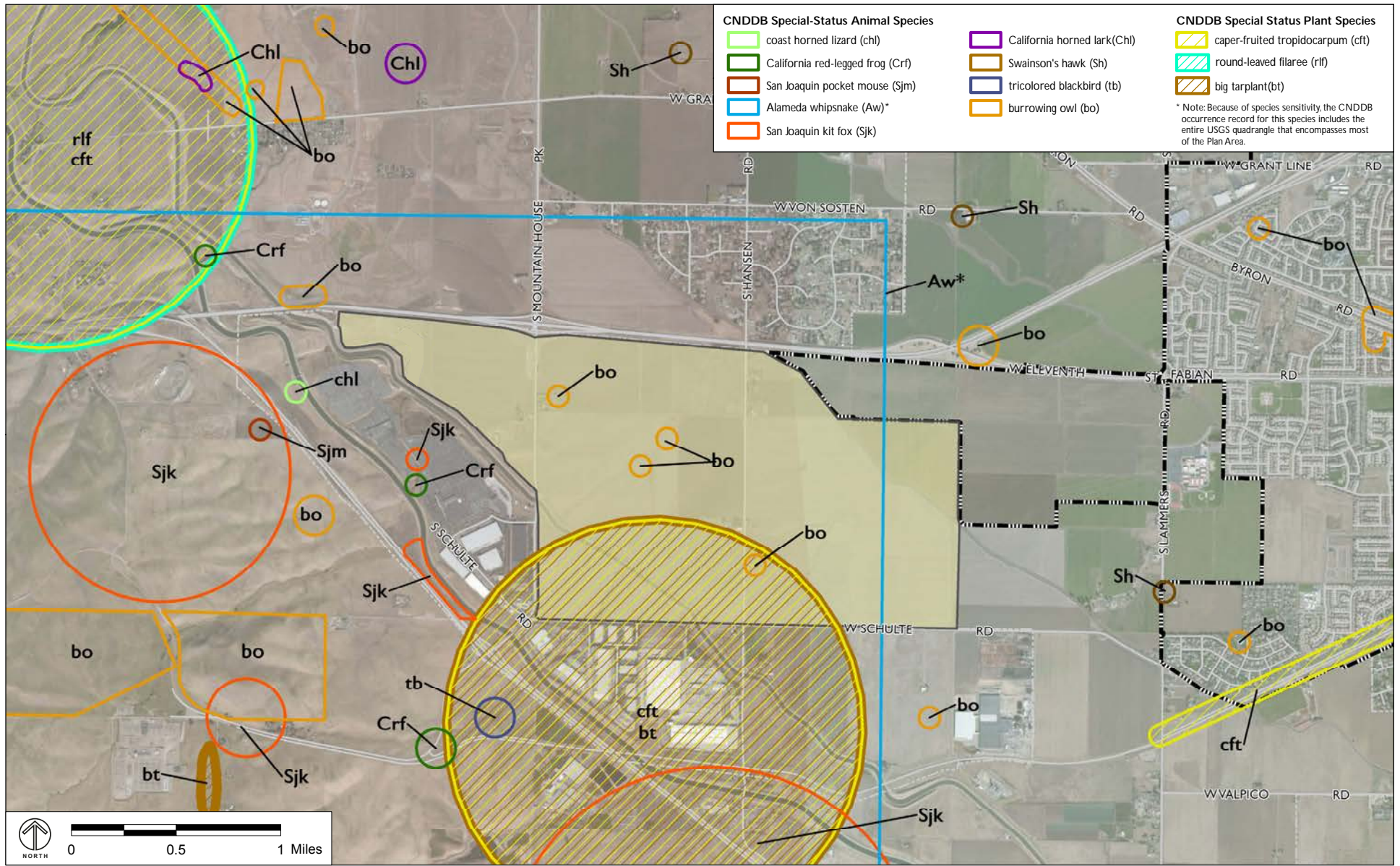
and urban pollutants from new development could reduce water quality requiring the imposition of appropriate mitigation measures. Accordingly, there may be cumulative impacts that occur on biological and wetlands resources as a result of cumulative development.

In terms of the Project's contribution, as discussed above and similar to other cumulative developments, the Project would be required to mitigate identified impacts. In addition, the central drainage would be preserved and enhanced as part of the Project, but would be surrounded by urban development limiting its importance for movement and connectivity of wildlife. Participation in the SJMSCP by project applicants would serve to address the direct impacts of the Project on special-status species but not the conversion of existing wildlife habitat to urban development, as discussed under Impact BIO-4. Further, conversion of natural habitat to urban development would substantially eliminate or diminish the existing wildlife habitat values of the Specific Plan Area. The potential impacts of the Project on wildlife habitat and movement opportunities would be an unavoidable significant adverse impact and the Project contribution to cumulative impacts on wildlife movement in this part of San Joaquin County would also be significant. Future development on the Specific Plan Area would contribute to the substantial conversion of existing habitat to urban uses as is occurring elsewhere in the surrounding area with implementation of other cumulative development considered as part of this cumulative impact analysis on biological resources. Accordingly, the Project's impacts in this regard would be cumulatively considerable.



Source: Moore Biological Consultants, 2001 and 2012; Environmental Collaborative, 2012.

FIGURE 1
 POTENTIAL JURISDICTIONAL WETLANDS AND OTHER WATERS



Source: The City of Tracy; The Planning Center | DC&E, 2012; California Natural Diversity Database (CNDDDB), April 29, 2012.

FIGURE 2

SPECIAL-STATUS PLANT AND ANIMAL SPECIES

APPENDIX A

PERSONS INVOLVED IN REPORT PREPARATION

This report was prepared by ENVIRONMENTAL COLLABORATIVE under contract to The Planning Center/DCE. Mr. James Martin, Principal Biologist of ENVIRONMENTAL COLLABORATIVE, conducted the field reconnaissance surveys, habitat suitability analysis, and preliminary wetland assessment, and prepared the written report. Any questions regarding this report may be directed to Mr. Martin by telephoning (510) 654-4444.

