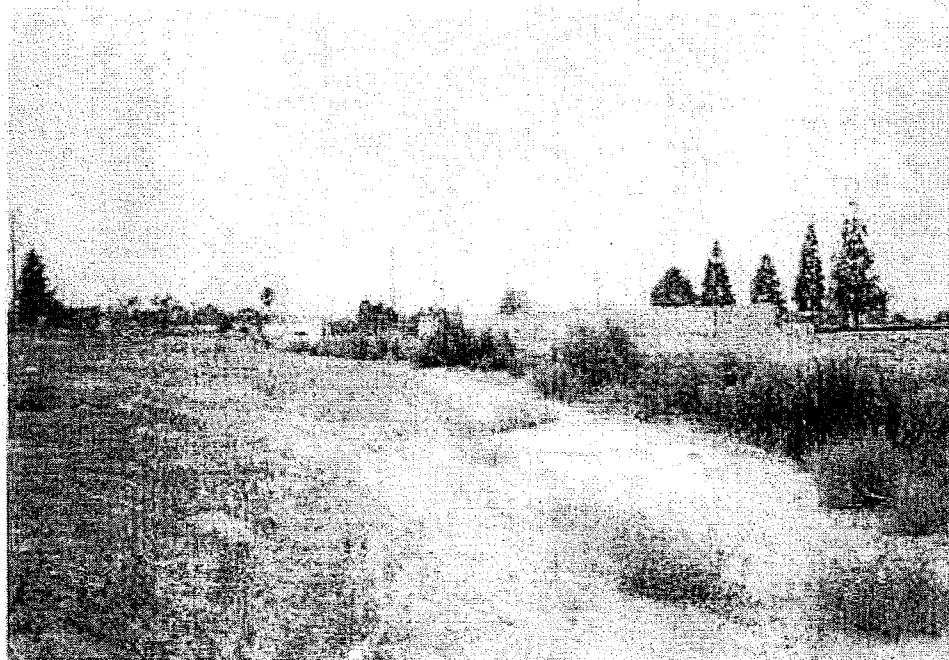
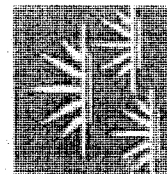


PHOTOGRAPH 1. This Photograph depicts the vegetation within the Project Site. Photograph taken looking west towards River Road on 9-11-2008.



PHOTOGRAPH 2. This photograph depicts the southern access road and a portion of the ruderal fields located immediately adjacent to the Project Site. Photograph taken looking northwest on 9-11-2008.



GLENN LUKOS ASSOCIATES

EXHIBIT 4

NORTH NORCO CHANNEL
IMPROVEMENT PROJECT

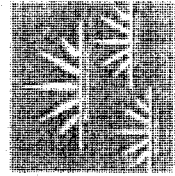
Site Photographs



PHOTOGRAPH 3. This photograph depicts the North Norco Flood Control Channel on the east end of the channel as it transitions into the improved concrete channel. Photograph taken looking east on 9-11-2008.



PHOTOGRAPH 4. This photograph depicts conditions in the North Norco Flood Control Channel after the 2008/2009 storm flows. Photograph looking east, taken on 03-05-2009.

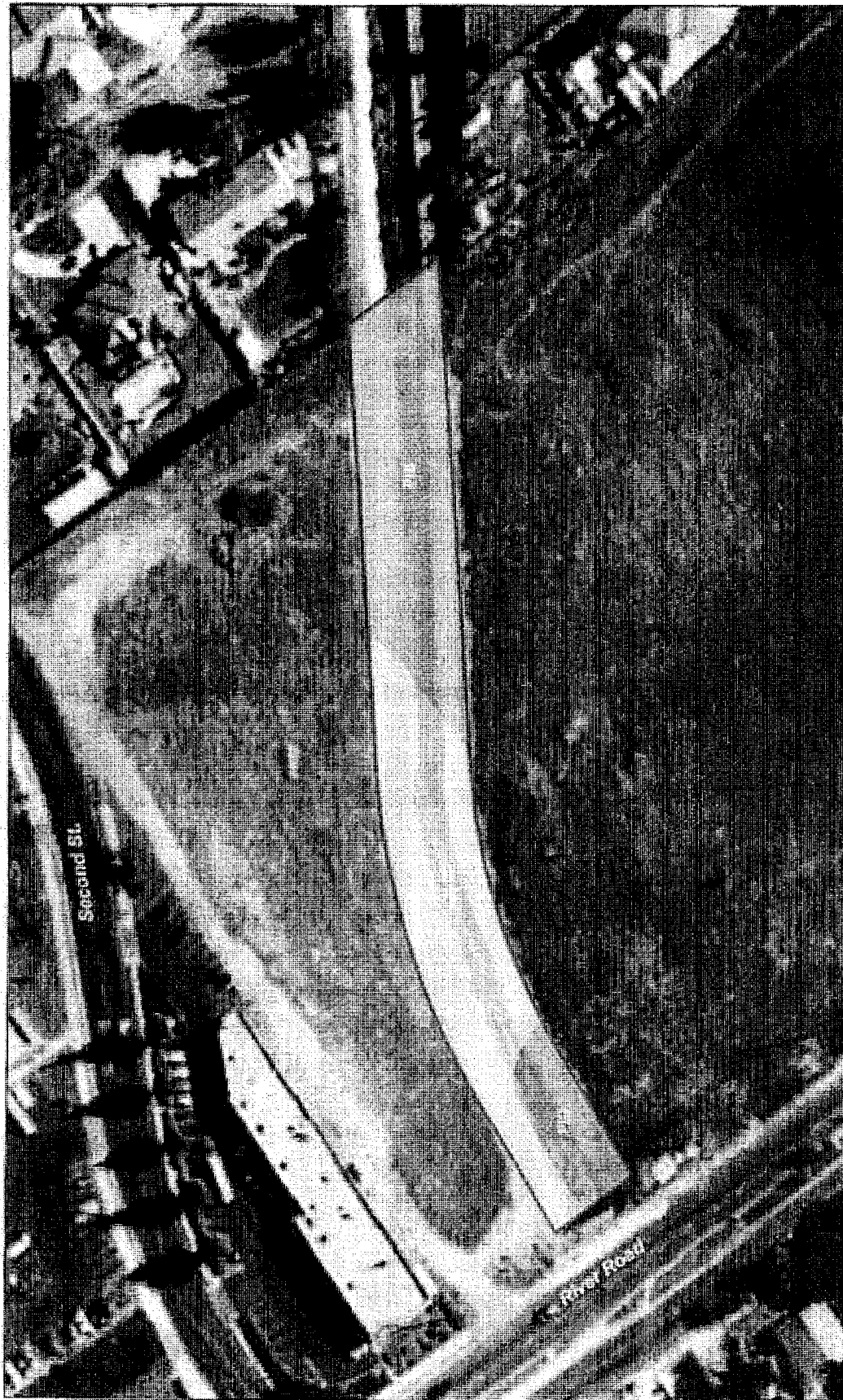


GLENN LUKOS ASSOCIATES

EXHIBIT 4

NORTH NORCO CHANNEL
IMPROVEMENT PROJECT

Site Photographs



Legend

Project Area

Gravel - Gravel/sand/sandy loam, 2 to 8 percent slopes, eroded

P10 - Piacentia fine sandy loam, 0 to 5 percent slopes

P10 - Piacentia fine sandy loam, 5 to 15 percent slopes



**NORTH NORCO CHANNEL
IMPROVEMENT PROJECT**
Scale Map



GLENN LUKIS ASSOCIATES

Exhibit 5

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Norco River Ridge Project City/County: Norco, Riverside County Sampling Date: 09/30/2008
 Applicant/Owner: Realty Bancorp Equities, Inc. State: CA Sampling Point: 01
 Investigator(s): Paul Schwartz, Justin Meyer Section, Township, Range: USGS Corona North, T3S, R7W, Section 14
 Landform (hillslope, terrace, etc.): Earthen Channel Local relief (concave, convex, none): Concave Slope (%): <1
 Subregion (LRR): LRR-C Mediterranean Region Lat: 33°54'27.65" N Long: 117°34'49.54" W Datum: NAD 83
 Soil Map Unit Name: Placentia fine sandy loam, 0 to 5 percent slopes NWI classification: N/A
 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:	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <u>Salix goodingii</u> <input checked="" type="checkbox"/>	02	Y	OBL	Number of Dominant Species That Are OBL, FACW, or FAC: <u>7</u> (A)
2. _____				Total Number of Dominant Species Across All Strata: <u>7</u> (B)
3. _____				
4. _____				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
	02 = Total Cover			
Sapling/Shrub Stratum (Plot size: <u>5</u>)				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species <u>65</u> x 1 = <u>65</u> FACW species <u>40</u> x 2 = <u>80</u> FAC species <u>20</u> x 3 = <u>60</u> FACU species _____ x 4 = _____ UPL species <u>10</u> x 5 = <u>50</u> Column Totals: <u>135</u> (A) <u>255</u> (B) Prevalence Index = B/A = <u>1.88</u>
1. <u>Salix goodingii</u>	35	Y	OBL	
2. <u>Polygonum lapathifolium</u> <input checked="" type="checkbox"/>	30	Y	OBL	
3. <u>Conyza canadensis</u>	20	Y	FAC	
4. <u>Salsola tragus</u>	10	N	UPL	
5. _____				
	95 = Total Cover			
Herb Stratum (Plot size: <u>5</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. <u>Echinochloa crus-galli</u>	10	Y	FACW	
2. <u>Leptochloa uninerva</u> <input checked="" type="checkbox"/>	15	Y	FACW	
3. <u>Polypogon monspeliensis</u>	15	Y	FACW	
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
	40 = Total Cover			
Woody Vine Stratum (Plot size: _____)				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. _____				
2. _____				
	_____ = Total Cover			
% Bare Ground in Herb Stratum <u>0</u> % Cover of Biotic Crust <u>0</u>				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____
Remarks:				
100 percent of dominant vegetation is hydrophytic				

SOIL

Sampling Point: 01

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-5"	2.5/N Gley 1	100					Sand	Strong hydrogen sulfide odor
5-12"	3/10Y Gley 1	100					Clay loam	

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

Restrictive Layer (if present):
 Type: None
 Depth (inches): _____

Hydric Soil Present? Yes No _____

Remarks:
 Strong hydrogen sulfide odor in upper 6 inches

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply) <input checked="" type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) (Nonriverine) <input type="checkbox"/> Sediment Deposits (B2) (Nonriverine) <input type="checkbox"/> Drift Deposits (B3) (Nonriverine) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Salt Crust (B11) <input type="checkbox"/> Biotic Crust (B12) <input type="checkbox"/> Aquatic Invertebrates (B13) <input checked="" 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)	Secondary Indicators (2 or more required) <input type="checkbox"/> Water Marks (B1) (Riverine) <input type="checkbox"/> Sediment Deposits (B2) (Riverine) <input type="checkbox"/> Drift Deposits (B3) (Riverine) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5)
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Field Observations:

Surface Water Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>6"</u>	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____
Water Table Present? Yes _____ No _____ Depth (inches): _____	
Saturation Present? (includes capillary fringe) Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>0</u>	

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

Remarks:
 Approximately 6 inches of surface water in flood control channel.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Norco River Ridge Project City/County: Norco, Riverside County Sampling Date: 09/30/2008
 Applicant/Owner: Realty Bancorp Equities, Inc. State: CA Sampling Point: 02
 Investigator(s): Paul Schwartz, Justin Meyer Section, Township, Range: USGS Corona North, T3S, R7W, Section 14
 Landform (hillslope, terrace, etc.): Earthen Channel Local relief (concave, convex, none): Concave Slope (%): <1
 Subregion (LRR): LRR-C Mediterranean Region Lat: 33°54'27.65" N Long: 117°34'49.54" W Datum: NAD 83
 Soil Map Unit Name: Placentia fine sandy loam, 0 to 5 percent slopes NWI classification: N/A

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

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>5</u> (A)
1. <u>Salix goodingii</u>	<input checked="" type="checkbox"/> 35	Y	OBL	
2. <u>Tamarix ramosissima</u>	02	N	FAC	
3. _____				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
4. _____				
<u>37</u> = Total Cover				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____
Sapling/Shrub Stratum (Plot size: <u>5</u>)				
1. <u>Typha domingensis</u>	02	N	OBL	OBL species <u>72</u> x 1 = <u>72</u>
2. <u>Polygonum lapathifolium</u>	<input checked="" type="checkbox"/> 20	Y	OBL	
3. <u>Conyza canadensis</u>	10	Y	FAC	FAC species <u>12</u> x 3 = <u>36</u>
4. <u>Salsola tragus</u>	05	N	UPL	FACW species <u>07</u> x 4 = _____
5. _____				FACW species <u>07</u> x 5 = <u>35</u>
<u>37</u> = Total Cover				Column Totals: <u>91</u> (A) <u>275</u> (B)
Herb Stratum (Plot size: <u>5</u>)				Prevalence Index = B/A = <u>2.23</u>
1. <u>Rorripa nasturium-aquaticum</u>	05	N	OBL	Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> Dominance Test is >50% <input checked="" type="checkbox"/> Prevalence Index is ≤3.0 ¹
2. <u>Leptochloa uninerva</u>	<input checked="" type="checkbox"/> 15	Y	FACW	
3. <u>Polyogon monspeliensis</u>	15	Y	FACW	____ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ____ Problematic Hydrophytic Vegetation ¹ (Explain)
4. <u>Sonchus oleraceus</u>	02	N	UPL	
5. <u>Cyperus eragrostis</u>	05	N	FACW	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
6. <u>Heliotropum curvassicum</u>	05	N	OBL	
7. <u>Ammania coccinea</u>	05	N	OBL	Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
8. _____				
<u>47</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>				

Remarks:
 100 percent of dominant vegetation is hydrophytic

SOIL

Sampling Point: 02

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-1"	2.5/N Gley 1	100					Muck	Strong hydrogen sulfide odor
1-12"	2.5/N Gley 1	100					Sand	Strong hydrogen sulfide odor

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"/> 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 checked="" type="checkbox"/> Hydrogen Sulfide (A4)	<input checked="" type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Stratified Layers (A5) (LRR C)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> 1 cm Muck (A9) (LRR D)	<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Depressions (F8)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Vernal Pools (F9)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)		

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

Restrictive Layer (if present): Type: <u>None</u> Depth (inches): _____	Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____
---	---

Remarks:
Strong hydrogen sulfide odor in upper 6 inches

HYDROLOGY

Wetland Hydrology Indicators:		
Primary Indicators (minimum of one required; check all that apply)	Secondary Indicators (2 or more required)	
<input checked="" type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Water Marks (B1) (Riverine)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Biotic Crust (B12)	<input type="checkbox"/> Sediment Deposits (B2) (Riverine)
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Drift Deposits (B3) (Riverine)
<input type="checkbox"/> Water Marks (B1) (Nonriverine)	<input checked="" 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 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 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 checked="" type="checkbox"/> No _____ Depth (inches): <u>6"</u> Water Table Present? Yes _____ No _____ Depth (inches): _____ Saturation Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>0</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
Approximately 6 inches of surface water in flood control channel.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: City of Norco River Ridge Project City/County: Norco, Riverside County Sampling Date: 09/30/2008
 Applicant/Owner: The City of Norco State: CA Sampling Point: 03
 Investigator(s): Paul Schwartz, Justin Meyer Section, Township, Range: USGS Corona North, T3S, R7W, Section 14
 Landform (hillslope, terrace, etc.): Earthen Channel Local relief (concave, convex, none): Concave Slope (%): <1
 Subregion (LRR): LRR-C Mediterranean Region Lat: 33°54'27.65" N Long: 117°34'49.54" W Datum: NAD 83
 Soil Map Unit Name: Greenfield sandy loam, 2 to 8 percent slopes, eroded NWM classification: N/A

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: 	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <u>Salix goodingii</u> <input checked="" type="checkbox"/>	25	Y	OBL	Number of Dominant Species That Are OBL, FACW, or FAC: <u>5</u> (A)
2. _____				Total Number of Dominant Species Across All Strata: <u>5</u> (B)
3. _____				
4. _____				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (AVB)
<u>25</u> = Total Cover				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: OBL species <u>80</u> x 1 = <u>80</u> FACW species <u>07</u> x 2 = <u>14</u> FAC species <u>20</u> x 3 = <u>60</u> FACU species _____ x 4 = _____ UPL species <u>05</u> x 5 = <u>25</u> Column Totals: <u>112</u> (A) <u>179</u> (B) Prevalence Index = B/A = <u>1.59</u>
Sapling/Shrub Stratum (Plot size: <u>5</u>)				
1. <u>Typha domingensis</u> <input checked="" type="checkbox"/>	35	Y	OBL	
2. <u>Polygonum lapathifolium</u> <input checked="" type="checkbox"/>	20	Y	OBL	
3. <u>Conyza canadensis</u>	20	Y	FAC	
4. <u>Salsola tragus</u>	05	N	UPL	
5. _____				
<u>80</u> = Total Cover				
Herb Stratum (Plot size: <u>5</u>)				
1. <u>Echinochloa crus-galli</u>	02	Y	FACW	
2. <u>Cyperus eragrostis</u> <input checked="" type="checkbox"/>	05	N	FACW	
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
<u>07</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 ≤3.0¹
 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 _____

Remarks:
 100 percent of dominant vegetation is hydrophytic

SOIL

Sampling Point: 03

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-15"	2.5/N Gley 1	100					Muck	Strong hydrogen sulfide odor

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

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

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

Restrictive Layer (if present):

Type: None

Depth (inches): _____

Hydric Soil Present? Yes No

Remarks:

Strong hydrogen sulfide odor in upper 6 inches

HYDROLOGY

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

Field Observations:

Surface Water Present? Yes No Depth (inches): 4"

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

Saturation Present? Yes No Depth (inches): 0

(includes capillary fringe)

Wetland Hydrology Present? Yes No

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

Remarks:

Approximately 4 inches of surface water in flood control channel.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: City of Norco River Ridge Project City/County: Norco, Riverside County Sampling Date: 09/30/2008
 Applicant/Owner: The City of Norco State: CA Sampling Point: 04
 Investigator(s): Paul Schwartz, Justin Meyer Section, Township, Range: USGS Corona North, T3S, R7W, Section 14
 Landform (hillslope, terrace, etc.): Earthen Channel Local relief (concave, convex, none): Concave Slope (%): <1
 Subregion (LRR): LRR-C Mediterranean Region Lat: 33°54'27.65" N Long: 117°34'49.54" W Datum: NAD 83
 Soil Map Unit Name: Placentia fine sandy loam, 5 to 15 percent slopes NWM classification: N/A

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

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <u>Salix goodingii</u> <input checked="" type="checkbox"/>	45	Y	OBL	Number of Dominant Species That Are OBL, FACW, or FAC: <u>5</u> (A) Total Number of Dominant Species Across All Strata: <u>6</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>83.3%</u> (A/B)
2. <u>Tamarix ramosissima</u>	10	N	FAC	
3. <u>Washingtonia fillifera</u>	10	N	FACW	
4. _____	65 = Total Cover			Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species <u>60</u> x 1 = <u>60</u> FACW species <u>30</u> x 2 = <u>60</u> FAC species <u>40</u> x 3 = <u>120</u> FACU species <u>15</u> x 4 = <u>60</u> UPL species _____ x 5 = _____ Column Totals: <u>145</u> (A) <u>300</u> (B) Prevalence Index = B/A = <u>2.07</u>
Sapling/Shrub Stratum (Plot size: <u>5</u>)				
1. <u>Tamarix ramosissima</u>	10	N	FAC	
2. <u>Polygonum lapathifolium</u> <input checked="" type="checkbox"/>	20	Y	OBL	
3. <u>Conyza canadensis</u>	15	Y	FAC	
4. <u>Cirsium vulgare</u>	15	Y	FACU	
5. _____	60 = Total Cover			
Herb Stratum (Plot size: <u>5</u>)				
1. <u>Echinochloa crus-galli</u>	10	Y	FACW	Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> Dominance Test is >50% <input checked="" type="checkbox"/> Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)
2. <u>Leptochloa uninerva</u> <input checked="" type="checkbox"/>	10	Y	FACW	
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
8. _____	20 = Total Cover			
Woody Vine Stratum (Plot size: _____)				
1. _____				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. _____				
_____ = Total Cover				
% Bare Ground in Herb Stratum <u>0</u> % Cover of Biotic Crust <u>0</u>				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>

Remarks:
 100 percent of dominant vegetation is hydrophytic

SOIL

Sampling Point: 04

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-6"	2.5Y 4/2	60	10YR 3/6	40	C	PL	Silty Clay	Strong hydrogen sulfide odor

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)	Indicators for Problematic Hydric Soils³:
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> 1 cm Muck (A9) (LRR C)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> 2 cm Muck (A10) (LRR B)
<input checked="" type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Reduced Vertic (F18)
<input type="checkbox"/> Stratified Layers (A5) (LRR C)	<input checked="" type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> 1 cm Muck (A9) (LRR D)	<input type="checkbox"/> Redox Dark Surface (F6)	<input type="checkbox"/> Other (Explain in Remarks)
<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: None

Depth (inches): _____

Hydric Soil Present? Yes No

Remarks:

Strong hydrogen sulfide odor in upper 6 inches

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)		Secondary Indicators (2 or more required)
<input checked="" type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Water Marks (B1) (Riverine)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Biotic Crust (B12)	<input type="checkbox"/> Sediment Deposits (B2) (Riverine)
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Drift Deposits (B3) (Riverine)
<input type="checkbox"/> Water Marks (B1) (Nonriverine)	<input checked="" 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 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 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 No Depth (inches): 12"

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

Saturation Present? Yes No Depth (inches): 0

(includes capillary fringe)

Wetland Hydrology Present? Yes No

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

Remarks:

Approximately 12 inches of surface water in flood control channel.

Appendix B

U.S. Army Corps of Engineers Preliminary Jurisdictional Determination Form

PRELIMINARY JURISDICTIONAL DETERMINATION FORM

This preliminary JD finds that there "may be" waters of the United States on the subject project site, and identifies all aquatic features on the site that could be affected by the proposed activity, based on the following information:

District Office	Los Angeles District	File/ORM #	PJD Date:
State	City/County	Name/ Address of Person Requesting PJD	
CA	Norco/Riverside	Mr. Douglas Jacobsen Realty Bancorp Equities, Inc. 21800 Burbank Boulevard, Suite 330 Woodland Hills, California 91367	
Nearest Waterbody:	Location: TRS, Lat/Long or UTM:		
North Norco Channel	33.907735 North Latitude -117.580532 West Longitude		

Identify (Estimate) Amount of Waters in the Review Area:	Name of Any Water Bodies on the Site Identified as Section 10 Waters:
Non-Wetland Waters: Stream Flow: <input checked="" type="checkbox"/> 35 linear ft <input type="checkbox"/> 12 width <input type="checkbox"/> 0.02 acres <input type="checkbox"/> Perennial	Tidal: _____ Non-Tidal: _____
Wetlands: <input type="checkbox"/> 0.20 acre(s) Cowardin Class: <input type="checkbox"/> Palustrine, emergent	<input type="checkbox"/> Office (Desk) Determination <input type="checkbox"/> Field Determination: _____ Date of Field Trip: _____

SUPPORTING DATA: Data reviewed for preliminary JD (check all that apply - checked items should be included in case file and, where checked and requested, appropriately reference sources below):

- Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant: See Attached Maps
- Data sheets prepared/submitted by or on behalf of the applicant/consultant.
 - Office concurs with data sheets/delineation report.
 - Office does not concur with data sheets/delineation report.
- Data sheets prepared by the Corps
- Corps navigable waters' study: _____
- U.S. Geological Survey Hydrologic Atlas:
 - USGS NHD data.
 - USGS 8 and 12 digit HUC maps.
- U.S. Geological Survey map(s). Cite quad name: Corona North, California
- USDA Natural Resources Conservation Service Soil Survey. Citation: http://websoilsurvey.nrcs.usda.gov/app/WebSoils.cfm
- National wetlands inventory map(s). Cite name: http://www.fws.gov/wetlands/Data/Mapper.html
- State/Local wetland inventory map(s): _____
- FEMA/FIRM maps: 060256-0003
- 100-year Floodplain Elevation is: 574 MSL
- Photographs: Aerial (Name & Date): Google Earth 2009
 - Other (Name & Date): Site Photographs, 10/11/07 and 09/11/08
- Previous determination(s). File no. and date of response letter: _____
- Other information (please specify): _____

IMPORTANT NOTE: The information recorded on this form has not necessarily been verified by the Corps and should not be relied upon for later jurisdictional determinations.

Signature and Date of Regulatory Project Manager (REQUIRED)	Signature and Date of Person Requesting Preliminary JD (REQUIRED, unless obtaining the signature is impracticable)
---	--

EXPLANATION OF PRELIMINARY AND APPROVED JURISDICTIONAL DETERMINATIONS:

1. The Corps of Engineers believes that there may be jurisdictional waters of the United States on the subject site, and the permit applicant or other affected party who requested this preliminary JD is hereby advised of his or her option to request and obtain an approved jurisdictional determination (JD) for that site. Nevertheless, the permit applicant or other person who requested this preliminary JD has declined to exercise the option to obtain an approved JD in this instance and at this time.

2. In any circumstance where a permit applicant obtains an individual permit, or a Nationwide General Permit (NWP) or other general permit verification requiring "preconstruction notification" (PCN), or requests verification for a non-reporting NWP or other general permit, and the permit applicant has not requested an approved JD for the activity, the permit applicant is hereby made aware of the following: (1) the permit applicant has elected to seek a permit authorization based on a preliminary JD, which does not make an official determination of jurisdictional waters; (2) that the applicant has the option to request an approved JD before accepting the terms and conditions of the permit authorization, and that basing a permit authorization on an approved JD could possibly result in less compensatory mitigation being required or different special conditions; (3) that the applicant has the right to request an individual permit rather than accepting the terms and conditions of the NWP or other general permit authorization; (4) that the applicant can accept a permit authorization and thereby agree to comply with all the terms and conditions of that permit, including whatever mitigation requirements the Corps has determined to be necessary; (5) that undertaking any activity in reliance upon the subject permit authorization without requesting an approved JD constitutes the applicant's acceptance of the use of the preliminary JD, but that either form of JD will be processed as soon as is practicable; (6) accepting a permit authorization (e.g., signing a proffered individual permit) or undertaking any activity in reliance on any form of Corps permit authorization based on a preliminary JD constitutes agreement that all wetlands and other water bodies on the site affected in any way by that activity are jurisdictional waters of the United States, and precludes any challenge to such jurisdiction in any administrative or judicial compliance or enforcement action, or in any administrative appeal or in any Federal court; and (7) whether the applicant elects to use either an approved JD or a preliminary JD, that JD will be processed as soon as is practicable. Further, an approved JD, a proffered individual permit (and all terms and conditions contained therein), or individual permit denial can be administratively appealed pursuant to 33 C.F.R. Part 331, and that in any administrative appeal, jurisdictional issues can be raised (see 33 C.F.R. 331.5(a)(2)). If, during that administrative appeal, it becomes necessary to make an official determination whether CWA jurisdiction exists over a site, or to provide an official delineation of jurisdictional waters on the site, the Corps will provide an approved JD to accomplish that result, as soon as is practicable.

PRELIMINARY JURISDICTIONAL DETERMINATION FORM

This preliminary JD finds that there "may be" waters of the United States on the subject project site, and identifies all aquatic features on the site that could be affected by the proposed activity, based on the following information:

Appendix A - Sites

District Office File/ORM # PJD Date:

State City/County Person Requesting PJD

Site Number	Latitude	Longitude	Cowardin Class	Est. Amount of Aquatic Resource in Review Area	Class of Aquatic Resource
Non-Wetland	33.907735 N	-117.580532 W	Riverine	0.02 Acre	Non-Section 10 non-wetland
Wetland	33.907735 N	-117.580532 W	Palustrine, emergent	0.20 Acre	Non-Section 10 wetland

Notes:

Appendix C

Biological Technical Report

1.10-Acre North Norco Flood Control Channel Improvements Project

INFORMATION SUMMARY

- A. **Report Date:** July 21, 2010
- B. **Report Title:** Results of Biological Surveys/MSHCP Consistency Analysis
- C. **Project Site Location:** City of Norco, Riverside County, Located Southeast of the Intersection of Second Street and River Road. USGS 7.5' Corona North quadrangle map (1967, photorevised 1981), Township 3 South, Range 7 West, Section 14.
- D. **Assessor's Parcel Number:** Portions of 119-020-002, 119-020-015, 119-020-021, -022, and -023
- E. **Owner/Applicant:** Prepared for:
Realty Bancorp Equities
21800 Burbank Boulevard, Suite 330
Woodland Hills, California 91367
Phone: 818-251-9911
Contact: Doug Jacobsen
- F. **Principal Investigator:** Glenn Lukos Associates, Inc.
29 Orchard
Lake Forest, California 92630
Phone (949) 837-0404
Fax (949) 837-5834
Report Preparer: Justin Meyer

G. **Report Summary:**

The 1.10-acre North Norco Flood Control Channel Improvements Project (Project) is located southeast of the intersection of Second Street and River Road in the City of Norco, Riverside County, California. Specifically the Project site consists of improvements to a 1.10-acre portion of the North Norco Flood Control Channel (Channel) and its adjacent access roads. The Project site is comprised of

disturbed/developed/open water, disturbed/developed, ruderal vegetation, and southern willow scrub with emergent wetland habitat.

The Project site is located within the Cities of Riverside/Norco Area Plan of the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP). No part of the Project site is located within a Criteria Area under the MSHCP, therefore, the Project is not subject to the Habitat Evaluation and Acquisition Negotiation Strategy (HANS) process.

The Project site is not located within the MSHCP Narrow Endemic Plant Species Survey Area (NEPSSA) pursuant to *Section 6.1.3* of the MSHCP or the Criteria Area Species Survey Area (CAPSSA) for additional Plants, or the MSHCP Additional Survey Areas for Amphibians, Mammals, Burrowing Owls, or Special Linkage Areas pursuant to *Section 6.3.2* of the MSHCP. Therefore, the NEPSSA, CAPSSA, and Additional Survey Needs and Procedures requirements are not applicable to the Project site.

The Project site is comprised of the Channel and supports vegetation that meets the definition of a MSHCP riparian/riverine area. Impacts to MSHCP riparian/riverine areas will require the submittal of a Determination of Biologically Equivalent or Superior Preservation (DBESP) report, which has been prepared under separate cover.

Activities within the Channel require the approval of the Riverside County Flood Control and Water Conservation District (RCFCD). Additionally, the Project site contains potential "Waters of the U.S." and "Waters of the State" subject to the jurisdictions of U.S. Army Corps of Engineers (Corps), California Department of Fish and Game (CDFG), and the Santa Ana Regional Water Quality Control Board (Regional Board).

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1.0 INTRODUCTION

1.1 Background and Scope of Work

This document summarizes the results of habitat assessments and general biological studies for the 1.10-acre North Norco Flood Control Channel Improvements Project (Project) located within the City of Norco (City), Riverside County (County), California. The 1.10 acres contains the North Norco Flood Control Channel (Channel) and its adjacent access roads. This report has been prepared to identify potential biological resources and impacts associated with the proposed improvements to the Channel in relationship to the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP), state and federal permitting requirements, and the California Environmental Quality Act (CEQA).

The scope of this report includes a discussion of existing conditions for the 1.10-acre Project site, the documentation of botanical and wildlife resources identified (including any special-status species), review of relevant literature, and habitat assessments for special-status species pursuant to *Sections 6.1.2 (Protection of Species Associated with Riparian/Riverine Areas and Vernal Pools)* [Section 6.1.2], *6.1.3 (Protection of Narrow Endemic Plant Species)* [Section 6.1.3] and *6.3.2 (Additional Survey Needs and Procedures)* [Section 6.3.2] of the MSHCP. As appropriate, this report is consistent with accepted scientific and technical standard requirements issued by the U.S. Fish and Wildlife Service (USFWS), CDFG, California Native Plant Society (CNPS), and the MSHCP. This report also discusses the relationship of the Project with the MSHCP, including the presence/absence of covered species, and compliance with survey and mapping provisions of the MSHCP as outlined in *Sections 6.1.2, 6.1.3, 6.1.4 (Guidelines Pertaining to the Urban/Wildlands Interface)* [Section 6.1.4] and *Section 6.3.2* of the MSHCP.

1.2 Project Location

The Project site comprises approximately 1.10 acres (approximately 676 linear feet) of the Channel and is located adjacent to a small field southeast of the intersection of Second Street and River Road in the City, Riverside County, California [Exhibit 1: Regional Map]. The Project site is located within Section 14 of Township 3 South, Range 7 West, of the Corona North USGS 7.5" Quadrangle Map (dated 1967, photorevised in 1981 [Exhibit 2: Vicinity Map]).

The Project site is bordered by ruderal lands and Second Street to the north, ruderal lands and the Corona-Norco Family YMCA to the south, River Road and an improved portion of the Channel to the west, and an improved portion of the Channel and existing residential development to the east.

The Channel originates east of the Interstate 15 Freeway (I-15 Freeway) and flows in a northeast to southwest direction before ultimately flowing into Temescal Wash at the

Rincon Street Bridge within the Prado Basin in the City of Corona. A majority of the Channel has been improved, contains concrete bed and bank, and now functions as a flood control facility.

Currently, the Project site contains a 676 linear-foot portion of the Channel and adjacent access roads, which supports disturbed/developed/open water, disturbed/developed, ruderal vegetation, and southern willow scrub with emergent wetlands habitat. The Channel within the Project site has a natural soft-bottom and earthen banks. The soft bottom and earthen bank condition of the Channel is limited to the Project site only, as the downstream Channel transitions into a concrete-lined bed and bank flood control channel for approximately 750 linear feet before discharging into Temescal Wash and transitioning into the Prado Basin. Immediately upstream of the Project site the Channel transitions into a concrete-lined bed and bank flood control channel for at least 2.94 miles (15,530 linear feet).

1.3 Project Description

The proposed Project includes 1.10 acres of land and consists of the improvement to an approximate 676 linear-foot section of the Channel from River Road to 676 linear feet to the east. The improvements to the Channel are required by the RCFCD in order to provide local residents with 100-year flood control protection and public safety through returning the existing flood control channel to its original design capacity. As part of the Project, an approximate 391 linear-foot segment of the Channel will be improved from a soft-bottom, earthen bank channel to a concrete bottom, concrete-sided channel, with the necessary RCFCD access roads, from the Project's eastern boundary to 391 linear feet to the west. This section of the Channel will connect with the off site upstream portion of the Channel, which is already a concrete-bottom, concrete-sided flood control channel between the Project boundary and the I-15 Freeway, which is approximately 1.75 miles to the east.

The downstream portion of the Project, which consists of the remaining 285 linear feet, will be placed into a triple box culvert, which will extend the existing triple box culvert from River Road east for approximately 285 linear feet. This section of the Channel will connect with the off site downstream portion of the Channel, which is already a concrete-bottom, concrete-sided flood control channel for 750 linear feet to the west adjacent to Country Club Park in the City of Corona.

1.4 Relationship of the Project Site to the Western Riverside County MSHCP

1.4.1 *MSHCP Background*

The MSHCP is a comprehensive habitat conservation-planning program for Western Riverside County. The intent of the MSHCP is to preserve native vegetation and meet the habitat needs of multiple species, rather than focusing preservation efforts on one species at a time. The MSHCP provides coverage (including take authorization for listed

species) for special-status plant and wildlife species, as well as mitigation for impacts to special-status species and their associated habitats.

Through agreements with the USFWS and CDFG, the MSHCP designates 146 special-status animal and plant species that receive some level of coverage under the plan. Of the 146 covered species designated under the MSHCP, the majority of these species have no additional survey/conservation requirements. In addition, the MSHCP provides mitigation for project-specific impacts to these species so that impacts would be reduced to below a level of significance pursuant to CEQA.

Of the species designated as covered by the MSHCP, some of these species have additional survey requirements. These include plants identified by the NEPSSA (*Section 6.1.3*); CAPSSA (*Section 6.3.2*); seven special-status animals identified by Survey Area (*Section 6.3.2*), including the western burrowing owl (*Athene cunicularia hypugaea*), three amphibians, three small mammals, six species associated with MSHCP riparian/riverine areas and vernal pool habitats, including three species of fairy shrimp, and three riparian birds (*Section 6.1.2*).

If portions of a property to be developed occur within the MSHCP Criteria Area (areas that may be needed for inclusion in the MSHCP Conservation Area), development of these areas is subject to the HANS process of the MSHCP. Through the HANS process, the County will determine whether the portions of the subject property within the Criteria Areas will be acquired for the MSHCP Conservation Area.

1.4.2 The Project Site

The entire Project site is located within the Cities of Riverside/Norco Area Plan of the MSHCP. No part of the Project site occurs within, or adjacent to, a Criteria Area proposed for conservation by the MSHCP; therefore, the Project is not subject to the HANS process.

In addition, the Project site is not located within the NEPSSA or the CAPSSA pursuant to *Section 6.1.3* and *6.3.2* of the MSHCP. Therefore, the NEPSSA and CAPSSA requirements are not applicable to the Project site. The Project site is not located within the MSHCP Additional Survey Areas for Amphibians, Mammals, Burrowing Owls, or Special Linkage Areas pursuant to *Section 6.3.2* of the MSHCP.

The Project site contains areas meeting the MSHCP definition of a riparian/riverine area. Impacts to MSHCP riparian/riverine areas will require submittal of a Determination of Biologically Equivalent or Superior Preservation (DBESP) report to the City, for review by USFWS and CDFG. Additionally, the entire Channel, including the portion within the Project site, is identified as Public/Quasi-Public (PQP) Lands. A total of 1.10 acres of PQP Lands are present. It is our understanding that the RCFCD has entered into PQP reconciliation discussions with the Western Riverside County Regional Conservation Authority (RCA). After discussing the status of the PQP reconciliations with RCFCD

staff, it appears that RCFCD and RCA are concentrating reconciliation efforts on lands currently depicted as PQP Lands that do not support habitat with conservation value and are not located within, or adjacent to, MSHCP Core Areas, Criteria Cells, or Linkages. The Project site is not located within, or adjacent to, MSHCP Core Areas, Criteria Cells, or Linkages; therefore, it is a part of these reconciliation discussions. It is contemplated that such land will not be designated as PQP Lands at the conclusion of these discussions. Activities within the Channel require the approval of the RCFCD.

1.5 Critical Habitat Areas

The Project site is not located within any of the most recent critical habitat areas as designated by the USFWS.

2.0 METHODOLOGY

In order to adequately identify biological resources in accordance with the requirements of the MSHCP and CEQA, GLA conducted habitat assessments and general biological studies to evaluate the presence/absence of special-status species (or potentially suitable habitat for special-status species).

2.1 Summary of Habitat Assessments and General Biological Studies

The habitat assessments and general biological studies focused on identification of occurrences or potential occurrences of biological resources as well as future survey needs necessary to satisfy the special provisions of the MSHCP and also comply with CEQA requirements; including (1) general floristic surveys; (2) general wildlife surveys; (3) habitat assessments for special-status plants; (4) habitat assessments and focused surveys for special-status animals; (5) assessments of special status plant communities; (6) assessments of MSHCP riparian/riverine areas and vernal pool habitats; (7) soils mapping; (8) raptor use assessments; (9) nesting birds assessment; and (10) a jurisdictional delineation. Observations of all plant and wildlife species were recorded during the habitat assessment and general biological studies and are included as Appendix A: Floral Compendium and Appendix B: Faunal Compendium. Table 2-1 provides a summary list of habitat assessment and general biological studies dates, conditions, and personnel.

Table 2-1. Summary of Site Visits for the Project Site

SURVEY DATE	SURVEY TYPE	SURVEYING BIOLOGIST	WEATHER
8/22/07	<ul style="list-style-type: none"> • General Habitat Assessments and Biological Studies • Step I Burrowing Owl Habitat Assessment 	Justin Meyer Martin Rasnick	85° F, clear, 5-10 mph wind, good visibility
8/24/07	<ul style="list-style-type: none"> • General Biological Studies • Step II-a Focused Burrow Survey • Step II-b Focused Burrowing Owl Survey 	Justin Meyer	66° F, overcast, no wind, good visibility
8/28/07	<ul style="list-style-type: none"> • General Biological Studies • Step II-b Focused Burrowing Owl Survey 	Justin Meyer Paul Schwartz	67° F, clear, no wind, good visibility
8/29/07	<ul style="list-style-type: none"> • General Biological Studies • Step II-b Focused Burrowing Owl Survey 	Justin Meyer Paul Schwartz	68° F, clear, no wind, good visibility
8/30/07	<ul style="list-style-type: none"> • General Biological Studies • Step II-b Focused Burrowing Owl Survey 	Justin Meyer Paul Schwartz	71° F, clear, 0-1 mph wind, good visibility
10/11/2007	<ul style="list-style-type: none"> • General Biological Studies • Jurisdictional Delineation • Vegetation Mapping 	Justin Meyer Paul Schwartz	Clear skies, good visibility
10/16/2007	<ul style="list-style-type: none"> • General Biological Studies • Jurisdictional Delineation 	Paul Schwartz Ben Smith	Clear skies, good visibility
04/08/2008	<ul style="list-style-type: none"> • General Biological Studies 	Paul Schwartz Justin Meyer Martin Rasnick	55° F, clear, 2-4 mph wind, overcast, good visibility
09/11/2008	<ul style="list-style-type: none"> • General Biological Studies 	Paul Schwartz	Overcast skies, good visibility
09/30/2008	<ul style="list-style-type: none"> • Jurisdictional Delineation 	Paul Schwartz Justin Meyer	Clear skies, good visibility
03/05/2009	<ul style="list-style-type: none"> • General Biological Studies 	Paul Schwartz Justin Meyer	Clear skies, good visibility

2.2 Literature Review

The focus of the habitat assessments and general biological studies was determined through initial site reconnaissance, a review of the California Natural Diversity Data Base (CNDDDB) for the USGS 7.5' quadrangle maps Corona North, Prado Dam, Blackstar Canyon, Corona South, Lake Mathews, Riverside West, Fontana, Guasti, and Ontario (CNDDDB 2010), CNPS Inventory of Rare and Endangered Plants of California (seventh edition, v7-09a) [CNPS 2010] for the above mentioned USGS quadrangle maps, MSHCP species and habitat maps, MSHCP sensitive soil maps, and the Natural Resources Conservation Services (NRCS) soil maps for the Corona North quadrangle and other

pertinent literature, including a previous habitat assessment conducted for the adjacent River Ridge Project site prepared by the Thomas Leslie Corporation (2006).

2.3 Vegetation Mapping

Vegetation mapping of the Project site was conducted pursuant to *Section 6.3.1 (Vegetation Mapping)* of the MSHCP document. Descriptions follow *Section 2.1.3 (Vegetation Communities)* of the MSHCP, although modified where necessary to accurately describe the habitat.

2.4 Habitat Assessment for Special Status Plant Species

The Project site is not located within the NEPSSA or the CAPSSA pursuant to *Section 6.1.3 and 6.3.2* of the MSHCP. Regardless, GLA biologists assessed the Project site for the presence of suitable habitat to support special-status plant species, including plant species not covered by the MSHCP, in order to satisfy general CEQA requirements.

2.5 Habitat Assessment for Special-Status Wildlife Species

The Project site is not located within the Additional Survey Areas for Amphibians, Mammals, Burrowing Owl, or Special Linkage Areas pursuant to *Section 6.3.2* of the MSHCP. Regardless, GLA biologists assessed the Project site for the presence of suitable habitat for special-status wildlife species, including wildlife species not covered by the MSHCP, in order to satisfy general CEQA requirements.

2.6 Assessment for Special-Status Plant Communities

Vegetation types are considered sensitive based on the overall rarity of the vegetation/plant species that comprise the vegetation community as well as the rarity of the wildlife species that have the potential to inhabit the community.

CDFG and the CNDDDB rank each special-status vegetation community with a state rank (S-rank) and a global rank (G-rank). The S-rank is a reflection of the overall condition of an element throughout California. State ranks also contain a threat designation attached to the S-rank. The G-rank is a reflection of the overall condition of an element throughout its global range. Tables 2-2 and 2-3 explain the State and Global rankings used by CDFG in greater detail. The locations of these communities are mapped in Exhibit 3 [Vegetation/Land Use Map].

Table 2-2. CDFG Species/Natural Communities Level State Rankings

State Rankings	Comment
S1	Species or natural communities with less than 6 element occurrences OR less than 1,000 individuals OR less than 2,000 acres remaining within California.
S2	Species or natural communities with less than 6-20 element occurrences OR 1,000-3,000 individuals OR 2,000-10,000 acres remaining in California.
S3	Species or natural communities with less than 21-100 element occurrences or 3,000-10,000 individuals OR 10,000-50,000 acres remaining in California.
S4	Species of natural communities that are apparently secure within California; this rank is clearly lower than S3 but factors exist to cause some concern; i.e. there is some threat, or somewhat narrow habitat, however this rank does not receive a threat rank described below.
S5	Species of natural communities that are demonstrably secure to ineradicable in California. This rank does not receive a threat rank described below.
Threat Rank	Comment
.1	Species or natural communities that are considered very threatened in California
.2	Species or natural communities that are considered threatened in California
.3	Species or natural communities that have no known current threats in California

Table 2-3. CDFG Species/Natural Communities Global Rankings

Global Rankings	Comment
G1	Species or natural communities with less than 6 element occurrences OR less than 1,000 individuals OR less than 2,000 acres remaining world-wide.
G2	Species or natural communities with less than 6-20 element occurrences OR 1,000-3,000 individuals OR 2,000-10,000 acres remaining world-wide.
G3	Species or natural communities with less than 21-100 element occurrences or 3,000-10,000 individuals OR 10,000-50,000 acres remaining world-wide.
G4	Species or natural communities that are apparently secure world-wide; this rank is clearly lower than G3 but factors exist to cause some concern; i.e. there is some threat, or somewhat narrow habitat.
G5	Species or natural communities that are demonstrably secure to ineradicable world-wide.

GLA biologists assessed the Project site for special-status plant communities as designated by the MSHCP or CDFG.

2.7 MSHCP Riparian/Riverine Areas and Vernal Pool Assessment

Section 6.1.2 of the MSHCP describes the process through which protection of riparian/riverine areas and vernal pools would occur within the MSHCP Plan Area. The purpose is to ensure that the biological functions and values of these areas throughout the MSHCP Plan Area are maintained such that habitat values for species inside the MSHCP Conservation Area are maintained. The MSHCP requires that as projects are proposed

within the overall Plan Area, the affect of those projects on riparian/riverine areas and vernal pools must be addressed.

The MSHCP defines riparian/riverine areas as

“Lands which contain Habitat dominated by trees, shrubs, persistent emergent mosses and lichens, which occur close to or which depend upon soils moisture from a nearby fresh water source; or areas with fresh water flow during all or a portion of the year.”

The MSHCP defines vernal pools as

“Seasonal wetlands that occur in depression areas that have wetlands indicators of all three parameters (soils, vegetation, and hydrology) during the wetter portion of the growing season but normally lack wetland indicators of hydrology and/or vegetation during the drier portion of the growing season.”

With the exception of wetlands created for the purpose of providing wetlands habitat or resulting from human actions to create open waters or from the alteration of natural stream courses, areas demonstrating characteristics as described above which are artificially created are not included in these definitions.

The Project site was evaluated for MSHCP riparian/riverine areas, vernal pools, and other seasonal ponding features.

2.7.1 *Habitat Assessment for MSHCP Riparian/Riverine and Vernal Pool Species*

Biologists evaluated the entire Project site for the potential to support the riparian/riverine and seasonal/vernal pool species listed in *Section 6.1.2* of the MSHCP.

2.8 MSHCP Public/Quasi-Public Lands Mapping

MSHCP and Riverside County GIS data maps were referenced to determine if the Project site is mapped as PQP lands to be conserved within the overall MSHCP Area Plan.

2.9 Soils Mapping

The United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) soil maps and MSHCP sensitive soil maps were reviewed for the Project site.

2.10 Raptor Use Assessment

Biologists evaluated the Project site for the capacity to support raptor species for nesting and foraging use.

2.11 Nesting Birds Evaluation

Biologists evaluated the Project site for the capacity to support nesting birds.

2.12 Jurisdictional Delineation

The Project site was evaluated for the potential to contain "Waters of the U.S." and "Waters of the State" subject to the jurisdiction of the Corps, CDFG, and Regional Board.

2.12.1 *Corps Jurisdiction*

Pursuant to Section 404 of the Clean Water Act (CWA), the Corps regulates the discharge of dredged and/or fill material into waters of the United States. The term "waters of the United States" is defined in Corps regulations at 33 CFR Part 328.3(a) as:

- (1) *All waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;*
- (2) *All interstate waters including interstate wetlands;*
- (3) *All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation or destruction of which could affect foreign commerce including any such waters:
 - (i) *Which are or could be used by interstate or foreign travelers for recreational or other purposes; or*
 - (ii) *From which fish or shell fish are or could be taken and sold in interstate or foreign commerce; or*
 - (iii) *Which are used or could be used for industrial purpose by industries in interstate commerce...**
- (4) *All impoundments of waters otherwise defined as waters of the United States under the definition;*
- (5) *Tributaries of waters identified in paragraphs (a) (1)-(4) of this section;*
- (6) *The territorial seas;*
- (7) *Wetlands adjacent to waters (other than waters that are themselves wetlands) identified in paragraphs (a) (1)-(6) of this section.*

Waste treatment systems, including treatment ponds or lagoons designed to meet the requirements of CWA (other than cooling ponds as defined in 40 CFR 123.11(m) which also meet the criteria of this definition) are not waters of the United States.

(8) *Waters of the United States do not include prior converted cropland.¹ Notwithstanding the determination of an area's status as prior converted cropland by any other federal agency, for the purposes of the Clean Water Act, the final authority regarding Clean Water Act jurisdiction remains with the EPA.*

In the absence of wetlands, the limits of Corps jurisdiction in non-tidal waters, such as intermittent streams, extend to the OHWM which is defined at 33 CFR 328.3(e) as:

...that line on the shore established by the fluctuation of water and indicated by physical characteristics such as 1) clear, natural line impressed on the bank, 2) shelving, 3) changes in the character of soil, 4) destruction of terrestrial vegetation, 5) the presence of litter and debris, or 6) other appropriate means that consider the characteristics of the surrounding areas.

Solid Waste Agency of Northern Cook County v. United States Army Corps of Engineers, et al.

Pursuant to Article I, Section 8 of the U.S. Constitution, federal regulatory authority extends only to activities that affect interstate commerce. In the early 1980s the Corps interpreted the interstate commerce requirement in a manner that restricted Corps jurisdiction on isolated (intrastate) waters. On September 12, 1985, EPA asserted that Corps jurisdiction extended to isolated waters that are used or could be used by migratory birds or endangered species, and the definition of "waters of the United States" in Corps regulations was modified as quoted above from 33 CFR 328.3(a).

On January 9, 2001, the Supreme Court of the United States issued a ruling on *Solid Waste Agency of Northern Cook County v. United States Army Corps of Engineers, et al.* (SWANCC). In this case the Court was asked whether use of an isolated, intrastate pond by migratory birds is a sufficient interstate commerce connection to bring the pond into federal jurisdiction of Section 404 of the Clean Water Act.

The written opinion notes that the court's previous support of the Corps' expansion of jurisdiction beyond navigable waters (*United States v. Riverside Bayview Homes, Inc.*) was for a wetland that abutted a navigable water and that the court did not express any opinion on the question of the authority of the Corps to regulate wetlands that are not adjacent to bodies of open water. The current opinion goes on to state:

¹ The term "prior converted cropland" is defined in the Corps' Regulatory Guidance Letter 90-7 (dated September 26, 1990) as "wetlands which were both manipulated (drained or otherwise physically altered to remove excess water from the land) and cropped before 23 December 1985, to the extent that they no longer exhibit important wetland values. Specifically, prior converted cropland is inundated for no more than 14 consecutive days during the growing season...." [Emphasis added.]

In order to rule for the respondents here, we would have to hold that the jurisdiction of the Corps extends to ponds that are not adjacent to open water. We conclude that the text of the statute will not allow this.

Rapanos v. United States and Carabell v. United States

On June 5, 2007, the U.S. Environmental Protection Agency (EPA) and Corps issued joint guidance that addresses the scope of jurisdiction pursuant to the Clean Water Act in light of the Supreme Court's decision in the consolidated cases *Rapanos v. United States* and *Carabell v. United States* ("Rapanos"). The chart below was provided in the joint EPA/Corps guidance.

For project sites that include waters other than TNWs and/or their adjacent wetlands or Relatively Permanent Waters (RPWs) tributary to TNWs and/or their adjacent wetlands as set forth in the chart below, the Corps must apply the significant nexus standard, that includes the data set forth in the *Approved Jurisdictional Determination Form*.

For "isolated" waters or wetlands, the joint guidance also requires an evaluation by the Corps and EPA to determine whether other interstate commerce clause nexuses, not addressed in the SWANCC decision are associated with isolated features on project sites for which a jurisdictional determination is being sought from the Corps.

The agencies will assert jurisdiction over the following waters:

- Traditional navigable waters
- Wetlands adjacent to traditional navigable waters
- Non-navigable tributaries of traditional navigable waters that are relatively permanent where the tributaries typically flow year-round or have continuous flow at least seasonally (e.g., typically three months)
- Wetlands that directly abut such tributaries

The agencies will decide jurisdiction over the following waters based on a fact-specific analysis to determine whether they have a significant nexus with a traditional navigable water:

- Non-navigable tributaries that are not relatively permanent
- Wetlands adjacent to non-navigable tributaries that are not relatively permanent
- Wetlands adjacent to but that do not directly abut a relatively permanent non-navigable tributary

The agencies generally will not assert jurisdiction over the following features:

- Swales or erosional features (e.g., gullies, small washes characterized by low volume, infrequent or short duration flow)
- Ditches (including roadside ditches) excavated wholly in and draining only uplands and that do not carry a relatively permanent flow of water

The agencies will apply the significant nexus standard as follows:

- A significant nexus analysis will assess the flow characteristics and functions of the tributary itself and the functions performed by all wetlands adjacent to the tributary to determine if they significantly affect the chemical, physical and biological integrity of downstream traditional navigable waters
- Significant nexus includes consideration of hydrologic and ecologic factors

Corps Preliminary Jurisdictional Determination

A *Corps Preliminary Jurisdictional Determination Form* may be used to concede Corps jurisdiction where all streambeds within the Project area are considered Corps jurisdictional waters. The Project would be able to move forward pursuant to Corps RGL 08-02, issued on June 26, 2008, which allows the Corps to issue preliminary jurisdictional determinations (Preliminary JD) for a project. A Preliminary JD allows you to move forward with the project by setting aside/voluntarily waiving questions regarding CWA jurisdiction over drainages on site in the interest of allowing you to expeditiously obtain a Section 404 Permit, when it is in your best interest to do so.

As stated in RGL 08-02:

While a landowner, permit applicant, or other affected party can elect to request and obtain an approved JD, he or she can also decline to request an approved JD, and instead obtain a Corps individual or general permit authorization based on either a preliminary JD, or, in appropriate circumstances (such as authorizations by non-reporting nationwide general permits), no JD whatsoever. The Corps will determine what form of JD is appropriate for any particular circumstance based on all the relevant factors, to include, but not limited to, the applicant's preference, what kind of permit authorization is being used (individual permit versus general permit), and the nature of the proposed activity needing authorization.

The Corps typically completes Preliminary JDs within 60 days of receipt of the request for such a determination. If the Corps project manager cannot complete the Preliminary JD within the 60-day timeframe, they must provide their supervisor, who would also provide the applicant, with a schedule to complete the determination (i.e., unlike the Rapanos significant nexus guidelines, there is a specific timeframe to complete the Preliminary JD and move forward with your project, without uncertainty, and the EPA will not be involved with the Preliminary JD process as the Corps is not required to coordinate with the EPA to review Preliminary JDs).

Wetland Definition Pursuant to Section 404 of the Clean Water Act

The term "wetlands" (a subset of "waters of the United States") is defined at 33 CFR 328.3(b) as "those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support...a prevalence of vegetation typically adapted for life in saturated soil conditions." In 1987 the Corps published a manual to guide its field personnel in determining jurisdictional wetland boundaries. The methodology set

forth in the 1987 Wetland Delineation Manual and the Arid West Supplement generally require that, in order to be considered a wetland, the vegetation, soils, and hydrology of an area exhibit at least minimal hydric characteristics. While the manual and Supplement provide great detail in methodology and allow for varying special conditions, a wetland should normally meet each of the following three criteria:

- more than 50 percent of the dominant plant species at the site must be typical of wetlands (i.e., rated as facultative or wetter in the National List of Plant Species that Occur in Wetlands²);
- soils must exhibit physical and/or chemical characteristics indicative of permanent or periodic saturation (e.g., a gleyed color, or mottles with a matrix of low chroma indicating a relatively consistent fluctuation between aerobic and anaerobic conditions); and
- Whereas the 1987 Manual requires that hydrologic characteristics indicate that the ground is saturated to within 12 inches of the surface for at least five percent of the growing season during a normal rainfall year, the Arid West Supplement does not include a quantitative criteria with the exception for areas with “problematic hydrophytic vegetation”, which require a minimum of 14 days of ponding to be considered a wetland.

2.12.2 Regional Water Quality Control Board

Subsequent to the SWANCC decision, the Chief Counsel for the State Water Resources Control Board issued a memorandum that addressed the effects of the SWANCC decision on the Section 401 Water Quality Certification Program.³ The memorandum states:

California's right and duty to evaluate certification requests under section 401 is pendant to (or dependent upon) a valid application for a section 404 permit from the Corps, or another application for a federal license or permit. Thus if the Corps determines that the water body in question is not subject to regulation under the COE's 404 program, for instance, no application for 401 certification will be required...

The SWANCC decision does not affect the Porter Cologne authorities to regulate discharges to isolated, non-navigable waters of the states....

Water Code section 13260 requires "any person discharging waste, or proposing to discharge waste, within any region that could affect the

² Reed, P.B., Jr. 1988. National List of Plant Species that Occur in Wetlands. U.S. Fish and Wildlife Service Biological Report 88(26.10).

³ Wilson, Craig M. January 25, 2001. Memorandum addressed to State Board Members and Regional Board Executive Officers.

waters of the state to file a report of discharge (an application for waste discharge requirements).” (Water Code § 13260(a)(1) (emphasis added).) The term “waters of the state” is defined as “any surface water or groundwater, including saline waters, within the boundaries of the state.” (Water Code § 13050(e).) The U.S. Supreme Court’s ruling in SWANCC has no bearing on the Porter-Cologne definition. While all waters of the United States that are within the borders of California are also waters of the state, the converse is not true—waters of the United States is a subset of waters of the state. Thus, since Porter-Cologne was enacted California always had and retains authority to regulate discharges of waste into any waters of the state, regardless of whether the COE has concurrent jurisdiction under section 404. The fact that often Regional Boards opted to regulate discharges to, e.g., vernal pools, through the 401 program in lieu of or in addition to issuing waste discharge requirements (or waivers thereof) does not preclude the regions from issuing WDRs (or waivers of WDRs) in the absence of a request for 401 certification....

In this memorandum the SWRCB’s Chief Counsel has made the clear assumption that fill material to be discharged into isolated waters of the United States is to be considered equivalent to “waste” and therefore subject to the authority of the Porter Cologne Water Quality Act. However, while providing a recounting of the Act’s definition of waters of the United States, this memorandum fails to also reference the Act’s own definition of waste:

“Waste” includes sewage and any and all other waste substances, liquid, solid, gaseous, or radioactive, associated with human habitation, or of human or animal origin, or from any producing, manufacturing, or processing operation, including waste placed within containers of whatever nature prior to, and for purposes of, disposal.

The lack of inclusion of a reference to “fill material,” “dirt,” “earth” or other similar terms in the Act’s definition of “waste,” or elsewhere in the Act, suggests that no such association was intended. Thus, the Chief Counsel’s memorandum signals that the SWRCB is attempting to retain jurisdiction over discharge of fill material into isolated waters of the United States by administratively expanding the definition of “waste” to include “fill material” without actually seeking amendment of the Act’s definition of waste (an amendment would require action by the state legislature). Consequently, discharge of fill material into waters of the State not subject to the jurisdiction of the Corps pursuant to Section 404 of the Clean Water Act may require authorization pursuant to the Porter Cologne Act through application for waste discharge requirements (WDRs) or through waiver of WDRs, despite the lack of a clear regulatory imperative.

2.12.3 CDFG Jurisdiction

Pursuant to Division 2, Chapter 6, Sections 1600-1603 of the California Fish and Game Code, the CDFG regulates all diversions, obstructions, or changes to the natural flow or bed, channel, or bank of any river, stream, or lake which supports fish or wildlife.

CDFG defines a "stream" (including creeks and rivers) as "a body of water that flows at least periodically or intermittently through a bed or channel having banks and supports fish or other aquatic life. This includes watercourses having surface or subsurface flow that supports or has supported riparian vegetation." CDFG's definition of "lake" includes "natural lakes or man-made reservoirs."

CDFG jurisdiction within altered or artificial waterways is based upon the value of those waterways to fish and wildlife. CDFG Legal Advisor has prepared the following opinion:

- Natural waterways that have been subsequently modified and which have the potential to contain fish, aquatic insects and riparian vegetation will be treated like natural waterways...
- Artificial waterways that have acquired the physical attributes of natural stream courses and which have been viewed by the community as natural stream courses, should be treated by [CDFG] as natural waterways...
- Artificial waterways without the attributes of natural waterways should generally not be subject to Fish and Game Code provisions...

Thus, CDFG jurisdictional limits closely mirror those of the USACE. Exceptions are CDFG's exclusion of isolated wetlands (those not associated with a river, stream, or lake), the addition of artificial stock ponds and irrigation ditches constructed on uplands, and the addition of riparian habitat supported by a river, stream, or lake regardless of the riparian area's federal wetland status.

3.0 REGULATORY SETTING

The proposed Project is subject to state and federal regulations associated with a number of regulatory programs. These programs often overlap and were developed to protect natural resources, including: state and federally listed plants and animals; aquatic resources including rivers and creeks, ephemeral streambeds, wetlands, and areas of riparian habitat; other special-status species which are not listed as threatened or endangered by the state or federal governments; and other special-status vegetation communities.

3.1 State and/or Federally Listed Plants or Animals

3.1.1 *State of California Endangered Species Act*

The California Endangered Species Act (CESA) defines an endangered species as “a native species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant which is in serious danger of becoming extinct throughout all, or a significant portion, of its range due to one or more causes, including loss of habitat, change in habitat, overexploitation, predation, competition, or disease.” The State defines a threatened species as “a native species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant that, although not presently threatened with extinction, is likely to become an endangered species in the foreseeable future in the absence of the special protection and management efforts required by this chapter. Any animal determined by the commission as rare on or before January 1, 1985 is a threatened species.” Candidate species are defined as “a native species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant that the commission has formally noticed as being under review by the department for addition to either the list of endangered species or the list of threatened species, or a species for which the commission has published a notice of proposed regulation to add the species to either list.” Candidate species may be afforded temporary protection as though they were already listed as threatened or endangered at the discretion of the Fish and Game Commission. Unlike the Federal Endangered Species Act (FESA), CESA does not list invertebrate species.

Article 3, Sections 2080 through 2085, of the CESA addresses the taking of threatened, endangered, or candidate species by stating “No person shall import into this state, export out of this state, or take, possess, purchase, or sell within this state, any species, or any part or product thereof, that the commission determines to be an endangered species or a threatened species, or attempt any of those acts, except as otherwise provided.” Under the CESA, “take” is defined as “hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill.” Exceptions authorized by the state to allow “take” require permits or memoranda of understanding and can be authorized for endangered species, threatened species, or candidate species for scientific, educational, or management purposes and for take incidental to otherwise lawful activities. Sections 1901 and 1913 of the California Fish and Game Code provide that notification is required prior to disturbance.

3.1.2 *Federal Endangered Species Act*

The FESA of 1973 defines an endangered species as “any species that is in danger of extinction throughout all or a significant portion of its range.” A threatened species is defined as “any species that is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range.” Under provisions of Section 9(a)(1)(B) of the FESA, it is unlawful to “take” any listed species. “Take,” as defined in Section 3(18) of FESA, is to: “...harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct.” Further, the

USFWS, through regulation, has interpreted the terms “harm” and “harass” to include certain types of habitat modification that result in injury to, or death of species as forms of “take.” These interpretations, however, are generally considered and applied on a case-by-case basis and often vary from species to species. In a case where a property owner seeks permission from a Federal agency for an action that could affect a federally listed plant and animal species, the property owner and agency are required to consult with USFWS. Section 9(a)(2)(b) of the FESA addresses the protections afforded to listed plants.

3.1.3 State and Federal Take Authorizations for Listed Species

Federal or state authorizations of impacts to or incidental take of a listed species by a private individual or other private entity would be granted in one of the following ways:

- Section 7 of the FESA stipulates that any federal action that may affect a species listed as threatened or endangered requires a formal consultation with USFWS to ensure that the action is not likely to jeopardize the continued existence of the listed species or result in destruction or adverse modification of designated critical habitat. 16 U.S.C. 1536(a)(2).
- In 1982, the FESA was amended to give private landowners the ability to develop Habitat Conservation Plans (HCP) pursuant to Section 10(a) of the FESA. Upon development of an HCP, the USFWS can issue incidental take permits for listed species where the HCP specifies, at minimum, the following: (1) the level of impact that will result from the taking, (2) steps that will minimize and mitigate the impacts, (3) funding necessary to implement the plan, (4) alternative actions to the taking considered by the applicant and the reasons why such alternatives were not chosen, and (5) such other measures that the Secretary of the Interior may require as being necessary or appropriate for the plan .
- Sections 2090-2097 of the CESA require that the state lead agency consult with CDFG on projects with potential impacts on state-listed species. These provisions also require CDFG to coordinate consultations with the USFWS for actions involving federally listed as well as state-listed species. In certain circumstances, Section 2080.1 of the California Fish and Game Code allows CDFG to adopt the federal incidental take statement or the 10(a) permit as its own based on its findings that the federal permit adequately protects the species under state law.

3.1.4 Take Authorizations Pursuant to the MSHCP

The MSHCP was adopted on June 17, 2003, and an Implementing Agreement (IA) was executed between the Federal and State Wildlife Agencies (USFWS and CDFG) and participating entities. The MSHCP is a comprehensive habitat conservation-planning program for western Riverside County. The intent of the MSHCP is to preserve native vegetation and meet the habitat needs of multiple species, rather than focusing preservation efforts on one species at a time. As such, the MSHCP is intended to streamline review of individual projects with respect to the species and habitats addressed in the MSHCP, and

to provide for an overall Conservation Area that would be of greater benefit to biological resources than would result from a piecemeal regulatory approach. The MSHCP provides coverage (including take authorization for listed species) for special-status plant and animal species, as well as mitigation for impacts to sensitive species.

Through agreements with the USFWS and the CDFG, the MSHCP designates approximately 146 special-status animal and plant species that receive some level of coverage under the plan. Of the 146 covered species designated under the MSHCP, the majority of these species have no additional survey/ conservation requirements. In addition, the MSHCP provides mitigation for project-specific impacts to these species so that the impacts would be reduced to below a level of significance pursuant to the CEQA. Beyond the fully covered species, there are species with additional survey/ conservation requirements. These included fourteen (14) Narrow Endemic Plant Species, as identified by the NEPSSA; thirteen (13) Criteria Area Plant Species, as identified by the CAPSSA; seven (7) animals species, as identified by survey area; six (6) species associated with riparian/riverine areas and vernal pool habitats (*Section 6.1.2*); and an additional 28 species (*Table 9.3 of the MSHCP document*) not yet adequately conserved.

3.2 California Environmental Quality Act

3.2.1 *CEQA Guidelines Section 15380*

CEQA requires evaluation of a project's impacts on biological resources and provides guidelines and thresholds for use by lead agencies for evaluating the significance of proposed impacts. Sections 5.1.1 and 5.2.2 below set forth these thresholds and guidelines. Furthermore, pursuant to the CEQA Guidelines Section 15380, CEQA provides protection for non-listed species that could potentially meet the criteria for state listing. For plants, CDFG recognizes that plants on Lists 1A, 1B, or 2 of the CNPS *Inventory of Rare and Endangered Plants in California* may meet the criteria for listing and should be considered under CEQA. CDFG also recommends protection of plants, which are regionally important, such as locally rare species, disjunct populations of more common plants, or plants on the CNPS Lists 3 or 4.

3.2.2 *Non-Listed Special-Status Plants and Animals Evaluated Under CEQA*

Federally Designated Special-Status Species

Within recent years, the USFWS instituted changes in the listing status of candidate species. Former C1 (candidate) species are now referred to simply as candidate species and represent the only candidates for listing. Former C2 species (for which the USFWS had insufficient evidence to warrant listing) and C3 species (either extinct, no longer a valid taxon or more abundant than was formerly believed) are no longer considered as candidate species. Therefore, these species are no longer maintained in list form by the USFWS, nor are they formally protected. However, some USFWS field offices have issued memoranda stating that former C2 species are to be considered federal Species of

Concern (FSC). This term is employed in this document, but carries no official protections. All references to federally protected species in this report (whether listed, proposed for listing, or candidate) include the most current published status or candidate category to which each species has been assigned by USFWS.

For this report the following acronyms are used for federal special-status species:

- FE Federally listed as Endangered
- FT Federally listed as Threatened
- FPE Federally proposed for listing as Endangered
- FPT Federally proposed for listing as Threatened
- FC Federal candidate species (former C1 species)
- FSC Federal Species of Concern (former C2 species)

State-Designated Special-Status Species

Some mammals and birds are protected by the state as Fully Protected (SFP) Mammals or Fully Protected Birds, as described in the California Fish and Game Code, Sections 4700 and 3511, respectively. California Species of Special Concern (CSC) are species designated as vulnerable to extinction due to declining population levels, limited ranges, and/or continuing threats. This list is primarily a working document for the CDFG's CNDDDB project. Informally listed taxa are not protected, but warrant consideration in the preparation of biotic assessments. For some species, the CNDDDB is only concerned with specific portions of the life history, such as roosts, rookeries, or nest sites.

For this report the following acronyms are used for State special-status species:

- SE State-listed as Endangered
- ST State-listed as Threatened
- SR State-listed as Rare
- SCE State candidate for listing as Endangered
- SCT State candidate for listing as Threatened
- CFP California Fully Protected
- SP State Protected
- CSC California Species of Special Concern

California Native Plant Society

The CNPS is a private plant conservation organization dedicated to the monitoring and protection of sensitive plant species in California. The CNPS's Sixth Edition of the *California Native Plant Society's Inventory of Rare and Endangered Plants of California* separates plants of interest into five categories. CNPS has compiled an inventory comprised of the information focusing on geographic distribution and qualitative characterization of rare, threatened, or endangered vascular plant species of California (Tibor 2001). The CNPS list serves as the candidate list for listing as threatened and

endangered by CDFG. CNPS has developed five categories of rarity that are summarized in Table 3-1.

Table 3-1. CNPS Lists 1, 2, 3, & 4, and Threat Code Extensions.

CNPS List	Comments
List 1A – Presumed Extinct in California	Thought to be extinct in California based on a lack of observation or detection for many years.
List 1B – Rare or Endangered in California and Elsewhere	Species, which are generally rare throughout their range that are also judged to be vulnerable to other threats such as declining habitat.
List 2 - Rare or Endangered in California, More Common Elsewhere	Species that are rare in California but more common outside of California
List 3 – Need More Information	Species that are thought to be rare or in decline but CNPS lacks the information needed to assign to the appropriate list. In most instances, the extent of surveys for these species is not sufficient to allow CNPS to accurately assess whether these species should be assigned to a specific list. In addition, many of the List 3 species have associated taxonomic problems such that the validity of their current taxonomy is unclear.
List 4 – Plants of Limited Distribution	Species that are currently thought to be limited in distribution or range whose vulnerability or susceptibility to threat is currently low. In some cases, as noted above for List 3 species above, CNPS lacks survey data to accurately determine status in California. Many species have been placed on List 4 in previous editions of the “Inventory” and have been removed as survey data has indicated that the species are more common than previously thought. CNPS recommends that species currently included on this list should be monitored to ensure that future substantial declines are minimized.
Extension	Comments
.1 – Seriously endangered in California	Species with over 80% of occurrences threatened and/or have a high degree and immediacy of threat.
.2 – Fairly endangered in California	Species with 20-80% of occurrences threatened.
.3 – Not very endangered in California	Species with <20% of occurrences threatened or with no current threats known.

4.0 RESULTS

This section provides the results of habitat assessments and general biological studies conducted for the 1.10-acre Project site. The habitat assessments and general biological studies focused on identifying potential biological resources within the 1.10-acre Project site in relationship to the MSHCP, state and federal permitting requirements, and CEQA.

4.1 Existing Conditions

The Project site is comprised of a 676 linear-foot portion of the Channel and its adjacent access roads which combined total 1.10 acres. The Project site contains

disturbed/developed/open water, disturbed/developed, ruderal vegetation, and southern willow scrub with emergent wetland habitat. The Channel within the Project site has a soft bottom with earthen banks and is dominated by riparian vegetation with emergent wetland. The RCFCDD has a MOU [Appendix C] with CDFG to allow the periodic trimming of the vegetation within the Channel in order to maintain 100-year flood flows. These maintenance activities are also the subject of a Master CDFG Section 1605 Streambed Alteration Agreement, which is currently being processed for RCFCDD by the CDFG.

Immediately to the west and east of the Project site, the Channel is an improved concrete lined channel. Elevations within the Project site range from approximately 590 to 600 feet above Mean Sea Level (MSL). The Project site is bordered on the north by ruderal lands and Second Street, River Road and an improved portion of the Channel to the west, ruderal lands and the Corona-Norco Family YMCA to the south, and an improved portion of the Channel and existing residential development to the east. Photographs depicting current site conditions are included as Exhibit 4 [Site Photographs].

4.2 Results of CNNDDB and CNPS Literature Search for Special Status Plant and Wildlife Species

The following tables represent a review of the CNDDDB (CNDDDB 2010), CNPS Inventory of Rare and Endangered Plants of California (seventh edition, v7-09a) [CNPS 2010] for the USGS 7.5' quadrangle maps Corona North, Prado Dam, Black Star Canyon, Corona South, Lake Mathews, Riverside West, Fontana, Guasti, and Ontario, MSHCP species and habitat maps, and local knowledge of the region.

Table 4-1. Special Status Plant Species Evaluated for the Project Site

Species Name	Status	Habitat Requirements	Potential to Occur On Site
Allen's pentachaeta <i>Pentachaeta aurea</i> ssp. <i>allenii</i>	Federal: None State: None CNPS: List 1B.1 MSHCP: Not Covered	Occurs in openings of coastal scrub and valley and foothill grasslands from 75 to 520 meters (246 to 1,705 feet) MSL. Known only from Orange County. Blooms from March through June.	Not expected to occur on site due to a lack of suitable habitat. Not observed during habitat assessments and general biological studies.
Brand's star phacelia <i>Phacelia stellaris</i>	Federal: None State: FC CNPS: List 1B.1 MSHCP: Covered, Section 6.1.2	Occurs in coastal dunes and coastal scrub below 400 meters (1,310 feet) MSL in Los Angeles, Orange and San Diego Counties. Blooms from March through June.	Not expected to occur within the Project site due the lack of coastal dunes and coastal scrub. Not observed during habitat assessments and general biological studies.

Species Name	Status	Habitat Requirements	Potential to Occur On Site
Braunton's milk-vetch <i>Astragalus brauntonii</i>	Federal: FE State: None CNPS: List 1B.1 MSHCP: Not Covered	Perennial herb considered a limestone endemic. Typically found in fire dependent chaparral habitats. Known from below 640 meters (3,000 feet MSL). Blooms from June through October.	Not expected to occur on site due to a lack of suitable habitat. Not observed during habitat assessments and general biological studies.
California beardtongue <i>Penstemon californicus</i>	Federal: None State: None CNPS: 1B.2 MSHCP: Covered	Perennial herb of sandy or granitic soils on stony slopes or shrubby openings of chaparral, lower montane coniferous forests, and pinyon-juniper woodlands. Known only from Riverside County from 1,160 – 2,320 meters (3,800 – 7,600 feet) MSL. Blooms May through August.	Not expected to occur on site due to a lack of suitable habitat. Not observed during habitat assessments and general biological studies.
California black walnut <i>Juglans californica</i>	Federal: None State: None CNPS: List 4.2 MSHCP: Covered, Section 6.1.2	Occurs in chaparral, cismontane woodland and coastal scrub from 50 to 900 meters (165 to 2,952 feet) MSL. Known to occur in Santa Barbara, Ventura, Los Angeles, Riverside, San Bernardino, Orange and San Diego Counties. Blooms from March through August, identifiable year-round.	Does not occur within the Project site. Not observed during habitat assessments and general biological studies.
California muhly <i>Muhlenbergia californica</i>	Federal: None State: None CNPS: 4.3 MSHCP: Not considered adequately conserved until species-specific objectives are met.	Found on streambanks, canyons, and moist sites in chaparral, coastal sage scrub, coniferous forests, and meadows. Known from 100 to 2,000 meters (300 to 6,600 feet) MSL. Blooms from July through September.	Not expected to occur on site due to a lack of suitable habitat. Not observed during habitat assessments and general biological studies.
California Orcutt grass <i>Orcuttia californica</i>	Federal: FE State: SE CNPS: List 1B.1 MSHCP: Covered (Project is not located within NEPSSA)	Well-established vernal pools. Known from 10 to 600 meters (30 to 1,970 feet) MSL.	Does not occur within the Project site due to a lack of vernal pools. Not observed during habitat assessments and general biological studies.

Species Name	Status	Habitat Requirements	Potential to Occur On Site
California sawgrass <i>Cladium californicum</i>	Federal: None State: None CNPS: List 2.2 MSHCP: Not Covered	Perennial herb of freshwater marshes, alkali sinks, and riparian areas. Known from below 1,988 meters (6,525 feet) MSL. Blooms from June through September.	Not expected to occur on site due to a lack of suitable habitat. Not observed during habitat assessments and general biological studies.
Chaparral ragwort <i>Senecio aphanactis</i>	Federal: None State: None CNPS: 2.2 MSHCP: Not Covered	Drying alkaline flats in chaparral, cismontane woodland, and coastal scrub. Known from 15-575 meters (50-1,900 feet) MSL. Active January. – April.	Not expected to occur on site due to a lack of suitable habitat. Not observed during habitat assessments and general biological studies.
Chaparral sand-verbena <i>Abronia villosa</i> var. <i>aurita</i>	Federal: None State: None CNPS: 1B.1 MSHCP: Not Covered	Sandy soils in Chaparral and coastal scrub. Identifiable January through August.	Not expected to occur on site due to a lack of suitable habitat. Not observed during habitat assessments and general biological studies.
Coulter's goldfield <i>Lasthenia glabrata</i> ssp. <i>coulteri</i>	Federal: None State: None CNPS: 1B.1 MSHCP: Covered (Property is not located within CAPSSA)	Marshes, playas, and vernal pools; usually alkaline soils. Blooms March – June.	Not expected to occur on site due to a lack of suitable habitat. Not observed during habitat assessments and general biological studies.
Coulter's matilija poppy <i>Romneya coulteri</i>	Federal: None State: None CNPS: List 4.2 MSHCP: Species-Specific Objectives	Occurs in chaparral and coastal scrub from 20 to 1,200 meters (66 to 3,940 feet) MSL and is known as a fire follower species. Known from Los Angeles, Orange, Riverside and San Diego Counties. Blooms from March through July, identifiable year-round.	Not expected to occur within the Project site due to the lack of chaparral and coastal scrub. Not observed during habitat assessments and general biological studies.
Coulter's saltbush <i>Atriplex coulteri</i>	Federal: None State: None CNPS: List 1B.2 MSHCP: Not Covered	Perennial herb of alkaline or clay soils on ocean bluffs, ridge-tops, and low alkaline areas in coastal bluff scrub, coastal dunes, coastal sage scrub, and valley and foothill grasslands below 460 meters (1,500 feet) MSL. Blooms from March through October.	Not expected to occur on site due to a lack of suitable habitat. Not observed during habitat assessments and general biological studies.

Species Name	Status	Habitat Requirements	Potential to Occur On Site
Engelmann oak <i>Quercus engelmanni</i>	Federal: None State: None CNPS: List 4.2 MSHCP: Covered, Section 6.1.2	Occurs in chaparral, cismontane woodland, riparian woodland and valley and foothill grasslands from 50 to 1,300 meters (165 to 4,265 feet) MSL. Known to occur from Los Angeles, Orange, Riverside, and San Diego Counties as well as on Catalina Island and in Baja California. Bloom from March through June, identifiable year round.	Does not occur within the Project site. Not observed during habitat assessments and general biological studies.
Fish's milkwort <i>Polygala cornuta</i> var. <i>fishiae</i>	Federal: None State: None CNPS: List 4.3 MSHCP: Species-Specific Objectives	Occurs in chaparral, cismontane woodland and riparian woodlands from 100 to 1,000 meters (328 to 3,280 feet) MSL. Known to occur from Santa Barbara, Ventura, Los Angeles, Orange, Riverside and San Diego Counties as well as Baja California. Blooms from May through January.	Not expected to occur within the Project site due to a lack of chaparral and cismontane woodland. Not observed during habitat assessments and general biological studies.
Graceful tarplant <i>Holocarpha virgata</i> ssp. <i>elongata</i>	Federal: None State: None CNPS: List 4.2 MSHCP: Species-Specific Objectives	Occurs in chaparral, cismontane woodland, coastal scrub, valley and foothill grasslands and vernal pools from 60 to 1,100 meters (197 to 3,609 feet) MSL. Known to occur from Orange, Riverside and San Diego Counties. Blooms from May through November.	Not expected to occur within the Project site due to the lack of chaparral, cismontane woodland, coastal scrub, and valley and foothill grasslands. Not observed during habitat assessments and general biological studies.
Heart-leaved pitcher sage <i>Lepechinia cardiophylla</i>	Federal: None State: None CNPS: 1B.2 MSHCP: Covered (Property is not located within CAPSSA)	Closed-cone coniferous forest, chaparral, and cismontane woodland. Known from 550-1,370 meters (1,800 -4,500 feet) MSL. Active April - July.	Not expected to occur on site due to a lack of suitable habitat. Not observed during habitat assessments and general biological studies.
Intermediate mariposa lily <i>Calochortus weedii</i> var. <i>intermedius</i>	Federal: None State: None CNPS: List 1B.2 MSHCP: Not considered adequately conserved until species-specific objectives are met.	Chaparral, coastal scrub, and valley and foothill grassland. Known from 180-850 meters (600-2,800 feet) MSL. Active June - July.	Not expected to occur on site due to a lack of suitable habitat. Not observed during habitat assessments and general biological studies.

Species Name	Status	Habitat Requirements	Potential to Occur On Site
Lemon lily <i>Lilium parryi</i>	Federal: None State: None CNPS: List 1B.2 MSHCP: Not Covered, Section 6.1.2	Occurs in lower and upper montane coniferous forest, meadows and seeps and riparian forests from 1,220 to 2,745 meters (4,000 to 9,000 feet) MSL. This species is known to occur from Los Angeles, Riverside, Orange and San Diego counties in southern California. Blooms from July through August.	Not expected to occur within the Project site due to a lack of montane coniferous forests, and meadows and seeps, and the Project is outside of the known elevational range for the species. Not observed during habitat assessments and general biological studies.
Long-spined spineflower <i>Chorizanthe polygonoides</i> var. <i>longispina</i>	Federal: None State: None CNPS: 1B.2 MSHCP: Covered	Chaparral, coastal scrub, meadows, seeps, and valley and foothill grassland. Known from 30-1,450 meters (100-4,800 feet) MSL. Active April – July.	Not expected to occur on site due to a lack of suitable habitat. Not observed during habitat assessments and general biological studies.
Malibu baccharis <i>Baccharis malibuensis</i>	Federal: None State: None CNPS: List 1B.1 MSHCP: Not Covered	Deciduous shrub of conejo volcanic soils (often roadsides), in coastal sage scrub, chaparral, or cismontane woodlands. Known from 150 to 260 meters (490 to 850 feet) MSL. Blooms in August.	Not expected to occur on site due to a lack of suitable habitat. Not observed during habitat assessments and general biological studies.
Many-stemmed dudleya <i>Dudleya multicaulis</i>	Federal: None State: None CNPS: 1B.2 MSHCP: Covered (Property is not located within NEPSSA)	Chaparral, coastal scrub, and valley and foothill grassland. Often found on clay soils or granitic outcrops. Known from below 800 meters (2,600 feet) MSL. Blooms May through July.	Not expected to occur on site due to a lack of suitable habitat. Not observed during habitat assessments and general biological studies.
Marsh sandwort <i>Arenaria paludicola</i>	Federal: FE State: SE CNPS: 1B.1 MSHCP: Not Covered	Freshwater marshes and swamps. Historically known from below 180 meters (600 feet) MSL. Blooms May – August.	Not expected to occur on site due to a lack of suitable habitat. Not observed during habitat assessments and general biological studies.
Mesa horkelia <i>Horkelia cuneata</i> ssp. <i>puberula</i>	Federal: None State: None CNPS: 1B.1 MSHCP: Not Covered	Sandy or gravelly soils in chaparral and coastal scrub. Known from 70 to 825 meters (200-2,700 feet) MSL. Identifiable February through September.	Not expected to occur on site due to a lack of suitable habitat. Not observed during habitat assessments and general biological studies.

Species Name	Status	Habitat Requirements	Potential to Occur On Site
Mojave tarplant <i>Deinandra mohaviensis</i>	Federal: None State: SE CNPS: List 1B.3 MSHCP: Covered, Section 6.1.2	Occurs in chaparral, coastal scrub and riparian scrub from 640 to 1,600 meters (2,100 to 5,428 feet) MSL. Known to occur from Kern Riverside, San Bernardino and San Diego Counties. Blooms from June through January.	Not expected to occur within the Project site due to the lack of chaparral, coastal scrub, and riparian scrub. Not observed during habitat assessments and general biological studies.
Moran's nosegay [spreading navarretia] <i>Navarretia fossalis</i>	Federal: FT State: None CNPS: List 1B.1 MSHCP: NEPSSA 1	Vernal pools, chenopod scrub, marshes ditches and playas. Known to occur from 30 to 1,310 meters (100 to 4,300 feet) MSL. Identifiable April through June.	Does not occur within the Project site due to a lack of vernal pools, chenopod scrub, marshes, and playas. Not observed during habitat assessments and general biological studies.
Mud nama <i>Nama stenocarpum</i>	Federal: None State: None CNPS: List 2.2 MSHCP: Covered, Section 6.1.2	Occurs in marshes and swamps and sometimes on lake margins and riverbanks. Known to occur from Los Angeles, Orange, Riverside, San Diego and Imperial Counties as well as San Clemente Island and Baja Mexico. Blooms from January through July.	Does not occur within the Project site due to a lack of marshes, swamps, and lake margins. Not observed during habitat assessments and general biological studies.
Munz's onion <i>Allium munzii</i>	Federal: FE State: ST CNPS: 1B.1 MSHCP: Covered (Property is not located within NEPSSA)	Clay soils supporting chaparral, cismontane woodland, coastal scrub, pinyon and juniper woodland, and valley and foothill grassland. Known from 300-1,070 meters (1,000- 3,500 feet) MSL. Active March – May.	Not expected to occur on site due to a lack of suitable habitat. Not observed during habitat assessments and general biological studies.

Species Name	Status	Habitat Requirements	Potential to Occur On Site
Ocellated Humboldt lily <i>Lilium humboldtii</i> ssp. <i>ocellatum</i>	Federal: None State: None CNPS: List 4.2 MSHCP: Not Covered, Section 6.1.2	Occurs in chaparral, cismontane woodland, coastal scrub, lower montane woodland and riparian woodlands from 30 to 1,800 meters (98 to 5,904 feet) MSL. Known to occur from San Luis Obispo, Santa Barbara, Los Angeles, Orange, Riverside, San Bernardino and San Diego Counties as well as several of the Channel Islands. Blooms from March through August.	Not expected to occur within the Project site due to the lack of chaparral, cismontane woodland, coastal scrub, and lower montane woodland. Not observed during habitat assessments and general biological studies.
Orcutt's brodiaea <i>Brodiaea orcuttii</i>	Federal: None State: None CNPS: 1B.1 MSHCP: Covered, Section 6.1.2	Clay and serpentine soils in with grasslands, woodlands, chaparral and coniferous forest associated with streams or vernal pools. Known to occur below 1,615 meters (5,300 feet) MSL. Active May through July.	Not expected to occur within the Project site due to the lack of clay and serpentine soils in grasslands, woodlands, chaparral, and coniferous forests with vernal pools. Not observed during habitat assessments and general biological studies.
Palmer's grapplinghook <i>Harpagonella palmeri</i>	Federal: None State: None CNPS: 4.2 MSHCP: Covered	Occurs in chaparral, coastal sage and valley and foothill grasslands with clay affinities from 20 to 955 meters (66 to 3,132 feet) MSL. Known from Los Angeles, Orange, Riverside, San Diego Counties as well as Catalina Island and Baja California. Blooms from March through May	Not expected to occur on site due to a lack of suitable habitat. Not observed during habitat assessments and general biological studies.
Parish's desert-thorn <i>Lycium parishii</i>	Federal: None State: None CNPS: 2.3 MSHCP: Not Covered	Deciduous shrub of coastal and desert scrub. Known from 305-1,000 meters (1,000-3,300 feet) MSL. Identifiable year round.	Not expected to occur on site due to a lack of suitable habitat. Not observed during habitat assessments and general biological studies.

Species Name	Status	Habitat Requirements	Potential to Occur On Site
Parish's meadowfoam <i>Limnanthes gracilis</i> ssp. <i>parishii</i>	Federal: None State: SE CNPS: List 1B.2 MSHCP: Not Covered, Section 6.1.2	Occurs in lower montane coniferous forest, meadows and seeps and vernal pools from 600 to 2,000 feet (1,968 to 6,560 feet) MSL. Known to occur from Riverside and San Diego Counties. Blooms from April through June.	Does not occur within the Project site due to a lack of lower montane coniferous forests, meadows and seeps, and vernal pools. Not observed during habitat assessments and general biological studies.
Parry's spineflower <i>Chorizanthe parryi</i> var. <i>parryi</i>	Federal: None State: None CNPS: 1B.1 MSHCP: Not considered adequately conserved until species-specific objectives are met.	Dry sometimes sandy soils in chaparral and coastal scrub. Known from 40-1,750 meters (100-5,700 feet) MSL. Blooms April through June.	Not expected to occur on site due to a lack of suitable habitat. Not observed during habitat assessments and general biological studies.
Payson's jewelflower <i>Caulanthus simulans</i>	Federal: None State: None CNPS: List 4.2 MSHCP: Covered	Occurs in recently burned or disturbed areas within chaparral, coastal sage scrub and grasslands. Known from 60 - 2,200 meters (200 - 7,200 feet) MSL. Identifiable March through June.	Not expected to occur on site due to a lack of suitable habitat. Not observed during habitat assessments and general biological studies.
Peninsular nolina <i>Nolina cismontana</i>	Federal: None State: None CNPS: List 1B.2 MSHCP: Not Covered	Inhabits chaparral, and coastal sage scrub with sandstone or gabbro substrates. Known from 140-1,275 meters (500-4,200 feet) MSL. Active year-round.	Not expected to occur on site due to a lack of suitable habitat. Not observed during habitat assessments and general biological studies.
Plummer's mariposa lily <i>Calochortus plummerae</i>	Federal: None State: None CNPS: 1B.2 MSHCP: Not considered adequately conserved until species-specific objectives are met.	Chaparral, cismontane woodland, coastal scrub, lower montane coniferous forest, and valley and foothill grassland. Known from 100-1,700 meters (300-5,600 feet) MSL. Blooms May through July.	Not expected to occur on site due to a lack of suitable habitat. Not observed during habitat assessments and general biological studies.
Pringle's monardella <i>Monardella pringlei</i>	Federal: None State: None CNPS: List 1A MSHCP: Not Covered	Found in sandy hills in coastal sage scrub. Known from 275 to 400 meters (900 to 1,300 feet) MSL. Blooms May through June.	Not expected to occur on site due to a lack of suitable habitat. Not observed during habitat assessments and general biological studies.

Species Name	Status	Habitat Requirements	Potential to Occur On Site
Prostrate vernal pool navarretia <i>Navarretia prostrata</i>	Federal: None State: None CNPS: 1B.1 MSHCP: Covered (Property is not located within CAPSSA)	Vernal pools in coastal scrub and alkaline valley and foothill grassland. Known from 15-700 meters (50-2,300 feet) MSL. Blooms May – July.	Not expected to occur on site due to a lack of suitable habitat. Not observed during habitat assessments and general biological studies.
Robinson's pepper-grass <i>Lepidium virginicum</i> var. <i>robinsonii</i>	Federal: None State: None CNPS: 1B.2 MSHCP: Not Covered	Dry soils in chaparral and coastal scrub. Known from below 500 meters (1,600 feet) MSL. Active January. – July.	Not expected to occur on site due to a lack of suitable habitat. Not observed during habitat assessments and general biological studies.
Round-leaved filaree <i>California macrophyllum</i>	Federal: None State: None CNPS: 1B.1 MSHCP: Covered (Property is not located within CAPSSA)	Clay soils supporting cismontane woodland and valley and foothill grassland. Known from 15-1,200 meters (50-3,900 feet) MSL. Active March – May.	Not expected to occur on site due to a lack of suitable habitat. Not observed during habitat assessments and general biological studies.
Salt-marsh bird's-beak <i>Cordylanthus maritimus</i> ssp. <i>maritimus</i>	Federal: FE State: SE CNPS: 1B.2 MSHCP: Not Covered	Annual herb of coastal dunes and salt marshes. Known from below 30 meters (100 feet) MSL. Blooms May – September.	Not expected to occur on site due to a lack of suitable habitat. Not observed during habitat assessments and general biological studies.
Salt spring checkerbloom <i>Sidalcea neomexicana</i>	Federal: None State: None CNPS: List 2.2 MSHCP: Not Covered	Alkaline seeps, springs, and marshes. Known from below 1,500 meters (5,000 feet) MSL. Blooms March – June.	Not expected to occur on site due to a lack of suitable habitat. Not observed during habitat assessments and general biological studies.
San Bernardino aster <i>Symphotrichum defoliatum</i>	Federal: None State: None CNPS: 1B.2 MSHCP: Not Covered	Vernally moist sites; ie. Ditches, seeps, streams, within a variety of plant communities. Known from below 2,050 meters (6,700 feet) MSL. Blooms July – November.	Not expected to occur on site due to a lack of suitable habitat. Not observed during habitat assessments and general biological studies.
San Diego ambrosia <i>Ambrosia pumila</i>	Federal: FE State: None CNPS: 1B.1 MSHCP: Covered (Property is not located within NEPSSA)	Open areas with coarse substrates near drainages or upland clay slopes, or the dry margins of vernal pools. Known from 20-420 meters (70-1,400 feet) MSL. Active June – September.	Not expected to occur on site due to a lack of suitable habitat. Not observed during habitat assessments and general biological studies.
San Diego button celery <i>Eryngium aristulatum</i> var. <i>parishii</i>	Federal: FE State: SE CNPS: 1B.1 MSHCP: Covered, Section 6.1.2	Vernal pools. Known from Riverside and San Diego Counties as well as Baja California. Known from 15 to 620 meters (50 to 2,000 feet) MSL. Active April through June.	Does not occur within the Project site due to a lack of vernal pools. Not observed during habitat assessments and general biological studies.

Species Name	Status	Habitat Requirements	Potential to Occur On Site
San Fernando Valley spineflower <i>Chorizanthe parryi</i> var. <i>fernandina</i>	Federal: FC State: SE CNPS: 1B.1 MSHCP: Not Covered	Occurs in coastal scrub, valley and foothill grasslands and vernal pools from 150 to 1,220 meters (490 to 4,000 feet) MSL. Known from Ventura, Los Angeles and Orange Counties. Blooms from April through July.	Not expected to occur on site due to a lack of suitable habitat. Not observed during habitat assessments and general biological studies.
San Jacinto valley crownscale <i>Atriplex coronata</i> var. <i>notator</i>	Federal: FE State: None CNPS: List 1B.1 MSHCP: Covered, Section 6.1.2	Playas, chenopod scrub, valley and foothill grassland (mesic) and vernal pools in the San Jacinto River Valley. Known from 370 to 520 meters (1,200 to 1,700 feet) MSL. Identifiable April through August.	Does not occur within the Project site due to a lack of playas, chenopod scrub, valley and foothill grassland (mesic) and vernal pools. Not observed during habitat assessments and general biological studies.
San Miguel savory <i>Satureja chandleri</i>	Federal: None State: None CNPS: List 1B.2 MSHCP: NEPSSA 1	Rocky areas in chaparral, cismontane woodland, coastal scrub, riparian woodland, and valley and foothill grassland. Known from 110 to 1,210 meters (400 to 4,000 feet) MSL. Identifiable year round.	Not expected to occur within the Project site due to the lack of chaparral, cismontane woodland, coastal scrub, and valley and foothill grasslands. Not observed during habitat assessments and general biological studies.
Santa Ana River woollystar <i>Eriastrum densifolium</i> ssp. <i>sanctorum</i>	Federal: FE State: SE CNPS: 1B.1 MSHCP: Covered	Found in sandy soils of floodplains and terraced fluvial deposits of the Santa Ana River and larger tributaries. Known from 120 to 625 meters (400 to 4,100 feet) MSL. Blooms from June through September.	Not expected to occur on site due to a lack of suitable habitat. Not observed during habitat assessments and general biological studies.
Santiago Peak phacelia <i>Phacelia suaveolens</i> ssp. <i>keckii</i>	Federal: None State: None CNPS: 1B.3 MSHCP: Not Covered	Closed cone coniferous forest and chaparral. Known from 550-1,600 meters (1,800-5,200 feet) MSL. Blooms May – June.	Not expected to occur on site due to a lack of suitable habitat. Not observed during habitat assessments and general biological studies.
Slender-horned spineflower <i>Dodecahema leptoceras</i>	Federal: FE State: SE CNPS: 1B.1 MSHCP: Covered (Property is not located within NEPSSA)	Mature undisturbed floodplain terraces and benches with overbank deposits every 50-100 years from large washes and rivers. Known from 200-770 meters (600-2,500 feet) MSL. Blooms April through June.	Not expected to occur on site due to a lack of suitable habitat. Not observed during habitat assessments and general biological studies.

Species Name	Status	Habitat Requirements	Potential to Occur On Site
Smooth tarplant <i>Centromadia pungens</i> ssp. <i>laevis</i>	Federal: None State: None CNPS: 1B.1 MSHCP: Covered (Property is not located within CAPSSA)	Alkaline areas in chenopod scrub, meadows and seeps, ditches, playas, riparian woodland, and valley and foothill grassland. Known from below 480 meters (1,600 feet) MSL. Active April through September.	Not expected to occur on site due to a lack of suitable habitat. Not observed during habitat assessments and general biological studies.
Tecate cypress <i>Callitropsis forbesii</i>	Federal: None State: None CNPS: List 1B.1 MSHCP: Not Covered	Closed-cone coniferous forest and chaparral. Known from 250-1,500 meters (800-4,900 feet) MSL. Active year-round.	Not expected to occur on site due to a lack of suitable habitat. Not observed during habitat assessments and general biological studies.
Thread-leaved brodiaea <i>Brodiaea filifolia</i>	Federal: FT State: SE CNPS: List 1B.1 MSHCP: CAPSSA 1	Clay, loamy sand or alkaline soils in grasslands at edges of vernal pools or floodplains. Known from below 1,220 meters (< 4,000 feet) MSL. Identifiable April through June.	Not expected to occur within the Project site due to the lack of clay and alkaline soils and vernal pools. Not observed during habitat assessments and general biological studies.
Vernal barley <i>Hordeum intercedens</i>	Federal: None State: None CNPS: 3.2 MSHCP: Covered	Coastal dunes, coastal scrub, valley and foothill grassland (saline flats and depressions), and vernal pools. Known from below 1,000 meters (3,300 feet) MSL. Active March – June.	Not expected to occur on site due to a lack of suitable habitat. Not observed during habitat assessments and general biological studies.
White-bracted spineflower <i>Chorizanthe xanti</i> var. <i>leucotheca</i>	Federal: None State: None CNPS: List 1B.2 MSHCP: Not Covered	Mojavean desert scrub and pinyon and juniper woodland. Known from 300-1,200 meters (900-4,000 feet) MSL. Blooms April through June.	Not expected to occur on site due to a lack of suitable habitat. Not observed during habitat assessments and general biological studies.
White rabbit-tobacco <i>Pseudognaphalium leucocephalum</i>	Federal: None State: None CNPS: List 2.2 MSHCP: Not Covered	Sandy margins of washes or in debris cones blow steep canyons.	Not expected to occur on site due to a lack of suitable habitat. Not observed during habitat assessments and general biological studies.

Federal

FE - Federally Endangered
FT - Federally Threatened
FC - Federal Candidate

State

SE - State Endangered
ST - State Threatened

CNPS

List 1A - Presumed Extinct in California.

List 1B - Plants rare, threatened, or endangered in California and elsewhere.

List 2 - Plants rare, threatened, or endangered in California, but more common elsewhere.

List 3 – Plants about which more information is needed.

List 4 – Plants of limited distribution (a watch list).

CNPS Threat Code Extensions

- .1 – Seriously endangered in California (over 80% of occurrences threatened/high degree and immediacy of threat)
- .2 – Fairly endangered in California (20-80% occurrences threatened)
- .3 – Not very endangered in California (<20% of occurrences threatened or no current threats known)

Table 4-2. Special Status Wildlife Species Evaluated for the Project Site

Species Name	Status	Habitat Requirements	Potential to Occur on Site
Arroyo chub <i>Gila orcutti</i>	Federal: None State: CSC MSHCP: Covered	Slow-moving or backwater sections of warm to cool streams with substrates of sand or mud.	Not expected to occur on site due to a lack of suitable habitat. Not observed during habitat assessments and general biological studies.
Arroyo toad <i>Anaxyrus californicus</i>	Federal: FE State: CSC MSHCP: Covered (Property is not located within ASSA)	Breeds, forages, and/or aestivates in aquatic habitats, riparian, coastal sage scrub, oak, and chaparral habitats. Breeding pools must be open and shallow with minimal current, and with a sand or pea gravel substrate overlain with sand or flocculent silt. Adjacent banks with sandy or gravelly terraces and very little herbaceous cover for adult and juvenile foraging areas, within a moderate riparian canopy of cottonwood, willow, or oak.	Not expected to occur on site due to a lack of suitable habitat. Not observed during habitat assessments and general biological studies.
Bald eagle <i>Haliaeetus leucocephalus</i> (wintering & nesting)	Federal: Delisted State: SE MSHCP: Covered	Primarily in or near seacoasts, rivers, swamps, and large lakes. Perching sites consist of large trees or snags with heavy limbs or broken tops.	Not expected to nest on site, marginal potential to forage on site. Not observed during habitat assessments and general biological studies.
Bell's sage sparrow <i>Amphispiza belli belli</i> (nesting)	Federal: None State: WL MSHCP: Covered	Chaparral and coastal sage scrub along the coastal lowlands, inland valleys, and in the lower foothills of local mountains.	Not expected to occur on site due to a lack of suitable habitat. Not observed during habitat assessments and general biological studies.

Species Name	Status	Habitat Requirements	Potential to Occur on Site
Big free-tailed bat <i>Nyctinomops macrotis</i>	Federal: None State: CSC MSHCP: Not Covered WBWG: MH	Occurs in low-lying arid areas in Southern California. Roosts in high cliffs or rocky outcrops.	Not expected to occur (roosting or nesting) on site due to a lack of suitable habitat. Not observed during habitat assessments and general biological studies.
California horned lark <i>Eremophila alpestris actia</i>	Federal: None State: WL MSHCP: Covered	Occupies a variety of open habitats, usually where trees and large shrubs are absent.	Moderate potential to occur on site. Not observed during habitat assessments and general biological studies.
California mountain kingsnake <i>Lampropeltis zonata (pulchra)</i> (San Diego population)	Federal: None State: CSC MSHCP: MOU with Forest Service	Inhabits a variety of habitats including valley-foothill hardwood, coniferous, chaparral, riparian, and wet meadows. Restricted to San Gabriel and San Jacinto Mountains.	Not expected to occur on site due to a lack of suitable habitat. Not observed during habitat assessments and general biological studies.
California red-legged frog <i>Rana draytoni</i>	Federal: FT State: CSC MSHCP: Covered (Property is not located within ASSA)	Quiet pools of streams, marshes, and occasionally ponds.	Not expected to occur within the Project site due to the improved concrete-lined bed and bank upstream and downstream of the Project site. Not observed during habitat assessments and general biological studies.
Coastal cactus wren <i>Campylorhynchus brunneicapillus couesi</i> (San Diego & Orange Counties only)	Federal: None State: CSC MSHCP: Covered	Occurs almost exclusively in cactus (cholla and prickly pear) dominated coastal sage scrub.	Not expected to occur on site due to a lack of suitable habitat. Not observed during habitat assessments and general biological studies.
Coastal California gnatcatcher <i>Poliophtila californica californica</i>	Federal: FT State: CSC MSHCP: Covered	Low elevation coastal sage scrub and coastal bluff scrub.	Not expected to occur on site due to a lack of suitable habitat. Not observed during habitat assessments and general biological studies.
Coastal western whiptail <i>Aspidoscelis tigris stejnegeri</i>	Federal: None State: None MSHCP: Covered	Deserts and semi-arid areas with sparse vegetation and open areas; also found in riparian and woodland areas.	Not expected to occur on site due to a lack of suitable habitat. Not observed during habitat assessments and general biological studies.
Coast horned lizard <i>Phrynosoma blainvillei</i>	Federal: None State: CSC MSHCP: Covered	Occurs in a variety of vegetation types including coastal sage scrub, chaparral, annual grassland, oak woodland, and riparian woodlands.	Not expected to occur on site due to a lack of suitable habitat. Not observed during habitat assessments and general biological studies.

Species Name	Status	Habitat Requirements	Potential to Occur on Site
Coast patch-nosed snake <i>Salvadora hexalepis virgultea</i>	Federal: None State: CSC MSHCP: Not Covered	Brushy or shrubby vegetation in coastal Southern California.	Not expected to occur on site due to a lack of suitable habitat. Not observed during habitat assessments and general biological studies.
Coast Range Newt <i>Taricha torosa torosa</i> (Monterey County south only)	Federal: None State: CSC MSHCP: Covered	Frequents terrestrial habitats (grassland, woodland and forest) but breeds in ponds, reservoirs, and slow moving streams.	Not expected to occur on site due to a lack of suitable habitat. Not observed during habitat assessments and general biological studies.
Cooper's hawk <i>Accipiter cooperii</i> (nesting)	Federal: None State: WL MSHCP: Covered	Primarily occurs in riparian areas and oak woodlands, most commonly in montane canyons. Known to use urban areas, occupying trees among residential and commercial.	Not expected to nest on site, marginal potential to forage on site. Not observed during habitat assessments and general biological studies.
Delhi sands flower-loving fly <i>Rhaphiomidas terminatus abdominalis</i>	Federal: FE State: None MSHCP: Covered (Property is not located within the Delhi Sands flower-loving fly Survey Area).	Found only in areas of the Delhi sands formation; requires fine, sandy soils associated with dunes and sparse vegetation.	Not expected to occur on site due to a lack of suitable habitat. Not observed during habitat assessments and general biological studies.
Golden eagle <i>Aquila chrysaetos</i> (nesting & wintering)	Federal: None State: CFP MSHCP: Covered	In southern California, occupies grasslands, brushlands, deserts, oak savannas, open coniferous forests, and montane valleys. Nests on rock outcrops and ledges.	Not expected to nest on site, marginal potential to forage on site. Not observed during habitat assessments and general biological studies.
Grasshopper sparrow <i>Ammodramus saviannarum</i> (nesting)	Federal: None State: CSC MSHCP: Not considered adequately conserved until species-specific objectives are met.	Dense grasslands on rolling hills, lowland plains, in valleys and on hillsides on lower mountain slopes.	Not expected to occur on site due to a lack of suitable habitat. Not observed during habitat assessments and general biological studies.
Least Bell's vireo <i>Vireo bellii pusillus</i>	Federal: FE State: SE MSHCP: Covered, with special survey requirements	Dense riparian habitats with a stratified canopy, including southern willow scrub, mule fat scrub, and riparian forest.	Not expected to occur on site due to a lack of suitable habitat. Not observed during habitat assessments and general biological studies.

Species Name	Status	Habitat Requirements	Potential to Occur on Site
Long-eared owl <i>Asio otus</i> (nesting)	Federal: None State: CSC MSHCP: Not Covered	Riparian habitats are required by the long-eared owl, but it also uses live-oak thickets and other dense stands of trees.	Not expected to occur on site due to a lack of suitable habitat. Not observed during habitat assessments and general biological studies.
Los Angeles pocket mouse <i>Perognathus longimembris brevinasus</i>	Federal: None State: CSC MSHCP: Covered (Property is not located within MSSA)	Prefers sandy soils within coastal sage scrub but also known to occur in gravel washes and rocky soils. Nocturnal species, active late spring to early fall. Nocturnal, active late spring through early fall.	Not expected to occur on site due to a lack of suitable habitat. Not observed during habitat assessments and general biological studies.
Northern leopard frog <i>Lithobates pipiens</i>	Federal: None State: CSC MSHCP: Not Covered	Native range is east of Sierra Nevada-Cascade crest. Near permanent or semi-permanent water in a variety of habitats. Highly aquatic species. Shoreline cover, submerged and emergent aquatic vegetation are important habitat characteristics.	Not expected to occur within the Project site due to the improved concrete-lined bed and bank upstream and downstream of the Project site. Not observed during habitat assessments and general biological studies.
Northern red-diamondback rattlesnake <i>Crotalus ruber ruber</i>	Federal: None State: CSC MSHCP: Covered	Habitats with heavy brush and rock outcrops, including coastal sage scrub and chaparral.	Not expected to occur on site due to a lack of suitable habitat. Not observed during habitat assessments and general biological studies.
Northwestern San Diego pocket mouse <i>Chaetodipus fallax fallax</i>	Federal: None State: CSC MSHCP: Covered	Coastal sage scrub, sage scrub/grassland ecotones, and chaparral.	Not expected to occur on site due to a lack of suitable habitat. Not observed during habitat assessments and general biological studies.
Orangethroat whiptail <i>Aspidoscelis hyperythra</i>	Federal: None State: CSC MSHCP: Covered	Coastal sage scrub, chaparral, non-native grassland, oak woodland, and juniper woodland.	Not expected to occur on site due to a lack of suitable habitat. Not observed during habitat assessments and general biological studies.
Pallid bat <i>Antrozous pallidus</i>	Federal: FSC State: CSC MSHCP: Not Covered WBWG: H	Deserts, grasslands, shrublands, woodlands, and forests. Most common in open, dry habitats with rocky areas for roosting.	Not expected to occur on site due to a lack of suitable habitat. Not observed during habitat assessments and general biological studies.

Species Name	Status	Habitat Requirements	Potential to Occur on Site
Peregrine falcon <i>Falco peregrinus</i>	Federal: Delisted State: SE MSHCP: Covered	Although part of its historic breeding range, this species does not breed in Southern California. In the west, breeding habitat consists of high cliffs along the coast.	Not expected to occur within the Project Study Area due to the lack of high cliffs and marshes, lake shores, river mouths, etc. Not observed during biological surveys.
Pocketed free-tailed bat <i>Nyctinomops femorasaccus</i>	Federal: None State: CSC MSHCP: Not Covered WBWG:M	Variety of arid areas in Southern California; pine-juniper woodlands, desert scrub, palm oasis, desert wash, and desert riparian areas.	Not expected to occur on site due to a lack of suitable habitat. Not observed during habitat assessments and general biological studies.
Riverside fairy shrimp <i>Strptocephalus woottoni</i>	Federal: FE State: None MSHCP: Covered, Section 6.1.2	Deep seasonal vernal pools, vernal pool-like ephemeral ponds and human modified ponds such as stock ponds.	Does not occur within the Project site due to the lack of seasonal pools and vernal pools. Not observed during habitat assessments and general biological studies.
Rosy boa <i>Charina trivirgata</i>	Federal: None State: None MSHCP: Not Covered	Coastal sage scrub, chaparral, or mixed habitats, commonly with rocky soils and outcrops. Also in oak woodlands and riparian areas bordering scrub habitats.	Not expected to occur on site due to a lack of suitable habitat. Not observed during habitat assessments and general biological studies.
San Bernardino kangaroo rat <i>Dipodomys merriami parvus</i>	Federal: FE State: CSC MSHCP: Covered (Property is not located within MSSA)	Typically found in Riversidean alluvial fan sage scrub and sandy loam soils, alluvial fans and floodplains, and along washes with nearby sage scrub.	Does not occur within the Project site due to the lack of Riversidean alluvial sage scrub. Outside known range for this species. Not observed during habitat assessments and general biological studies.
San Diego banded gecko <i>Coleonyx variegatus abbotti</i>	Federal: None State: None MSHCP: Covered	Primarily a desert species, but also occurs in cismontane chaparral, desert scrub, and open sand dunes.	Not expected to occur on site due to a lack of suitable habitat. Not observed during habitat assessments and general biological studies.
San Diego black-tailed jackrabbit <i>Lepus californicus bennettii</i>	Federal: None State: CSC MSHCP: Covered	Occupies a variety of habitats, but is most common among shortgrass habitats. Also occurs in sage scrub, but needs open habitats.	Habitat occurs on site, however, given the isolated and disturbed nature of the site and surrounding areas this species is not expected to occur on site. Not observed during habitat assessments and general biological studies.

Species Name	Status	Habitat Requirements	Potential to Occur on Site
San Diego desert woodrat <i>Neotoma lepida intermedia</i>	Federal: None State: CSC MSHCP: Covered	Occurs in a variety of shrub and desert habitats, primarily associated with rock outcrops, boulders, cacti, or areas of dense undergrowth.	Not expected to occur on site due to a lack of suitable habitat. Not observed during habitat assessments and general biological studies.
San Diego fairy shrimp <i>Branchinecta sandiegonensis</i>	Federal: FE State: None MSHCP: Not Covered	Seasonal vernal pools.	Not expected to occur on site due to a lack of suitable habitat. Not observed during habitat assessments and general biological studies.
Santa Ana speckled dace <i>Rhinichthys osculus ssp.3</i>	Federal: None State: CSC MSHCP: Not Covered	Occurs in the headwaters of the Santa Ana and San Gabriel Rivers. May be extirpated from the Los Angeles River system. Requires permanent flowing streams with summer water temperatures of 17-20 C. Usually inhabits shallow cobble and gravel riffles.	Not expected to occur on site due to a lack of suitable habitat. Not observed during habitat assessments and general biological studies.
Santa Ana sucker <i>Catostomas santaanae</i>	Federal: FT State: CSC MSHCP: Covered	Habitat generalists, but prefer sand-rubble-boulder bottoms, cool clear water and algae.	Not expected to occur on site due to a lack of suitable habitat. Not observed during habitat assessments and general biological studies.
Sierra Madre mountain yellow-legged frog <i>Rana muscosa</i>	Federal: FE State: CSC MSHCP: Covered (Property is not located within ASSA)	Inhabits ponds, tams, lakes, and streams at moderate to high elevations.	Does not occur within the Project site. Outside known range for this species. Not observed during habitat assessments and general biological studies.
Southern California rufous-crowned sparrow <i>Aimophila ruficeps canescens</i>	Federal: None State: WL MSHCP: Covered	Grass covered hillsides, coastal sage scrub, and chaparral.	Not expected to occur on site due to a lack of suitable habitat. Not observed during habitat assessments and general biological studies.

Species Name	Status	Habitat Requirements	Potential to Occur on Site
Southwestern pond turtle <i>Actinemys marmorata pallida</i>	Federal: None State: CSC MSHCP: Covered	Slow-moving permanent or intermittent streams, small ponds and lakes, reservoirs, abandoned gravel pits, permanent and ephemeral shallow wetlands, stock ponds, and treatment lagoons. Abundant basking sites and cover necessary, including logs, rocks, submerged vegetation, and undercut banks.	Marginal habitat occurs on site, however, given the isolated and disturbed nature of the site and surrounding areas this species is not expected to occur on site. Not observed during habitat assessments and general biological studies.
Southwestern willow flycatcher <i>Empidonax traillii extimus</i>	Federal: FE State: SE MSHCP: Covered, with special survey requirements	Riparian woodlands along streams and rivers with mature dense thickets of trees and shrubs.	Not expected to occur on site due to a lack of suitable habitat. Not observed during habitat assessments and general biological studies.
Stephens' kangaroo rat <i>Dipodomys stephensi</i>	Federal: FE State: ST MSHCP: Covered	Open grasslands or sparse shrublands with less than 50% vegetation cover during the summer.	Not expected to occur on site due to a lack of suitable habitat. Not observed during habitat assessments and general biological studies.
Tricolored blackbird <i>Agelaius tricolor</i> (nesting colony)	Federal: None State: CSC MSHCP: Covered	Breeding colonies require nearby water, a suitable nesting substrate, and open-range foraging habitat of natural grassland, woodland, or agricultural cropland.	Marginal habitat occurs on site, however, given the isolated and disturbed nature of the site and surrounding areas this species is not expected to occur on site. Not observed during habitat assessments and general biological studies.
Two-striped garter snake <i>Thamnophis hammondi</i>	Federal: None State: CSC MSHCP: Not Covered	Aquatic snake typically associated with wetland habitats such as streams, creeks, and pools.	Not expected to occur on site due to a lack of suitable habitat. Not observed during habitat assessments and general biological studies.
Vernal pool fairy shrimp <i>Branchinecta lynchi</i>	Federal: FT State: None MSHCP: Covered, Section 6.1.2	Restricted to seasonal vernal pools.	Does not occur within the Project site due to the lack of seasonal pools and vernal pools. Not observed during habitat assessments and general biological studies.

Species Name	Status	Habitat Requirements	Potential to Occur on Site
Western burrowing owl <i>Athene cunicularia hypugaea</i> (burrow sites & some wintering sites)	Federal: None State: CSC MSHCP: Covered (Property is not located within the MSHCP Burrowing Owl Survey Area)	Shortgrass prairies, grasslands, lowland scrub, agricultural lands (particularly rangelands), coastal dunes, desert floors, and some artificial, open areas as a year-long resident. Occupies abandoned ground squirrel burrows as well as artificial structures such as culverts and underpasses.	Previously observed on site, however, not currently present.
Western mastiff bat <i>Eumops perotis californicus</i>	Federal: None State: CSC MSHCP: Not Covered WBWG:H	Occurs in many open, semi-arid to arid habitats, including conifer and deciduous woodlands, coastal scrub, grasslands, and chaparral. Roosts in crevices in cliff faces, high buildings, trees, and tunnels.	Not expected to occur on site due to a lack of suitable habitat. Not observed during habitat assessments and general biological studies.
Western spadefoot <i>Spea hammondi</i>	Federal: None State: CSC MSHCP: Covered	Seasonal pools in coastal sage scrub, chaparral, and grassland habitats.	Not expected to occur on site due to a lack of suitable habitat. Not observed during habitat assessments and general biological studies.
Western yellow bat <i>Lasiurus xanthinus</i>	Federal: None State: CSC MSHCP: Not Covered WBWG:H	In southern California occurs in palm oases and un-trimmed palm trees in residential areas. Roosts in trees, and forages over water and amongst trees. Active nocturnally, primarily in the warmer months.	Not expected to occur on site due to a lack of suitable habitat. Not observed during habitat assessments and general biological studies.
Western yellow-billed cuckoo <i>Coccyzus americanus occidentalis</i>	Federal: Candidate State: SE MSHCP: Covered, with special survey requirements	Dense, wide riparian woodlands with well-developed understories.	Not expected to occur on site due to a lack of suitable habitat. Not observed during habitat assessments and general biological studies.
White-tailed kite <i>Elanus leucurus</i> (nesting)	Federal: None State: CFP MSHCP: Covered	Low elevation open grasslands, savannah-like habitats, agricultural areas, wetlands and oak woodlands. Dense canopies used for nesting and cover.	Not expected to occur on site due to a lack of suitable habitat. Not observed during habitat assessments and general biological studies.

Species Name	Status	Habitat Requirements	Potential to Occur on Site
Yellow-breasted chat <i>Icteria virens</i> (nesting)	Federal: None State: CSC MSHCP: Covered	Dense, relatively wide riparian woodlands and thickets of willows, vine tangles, and dense brush with well-developed understories.	Not expected to occur on site due to a lack of suitable habitat. Not observed during habitat assessments and general biological studies.
Yellow warbler <i>Dendroica petechia</i> (nesting)	Federal: None State: CSC MSHCP: Covered	Lowland and foothill riparian woodlands dominated by cottonwoods, alders, or willows and other small trees and shrubs typical of low, open-canopy riparian woodland.	Not expected to occur on site due to a lack of suitable habitat. Not observed during habitat assessments and general biological studies.
Yuma myotis <i>Myotis yumanensis</i>	Federal: None State: None MSHCP: Not Covered WBWG:LM	Optimal habitats are open forests and woodlands with sources of water over which to feed. Distribution is closely tied to bodies of water. Maternity colonies in caves, mines, buildings or crevices.	Not expected to occur on site due to a lack of suitable habitat. Not observed during habitat assessments and general biological studies.

Federal

FE - Federally Endangered
FT - Federally Threatened
FC - Federal Candidate

State

SE - State Endangered
ST - State Threatened
SCE - State Candidate Endangered
CSC - California Species of Concern
CFP - Fully Protected
WL - Watch List

MSHCP

ASSA - Amphibian Species Survey Area

BOSA - Burrowing Owl Survey Area

CAPSSA - Criteria Area Plant Species Survey Area

MOU with Forest Service - In order for these species to become a Covered Species adequately conserved, a MOU with the U.S. Forest Service will need to be executed that addresses management for these species on Forest Service lands.

NEPSSA - Narrow Endemic Plant Species Survey Area

Section 6.1.2 - Riparian/Riverine/Vernal Pool Survey Required

Species-Specific Objectives - In order for these species to become a Covered Species adequately conserved, achievement of species-specific conservation objectives will need to be demonstrated.

WBWG - Western Bat Working Group

H - High Priority

LM - Low-Medium Priority

M - Medium Priority

MH - Medium-High Priority

4.3 Special Status Plant Species

No special-status plant species were observed within the Project site during general habitat assessments. Due to a lack of suitable habitat, no special-status plant species are expected to occur within the Project site. In addition, the Project site is not located within the NEPSSA or CAPSSA pursuant to *Section 6.1.3* or *Section 6.3.2* of the MSHCP. Therefore, the NEPSSA, CAPSSA and additional survey requirements are not applicable to the Project site.

4.4 Special-Status Wildlife Species

One special-status wildlife species; the western burrowing owl (*Athene cunicularia hypugaea*), was observed on and adjacent to the Project site. However, in the latest survey of the Project site, no burrowing owls were observed. Three additional special-status wildlife species were determined to have the potential to occur on site during general habitat assessments and general biological studies. The three additional special-status wildlife species not observed but determined to have the potential to occur on site consist of the California horned lark, southwestern pond turtle and the tri-colored blackbird.

4.4.1 *Special Status Wildlife Species Observed on the Project Site*

One special status wildlife species was observed on site during general habitat assessments and general biological studies: the western burrowing owl (*Athene cunicularia hypugaea*), which is discussed in greater detail below.

Western Burrowing Owl (*Athene cunicularia hypugaea*)

The western burrowing owl (*Athene cunicularia hypugaea*), designated as a CSC, was observed within the Project site during habitat assessments, general biological studies, and focused burrowing owl surveys. During breeding season surveys conducted in 2007, three western burrowing owls (one male, one female, and one juvenile owl) were observed adjacent to and within the Project site. Two burrows located within the channel banks on site were actively being used by the owls. When approached, the owls flew westward and off of the Project site. On September 11, 2008 during a general biological survey only one owl was observed using one of the burrows located on site. On March 5, 2009, GLA biologists revisited the Project site to update the general biological survey. During this visit, GLA observed that the storm flows from the 2008/2009 winter rain season had significantly eroded the existing earthen banks of the Channel, which destroyed the existing burrowing owl burrows. No burrowing owls were observed on or adjacent to the Project site during the March 5, 2009 site visit; however, one small fresh potential owl pellet was observed in a rock pile located off site to the north of the Channel.

4.4.2 Special Status Wildlife Species with the Potential to Occur on Site.

California horned lark (*Eremophila alpestris actia*)

The California horned lark is designated as a CSC. This species is known to occur in non-desert areas from northern Baja north to San Francisco. Within its range, the California horned lark is considered a year-round resident. The California horned lark prefers open, barren country with bare ground or short grasses such as agricultural fields, open grasslands, and disturbed ruderal areas. This species nests on the ground in a basket woven of fine grass or other plant materials.

Foraging habitat exists on site for this species, however due to a lack of suitable habitat, this species is not expected to nest on site. Although not observed during habitat assessments or general biological studies, the California horned lark has a moderate potential to forage on site.

Southwestern pond turtle (*Actinemys marmorata pallida*)

The southwestern pond turtle is designated as a CSC. This species is known to occur throughout California west of the Sierra Crest-Cascade crest below 1,830 meters (6,000 feet) MSL. This species inhabits permanent or nearly permanent water with basking sites such as logs, rocks, or mud banks. This species is a year round resident in southern California but has much reduced activity levels from November to March.

Marginal habitat occurs on site for this species, however, given the isolated and disturbed nature of the site and the improved concrete-lined channel upstream and downstream of the Project site, this species is not expected to occur on site. This species was not observed during habitat assessments and general biological studies.

Tricolored blackbird (*Agelaius tricolor*)

The Tricolored blackbird is designated as a CSC. This species is known to occur throughout California in non-desert lowlands. This species is known to breed near fresh water, preferably in emergent wetland with dense cattails or tules and forages in grassland and cropland habitats. This species is a year round resident to southern California.

Marginal habitat occurs on site for this species, however, given the isolated nature of the riparian vegetation on site and the disturbed/developed nature of the surrounding area, this species is not expected to occur on site. This species was not observed during habitat assessments and general biological studies.

4.5 Vegetation Mapping

The Project Site is comprised of 1.10 acres and includes disturbed/developed/open water, disturbed/developed, ruderal vegetation, and southern willow scrub with emergent wetland habitat.

Table 4-3 depicts the acreage totals of plant communities and land uses mapped within the Project site. Below the table are detailed descriptions of each plant community/land use.

Table 4-3. Vegetation/Land Use Totals

Vegetation Type	Area (acres)
Disturbed/Developed/Open Water	0.02
Disturbed/Developed	0.67
Ruderal Vegetation	0.12
Southern Willow Scrub with Emergent Wetlands	0.29
TOTAL	1.10

4.5.1 *Disturbed/Developed/Open Water*

The Project site contains 0.02-acre of disturbed/developed/open water. The disturbed/developed/open water area consists of a concrete block that forms the bed of the Channel, which is preventing any vegetation from growing.

4.5.2 *Disturbed/Developed*

The Project site contains 0.67-acre of disturbed/developed lands. The disturbed/developed lands consist of dirt access roads located on the north and south sides of the Channel. These areas are developed or contain ruderal and/or non-native ruderal vegetation such as Russian thistle (*Salsola tragus*), tocalote (*Centauria melitensis*) and Australian saltbush (*Atriplex semibaccata*). This area does not meet the MSHCP riparian/riverine or vernal pool definition. Additionally, none of the plants in this area are targeted for conservation under Section 6.1.2 of the MSHCP.

4.5.3 *Ruderal Vegetation*

The Project site contains 0.12-acre of lands dominated by ruderal and/or non-native plant species. The ruderal areas comprise a majority of the Project site [Exhibit 3: Vegetation Map]. Ruderal and/or non-native plants observed in this habitat type consist of summer mustard (*Hershfeldia incana*), fox-tail chess (*Bromus madritensis* subsp. *rubens*), red-stemmed filaree (*Erodium cicutarium*), Russian thistle (*Salsola tragus*), and tocalote (*Centauria melitensis*). This area does not meet the MSHCP riparian/riverine or vernal pool definition. Additionally, none of the plants in this area are targeted for conservation under Section 6.1.2 of the MSHCP.

4.5.4 Southern Willow Scrub with Emergent Wetland

Southern willow scrub with emergent wetlands habitat accounts for 0.29-acre of the Project site and is dominated by black willow (*Salix gooddingii*), southern cat-tail (*Typha domingensis*) and willow smartweed (*Polygonum lapathifolium*). Additional plant species found in the channel include, but are not limited to, annual beard grass (*Polypogon monspeliensis*), dense-flowered sprangletop (*Leptochloa uninervia*), tall umbrella-sedge (*Cyperus eragrostis*), barnyard grass (*Echinochloa crus-galli*), alkali heliotrope (*Heliotropium curassavicum*), tamarisk (*Tamarix ramosissima*), castor bean (*Ricinus communis*), tree tobacco (*Nicotiana glauca*), Mexican fan palm (*Washingtonia robusta*), horseweed (*Conyza canadensis*), common sow-thistle (*Sonchus oleraceus*), golden crownbeard (*Verbesina encelioides*) and bull thistle (*Cirsium vulgare*). This area meets the definition of a MSHCP riparian/riverine area pursuant to Section 6.1.2 of the MSHCP. Although these plants constitute the southern willow scrub with emergent wetland habitat, none of the plants observed in this area are targeted for conservation under Section 6.1.2 of the MSHCP.

4.6 Special Status Plant Communities Observed Onsite

The CNDDDB lists the following special-status plant communities that occur in the general area of the Project site: California Walnut woodland (S2.1/G2), Riversidean Alluvial Fan Sage Scrub (S1.1/G1), Southern California Arroyo Chub/Santa Ana Sucker Stream (not ranked), Southern Coast Live Oak Riparian Forest (S4/G4), Southern Cottonwood Willow Riparian Forest (S3.2/G3), Southern Interior Cypress Forest (S2.1/G2), Southern Riparian Forest (S4/G4), Southern Riparian Scrub (S3.2/G3), Southern Sycamore Alder Riparian Forest (S4/G4), and Southern Willow Scrub (S2.1/G3).

As stated above in Section 4.5 of this report, approximately 0.29-acre of southern willow scrub with emergent wetland habitat was mapped within the Project site. Southern willow scrub is designated as a special status vegetation community by the CDFG. CDFG ranks this vegetation community as S2.1/G3. Tables 2-2 and 2-3 in Section 2 depict the S and G rankings. As the tables depict, the S2.1 ranking is specific to the State of California and means that this is a "Species or natural community with less than 6-20 element occurrences OR 1,000-3,000 individuals OR 2,000-10,000 acres remaining in California," and that this is a "Species or natural community that is considered very threatened in California." The G3 ranking is the overall global ranking and means that this is a "Species or natural community with less than 21-100 element occurrences or 3,000-10,000 individuals OR 10,000-50,000 acres remaining world-wide."

4.7 Habitat Assessment for MSHCP Riparian/Riverine Areas and Vernal Pools

The Project site contains a portion of the Channel that supports southern willow scrub with emergent wetland habitat and disturbed/developed/open water, which meets the MSHCP definition of a riparian/riverine area. Approximately 0.29-acre of southern willow scrub with emergent wetland habitat and 0.02 acre of disturbed/developed/open

water was mapped within the Project site. Therefore, pursuant to *Section 6.1.2*, the Project site contains approximately 0.31-acre of lands, which meet the definition of a MSHCP riparian/riverine area. Pursuant to *Section 6.1.2* of the MSHCP document, impacts to MSHCP riparian/riverine areas will require an approved DBESP.

No vernal or seasonal pools are located within the Project site.

The riparian/riverine features on site were evaluated and were found not to contain those species identified in *Section 6.1.2 (Protection of Species Associated with Riparian/Riverine Areas and Vernal Pools)*, including listed fairy shrimp, or contain potential habitat for those species identified in *Section 6.1.2*. As stated above, no seasonal or vernal pools, or species associated with seasonal or vernal pools, were observed or detected on site.

4.8 MSHCP Public/Quasi-Public Lands Mapping

The Project site was evaluated using the County of Riverside's GIS files for PQP lands. It was determined that the entire Channel and associated access roads is identified as PQP Lands.

4.9 Soils Mapping

The NRCS has mapped the following soil types as occurring within the Project site. These include soils in the following series: Greenfield and Placentia. None of these soils are sensitive soils as designated by the MSHCP.

Included below is a brief discussion for each of the soil types mapped within the general vicinity of the Project site. A map depicting the soils mapped within the Project site boundaries is included as Exhibit 5 [Soils Map].

Greenfield Series

Soils of the Greenfield series are on alluvial fans and terraces. Slopes are 0 to 25 percent. These well-drained soils developed in alluvium consisting mainly of granitic materials. Vegetation typically associated with the Greenfield soils includes annual grasses, forbs, sumac, and chamise, and also includes some scattered oaks. In a typical profile, the surface layer is brown sandy loam (10YR 3/2 when moist) about 26 inches thick and is slightly acidic (pH 6.5). The subsoil is brown sandy loam and pale-brown loam (10YR 3/2 when moist) and extends to a depth of about 60 inches and is slightly alkaline (pH 7.4). Greenfield soils are used for dryland grain and pasture, for irrigated truck crops, alfalfa, potatoes, citrus, and peaches, and for homesites.

- Greenfield Sandy Loam, 2 to 8 Percent Slopes, Eroded (GyC2).

Placentia Series

The Placentia series consists of moderately well drained soils on alluvial fans and terraces. Slopes range from 0 to 25 percent. These soils developed in alluvium consisting mainly of granitic materials. Vegetation typically associated with the Placentia soils includes annual grasses, forbs, and chamise. In a typical profile, the surface layer is brown and pale-brown fine (10YR 4/3 when moist) sandy loam and loam about 18 inches thick and is medium acidic (pH 6.2). The upper subsoil is brown heavy clay loam (7.5YR 3/2 when moist) about 21 inches thick and mildly alkaline (pH 7.5). The lower subsoil is brown sandy clay (7.5YR 3/2 when moist) loam about 18 inches thick and is moderately alkaline (pH 8.0). The Placentia soils are used for dryland pasture and grain, for irrigated permanent pasture, and for nonfarm purposes.

- Placentia Fine Sandy Loam, 0 to 5 Percent Slopes (PIB)
- Placentia Fine Sandy Loam, 5 to 15 Percent Slopes (PID)

4.10 Raptor Use

The Project site provides marginal foraging habitat for a number of raptor species, but due to a lack of suitable nesting habitat does not support any nesting opportunities.

4.11 Nesting Birds

The Project site supports vegetation that provides suitable habitat for nesting migratory birds. Impacts to nesting birds are prohibited under the Migratory Bird Treaty Act (MBTA) and California Fish and Game Code.⁴

4.12 Jurisdictional Delineation

The Project site contains potential "Waters of the U.S." and "Waters of the State" subject to the jurisdiction of Corps and CDFG.

The Project site contains one drainage feature (the North Norco Flood Control Channel), which supports a total of 0.22-acre of Corps jurisdictional waters, of which 0.20 acre consists of jurisdictional wetlands. Regional Board jurisdiction at the site totals 0.22-acre, of which 0.20 acre consists of jurisdictional wetlands. CDFG jurisdiction at the site totals 0.31-acre, of which 0.29 acre consists of vegetated riparian habitat. The complete jurisdictional delineation report is attached as Appendix D.

⁴ The MBTA makes it unlawful to take, possess, buy, sell, purchase, or barter any migratory bird listed in 50 C.F.R. Part 10, including feathers or other parts, nests, eggs, or products, except as allowed by implementing regulations (50 C.F.R.21). In addition, sections 3505, 3503.5, and 3800 of the California Department of Fish and Game Code prohibit the take, possession, or destruction of birds, their nests or eggs.

5.0 IMPACTS

The following discussion examines the potential impacts to plant and wildlife resources that would occur as a result of Project impacts to the Channel. Project-related impacts can occur in two forms, direct and indirect. Direct impacts are considered to be those that involve the loss, modification or disturbance of plant communities, which in turn, directly affect the flora and fauna of those habitats. Direct impacts also include the destruction of individual plants or wildlife, which may also directly affect regional population numbers of a species or result in the physical isolation of populations thereby reducing genetic diversity and population stability.

Indirect impacts pertain to those impacts that have the potential to occur along urban/wildland interface of the proposed project. Indirect impacts involve the effects of increases in ambient levels of noise or light, unnatural predators (i.e., domestic cats and other non-native animals), competition with exotic plants and animals, and increased human disturbance such as hiking and dumping of green waste on site. Indirect impacts may be associated with the subsequent day-to-day activities associated with project build-out, such as increased traffic use, permanent concrete barrier walls or chain-link fences, exotic ornamental plantings that provide a local source of seed, etc., which may be both short-term and long-term in their duration. These impacts are commonly referred to as "edge effects" and may result in a slow replacement of native plants by exotics, changes in the behavioral patterns of wildlife, reduced wildlife diversity and abundance in habitats adjacent to project sites.

Potential significant adverse effects, either directly or through habitat modifications, on any special-status plant, animal, or habitat that could occur as a result of project development, are discussed below.

5.1 California Environmental Quality Act (CEQA)

5.1.1 *Thresholds of Significance*

Environmental impacts relative to biological resources are assessed using impact significance threshold criteria, which reflect the policy statement contained in CEQA, Section 21001(c) of the California Public Resources Code. Accordingly, the State Legislature has established it to be the policy of the State of California:

"Prevent the elimination of fish or wildlife species due to man's activities, ensure that fish and wildlife populations do not drop below self-perpetuating levels, and preserve for future generations representations of all plant and animal communities..."

Determining whether a project may have a significant effect, or impact, plays a critical role in the CEQA process. According to CEQA, Section 15064.7 (Thresholds of Significance), each public agency is encouraged to develop and adopt (by ordinance,

resolution, rule, or regulation) thresholds of significance that the agency uses in the determination of the significance of environmental effects. A threshold of significance is an identifiable quantitative, qualitative or performance level of a particular environmental effect, non-compliance with which means the effect will normally be determined to be significant by the agency and compliance with which means the effect normally will be determined to be less than significant. In the development of thresholds of significance for impacts to biological resources CEQA provides guidance primarily in Section 15065, Mandatory Findings of Significance, and the CEQA Guidelines, Appendix G, Environmental Checklist Form. Section 15065(a) states that a project may have a significant effect where:

"The project has the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or wildlife community, reduce the number or restrict the range of an endangered, rare, or threatened species, ..."

Therefore, for the purpose of this analysis, impacts to biological resources are considered potentially significant (before considering offsetting mitigation measures) if one or more of the following criteria discussed below would result from implementation of the proposed project.

5.1.2 Criteria for Determining Significance Pursuant to CEQA

Appendix G of the 1998 State CEQA guidelines indicate that a project may be deemed to have a significant effect on the environment if the project is likely to:

- a) Have 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, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service.*
- b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service.*
- c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.*
- d) 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.

e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.

f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

5.2 Vegetation/Land Use Impacts

Expected impacts from improving the on site portion of the Channel from the existing earthen bed and banks to concrete bed and banks and a triple box culvert will result in permanent impacts to approximately 0.02 acre of disturbed/developed/open water and 0.29 acre of southern willow scrub with emergent wetland habitat.

5.3 Impacts to Special Status Plant Species

Improving the Channel to concrete bed and banks and a triple box culvert will not impact any special-status plants. No special-status plants were detected on the Project site during general biological studies and habitat assessments. No special-status plant species are expected to occur on site based on a lack of suitable habitat.

5.4 Impacts to Special Status Wildlife Species

The Project site supports suitable habitat for four special status species. These species have the potential to utilize the site to some capacity (foraging, nesting, and/or breeding). These four special-status species include the western burrowing owl, California horned lark, southwestern pond turtle, and tri-colored blackbird. Potential impacts from the expected improvements to these species are discussed below.

Western Burrowing Owl

The western burrowing owl was observed utilizing the Project site during general biological surveys and during focused surveys conducted in 2007. However, no burrowing owls were detected during an updated site visit on March 5, 2009. As noted above, recent storm flows scoured the adjacent banks and eliminated previously occupied burrows. On March 5, 2009, no burrowing owls were observed on or adjacent to the Project site. As discussed above in Section 4.5, the Channel supports suitable burrows and foraging habitat for the western burrowing owl. As such, improvements to the Channel will result in impacts to habitat with the potential for use by burrowing owl. The Project site is not located within the burrowing owl survey area; therefore the burrowing owl is a Covered Species under the MSHCP.

Compliance with the MSHCP conservation measures for the burrowing owl provides complete mitigation for any impacts to burrowing owl habitat.

California horned lark

The California horned lark was not observed on site during habitat assessments and general biological surveys. The California horned lark is not expected to breed on site as the site does not support suitable nesting habitat. The Project site contains marginal foraging habitat only for the California horned lark. As such, the Project is expected to result in impacts to marginal California horned lark foraging habitat. The California horned lark is a Covered Species under the MSHCP. Compliance with the MSHCP conservation measures provides complete mitigation for any impacts associated with the California horned lark.

Southwestern pond turtle

The southwestern pond turtle was not observed during habitat assessments and general biological surveys. The Channel contains concrete lined bed and banks both immediately upstream and downstream of the Project site. Given the isolated nature of the riparian habitat on the Project site and the lack of detection during surveys, the southwestern pond turtle is not expected to occur on site. As such, the Project is expected to result in impacts to poor to marginal southwestern pond turtle habitat. The southwestern pond turtle is a Covered Species under the MSHCP. Compliance with the MSHCP conservation measures provides complete mitigation for any impacts associated with the southwestern pond turtle.

Tri-colored blackbird

The tri-colored blackbird was not observed during habitat assessments and general biological surveys. The Project site contains marginal nesting and foraging habitat for the tri-colored blackbird. However, given the isolated nature of the riparian habitat within the channel, and the lack of detection during surveys, the tri-colored blackbird is not expected to occur (breeding or foraging) on site. As such, the expected improvements to the Channel will result in impacts to potential marginal tri-colored blackbird habitat. The tricolored blackbird is a Covered Species under the MSHCP. Compliance with the MSHCP conservation measures provides complete mitigation for any impacts associated with the tricolored blackbird.

5.5 Impacts to Special-Status Plant Communities

The Project will impact approximately 0.29 acre of southern willow scrub with emergent wetland habitat, a CDFG designated special-status riparian habitat.

Impacts to southern willow scrub with emergent wetland habitat is potentially significant prior to mitigation. Mitigation will be required in order to satisfy MSHCP DBESP

requirements pursuant to *Section 6.1.2*, and is expected to be required when the Project applicant submits notification to the CDFG to secure a streambed alteration agreement pursuant to Section 1602 of the Fish and Game Code.

5.6 Impacts to MSHCP Riparian/Riverine Areas

The Project will result in unavoidable impacts to 0.29 acre of southern willow scrub with emergent wetland habitat and 0.02 acre of disturbed/developed/open water which meets the definition of a MSHCP riparian/riverine area. For unavoidable impacts to MSHCP riparian/riverine areas, *Section 6.1.2* of the MSHCP requires that the Permittee (i.e., City of Norco) approve a DBESP to ensure the replacement of any lost functions and values of habitat as it relates to Covered Species.

5.6.1 *Impacts to MSHCP Riparian/Riverine Species*

The Project site does not contain suitable habitat for any of the riparian/riverine and vernal pool species listed in *Section 6.1.2* of the MSHCP, including listed fairy shrimp. Therefore, no impacts to those species listed in *Section 6.1.2* of the MSHCP are expected to occur due to the expected improvements to the Channel.

5.7 Impacts to MSHCP Public/Quasi-Public Lands

The Channel is currently designated as PQP lands to be conserved under the MSHCP. Pursuant to *Section 7.2.4* of the MSHCP document, "*Impacts to habitats within existing PQP lands shall be compensated by purchase and dedication into the MSHCP Conservation Area of land at not less than a ratio of 1:1 that is in addition to the Additional Reserve Lands*".

Pursuant to *Section 3.2.1* (The MSHCP Plan Map) the PQP Lands reconciliation process is described as follows: *Within five years of Permit issuance, the RCA shall verify the precise acreage, location, amount and status of PQP Lands in the MSHCP Conservation Area. Such information shall be submitted to the Wildlife Agencies for review. It is anticipated that during this time period, the status of PQP Lands will be verified and that periodic revisions or amendments will occur to property depicted as PQP Lands on the MSHCP Plan Map.*"

Currently, it is our understanding that RCFCDD has entered PQP reconciliation discussions with the RCA. After discussing the status of the PQP reconciliations with RCFCDD staff, it appears that RCFCDD and RCA are concentrating reconciliation efforts on lands currently depicted as PQP Lands that do not support habitat with conservation value and are not located within, or adjacent to, MSHCP Core Areas, Criteria Cells, or Linkages. The Channel is not located within, or adjacent to, MSHCP Core Areas, Criteria Cells, or Linkages and is part of these reconciliation discussions. It is contemplated that such land will not be designated as PQP Lands at the conclusion of these discussions; therefore, no impact to PQP Lands will occur and no mitigation is being proposed.

5.8 Impacts to Raptor Foraging Habitat

The expected improvements to the Channel will result in the loss of marginal foraging habitat for raptors that have the potential to occur on site.

The general conservation of lands and suitable habitats through the MSHCP mitigates the regional cumulative impacts to raptor habitat. As such, impacts to marginal raptor foraging habitat associated with the proposed Project would be less than significant and would not require any avoidance and/or mitigation.

5.9 Impacts to Nesting Birds

The expected improvements to the Channel have the potential to impact nesting birds through the removal of vegetation.

5.10 Jurisdictional Impacts

The Project, as proposed, will result in permanent impacts to 0.22-acre of Corps jurisdiction, of which 0.20 acre consists of jurisdictional wetlands. Permanent impacts to 676 linear feet of streambed will occur.

The Project, as proposed, will result in permanent impacts to 0.22-acre of Regional Board jurisdiction, of which 0.20 acre consists of jurisdictional wetlands. Permanent impacts to 676 linear feet of streambed will occur.

The Project, as proposed, will result in permanent impacts to 0.31-acre of CDFG jurisdiction, of which 0.29 acre consists of vegetated riparian habitat. Permanent impacts to 676 linear feet of streambed will occur.

5.11 Indirect Impacts

The Project site is surrounded by ruderal lands and development including residential complexes, the North Corona YMCA and two major streets. In addition, the Project site is not located in proximity to the MSHCP conservation area. As such, the expected improvements to the Channel will not result in any indirect impacts to sensitive biological resources.

5.12 Cumulative Impacts

The proposed Project will contribute to regional cumulative impacts as it pertains to the loss of riparian habitat, foraging and live in habitat for special-status wildlife, (i.e., the western burrowing owl and/or the tri-colored blackbird), the loss of raptor foraging habitat, and the loss of nesting bird habitat to be conserved under the MSHCP.

6.0 MITIGATION

The following section discusses actual or potential impacts to sensitive resources that would be considered potentially significant prior to mitigation. As applicable, specific mitigation measures are provided to ensure that impacts to sensitive biological resources, as a result of improvements to the Channel, are less than significant after mitigation. In addition to these specific measures, because the Project is consistent with the MSHCP, biological impacts to covered species and their respective habitats, as well as impacts to Corps and CDFG jurisdiction, are expected to be mitigated to a less than significant level.

6.1 Mitigation for Impacts and Potential Impacts to Special Status Wildlife Species

6.1.1 *Western Burrowing Owl*

The following mitigation measures should be implemented to ensure that impacts to burrowing owls are mitigated to a less than significant level:

Mitigation Measure Burrowing Owl 1: No more than 30 days prior to ground disturbance associated with clearing, grading, demolition, etc. within the Project area, a qualified biologist will conduct a pre-construction burrowing owl clearance survey to satisfy Objective Number 6 of the MSHCP species-specific objectives for the burrowing owl. If breeding burrowing owls are detected on site, the applicant shall not impact breeding owls, or adjacent foraging habitat within 100 meters of breeding owl burrows, until after the breeding season ends (March 15th to August 31st).

Mitigation Measure Burrowing Owl 2: If burrowing owls are observed within the Project's impact footprint, the applicant shall comply with the MSHCP guidelines by passively relocating the burrowing owl(s) outside of the burrowing owl breeding season, which is March 15th to August 31st. Relocation efforts will be conducted outside of the burrowing owl breeding season following MSHCP-approved protocols.

6.1.2 *Additional Special Status-Species with the Potential to Occur on Site*

The Project applicant shall comply with all applicable provisions of the MSHCP. This mitigation shall apply to the following covered species: California horned lark, southwestern pond turtle, and tri-colored blackbird.

6.2 Mitigation for Impacts to Special Status Plant Communities

The southern willow scrub with emergent wetland habitat impacted through improvements to the Channel will be replaced or mitigated at a minimum 2:1 ratio. With the Project's participation in the DBESP process, and with the additional required mitigation, impacts to southern willow scrub with emergent wetland habitat will be reduced to a less than significant level.

6.3 Mitigation for Impacts to MSHCP Riparian/Riverine Resources

Approximately 0.29-acre of southern willow scrub with emergent wetland habitat and 0.02 acre of disturbed/developed/open water will be permanently impacted through the expected Channel improvements.

As stated above, the RCFCFCD has a MOU with CDFG [Appendix C] allowing for routine maintenance activities, including the removal of woody and herbaceous vegetation within flood control channels, in order to provide the designed level of flood protection and public safety to which the facilities were constructed. During the course of biological surveys for the Project site, it was observed that RCFCFCD may have trimmed the vegetation within the Project site, as authorized, at least once in the past three years. Under existing conditions, routine maintenance activities conducted by RCFCFCD would result in ongoing perpetual temporary impacts to 0.29-acre of MSHCP riparian/riverine areas within the Project site. Due to the CDFG authorized routine temporary impacts to the vegetation within the Project site and the 0.02 acre of disturbed/developed/open water, mitigation at a minimum 2:1 mitigation to impact ratio (0.63-acre) is proposed for impacts to MSHCP riparian/riverine areas.

Mitigation Measure Riparian/Riverine 1: To mitigate for the loss of 0.31-acre of MSHCP riparian/riverine areas, the Project applicant shall pay a one-time in-lieu fee to a Corps and/or CDFG-approved mitigation bank and/or in-lieu fee program, such as the Santa Ana Watershed Association (SAWA) In-Lieu Fee Wetland Creation Program or the Riverside County Regional Park and Open Space District Santa Ana River Mitigation Bank (SARMB), for the purchase of no less than 0.63-acre of vegetated riparian and/or wetland habitat creation.

The SAWA in-lieu fee program involves replanting currently disturbed areas with native species following the removal of non-wetland plants from a place in the Santa Ana River floodplain where wetland hydrology and soils exist. The SARMB is a Corps certified mitigation bank that removes exotic vegetation such as giant reed (*Arundo donax*) and tamarisk from existing wetlands, to allow native vegetation such as willows and cottonwoods to re-establish themselves.

With the proposed mitigation and approval of a DBESP, impacts to MSHCP riparian/riverine areas will be reduced to a less than significant level.

6.4 Mitigation for Impacts to MSHCP Public/Quasi-Public Lands

The Channel is part of the PQP reconciliation discussions between RCFCFCD and RCA. The Channel is not located within, or adjacent to, a MSHCP Core Area, Criteria Cell, or Linkage and only supports a small, isolated patch of habitat with low conservation value. As a result, the PQP Land designation within the Channel is expected to be removed at the conclusion of reconciliation discussions and no impact on lands designated as PQP will occur. As such, no mitigation is being proposed or necessary.

6.5 Mitigation for Potential Impacts to Raptor Foraging Habitat

As noted in Section 5.8 of this report, the Project would result in the loss of 1.10-acre of marginal foraging habitat for raptor species. The MSHCP conserves foraging habitat for raptors through the various Core areas, Habitat Blocks, and Linkages. With the Project's compliance with the MSHCP, impacts to raptor foraging habitat will be mitigated to below a less than significant level.

6.6 Mitigation for Potential Impacts to Nesting Birds

As noted in Section 5.9 of this report, the Project has the potential to impact nesting birds. The following mitigation measure shall be implemented to ensure that the Project will not result in impacts to nesting birds:

Mitigation Measure Nesting Bird 1: The removal of potential nesting vegetation will be conducted outside of the nesting season (February 1 to August 31) to the extent that this is feasible. If vegetation must be removed during the nesting season, a qualified biologist will conduct a nesting bird survey of potentially suitable nesting vegetation prior to removal. Surveys will be conducted no more than three (3) days prior to scheduled removals. If active nests are identified, the biologist will establish buffers around the vegetation containing the active nest (500 feet for raptors and 150 feet for non raptors). The vegetation containing the active nest will not be removed, and no grading will occur within the established buffer, until a qualified biologist has determined that the nest is no longer active (i.e., the juveniles are surviving independent from the nest). If clearing is not conducted within three days of a negative survey, the nesting survey must be repeated to confirm the absence of nesting birds.

6.7 Mitigation for Impacts to Jurisdictional Areas

Jurisdictional Areas Mitigation Measure 1: Compensatory mitigation for the Project will be proposed at an off site Corps and CDFG-approved mitigation bank and/or in-lieu fee program within the Santa Ana River Watershed. Mitigation will be proposed at a 2:1 mitigation to impact ratio based upon total impact to CDFG jurisdiction and will consist of a one-time in-lieu fee payment to create 0.63-acre of vegetated riparian habitat and/or wetland habitat. Based upon the total Corps and CDFG jurisdiction within the Project area (0.22 acre and 0.31 acre respectively) and its overall habitat value, the creation of 0.63-acre of vegetated riparian habitat and/or wetland habitat would adequately compensate for the proposed permanent impacts and reduce the loss of 0.22-acre of Corps jurisdiction and 0.31-acre of CDFG jurisdiction, including 676 linear feet of streambed, on site to a less than significant level.

6.8 Level of Significance after Mitigation

With the Project's compliance with the MSHCP, and with the mitigation measures as described above, direct and cumulative impacts to biological resources will be reduced to a less than significant level.

7.0 MSHCP CONSISTENCY ANALYSIS AND CONCLUSION

7.1 Relationship of the Project Site to the Western Riverside County MSHCP

The entire Project site is located within the Cities of Riverside/Norco Area Plan of the MSHCP. No part of the Project site occurs within a Criteria Cell proposed for conservation by the MSHCP, therefore, the Project is not subject to the HANS process, and thus the Project is consistent with this section of the MSHCP.

7.2 MSHCP Consistency Analysis

7.2.1 *Protection of Species Associated with Riparian/Riverine Areas and Vernal Pools (Section 6.1.2)*

The Project site contains areas meeting the MSHCP definition of a riparian/riverine area. The Project site does not support vernal pools or vernal pool species, including listed fairy shrimp. Impacts to MSHCP riparian/riverine areas will require submittal of a DBESP report to the City, USFWS and CDFG. Upon approval of the DBESP, the Project will be consistent with the MSHCP's riparian/riverine policies.

7.2.2 *Protection of Narrow Endemic Plant Species (Section 6.1.3)*

The Project site is not located within the NEPSSA pursuant to *Section 6.1.3* of the MSHCP. Therefore, the NEPSSA requirements are not applicable to the Project site, and the Project is consistent with the NEPSSA policies.

7.2.3 *Guidelines Pertaining to the Urban/Wildland Interface (Section 6.1.4)*

The Project site is not located within or adjacent to a MSHCP Conservation Area, therefore the Project site is not required to address *Section 6.1.4* of the MSHCP, and thus the Project is consistent with the MSHCP's Urban/Wildland Interface policies.

7.2.4 *Additional Survey Needs and Procedures (Section 6.3.2)*

The Project site is not located within the CAPSSA pursuant to *Section 6.3.2* of the MSHCP. Therefore, the CAPSSA requirements are not applicable to the Project site.

The Project site is not located within the MSHCP Additional Survey Areas for Amphibians, Mammals, Burrowing Owl, or any Special Linkage Areas; however, the Project site contains habitat for, and has previously supported, at least one western burrowing owl (*Athene cunicularia hypugaea*). Although surveys for the western burrowing owl are not required by the MSHCP, breeding season protocol surveys for the western burrowing owl were conducted pursuant to the *Burrowing Owl Survey Instructions For The Western Riverside Multiple Species Habitat Conservation Plan Area*.

As noted in Section 5.0 of this report, the Project will result in the potential loss of foraging and breeding habitat for the western burrowing owl. As the Project is within the coverage area of the western Riverside County MSHCP but outside of the western burrowing owl survey area, the Project is not required to provide mitigation for the loss of burrowing owl habitat. Therefore, the Project is not required to avoid areas occupied by burrowing owls. The MSHCP does not afford take (i.e. direct harm) of western burrowing owls (breeding and non-breeding), therefore the Project applicant proposes to passively exclude and/or relocate burrowing owl(s), if present, outside of the breeding season to avoid impacts to the burrowing owl.

The following mitigation measure should be implemented to ensure that impacts to burrowing owls are mitigated to a less than significant level:

- No more than 30 days prior to ground disturbance associated with clearing, grading, demolition, etc., a qualified biologist will conduct a pre-construction burrowing owl clearance survey to satisfy Objective Number 6 of the MSHCP species-specific objectives for the burrowing owl. If breeding burrowing owls are detected on site, the applicant shall not impact breeding owls, or adjacent foraging habitat within 100 meters of breeding owl burrows, until after the breeding season ends (March 15th to August 31st).

Through compliance with the MSHCP, and the aforementioned mitigation measure, the Project is consistent with the MSHCP's Additional Survey Needs and Procedures policies.

7.2.5 Fuels Management (Section 6.4)

The Project site is not located within, or adjacent to, the MSHCP Conservation Area proposed for conservation by the MSHCP, therefore the Project site is not required to address Section 6.4 of the MSHCP, and thus the Project is consistent with the MSHCP's Fuels Management policies.

7.2.6 Future Facilities Within Public/Quasi-Public Lands (Section 7.2.4)

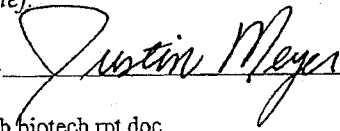
The Channel is under the jurisdiction of the RCFCD. Although the MSHCP has designated the entire Project site as MSHCP PQP lands to be conserved under the

MSHCP plan, the Channel and its adjacent access roads are part of the PQP reconciliation discussions between RCFCD and RCA. The PQP lands are not located within, or adjacent to, a MSHCP Core Area, Criteria Cell, or Linkage and only supports small, isolated patches of habitat with low conservation value. As a result, the PQP Land designation within the Channel is expected to be removed at the conclusion of reconciliation discussions and no impact on lands designated as PQP will occur. As such, no mitigation is being proposed or necessary; therefore, the Project is consistent with Sections 3.2.1 and 7.2.4 of the MSHCP.

8.0 CERTIFICATION

I hereby certify that the statements furnished above and in the attached exhibits present data and information required for this biological evaluation, and that the facts, statements, and information presented are true and correct to the best of my knowledge and belief.

Signed: _____



Date: _____

7/21/10

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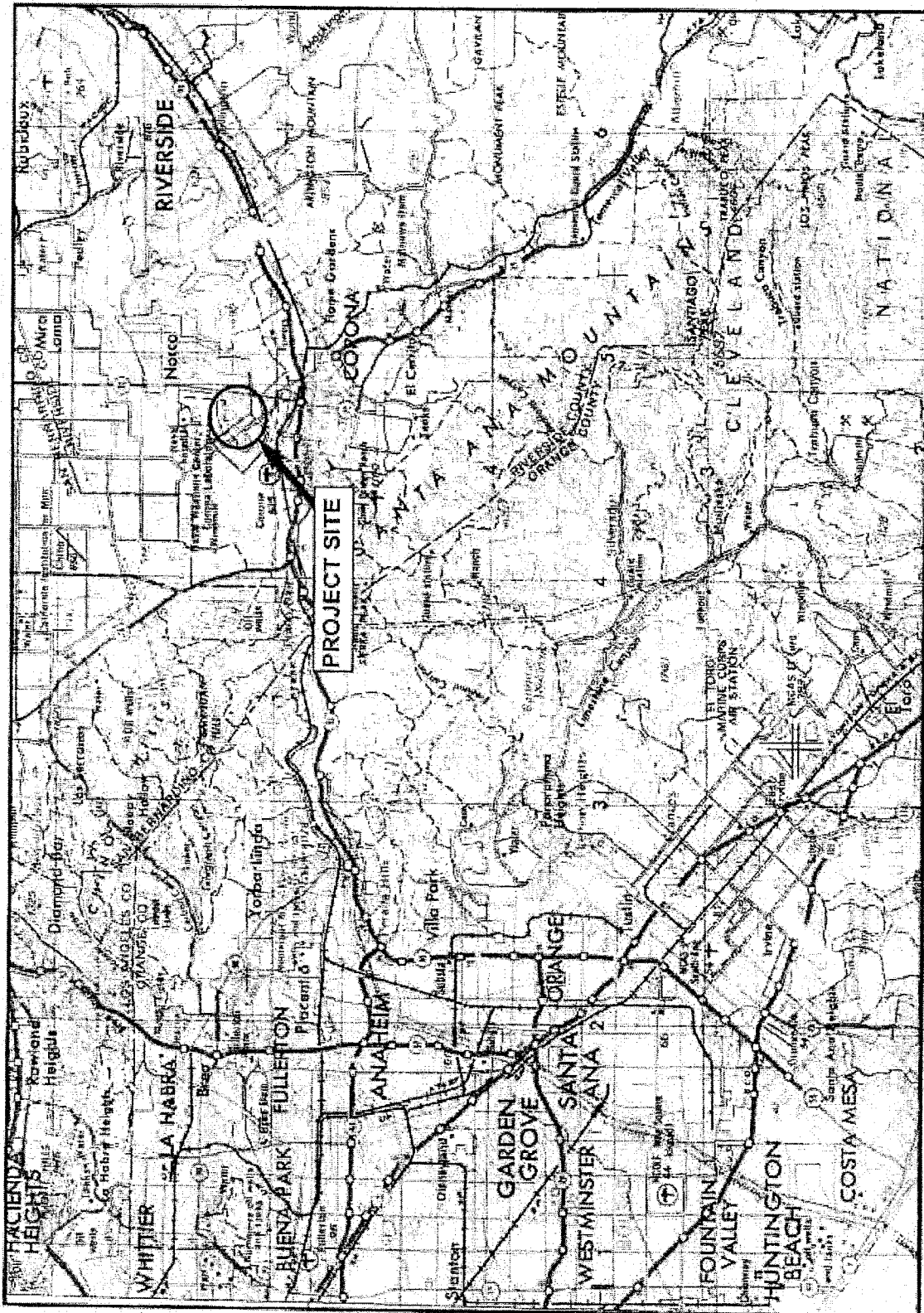
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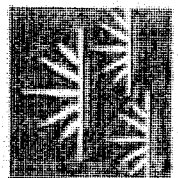
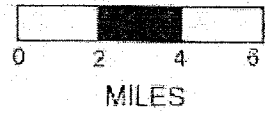
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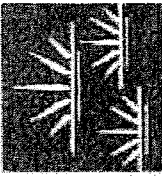
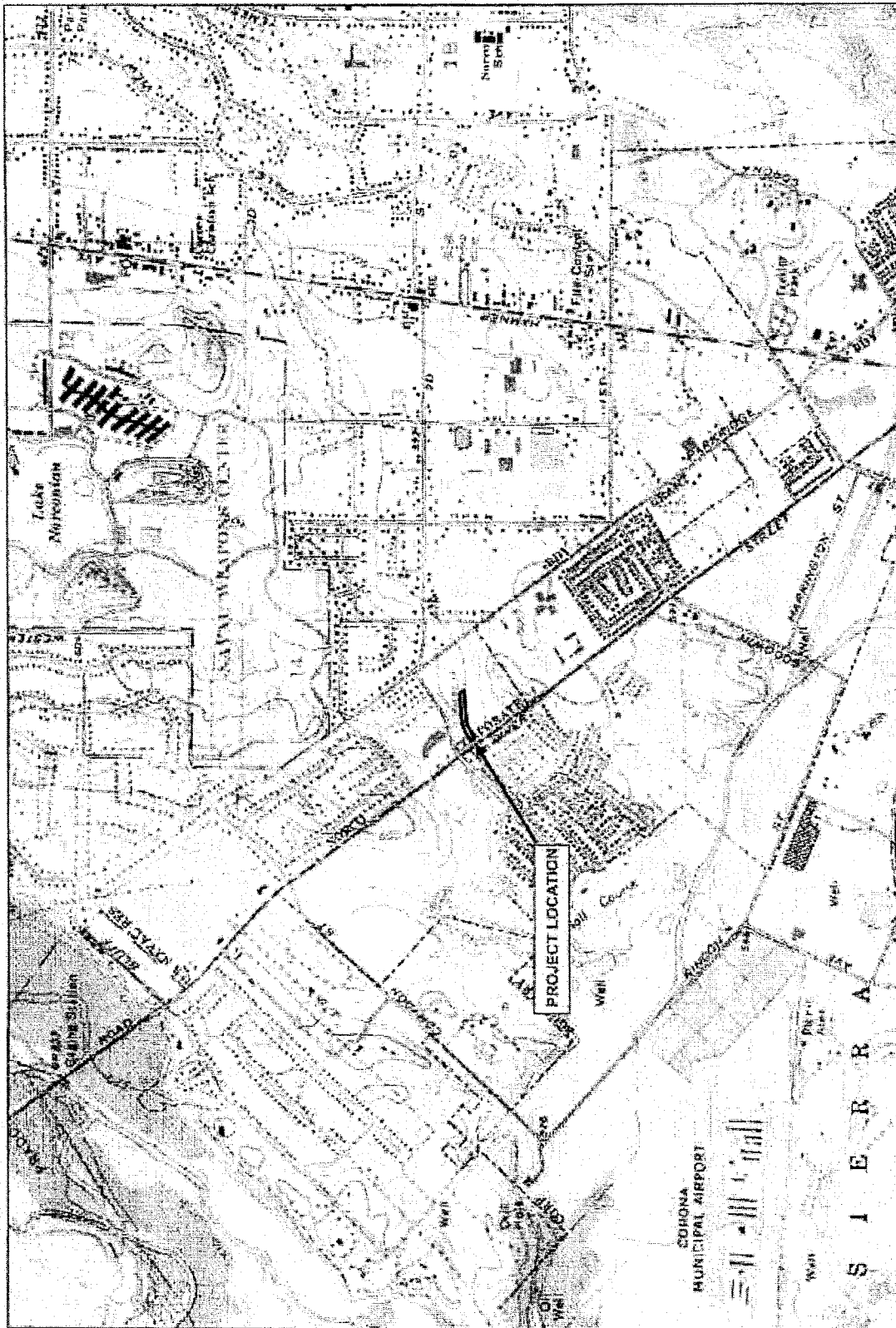
Adapted from USGS Santa Ana quadrangle



GLENN LUKOS ASSOCIATES

Exhibit 1

**NORTH NORCO CHANNEL
IMPROVEMENT PROJECT**
Regional Map



GLENN LUKOS ASSOCIATES

EXHIBIT 2

**NORTH NORCO CHANNEL
IMPROVEMENT PROJECT**

Vicinity Map

Adapted from USGS Corona North, CA quadrangle

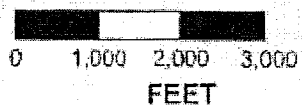







Exhibit 3

Vegetation/Land Use Map



Legend

-  Project Area
-  Developed/Developed/Open Water
-  Disturbed/Developed
-  Natural
-  Southern White Birch with Emergent Wetland



**NORTH NORCO CHANNEL
IMPROVEMENT PROJECT**
Vegetational Land Use Map



GLENN LUKOS ASSOCIATES
Exhibit 3

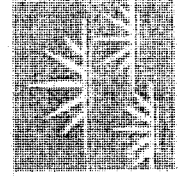
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PHOTOGRAPH 1. This Photograph depicts the vegetation within the Project Site. Photograph taken looking west towards River Road on 9-11-2008.



PHOTOGRAPH 2. This photograph depicts the southern access road and a portion of the ruderal fields located immediately adjacent to the Project Site. Photograph taken looking northwest on 9-11-2008.



GLENN LUKOS ASSOCIATES

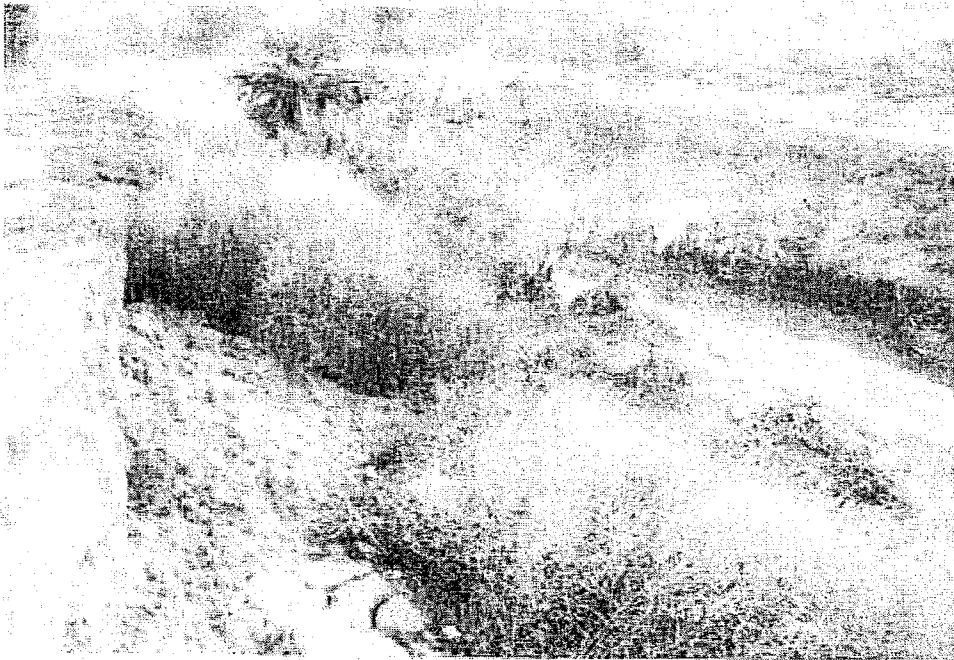
EXHIBIT 4

NORTH NORCO CHANNEL
IMPROVEMENT PROJECT

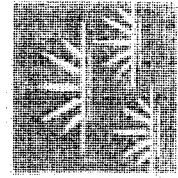
Site Photographs



PHOTOGRAPH 3. This photograph depicts the North Norco Flood Control Channel on the east end of the channel as it transitions into the improved concrete channel. Photograph taken looking east on 9-11-2008.



PHOTOGRAPH 4. This photograph depicts conditions in the North Norco Flood Control Channel after the 2008/2009 storm flows. Photograph looking east, taken on 03-05-2009.

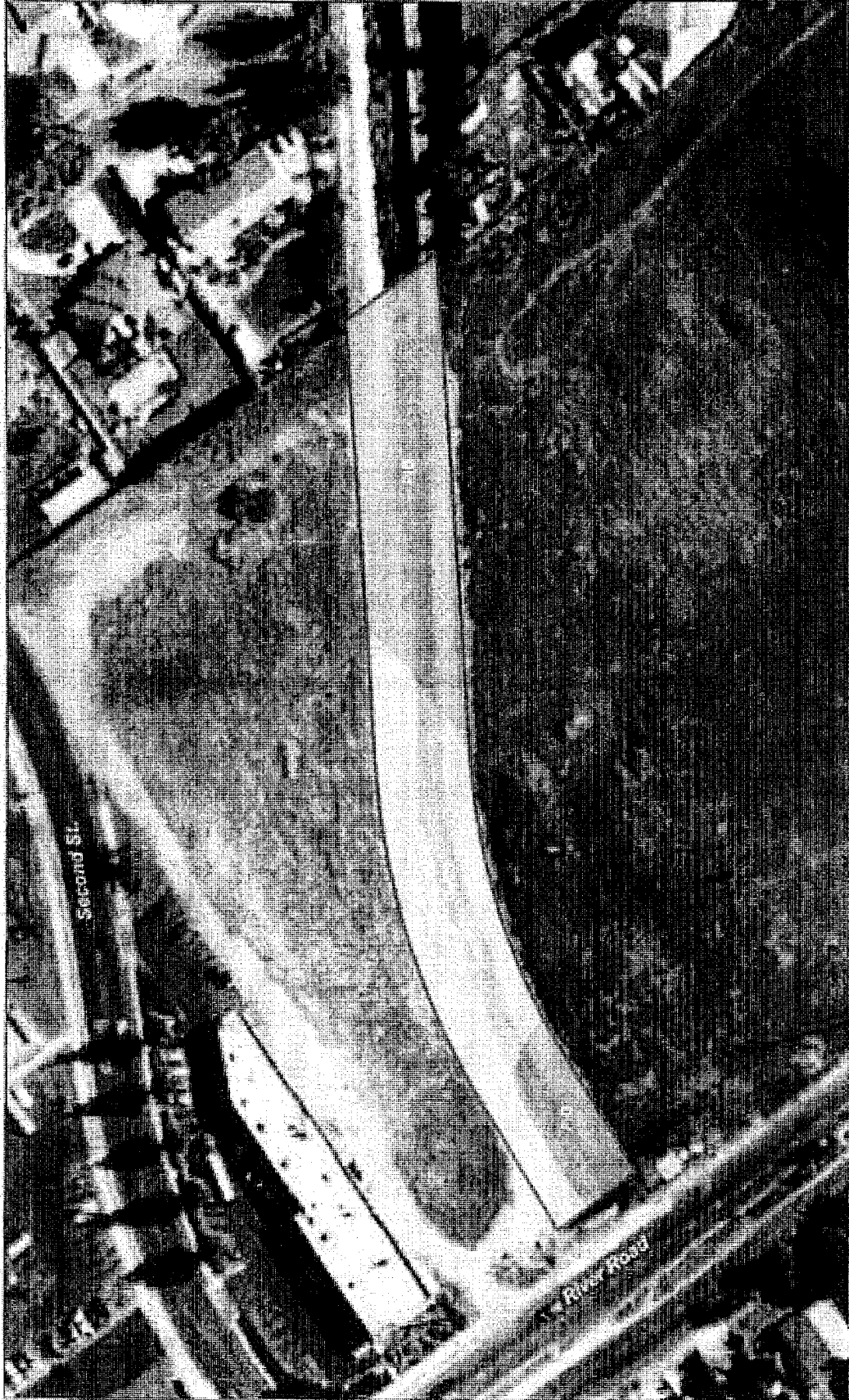


GLENN LUKOS ASSOCIATES

EXHIBIT 4

NORTH NORCO CHANNEL
IMPROVEMENT PROJECT

Site Photographs



Legend

Project Area

GyC2 - Greenfield sandy loam, 2 to 8 percent slopes, eroded

P1B - Placentia fine sandy loam, 0 to 5 percent slopes

P1D - Placentia fine sandy loam, 5 to 15 percent slopes



**NORTH NORCO CHANNEL
IMPROVEMENT PROJECT**

Soils Map

GLENN LUKOS ASSOCIATES

Exhibit 5



Appendix A

Floral Compendium

APPENDIX A

FLORAL COMPENDIUM

The floral compendium lists species identified on the project site. Taxonomy follows the Jepson Manual (Hickman 1993). Common plant names are taken from Munz (1974) and Roberts et al. (2004). An asterisk (*) denotes a non-native species.

SCIENTIFIC NAME	COMMON NAME
ANGIOSPERMS-DICOTS	
AMARANTHACEAE	
* <i>Amaranthus albus</i>	Amaranth Family tumbling pigweed
ANACARDIACEAE	
* <i>Schinus molle</i>	Sumac Family Peruvian pepper tree
ASTERACEAE	
<i>Ambrosia acanthicarpa</i>	Sunflower Family annual burweed
<i>Baccharis salicifolia</i>	mulefat
<i>Conyza canadensis</i>	common horseweed
<i>Helianthus annuus</i>	western sunflower
* <i>Lactuca serriola</i>	prickly lettuce
* <i>Verbesina encelioides</i>	earless crownbeard
BORAGINACEAE	
<i>Heliotropium curassavicum</i>	Borage Family salt heliotrope
BRASSICACEAE	
* <i>Hirschfeldia incana</i>	Mustard Family summer mustard
<i>Rorripa nasturtium-aquaticum</i>	white water cress
CHENOPODIACEAE	
* <i>Salsola tragus</i>	Goosefoot Family Russian-thistle
EUPHORBIACEAE	
<i>Eremocarpus setigerus</i>	Spurge Family doveweed
* <i>Ricinis communis</i>	castor bean
FABACEAE	
* <i>Senna alata</i>	Legume Family candle bush

GERANIACEAE	Geranium Family
* <i>Erodium cicutarium</i>	red-stemmed filaree
LYTHRACEAE	Loosestrife Family
<i>Ammannia coccinea</i>	valley red-stem
POLYGONACEAE	Buckwheat Family
* <i>Polygonum lapathifolium</i>	willow smartweed
SALICACEAE	Willow Family
<i>Salix gooddingii</i>	Goodding's black willow
SCROPHULARIACEAE	Figwort Family
* <i>Veronica anagallis-aquatica</i>	great water speedwell
SIMAROUBACEAE	Quassia Family
<i>Ailanthus altissima</i>	tree of heaven
SOLANACEAE	Nightshade Family
<i>Datura wrightii</i>	jimsonweed
* <i>Nicotiana glauca</i>	tree tobacco
TAMARICACEAE	Tamarisk Family
* <i>Tamarix ramosissima</i>	Mediterranean tamarisk
ZYGOPHYLLACEAE	Caltrop Family
* <i>Tribulus terrestris</i>	puncture vine
ANGIOSPERMS-MONOCOTS	
ARECACEAE	Palm Family
* <i>Washingtonia robusta</i>	Mexican fan palm
CYPERACEAE	Sedge Family
<i>Cyperus eragrostis</i>	tall umbrella-sedge
<i>Eleocharis</i> sp.	spike rush
LEMNACEAE	Duckweed Family
<i>Lemna</i> sp.	duckweed
POACEAE	Grass Family
* <i>Arundo donax</i>	giant reed
* <i>Bromus madritensis</i> ssp. <i>rubens</i>	foxtail chess
* <i>Cynodon dactylon</i>	Bermuda grass
<i>Distichlis spicata</i>	saltgrass

<i>*Echinochloa crus-galli</i>	barnyard grass
<i>Leptochloa uninerva</i>	dense-flowered sprangletop
<i>*Polypogon monspeliensis</i>	rabbitfoot grass
TYPHACEAE	Cat-Tail Family
<i>Typha domingensis</i>	southern cat-tail

Appendix B

Faunal Compendium

APPENDIX B

FAUNAL COMPENDIUM

Scientific nomenclature and common names for vertebrate species referred to in this report follow Collins (1997) for amphibians and reptiles, Jones, et al. (1992) for mammals, and AOU Checklist (1998) for birds.

SCIENTIFIC NAME	COMMON NAME
AMPHIBIANS	
BUFONIDAE	TRUE TOADS
<i>Bufo boreas</i>	western toad
BIRDS	
ARDEIDAE	HERONS AND BITTERNS
<i>Egretta thula</i>	snowy egret
ANATIDAE	DUCKS AND RELATIVES
<i>Anas platyrhynchos</i>	mallard
FALCONIDAE	FALCONS
<i>Falco sparverius</i>	American kestrel
CHARADRIIDAE	PLOVERS AND RELATIVES
<i>Charadrius vociferus</i>	killdeer
COLUMBIDAE	PIGEONS AND DOVES
<i>Zenaida macroura</i>	mourning dove
STRIGIDAE	TYPICAL OWLS
<i>Athene cunicularia hypugaea</i>	western burrowing owl
TROCHILIDAE	HUMMINGBIRDS
<i>Calypte anna</i>	Anna's hummingbird
MIMIDAE	MOCKINGBIRDS AND TRASHERS
<i>Mimus polyglottos</i>	northern mockingbird
TYRANNIDAE	TYRANT FLYCATCHERS
<i>Myiarchus cinerascens</i>	ash-throated flycatcher
<i>Sayornis nigricans</i>	black phoebe
<i>Tyrannus verticalis</i>	western kingbird
<i>Tyrannus vociferans</i>	Cassin's kingbird

CORVIDAE	JAYS, MAGPIES, AND CROWS
<i>Corvus brachyrhynchos</i>	American crow
<i>Corvus corax</i>	common raven
HIRUNDINIDAE	SWALLOWS
<i>Hirundo rustica</i>	barn swallow
<i>Petrochelidon pyrrhonota</i>	cliff swallow
PARULIDAE	WOOD WARBLERS AND RELATIVES
<i>Geothlypis trichas</i>	common yellowthroat
EMBERIZIDAE	EMBERIZINES
<i>Melospiza melodia</i>	song sparrow
<i>Passerculus sandwichensis</i>	savannah sparrow
STURNIDAE	STARLINGS
<i>Sturnus vulgaris</i>	European starling
ICTERIDAE	BLACKBIRDS, ORIOLES, AND ALLIES
<i>Euphagus cyanocephalus</i>	Brewer's blackbird
FRINGILLIDAE	FINCHES
<i>Carduelis psaltria</i>	lesser goldfinch
<i>Carduelis tristis</i>	American goldfinch
<i>Carpodacus mexicanus</i>	house finch
MAMMALS	
LEPORIDAE	HARES & RABBITS
<i>Sylvilagus audubonii</i>	desert cottontail
SCIURIDAE	SQUIRRELS
<i>Spermophilus beecheyi</i>	California ground squirrel
CANIDAE	FOXES, WOLVES, & COYOTES
<i>Canis familiaris</i>	domestic dog
<i>Canis latrans</i>	coyote

Appendix C

Memorandum of Understanding Between Riverside County Flood Control and Water
Conservation District and the California Department of Fish and Game

SCANNED

300 -

RIVERSIDE COUNTY FLOOD CONTROL
 AND WATER CONSERVATION DISTRICT
 AND
 CALIFORNIA DEPARTMENT OF FISH AND GAME
 MEMORANDUM OF UNDERSTANDING
 MAINTENANCE ACTIVITIES IN IMPROVED CHANNELS
 AND
 DETENTION/RETENTION AND/OR DEBRIS BASINS

(DFG Mon

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RIVERSIDE COUNTY FLOOD CONTROL
AND WATER CONSERVATION DISTRICT
AND
CALIFORNIA DEPARTMENT OF FISH AND GAME
MEMORANDUM OF UNDERSTANDING
MAINTENANCE ACTIVITIES IN IMPROVED CHANNELS
AND
DETENTION/RETENTION AND/OR DEBRIS BASINS

This Memorandum of Understanding (MOU) by and between the California Department of Fish and Game, hereinafter called the "Department", and Riverside County Flood Control and Water Conservation District, hereinafter called the "District", is for the purpose of delineating defining routine maintenance activities in improved channels and basins that shall not require further Notice and Agreement in compliance with Section 1601 of the Fish and Game Code.

WHEREAS, Section 1601 of the Fish and Game Code empowers the Department to propose reasonable modification(s) to projects as would allow for the protection and continuation of existing fish and wildlife resources; and

WHEREAS, it is essential that the District perform routine maintenance activities within improved channels and basins to ensure that the facilities continue to provide the design level of flood protection to which the facilities were constructed, to protect the public's investment, to prevent loss of life and property and to comply with local ordinances and regulations, the regulations pertaining to the National Flood Insurance Program and other legally mandated programs; and

WHEREAS, it is mutually beneficial to delineate and define routine maintenance of improved channels and basins, and to establish procedures to expedite maintenance activities, and to provide for the protection of fish, wildlife and their habitats during such maintenance activities; and

WHEREAS, nothing in this MOU shall constitute a waiver of any future or current Department claims to the use and maintenance of natural conditions under the public trust doctrine; and

WHEREAS, nothing in this MOU shall constitute a waiver of the District's claimed rights to maintain and operate the improved channel(s) and basin(s) solely for flood control purposes.

NOW, THEREFORE, the Department and the District agree as follows:

I. DEFINITIONS

A. Improved Channel. A waterway in which significant man-made alteration has occurred to improve the passage of flood flows, including straightening and containing the flows within constructed banks (including levees) and concrete-lined, riprap or earth trapezoidal channels with engineered banks. Channel banks, channel bottoms, low flow channels and other appurtenant features of improved channels are defined by the diagram of the typical cross section of improved flood control channels as shown in Exhibit J attached hereto and incorporated herein by reference.

- B. Improved Basin. A facility which has been designed and constructed to temporarily impound flood waters and/or debris during times of flood flows. An improved basin is typically located along a natural watercourse and has flood waters and/or debris delivered to it via the watercourse or an improved basin. may be located apart from a natural watercourse and have flood waters and/or debris delivered to it via an improved channel or underground storm drain system. Basin banks, bottom, low flow "wet" areas, low flow channel, inlet structure(s), outlet structure, dam embankment (if any) and other appurtenant features are defined by the diagram of the conceptual plan view and cross section as shown in Exhibit 4 attached hereto and incorporated herein by reference.
- C. Maintenance. The removal of sand, silt, sediment, debris, rubbish, woody and herbaceous vegetation and other obstructions to flow, the control of weeds, grasses and emergent vegetation and the repair and/or replacement, cleaning and clearing of constructed channel or basin improvements all as necessary to maintain the structural integrity and capacity of the improved channel(s) or basin(s). The improved channels and basins listed in Exhibit 1 and shown on the Maintenance Maps, Exhibit 2, attached hereto are the current list of facilities covered by this MOU. Exhibit 1 and Exhibit 2 are attached hereto and incorporated herein by reference.

II. AUTHORIZED ACTIVITIES

The maintenance activities identified below, when performed on the improved channel(s), improved basin(s) and adjacent work area(s) specified in Exhibit 1 and in accordance with the procedures described below, shall not require further notice to, or agreement with, the Department pursuant to Section 1601 of the Fish and Game Code.

The District, in the selection and application of pesticides (herbicides and rodenticides) as hereinafter set forth, shall comply with all applicable local, State, and Federal permitting or licensing requirements or regulations. Nothing in this MOU shall be construed as a permit, license, or any other entitlement to the application of pesticides.

- A. Control of weeds and grasses on maintenance roads and on the areas between top of banks (improved channel and improved basin) and adjacent property to comply with local fire regulations and to provide a safe travel way to conduct facility inspection and maintenance activities by mowing, discing, hand labor or herbicide application.

- B. Control of weeds and grasses, and emergent aquatic vegetation on earthen channel bottoms and banks to maintain channel design capacity, or to comply with local fire regulations, or to conduct facility inspection. Vegetation control will be accomplished by mowing, hand labor or herbicide application.

- C. Control of weeds and grasses on the basin banks to comply with local fire regulations or to conduct facility inspection by mowing, hand labor or herbicide application.
- D. Control of weeds and grasses in revegetated mitigation areas and landscaped areas to allow plant establishment by mowing, discing, hand labor or herbicide application as specified in Exhibit 1.
- E. Removal of vegetation, sand, silt, sediment and debris, and other obstructions to flow within the immediate vicinity (not to exceed 100 feet) of the following structures: (1) stream flow measuring stations; (2) culverts and bridges; (3) storm drain outfall structures; (4) drop structures (energy dissipaters), and (5) basin inlet and outlet structures, to maintain the structures design function. Surface flowing water, if any, will be diverted, if possible, from work area when using equipment in the improved channel or improved basin.
- F. Control and/or removal of woody and herbaceous vegetation with large tractor-pulled rotary mowers or equivalent and/or hand labor and tools on channel bottoms and channel banks to maintain channel design capacity. Improved channels that are to be cleared in strips in alternating years to retain habitat for wildlife, as illustrated in Exhibit 5, attached hereto and incorporated herein by reference, are indicated in Exhibit 1.

- Control and/or removal of woody and herbaceous vegetation, weeds and grasses with large tractor-pulled rotary mowers or equivalent and/or hand labor tools on basin bottoms to comply with local fire regulations or to minimize the potential for obstructing the basin outlet structure. Except as provided for in Authorized Activities E or P or as indicated in Exhibit 1, vegetation in low flow "wet" areas shall be left undisturbed.
- H. Removal of trees or branches that are in imminent danger of falling, fallen trees and associated debris to maintain the channel or basin outlet structure design capacity.
- I. Removal of accumulated sand, silt, sediment, woody and herbaceous vegetation, debris, rubbish and other obstructions from concrete-lined or rock-lined channels or transition sections to maintain design capacity.
- J. Removal of accumulated sand, silt, sediment, debris, rubbish and other obstructions or accumulations in improved channels with unlined channel bottoms or basin bottoms to maintain channel or basin design capacity. Improved channels or improved basins that are to be cleared in strips in alternating years to retain habitat for wildlife, as illustrated in Exhibit 5, are indicated in Exhibit 1.
- K. Removal of accumulated sand, silt, sediment, debris, rubbish and other obstructions or accumulations in improved channels with unlined channel bottoms to maintain low flow channel design capacity or, when necessary, to

provide fish passage or habitat identified in District environmental documents.

- L. Repair of failed sections of rock, gabion, masonry block, rail and wire, concrete-lined, gunite, grouted concrete riprap or other bank protections to maintain bank stabilization measures or drop structures to provide invert stabilization measures. Surface flowing water, if any, will be diverted from the work area, if possible, when using equipment in the improved channel. Maintenance activities shall be confined to the section affected by the failure. Upon maintenance activity completion, disturbed portions of the channel bottom shall be scarified from the work site to the equipment entrance where equipment traffic has caused compaction of the streambed soil materials.
- M. Restoration of eroded earth levees or channel and basin banks previously installed and/or maintained for public health and safety. Surface flowing water, if any, will be diverted from the work area, if possible, when using equipment in the improved channel or improved basin.
- N. Scarify bottom of improved channel(s) or improved basin(s) by discing, ripping or bulldozing for the purpose of increasing the percolation rate related to the promotion of groundwater recharge.
- O. Control of burrowing rodents in channel, basin (including dam embankment) or levee banks with application of rodenticides.

P. Removal of accumulated sand, silt, sediment, woody and herbaceous vegetation, debris, rubbish and other obstructions from basin bottoms including low flow "wet" areas by mowing, discing, bulldozing, hand labor or herbicide application as specified in Exhibit 1.

III. TIME AND MANNER OF WORK

Maintenance work shall be performed at a time and in a manner which shall meet the District's obligations to public health and safety while recognizing the need to minimize adverse impacts to fish and wildlife resources and their habitat. Periods of concern to the Department are March through June for nesting birds.

IV. REPORTING REQUIREMENTS

The District shall provide written notification to the Regional Manager, Region 5 of the Department on or about May 1, of each year. The notification shall include a list of the projects on which routine maintenance is anticipated to be performed in the following fiscal year (July 1 through June 30). The notification shall also include a list of those projects on which routine maintenance was performed during the current fiscal year but were not included in the notification provided in the previous year. The notification need not include a list of those projects on which routine maintenance is not anticipated to occur in the following year or will be performed entirely within a reach of concrete channel.

V. FEE PAYMENT

The District shall deposit with the Department the sum of one thousand five hundred dollars and no cents (\$1,500.00) the estimated cost of the Department ensuring compliance with the terms of this MOU, to be submitted concurrently with each annual notification. The District and Department shall fully expect that the submitted fee will be "payment in full" for those routine maintenance activities anticipated to occur in the following fiscal year, however, the parties also recognize that due to unusual and unforeseen circumstances the Department may expend more than the deposited amount in personnel costs in ensuring compliance with the terms of this MOU. In this event, the Department may request that the District reimburse the Department for those reasonable personnel costs expended in excess of the deposited amount. The Department request for reimbursement shall be submitted to the District within thirty (30) days following the close of the previous fiscal year and shall include an accurate accounting of all Department personnel costs assignable to individual projects listed within Exhibit 1 of this MOU and upon which routine maintenance was performed during the previous fiscal year. Upon concurrence by the District, the District shall reimburse the Department for reasonable personnel costs expended in excess of the deposited amount within forty-five (45) calendar days after the receipt of the request.

ENTIRE AGREEMENT

This MOU, along with the Exhibits attached hereto, constitutes the entire Agreement and understanding between the Department and the District for routine maintenance activities. This Agreement supersedes all prior and contemporaneous routine activity agreements, representation, or understandings, if any, whether oral or written.

OTHER ENVIRONMENTAL LAWS, STATUTES OR REGULATIONS

This MOU does not constitute any form of authorization, permit, or biological opinion or compliance with the requirements and provisions of any other statute, regulation, requirement or ordinance respecting the protection or conservation of fish and wildlife resources. Those statutes include, but are not limited to, the California Environmental Quality Act, the California Endangered Species Act, or the Federal Endangered Species Act.

AMENDMENT AND TERMINATION

This MOU may be amended at any time upon written agreement of the parties. If the District gives notice to and obtains the agreement of the Department to construct additional improved channels or basins, in compliance with Section 1601, any such additional improved channels or basins will be added to Exhibit 1 and Exhibit 2 by written amendment to this MOU, and all provisions of this MOU shall apply.

This MOU may be terminated by either party upon thirty (30) days written notification to the other party. Upon termination, the activities of the parties shall be governed by the applicable provisions of Section 1601 of the California Fish and Game Code.

[Signature]
Department of Fish and Game
Regional Manager, Region 5

June 25, 1993
Date

[Signature]
District
General Manager-Chief Engineer

March 29, 1993
Date

mcj:bjp
mt667
05/93

EXHIBIT 1

IMPROVED CHANNELS AND BASINS MAINTENANCE LISTING

RIVERSIDE COUNTY FLOOD CONTROL & WATER CONSERVATION DISTRICT

NOTES:

- GROUP 1: AUTHORIZED ACTIVITIES INCLUDE ITEMS A, B, E, F, H, J, K, L, M, O (typically applicable to earthen channels and/or levees and with or without slope protection)
- GROUP 2: AUTHORIZED ACTIVITIES INCLUDE ITEMS A, E, H, I, L, O (typically applicable to concrete trapezoidal or rectangular channels)
- GROUP 3: AUTHORIZED ACTIVITIES INCLUDE ITEMS A, C, E, G, H, J, L, M, O (typically applicable to detention/retention and/or debris basins)
- GROUP 4: Federal Project - Maintenance activities regulated by the Secretary of the Army and may include any or all of the Authorized Activities.

Unless an individual Authorized Activity is specifically listed as an Authorized Activity on Pages 1 through 35 of this Exhibit, the activities included in each of the Groups above shall be the only activities which may be accomplished for any particular project as designated on Pages 1 through 35 of this Exhibit.

EXHIBIT 1
IMPROVED CHANNELS AND BASINS MAINTENANCE LISTING

R.C.F.C. & W.C.D.

ZONE 2

AUTHORIZED ACTIVITIES
(SEE COVER SHEET OF EXHIBIT
1 AND SECTION II OF MOVL)

LOCATION
(See Thomas Bros. Map)

PROJECT NO. PROJECT NAME DESCRIPTION (PROJECT TYPE) PAGE NO. GRID

GROUP 2

2-0135 North Norco Channel Concrete trap. channel 10 E6 20 D1, E1

GROUP 2

2-0140 North Norco Channel Concrete trap., concrete rectangular channels 10 E5, 6 20 B3, C2, D1, 2, E1

GROUP 1

North Norco Channel Earthen trap. channel 10 E4, 5, F4 20 B2, 3

GROUP 2

2-0142 North Norco Channel Concrete rectangular wall 10 E5, F5

GROUP 2

2-0145 North Norco Channel Concrete trap. channel 10 E6, F6

GROUP 1

North Norco Channel Earthen trap. channel 10 E6

GROUP 2

2-0150 South Norco Channel Concrete channel 20 D3

GROUP 1

South Norco Channel Earthen trap. channel with and without bank protection 20 C3, D3, E1-3, F1

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Appendix D

Jurisdictional Delineation Report

**U.S. ARMY CORPS OF ENGINEERS
and
CALIFORNIA DEPARTMENT OF FISH AND GAME
JURISDICTIONAL DELINEATION
FOR:**

**THE NORTH NORCO CHANNEL
FLOOD CONTROL IMPROVEMENT PROJECT
LOCATED IN THE CITY OF NORCO
RIVERSIDE COUNTY, CALIFORNIA**

July 21, 2010

Prepared for:

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I. SUMMARY

This letter report summarizes our findings of U.S. Army Corps of Engineers (Corps), Santa Ana Regional Water Quality Control Board (Regional Board) and California Department of Fish and Game (CDFG) jurisdiction for the above-referenced property.¹

The North Norco Channel Flood Control Improvement Project (Project) contains 1.10 acres of land and consists of the improvement to an approximate 676 linear-foot section of the North Norco Channel (Channel) from River Road to 676 linear feet to the east. The improvements to the Channel are required by the Riverside County Flood Control and Water Conservation District (Flood Control) in order to provide local residents with 100-year flood control protection and public safety through returning the existing flood control channel to its original design capacity.

The Project is located in the City of Norco, Riverside County, California [Exhibit 1] and contains an unimproved section of the Channel. The Project site contains no blue-line drainages (as depicted on the U.S. Geological Survey (USGS) topographic map Corona North, California [dated 1967 and photorevised in 1988]) [Exhibit 2]. On October 11, 2007 and September 30, 2008, regulatory specialists of Glenn Lukos Associates, Inc. (GLA) examined the Project site to determine the limits of (1) Corps jurisdiction pursuant to Section 404 of the Clean Water Act (CWA), (2) CDFG jurisdiction pursuant to Division 2, Chapter 6, Section 1600 of the Fish and Game Code, and (3) Regional Board jurisdiction pursuant to Section 401 of the CWA and Section 13260 of the California Water Code (CWC). Enclosed is a 100-scale map [Exhibit 3] that depicts the areas of Corps and CDFG jurisdiction. Photographs to document the topography, vegetative communities, and areas evaluated for CDFG and Corps jurisdiction are provided as Exhibit 4. A Soils Map of the Project site is enclosed as Exhibit 5. Wetland data sheets are attached as Appendix A. A copy of the Corps' approved Preliminary Jurisdictional Determination form is attached as Appendix B.

The Project site contains one drainage feature (the North Norco Flood Control Channel), known as the Channel, which supports a total of 0.22 acre of Corps jurisdictional waters, of which 0.20 acre consists of jurisdictional wetlands. A total of 676 linear feet of streambed is present. The Channel mainly supports nuisance and storm water flows, as well as limited natural flows, from the upstream watershed. Since flows within the Channel appear relatively constant, the Channel is a Relatively Permanent Water (RPW). The Channel is a direct tributary of Temescal Creek (also a RPW), which is a tributary of the Santa Ana River (RPW), which flows into the Pacific Ocean (a Traditionally Navigable Water [TNW]). Since the Channel is a RPW, which connects directly or indirectly to a TNW, it would be subject to Corps jurisdiction pursuant to Section 404 of the CWA.

The Project, as proposed, will result in permanent impacts to 0.22 acre of Corps jurisdiction, of which 0.20 acre consists of jurisdictional wetlands. Permanent impacts to 676 linear feet of streambed will occur.

¹ This report is based upon using the most up-to-date regulations and written policy and guidance from the regulatory agencies.

CDFG jurisdiction at the site totals 0.31 acre, of which 0.29 acre consists of vegetated riparian habitat, and 0.02 acre consists of un-vegetated streambed associated with the vegetated riparian habitat. A total of 676 linear feet of streambed is present. The Project, as proposed, will result in permanent impacts to 0.31 acre of CDFG jurisdiction, of which 0.29 acre consists of vegetated riparian habitat. Permanent impacts to 676 linear feet of streambed will occur.

A July 1997 Memorandum of Understanding (MOU) between CDFG and Flood Control titled "Riverside County Flood Control and Water Conservation District and California Department of Fish and Game Memorandum of Understanding Maintenance Activities in Improved Channels and Detention/Retention/and/or Debris Basins" provides that Flood Control may undertake routine maintenance activities, such as vegetation removal, from various improved channels and basins, and that such maintenance shall not require a streambed alteration agreement between the Flood Control and CDFG. The Project site is subject to this MOU. Additionally, although the MOU states that Flood Control's maintenance activities shall not require a streambed alteration agreement, we have been informed that Flood Control and the CDFG are in the process of executing a Master Section 1605 Streambed Alteration Agreement for further long-term maintenance activities within the Channel.

Regional Board jurisdiction at the site totals 0.22 acre, of which 0.20 acre consists of jurisdictional wetlands. The Project, as proposed, will result in permanent impacts to 0.22 acre of Regional Board jurisdiction, of which 0.20 acre consists of jurisdictional wetlands. Permanent impacts to 676 linear feet of streambed will occur.

II. METHODOLOGY

Prior to beginning the field delineation a 100-scale color aerial photograph, a 100-scale topographic base map of the property, and the previously cited USGS topographic map were examined to determine the locations of potential areas of Corps/CDFG jurisdiction. Suspected jurisdictional areas were field checked for the presence of definable channels and/or wetland vegetation, soils and hydrology. Suspected wetland habitats on the site were evaluated using the methodology set forth in the U.S. Army Corps of Engineers 1987 Wetland Delineation Manual² (Wetland Manual) and the 2006 Interim Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Supplement (Arid West Supplement)³. While in the field the limits of CDFG jurisdiction were recorded onto a 100-scale color aerial photograph using visible landmarks. Other data were recorded onto wetland data sheets.

The Soil Conservation Service (SCS)⁴ has mapped the following two soil series as occurring in the general vicinity of the project site. A soils map is provided as Exhibit 5.

² Environmental Laboratory. 1987. Corps of Engineers Wetlands Delineation Manual, Technical Report Y-87-1, U.S. Army Engineer Waterways Experimental Station, Vicksburg, Mississippi.

³ U.S. Army Corps of Engineers. 2006. Interim Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Supplement. Ed. J.S. Wakeley, R.W. Lichevar, and C.V. Noble. ERDC/EL TR-06-16. Vicksburg, MS: U.S. Army Engineer Research and Development Center.

⁴ SCS is now known as the National Resource Conservation Service or NRCS.

Greenfield Series

The Greenfield series consists of well-drained soils located on alluvial fans and terraces. Slopes range from 0 to 25 percent. These soils formed in alluvium consisting mostly of granitic materials. Vegetation typically associated with the Greenfield series predominately includes annual grasses but also includes forbs, sumac, chamise and scattered oak trees. In a typical profile, the surface layer is brown sandy loam (10 YR3/3 when moist) approximately 26 inches in depth. Underlying this is brown sandy loam and pale brown loam (10 YR3/3 when moist) to a depth of 60 inches. The Greenfield series are commonly used for dryland grain and pasture, irrigated truck crops, alfalfa, potatoes, citrus, peaches and for homesites. Greenfield soils types that occur within the Project site include the following:

- *Greenfield sandy loam, 2-8 Percent Slopes, Eroded (GyC2)*

Placentia Series

The Placentia series consists of moderately well drained soils on alluvial fans and terraces. Slopes range from 0 to 25 percent. These soils formed in alluvium consisting mainly of granitic materials. Vegetation typically associated with the Placentia series predominately includes annual grasses, forbs, and chamise. In a typical soil profile, the surface layer is brown and pale brown fine sandy loam (10 YR4/3 when moist) approximately 18 inches in depth. The upper subsoil consists of brown heavy clay loam (7.5 YR3/2 when moist) approximately 21 inches thick. The lower subsoil consists of brown sandy clay loam (7.5 YR when moist) approximately 18 inches thick. The substratum consists of sandy, gravelly, or cobbly alluvium of granitic origin. The Placentia series soils are commonly used for dryland pasture and grain, irrigated permanent pasture, and for non-farm purposes. Placentia soil types that occur within the Project Site include the following:

- *Placentia fine sandy loam, 0-5 Percent Slopes (PIB)*
- *Placentia fine sandy loam, 5-15 Percent Slopes (PID)*

None of these soil units are identified as hydric in the SCS's publication, Hydric Soils of the United States⁵, or the local hydric soils list for western Riverside Area, Riverside County, California.

⁵ United States Department of Agriculture, Soil Conservation Service. 1991. Hydric Soils of the United States, 3rd Edition, Miscellaneous Publication Number 1491. (In cooperation with the National Technical Committee for Hydric Soils.)

III. JURISDICTION

A. Army Corps of Engineers

Pursuant to Section 404 of the CWA, the Corps regulates the discharge of dredged and/or fill material into waters of the United States. The term "waters of the United States" is defined in Corps regulations at 33 CFR Part 328.3(a) as:

- (1) *All waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters, which are subject to the ebb and flow of the tide;*
- (2) *All interstate waters including interstate wetlands;*
- (3) *All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation or destruction of which could affect foreign commerce including any such waters:*
 - (i) *Which are or could be used by interstate or foreign travelers for recreational or other purposes; or*
 - (ii) *From which fish or shell fish are or could be taken and sold in interstate or foreign commerce; or*
 - (iii) *Which are used or could be used for industrial purpose by industries in interstate commerce...*
- (4) *All impoundments of waters otherwise defined as waters of the United States under the definition;*
- (5) *Tributaries of waters identified in paragraphs (a) (1)-(4) of this section;*
- (6) *The territorial seas;*
- (7) *Wetlands adjacent to waters (other than waters that are themselves wetlands) identified in paragraphs (a) (1)-(6) of this section.*

Waste treatment systems, including treatment ponds or lagoons designed to meet the requirements of CWA (other than cooling ponds as defined in 40 CFR 123.11(m) which also meet the criteria of this definition) are not waters of the United States.

- (8) *Waters of the United States do not include prior converted cropland.⁶ Notwithstanding the determination of an area's status as prior converted cropland by any other federal agency, for the purposes of the Clean Water Act, the final authority regarding Clean Water Act jurisdiction remains with the EPA.*

⁶ The term "prior converted cropland" is defined in the Corps' Regulatory Guidance Letter 90-7 (dated September 26, 1990) as "wetlands which were both manipulated (drained or otherwise physically altered to remove excess water from the land) and cropped before 23 December 1985, to the extent that they no longer exhibit important wetland values. Specifically, prior converted cropland is inundated for no more than 14 consecutive days during the growing season...." [Emphasis added.]

In the absence of wetlands, the limits of Corps jurisdiction in non-tidal waters, such as intermittent streams, extend to the OHWM which is defined at 33 CFR 328.3(e) as:

...that line on the shore established by the fluctuation of water and indicated by physical characteristics such as clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas.

1. Solid Waste Agency of Northern Cook County v. United States Army Corps of Engineers, et al.

Pursuant to Article I, Section 8 of the U.S. Constitution, federal regulatory authority extends only to activities that affect interstate commerce. In the early 1980s the Corps interpreted the interstate commerce requirement in a manner that restricted Corps jurisdiction on isolated (intrastate) waters. On September 12, 1985, EPA asserted that Corps jurisdiction extended to isolated waters that are used or could be used by migratory birds or endangered species, and the definition of "waters of the United States" in Corps regulations was modified as quoted above from 33 CFR 328.3(a).

On January 9, 2001, the Supreme Court of the United States issued a ruling on *Solid Waste Agency of Northern Cook County v. United States Army Corps of Engineers, et al.* (SWANCC). In this case the Court was asked whether use of an isolated, intrastate pond by migratory birds is a sufficient interstate commerce connection to bring the pond into federal jurisdiction of Section 404 of the CWA.

The written opinion notes that the court's previous support of the Corps' expansion of jurisdiction beyond navigable waters (*United States v. Riverside Bayview Homes, Inc.*) was for a wetland that abutted a navigable water and that the court did not express any opinion on the question of the authority of the Corps to regulate wetlands that are not adjacent to bodies of open water. The current opinion goes on to state:

In order to rule for the respondents here, we would have to hold that the jurisdiction of the Corps extends to ponds that are not adjacent to open water. We conclude that the text of the statute will not allow this.

Therefore, we believe that the court's opinion goes beyond the migratory bird issue and says that no isolated, intrastate water is subject to the provisions of Section 404(a) of the CWA (regardless of any interstate commerce connection). However, the Corps and EPA have issued a joint memorandum, which states that they are interpreting the ruling to address only the migratory bird issue and leaving the other interstate commerce clause nexuses intact.

2. Rapanos v. United States and Carabell v. United States

On June 5, 2007, the U.S. Environmental Protection Agency (EPA) and Corps issued joint guidance that addresses the scope of jurisdiction pursuant to the CWA in light of the Supreme

Court's decision in the consolidated cases *Rapanos v. United States* and *Carabell v. United States* ("Rapanos"). The June 5, 2007 joint Rapanos guidance was re-affirmed in a Regulatory Guidance Letter issued by the Corps on December 2, 2008. The chart below was provided in the joint EPA/Corps guidance.

For project sites that include waters other than Traditional Navigable Waters (TNWs) and/or their adjacent wetlands or Relatively Permanent Waters (RPWs) tributary to TNWs and/or their adjacent wetlands as set forth in the chart below, the Corps must apply the significant nexus standard, that includes the data set forth in the *Approved Jurisdictional Determination Form*. For "isolated" waters or wetlands, the joint guidance also requires an evaluation by the Corps and EPA to determine whether other interstate commerce clause nexuses, not addressed in the SWANCC decision are associated with isolated features on project sites for which a jurisdictional determination is being sought from the Corps.

The agencies will assert jurisdiction over the following waters:

- Traditional navigable waters
- Wetlands adjacent to traditional navigable waters
- Non-navigable tributaries of traditional navigable waters that are relatively permanent where the tributaries typically flow year-round or have continuous flow at least seasonally (e.g., typically three months)
- Wetlands that directly abut such tributaries

The agencies will decide jurisdiction over the following waters based on a fact-specific analysis to determine whether they have a significant nexus with a traditional navigable water:

- Non-navigable tributaries that are not relatively permanent
- Wetlands adjacent to non-navigable tributaries that are not relatively permanent
- Wetlands adjacent to but that do not directly abut a relatively permanent non-navigable tributary

The agencies generally will not assert jurisdiction over the following features:

- Swales or erosional features (e.g., gullies, small washes characterized by low volume, infrequent or short duration flow)
- Ditches (including roadside ditches) excavated wholly in and draining only uplands and that do not carry a relatively permanent flow of water

The agencies will apply the significant nexus standard as follows:

- A significant nexus analysis will assess the flow characteristics and functions of the tributary itself and the functions performed by all wetlands adjacent to the tributary to determine if they significantly affect the chemical, physical and biological integrity of downstream traditional navigable waters
- Significant nexus includes consideration of hydrologic and ecologic factors

3. Corps Preliminary Jurisdictional Determination

A *Corps Preliminary Jurisdictional Determination Form* may be used to concede Corps jurisdiction where all streambeds within the Project area are considered Corps jurisdictional waters. The Project would be able to move forward pursuant to Corps RGL 08-02, issued on June 26, 2008, which allows the Corps to issue preliminary jurisdictional determinations (Preliminary JD) for a project. A Preliminary JD allows you to move forward with the project by setting aside/voluntarily waiving questions regarding CWA jurisdiction over drainages on site in the interest of allowing you to expeditiously obtain a Section 404 Permit, when it is in your best interest to do so.

As stated in RGL 08-02:

While a landowner, permit applicant, or other affected party can elect to request and obtain an approved JD, he or she can also decline to request an approved JD, and instead obtain a Corps individual or general permit authorization based on either a preliminary JD, or, in appropriate circumstances (such as authorizations by non-reporting nationwide general permits), no JD whatsoever. The Corps will determine what form of JD is appropriate for any particular circumstance based on all the relevant factors, to include, but not limited to, the applicant's preference, what kind of permit authorization is being used (individual permit versus general permit), and the nature of the proposed activity needing authorization.

The Corps typically completes Preliminary JDs within 60 days of receipt of the request for such a determination. If the Corps project manager cannot complete the Preliminary JD within the 60-day timeframe, they must provide their supervisor, who would also provide the applicant, with a schedule to complete the determination (i.e., unlike the Rapanos significant nexus guidelines, there is a specific timeframe to complete the Preliminary JD and move forward with your project, without uncertainty, and the EPA will not be involved with the Preliminary JD process as the Corps is not required to coordinate with the EPA to review Preliminary JDs).

4. Wetland Definition Pursuant to Section 404 of the Clean Water Act

The term "wetlands" (a subset of "waters of the United States") is defined at 33 CFR 328.3(b) as "those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support...a prevalence of vegetation typically adapted for life in saturated soil conditions." In 1987 the Corps published a manual to guide its field personnel in determining jurisdictional wetland boundaries. The methodology set forth in the 1987 Wetland Delineation Manual and the Arid West Supplement generally require that, in order to be considered a wetland, the vegetation, soils, and hydrology of an area exhibit at least minimal hydric characteristics. While the manual and Supplement provide great detail in methodology and allow for varying special conditions, a wetland should normally meet each of the following three criteria:

- more than 50 percent of the dominant plant species at the site must be typical of wetlands (i.e., rated as facultative or wetter in the National List of Plant Species that Occur in Wetlands⁷);
- soils must exhibit physical and/or chemical characteristics indicative of permanent or periodic saturation (e.g., a gleyed color, or mottles with a matrix of low chroma indicating a relatively consistent fluctuation between aerobic and anaerobic conditions); and
- Whereas the 1987 Manual requires that hydrologic characteristics indicate that the ground is saturated to within 12 inches of the surface for at least five percent of the growing season during a normal rainfall year, the Arid West Supplement does not include a quantitative criteria with the exception for areas with “problematic hydrophytic vegetation”, which require a minimum of 14 days of ponding to be considered a wetland.

B. Regional Water Quality Control Board

Subsequent to the SWANCC decision, the Chief Counsel for the State Water Resources Control Board issued a memorandum that addressed the effects of the SWANCC decision on the Section 401 Water Quality Certification Program.⁸ The memorandum states:

California's right and duty to evaluate certification requests under section 401 is pendant to (or dependent upon) a valid application for a section 404 permit from the Corps, or another application for a federal license or permit. Thus if the Corps determines that the water body in question is not subject to regulation under the COE's 404 program, for instance, no application for 401 certification will be required...

The SWANCC decision does not affect the Porter Cologne authorities to regulate discharges to isolated, non-navigable waters of the states....

Water Code section 13260 requires “any person discharging waste, or proposing to discharge waste, within any region that could affect the waters of the state to file a report of discharge (an application for waste discharge requirements).” (Water Code § 13260(a)(1) (emphasis added).) The term “waters of the state” is defined as “any surface water or groundwater, including saline waters, within the boundaries of the state.” (Water Code § 13050(e).) The U.S. Supreme Court's ruling in SWANCC has no bearing on the Porter-Cologne definition. While all waters of the United States that are within the borders of California are also waters of the state, the converse is not true—waters of the United States is a subset of waters of the state. Thus, since Porter-Cologne was enacted California always had and retains authority to regulate discharges of waste into any waters

⁷ Reed, P.B., Jr. 1988. National List of Plant Species that Occur in Wetlands. U.S. Fish and Wildlife Service Biological Report 88(26.10).

⁸ Wilson, Craig M. January 25, 2001. Memorandum addressed to State Board Members and Regional Board Executive Officers.

of the state, regardless of whether the COE has concurrent jurisdiction under section 404. The fact that often Regional Boards opted to regulate discharges to, e.g., vernal pools, through the 401 program in lieu of or in addition to issuing waste discharge requirements (or waivers thereof) does not preclude the regions from issuing WDRs (or waivers of WDRs) in the absence of a request for 401 certification....

In this memorandum the SWRCB's Chief Counsel has made the clear assumption that fill material to be discharged into isolated waters of the United States is to be considered equivalent to "waste" and therefore subject to the authority of the Porter Cologne Water Quality Act. However, while providing a recounting of the Act's definition of waters of the United States, this memorandum fails to also reference the Act's own definition of waste:

"Waste" includes sewage and any and all other waste substances, liquid, solid, gaseous, or radioactive, associated with human habitation, or of human or animal origin, or from any producing, manufacturing, or processing operation, including waste placed within containers of whatever nature prior to, and for purposes of, disposal.

The lack of inclusion of a reference to "fill material," "dirt," "earth" or other similar terms in the Act's definition of "waste," or elsewhere in the Act, suggests that no such association was intended. Thus, the Chief Counsel's memorandum signals that the SWRCB is attempting to retain jurisdiction over discharge of fill material into isolated waters of the United States by administratively expanding the definition of "waste" to include "fill material" without actually seeking amendment of the Act's definition of waste (an amendment would require action by the state legislature). Consequently, discharge of fill material into waters of the State not subject to the jurisdiction of the Corps pursuant to Section 404 of the CWA may require authorization pursuant to the Porter Cologne Act through application for waste discharge requirements (WDRs) or through waiver of WDRs, despite the lack of a clear regulatory imperative.

C. California Department of Fish and Game

Pursuant to Division 2, Chapter 6, Sections 1600-1603 of the California Fish and Game Code, the CDFG regulates all diversions, obstructions, or changes to the natural flow or bed, channel, or bank of any river, stream, or lake, which supports fish or wildlife.

CDFG defines a "stream" (including creeks and rivers) as "a body of water that flows at least periodically or intermittently through a bed or channel having banks and supports fish or other aquatic life. This includes watercourses having surface or subsurface flow that supports or has supported riparian vegetation." CDFG's definition of "lake" includes "natural lakes or man-made reservoirs."

CDFG jurisdiction within altered or artificial waterways is based upon the value of those waterways to fish and wildlife. CDFG Legal Advisor has prepared the following opinion:

- Natural waterways that have been subsequently modified and which have the potential to contain fish, aquatic insects and riparian vegetation will be treated like natural waterways...
- Artificial waterways that have acquired the physical attributes of natural stream courses and which have been viewed by the community as natural stream courses, should be treated by [CDFG] as natural waterways...
- Artificial waterways without the attributes of natural waterways should generally not be subject to Fish and Game Code provisions...

Thus, CDFG jurisdictional limits closely mirror those of the Corps. Exceptions are CDFG's exclusion of isolated wetlands (those not associated with a river, stream, or lake), the addition of artificial stock ponds and irrigation ditches constructed on uplands, and the addition of riparian habitat supported by a river, stream, or lake regardless of the riparian area's federal wetland status.

IV. RESULTS

GLA regulatory specialists conducted a jurisdictional delineation on October 11, 2007, after the CDFG authorized routine maintenance activities (i.e. vegetation thinning) within the Channel had occurred. On September 30, 2008, GLA updated the jurisdictional delineation, which occurred prior to routine maintenance activities within the Channel. The results used for this jurisdictional delineation report are based upon the results of the September 2008 jurisdictional delineation as it is GLA's professional opinion that the 2008 data represents the extent of jurisdiction within the Channel prior to any temporary impacts due to the maintenance activities authorized by the previously mentioned MOU.

A. Corps Jurisdiction

Corps jurisdiction associated with the Project totals approximately 0.22 acre, of which 0.20 acre consists of jurisdictional wetlands. The Project contains one drainage feature, which consists of an unimproved earthen bed and bank portion of the Channel. Since the Channel is an RPW which flows directly or indirectly into a TNW, it would be subject to Corps jurisdiction pursuant to Section 404 of the CWA. The Channel conveys flows from east to west for 676 feet before exiting the site beneath River Road. Ultimately, the Channel discharges into Temescal Creek adjacent to the North Norco Levee at the Rincon Street Bridge in the City of Corona (Corona). Indicators of an ordinary high water mark (OHWM) range between 9 and 17 feet and include the presence of litter and debris wracks, shelving, lines impressed upon the banks, and changes in soil characteristics. The Channel has an earthen bed and bank and supports riparian habitat and emergent wetlands.

The upstream portion of the Channel, located immediately east of the Project site, consists of a concrete-bottom, concrete-sided flood control channel for at least 1.75 miles between the Project and the Interstate 15 Freeway (I-15 Freeway). The downstream portion of the Channel, located immediately west of River Road, also consists of an improved, concrete-bottom, concrete-sided

channel between the Project boundary and 750 linear feet to the west adjacent to Country Club Park in Corona. A majority of the flows conveyed by the Channel consist of nuisance water, as well as limited natural flow, from the upstream watershed. Due to the presence of highly eroded banks and large debris racks above the OHWM, the Channel appears to convey high-volume, high velocity flows following significant storm events.

Four soil pits were excavated within the Channel and the accompanying wetland data sheets are enclosed as Appendix A. A Copy of the Corps' approved Preliminary Jurisdictional Determination Form is attached as Appendix B. The boundaries of Corps jurisdiction are depicted on the enclosed jurisdictional delineation map [Exhibit 3]. Photographs documenting the existing condition of the Channel are included as Exhibit 4.

Dominant vegetation associated with the Channel consists of barnyard grass (*Echinochloa crus-galli*, FACW), annual beard grass (*Polypogon monspeliensis*, FACW), Mexican sprangletop (*Leptochloa uninervia*, FACW), tall umbrella-sedge (*Cyperus eragrostis*, FACW), slender cattail (*Typha domingensis*, OBL), black willow (*Salix gooddingii*, OBL), willow-weed (*Polygonum lapathifolium*, OBL), tree tobacco (*Nicotiana glauca*, FAC), Mediterranean tamarisk (*Tamarix ramosissima*, FAC), valley red-stem (*Ammannia coccinea*, OBL), castor-bean (*Ricinus communis*, FACU) and eared crown-beard (*Verbesina encelioides*, FAC).

B. Regional Water Quality Control Board

The Channel was not determined to be an intrastate, isolated water outside of Corps jurisdiction, therefore, it does not need to be addressed separately pursuant to Section 13260 of the CWC.

C. CDFG Jurisdiction

CDFG jurisdiction associated with the Project totals approximately 0.31 acre, of which 0.29 acre consists of vegetated riparian habitat, and 0.02 acre consists of un-vegetated streambed associated with the vegetated riparian habitat. One drainage, known as the Channel, supports bed, bank, and channel, as well as vegetated riparian habitat. The Channel conveys flows from east to west for 676 feet before exiting the site beneath River Road. Ultimately, the Channel discharges into Temescal Creek adjacent to the North Norco Levee at the Rincon Street Bridge in Corona. Indicators of a high water mark (HWM) range between 9 and 17 feet and include the presence of bed, bank, channel, litter and debris wracks, shelving, lines impressed upon the banks, and changes in soil characteristics. The Channel supports an earthen bed and bank and contains both native and non-native riparian species.

The upstream portion of the Channel, located immediately east of the Project site, consists of a concrete-bottom, concrete-sided flood control channel for at least 1.75 miles between the Project and the I-15 Freeway. The downstream portion of the Channel, located immediately west of River Road, also consists of an improved, concrete-bottom, concrete-sided channel between the Project boundary and 750 linear feet to the west adjacent to Country Club Park in Corona. A majority of the flows conveyed by the Channel consist of nuisance water, as well as limited

natural flow, from the upstream watershed. Due to the presence of highly eroded banks and large debris racks, the Channel appears to convey high-volume, high velocity flows following significant storm events. The boundaries of CDFG jurisdiction associated with the Project are depicted on the enclosed map [Exhibit 3- Jurisdictional Delineation Map].

The dominant riparian vegetation associated with the Channel consists of barnyard grass (*Echinochloa crus-galli*), annual beard grass (*Polypogon monspeliensis*), Mexican sprangletop (*Leptochloa uninervia*), tall umbrella-sedge (*Cyperus eragrostis*), slender cattail (*Typha domingensis*), black willow (*Salix gooddingii*), willow-weed (*Polygonum lapathifolium*), tree tobacco (*Nicotiana glauca*), Mediterranean tamarisk (*Tamarix ramosissima*), valley red-stem (*Ammannia coccinea*), castor-bean (*Ricinus communis*), and eared crown-beard (*Verbesina encelioides*).

Due to the existence of the MOU, which has allowed vegetation clearing in the Channel in past years, as well as the Master Section 1605 Streambed Alteration Agreement, which is currently being negotiated, the functions and values of the riparian vegetation within the Channel are considered temporary in nature. Such routine maintenance, as is authorized within the Channel, is likely to occur annually in order to ensure that the flood control channel continues to provide the designated level of flood protection to which the facility was designed and constructed, to protect the public's investment, to prevent loss of life and property, and to comply with local ordinances and regulations.

V. IMPACT ANALYSIS

A. *Impacts to U.S. Army Corps of Engineers Jurisdiction*

Corps jurisdiction at the Project Site totals 0.22 acre, of which 0.20 acre consists of jurisdictional wetlands. The Project, as proposed, will result in permanent impacts to 0.20 acre of Corps jurisdiction, of which 0.20 acre consists of jurisdictional wetlands. Permanent impacts to 676 linear feet of streambed will occur.

B. *Impacts to California Department of Fish and Game Jurisdiction*

CDFG jurisdiction at the Project Site totals 0.31 acre, of which 0.29 acre consists of vegetated riparian habitat, and 0.02 acre consists of un-vegetated streambed associated with the vegetated riparian habitat. The Project, as proposed, will result in permanent impacts to 0.31 acre of CDFG jurisdiction, of which 0.29 acre consists of vegetated riparian habitat and 0.02 acre consists of un-vegetated streambed associated with the riparian habitat. Permanent impacts to 676 linear feet of streambed will occur.

C. *Impacts to Santa Ana Regional Water Quality Control Board Jurisdiction*

Regional Board jurisdiction at the site totals 0.22 acre, of which 0.20 acre consists of jurisdictional wetlands. The Project, as proposed, will result in permanent impacts to 0.22 acre of Regional Board jurisdiction, of which 0.20 acre consists of jurisdictional wetlands. Permanent impacts to 676 linear feet of streambed will occur.

VI. CONCLUSION

Corps and CDFG Jurisdiction

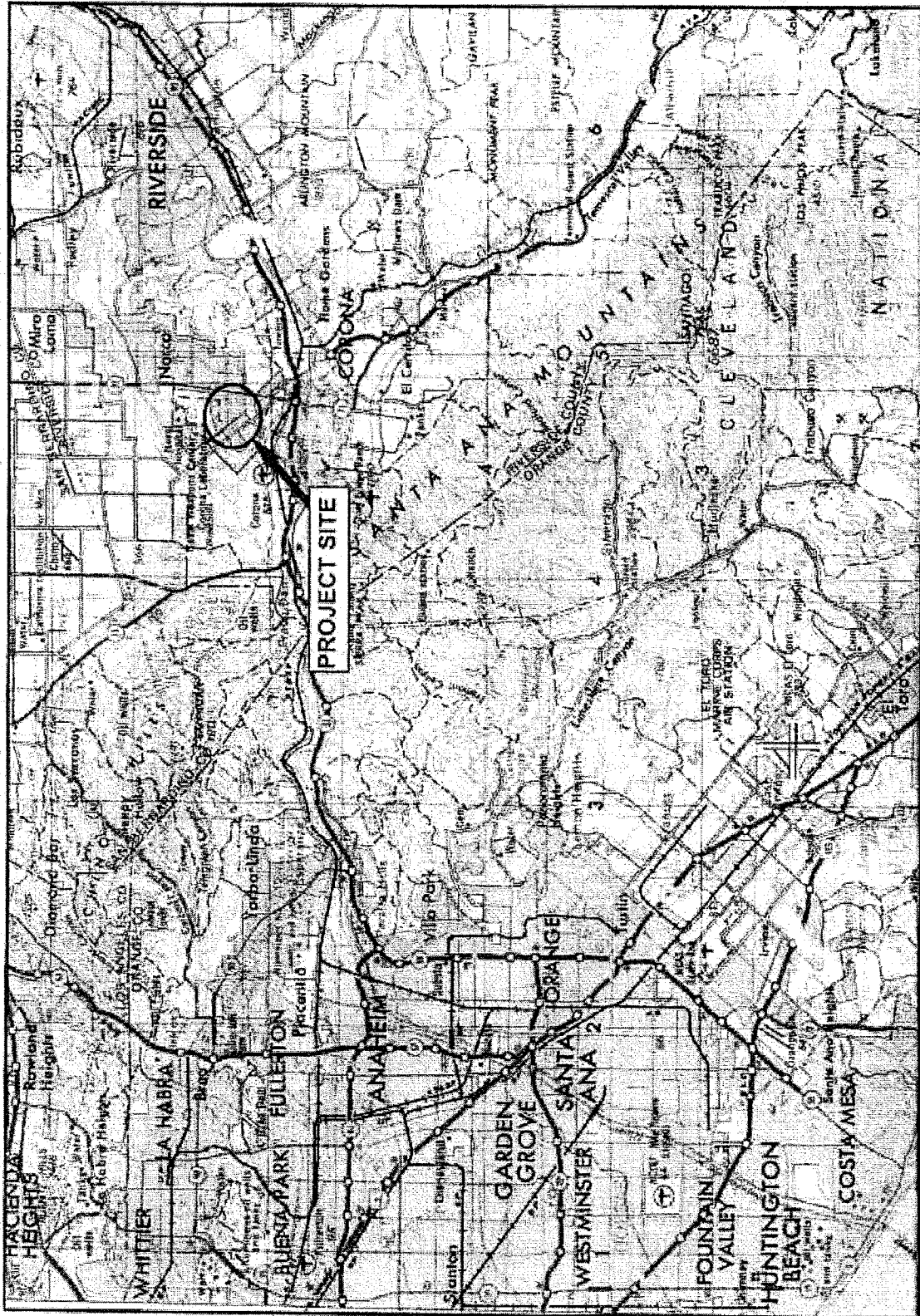
Total Corps and Regional Board jurisdiction associated with the Project area is 0.22 acre, of which 0.20 acre consists of jurisdictional wetlands, and includes 676 linear feet of streambed. Total CDFG jurisdiction within the Project area is 0.31 acre, of which 0.29 acre consists of vegetated riparian habitat, and includes 676 linear feet of streambed.

Total impacts to Corps and Regional Board jurisdiction are 0.22 acre, of which 0.20 acre consists of jurisdictional wetlands, and includes 676 linear feet of streambed. Total impacts to CDFG jurisdiction are 0.31 acre, of which 0.29 acre consists of vegetated riparian habitat, and includes 676 linear feet of streambed.

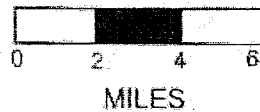
Potential Compensatory Mitigation

Compensatory mitigation for the Project will be proposed at an off site Corps and CDFG-approved mitigation bank and/or in-lieu fee program within the Santa Ana River Watershed. Mitigation will be proposed at a 2:1 mitigation to impact ratio based upon total impact to CDFG jurisdiction and will consist of a one-time in-lieu fee payment to create 0.62 acre of vegetated riparian habitat and/or wetland habitat within the Santa Ana River Watershed. Based upon the total Corps and CDFG jurisdiction within the Project area (0.22 acre and 0.31 acre respectively) and its overall habitat value, the creation of 0.62 acre of vegetated riparian habitat and/or wetland habitat within the Santa Ana River Watershed would adequately compensate for the proposed permanent impacts and reduce the loss of 0.22 acre of Corps jurisdiction and 0.31 acre of CDFG jurisdiction, including 676 linear feet of streambed, on site to a less than significant level.

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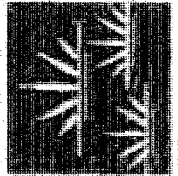


Adapted from USGS Santa Ana quadrangle



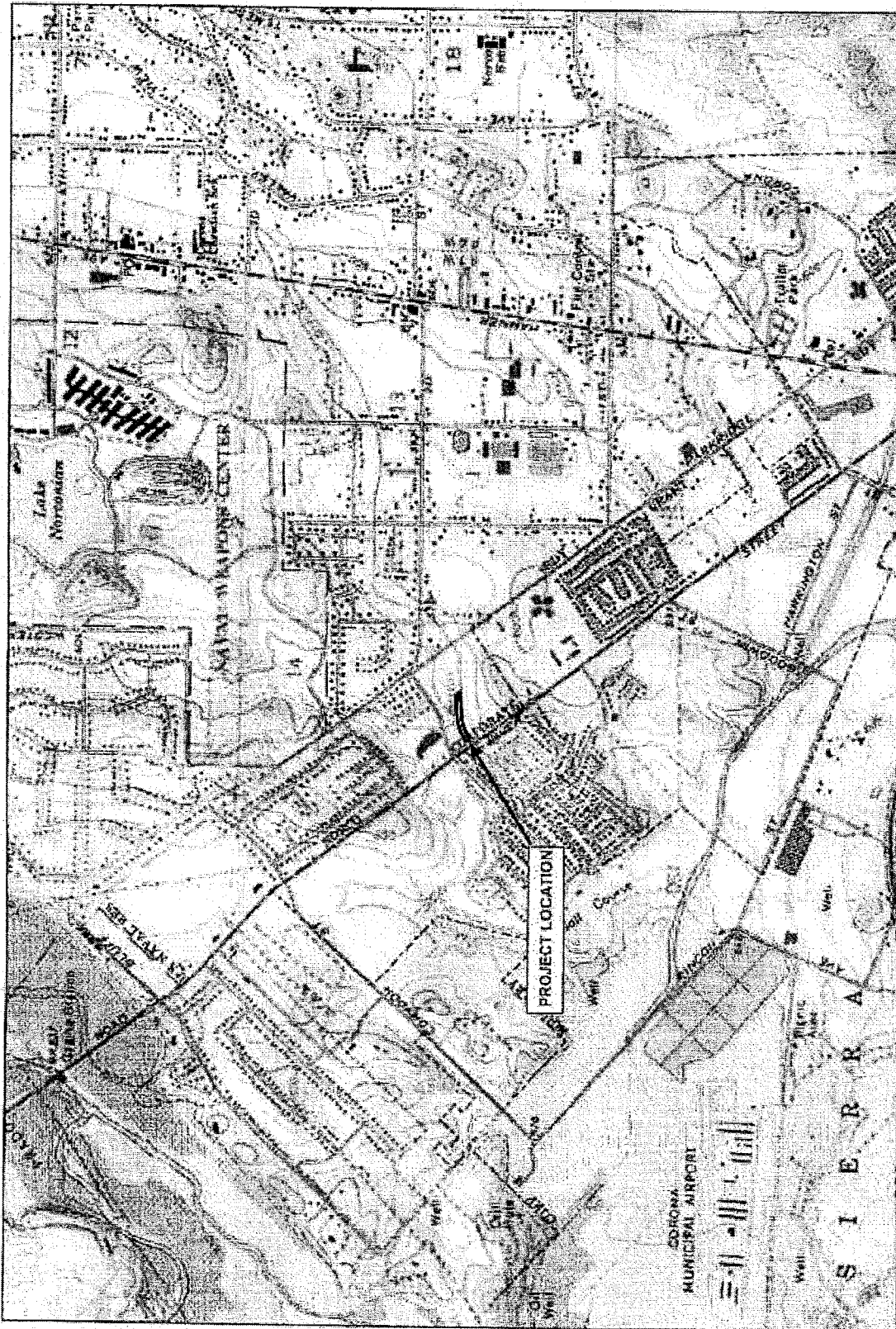
**NORTH NORCO CHANNEL
IMPROVEMENT PROJECT**

Regional Map

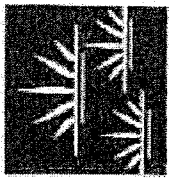
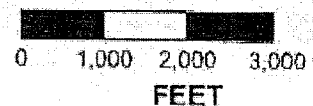


GLENN LUKOS ASSOCIATES

Exhibit 1



Adapted from USGS Corona North, CA quadrangle



GLENN LUKOS ASSOCIATES

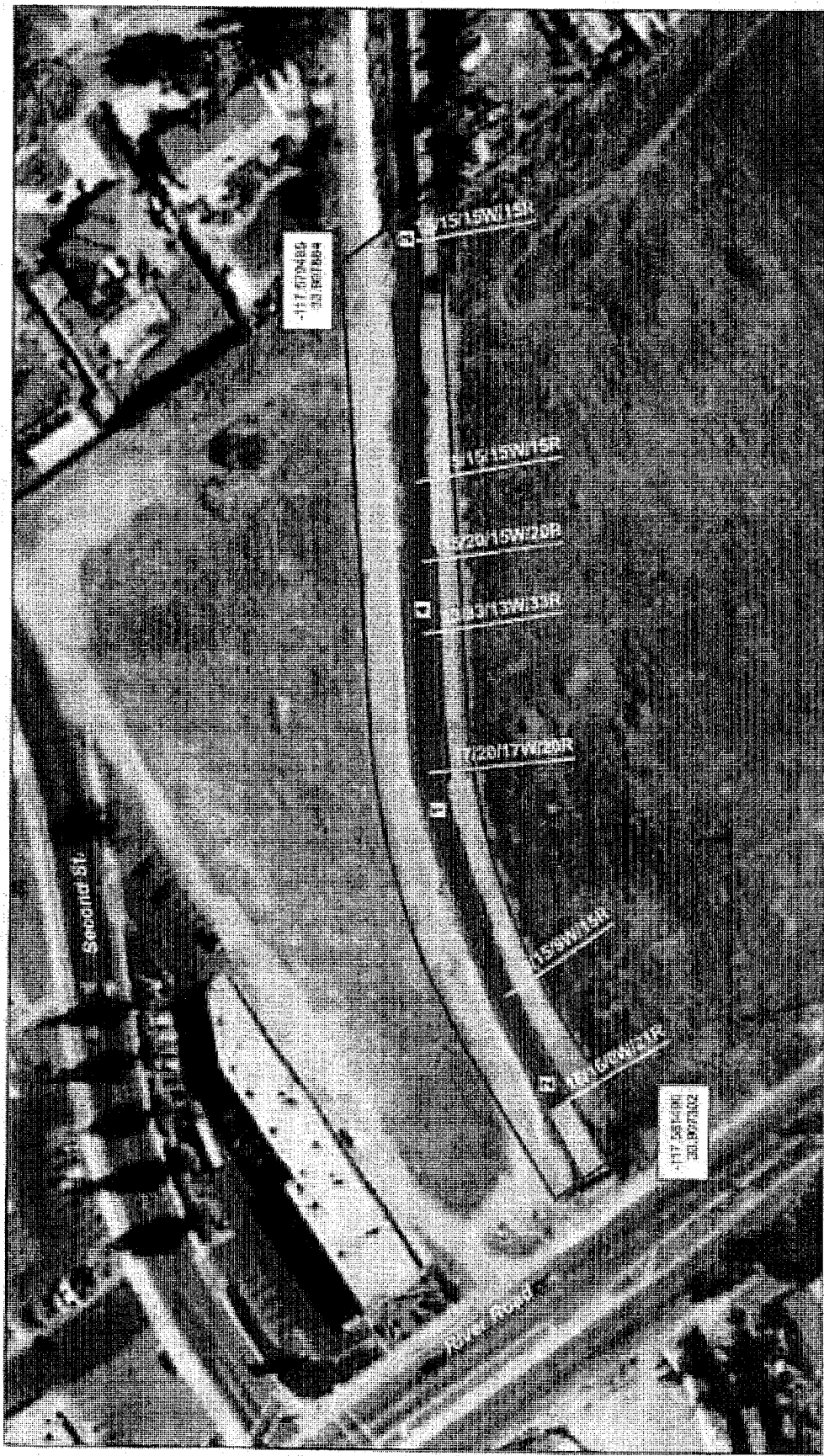
EXHIBIT 2

**NORTH NORCO CHANNEL
IMPROVEMENT PROJECT**






Vicinity Map

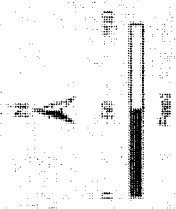
Exhibit 3

Jurisdictional Delineation Map




Legend

-  Project Area
-  Corps Non-wetland Waters and COFG Unvegetated Streambed
-  Corps Wetlands and COFG Riparian
-  COFG Riparian Only
-  Soil Pit Location



**NORTH NORCO CHANNEL
IMPROVEMENT PROJECT**
Jurisdictional Delineation Map

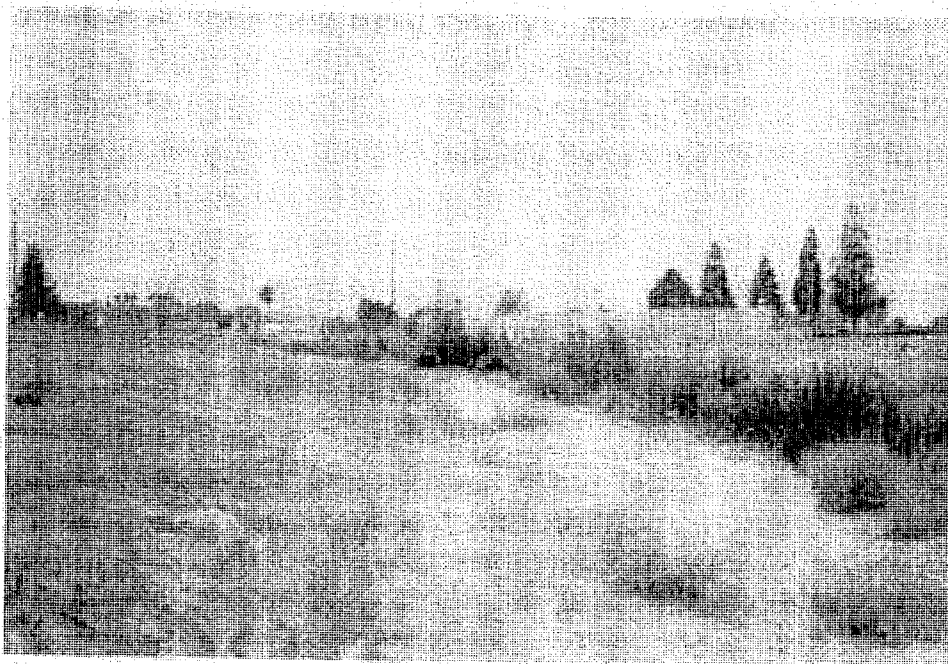


GLEN LUKOS ASSOCIATES
Exhibit 3

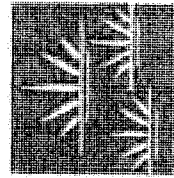
The final number represents Chain width, the second number represents the COFG width, and the third number represents the COFG riparian.



PHOTOGRAPH 1. This Photograph depicts the vegetation within the Project Site. Photograph taken looking west towards River Road on 9-11-2008.



PHOTOGRAPH 2. This photograph depicts the southern access road and a portion of the ruderal fields located immediately adjacent to the Project Site. Photograph taken looking northwest on 9-11-2008.



GLENN LUKOS ASSOCIATES

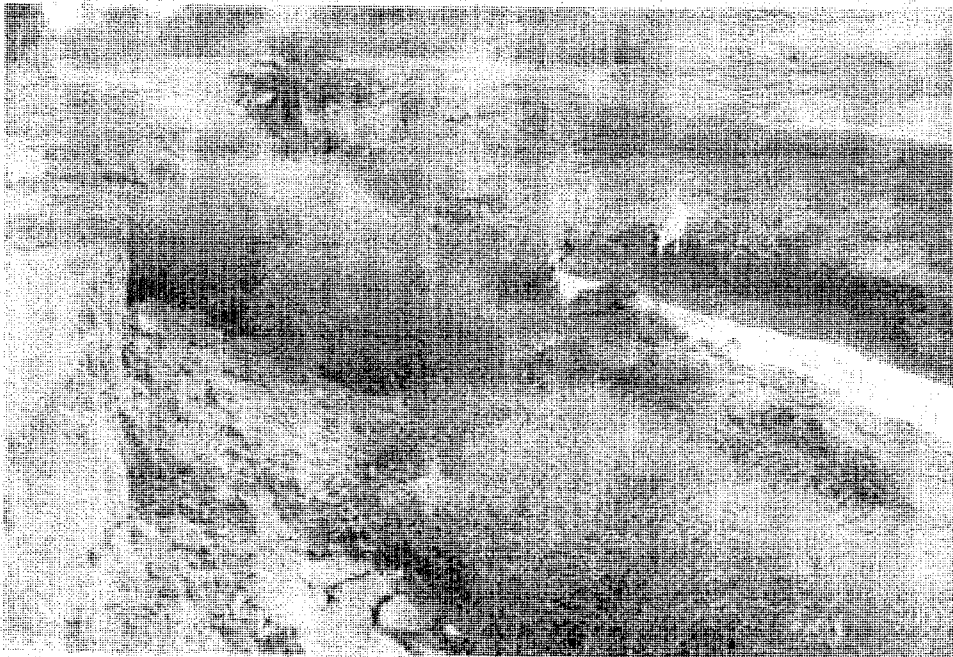
EXHIBIT 4

NORTH NORCO CHANNEL
IMPROVEMENT PROJECT

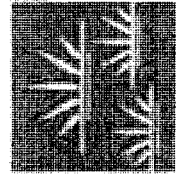
Site Photographs



PHOTOGRAPH 3. This photograph depicts the North Norco Flood Control Channel on the east end of the channel as it transitions into the improved concrete channel. Photograph taken looking east on 9-11-2008.



PHOTOGRAPH 4. This photograph depicts conditions in the North Norco Flood Control Channel after the 2008/2009 storm flows. Photograph looking east, taken on 03-05-2009.

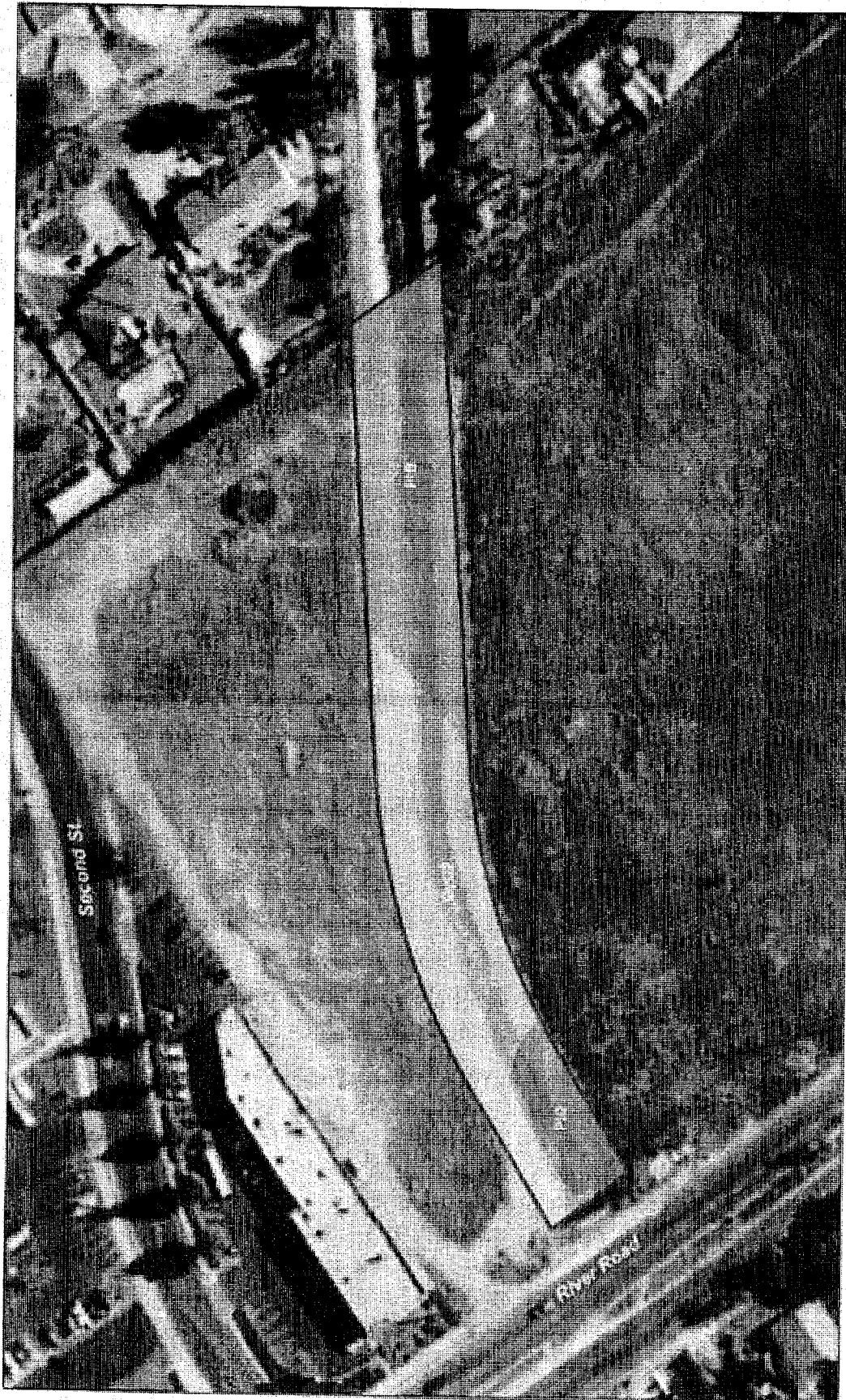


GLENN LUKOS ASSOCIATES





EXHIBIT 4

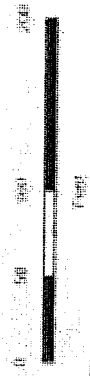
NORTH NORCO CHANNEL
IMPROVEMENT PROJECT

Site Photographs



Legend

-  Project Area
-  G/C2 - Greenfield sandy loam, 2 to 8 percent slopes, eroded
-  P1B - Placentia fine sandy loam, 0 to 5 percent slopes
-  P1C - Placentia fine sandy loam, 5 to 15 percent slopes



**NORTH NORCO CHANNEL
IMPROVEMENT PROJECT**
Soils Map



GLENN LUKOS ASSOCIATES
Exhibit 5

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Norco River Ridge Project City/County: Norco, Riverside County Sampling Date: 09/30/2008
 Applicant/Owner: Realty Bancorp Equities, Inc. State: CA Sampling Point: 01
 Investigator(s): Paul Schwartz, Justin Meyer Section, Township, Range: USGS Corona North, T3S, R7W, Section 14
 Landform (hillslope, terrace, etc.): Earthen Channel Local relief (concave, convex, none): Concave Slope (%): <1
 Subregion (LRR): LRR-C Mediterranean Region Lat: 33°54'27.65" N Long: 117°34'49.54" W Datum: NAD 83
 Soil Map Unit Name: Placentia fine sandy loam, 0 to 5 percent slopes NWM classification: N/A

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

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
1. <u>Salix goodingii</u> <input checked="" type="checkbox"/>	02	Y	OBL	Number of Dominant Species That Are OBL, FACW, or FAC: <u>7</u> (A)	
2. _____				Total Number of Dominant Species Across All Strata: <u>7</u> (B)	
3. _____					
4. _____					
<u>02</u> = Total Cover					Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
Sapling/Shrub Stratum (Plot size: <u>5</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Prevalence Index worksheet:	
1. <u>Salix goodingii</u>	35	Y	OBL	Total % Cover of: OBL species <u>65</u> x 1 = <u>65</u> FACW species <u>40</u> x 2 = <u>80</u> FAC species <u>20</u> x 3 = <u>60</u> FACU species _____ x 4 = _____ UPL species <u>10</u> x 5 = <u>50</u> Column Totals: <u>135</u> (A) <u>255</u> (B) Prevalence Index = B/A = <u>1.88</u>	
2. <u>Polygonum lapathifolium</u> <input checked="" type="checkbox"/>	30	Y	OBL		
3. <u>Conyza canadensis</u>	20	Y	FAC		
4. <u>Salsola tragus</u>	10	N	UPL		
5. _____					
<u>95</u> = Total Cover					
Herb Stratum (Plot size: <u>5</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Indicators:	
1. <u>Echinochloa crus-galli</u>	10	Y	FACW	<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)	
2. <u>Leptochloa uninerva</u> <input checked="" type="checkbox"/>	15	Y	FACW		
3. <u>Polyopogon monspeliensis</u>	15	Y	FACW		
4. _____					
5. _____					
6. _____					
7. _____					
8. _____					
<u>40</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 <input type="checkbox"/>
2. _____					
_____ = Total Cover					
% Bare Ground in Herb Stratum <u>0</u> % Cover of Biotic Crust <u>0</u>					

Remarks:
 100 percent of dominant vegetation is hydrophytic

SOIL

Sampling Point: 01

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		
0-5"	2.5/N Gley 1	100				Sand	Strong hydrogen sulfide odor
5-12"	3/10Y Gley 1	100				Clay loam	

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"/> 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 checked="" type="checkbox"/> Hydrogen Sulfide (A4)	<input checked="" type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Stratified Layers (A5) (LRR C)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> 1 cm Muck (A9) (LRR D)	<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Depressions (F8)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Vernal Pools (F9)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)		

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

Restrictive Layer (if present): Type: <u>None</u> Depth (inches): _____	Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____
--	---

Remarks:
 Strong hydrogen sulfide odor in upper 6 inches

HYDROLOGY

Wetland Hydrology Indicators:	
Primary Indicators (minimum of one required; check all that apply)	Secondary Indicators (2 or more required)
<input checked="" 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 checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)
<input type="checkbox"/> Water Marks (B1) (Nonriverine)	<input checked="" 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 <input checked="" type="checkbox"/> No _____ Depth (inches): <u>6"</u> Water Table Present? Yes _____ No _____ Depth (inches): _____ Saturation Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>0</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 Approximately 6 inches of surface water in flood control channel.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Norco River Ridge Project City/County: Norco, Riverside County Sampling Date: 09/30/2008
 Applicant/Owner: Realty Bancorp Equities, Inc. State: CA Sampling Point: 02
 Investigator(s): Paul Schwartz, Justin Meyer Section, Township, Range: USGS Corona North, T3S, R7W, Section 14
 Landform (hillslope, terrace, etc.): Earthen Channel Local relief (concave, convex, none): Concave Slope (%): <1
 Subregion (LRR): LRR-C Mediterranean Region Lat: 33°54'27.65" N Long: 117°34'49.54" W Datum: NAD 83
 Soil Map Unit Name: Placentia fine sandy loam, 0 to 5 percent slopes NWI classification: N/A

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:	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Salix goodingii</u> <input checked="" type="checkbox"/>	35	Y	OBL	
2. <u>Tamarix ramosissima</u>	02	N	FAC	
3. _____				
4. _____				
<u>37</u> = Total Cover				
Sapling/Shrub Stratum (Plot size: <u>5</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Typha domingensis</u>	02	N	OBL	
2. <u>Polygonum lapathifolium</u> <input checked="" type="checkbox"/>	20	Y	OBL	
3. <u>Conyza canadensis</u>	10	Y	FAC	
4. <u>Salsola tragus</u>	05	N	UPL	
5. _____				
<u>37</u> = Total Cover				
Herb Stratum (Plot size: <u>5</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Rorripa nasturium-aquaticum</u>	05	N	OBL	
2. <u>Leptochloa uninerva</u> <input checked="" type="checkbox"/>	15	Y	FACW	
3. <u>Polypogon monspeliensis</u>	15	Y	FACW	
4. <u>Sonchus oleraceus</u>	02	N	UPL	
5. <u>Cyperus eragrostis</u>	05	N	FACW	
6. <u>Heliotropum curvassicum</u>	05	N	OBL	
7. <u>Ammania coccinea</u>	05	N	OBL	
8. _____				
<u>47</u> = Total Cover				
Woody Vine Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____				
2. _____				
_____ = Total Cover				
% Bare Ground in Herb Stratum <u>0</u> % Cover of Biotic Crust <u>0</u>				

Dominance Test worksheet:
 Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)
 Total Number of Dominant Species Across All Strata: 5 (B)
 Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>72</u>	x 1 = <u>72</u>
FACW species <u>30</u>	x 2 = <u>60</u>
FAC species <u>12</u>	x 3 = <u>36</u>
FACU species _____	x 4 = _____
UPL species <u>07</u>	x 5 = <u>35</u>
Column Totals: <u>91</u> (A)	<u>275</u> (B)
Prevalence Index = B/A = <u>2.23</u>	

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 _____

Remarks:
 100 percent of dominant vegetation is hydrophytic

SOIL

Sampling Point: 02

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)									
Depth (inches)	Matrix		Redox Features				Texture	Remarks	
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²			
0-1"	2.5/N Gley 1	100					Muck	Strong hydrogen sulfide odor	
1-12+"	2.5/N Gley 1	100					Sand	Strong hydrogen sulfide odor	
¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ² Location: PL=Pore Lining, M=Matrix.									
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)					Indicators for Problematic Hydric Soils ³ :				
<input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input checked="" type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) (LRR C) <input type="checkbox"/> 1 cm Muck (A9) (LRR D) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> Sandy Gleyed Matrix (S4)			<input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input checked="" 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)			<input type="checkbox"/> 1 cm Muck (A9) (LRR C) <input type="checkbox"/> 2 cm Muck (A10) (LRR B) <input type="checkbox"/> Reduced Vertic (F18) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> Other (Explain in Remarks)			
Restrictive Layer (if present): Type: <u>None</u> Depth (inches): _____					³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.				
Remarks: Strong hydrogen sulfide odor in upper 6 inches					Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>				

HYDROLOGY

Wetland Hydrology Indicators:		
Primary Indicators (minimum of one required; check all that apply)	Secondary Indicators (2 or more required)	
<input checked="" type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) (Nonriverine) <input type="checkbox"/> Sediment Deposits (B2) (Nonriverine) <input type="checkbox"/> Drift Deposits (B3) (Nonriverine) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Salt Crust (B11) <input type="checkbox"/> Biotic Crust (B12) <input type="checkbox"/> Aquatic Invertebrates (B13) <input checked="" 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)	<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 <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>6"</u>	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Water Table Present? Yes <input type="checkbox"/> No <input type="checkbox"/> Depth (inches): _____		
Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0</u> (includes capillary fringe)		
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks: Approximately 6 inches of surface water in flood control channel.		

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: City of Norco River Ridge Project City/County: Norco, Riverside County Sampling Date: 09/30/2008
 Applicant/Owner: The City of Norco State: CA Sampling Point: 03
 Investigator(s): Paul Schwartz, Justin Meyer Section, Township, Range: USGS Corona North, T3S, R7W, Section 14
 Landform (hillslope, terrace, etc.): Earthen Channel Local relief (concave, convex, none): Concave Slope (%): <1
 Subregion (LRR): LRR-C Mediterranean Region Lat: 33°54'27.65" N Long: 117°34'49.54" W Datum: NAD 83
 Soil Map Unit Name: Greenfield sandy Loam, 2 to 8 percent slopes, eroded NWI classification: N/A

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

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Salix goodingii</u> <input checked="" type="checkbox"/>	25	Y	OBL	
2. _____				
3. _____				
4. _____				
				25 = Total Cover
Sapling/Shrub Stratum (Plot size: <u>5</u>)				
1. <u>Typha domingensis</u> <input checked="" type="checkbox"/>	35	Y	OBL	
2. <u>Polygonum lapathifolium</u> <input checked="" type="checkbox"/>	20	Y	OBL	
3. <u>Conyza canadensis</u>	20	Y	FAC	
4. <u>Salsola tragus</u>	05	N	UPL	
5. _____				
				80 = Total Cover
Herb Stratum (Plot size: <u>5</u>)				
1. <u>Echinochloa crus-galli</u>	02	Y	FACW	
2. <u>Cyperus eragrostis</u> <input checked="" type="checkbox"/>	05	N	FACW	
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
				07 = 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>				
Remarks:				
100 percent of dominant vegetation is hydrophytic				

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>80</u>	x 1 = <u>80</u>
FACW species <u>07</u>	x 2 = <u>14</u>
FAC species <u>20</u>	x 3 = <u>60</u>
FACU species _____	x 4 = _____
UPL species <u>05</u>	x 5 = <u>25</u>
Column Totals: <u>112</u> (A)	<u>179</u> (B)
Prevalence Index = B/A = <u>1.59</u>	

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: 03

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-15"	2.5/N Gley 1	100					Muck	Strong hydrogen sulfide odor

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

Restrictive Layer (if present): Type: <u>None</u> Depth (inches): _____	Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Remarks:
 Strong hydrogen sulfide odor in upper 6 inches

HYDROLOGY

Wetland Hydrology Indicators:		
Primary Indicators (minimum of one required; check all that apply) <input checked="" type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) (Nonriverine) <input type="checkbox"/> Sediment Deposits (B2) (Nonriverine) <input type="checkbox"/> Drift Deposits (B3) (Nonriverine) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Salt Crust (B11) <input type="checkbox"/> Biotic Crust (B12) <input type="checkbox"/> Aquatic Invertebrates (B13) <input checked="" 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)	Secondary Indicators (2 or more required) <input type="checkbox"/> Water Marks (B1) (Riverine) <input type="checkbox"/> Sediment Deposits (B2) (Riverine) <input type="checkbox"/> Drift Deposits (B3) (Riverine) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> 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 <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>4"</u> Water Table Present? Yes <input type="checkbox"/> No <input type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 Approximately 4 inches of surface water in flood control channel.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: City of Norco River Ridge Project City/County: Norco, Riverside County Sampling Date: 09/30/2008
 Applicant/Owner: The City of Norco State: CA Sampling Point: 04
 Investigator(s): Paul Schwartz, Justin Meyer Section, Township, Range: USGS Corona North, T3S, R7W, Section 14
 Landform (hillslope, terrace, etc.): Earthen Channel Local relief (concave, convex, none): Concave Slope (%): <1
 Subregion (LRR): LRR-C Mediterranean Region Lat: 33°54'27.65" N Long: 117°34'49.54" W Datum: NAD 83
 Soil Map Unit Name: Placentia fine sandy loam, 5 to 15 percent slopes NWI classification: N/A

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

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <u>Salix goodingii</u> <input checked="" type="checkbox"/>	45	Y	OBL	Number of Dominant Species That Are OBL, FACW, or FAC: <u>5</u> (A) Total Number of Dominant Species Across All Strata: <u>6</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>83.3%</u> (A/B)
2. <u>Tamarix ramosissima</u>	10	N	FAC	
3. <u>Washingtonia filifera</u>	10	N	FACW	
<u>65</u> = Total Cover				Prevalence Index worksheet: Total % Cover of: <u>60</u> Multiply by: <u>3</u> OBL species <u>60</u> x 1 = <u>60</u> FACW species <u>30</u> x 2 = <u>60</u> FAC species <u>40</u> x 3 = <u>120</u> FACU species <u>15</u> x 4 = <u>60</u> UPL species <u> </u> x 5 = <u> </u> Column Totals: <u>145</u> (A) <u>300</u> (B) Prevalence Index = B/A = <u>2.07</u>
<u>60</u> = Total Cover				
Sapling/Shrub Stratum (Plot size: <u>5</u>)				
1. <u>Tamarix ramosissima</u>	10	N	FAC	
2. <u>Polygonum lapathifolium</u> <input checked="" type="checkbox"/>	20	Y	OBL	
3. <u>Conyza canadensis</u>	15	Y	FAC	
4. <u>Cirsium vulgare</u>	15	Y	FACU	
<u>60</u> = Total Cover				
Herb Stratum (Plot size: <u>5</u>)				
1. <u>Echinochloa crus-galli</u>	10	Y	FACW	
2. <u>Leptochloa uninerva</u> <input checked="" type="checkbox"/>	10	Y	FACW	
<u>20</u> = Total Cover				
Woody Vine Stratum (Plot size: <u> </u>)				
1. <u> </u>				
2. <u> </u>				
<u> </u> = Total Cover				
% Bare Ground in Herb Stratum <u>0</u> % Cover of Biotic Crust <u>0</u>				
Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>				
Remarks: 100 percent of dominant vegetation is hydrophytic				

SOIL

Sampling Point: 04

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-6"	2.5Y 4/2	60	10YR 3/6	40	C	PL	Silty Clay	Strong hydrogen sulfide odor

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: None
Depth (inches): _____

Hydric Soil Present? Yes No

Remarks:

Strong hydrogen sulfide odor in upper 6 inches

HYDROLOGY

Wetland Hydrology Indicators:

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

Secondary Indicators (2 or more required)

- | | | |
|--|--|--|
| <input checked="" type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Salt Crust (B11) | <input type="checkbox"/> Water Marks (B1) (Riverine) |
| <input type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Biotic Crust (B12) | <input type="checkbox"/> Sediment Deposits (B2) (Riverine) |
| <input checked="" type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Aquatic Invertebrates (B13) | <input type="checkbox"/> Drift Deposits (B3) (Riverine) |
| <input type="checkbox"/> Water Marks (B1) (Nonriverine) | <input checked="" 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 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 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 No Depth (inches): 12"
 Water Table Present? Yes No Depth (inches): _____
 Saturation Present? Yes No Depth (inches): 0
 (includes capillary fringe)

Wetland Hydrology Present? Yes No

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

Remarks:

Approximately 12 inches of surface water in flood control channel.

Appendix B

U.S. Army Corps of Engineers Preliminary Jurisdictional Determination Form

PRELIMINARY JURISDICTIONAL DETERMINATION FORM

This preliminary JD finds that there "may be" waters of the United States on the subject project site, and identifies all aquatic features on the site that could be affected by the proposed activity, based on the following information:

District Office	Los Angeles District	File/ORM #	PJD Date:
State	CA		
City/County	Norco/Riverside		
Nearest Waterbody:	North Norco Channel		
Location: TRS, Lat/Long or UTM:	33.907735 North Latitude -117.580532 West Longitude		
Name/ Address of Person Requesting PJD	Mr. Douglas Jacobsen Realty Bancorp Equities, Inc. 21800 Burbank Boulevard, Suite 330 Woodland Hills, California 91367		

Identify (Estimate) Amount of Waters in the Review Area:	Name of Any Water Bodies on the Site Identified as
Non-Wetland Waters: <input type="checkbox"/> 35 linear ft <input type="checkbox"/> 12 width <input type="checkbox"/> 0.02 acres <input type="checkbox"/> Perennial Stream Flow:	Tidal: _____ Section 10 Waters: Non-Tidal: _____
Wetlands: <input type="checkbox"/> 0.20 acre(s) Cowardin Class: <input type="checkbox"/> Palustrine, emergent	<input type="checkbox"/> Office (Desk) Determination <input type="checkbox"/> Field Determination: Date of Field Trip: _____

SUPPORTING DATA: Data reviewed for preliminary JD (check all that apply - checked items should be included in case file and, where checked and requested, appropriately reference sources below):

- Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant: See Attached Maps
- Data sheets prepared/submitted by or on behalf of the applicant/consultant.
 - Office concurs with data sheets/delineation report.
 - Office does not concur with data sheets/delineation report.
- Data sheets prepared by the Corps _____
- Corps navigable waters' study: _____
- U.S. Geological Survey Hydrologic Atlas:
 - USGS NHD data.
 - USGS 8 and 12 digit HUC maps.
- U.S. Geological Survey map(s). Cite quad name: Corona North, California
- USDA Natural Resources Conservation Service Soil Survey. Citation: http://websoilsurvey.nrcs.usda.gov/app/WebSoilsSurvey
- National wetlands inventory map(s). Cite name: http://www.fws.gov/wetlands/Data/Mapper.html
- State/Local wetland inventory map(s): _____
- FEMA/FIRM maps: 060256-0003
- 100-year Floodplain Elevation is: 574 MSL
- Photographs: Aerial (Name & Date): Google Earth 2009
 - Other (Name & Date): Site Photographs, 10/11/07 and 09/11/08
- Previous determination(s). File no. and date of response letter: _____
- Other information (please specify): _____

IMPORTANT NOTE: The information recorded on this form has not necessarily been verified by the Corps and should not be relied upon for later jurisdictional determinations.

Signature and Date of Regulatory Project Manager (REQUIRED)	Signature and Date of Person Requesting Preliminary JD (REQUIRED, unless obtaining the signature is impracticable)
--	---

EXPLANATION OF PRELIMINARY AND APPROVED JURISDICTIONAL DETERMINATIONS:

1. The Corps of Engineers believes that there may be jurisdictional waters of the United States on the subject site, and the permit applicant or other affected party who requested this preliminary JD is hereby advised of his or her option to request and obtain an approved jurisdictional determination (JD) for that site. Nevertheless, the permit applicant or other person who requested this preliminary JD has declined to exercise the option to obtain an approved JD in this instance and at this time.

2. In any circumstance where a permit applicant obtains an individual permit, or a Nationwide General Permit (NWP) or other general permit verification requiring "preconstruction notification" (PCN), or requests verification for a non-reporting NWP or other general permit, and the permit applicant has not requested an approved JD for the activity, the permit applicant is hereby made aware of the following: (1) the permit applicant has elected to seek a permit authorization based on a preliminary JD, which does not make an official determination of jurisdictional waters; (2) that the applicant has the option to request an approved JD before accepting the terms and conditions of the permit authorization, and that basing a permit authorization on an approved JD could possibly result in less compensatory mitigation being required or different special conditions; (3) that the applicant has the right to request an individual permit rather than accepting the terms and conditions of the NWP or other general permit authorization; (4) that the applicant can accept a permit authorization and thereby agree to comply with all the terms and conditions of that permit, including whatever mitigation requirements the Corps has determined to be necessary; (5) that undertaking any activity in reliance upon the subject permit authorization without requesting an approved JD constitutes the applicant's acceptance of the use of the preliminary JD, but that either form of JD will be processed as soon as is practicable; (6) accepting a permit authorization (e.g., signing a proffered individual permit) or undertaking any activity in reliance on any form of Corps permit authorization based on a preliminary JD constitutes agreement that all wetlands and other water bodies on the site affected in any way by that activity are jurisdictional waters of the United States, and precludes any challenge to such jurisdiction in any administrative or judicial compliance or enforcement action, or in any administrative appeal or in any Federal court; and (7) whether the applicant elects to use either an approved JD or a preliminary JD, that JD will be processed as soon as is practicable. Further, an approved JD, a proffered individual permit (and all terms and conditions contained therein), or individual permit denial can be administratively appealed pursuant to 33 C.F.R. Part 331, and that in any administrative appeal, jurisdictional issues can be raised (see 33 C.F.R. 331.5(a)(2)). If, during that administrative appeal, it becomes necessary to make an official determination whether CWA jurisdiction exists over a site, or to provide an official delineation of jurisdictional waters on the site, the Corps will provide an approved JD to accomplish that result, as soon as is practicable.

PRELIMINARY JURISDICTIONAL DETERMINATION FORM

This preliminary JD finds that there "may be" waters of the United States on the subject project site, and identifies all aquatic features on the site that could be affected by the proposed activity, based on the following information:

Appendix A - Sites

District Office Los Angeles District File/ORM # PJD Date:
State CA City/County Norco/Riverside Person Requesting PJD Douglas Jacobsen, RBE, Inc.

Site Number	Latitude	Longitude	Cowardin Class	Est. Amount of Aquatic Resource in Review Area	Class of Aquatic Resource
Non-Wetland	33.907735 N	-117.580532 W	Riverine	0.02 Acre	Non-Section 10 non-wetland
Wetland	33.907735 N	-117.580532 W	Palustrine, emergent	0.20 Acre	Non-Section 10 wetland

Notes:

CALIFORNIA ENVIRONMENTAL QUALITY ACT
MITIGATED NEGATIVE DECLARATION
CITY OF NORCO, CALIFORNIA

- 1. **NAME OF PROPONENT:** SSOE, Inc.
- 2. **PROJECT TYPE:** Site Plan 2009-02, Conditional Use Permits 2008-02 and 2008-03, and Tentative Parcel Map 24525
- 3. **PROJECT LOCATION:** Northeast corner of River Road and Second Street, Norco, Riverside County
- 4. **PROJECT DESCRIPTION:** New retail center with drive-up pharmacy, drive-up bank, drive-up coffee house, drive-up fast food, grocery store and in-line shops, alcohol consumption with the commercial development, and subdivision of 14.33 acres into eight parcels, two of which are for sale to the Norco Redevelopment Agency for future development.
- 5. **ADDRESS AND PHONE NUMBER OF PROPONENT:** 192 Technology Drive, Suite Q, Irvine, CA 92618
- 6. **DATE INITIAL STUDY WAS SUBMITTED:** April 16, 2008
- 7. **AGENCY REQUIRING ENVIRONMENTAL REVIEW:** City of Norco
- 8. **NAME OF PROPOSAL, IF APPLICABLE:** n/a
- 9. **DATE RECEIVED BY LEAD AGENCY:** April 16, 2008

A. FINDING:

It is the opinion of the Norco Planning Department that this project will have no significant impact upon the environment within the meaning of the California Environmental Quality Act of 1970 as amended.

B. REASONS:

- 1. This project is not in conflict with environmental plans and goals that have been adopted by the community where the project is to be located, and is in conformity with the Norco General Plan.
- 2. This project will not have a substantial or demonstrable negative aesthetic effect.
- 3. This project will not have any effects on rare or endangered species of animal or plants, nor is this site inhabited by such animals or plant life.
- 4. This project will not cause any interference with the movement of any resident or migratory fish or wildlife species.
- 5. This project does not breach any published national, state, or local standards relating to solid waste or litter control.
- 6. This project will not result in any effect on air or water quality, or on ambient noise levels for adjoining areas.
- 7. This project will not contaminate a public water supply system or adversely affect underground water.
- 8. This project cannot cause flooding, erosion, or siltation.
- 9. This project will not expose people or structures to any geological hazards.
- 10. This project will not result in a dislocation of people.
- 11. This project does not appear to generate any environmental or public controversy.
- 12. This project will have no effects on the environment as stated under Section 15082 of the California Quality Act of 1970 as amended.

DATE ADOPTED: July 16, 2008

DATE EFFECTIVE July 16, 2008

SIGNATURE: 

DATE: July 21, 2008

DATE PUBLISHED: June 19, 2008

NOTICE OF DETERMINATION

To: Office of Planning and Research
P.O. BOX 3044
Sacramento, CA 95812-3044

From: City of Norco
2780 Clark Avenue
Norco, CA 92860

County Clerk
County of Riverside
P.O. BOX 751
Riverside, CA 92502-0751

JUL 22 2008

LARRY W. WARD, CLERK

By *[Signature]* M. Meyer
Deputy

Filing of Notice of Determination in compliance with Section 21108 or 21152 of the Public Resources Code.

Project Title: Site Plan 2008-02, Conditional Use Permit 2008-02 and 2008-03 and TPM 24525 (SSOE, Inc.)

n/a	City of Norco	(951) 270-5681
State Clearinghouse Number (If submitted to Clearinghouse)	Lead Agency Contact Person	Area Code/Telephone/Extension

Name, address and phone number of project applicant: Doug Jacobsen, 192 Technology Drive, Suite Q, Irvine, California 92618. (949) 727-9293

Project Location (include County): Northeast corner of River Road and Second Street, Norco, Riverside County

Project Description: New retail center with drive-up pharmacy, drive-up bank, drive-up coffee house, drive-up fast food, grocery store and in-line shops, alcohol consumption with the commercial development, and subdivision of 14.33 acres into eight parcels, two of which are for sale to the Norco Redevelopment Agency for future development.

This is to advise that the City of Norco (Lead Agency) has approved the above described project on July 16, 2008 and has made the following determinations regarding the above described project:

1. The project (will will not) have a significant effect on the environment.
2. An Environmental Impact Report was prepared for this project pursuant to the provisions of CEQA.
 A Negative Declaration was prepared for this project pursuant to the provisions of CEQA.
3. Mitigation measures (were were not) made a condition of the approval of the project.
4. Statement of Overriding Considerations (was was not) adopted for this project.
5. Findings (were were not) made pursuant to the provisions of CEQA.

This is to certify that the record of project approval is available to the general public at: The City of Norco, 2870 Clark Avenue, Norco, CA 92860.

[Signature] 7-16-08 Senior Planner
 Signature Date Title
 COUNTY CLERK
 Declaration/Ntc Determination
 Filed per P.R.C. 21152
 POSTED

Date received for filing at OPR:
/69770

JUL 22 2008

Removed: _____
By: _____ Dep:
County of Riverside, State of California

STATE OF CALIFORNIA - THE RESOURCES AGENCY
DEPARTMENT OF FISH AND GAME
ENVIRONMENTAL FILING FEE CASH RECEIPT

Receipt # 200800762

Lead Agency: CITY OF NORCO Date: 07/22/2008

County Agency of Filing: Riverside Document No: 200800762

Project Title: SITE PLAN 2008-02; CUP 2008-02; 2008-03; TPM 24525


Project Applicant Name: DOUG JACOBSEN Phone Number: 949 727-9293

Project Applicant Address: 192 TECHNOLOGY DRIVE, SUITE Q IRVINE CA 92618

Project Applicant: Private Entity

CHECK APPLICABLE FEES:

- Environmental Impact Report _____
 - Negative Declaration 1876.75
 - Application Fee Water Diversion (State Water Resources Control Board Only) _____
 - Project Subject to Certified Regulatory Programs _____
 - County Administration Fee \$64.00
 - Project that is exempt from fees (DeMinimis Exemption)
 - Project that is exempt from fees (Notice of Exemption)
- Total Received** 1940.75

Signature and title of person receiving payment: 

Notes: