

APPENDIX H
BIOLOGICAL RESOURCES FORMS

TABLE OF CONTENTS

Appendix H1	Wetland Determination Forms
Appendix H2	Natural Diversity Data Base Survey Forms

APPENDIX H1
WETLAND DETERMINATION FORMS

2001 WETLAND DELINEATION FORMS

Routine Wetland Determination

DATA FORM 1 (Revised)

Wetland Delineation Manual or 1987 Corps Wetland Delineation Manual)

Project/Site: <i>Reliant Colusa</i>	Date: <i>3-26-01</i>
Applicant/owner:	County: <i>Colusa</i>
Investigator(s): <i>S. Leach, J. Stead, C. Lu</i>	State: <i>CA</i>
	S/T/R:

Do normal circumstances exist on the site? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Community ID:
Is the site significantly disturbed (atypical situation)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Transect ID:
Is the area a potential problem area? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Plot ID: <i>A-1</i>
Explanation of atypical or problem area: <i>seasonal hydrology</i>	

VEGETATION (For *strata, indicate T = tree; S = shrub; H = herb; V = vine)

Dominant Plant Species	*Stratum	% cover	Indicator	Dominant Plant Species	*Stratum	% cover	Indicator
<i>d Brassica nigra</i>	<i>H</i>	<i>15%</i>	<i>NI</i>				
<i>Geranium dissectum</i>	<i>H</i>	<i>5%</i>	<i>NI</i>				
<i>d Hordeum marinum ssp.</i>	<i>H</i>	<i>40%</i>	<i>FAC</i>				
<i>d Senecio vulgaris</i>	<i>H</i>	<i>10%</i>	<i>NI*</i>				
<i>Medicago polymorpha</i>	<i>H</i>	<i>5%</i>	<i>FAC</i>				
<i>Capsella bursa-pastoris</i>	<i>H</i>	<i>1%</i>	<i>FAC-</i>				

HYDROPHYTIC VEGETATION INDICATORS:

% of dominants OBL, FACW, & FAC: *33%*

Check all indicators that apply and explain below:

- | | |
|--|---|
| <input type="checkbox"/> Visual observation of plant species growing in areas of prolonged inundation/saturation | <input type="checkbox"/> Physiological/reproductive adaptations |
| <input type="checkbox"/> Morphological adaptations | <input type="checkbox"/> Wetland plant database |
| <input checked="" type="checkbox"/> Technical Literature | <input type="checkbox"/> Personal knowledge of regional plant communities |
| | <input type="checkbox"/> Other (explain) |

Hydrophytic vegetation present? Yes No

Rationale for decision/Remarks:

HYDROLOGY

Is it the growing season? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Water Marks: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Sediment Deposits: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Based on: <input type="checkbox"/> Soil temp (record temp) <input type="checkbox"/> Other (explain)	Drift Lines: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Drainage Patterns: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Depth of inundation: <i>dry</i> inches	Oxidized Root (live roots) Channels <12in.: <input type="checkbox"/> Yes <input type="checkbox"/> No	Local Soil Survey: <input type="checkbox"/> Yes <input type="checkbox"/> No
Depth to free water in pit: inches	FAC Neutral: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Water-stained Leaves: <input type="checkbox"/> Yes <input type="checkbox"/> No
Depth to saturated soil: inches		

Check all that apply & explain below:

- Stream, lake or gage data
- Aerial photographs
- Other

Other (explain):

Cattle hoof prints 3-5" deep indicate seasonal saturation.

Wetland hydrology present? Yes No

Rationale for decision/remarks:

SOILS

Map Unit Name (Series and Phase) :

Drainage Class

Field observations confirm mapped type? Yes No

Taxonomy (subgroup)

Profile Description

Depth (inches)	Horizon	Matrix color (Munsell moist)	Mottle colors (Munsell moist)	Mottle abundance size and contrast	Texture, concretions, structure, etc.	Drawing of soil profile (match description)
0-6"+	A	10YR 2/2	none	none	silty-clay	

Hydric Soil Indicators: (check all that apply)

- Histosol
- Histic Epipedon
- Sulfidic Odor
- Aquic Moisture Regime
- Reducing Conditions
- Gleyed or Low-Chroma (=1) matrix
- Matrix chroma ≤ 2 with mottles
- Mg or Fe Concretions
- High Organic Content in Surface Layer of Sandy Soils
- Organic Streaking in Sandy Soils
- Listed on National/Local Hydric Soils List
- Other (explain in remarks)

Hydric soils present? Yes No

Rationale for decision/Remarks:

Wetland Determination

- Hydrophytic vegetation present? Yes No
- Hydric soils present? Yes No
- Wetland hydrology present? Yes No
- Is the sampling point within a wetland? Yes No

Rationale/Remarks:

NOTES:

Routine Wetland Determination

DATA FORM 1 (Revised)

Wetland Delineation Manual or 1987 Corps Wetland Delineation Manual)

Project/Site: <u>Deliant Energy</u>	Date: <u>3/26/01</u>
Applicant/owner:	County: <u>Colusa</u>
Investigator(s): <u>C. W. J. Stead, S. Leach</u>	State: <u>CA</u>
	S/T/R:

Do normal circumstances exist on the site? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Community ID: <u>A-2</u>
Is the site significantly disturbed (atypical situation)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Transect ID:
Is the area a potential problem area? <input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Plot ID:
Explanation of atypical or problem area: <u>grazing area, seasonal hydrology</u>	

VEGETATION (For *strata, indicate T = tree; S = shrub; H = herb; V = vine) ^{hydrology}							
Dominant Plant Species	*Stratum	% cover	Indicator	Dominant Plant Species	*Stratum	% cover	Indicator
<u>Hordeum maritimum</u>	<u>H</u>	<u>85</u>	<u>FAC</u>				
<u>Solidago</u>		<u> </u>					
<u>Genetio vulgaris</u>	<u>H</u>	<u>10</u>	<u>NI</u>				
<u>Melilotus polymorpha</u>	<u>H</u>	<u>>5</u>	<u>NL</u>				
<u>Shepard's purse</u> <small>Capcella bursa-pastoris</small>	<u>H</u>	<u>>5</u>	<u>FAC-</u>				
<u>Geranium dissectum</u>	<u>H</u>	<u>>5</u>	<u>NI</u>				

HYDROPHYTIC VEGETATION INDICATORS:

% of dominants OBL, FACW, & FAC: 85

Check all indicators that apply and explain below:

<input type="checkbox"/> Visual observation of plant species growing in areas of prolonged inundation/saturation	<input type="checkbox"/> Physiological/reproductive adaptations
<input type="checkbox"/> Morphological adaptations	<input type="checkbox"/> Wetland plant database
<input checked="" type="checkbox"/> Technical Literature	<input type="checkbox"/> Personal knowledge of regional plant communities
	<input type="checkbox"/> Other (explain)

Hydrophytic vegetation present? Yes No

Rationale for decision/Remarks:

HYDROLOGY

Is it the growing season? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Water Marks: <input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Sediment Deposits: <input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Based on: <input type="checkbox"/> Soil temp (record temp) <input type="checkbox"/> Other (explain)	Drift Lines: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Drainage Patterns: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Depth of inundation: <u>0</u> inches	Oxidized Root (live roots) Channels <12in.: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Local Soil Survey: <input type="checkbox"/> Yes <input type="checkbox"/> No
Depth to free water in pit: <u>0</u> inches	FAC Neutral: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Water-stained Leaves: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Depth to saturated soil: <u>0</u> inches		

Check all that apply & explain below:

<input type="checkbox"/> Stream, lake or gage data	Other (explain): <u>The site is at the bottom of a swale that collects water. The site is not very pronounced (cattle hoofprints 3"-5" deep).</u>
<input type="checkbox"/> Aerial photographs	
<input type="checkbox"/> Other	

Wetland hydrology present? Yes No

Rationale for decision/remarks:

SOILS

Map Unit Name (Series and Phase):

Cupay clay loam

Taxonomy (subgroup)

0-10% slope

Drainage Class

Field observations confirm mapped type? Yes No

Profile Description

Depth (inches)	Horizon	Matrix color (Munsell moist)	Mottle colors (Munsell moist)	Mottle abundance size and contrast	Texture, concretions, structure, etc.	Drawing of soil profile (match description)
<i>12"</i>	<i>A</i>	<i>10YR 3/2</i>			<i>barely noticeable oxidized root channel</i>	

Hydric Soil Indicators: (check all that apply)

- Histosol
- Histic Epipedon
- Sulfidic Odor
- Aquic Moisture Regime
- Reducing Conditions
- Gleyed or Low-Chroma (=1) matrix
- Matrix chroma ≤ 2 with mottles
- Mg or Fe Concretions
- High Organic Content in Surface Layer of Sandy Soils
- Organic Streaking in Sandy Soils
- Listed on National/Local Hydric Soils List
- Other (explain in remarks)

Hydric soils present? Yes No

Rationale for decision/Remarks:

Wetland Determination

- Hydrophytic vegetation present? Yes No
- Hydric soils present? Yes No
- Wetland hydrology present? Yes No
- Is the sampling point within a wetland? Yes No

Rationale/Remarks:

NOTES:

Routine Wetland Determination

DATA FORM 1 (Revised)

Wetland Delineation Manual or 1987 Corps Wetland Delineation Manual)

Project/Site: <u>Pellant - Colusa</u> Applicant/owner: Investigator(s): <u>S. Leach, J. Stead, C. Lu</u>	Date: <u>3-26-01</u> County: <u>Colusa</u> State: <u>CA</u> S/T/R:
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Do normal circumstances exist on the site? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Is the site significantly disturbed (atypical situation)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Is the area a potential problem area? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Explanation of atypical or problem area: <u>Seasonal hydrology</u>	Community ID: Transect ID: Plot ID: <u>B-1</u>
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VEGETATION (For *strata, indicate T = tree; S = shrub; H = herb; V = vine)

Dominant Plant Species	*Stratum	% cover	Indicator	Dominant Plant Species	*Stratum	% cover	Indicator
<u>Hordeum marinum</u>	<u>H</u>	<u>70%</u>	<u>FAC</u>				
<u>Lepidium nitidum</u>	<u>H</u>	<u>3%</u>	<u>NI</u>				
<u>Cerastium</u>	<u>H</u>	<u>5%</u>	<u>FAC</u>				
<u>Plantago elongata</u>	<u>H</u>	<u>3%</u>	<u>FACW</u>				

HYDROPHYTIC VEGETATION INDICATORS:

% of dominants OBL, FACW, & FAC: 93%

Check all indicators that apply and explain below:

- | | |
|--|---|
| <input type="checkbox"/> Visual observation of plant species growing in areas of prolonged inundation/saturation | <input type="checkbox"/> Physiological/reproductive adaptations |
| <input type="checkbox"/> Morphological adaptations | <input type="checkbox"/> Wetland plant database |
| <input checked="" type="checkbox"/> Technical Literature | <input type="checkbox"/> Personal knowledge of regional plant communities |
| | <input type="checkbox"/> Other (explain) |

Hydrophytic vegetation present? Yes No

Rationale for decision/Remarks:

HYDROLOGY

Is it the growing season? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Water Marks: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No on	Sediment Deposits: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Based on: <input type="checkbox"/> Soil temp (record temp) <input type="checkbox"/> Other (explain)	Drift Lines: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Drainage Patterns: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Depth of inundation: <u>none</u> inches	Oxidized Root (live roots) Channels <12in.: <input type="checkbox"/> Yes <input type="checkbox"/> No	Local Soil Survey: <input type="checkbox"/> Yes <input type="checkbox"/> No
Depth to free water in pit: _____ inches	FAC Neutral: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Water-stained Leaves: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Depth to saturated soil: _____ inches	Other (explain):	

Check all that apply & explain below:

- Stream, lake or gage data
- Aerial photographs
- Other

Wetland hydrology present? Yes No

Rationale for decision/remarks: sample point is located in shallow, low-gradient swale.

SOILS

Map Unit Name (Series and Phase) :

Drainage Class

Taxonomy (subgroup)

Field observations confirm mapped type? Yes No**Profile Description**

Depth (inches)	Horizon	Matrix color (Munsell moist)	Mottle colors (Munsell moist)	Mottle abundance size and contrast	Texture, concretions, structure, etc.	Drawing of soil profile (match description)
0-9"	A	10YR 2/2	none	none	Silty-clay	

Hydric Soil Indicators: (check all that apply)

- | | |
|---|---|
| <input type="checkbox"/> Histosol | <input type="checkbox"/> Matrix chroma \leq 2 with mottles |
| <input type="checkbox"/> Histic Epipedon | <input type="checkbox"/> Mg or Fe Concretions |
| <input type="checkbox"/> Sulfidic Odor | <input type="checkbox"/> High Organic Content in Surface Layer of Sandy Soils |
| <input type="checkbox"/> Aquic Moisture Regime | <input type="checkbox"/> Organic Streaking in Sandy Soils |
| <input type="checkbox"/> Reducing Conditions | <input type="checkbox"/> Listed on National/Local Hydric Soils List |
| <input type="checkbox"/> Gleyed or Low-Chroma (=1) matrix | <input type="checkbox"/> Other (explain in remarks) |

Hydric soils present? Yes No

Rationale for decision/Remarks:

Wetland Determination

- Hydrophytic vegetation present? Yes No
- Hydric soils present? Yes No
- Wetland hydrology present? Yes No
- Is the sampling point within a wetland? Yes No

Rationale/Remarks:

NOTES:

Revised 4/97

Routine Wetland Determination

DATA FORM 1 (Revised)

Wetland Delineation Manual or 1987 Corps Wetland Delineation Manual)

Project/Site: <i>Colusa - reliant</i> Applicant/owner: Investigator(s): <i>S. Lead, C. Lu, J. Stegd</i>	Date: <i>3-26-01</i> County: <i>Colusa</i> State: <i>CA</i> S/T/R:
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Do normal circumstances exist on the site? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Is the site significantly disturbed (atypical situation)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Is the area a potential problem area? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Explanation of atypical or problem area: <i>sens. hydrology</i>	Community ID: Transect ID: Plot ID: <i>B-2</i>
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VEGETATION (For *strata, indicate T = tree; S = shrub; H = herb; V = vine)							
Dominant Plant Species	*Stratum	% cover	Indicator	Dominant Plant Species	*Stratum	% cover	Indicator
<i>Hordeum marinum</i>		<i>50%</i>	<i>H</i>	<i>FAC</i>			
<i>Brassica nigra</i>		<i>30%</i>	<i>H</i>	<i>NL</i>			
<i>Senatio vulgaris</i>		<i>19%</i>	<i>H</i>	<i>NL</i>			
<i>Geranium dissectum</i>		<i>1%</i>	<i>H</i>	<i>MI</i>			

HYDROPHYTIC VEGETATION INDICATORS:

% of dominants OBL, FACW, & FAC: *50*

Check all indicators that apply and explain below:

<input type="checkbox"/> Visual observation of plant species growing in areas of prolonged inundation/saturation	<input type="checkbox"/> Physiological/reproductive adaptations
<input type="checkbox"/> Morphological adaptations	<input type="checkbox"/> Wetland plant database
<input checked="" type="checkbox"/> Technical Literature	<input type="checkbox"/> Personal knowledge of regional plant communities
	<input type="checkbox"/> Other (explain)

Hydrophytic vegetation present? Yes No

Rationale for decision/Remarks:

HYDROLOGY

Is it the growing season? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Water Marks: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No on	Sediment Deposits: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Based on: <input type="checkbox"/> Soil temp (record temp) <input type="checkbox"/> Other (explain)	Drift Lines: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Drainage Patterns: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Depth of inundation: <i>∅</i> inches	Oxidized Root (live roots) Channels <12in: <input type="checkbox"/> Yes <input type="checkbox"/> No	Local Soil Survey: <input type="checkbox"/> Yes <input type="checkbox"/> No
Depth to free water in pit: <i>∅</i> inches	FAC Neutral: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Water-stained Leaves: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Depth to saturated soil: <i>∅</i> inches		

Check all that apply & explain below:

<input type="checkbox"/> Stream, lake or gage data <input type="checkbox"/> Aerial photographs <input type="checkbox"/> Other	Other (explain): <i>Slight depression, hoof prints 2-3"</i>
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Wetland hydrology present? Yes No

Rationale for decision/remarks:

SOILS

Map Unit Name (Series and Phase) :

Drainage Class

Field observations confirm mapped type? Yes No

Taxonomy (subgroup)

Profile Description

Depth (inches)	Horizon	Matrix color (Munsell moist)	Mottle colors (Munsell moist)	Mottle abundance size and contrast	Texture, concretions, structure, etc.	Drawing of soil profile (match description)
0-6"	A	10YR 3/2	none	—	silty clay	

Hydric Soil Indicators: (check all that apply)

- Histosol
- Histic Epipedon
- Sulfidic Odor
- Aquic Moisture Regime
- Reducing Conditions
- Gleyed or Low-Chroma (=1) matrix
- Matrix chroma ≤ 2 with mottles
- Mg or Fe Concretions
- High Organic Content in Surface Layer of Sandy Soils
- Organic Streaking in Sandy Soils
- Listed on National/Local Hydric Soils List
- Other (explain in remarks)

Hydric soils present? Yes No

Rationale for decision/Remarks:

Wetland Determination

- Hydrophytic vegetation present? Yes No
- Hydric soils present? Yes No
- Wetland hydrology present? Yes No
- Is the sampling point within a wetland? Yes No

Rationale/Remarks: The soils aren't hydric + the vegetation + hydrology is marginal.

NOTES:

Routine Wetland Determination

DATA FORM 1 (Revised)

Wetland Delineation Manual or 1987 Corps Wetland Delineation Manual)

Project/Site: Reliant - Colusa Applicant/owner: Investigator(s):	Date: 3-26-01 County: Colusa State: CA S/T/R:
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Do normal circumstances exist on the site? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Is the site significantly disturbed (atypical situation)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Is the area a potential problem area? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Explanation of atypical or problem area: seasonal hydrology	Community ID: Transect ID: Plot ID: B-3
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VEGETATION (For *strata, indicate T = tree; S = shrub; H = herb; V = vine)

Dominant Plant Species	*Stratum	% cover	Indicator	Dominant Plant Species	*Stratum	% cover	Indicator
<i>Bromus mollis</i>	H	70%	NI				
<i>Lepidium latifolium</i>	H	30%	NI				
<i>Plantago elongata</i>	H	5%	FACW				
<i>Medicago polymorpha</i>	H	3%	NI				
<i>Senecio. vulgaris</i>	H	1%	NI				
<i>Lemnium latifolium</i>	H	1%	OBL				

HYDROPHYTIC VEGETATION INDICATORS:

% of dominants OBL, FACW, & FAC:

Check all indicators that apply and explain below:

- | | |
|--|---|
| <input type="checkbox"/> Visual observation of plant species growing in areas of prolonged inundation/saturation | <input type="checkbox"/> Physiological/reproductive adaptations |
| <input type="checkbox"/> Morphological adaptations | <input type="checkbox"/> Wetland plant database |
| <input type="checkbox"/> Technical Literature | <input type="checkbox"/> Personal knowledge of regional plant communities |
| | <input type="checkbox"/> Other (explain) |

Hydrophytic vegetation present? Yes No

Rationale for decision/Remarks:

HYDROLOGY

Is it the growing season? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Water Marks: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No on	Sediment Deposits: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Based on: <input type="checkbox"/> Soil temp (record temp) <input type="checkbox"/> Other (explain)	Drift Lines: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Drainage Patterns: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Depth of inundation: none inches	Oxidized Root (live roots) Channels <12in.: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Local Soil Survey: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Depth to free water in pit: none inches	FAC Neutral: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Water-stained Leaves: <input type="checkbox"/> Yes <input type="checkbox"/> No
Depth to saturated soil: none inches	Other (explain):	

Check all that apply & explain below:

- Stream, lake or gage data
- Aerial photographs
- Other

Wetland hydrology present? Yes No

Rationale for decision/remarks:

SOILS

Map Unit Name (Series and Phase) :

Drainage Class

Taxonomy (subgroup)

Field observations confirm mapped type? Yes No**Profile Description**

Depth (inches)	Horizon	Matrix color (Munsell moist)	Mottle colors (Munsell moist)	Mottle abundance size and contrast	Texture, concretions, structure, etc.	Drawing of soil profile (match description)
0 - 5 1/4	A	10YR 3/2	none	—	silty loam	

Hydric Soil Indicators: (check all that apply)

- | | |
|---|---|
| <input type="checkbox"/> Histosol | <input type="checkbox"/> Matrix chroma \leq 2 with mottles |
| <input type="checkbox"/> Histic Epipedon | <input type="checkbox"/> Mg or Fe Concretions |
| <input type="checkbox"/> Sulfidic Odor | <input type="checkbox"/> High Organic Content in Surface Layer of Sandy Soils |
| <input type="checkbox"/> Aquic Moisture Regime | <input type="checkbox"/> Organic Streaking in Sandy Soils |
| <input type="checkbox"/> Reducing Conditions | <input type="checkbox"/> Listed on National/Local Hydric Soils List |
| <input type="checkbox"/> Gleyed or Low-Chroma (=1) matrix | <input type="checkbox"/> Other (explain in remarks) |

Hydric soils present? Yes No

Rationale for decision/Remarks:

Wetland Determination

- Hydrophytic vegetation present? Yes No
- Hydric soils present? Yes No
- Wetland hydrology present? Yes No
- Is the sampling point within a wetland? Yes No

Rationale/Remarks:

NOTES:

Revised 4/97

Routine Wetland Determination

DATA FORM 1 (Revised)

Wetland Delineation Manual or 1987 Corps Wetland Delineation Manual)

Project/Site: <i>Colusa - Reliant</i> Applicant/owner: Investigator(s): <i>S. Leach, J. Stead, C. Lu.</i>	Date: <i>3-26-01</i> County: <i>Colusa</i> State: <i>CA</i> S/T/R:
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Do normal circumstances exist on the site? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Is the site significantly disturbed (atypical situation)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Is the area a potential problem area? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Explanation of atypical or problem area:	Community ID: Transect ID: Plot ID: <i>C-1</i>
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VEGETATION (For *strata, indicate T = tree; S = shrub; H = herb; V = vine)							
Dominant Plant Species	*Stratum	% cover	Indicator	Dominant Plant Species	*Stratum	% cover	Indicator
<i>Lolium multiflorum</i>	<i>H</i>	<i>90%</i>	<i>FAC</i>				
<i>Plagiobothrys stipitatus</i>	<i>H</i>	<i>5%</i>	<i>OBL</i>				
<i>Veronica peregrina</i> <i>ssp. xalapensis</i>	<i>H</i>	<i>1%</i>	<i>OBL</i>				

HYDROPHYTIC VEGETATION INDICATORS:
 % of dominants OBL, FACW, & FAC: *100%*
 Check all indicators that apply and explain below:

<input type="checkbox"/> Visual observation of plant species growing in areas of prolonged inundation/saturation	<input type="checkbox"/> Physiological/reproductive adaptations
<input type="checkbox"/> Morphological adaptations	<input type="checkbox"/> Wetland plant database
<input type="checkbox"/> Technical Literature	<input type="checkbox"/> Personal knowledge of regional plant communities
	<input type="checkbox"/> Other (explain)

Hydrophytic vegetation present? Yes No
 Rationale for decision/Remarks:

HYDROLOGY

Is it the growing season? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Based on: <input type="checkbox"/> Soil temp (record temp) <input type="checkbox"/> Other (explain)	Water Marks: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No on Drift Lines: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Sediment Deposits: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Drainage Patterns: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Depth of inundation: <i>none</i> inches Depth to free water in pit: <i>none</i> inches Depth to saturated soil: <i>714"</i> inches	Oxidized Root (live roots) Channels <12in.: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No FAC Neutral: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Local Soil Survey: <input type="checkbox"/> Yes <input type="checkbox"/> No Water-stained Leaves: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

Check all that apply & explain below:

<input type="checkbox"/> Stream, lake or gage data	Other (explain): <i>recently saturated - deep hoof prints and adjacent inundation still present - Seed shrimp (ostracoda) carapaces on soil surface</i>
<input type="checkbox"/> Aerial photographs	
<input type="checkbox"/> Other	

Wetland hydrology present? Yes No
 Rationale for decision/remarks:

SOILS

Map Unit Name (Series and Phase) : _____ Drainage Class _____

Taxonomy (subgroup) _____ Field observations confirm mapped type? Yes No

Profile Description						Drawing of soil profile (match description)
Depth (inches)	Horizon	Matrix color (Munsell moist)	Mottle colors (Munsell moist)	Mottle abundance size and contrast	Texture, concretions, structure, etc.	
0-5"	A	10YR 4/1	10YR 5/6	15%, large/high	silty loam	
5-12"	B	10YR 4/4	none	—	silty loam	

Hydric Soil Indicators: (check all that apply)

<input type="checkbox"/> Histosol	<input checked="" type="checkbox"/> Matrix chroma ≤ 2 with mottles
<input type="checkbox"/> Histic Epipedon	<input type="checkbox"/> Mg or Fe Concretions
<input type="checkbox"/> Sulfidic Odor	<input type="checkbox"/> High Organic Content in Surface Layer of Sandy Soils
<input type="checkbox"/> Aquic Moisture Regime	<input type="checkbox"/> Organic Streaking in Sandy Soils
<input type="checkbox"/> Reducing Conditions	<input type="checkbox"/> Listed on National/Local Hydric Soils List
<input checked="" type="checkbox"/> Gleyed or Low-Chroma (=1) matrix	<input type="checkbox"/> Other (explain in remarks)

Hydric soils present? Yes No

Rationale for decision/Remarks: _____

Wetland Determination

Hydrophytic vegetation present? Yes No

Hydric soils present? Yes No

Wetland hydrology present? Yes No

Is the sampling point within a wetland? Yes No

Rationale/Remarks: _____

NOTES:

Routine Wetland Determination

DATA FORM 1 (Revised)

Wetland Delineation Manual or 1987 Corps Wetland Delineation Manual)

Project/Site: Reliant - Colusa	Date: 3-26-01
Applicant/owner:	County: Colusa
Investigator(s): S. Leach, J. Stead, C. Cu	State: CA
	S/T/R:

Do normal circumstances exist on the site? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Community ID:
Is the site significantly disturbed (atypical situation)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Transect ID:
Is the area a potential problem area? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Plot ID: C-2
Explanation of atypical or problem area:	

VEGETATION (For *strata, indicate T = tree; S = shrub; H = herb; V = vine)

Dominant Plant Species	*Stratum	% cover	Indicator	Dominant Plant Species	*Stratum	% cover	Indicator
<i>Lepidium nitidum</i>	H	40%	NI				
<i>Plantago elongata</i>	H	25%	FACW				
<i>Lolium multiflorum</i>	H	5%	FAC				
<i>Medicago polymorpha</i>	H	2%	NI				
<i>Hordeum marinum</i>	H	2%	FAC				

HYDROPHYTIC VEGETATION INDICATORS:

% of dominants OBL, FACW, & FAC: **50%**

Check all indicators that apply and explain below:

<input type="checkbox"/> Visual observation of plant species growing in areas of prolonged inundation/saturation	<input type="checkbox"/> Physiological/reproductive adaptations
<input type="checkbox"/> Morphological adaptations	<input type="checkbox"/> Wetland plant database
<input checked="" type="checkbox"/> Technical Literature	<input type="checkbox"/> Personal knowledge of regional plant communities
	<input type="checkbox"/> Other (explain)

Hydrophytic vegetation present? Yes No

Rationale for decision/Remarks: **marginal - plantago elongata occurs in adj. uplands**

HYDROLOGY

Is it the growing season? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Water Marks: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Sediment Deposits: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Based on: <input type="checkbox"/> Soil temp (record temp) <input type="checkbox"/> Other (explain)	Drift Lines: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Drainage Patterns: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Depth of inundation: none inches	Oxidized Root (live roots) Channels <12in: Yes <input checked="" type="checkbox"/> No	Local Soil Survey: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Depth to free water in pit: > 3" inches	FAC Neutral: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Water-stained Leaves: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Depth to saturated soil: > 3" inches	Other (explain): Sample point is at higher elevation than C-1. Cattle hoof prints are shallow.	

Check all that apply & explain below:

<input type="checkbox"/> Stream, lake or gage data
<input type="checkbox"/> Aerial photographs
<input type="checkbox"/> Other

Wetland hydrology present? Yes No

Rationale for decision/remarks:

SOILS								
Map Unit Name (Series and Phase) :			Drainage Class					
Taxonomy (subgroup)			Field observations confirm mapped type? <input type="checkbox"/> Yes <input type="checkbox"/> No					
Profile Description								
Depth (inches)	Horizon	Matrix color (Munsell moist)	Mottle colors (Munsell moist)	Mottle abundance size and contrast	Texture, concretions, structure, etc.	Drawing of soil profile (match description)		
0-3"+	A	10YR 4/2	none	—	silty loam			
Hydric Soil Indicators: (check all that apply) <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; vertical-align: top;"> <input type="checkbox"/> Histosol <input type="checkbox"/> Histic Epipedon <input type="checkbox"/> Sulfidic Odor <input type="checkbox"/> Aquic Moisture Regime <input type="checkbox"/> Reducing Conditions <input type="checkbox"/> Gleyed or Low-Chroma (=1) matrix </td> <td style="width: 50%; vertical-align: top;"> <input type="checkbox"/> Matrix chroma ≤ 2 with mottles <input type="checkbox"/> Mg or Fe Concretions <input type="checkbox"/> High Organic Content in Surface Layer of Sandy Soils <input type="checkbox"/> Organic Streaking in Sandy Soils <input type="checkbox"/> Listed on National/Local Hydric Soils List <input type="checkbox"/> Other (explain in remarks) </td> </tr> </table>							<input type="checkbox"/> Histosol <input type="checkbox"/> Histic Epipedon <input type="checkbox"/> Sulfidic Odor <input type="checkbox"/> Aquic Moisture Regime <input type="checkbox"/> Reducing Conditions <input type="checkbox"/> Gleyed or Low-Chroma (=1) matrix	<input type="checkbox"/> Matrix chroma ≤ 2 with mottles <input type="checkbox"/> Mg or Fe Concretions <input type="checkbox"/> High Organic Content in Surface Layer of Sandy Soils <input type="checkbox"/> Organic Streaking in Sandy Soils <input type="checkbox"/> Listed on National/Local Hydric Soils List <input type="checkbox"/> Other (explain in remarks)
<input type="checkbox"/> Histosol <input type="checkbox"/> Histic Epipedon <input type="checkbox"/> Sulfidic Odor <input type="checkbox"/> Aquic Moisture Regime <input type="checkbox"/> Reducing Conditions <input type="checkbox"/> Gleyed or Low-Chroma (=1) matrix	<input type="checkbox"/> Matrix chroma ≤ 2 with mottles <input type="checkbox"/> Mg or Fe Concretions <input type="checkbox"/> High Organic Content in Surface Layer of Sandy Soils <input type="checkbox"/> Organic Streaking in Sandy Soils <input type="checkbox"/> Listed on National/Local Hydric Soils List <input type="checkbox"/> Other (explain in remarks)							
Hydric soils present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Rationale for decision/Remarks:								
Wetland Determination								
Hydrophytic vegetation present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Hydric soils present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Wetland hydrology present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Is the sampling point within a wetland? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No								
Rationale/Remarks:								

NOTES:

Routine Wetland Determination

DATA FORM 1 (Revised)

Wetland Delineation Manual or 1987 Corps Wetland Delineation Manual)

Project/Site: <u>Reliant - Colusa Site</u>	Date: <u>3-26-01</u>
Applicant/owner:	County:
Investigator(s): <u>C. Lu, S. Leach</u>	State:
	S/T/R:

Do normal circumstances exist on the site? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Community ID:
Is the site significantly disturbed (atypical situation)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Transect ID:
Is the area a potential problem area? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Plot ID: <u>D-1</u>
Explanation of atypical or problem area: <u>Seas. hydrology</u>	

VEGETATION (For *strata, indicate T = tree; S = shrub; H = herb; V = vine)

Dominant Plant Species	*Stratum	% cover	Indicator	Dominant Plant Species	*Stratum	% cover	Indicator
<u>Bromus mollis</u>	<u>H</u>	<u>80%</u>	<u>NI</u>				
<u>Plantago elongata</u>	<u>H</u>	<u>35%</u>	<u>FACW</u>				
<u>Medicago polymorpha</u>	<u>H</u>	<u>5%</u>	<u>NI</u>				
<u>Erodium moschatum</u>	<u>H</u>	<u>5%</u>	<u>NI</u>				

HYDROPHYTIC VEGETATION INDICATORS:

% of dominants OBL, FACW, & FAC: 50%

Check all indicators that apply and explain below:

- | | |
|--|---|
| <input type="checkbox"/> Visual observation of plant species growing in areas of prolonged inundation/saturation | <input type="checkbox"/> Physiological/reproductive adaptations |
| <input type="checkbox"/> Morphological adaptations | <input type="checkbox"/> Wetland plant database |
| <input checked="" type="checkbox"/> Technical Literature | <input type="checkbox"/> Personal knowledge of regional plant communities |
| | <input type="checkbox"/> Other (explain) |

Hydrophytic vegetation present? Yes No

Rationale for decision/Remarks:

HYDROLOGY

Is it the growing season? Yes No

Water Marks: Yes No

Sediment Deposits: Yes No

Based on: Soil temp (record temp)
 Other (explain)

Drift Lines: Yes No

Drainage Patterns: Yes No

Depth of inundation: none inches

Oxidized Root (live roots)
Channels <12in.: Yes No

Local Soil Survey: Yes No

Depth to free water in pit: > 3" inches

FAC Neutral: Yes No

Water-stained Leaves:
 Yes No

Depth to saturated soil: > 3" inches

Check all that apply & explain below:

Other (explain): many shallow hoof prints

- Stream, lake or gage data
 Aerial photographs
 Other

Wetland hydrology present? Yes No

Rationale for decision/remarks:

SOILS

Map Unit Name (Series and Phase) :

Drainage Class

Field observations confirm mapped type? Yes No

Taxonomy (subgroup)

Profile Description

Depth (inches)	Horizon	Matrix color (Munsell moist)	Mottle colors (Munsell moist)	Mottle abundance size and contrast	Texture, concretions, structure, etc.	Drawing of soil profile (match description)
0-3"	0-3 A	10YR 3/2	None	—	Silty-clay	

Hydric Soil Indicators: (check all that apply)

- | | |
|---|---|
| <input type="checkbox"/> Histosol | <input type="checkbox"/> Matrix chroma \leq 2 with mottles |
| <input type="checkbox"/> Histic Epipedon | <input type="checkbox"/> Mg or Fe Concretions |
| <input type="checkbox"/> Sulfidic Odor | <input type="checkbox"/> High Organic Content in Surface Layer of Sandy Soils |
| <input type="checkbox"/> Aquic Moisture Regime | <input type="checkbox"/> Organic Streaking in Sandy Soils |
| <input type="checkbox"/> Reducing Conditions | <input type="checkbox"/> Listed on National/Local Hydric Soils List |
| <input type="checkbox"/> Gleyed or Low-Chroma (=1) matrix | <input type="checkbox"/> Other (explain in remarks) |

Hydric soils present? Yes No

Rationale for decision/Remarks:

Wetland Determination

- | | | |
|---|------------------------------|--|
| Hydrophytic vegetation present? | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No |
| Hydric soils present? | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No |
| Wetland hydrology present? | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No |
| Is the sampling point within a wetland? | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No |

Rationale/Remarks:

NOTES:

Revised 4/97

Routine Wetland Determination

DATA FORM 1 (Revised)

Wetland Delineation Manual or 1987 Corps Wetland Delineation Manual)

Project/Site: <u>Reliant - Colusa</u> Applicant/owner: Investigator(s): <u>C. Lu, S. Leach</u>	Date: <u>3-26</u> County: <u>Colusa</u> State: <u>CA</u> S/T/R:
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Do normal circumstances exist on the site? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Is the site significantly disturbed (atypical situation)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Is the area a potential problem area? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Explanation of atypical or problem area:	Community ID: Transect ID: Plot ID: <u>D-2</u>
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VEGETATION (For *strata, indicate T = tree; S = shrub; H = herb; V = vine)

Dominant Plant Species	*Stratum	% cover	Indicator	Dominant Plant Species	*Stratum	% cover	Indicator
<u>Lolium multiflorum</u>	<u>H</u>	<u>80%</u>	<u>FAC</u>				
<u>Limnanthes douglasii</u>	<u>H</u>	<u>15%</u>	<u>OBL</u>				
<u>Plagiobothrys stipitatus</u>	<u>H</u>	<u>5%</u>	<u>OBL</u>				
<u>Medicago polymorpha</u>	<u>H</u>	<u>2%</u>	<u>NI</u>				
<u>Lepidium nitidum</u>	<u>H</u>	<u>1%</u>	<u>NI</u>				

HYDROPHYTIC VEGETATION INDICATORS:

% of dominants OBL, FACW, & FAC: 100%

Check all indicators that apply and explain below:

- | | |
|--|---|
| <input type="checkbox"/> Visual observation of plant species growing in areas of prolonged inundation/saturation
<input type="checkbox"/> Morphological adaptations
<input checked="" type="checkbox"/> Technical Literature | <input type="checkbox"/> Physiological/reproductive adaptations
<input type="checkbox"/> Wetland plant database
<input type="checkbox"/> Personal knowledge of regional plant communities
<input type="checkbox"/> Other (explain) |
|--|---|

Hydrophytic vegetation present? Yes No

Rationale for decision/Remarks:

HYDROLOGY

Is it the growing season? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Based on: <input type="checkbox"/> Soil temp (record temp) <input type="checkbox"/> Other (explain)	Water Marks: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No on	Sediment Deposits: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Drainage Patterns: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Depth of inundation: _____ inches Depth to free water in pit: _____ inches Depth to saturated soil: _____ inches	Oxidized Root (live roots) Channels <12in.: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No FAC Neutral: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Local Soil Survey: <input type="checkbox"/> Yes <input type="checkbox"/> No Water-stained Leaves: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

Check all that apply & explain below:

- Stream, lake or gage data
 Aerial photographs
 Other

Other (explain): deep cattle hoof prints (~5-6" deep) closed, shallow topographic depression would pond water.

Wetland hydrology present? Yes No

Rationale for decision/remarks:

SOILS

Map Unit Name (Series and Phase) :

Drainage Class

Field observations confirm mapped type? Yes No

Taxonomy (subgroup)

Profile Description

Depth (inches)	Horizon	Matrix color (Munsell moist)	Mottle colors (Munsell moist)	Mottle abundance size and contrast	Texture, concretions, structure, etc.	Drawing of soil profile (match description)
0-6" L	A	10YR 2/2	Oxidized rhizospheres			

Hydric Soil Indicators: (check all that apply)

- Histosol
- Histic Epipedon
- Sulfidic Odor
- Aquic Moisture Regime
- Reducing Conditions
- Gleyed or Low-Chroma (=1) matrix
- Matrix chroma ≤ 2 with mottles
- Mg or Fe Concretions
- High Organic Content in Surface Layer of Sandy Soils
- Organic Streaking in Sandy Soils
- Listed on National/Local Hydric Soils List
- Other (explain in remarks)

Hydric soils present? Yes No

Rationale for decision/Remarks:

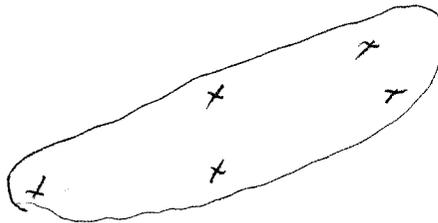
Wetland Determination

- Hydrophytic vegetation present? Yes No
- Hydric soils present? Yes No
- Wetland hydrology present? Yes No
- Is the sampling point within a wetland? Yes No

Rationale/Remarks: closed basin with deep hoof prints

NOTES:

Revised 4/97



Routine Wetland Determination

DATA FORM 1 (Revised)

Wetland Delineation Manual or 1987 Corps Wetland Delineation Manual)

Project/Site: <i>Reliant Energy</i> Applicant/owner: Investigator(s): <i>S. Leach, C. Lu, J. Stead</i>	Date: <i>3/27/01</i> County: <i>Colusa</i> State: <i>CA</i> S/T/R:
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Do normal circumstances exist on the site? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Is the site significantly disturbed (atypical situation)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Is the area a potential problem area? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Explanation of atypical or problem area: <i>Seasonal hydrology, heavy grazing</i>	Community ID: <i>E-1</i> Transect ID: Plot ID: <i>drainage channel</i>
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VEGETATION (For *strata, indicate T = tree; S = shrub; H = herb; V = vine)

Dominant Plant Species	*Stratum	% cover	Indicator	Dominant Plant Species	*Stratum	% cover	Indicator
<i>Lolium perenne</i>	<i>H</i>	<i>75</i>	<i>FAC</i>	<i>Centaurea solistalis</i>		<i><1</i>	<i>NL</i>
<i>Hordeum histrix</i>	<i>H</i>	<i>20</i>	<i>FAC</i>				
<i>Elychorus ^{macrostachyon} macrostachyon</i>	<i>H</i>	<i>5</i>	<i>OBL</i>				
<i>Geranium dissectum</i>	<i>H</i>	<i><1</i>	<i>NI</i>				
<i>Capsella bursa/pastoris</i>	<i>H</i>	<i><1</i>	<i>NL</i>				

HYDROPHYTIC VEGETATION INDICATORS:

% of dominants OBL, FACW, & FAC: *100*

Check all indicators that apply and explain below:

<input type="checkbox"/> Visual observation of plant species growing in areas of prolonged inundation/saturation	<input type="checkbox"/> Physiological/reproductive adaptations
<input type="checkbox"/> Morphological adaptations	<input type="checkbox"/> Wetland plant database
<input checked="" type="checkbox"/> Technical Literature	<input type="checkbox"/> Personal knowledge of regional plant communities
	<input type="checkbox"/> Other (explain)

Hydrophytic vegetation present? Yes No

Rationale for decision/Remarks:

HYDROLOGY

Is it the growing season? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Based on: <input type="checkbox"/> Soil temp (record temp) <input type="checkbox"/> Other (explain)	Water Marks: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No on Drift Lines: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Sediment Deposits: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Drainage Patterns: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Depth of inundation: <i>0</i> inches Depth to free water in pit: <i>0</i> inches Depth to saturated soil: <i>0</i> inches	Oxidized Root (live roots) Channels <12in.: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No FAC Neutral: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Local Soil Survey: <input type="checkbox"/> Yes <input type="checkbox"/> No Water-stained Leaves: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Check all that apply & explain below: <input type="checkbox"/> Stream, lake or gage data <input type="checkbox"/> Aerial photographs <input type="checkbox"/> Other	Other (explain):	

Wetland hydrology present? Yes No

Rationale for decision/remarks:

SOILS

Map Unit Name (Series and Phase) : _____ Drainage Class _____

Taxonomy (subgroup) _____ Field observations confirm mapped type? Yes No

Profile Description						
Depth (inches)	Horizon	Matrix color (Munsell moist)	Mottle colors (Munsell moist)	Mottle abundance size and contrast	Texture, concretions, structure, etc.	Drawing of soil profile (match description)
15	A	10YR 2/1	no mottles			

Hydric Soil Indicators: (check all that apply)

<input type="checkbox"/> Histosol	<input type="checkbox"/> Matrix chroma ≤ 2 with mottles
<input type="checkbox"/> Histic Epipedon	<input type="checkbox"/> Mg or Fe Concretions
<input type="checkbox"/> Sulfidic Odor	<input type="checkbox"/> High Organic Content in Surface Layer of Sandy Soils
<input type="checkbox"/> Aquic Moisture Regime	<input type="checkbox"/> Organic Streaking in Sandy Soils
<input type="checkbox"/> Reducing Conditions	<input type="checkbox"/> Listed on National/Local Hydric Soils List
<input checked="" type="checkbox"/> Gleyed or Low-Chroma (=1) matrix	<input type="checkbox"/> Other (explain in remarks)

Hydric soils present? Yes No

Rationale for decision/Remarks: _____

Wetland Determination

Hydrophytic vegetation present? Yes No

Hydric soils present? Yes No

Wetland hydrology present? Yes No

Is the sampling point within a wetland? Yes No

Rationale/Remarks: _____

NOTES: adjacent upland soils are 3/1, so the soils are very similar in value + chroma. Revised 4/97
 This indicator for a wetland may not be a very reliable.

Smaller drainage channel. This channel is dry but also has a distinct bed + bank. The vegetation does not differ that much from the upland banks

Routine Wetland Determination

DATA FORM 1 (Revised)

Wetland Delineation Manual or 1987 Corps Wetland Delineation Manual)

Project/Site: <i>Reliant Energy</i> Applicant/owner: Investigator(s): <i>S. Leach, C. Lu, J. Stead</i>	Date: <i>3/27/01</i> County: <i>Colusa</i> State: <i>CA</i> S/T/R:
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Do normal circumstances exist on the site? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Is the site significantly disturbed (atypical situation)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Is the area a potential problem area? <input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> No Explanation of atypical or problem area: <i>Seasonal hydrology</i>	Community ID: <i>E-2</i> Transect ID: Plot ID: <i>drainage channel</i>
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VEGETATION (For *strata, indicate T = tree; S = shrub; H = herb; V = vine)							
Dominant Plant Species	*Stratum	% cover	Indicator	Dominant Plant Species	*Stratum	% cover	Indicator
<i>Glycyche macrostachya</i>	H		OBL				
<i>Lolium perenne</i>	H		FAC				
<i>Geranium vulgare</i>	H		NL				
<i>Geranium dissectum</i>	H		NL				
<i>Capsella bursa-pastoris</i>	<H		NL				
<i>Bare ground</i>			—				

HYDROPHYTIC VEGETATION INDICATORS: *Bryophytes growing on surface.*

% of dominants OBL, FACW, & FAC:

Check all indicators that apply and explain below:

<input type="checkbox"/> Visual observation of plant species growing in areas of prolonged inundation/saturation	<input type="checkbox"/> Physiological/reproductive adaptations
<input type="checkbox"/> Morphological adaptations	<input type="checkbox"/> Wetland plant database
<input checked="" type="checkbox"/> Technical Literature	<input type="checkbox"/> Personal knowledge of regional plant communities
	<input type="checkbox"/> Other (explain)

Hydrophytic vegetation present? Yes No

Rationale for decision/Remarks:

HYDROLOGY			
Is it the growing season? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Water Marks: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No on	Sediment Deposits: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Based on: <input type="checkbox"/> Soil temp (record temp) <input type="checkbox"/> Other (explain)	Drift Lines: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Drainage Patterns: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Depth of inundation: _____ inches	Oxidized Root (live roots) Channels <12in.: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Local Soil Survey: <input type="checkbox"/> Yes <input type="checkbox"/> No	
Depth to free water in pit: _____ inches	FAC Neutral: <input type="checkbox"/> Yes <input type="checkbox"/> No	Water-stained Leaves: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Depth to saturated soil: _____ inches	Check all that apply & explain below: <input type="checkbox"/> Stream, lake or gage data <input type="checkbox"/> Aerial photographs <input type="checkbox"/> Other		

Other (explain): *ponded water (3-4") immediately adjacent to site.*

Wetland hydrology present? Yes No

Rationale for decision/remarks:

SOILS

Map Unit Name (Series and Phase) : _____ Drainage Class _____

Taxonomy (subgroup) _____ Field observations confirm mapped type? Yes No

Profile Description						
Depth (inches)	Horizon	Matrix color (Munsell moist)	Mottle colors (Munsell moist)	Mottle abundance size and contrast	Texture, concretions, structure, etc.	Drawing of soil profile (match description)
16	A	10YR 2/1	10YR 4/3 10YR 4/3	15% mottling large + med. contrast		

Hydric Soil Indicators: (check all that apply)

<input type="checkbox"/> Histosol	<input type="checkbox"/> Matrix chroma \leq 2 with mottles
<input type="checkbox"/> Histic Epipedon	<input type="checkbox"/> Mg or Fe Concretions
<input type="checkbox"/> Sulfidic Odor	<input type="checkbox"/> High Organic Content in Surface Layer of Sandy Soils
<input type="checkbox"/> Aquic Moisture Regime	<input type="checkbox"/> Organic Streaking in Sandy Soils
<input type="checkbox"/> Reducing Conditions	<input type="checkbox"/> Listed on National/Local Hydric Soils List
<input checked="" type="checkbox"/> Gleyed or Low-Chroma (=1) matrix	<input type="checkbox"/> Other (explain in remarks)

Hydric soils present? Yes No

Rationale for decision/Remarks: _____

Wetland Determination

Hydrophytic vegetation present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Hydric soils present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Wetland hydrology present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Is the sampling point within a wetland?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No

Rationale/Remarks: _____

NOTES: width of the channel is about 4 feet. There are some larger ponded areas. Much of the channel is still saturated. There is a clear bed + bank.

Routine Wetland Determination

1987 Corps Wetland Delineation Manual

Project/Site: <u>Colusa P.P.</u> Applicant/owner: Investigator(s): <u>M Lee, C. Lu</u>	Date: <u>4/10/01</u> County: <u>Colusa</u> State: <u>CA</u> S/T/R:
--	---

Do normal circumstances exist on the site? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Is the site significantly disturbed (atypical situation)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Is the area a potential problem area? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Explanation of atypical or problem area: <u>Seasonal hydrology</u>	Community ID: <u>1-2</u> Transect ID: Plot ID:
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VEGETATION (For *strata, indicate T = tree; S = shrub; H = herb; V = vine)

Dominant Plant Species	*Stratum	% cover	Indicator	Dominant Plant Species	*Stratum	% cover	Indicator
<u>Centaurea solistis</u>	<u>H</u>		<u>NL</u>				
<u>Bromus mollis</u>	<u>H</u>		<u>NL</u>				
<u>Achyra chaena</u> <u>Blow weed</u>	<u>H</u>		<u>FAC</u>				
<u>CONVOLVULUS arvensis</u> <u>bind weed</u>	<u>H</u>		<u>NL</u>				
<u>Hordeum marinum</u>	<u>H</u>		<u>NL</u>				
<u>Hordeum marinum</u>	<u>H</u>		<u>FAC</u>				

HYDROPHYTIC VEGETATION INDICATORS:

% of dominants OBL, FACW, & FAC:

Check all indicators that apply and explain below:

<input type="checkbox"/> Visual observation of plant species growing in areas of prolonged inundation/saturation	<input type="checkbox"/> Physiological/reproductive adaptations
<input type="checkbox"/> Morphological adaptations	<input type="checkbox"/> Wetland plant database
<input checked="" type="checkbox"/> Technical Literature	<input type="checkbox"/> Personal knowledge of regional plant communities
	<input type="checkbox"/> Other (explain)

Hydrophytic vegetation present? Yes No

Rationale for decision/Remarks:

HYDROLOGY

Is it the growing season? Yes No

Based on: Soil temp (record temp)
 Other (explain)

Depth of inundation: _____ inches Depth to free water in pit: <u>0</u> inches Depth to saturated soil: _____ inches	<p style="text-align: center;">WETLAND HYDROLOGY INDICATORS</p> <p>Primary Indicators:</p> <input type="checkbox"/> Inundated <input type="checkbox"/> Saturated in Upper 12 Inches <input type="checkbox"/> Water Marks <input type="checkbox"/> Drift Lines <input type="checkbox"/> Sediment Deposits <input type="checkbox"/> Drainage Patterns in Wetlands
Check all that apply & explain below: <input type="checkbox"/> Stream, lake or gage data <input type="checkbox"/> Aerial photographs <input type="checkbox"/> Other	<p>Secondary Indicators (2 or more Required):</p> <input type="checkbox"/> Oxidized Root Channels in Upper 12 Inches <input type="checkbox"/> Water-Stained Leaves <input type="checkbox"/> Local Soil Survey Data <input type="checkbox"/> FAC-Neutral Test <input type="checkbox"/> Other (Explain in Remarks)

Wetland hydrology present? Yes No

Rationale for decision/remarks: no hydrology present

SOILS

Plot ID:

Map Unit Name (Series and Phase):

Drainage Class

Aitامت Clay
Taxonomy (subgroup)

Field observations confirm mapped type? Yes No

Profile Description

Depth (inches)	Horizon	Matrix color (Munsell moist)	Mottle colors (Munsell moist)	Mottle abundance size and contrast	Texture, concretions, structure, etc.	Drawing of soil profile (match description)
8	A	10YR 3/3	—	—	—	

Hydric Soil Indicators: (check all that apply)

- Histosol
- Histic Epipedon
- Sulfidic Odor
- Aquic Moisture Regime
- Reducing Conditions
- Gleyed or Low-Chroma (=1) matrix
- Matrix chroma ≤ 2 with mottles
- Mg or Fe Concretions
- High Organic Content in Surface Layer of Sandy Soils
- Organic Streaking in Sandy Soils
- Listed on National/Local Hydric Soils List
- Other (explain in remarks)

Hydric soils present? Yes No

Rationale for decision/Remarks: *no hydric indicators*

Wetland Determination

- Hydrophytic vegetation present? Yes No
- Hydric soils present? Yes No
- Wetland hydrology present? Yes No
- Is the sampling point within a wetland? Yes No

Rationale/Remarks:

NOTES: *alkali sealed*

Revised 3/01

Routine Wetland Determination

1987 Corps Wetland Delineation Manual

Project/Site: <i>Colusa P.P.</i>				Date: <i>4/10/01</i>			
Applicant/owner: <i>Reliant</i>				County: <i>Colusa</i>			
Investigator(s): <i>C. Lu, M. Lee</i>				State: <i>CA</i>			
Do normal circumstances exist on the site? <input type="checkbox"/> Yes <input type="checkbox"/> No				Community ID:			
Is the site significantly disturbed (atypical situation)? <input type="checkbox"/> Yes <input type="checkbox"/> No				Transect ID: <i>0-1</i>			
Is the area a potential problem area? <input type="checkbox"/> Yes <input type="checkbox"/> No				Plot ID:			
Explanation of atypical or problem area:							
VEGETATION (For *strata, indicate T = tree; S = shrub; H = herb; V = vine)							
Dominant Plant Species	*Stratum	% cover	Indicator	Dominant Plant Species	*Stratum	% cover	Indicator
<i>Plantago coronopus</i>	<i>H</i>	<i>70</i>	<i>FAC</i>				
<i>Erodium botrys</i>	<i>H</i>	<i>10</i>	<i>NL</i>				
<i>Galium perenne</i>	<i>H</i>	<i>5</i>	<i>FAC</i>				
<i>Bromus mollis</i>	<i>H</i>	<i>5</i>	<i>NL</i>				
<i>bare ground</i>	<i>H</i>	<i>10</i>	<i>-</i>				
HYDROPHYTIC VEGETATION INDICATORS:							
% of dominants OBL, FACW, & FAC: <i>75</i>							
Check all indicators that apply and explain below:							
<input type="checkbox"/> Visual observation of plant species growing in areas of prolonged inundation/saturation				<input type="checkbox"/> Physiological/reproductive adaptations			
<input type="checkbox"/> Morphological adaptations				<input type="checkbox"/> Wetland plant database			
<input type="checkbox"/> Technical Literature				<input type="checkbox"/> Personal knowledge of regional plant communities			
				<input type="checkbox"/> Other (explain)			
Hydrophytic vegetation present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No							
Rationale for decision/Remarks:							
HYDROLOGY							
Is it the growing season? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No							
Based on: <input type="checkbox"/> Soil temp (record temp)							
<input type="checkbox"/> Other (explain)							
Depth of inundation: _____ inches							
Depth to free water in pit: <i>0</i> inches							
Depth to saturated soil: _____ inches							
Check all that apply & explain below:							
<input type="checkbox"/> Stream, lake or gage data							
<input type="checkbox"/> Aerial photographs							
<input type="checkbox"/> Other							
WETLAND HYDROLOGY INDICATORS							
Primary Indicators:							
<input type="checkbox"/> Inundated - <i>some hoof marks</i>							
<input type="checkbox"/> Saturated in Upper 12 Inches							
<input type="checkbox"/> Water Marks							
<input type="checkbox"/> Drift Lines							
<input type="checkbox"/> Sediment Deposits							
<input type="checkbox"/> Drainage Patterns in Wetlands							
Secondary Indicators (2 or more Required):							
<input type="checkbox"/> Oxidized Root Channels in Upper 12 Inches							
<input type="checkbox"/> Water-Stained Leaves							
<input type="checkbox"/> Local Soil Survey Data							
<input type="checkbox"/> FAC-Neutral Test							
<input type="checkbox"/> Other (Explain in Remarks)							
Wetland hydrology present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No							
Rationale for decision/remarks: <i>Some are slightly lower in elevation by several inches</i>							

SOILS

Plot ID:

Map Unit Name (Series and Phase):

Drainage Class

altamont clay

Field observations confirm mapped type? Yes No

Taxonomy (subgroup)

Profile Description

Depth (inches)	Horizon	Matrix color (Munsell moist)	Mottle colors (Munsell moist)	Mottle abundance size and contrast	Texture, concretions, structure, etc.	Drawing of soil profile (match description)
0-6+	A	10YR 4/3			Silty loam	

Hydric Soil Indicators: (check all that apply)

- Histosol
- Histic Epipedon
- Sulfidic Odor
- Aquic Moisture Regime
- Reducing Conditions
- Gleyed or Low-Chroma (=1) matrix
- Matrix chroma ≤ 2 with mottles
- Mg or Fe Concretions
- High Organic Content in Surface Layer of Sandy Soils
- Organic Streaking in Sandy Soils
- Listed on National/Local Hydric Soils List
- Other (explain in remarks)

Hydric soils present? Yes No

Rationale for decision/Remarks:

Wetland Determination

- Hydrophytic vegetation present? Yes No
- Hydric soils present? Yes No
- Wetland hydrology present? Yes No
- Is the sampling point within a wetland? Yes No

Rationale/Remarks:

NOTES:

alkali scald
other plants in swals

- Atriplex for*
- Vulpia m*
- Hordeum murinum*
- Lepidium latipes var. latipes (not dominant)*
- Medicago polymorpha*
- Lepidium n.*
- Hordeum maximum*

Revised 3/01

Routine Wetland Determination

1987 Corps Wetland Delineation Manual

Project/Site: <u>Colusa P.P.</u> Applicant/owner: <u>Feliant</u> Investigator(s): <u>C. Lu, M. Lee</u>	Date: <u>4/10/01</u> County: <u>Colusa</u> State: <u>CA</u> S/T/R:
Do normal circumstances exist on the site? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Is the site significantly disturbed (atypical situation)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Is the area a potential problem area? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Explanation of atypical or problem area: <u>Seasonal hydrology</u>	Community ID: Transect ID: <u>U-1</u> Plot ID:

VEGETATION (For *strata, indicate T = tree; S = shrub; H = herb; V = vine)

Dominant Plant Species	*Stratum	% cover	Indicator	Dominant Plant Species	*Stratum	% cover	Indicator
<u>Plagiobothrys stipitatus</u>	<u>H</u>	<u>5</u>	<u>OBL</u>				
<u>Hordeum marinum</u>	<u>A</u>	<u>5</u>	<u>FAC</u>				
<u>Bare ground</u>		<u>90</u>	<u>-</u>				

HYDROPHYTIC VEGETATION INDICATORS:

% of dominants OBL, FACW, & FAC: 100

Check all indicators that apply and explain below:

<input type="checkbox"/> Visual observation of plant species growing in areas of prolonged inundation/saturation	<input type="checkbox"/> Physiological/reproductive adaptations
<input type="checkbox"/> Morphological adaptations	<input type="checkbox"/> Wetland plant database
<input type="checkbox"/> Technical Literature	<input type="checkbox"/> Personal knowledge of regional plant communities
	<input type="checkbox"/> Other (explain)

Hydrophytic vegetation present? Yes No

Rationale for decision/Remarks:

HYDROLOGY

Is it the growing season? Yes No

Based on: Soil temp (record temp)
 Other (explain)

Depth of inundation: _____ inches Depth to free water in pit: <u>0</u> inches Depth to saturated soil: _____ inches	<p style="text-align: center;">WETLAND HYDROLOGY INDICATORS</p> <p>Primary Indicators:</p> <input type="checkbox"/> Inundated <input type="checkbox"/> Saturated in Upper 12 Inches <input type="checkbox"/> Water Marks <input type="checkbox"/> Drift Lines <input type="checkbox"/> Sediment Deposits <input type="checkbox"/> Drainage Patterns in Wetlands
Check all that apply & explain below: <input type="checkbox"/> Stream, lake or gage data <input type="checkbox"/> Aerial photographs <input type="checkbox"/> Other	<p>Secondary Indicators (2 or more Required):</p> <input type="checkbox"/> Oxidized Root Channels in Upper 12 Inches <input type="checkbox"/> Water-Stained Leaves <input type="checkbox"/> Local Soil Survey Data <input type="checkbox"/> FAC-Neutral Test <input type="checkbox"/> Other (Explain in Remarks)

Wetland hydrology present? Yes No

Rationale for decision/remarks: heavy hoofprints

SOILS

Plot ID:

Map Unit Name (Series and Phase) :

Drainage Class

Taxonomy (subgroup) *altamont clay*

Field observations confirm mapped type? Yes No

Profile Description

Depth (inches)	Horizon	Matrix color (Munsell moist)	Mottle colors (Munsell moist)	Mottle abundance size and contrast	Texture, concretions, structure, etc.	Drawing of soil profile (match description)
12	A	10YR 3/2				

Hydric Soil Indicators: (check all that apply)

- Histosol
- Histic Epipedon
- Sulfidic Odor
- Aquic Moisture Regime
- Reducing Conditions
- Gleyed or Low-Chroma (=1) matrix
- Matrix chroma ≤ 2 with mottles
- Mg or Fe Concretions
- High Organic Content in Surface Layer of Sandy Soils
- Organic Streaking in Sandy Soils
- Listed on National/Local Hydric Soils List
- Other (explain in remarks)

Hydric soils present? Yes No

Rationale for decision/Remarks:

Wetland Determination

- Hydrophytic vegetation present? Yes No
- Hydric soils present? Yes No
- Wetland hydrology present? Yes No
- Is the sampling point within a wetland? Yes No

Rationale/Remarks:

NOTES:

alkali scald

Revised 3/01

Routine Wetland Determination

1987 Corps Wetland Delineation Manual

Project/Site: <i>Colusa P.P.</i> Applicant/owner: <i>Reliant</i> Investigator(s): <i>C. Lee, M. Lee</i>	Date: <i>Colusa 4/10/01</i> County: State: <i>CA</i> S/T/R:
Do normal circumstances exist on the site? <input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> No Is the site significantly disturbed (atypical situation)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Is the area a potential problem area? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Explanation of atypical or problem area: <i>Seasonal hydrology</i>	Community ID: <i>G1</i> Transect ID: Plot ID:

VEGETATION (For *strata, indicate T = tree; S = shrub; H = herb; V = vine)

Dominant Plant Species	*Stratum	% cover	Indicator	Dominant Plant Species	*Stratum	% cover	Indicator
<i>Plantago cornada</i>	<i>H</i>	<i>27%</i>	<i>FAC</i>				
<i>Bromus mollis</i>	<i>H</i>	<i>20</i>	<i>NL</i>				
<i>Erodium botrys</i>	<i>H</i>	<i>5</i>	<i>NL</i>				
<i>Lepidium latipes latipes</i>	<i>H</i>	<i>45</i>	<i>OBL</i>				

HYDROPHYTIC VEGETATION INDICATORS: *75*

% of dominants OBL, FACW, & FAC:

Check all indicators that apply and explain below:

<input type="checkbox"/> Visual observation of plant species growing in areas of prolonged inundation/saturation	<input type="checkbox"/> Physiological/reproductive adaptations
<input type="checkbox"/> Morphological adaptations	<input type="checkbox"/> Wetland plant database
<input checked="" type="checkbox"/> Technical Literature	<input type="checkbox"/> Personal knowledge of regional plant communities
	<input type="checkbox"/> Other (explain)

Hydrophytic vegetation present? Yes No

Rationale for decision/Remarks:

HYDROLOGY

Is it the growing season? Yes No

Based on: Soil temp (record temp)
 Other (explain)

Depth of inundation: _____ inches
 Depth to free water in pit: *0* inches
 Depth to saturated soil: _____ inches

Check all that apply & explain below:

Stream, lake or gage data
 Aerial photographs
 Other

WETLAND HYDROLOGY INDICATORS

Primary Indicators:

Inundated
 Saturated in Upper 12 Inches
 Water Marks
 Drift Lines
 Sediment Deposits
 Drainage Patterns in Wetlands

Secondary Indicators (2 or more Required):

Oxidized Root Channels in Upper 12 Inches
 Water-Stained Leaves
 Local Soil Survey Data
 FAC-Neutral Test
 Other (Explain in Remarks)

Wetland hydrology present? Yes No

Rationale for decision/remarks: *see a few hoofprints*

SOILS

Map Unit Name (Series and Phase):

altamont clay

Taxonomy (subgroup)

Plot ID:

Drainage Class

Field observations confirm mapped type? Yes No

Profile Description

Depth (inches)	Horizon	Matrix color (Munsell moist)	Mottle colors (Munsell moist)	Mottle abundance size and contrast	Texture, concretions, structure, etc.	Drawing of soil profile (match description)
0-3+	A	10YR 4/2	7.5YR 4/4	20% high contrast		

Hydric Soil Indicators: (check all that apply)

- Histosol
- Histic Epipedon
- Sulfidic Odor
- Aquic Moisture Regime
- Reducing Conditions
- Gleyed or Low-Chroma (=1) matrix
- Matrix chroma ≤ 2 with mottles
- Mg or Fe Concretions
- High Organic Content in Surface Layer of Sandy Soils
- Organic Streaking in Sandy Soils
- Listed on National/Local Hydric Soils List
- Other (explain in remarks)

Hydric soils present? Yes No

Rationale for decision/Remarks:

Wetland Determination

- Hydrophytic vegetation present? Yes No
- Hydric soils present? Yes No
- Wetland hydrology present? Yes No
- Is the sampling point within a wetland? Yes No

Rationale/Remarks:

NOTES: soil very dry + hard to dig, alkali scald
no leaf plants.

Revised 3/01

Routine Wetland Determination

1987 Corps Wetland Delineation Manual

Project/Site: <u>Colusa</u> Applicant/owner: Investigator(s): <u>M. Lee + C. Lu</u>	Date: <u>4-10-01</u> County: <u>Colusa</u> State: <u>CA</u> S/T/R:
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Do normal circumstances exist on the site? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Is the site significantly disturbed (atypical situation)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Is the area a potential problem area? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Explanation of atypical or problem area:	Community ID: Transect ID: Plot ID: <u>I 1</u>
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VEGETATION (For *strata, indicate T = tree; S = shrub; H = herb; V = vine)

Dominant Plant Species	*Stratum	% cover	Indicator	Dominant Plant Species	*Stratum	% cover	Indicator
<u>Plantago coron</u>	<u>50</u>	<u>H</u>					
<u>Lepidium latipes</u>	<u>30</u>	<u>H</u>					
<u>Erodium botrys</u>	<u>10</u>	<u>H</u>					
<u>Bromus hordeaceus</u>	<u><5</u>	<u>H</u>					

HYDROPHYTIC VEGETATION INDICATORS:

% of dominants OBL, FACW, & FAC: bare ground = 10%

Check all indicators that apply and explain below:

<input type="checkbox"/> Visual observation of plant species growing in areas of prolonged inundation/saturation	<input type="checkbox"/> Physiological/reproductive adaptations
<input type="checkbox"/> Morphological adaptations	<input type="checkbox"/> Wetland plant database
<input type="checkbox"/> Technical Literature	<input type="checkbox"/> Personal knowledge of regional plant communities
	<input type="checkbox"/> Other (explain)

Hydrophytic vegetation present? Yes No

Rationale for decision/Remarks:

HYDROLOGY

Is it the growing season? Yes No

Based on: Soil temp (record temp)
 Other (explain)

Depth of inundation: inches
 Depth to free water in pit: inches
 Depth to saturated soil: inches

Check all that apply & explain below:

<input type="checkbox"/> Stream, lake or gage data	WETLAND HYDROLOGY INDICATORS Primary Indicators: <input type="checkbox"/> Inundated <u>X mud cracking</u> <input type="checkbox"/> Saturated in Upper 12 Inches <u>X moss</u> <input type="checkbox"/> Water Marks <input type="checkbox"/> Drift Lines <input type="checkbox"/> Sediment Deposits <input checked="" type="checkbox"/> Drainage Patterns in Wetlands <u>(lower)</u>
<input type="checkbox"/> Aerial photographs	
<input type="checkbox"/> Other	

Secondary Indicators (2 or more Required):

<input checked="" type="checkbox"/> Oxidized Root Channels in Upper 12 Inches
<input type="checkbox"/> Water-Stained Leaves
<input type="checkbox"/> Local Soil Survey Data
<input type="checkbox"/> FAC-Neutral Test
<input type="checkbox"/> Other (Explain in Remarks)

Wetland hydrology present? Yes No

Rationale for decision/remarks: point is in lower elevation ~ 4" from upland road goes through this pool

SOILS

Plot ID:

Map Unit Name (Series and Phase):

Drainage Class

Taxonomy (*altamont clay*)

Field observations confirm mapped type? Yes No

Profile Description

Depth (inches)	Horizon	Matrix color (Munsell moist)	Mottle colors (Munsell moist)	Mottle abundance size and contrast	Texture, concretions, structure, etc.	Drawing of soil profile (match description)
0-5"	A	10YR3/2			Silty loam	

Hydric Soil Indicators: (check all that apply)

- Histosol
- Histic Epipedon
- Sulfidic Odor
- Aquic Moisture Regime
- Reducing Conditions
- Gleyed or Low-Chroma (=1) matrix
- Matrix chroma ≤ 2 with mottles
- Mg or Fe Concretions
- High Organic Content in Surface Layer of Sandy Soils
- Organic Streaking in Sandy Soils
- Listed on National/Local Hydric Soils List
- Other (explain in remarks)

Hydric soils present? Yes No

Rationale for decision/Remarks:

Wetland Determination

- Hydrophytic vegetation present? Yes No
- Hydric soils present? Yes No
- Wetland hydrology present? Yes No
- Is the sampling point within a wetland? Yes No

Rationale/Remarks:

NOTES:

alkali scald

Revised 3/01

Routine Wetland Determination 1987 Corps Wetland Delineation Manual

Project/Site: <u>Colusa</u> Applicant/owner: Investigator(s): <u>M. Lee + C. Lee</u>	Date: <u>4-10-01</u> County: State: S/T/R:
Do normal circumstances exist on the site? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Is the site significantly disturbed (atypical situation)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Is the area a potential problem area? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Explanation of atypical or problem area:	Community ID: Transect ID: Plot ID: <u>R1</u>

VEGETATION (For *strata, indicate T = tree; S = shrub; H = herb; V = vine)

Dominant Plant Species	*Stratum	% cover	Indicator	Dominant Plant Species	*Stratum	% cover	Indicator
<u>Plantago lanceolata</u>	<u>H</u>	<u>60</u>	<u>FAC</u>				
<u>Erodium botrys</u>	<u>H</u>	<u>30</u>	<u>NL</u>				
<u>Vulpia myosuroides</u>	<u>H</u>	<u><5</u>	<u>FACU</u>				
<u>Bromus horridus</u>	<u>H</u>	<u><5</u>	<u>NL</u>				
<u>base ground</u>		<u>10</u>	<u>-</u>				

HYDROPHYTIC VEGETATION INDICATORS: 60

% of dominants OBL, FACW, & FAC:

Check all indicators that apply and explain below:

<input type="checkbox"/> Visual observation of plant species growing in areas of prolonged inundation/saturation	<input type="checkbox"/> Physiological/reproductive adaptations
<input type="checkbox"/> Morphological adaptations	<input type="checkbox"/> Wetland plant database
<input type="checkbox"/> Technical Literature	<input type="checkbox"/> Personal knowledge of regional plant communities
	<input type="checkbox"/> Other (explain)

Hydrophytic vegetation present? Yes No

Rationale for decision/Remarks:

HYDROLOGY

Is it the growing season? Yes No

Based on: Soil temp (record temp)
 Other (explain)

Depth of inundation: _____ inches	WETLAND HYDROLOGY INDICATORS Primary Indicators: <u>some hoof marks not a tree</u> <input type="checkbox"/> Inundated <input type="checkbox"/> Saturated in Upper 12 Inches <input type="checkbox"/> Water Marks <input type="checkbox"/> Drift Lines <input type="checkbox"/> Sediment Deposits <input type="checkbox"/> Drainage Patterns in Wetlands Secondary Indicators (2 or more Required): <input type="checkbox"/> Oxidized Root Channels in Upper 12 Inches <input type="checkbox"/> Water-Stained Leaves <input type="checkbox"/> Local Soil Survey Data <input type="checkbox"/> FAC-Neutral Test <input type="checkbox"/> Other (Explain in Remarks)
Depth to free water in pit: _____ inches	
Depth to saturated soil: _____ inches	

Check all that apply & explain below:

Stream, lake or gage data
 Aerial photographs
 Other

Wetland hydrology present? Yes No

Rationale for decision/remarks: on a slope

SOILS

Map Unit Name (Series and Phase) :

altamont clay

Taxonomy (subgroup)

Plot ID:

Drainage Class

Field observations confirm mapped type? Yes No

Profile Description

Depth (inches)	Horizon	Matrix color (Munsell moist)	Mottle colors (Munsell moist)	Mottle abundance size and contrast	Texture, concretions, structure, etc.	Drawing of soil profile (match description)
0-4+	A	10YR 3/3			silty loam	

Hydric Soil Indicators: (check all that apply)

- Histosol
- Histic Epipedon
- Sulfidic Odor
- Aquic Moisture Regime
- Reducing Conditions
- Gleyed or Low-Chroma (=1) matrix
- Matrix chroma ≤ 2 with mottles
- Mg or Fe Concretions
- High Organic Content in Surface Layer of Sandy Soils
- Organic Streaking in Sandy Soils
- Listed on National/Local Hydric Soils List
- Other (explain in remarks)

Hydric soils present? Yes No

Rationale for decision/Remarks:

Wetland Determination

- Hydrophytic vegetation present? Yes No
- Hydric soils present? Yes No
- Wetland hydrology present? Yes No
- Is the sampling point within a wetland? Yes No

Rationale/Remarks:

NOTES: *alkali scald*

Revised 3/01

Routine Wetland Determination

1987 Corps Wetland Delineation Manual

Project/Site: <i>Colusa</i> Applicant/owner: Investigator(s): <i>M. Lee + C. Lee</i>	Date: <i>4-10-01</i> County: State: S/T/R:
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Do normal circumstances exist on the site? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Is the site significantly disturbed (atypical situation)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Is the area a potential problem area? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Explanation of atypical or problem area:	Community ID: Transect ID: Plot ID: <i>Q1</i>
--	---

VEGETATION (For *strata, indicate T = tree; S = shrub; H = herb; V = vine) *5' radius*

Dominant Plant Species	*Stratum	% cover	Indicator	Dominant Plant Species	*Stratum	% cover	Indicator
<i>Hordeum marinum</i>	<i>H</i>		<i>FAC</i>				

HYDROPHYTIC VEGETATION INDICATORS:

% of dominants OBL, FACW, & FAC: *100*

Check all indicators that apply and explain below:

<input type="checkbox"/> Visual observation of plant species growing in areas of prolonged inundation/saturation	<input type="checkbox"/> Physiological/reproductive adaptations
<input type="checkbox"/> Morphological adaptations	<input type="checkbox"/> Wetland plant database
<input type="checkbox"/> Technical Literature	<input type="checkbox"/> Personal knowledge of regional plant communities
	<input type="checkbox"/> Other (explain)

Hydrophytic vegetation present? Yes No

Rationale for decision/Remarks:

HYDROLOGY

Is it the growing season? Yes No

Based on: Soil temp (record temp)
 Other (explain)

Depth of inundation: _____ inches Depth to free water in pit: _____ inches Depth to saturated soil: _____ inches	<p>WETLAND HYDROLOGY INDICATORS</p> <p>Primary Indicators: <i>Deep hoof prints</i></p> <input type="checkbox"/> Inundated <input type="checkbox"/> Saturated in Upper 12 Inches <input type="checkbox"/> Water Marks <input type="checkbox"/> Drift Lines <input type="checkbox"/> Sediment Deposits <input type="checkbox"/> Drainage Patterns in Wetlands
Check all that apply & explain below: <input type="checkbox"/> Stream, lake or gage data <input type="checkbox"/> Aerial photographs <input type="checkbox"/> Other	Secondary Indicators (2 or more Required): <input type="checkbox"/> Oxidized Root Channels in Upper 12 Inches <input type="checkbox"/> Water-Stained Leaves <input type="checkbox"/> Local Soil Survey Data <input type="checkbox"/> FAC-Neutral Test <input type="checkbox"/> Other (Explain in Remarks)

Wetland hydrology present? Yes No

Rationale for decision/remarks: *Lower in elevation ≈ 6"*

SOILS

Map Unit Name (Series and Phase):

altamont clay

Taxonomy (subgroup)

Plot ID:

Drainage Class

Field observations confirm mapped type? Yes No

Profile Description

Depth (inches)	Horizon	Matrix color (Munsell moist)	Mottle colors (Munsell moist)	Mottle abundance size and contrast	Texture, concretions, structure, etc.	Drawing of soil profile (match description)
0-6+	A	10YR4/2			Silty loam	

Hydric Soil Indicators: (check all that apply)

- Histosol
- Histic Epipedon
- Sulfidic Odor
- Aquic Moisture Regime
- Reducing Conditions
- Gleyed or Low-Chroma (=1) matrix
- Matrix chroma ≤ 2 with mottles
- Mg or Fe Concretions
- High Organic Content in Surface Layer of Sandy Soils
- Organic Streaking in Sandy Soils
- Listed on National/Local Hydric Soils List
- Other (explain in remarks)

Hydric soils present? Yes No

Rationale for decision/Remarks:

Wetland Determination

- Hydrophytic vegetation present? Yes No
- Hydric soils present? Yes No
- Wetland hydrology present? Yes No
- Is the sampling point within a wetland? Yes No

Rationale/Remarks:

NOTES:

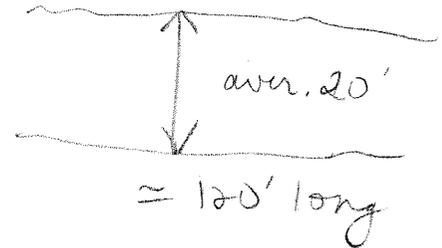
alkali scald

This is lower swale that receives runoff from adjacent uplands.

Revised 3/01

other plants in swale:

- Bromus hordeaceus*
- Solium multiflorum/perenne*
- Hordeum murinum*



This is not hydrologically connected to creek (isolated). i.e.

Routine Wetland Determination

1987 Corps Wetland Delineation Manual

Project/Site: <u>Colusa</u>				Date: <u>4-10-01</u>			
Applicant/owner: <u>Reliant</u>				County: <u>Colusa</u>			
Investigator(s): <u>M. Lee + C. Lu</u>				State:			
Do normal circumstances exist on the site?				<input checked="" type="checkbox"/> Yes		<input type="checkbox"/> No	
Is the site significantly disturbed (atypical situation)?				<input type="checkbox"/> Yes		<input checked="" type="checkbox"/> No	
Is the area a potential problem area?				<input checked="" type="checkbox"/> Yes		<input type="checkbox"/> No	
Explanation of atypical or problem area:				Community ID:			
				Transect ID:			
				Plot ID: <u>02</u>			
VEGETATION (For *strata, indicate T = tree; S = shrub; H = herb; V = vine)							
Dominant Plant Species	*Stratum	% cover	Indicator	Dominant Plant Species	*Stratum	% cover	Indicator
<u>Bromus hordeaceus</u>	<u>H</u>	<u>85</u>	<u>NL</u>				
<u>Taeniatherum caput-medusae</u>	<u>H</u>	<u><5</u>	<u>NL</u>				
<u>Hordeum murinum</u>	<u>H</u>	<u>10</u>	<u>FAC</u>				
<u>Cony</u>	<u>H</u>	<u><5</u>	<u>NL</u>				
HYDROPHYTIC VEGETATION INDICATORS:							
% of dominants OBL, FACW, & FAC: <u>10</u>							
Check all indicators that apply and explain below:							
<input type="checkbox"/> Visual observation of plant species growing in areas of prolonged inundation/saturation				<input type="checkbox"/> Physiological/reproductive adaptations			
<input type="checkbox"/> Morphological adaptations				<input type="checkbox"/> Wetland plant database			
<input type="checkbox"/> Technical Literature				<input type="checkbox"/> Personal knowledge of regional plant communities			
				<input type="checkbox"/> Other (explain)			
Hydrophytic vegetation present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No							
Rationale for decision/Remarks:							
HYDROLOGY							
Is it the growing season? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No							
Based on: <input type="checkbox"/> Soil temp (record temp)							
<input type="checkbox"/> Other (explain)							
Depth of inundation: _____ inches							
Depth to free water in pit: _____ inches							
Depth to saturated soil: _____ inches							
Check all that apply & explain below:							
<input type="checkbox"/> Stream, lake or gage data							
<input type="checkbox"/> Aerial photographs							
<input type="checkbox"/> Other							
WETLAND HYDROLOGY INDICATORS							
Primary Indicators:							
<input type="checkbox"/> Inundated							
<input type="checkbox"/> Saturated in Upper 12 Inches							
<input type="checkbox"/> Water Marks							
<input type="checkbox"/> Drift Lines							
<input type="checkbox"/> Sediment Deposits							
<input type="checkbox"/> Drainage Patterns in Wetlands							
Secondary Indicators (2 or more Required):							
<input type="checkbox"/> Oxidized Root Channels in Upper 12 Inches							
<input type="checkbox"/> Water-Stained Leaves							
<input type="checkbox"/> Local Soil Survey Data							
<input type="checkbox"/> FAC-Neutral Test							
<input type="checkbox"/> Other (Explain in Remarks)							
Wetland hydrology present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No							
Rationale for decision/remarks: <u>Slightly higher than adjacent Swale</u>							

SOILS

Plot ID:

Map Unit Name (Series and Phase) :

Drainage Class

altamont clay

Field observations confirm mapped type? Yes No

Taxonomy (subgroup)

Profile Description

Depth (inches)	Horizon	Matrix color (Munsell moist)	Mottle colors (Munsell moist)	Mottle abundance size and contrast	Texture, concretions, structure, etc.	Drawing of soil profile (match description)
0-5 ⁺	A	10YR3/2				

Hydric Soil Indicators: (check all that apply)

- Histosol
- Histic Epipedon
- Sulfidic Odor
- Aquic Moisture Regime
- Reducing Conditions
- Gleyed or Low-Chroma (=1) matrix
- Matrix chroma ≤ 2 with mottles
- Mg or Fe Concretions
- High Organic Content in Surface Layer of Sandy Soils
- Organic Streaking in Sandy Soils
- Listed on National/Local Hydric Soils List
- Other (explain in remarks)

Hydric soils present? Yes No

Rationale for decision/Remarks:

Wetland Determination

- Hydrophytic vegetation present? Yes No
- Hydric soils present? Yes No
- Wetland hydrology present? Yes No
- Is the sampling point within a wetland? Yes No

Rationale/Remarks:

NOTES: *alkali scald*

Revised 3/01

Routine Wetland Determination

1987 Corps Wetland Delineation Manual

Project/Site: <u>Colusa</u> Applicant/owner: Investigator(s): <u>M. Lu + C. Lu</u>	Date: <u>4-10-01</u> County: State: S/T/R:																																																
Do normal circumstances exist on the site? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Is the site significantly disturbed (atypical situation)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Is the area a potential problem area? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Explanation of atypical or problem area:	Community ID: Transect ID: Plot ID: <u>K7</u>																																																
VEGETATION (For *strata, indicate T = tree; S = shrub; H = herb; V = vine)																																																	
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 25%;">Dominant Plant Species</th> <th style="width: 10%;">*Stratum</th> <th style="width: 10%;">% cover</th> <th style="width: 10%;">Indicator</th> <th style="width: 25%;">Dominant Plant Species</th> <th style="width: 10%;">*Stratum</th> <th style="width: 10%;">% cover</th> <th style="width: 10%;">Indicator</th> </tr> </thead> <tbody> <tr> <td><u>Plantago coronopus</u></td> <td><u>H</u></td> <td><u>80</u></td> <td><u>FACW</u></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td><u>Erodium cicutaria</u></td> <td><u>H</u></td> <td><u>5</u></td> <td><u>NL</u></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td><u>Bromus hordeaceus</u></td> <td><u>H</u></td> <td><u>15</u></td> <td><u>NL</u></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td> </td> </tr> <tr> <td> </td> </tr> </tbody> </table>		Dominant Plant Species	*Stratum	% cover	Indicator	Dominant Plant Species	*Stratum	% cover	Indicator	<u>Plantago coronopus</u>	<u>H</u>	<u>80</u>	<u>FACW</u>					<u>Erodium cicutaria</u>	<u>H</u>	<u>5</u>	<u>NL</u>					<u>Bromus hordeaceus</u>	<u>H</u>	<u>15</u>	<u>NL</u>																				
Dominant Plant Species	*Stratum	% cover	Indicator	Dominant Plant Species	*Stratum	% cover	Indicator																																										
<u>Plantago coronopus</u>	<u>H</u>	<u>80</u>	<u>FACW</u>																																														
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<u>Bromus hordeaceus</u>	<u>H</u>	<u>15</u>	<u>NL</u>																																														
HYDROPHYTIC VEGETATION INDICATORS: % of dominants OBL, FACW, & FAC: <u>80</u> <u>bare ground 10%</u> Check all indicators that apply and explain below: <table style="width: 100%; margin-top: 5px;"> <tr> <td><input type="checkbox"/> Visual observation of plant species growing in areas of prolonged inundation/saturation</td> <td><input type="checkbox"/> Physiological/reproductive adaptations</td> </tr> <tr> <td><input type="checkbox"/> Morphological adaptations</td> <td><input type="checkbox"/> Wetland plant database</td> </tr> <tr> <td><input type="checkbox"/> Technical Literature</td> <td><input type="checkbox"/> Personal knowledge of regional plant communities</td> </tr> <tr> <td></td> <td><input type="checkbox"/> Other (explain)</td> </tr> </table>		<input type="checkbox"/> Visual observation of plant species growing in areas of prolonged inundation/saturation	<input type="checkbox"/> Physiological/reproductive adaptations	<input type="checkbox"/> Morphological adaptations	<input type="checkbox"/> Wetland plant database	<input type="checkbox"/> Technical Literature	<input type="checkbox"/> Personal knowledge of regional plant communities		<input type="checkbox"/> Other (explain)																																								
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<input type="checkbox"/> Technical Literature	<input type="checkbox"/> Personal knowledge of regional plant communities																																																
	<input type="checkbox"/> Other (explain)																																																
Hydrophytic vegetation present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Rationale for decision/Remarks:																																																	
HYDROLOGY Is it the growing season? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Based on: <input type="checkbox"/> Soil temp (record temp) <input type="checkbox"/> Other (explain)																																																	
Depth of inundation: _____ inches Depth to free water in pit: _____ inches Depth to saturated soil: _____ inches	WETLAND HYDROLOGY INDICATORS Primary Indicators: <ul style="list-style-type: none"> <input type="checkbox"/> Inundated <input type="checkbox"/> Saturated in Upper 12 Inches <input type="checkbox"/> Water Marks <input type="checkbox"/> Drift Lines <input type="checkbox"/> Sediment Deposits <input checked="" type="checkbox"/> Drainage Patterns in Wetlands <u>24" low</u> Secondary Indicators (2 or more Required): <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Oxidized Root Channels in Upper 12 Inches <input type="checkbox"/> Water-Stained Leaves <input type="checkbox"/> Local Soil Survey Data <input type="checkbox"/> FAC-Neutral Test <input type="checkbox"/> Other (Explain in Remarks) 																																																
Wetland hydrology present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Rationale for decision/remarks: <u>Lower - only slightly = 2"</u>																																																	

SOILS

Plot ID:

Map Unit Name (Series and Phase) :

Drainage Class

Altamont clay
Taxonomy (subgroup)

Field observations confirm mapped type? Yes No

Profile Description

Depth (inches)	Horizon	Matrix color (Munsell moist)	Mottle colors (Munsell moist)	Mottle abundance size and contrast	Texture, concretions, structure, etc.	Drawing of soil profile (match description)
0-4+	A	10R 4/2			Silty loam	

Hydric Soil Indicators: (check all that apply)

- | | |
|--|---|
| <input type="checkbox"/> Histosol
<input type="checkbox"/> Histic Epipedon
<input type="checkbox"/> Sulfidic Odor
<input type="checkbox"/> Aquic Moisture Regime
<input type="checkbox"/> Reducing Conditions
<input type="checkbox"/> Gleyed or Low-Chroma (=1) matrix | <input type="checkbox"/> Matrix chroma ≤ 2 with mottles
<input type="checkbox"/> Mg or Fe Concretions
<input type="checkbox"/> High Organic Content in Surface Layer of Sandy Soils
<input type="checkbox"/> Organic Streaking in Sandy Soils
<input type="checkbox"/> Listed on National/Local Hydric Soils List
<input type="checkbox"/> Other (explain in remarks) |
|--|---|

Hydric soils present? Yes No

Rationale for decision/Remarks:

Wetland Determination

- | | | |
|---|---|--|
| Hydrophytic vegetation present? | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No |
| Hydric soils present? | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No |
| Wetland hydrology present? | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No |
| Is the sampling point within a wetland? | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No |

Rationale/Remarks:

NOTES: *alkali scald*

Revised 3/01

Routine Wetland Determination

1987 Corps Wetland Delineation Manual

Project/Site: <u>Colusa</u> Applicant/owner: <u>Reliant</u> Investigator(s): <u>M. Lee + C. Lu</u>	Date: <u>4-9-01</u> County: <u>Colusa</u> State: <u>CA</u> S/T/R:
--	--

Do normal circumstances exist on the site? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Is the site significantly disturbed (atypical situation)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Is the area a potential problem area? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Explanation of atypical or problem area: <u>Seasonal hydrology</u>	Community ID: Transect ID: Plot ID: <u>A-2</u>
--	--

VEGETATION (For *strata, indicate T = tree; S = shrub; H = herb; V = vine) 5' radius

Dominant Plant Species	*Stratum	% cover	Indicator	Dominant Plant Species	*Stratum	% cover	Indicator
<u>Hordeum marinum</u>	<u>H</u>	<u>35</u>	<u>FAC</u>				
<u>Lolium multiflorum/perenne</u>	<u>H</u>	<u>35</u>	<u>FAC</u>				
<u>Lepidium nitidum</u>	<u>H</u>	<u><5</u>	<u>NL</u>				
<u>Pantago coronopus</u>	<u>H</u>	<u><5</u>	<u>FAC</u>				
<u>Lepidium latipes var. latipes</u>	<u>H</u>	<u><5</u>	<u>OBL</u>				
<u>Linaria vulgaris</u>		<u><5</u>	<u>NL</u>				

HYDROPHYTIC VEGETATION INDICATORS:

% of dominants OBL, FACW, & FAC: 70 Bare ground 20%

Check all indicators that apply and explain below:

<input type="checkbox"/> Visual observation of plant species growing in areas of prolonged inundation/saturation	<input type="checkbox"/> Physiological/reproductive adaptations
<input type="checkbox"/> Morphological adaptations	<input type="checkbox"/> Wetland plant database
<input type="checkbox"/> Technical Literature	<input type="checkbox"/> Personal knowledge of regional plant communities
	<input type="checkbox"/> Other (explain)

Hydrophytic vegetation present? Yes No

Rationale for decision/Remarks:

HYDROLOGY

Is it the growing season? Yes No

Based on: Soil temp (record temp)
 Other (explain)

Depth of inundation: _____ inches
 Depth to free water in pit: _____ inches
 Depth to saturated soil: _____ inches

Check all that apply & explain below:

<input type="checkbox"/> Stream, lake or gage data <input type="checkbox"/> Aerial photographs <input type="checkbox"/> Other	<p style="text-align: center;">WETLAND HYDROLOGY INDICATORS</p> <p>Primary Indicators: <u>X ^{core} root prints</u></p> <input type="checkbox"/> Inundated <input type="checkbox"/> Saturated in Upper 12 Inches <input type="checkbox"/> Water Marks <input type="checkbox"/> Drift Lines <input type="checkbox"/> Sediment Deposits <input checked="" type="checkbox"/> Drainage Patterns in Wetlands
	<p>Secondary Indicators (2 or more Required):</p> <input checked="" type="checkbox"/> Oxidized Root Channels in Upper 12 Inches <input type="checkbox"/> Water-Stained Leaves <input type="checkbox"/> Local Soil Survey Data <input type="checkbox"/> FAC-Neutral Test <input type="checkbox"/> Other (Explain in Remarks)

Wetland hydrology present? Yes No

Rationale for decision/remarks: lower elevation ~ 2' from adjacent upland

SOILS

Plot ID:

Map Unit Name (Series and Phase):

Altamont Clay

Drainage Class

Field observations confirm mapped type? Yes No

Taxonomy (subgroup)

Profile Description

Depth (inches)	Horizon	Matrix color (Munsell moist)	Mottle colors (Munsell moist)	Mottle abundance size and contrast	Texture, concretions, structure, etc.	Drawing of soil profile (match description)
0-4+	A	10YR 3/2	-		silty loam	

Hydric Soil Indicators: (check all that apply)

- Histosol
- Histic Epipedon
- Sulfidic Odor
- Aquic Moisture Regime
- Reducing Conditions
- Gleyed or Low-Chroma (=1) matrix
- Matrix chroma ≤ 2 with mottles
- Mg or Fe Concretions
- High Organic Content in Surface Layer of Sandy Soils
- Organic Streaking in Sandy Soils
- Listed on National/Local Hydric Soils List
- Other (explain in remarks)

Hydric soils present?

Yes No

Rationale for decision/Remarks:

*very dry! cow hoof marks
wooded + gravel in soil*

Wetland Determination

- Hydrophytic vegetation present? Yes No
- Hydric soils present? Yes No
- Wetland hydrology present? Yes No
- Is the sampling point within a wetland? Yes No

Rationale/Remarks:

NOTES:

alkali scald

Revised 3/01

Routine Wetland Determination

1987 Corps Wetland Delineation Manual

Project/Site: <u>Colusa Co.</u> Applicant/owner: Investigator(s): <u>M. Lee + C. Lu</u>	Date: <u>7-10-01</u> County: State: S/T/R:
Do normal circumstances exist on the site? <input type="checkbox"/> Yes <input type="checkbox"/> No Is the site significantly disturbed (atypical situation)? <input type="checkbox"/> Yes <input type="checkbox"/> No Is the area a potential problem area? <input type="checkbox"/> Yes <input type="checkbox"/> No Explanation of atypical or problem area:	Community ID: Transect ID: Plot ID: <u>F2</u>

VEGETATION (For *strata, indicate T = tree; S = shrub; H = herb; V = vine) 2' radius

Dominant Plant Species	*Stratum	% cover	Indicator	Dominant Plant Species	*Stratum	% cover	Indicator
<u>Lepidium latifolium</u>	<u>H</u>	<u>5</u>	<u>OBL</u>				
<u>Shepherd purse</u>	<u>H</u>	<u><5</u>	<u>FACW</u>				
<u>Yucca rostrata</u>	<u>H</u>	<u>80%</u>	<u>NL</u>				
<u>Erodium cicutarium</u>	<u>H</u>	<u>5</u>	<u>NL</u>				
<u>Brassica nigra</u>	<u>H</u>	<u><5</u>	<u>NL</u>				
<u>Cerastium dissectum</u>	<u>H</u>	<u><5</u>	<u>F</u>				

HYDROPHYTIC VEGETATION INDICATORS:

% of dominants OBL, FACW, & FAC:

Check all indicators that apply and explain below:

- | | |
|--|---|
| <input type="checkbox"/> Visual observation of plant species growing in areas of prolonged inundation/saturation | <input type="checkbox"/> Physiological/reproductive adaptations |
| <input type="checkbox"/> Morphological adaptations | <input type="checkbox"/> Wetland plant database |
| <input type="checkbox"/> Technical Literature | <input type="checkbox"/> Personal knowledge of regional plant communities |
| | <input type="checkbox"/> Other (explain) |

Hydrophytic vegetation present? Yes No

Rationale for decision/Remarks:

HYDROLOGY

Is it the growing season? Yes No

Based on: Soil temp (record temp)
 Other (explain)

Depth of inundation: _____ inches
 Depth to free water in pit: _____ inches
 Depth to saturated soil: _____ inches

Check all that apply & explain below:

- Stream, lake or gage data
 Aerial photographs
 Other

WETLAND HYDROLOGY INDICATORS

Primary Indicators:

- Inundated
 Saturated in Upper 12 Inches
 Water Marks
 Drift Lines
 Sediment Deposits
 Drainage Patterns in Wetlands

Secondary Indicators (2 or more Required):

- Oxidized Root Channels in Upper 12 Inches
 Water-Stained Leaves
 Local Soil Survey Data
 FAC-Neutral Test
 Other (Explain in Remarks)

Wetland hydrology present? Yes No

Rationale for decision/remarks:

SOILS

Plot ID:

Map Unit Name (Series and Phase):

Altamont clay

Drainage Class

Field observations confirm mapped type? Yes No

Taxonomy (subgroup)

Profile Description

Depth (inches)	Horizon	Matrix color (Munsell moist)	Mottle colors (Munsell moist)	Mottle abundance size and contrast	Texture, concretions, structure, etc.	Drawing of soil profile (match description)
0-4+	A	10YR 3/2	7.5YR 4/6	20%, med, ki	silty loam	

Hydric Soil Indicators: (check all that apply)

- Histosol
- Histic Epipedon
- Sulfidic Odor
- Aquic Moisture Regime
- Reducing Conditions
- Gleyed or Low-Chroma (=1) matrix
- Matrix chroma ≤ 2 with mottles
- Mg or Fe Concretions
- High Organic Content in Surface Layer of Sandy Soils
- Organic Streaking in Sandy Soils
- Listed on National/Local Hydric Soils List
- Other (explain in remarks)

Hydric soils present? Yes No

Rationale for decision/Remarks:

Wetland Determination

- Hydrophytic vegetation present? Yes No
- Hydric soils present? Yes No
- Wetland hydrology present? Yes No
- Is the sampling point within a wetland? Yes No

Rationale/Remarks:

NOTES: Point located ~ 3' higher than a swale that drains into a channel.

Revised 3/01

Routine Wetland Determination

1987 Corps Wetland Delineation Manual

Project/Site: <i>Colusa PP</i> Applicant/owner: <i>Reliant</i> Investigator(s): <i>C Lu, M Lee</i>	Date: <i>4/10/03</i> County: <i>Colusa</i> State: <i>CA</i> S/T/R:
Do normal circumstances exist on the site? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Is the site significantly disturbed (atypical situation)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Is the area a potential problem area? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Explanation of atypical or problem area: <i>Seasonal hydrology</i>	Community ID: <i>V-1</i> Transect ID: Plot ID:

VEGETATION (For *strata, indicate T = tree; S = shrub; H = herb; V = vine)

Dominant Plant Species	*Stratum	% cover	Indicator	Dominant Plant Species	*Stratum	% cover	Indicator
<i>Hordeum maritima</i>	<i>7S</i>	<i>H</i>	<i>FAC</i>				
<i>Downingia sp.</i>	<i>5S</i>	<i>H</i>	<i>OBL</i>				
<i>Plagiobothrys stipitatus</i>	<i>5S</i>	<i>H</i>	<i>OBL</i>				
<i>Bare ground</i>	<i>20</i>	<i>1</i>	<i>-</i>				
<i>Eryngium</i> <small>at. small folium</small> <i>coyote thistle</i>		<i>H</i>	<i>FACW</i>				
<i>wooly manblers</i> <i>Ps. leucorhynchus brevis</i>			<i>OBL</i>				

5ft
width

HYDROPHYTIC VEGETATION INDICATORS:

% of dominants OBL, FACW, & FAC: *80*

Check all indicators that apply and explain below:

- | | |
|--|---|
| <input type="checkbox"/> Visual observation of plant species growing in areas of prolonged inundation/saturation | <input type="checkbox"/> Physiological/reproductive adaptations |
| <input type="checkbox"/> Morphological adaptations | <input type="checkbox"/> Wetland plant database |
| <input type="checkbox"/> Technical Literature | <input type="checkbox"/> Personal knowledge of regional plant communities |
| | <input type="checkbox"/> Other (explain) |

Hydrophytic vegetation present? Yes No

Rationale for decision/Remarks:

HYDROLOGY

Is it the growing season? Yes No

Based on: Soil temp (record temp)
 Other (explain)

Depth of inundation: *0* inches
 Depth to free water in pit: *0* inches
 Depth to saturated soil: *0* inches

Check all that apply & explain below:

- Stream, lake or gage data
- Aerial photographs
- Other

WETLAND HYDROLOGY INDICATORS

Primary Indicators:

- Inundated
- Saturated in Upper 12 Inches
- Water Marks
- Drift Lines
- Sediment Deposits
- Drainage Patterns in Wetlands

Secondary Indicators (2 or more Required):

- Oxidized Root Channels in Upper 12 Inches
- Water-Stained Leaves
- Local Soil Survey Data
- FAC-Neutral Test
- Other (Explain in Remarks)

Wetland hydrology present? Yes No

Rationale for decision/remarks: *deep plentiful hoofprints*

SOILS

Plot ID:

Map Unit Name (Series and Phase):

Drainage Class

Taxonomy (subgroup) *altamont clay*

Field observations confirm mapped type? Yes No

Profile Description

Depth (inches)	Horizon	Matrix color (Munsell moist)	Mottle colors (Munsell moist)	Mottle abundance size and contrast	Texture, concretions, structure, etc.	Drawing of soil profile (match description)
18	A	10YR 3/2	7.5YR 4/6	30% lg mottles high contrast		

Hydric Soil Indicators: (check all that apply)

- Histosol
- Histic Epipedon
- Sulfidic Odor
- Aquic Moisture Regime
- Reducing Conditions
- Gleyed or Low-Chroma (=1) matrix
- Matrix chroma \leq 2 with mottles
- Mg or Fe Concretions
- High Organic Content in Surface Layer of Sandy Soils
- Organic Streaking in Sandy Soils
- Listed on National/Local Hydric Soils List
- Other (explain in remarks)

Hydric soils present? Yes No

Rationale for decision/Remarks:

Wetland Determination

- Hydrophytic vegetation present? Yes No
- Hydric soils present? Yes No
- Wetland hydrology present? Yes No
- Is the sampling point within a wetland? Yes No

large band of

Rationale/Remarks: *vernal pool next to alkali swale*

NOTES:

Revised 3/01

Routine Wetland Determination

1987 Corps Wetland Delineation Manual

Project/Site: <i>Colusa P.P.</i>				Date: <i>4/10/01</i>			
Applicant/owner: <i>Reliant</i>				County: <i>Colusa</i>			
Investigator(s): <i>C. Lu, M. Lee</i>				State: <i>CA</i>			
				S/T/R:			
Do normal circumstances exist on the site? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No				Community ID: <i>T-1</i>			
Is the site significantly disturbed (atypical situation)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No				Transect ID:			
Is the area a potential problem area? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No				Plot ID:			
Explanation of atypical or problem area: <i>Seasonal hydrology</i>							
VEGETATION (For *strata, indicate T = tree; S = shrub; H = herb; V = vine)							
Dominant Plant Species	*Stratum	% cover	Indicator	Dominant Plant Species	*Stratum	% cover	Indicator
<i>Atriplex falcata</i>		<i>H</i>	<i>FAC</i>				
<i>Bromus mollis</i>		<i>H</i>	<i>FACU-</i>				
<i>Plantago cornopis</i>		<i>H</i>	<i>FAC</i>				
<i>Sand spurry</i>		<i>H</i>	<i>FAC-</i>				
<i>Hordeum maximum</i>		<i>H</i>					
HYDROPHYTIC VEGETATION INDICATORS:							
% of dominants OBL, FACW, & FAC: <i>100%</i>							
Check all indicators that apply and explain below:							
<input type="checkbox"/> Visual observation of plant species growing in areas of prolonged inundation/saturation				<input type="checkbox"/> Physiological/reproductive adaptations			
<input type="checkbox"/> Morphological adaptations				<input type="checkbox"/> Wetland plant database			
<input type="checkbox"/> Technical Literature				<input type="checkbox"/> Personal knowledge of regional plant communities			
				<input type="checkbox"/> Other (explain)			
Hydrophytic vegetation present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No							
Rationale for decision/Remarks:							
HYDROLOGY							
Is it the growing season? <input type="checkbox"/> Yes <input type="checkbox"/> No							
Based on: <input type="checkbox"/> Soil temp (record temp)							
<input type="checkbox"/> Other (explain)							
Depth of inundation: _____ inches				WETLAND HYDROLOGY INDICATORS Primary Indicators: <input type="checkbox"/> Inundated <input type="checkbox"/> Saturated in Upper 12 Inches <input type="checkbox"/> Water Marks <input type="checkbox"/> Drift Lines <input type="checkbox"/> Sediment Deposits <input type="checkbox"/> Drainage Patterns in Wetlands Secondary Indicators (2 or more Required): <input type="checkbox"/> Oxidized Root Channels in Upper 12 Inches <input type="checkbox"/> Water-Stained Leaves <input type="checkbox"/> Local Soil Survey Data <input type="checkbox"/> FAC-Neutral Test <input type="checkbox"/> Other (Explain in Remarks)			
Depth to free water in pit: _____ inches							
Depth to saturated soil: _____ inches							
Check all that apply & explain below:							
<input type="checkbox"/> Stream, lake or gage data							
<input type="checkbox"/> Aerial photographs							
<input type="checkbox"/> Other							
Wetland hydrology present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No							
Rationale for decision/remarks: <i>hoofprints</i>							

SOILS

Map Unit Name (Series and Phase) :

Altamundo Clay

Taxonomy (subgroup)

Plot ID:

Drainage Class

Field observations confirm mapped type? Yes No

Profile Description

Depth (inches)	Horizon	Matrix color (Munsell moist)	Mottle colors (Munsell moist)	Mottle abundance size and contrast	Texture, concretions, structure, etc.	Drawing of soil profile (match description)
0-4+	A	10YR 4/3	7.5YR 4/3	10YR 4/3	—	

Hydric Soil Indicators: (check all that apply)

- Histosol
- Histic Epipedon
- Sulfidic Odor
- Aquic Moisture Regime
- Reducing Conditions
- Gleyed or Low-Chroma (=1) matrix
- Matrix chroma ≤ 2 with mottles
- Mg or Fe Concretions
- High Organic Content in Surface Layer of Sandy Soils
- Organic Streaking in Sandy Soils
- Listed on National/Local Hydric Soils List
- Other (explain in remarks)

Hydric soils present?

Yes No

Rationale for decision/Remarks:

Wetland Determination

- Hydrophytic vegetation present? Yes No
- Hydric soils present? Yes No
- Wetland hydrology present? Yes No
- Is the sampling point within a wetland? Yes No

Rationale/Remarks:

NOTES: *deep hoofprints - alkali swale*

Revised 3/01

Routine Wetland Determination

1987 Corps Wetland Delineation Manual

Project/Site: <u>Colusa P.P.</u> Applicant/owner: <u>Reliant</u> Investigator(s): <u>C. Lee, M. Lee</u>	Date: <u>4/10/07</u> County: <u>Colusa</u> State: <u>CA</u> S/T/R:
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Do normal circumstances exist on the site? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Is the site significantly disturbed (atypical situation)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Is the area a potential problem area? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Explanation of atypical or problem area: <u>Seasonal hydrology</u>	Community ID: <u>p-1</u> Transect ID: Plot ID:
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VEGETATION (For *strata, indicate T = tree; S = shrub; H = herb; V = vine)							
Dominant Plant Species	*Stratum	% cover	Indicator	Dominant Plant Species	*Stratum	% cover	Indicator
<u>Atriplex falcata</u>	<u>H</u>	<u><5</u>	<u>FAC</u>	<u>Hondewum marimum</u>		<u><5</u>	<u>FAC</u>
<u>Sand spurry</u> ^{<u>Spergularia</u>} <u>macrotheca</u>	<u>H</u>	<u>5</u>	<u>FAC-</u>	<u>Bar ground</u>		<u>60</u>	<u>/</u>
<u>Bromus mollis</u>	<u>H</u>	<u>30</u>	<u>NL</u>				
<u>Lolium perenne</u>	<u>H</u>	<u><5</u>	<u>FAC</u>				
<u>Y seed</u>	<u>H</u>	<u><1</u>					
<u>Lepidum natidum</u>	<u>H</u>	<u>5</u>	<u>NL</u>				

HYDROPHYTIC VEGETATION INDICATORS:
 % of dominants OBL, FACW, & FAC: 10% & 40% (25%)

Check all indicators that apply and explain below:

<input type="checkbox"/> Visual observation of plant species growing in areas of prolonged inundation/saturation	<input type="checkbox"/> Physiological/reproductive adaptations
<input type="checkbox"/> Morphological adaptations	<input type="checkbox"/> Wetland plant database
<input type="checkbox"/> Technical Literature	<input type="checkbox"/> Personal knowledge of regional plant communities
	<input type="checkbox"/> Other (explain)

Hydrophytic vegetation present? Yes No
 Rationale for decision/Remarks:

HYDROLOGY	WETLAND HYDROLOGY INDICATORS
Is it the growing season? <input type="checkbox"/> Yes <input type="checkbox"/> No Based on: <input type="checkbox"/> Soil temp (record temp) <input type="checkbox"/> Other (explain)	Primary Indicators: <input type="checkbox"/> Inundated <input type="checkbox"/> Saturated in Upper 12 Inches <input type="checkbox"/> Water Marks <input type="checkbox"/> Drift Lines <input type="checkbox"/> Sediment Deposits <input checked="" type="checkbox"/> Drainage Patterns in Wetlands Secondary Indicators (2 or more Required): <input type="checkbox"/> Oxidized Root Channels in Upper 12 Inches <input type="checkbox"/> Water-Stained Leaves <input type="checkbox"/> Local Soil Survey Data <input type="checkbox"/> FAC-Neutral Test <input type="checkbox"/> Other (Explain in Remarks)
Depth of inundation: <u>0</u> inches Depth to free water in pit: <u>0</u> inches Depth to saturated soil: <u>0</u> inches	
Check all that apply & explain below: <input type="checkbox"/> Stream, lake or gage data <input type="checkbox"/> Aerial photographs <input type="checkbox"/> Other	

Wetland hydrology present? Yes No
 Rationale for decision/remarks:
slightly lower in elevation

SOILS

Plot ID:

Map Unit Name (Series and Phase):

Altamont Clay

Drainage Class

Field observations confirm mapped type? Yes No

Taxonomy (subgroup)

Profile Description

Depth (inches)	Horizon	Matrix color (Munsell moist)	Mottle colors (Munsell moist)	Mottle abundance size and contrast	Texture, concretions, structure, etc.	Drawing of soil profile (match description)
.0-2+	A	10YR 3/3	10YR 3/3	Common		

Hydric Soil Indicators: (check all that apply)

- Histosol
- Histic Epipedon
- Sulfidic Odor
- Aquic Moisture Regime
- Reducing Conditions
- Gleyed or Low-Chroma (=1) matrix
- Matrix chroma ≤ 2 with mottles
- Mg or Fe Concretions
- High Organic Content in Surface Layer of Sandy Soils
- Organic Streaking in Sandy Soils
- Listed on National/Local Hydric Soils List
- Other (explain in remarks)

Hydric soils present? Yes No

Rationale for decision/Remarks:

Wetland Determination

- Hydrophytic vegetation present? Yes No
- Hydric soils present? Yes No
- Wetland hydrology present? Yes No
- Is the sampling point within a wetland? Yes No

Rationale/Remarks: *hydrology very marginal*

NOTES: *alkali scald*

Revised 3/01

Routine Wetland Determination

1987 Corps Wetland Delineation Manual

Project/Site: <i>Colusa P.P.</i>		Date: <i>4/9/01</i>	
Applicant/owner: <i>Reliant</i>		County: <i>Colusa</i>	
Investigator(s): <i>M. Lee + C. Lu</i>		State: <i>CA</i>	
Do normal circumstances exist on the site? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Community ID: <i>D-2</i>	
Is the site significantly disturbed (atypical situation)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		Transect ID:	
Is the area a potential problem area? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Plot ID:	
Explanation of atypical or problem area: <i>Seasonal hydrology</i>			
VEGETATION (For *strata, indicate T = tree; S = shrub; H = herb; V = vine)			
Dominant Plant Species	*Stratum	% cover	Indicator
<i>Base ground</i>	<i>H</i>	<i>20</i>	
<i>Bromus mollis</i>	<i>H</i>	<i>60</i>	<i>NL</i>
<i>Lepidium latipes</i>	<i>H</i>	<i><5</i>	<i>NL</i>
<i>Achyrachaena mollis</i>	<i>H</i>	<i><5</i>	<i>FAC</i>
<i>Blow wives</i>	<i>H</i>	<i>10</i>	<i>NL</i>
<i>Centauria solistatus</i>	<i>H</i>	<i>5</i>	<i>M</i>
<i>Medicago polymorpha</i>	<i>H</i>		
HYDROPHYTIC VEGETATION INDICATORS:			
% of dominants OBL, FACW, & FAC: <i><5</i>			
Check all indicators that apply and explain below:			
<input type="checkbox"/> Visual observation of plant species growing in areas of prolonged inundation/saturation	<input type="checkbox"/> Physiological/reproductive adaptations		
<input type="checkbox"/> Morphological adaptations	<input type="checkbox"/> Wetland plant database		
<input type="checkbox"/> Technical Literature	<input type="checkbox"/> Personal knowledge of regional plant communities		
	<input type="checkbox"/> Other (explain)		
Hydrophytic vegetation present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			
Rationale for decision/Remarks:			
HYDROLOGY			
Is it the growing season? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			
Based on: <input type="checkbox"/> Soil temp (record temp)			
<input type="checkbox"/> Other (explain)			
Depth of inundation:		inches	
Depth to free water in pit: <i>0</i>		inches	
Depth to saturated soil:		inches	
Check all that apply & explain below:			
<input type="checkbox"/> Stream, lake or gage data			
<input type="checkbox"/> Aerial photographs			
<input type="checkbox"/> Other			
WETLAND HYDROLOGY INDICATORS			
Primary Indicators:			
<input type="checkbox"/> Inundated			
<input type="checkbox"/> Saturated in Upper 12 Inches			
<input type="checkbox"/> Water Marks			
<input type="checkbox"/> Drift Lines			
<input type="checkbox"/> Sediment Deposits			
<input checked="" type="checkbox"/> Drainage Patterns in Wetlands			
Secondary Indicators (2 or more Required):			
<input type="checkbox"/> Oxidized Root Channels in Upper 12 Inches			
<input type="checkbox"/> Water-Stained Leaves			
<input type="checkbox"/> Local Soil Survey Data			
<input type="checkbox"/> FAC-Neutral Test			
<input type="checkbox"/> Other (Explain in Remarks)			
Wetland hydrology present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			
Rationale for decision/remarks: <i>Cow hoofprints present</i>			

SOILS

Plot ID:

Map Unit Name (Series and Phase) :

Drainage Class

Altamont Clay
Taxonomy (subgroup)

Field observations confirm mapped type? Yes No

Profile Description

Depth (inches)	Horizon	Matrix color (Munsell moist)	Mottle colors (Munsell moist)	Mottle abundance size and contrast	Texture, concretions, structure, etc.	Drawing of soil profile (match description)
10''	A	10YR 3/3	 	 	<i>silty loam</i>	

Hydric Soil Indicators: (check all that apply)

- Histosol
- Histic Epipedon
- Sulfidic Odor
- Aquic Moisture Regime
- Reducing Conditions
- Gleyed or Low-Chroma (=1) matrix
- Matrix chroma ≤ 2 with mottles
- Mg or Fe Concretions
- High Organic Content in Surface Layer of Sandy Soils
- Organic Streaking in Sandy Soils
- Listed on National/Local Hydric Soils List
- Other (explain in remarks)

Hydric soils present? Yes No

Rationale for decision/Remarks:

Wetland Determination

- Hydrophytic vegetation present? Yes No
- Hydric soils present? Yes No
- Wetland hydrology present? Yes No
- Is the sampling point within a wetland? Yes No

Rationale/Remarks:

NOTES: *The elevation of D-1 + D-2 are almost the same, although there is more upland vegetation in D-2 alkali scald*

Revised 3/01

Routine Wetland Determination

1987 Corps Wetland Delineation Manual

Project/Site: <i>Colusa P.P.</i> Applicant/owner: <i>Reliant</i> Investigator(s): <i>C. Lu, M. Lee</i>	Date: <i>4/9/01</i> County: <i>Colusa</i> State: <i>CA</i> S/T/R:
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Do normal circumstances exist on the site? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Is the site significantly disturbed (atypical situation)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Is the area a potential problem area? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Explanation of atypical or problem area: <i>Seasonal drainage</i>	Community ID: <i>A-1</i> Transect ID: Plot ID:
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VEGETATION (For *strata, indicate T = tree; S = shrub; H = herb; V = vine)

Dominant Plant Species	*Stratum	% cover	Indicator	Dominant Plant Species	*Stratum	% cover	Indicator
<i>Bare ground</i>	<i>H</i>	<i>80</i>		<i>Lolium multiflorum / perenne</i>	<i>H</i>	<i>5</i>	<i>FAC*</i>
<i>Plagiobothrys stippatus</i>	<i>H</i>	<i>10</i>	<i>OBL</i>		<i>H</i>		
<i>Erodium botrys</i>	<i>H</i>	<i>5</i>	<i>NL</i>	<i>Hordeum marium</i>	<i>H</i>	<i>5</i>	<i>FAC</i>
<i>Lepidium latipes latipes</i>	<i>H</i>	<i>5</i>	<i>OBL</i>	<i>Plantago cornopustata</i>		<i>5</i>	<i>FAC</i>
<i>Barnadesia</i>	<i>H</i>						
<i>Coyote Tussle Aringium</i>	<i>H</i>	<i>5</i>	<i>FACW</i>				

HYDROPHYTIC VEGETATION INDICATORS:

% of dominants OBL, FACW, & FAC:

Check all indicators that apply and explain below:

<input type="checkbox"/> Visual observation of plant species growing in areas of prolonged inundation/saturation	<input type="checkbox"/> Physiological/reproductive adaptations
<input type="checkbox"/> Morphological adaptations	<input type="checkbox"/> Wetland plant database
<input checked="" type="checkbox"/> Technical Literature	<input type="checkbox"/> Personal knowledge of regional plant communities
	<input type="checkbox"/> Other (explain)

Hydrophytic vegetation present? Yes No

Rationale for decision/Remarks:

HYDROLOGY

Is it the growing season? Yes No

Based on: Soil temp (record temp)
 Other (explain)

Depth of inundation: _____ inches Depth to free water in pit: _____ inches Depth to saturated soil: _____ inches	<p style="text-align: center;">WETLAND HYDROLOGY INDICATORS</p> <p>Primary Indicators:</p> <input type="checkbox"/> Inundated <input type="checkbox"/> Saturated in Upper 12 Inches <input type="checkbox"/> Water Marks <input type="checkbox"/> Drift Lines <input type="checkbox"/> Sediment Deposits <input checked="" type="checkbox"/> Drainage Patterns in Wetlands
Check all that apply & explain below: <input checked="" type="checkbox"/> Stream, lake or gage data <input type="checkbox"/> Aerial photographs <input type="checkbox"/> Other	Secondary Indicators (2 or more Required): <input type="checkbox"/> Oxidized Root Channels in Upper 12 Inches <input type="checkbox"/> Water-Stained Leaves <input type="checkbox"/> Local Soil Survey Data <input checked="" type="checkbox"/> FAC-Neutral Test <input type="checkbox"/> Other (Explain in Remarks)

Wetland hydrology present? Yes No

Rationale for decision/remarks: *Cow prints present in area*

SOILS

Plot ID:

Map Unit Name (Series and Phase):

Altamont Clay

Drainage Class

Taxonomy (subgroup)

Field observations confirm mapped type? Yes No

Profile Description

Depth (inches)	Horizon	Matrix color (Munsell moist)	Mottle colors (Munsell moist)	Mottle abundance size and contrast	Texture, concretions, structure, etc.	Drawing of soil profile (match description)
10"	A	10YR 3/2	10YR 3/2	10YR 3/2	clay - drying + very hard	

Hydric Soil Indicators: (check all that apply)

- Histosol
- Histic Epipedon
- Sulfidic Odor
- Aquic Moisture Regime
- Reducing Conditions
- Gleyed or Low-Chroma (=1) matrix
- Matrix chroma ≤ 2 with mottles
- Mg or Fe Concretions
- High Organic Content in Surface Layer of Sandy Soils
- Organic Streaking in Sandy Soils
- Listed on National/Local Hydric Soils List
- Other (explain in remarks)

Hydric soils present? Yes No

Rationale for decision/Remarks:

Wetland Determination

- Hydrophytic vegetation present? Yes No
- Hydric soils present? Yes No
- Wetland hydrology present? Yes No
- Is the sampling point within a wetland? Yes No

Rationale/Remarks:

Dry + soil is very hard

NOTES: *alkali peald*

Revised 3/01

SOILS

Plot ID:

Map Unit Name (Series and Phase):

Drainage Class

Chambers Clay
Taxonomy (subgroup)

Field observations confirm mapped type? Yes No

Profile Description

Depth (inches)	Horizon	Matrix color (Munsell moist)	Mottle colors (Munsell moist)	Mottle abundance size and contrast	Texture, concretions, structure, etc.	Drawing of soil profile (match description)
5 1/2	A	10YR 4/2	7.5Y 4/1	+	silty loam	

Hydric Soil Indicators: (check all that apply)

- Histosol
- Histic Epipedon
- Sulfidic Odor
- Aquic Moisture Regime
- Reducing Conditions
- Gleyed or Low-Chroma (=1) matrix
- Matrix chroma ≤ 2 with mottles
- Mg or Fe Concretions
- High Organic Content in Surface Layer of Sandy Soils
- Organic Streaking in Sandy Soils
- Listed on National/Local Hydric Soils List
- Other (explain in remarks)

Hydric soils present? Yes No

Rationale for decision/Remarks:

Wetland Determination

- Hydrophytic vegetation present? Yes No
- Hydric soils present? Yes No
- Wetland hydrology present? Yes No
- Is the sampling point within a wetland? Yes No

Rationale/Remarks:

NOTES:

alkali scald

Revised 3/01

Routine Wetland Determination

1987 Corps Wetland Delineation Manual

Project/Site: <i>Colusa P.P.</i> Applicant/owner: <i>Reliant</i> Investigator(s): <i>C. Lu, M. Lee</i>	Date: <i>4/9/61</i> County: <i>Colusa</i> State: <i>CA</i> S/T/R:
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Do normal circumstances exist on the site? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Is the site significantly disturbed (atypical situation)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Is the area a potential problem area? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Explanation of atypical or problem area: <i>seasonal drainage</i>	Community ID: <i>A-4</i> Transect ID: Plot ID:
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VEGETATION (For *strata, indicate T = tree; S = shrub; H = herb; V = vine)

Dominant Plant Species	*Stratum	% cover	Indicator	Dominant Plant Species	*Stratum	% cover	Indicator
<i>Achyrochaena</i>	H	<5	FAC				
<i>Blow wiver mollis</i>	H	10%	-				
<i>bare ground</i>	H	10%	-				
<i>Centauria solistatus</i>	H	50%	ML				
<i>bronnys hort. . .</i>	H	50 40	3S NL				
<i>Hordeum marianum</i>	H	40 <5	FAC				

HYDROPHYTIC VEGETATION INDICATORS:

% of dominants OBL, FACW, & FAC: *<5*

Check all indicators that apply and explain below:

<input type="checkbox"/> Visual observation of plant species growing in areas of prolonged inundation/saturation	<input type="checkbox"/> Physiological/reproductive adaptations
<input type="checkbox"/> Morphological adaptations	<input type="checkbox"/> Wetland plant database
<input checked="" type="checkbox"/> Technical Literature	<input type="checkbox"/> Personal knowledge of regional plant communities
	<input type="checkbox"/> Other (explain)

Hydrophytic vegetation present? Yes No

Rationale for decision/Remarks:

HYDROLOGY

Is it the growing season? Yes No

Based on: Soil temp (record temp)
 Other (explain)

Depth of inundation: _____ inches Depth to free water in pit: <i>Ø</i> inches Depth to saturated soil: _____ inches	<p style="text-align: center;">WETLAND HYDROLOGY INDICATORS</p> <p>Primary Indicators:</p> <input type="checkbox"/> Inundated <input type="checkbox"/> Saturated in Upper 12 Inches <input type="checkbox"/> Water Marks <input type="checkbox"/> Drift Lines <input type="checkbox"/> Sediment Deposits <input checked="" type="checkbox"/> Drainage Patterns in Wetlands
Check all that apply & explain below: <input type="checkbox"/> Stream, lake or gage data <input type="checkbox"/> Aerial photographs <input type="checkbox"/> Other	Secondary Indicators (2 or more Required): <input type="checkbox"/> Oxidized Root Channels in Upper 12 Inches <input type="checkbox"/> Water-Stained Leaves <input type="checkbox"/> Local Soil Survey Data <input type="checkbox"/> FAC-Neutral Test <input type="checkbox"/> Other (Explain in Remarks)

Wetland hydrology present? Yes No

Rationale for decision/remarks: *Cow droppings*

SOILS

Plot ID:

Map Unit Name (Series and Phase):

altamont clay

Drainage Class

Field observations confirm mapped type? Yes No

Taxonomy (subgroup)

Profile Description

Depth (inches)	Horizon	Matrix color (Munsell moist)	Mottle colors (Munsell moist)	Mottle abundance size and contrast	Texture, concretions, structure, etc.	Drawing of soil profile (match description)
8"	A	10YR 3/2	—	10YR 3/2	silty loam	

Hydric Soil Indicators: (check all that apply)

- Histosol
- Histic Epipedon
- Sulfidic Odor
- Aquic Moisture Regime
- Reducing Conditions
- Gleyed or Low-Chroma (=1) matrix
- Matrix chroma ≤ 2 with mottles
- Mg or Fe Concretions
- High Organic Content in Surface Layer of Sandy Soils
- Organic Streaking in Sandy Soils
- Listed on National/Local Hydric Soils List
- Other (explain in remarks)

Hydric soils present? Yes No

Rationale for decision/Remarks:

Wetland Determination

- Hydrophytic vegetation present? Yes No
- Hydric soils present? Yes No
- Wetland hydrology present? Yes No
- Is the sampling point within a wetland? Yes No

Rationale/Remarks:

NOTES:

** re: area B+C alkali scald*

** Areas B+C were recorded by GPS. They are separated by a road but were once part of the same vernal pool.*

Revised 3/01



Routine Wetland Determination

1987 Corps Wetland Delineation Manual

Project/Site: <u>Colusa P.P.</u> Applicant/owner: <u>Keliant</u> Investigator(s): <u>C. Lu, M. Lu</u>	Date: 4/19/01 <u>4/19/01</u> County: <u>Colusa</u> State: S/T/R:
Do normal circumstances exist on the site? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Is the site significantly disturbed (atypical situation)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Is the area a potential problem area? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Explanation of atypical or problem area: <u>Seasonal hydrology</u>	Community ID: <u>D-1</u> Transect ID: Plot ID:

VEGETATION (For *strata, indicate T = tree; S = shrub; H = herb; V = vine)

Dominant Plant Species	*Stratum	% cover	Indicator	Dominant Plant Species	*Stratum	% cover	Indicator
<u>Bare ground</u>	<u>H</u>	<u>50</u>	<u>—</u>	<u>Bromus moeris</u>		<u>< 5</u>	<u>NL</u>
<u>Lepidium latipes latipes</u>	<u>H</u>	<u>25</u>	<u>OBL</u>	<u>Poa annua</u>		<u>~ 5</u>	<u>FACW</u>
<u>Erodium katy</u>	<u>H</u>	<u>5</u>	<u>NL</u>	<u>Polygonum sp.</u>		<u>< 5</u>	<u>—</u>
<u>Plantago corniculata</u>	<u>H</u>	<u>15</u>	<u>FAC</u>	<u>Plagiobothrys stipitatus</u>		<u>5</u>	<u>OBL</u>
<u>Eryngium alismaefolium</u> <u>Coyote thistle</u>	<u>A</u>	<u>< 5</u>	<u>FACW</u>				<u>not in plot but in the area</u>
<u>Medicago polymorpha</u>	<u>H</u>	<u>5</u>	<u>NL</u>				

HYDROPHYTIC VEGETATION INDICATORS:

% of dominants OBL, FACW, & FAC: 25 of 50%, or 50%.

Check all indicators that apply and explain below:

- | | |
|--|---|
| <input type="checkbox"/> Visual observation of plant species growing in areas of prolonged inundation/saturation | <input type="checkbox"/> Physiological/reproductive adaptations |
| <input type="checkbox"/> Morphological adaptations | <input type="checkbox"/> Wetland plant database |
| <input checked="" type="checkbox"/> Technical Literature | <input type="checkbox"/> Personal knowledge of regional plant communities |
| | <input type="checkbox"/> Other (explain) |

Hydrophytic vegetation present? Yes No

Rationale for decision/Remarks:

HYDROLOGY

Is it the growing season? Yes No

Based on: Soil temp (record temp)
 Other (explain)

Depth of inundation: _____ inches
 Depth to free water in pit: 0 inches
 Depth to saturated soil: _____ inches

Check all that apply & explain below:

- Stream, lake or gage data
 Aerial photographs
 Other

WETLAND HYDROLOGY INDICATORS

Primary Indicators:

- Inundated
 Saturated in Upper 12 Inches
 Water Marks
 Drift Lines
 Sediment Deposits
 Drainage Patterns in Wetlands

Secondary Indicators (2 or more Required):

- Oxidized Root Channels in Upper 12 Inches
 Water-Stained Leaves
 Local Soil Survey Data
 FAC-Neutral Test
 Other (Explain in Remarks)

Wetland hydrology present? Yes No

Rationale for decision/remarks:

cow hoof prints, slightly depressed area next to fence line

SOILS

Plot ID:

Map Unit Name (Series and Phase) :

Drainage Class

Altamont Clay
Taxonomy (subgroup)

Field observations confirm mapped type? Yes No

Profile Description

Depth (inches)	Horizon	Matrix color (Munsell moist)	Mottle colors (Munsell moist)	Mottle abundance size and contrast	Texture, concretions, structure, etc.	Drawing of soil profile (match description)
~ 8	A	10YR 3/3	 	~? 	silty loam	

Hydric Soil Indicators: (check all that apply)

- | | |
|--|--|
| <input type="checkbox"/> Histosol
<input type="checkbox"/> Histic Epipedon
<input type="checkbox"/> Sulfidic Odor
<input type="checkbox"/> Aquic Moisture Regime
<input type="checkbox"/> Reducing Conditions
<input type="checkbox"/> Gleyed or Low-Chroma (=1) matrix | <input type="checkbox"/> Matrix chroma ≤ 2 with mottles
<input type="checkbox"/> Mg or Fe Concretions
<input type="checkbox"/> High Organic Content in Surface Layer of Sandy Soils
<input type="checkbox"/> Organic Streaking in Sandy Soils
<input type="checkbox"/> Listed on National/Local Hydric Soils List
<input type="checkbox"/> Other (explain in remarks) |
|--|--|

Hydric soils present? Yes No

Rationale for decision/Remarks:

Wetland Determination

- Hydrophytic vegetation present? Yes No
- Hydric soils present? Yes No
- Wetland hydrology present? Yes No
- Is the sampling point within a wetland? Yes No

Rationale/Remarks:

NOTES: *Alkaline soils*

Revised 3/01

Routine Wetland Determination

1987 Corps Wetland Delineation Manual

Project/Site: <i>Colusa P.P.</i> Applicant/owner: <i>Reliant</i> Investigator(s): <i>C. Lu, M. Lee</i>	Date: <i>4/10/03</i> County: <i>Colusa</i> State: S/T/R:
Do normal circumstances exist on the site? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Is the site significantly disturbed (atypical situation)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Is the area a potential problem area? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Explanation of atypical or problem area: <i>seasonal drainage</i>	Community ID: <i>F-1</i> Transect ID: Plot ID:

VEGETATION (For *strata, indicate T = tree; S = shrub; H = herb; V = vine)

Dominant Plant Species	*Stratum	% cover	Indicator	Dominant Plant Species	*Stratum	% cover	Indicator
<i>Plantago corulata</i>	H	50 50	FAC	<i>bare ground</i>		15 15	
<i>epidium latifolium</i>	H	20	OBL				
<i>Hordeum ^{maritimum} maritimum</i>	H	10	NL				
<i>Chamaeliria occidentalis</i>	H	5	N				
<i>shepard's purse</i>	H	5	NL				
<i>Lolium perenne</i>	A	5	FAC				

HYDROPHYTIC VEGETATION INDICATORS:

% of dominants OBL, FACW, & FAC: *70*

Check all indicators that apply and explain below:

<input type="checkbox"/> Visual observation of plant species growing in areas of prolonged inundation/saturation	<input type="checkbox"/> Physiological/reproductive adaptations
<input type="checkbox"/> Morphological adaptations	<input type="checkbox"/> Wetland plant database
<input checked="" type="checkbox"/> Technical Literature	<input type="checkbox"/> Personal knowledge of regional plant communities
	<input type="checkbox"/> Other (explain)

Hydrophytic vegetation present? Yes No

Rationale for decision/Remarks:

HYDROLOGY

Is it the growing season? Yes No

Based on: Soil temp (record temp)
 Other (explain)

Depth of inundation: _____ inches Depth to free water in pit: _____ inches Depth to saturated soil: _____ inches	<p style="text-align: center;">WETLAND HYDROLOGY INDICATORS</p> <p>Primary Indicators:</p> <input type="checkbox"/> Inundated <input type="checkbox"/> Saturated in Upper 12 Inches <input type="checkbox"/> Water Marks <input type="checkbox"/> Drift Lines <input type="checkbox"/> Sediment Deposits <input type="checkbox"/> Drainage Patterns in Wetlands
Check all that apply & explain below: <input type="checkbox"/> Stream, lake or gage data <input type="checkbox"/> Aerial photographs <input type="checkbox"/> Other	<p>Secondary Indicators (2 or more Required):</p> <input type="checkbox"/> Oxidized Root Channels in Upper 12 Inches <input type="checkbox"/> Water-Stained Leaves <input type="checkbox"/> Local Soil Survey Data <input type="checkbox"/> FAC-Neutral Test <input type="checkbox"/> Other (Explain in Remarks)

Wetland hydrology present? Yes No

Rationale for decision/remarks: *site is on a slope. No cow hoofprints*

SOILS

Plot ID:

Map Unit Name (Series and Phase) :

Drainage Class

Altamont Clay
Taxonomy (subgroup)

Field observations confirm mapped type? Yes No

Profile Description

Depth (inches)	Horizon	Matrix color (Munsell moist)	Mottle colors (Munsell moist)	Mottle abundance size and contrast	Texture, concretions, structure, etc.	Drawing of soil profile (match description)
5	A	10YR 3/3	10YR 3/3	2:1 10YR 3/3 †		

Hydric Soil Indicators: (check all that apply)

- Histosol
- Histic Epipedon
- Sulfidic Odor
- Aquic Moisture Regime
- Reducing Conditions
- Gleyed or Low-Chroma (=1) matrix
- Matrix chroma ≤ 2 with mottles
- Mg or Fe Concretions
- High Organic Content in Surface Layer of Sandy Soils
- Organic Streaking in Sandy Soils
- Listed on National/Local Hydric Soils List
- Other (explain in remarks)

Hydric soils present? Yes No

Rationale for decision/Remarks:

Wetland Determination

- Hydrophytic vegetation present? Yes No
- Hydric soils present? Yes No
- Wetland hydrology present? Yes No
- Is the sampling point within a wetland? Yes No

Rationale/Remarks:

NOTES: *ground very hard, alkali sealed*

Revised 3/01

Routine Wetland Determination

1987 Corps Wetland Delineation Manual

Project/Site: <i>Colusa P.P.</i> Applicant/owner: <i>Reliant</i> Investigator(s): <i>C. Lee, M. Lee</i>	Date: <i>4/10/01</i> County: <i>Colusa</i> State: <i>CA</i> S/T/R:
Do normal circumstances exist on the site? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Is the site significantly disturbed (atypical situation)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Is the area a potential problem area? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Explanation of atypical or problem area: <i>Seasonal drainage</i>	Community ID: <i>F-3</i> Transect ID: Plot ID:

VEGETATION (For *strata, indicate T = tree; S = shrub; H = herb; V = vine)

Dominant Plant Species	*Stratum	% cover	Indicator	Dominant Plant Species	*Stratum	% cover	Indicator
<i>Plantago coronopus</i>	H	10 80	FAC				
<i>Convolvulus arvensis</i>	H	10	ML				
<i>Polygonum</i> etc Sp. (Common)	H	30 35	T				
		5					

HYDROPHYTIC VEGETATION INDICATORS:

% of dominants OBL, FACW, & FAC: *10 of 56* *bare ground 45%*

Check all indicators that apply and explain below:

<input type="checkbox"/> Visual observation of plant species growing in areas of prolonged inundation/saturation	<input type="checkbox"/> Physiological/reproductive adaptations
<input type="checkbox"/> Morphological adaptations	<input type="checkbox"/> Wetland plant database
<input type="checkbox"/> Technical Literature	<input type="checkbox"/> Personal knowledge of regional plant communities
	<input type="checkbox"/> Other (explain)

Hydrophytic vegetation present? Yes No

Rationale for decision/Remarks:

HYDROLOGY

Is it the growing season? Yes No

Based on: Soil temp (record temp)
 Other (explain)

Depth of inundation: _____ inches Depth to free water in pit: _____ inches Depth to saturated soil: _____ inches	<p style="text-align: center;">WETLAND HYDROLOGY INDICATORS</p> <p>Primary Indicators:</p> <input type="checkbox"/> Inundated <i>X algal matting</i> <input type="checkbox"/> Saturated in Upper 12 Inches <i>X 36" cracks</i> <input type="checkbox"/> Water Marks <input type="checkbox"/> Drift Lines <input type="checkbox"/> Sediment Deposits <input checked="" type="checkbox"/> Drainage Patterns in Wetlands <i>(lower)</i>
Check all that apply & explain below: <input type="checkbox"/> Stream, lake or gage data <input type="checkbox"/> Aerial photographs <input type="checkbox"/> Other	Secondary Indicators (2 or more Required): <input type="checkbox"/> Oxidized Root Channels in Upper 12 Inches <input type="checkbox"/> Water-Stained Leaves <input type="checkbox"/> Local Soil Survey Data <input type="checkbox"/> FAC-Neutral Test <input type="checkbox"/> Other (Explain in Remarks)

Wetland hydrology present? Yes No

Rationale for decision/remarks:

SOILS

Plot ID:

Map Unit Name (Series and Phase):

Altamont Clay

Drainage Class

Taxonomy (subgroup)

Field observations confirm mapped type? Yes No

Profile Description

Depth (inches)	Horizon	Matrix color (Munsell moist)	Mottle colors (Munsell moist)	Mottle abundance size and contrast	Texture, concretions, structure, etc.	Drawing of soil profile (match description)
10	A	10YR 3/2	—	—		

Hydric Soil Indicators: (check all that apply)

- | | |
|--|--|
| <input type="checkbox"/> Histosol
<input type="checkbox"/> Histic Epipedon
<input type="checkbox"/> Sulfidic Odor
<input type="checkbox"/> Aquic Moisture Regime
<input type="checkbox"/> Reducing Conditions
<input type="checkbox"/> Gleyed or Low-Chroma (=1) matrix | <input type="checkbox"/> Matrix chroma ≤ 2 with mottles
<input type="checkbox"/> Mg or Fe Concretions
<input type="checkbox"/> High Organic Content in Surface Layer of Sandy Soils
<input type="checkbox"/> Organic Streaking in Sandy Soils
<input type="checkbox"/> Listed on National/Local Hydric Soils List
<input type="checkbox"/> Other (explain in remarks) |
|--|--|

Hydric soils present? Yes No

Rationale for decision/Remarks: *no mottling*

Wetland Determination

- | | | |
|---|---|--|
| Hydrophytic vegetation present? | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No |
| Hydric soils present? | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No |
| Wetland hydrology present? | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No |
| Is the sampling point within a wetland? | <input type="checkbox"/> Yes | <input type="checkbox"/> No |

Rationale/Remarks:

NOTES: *The site is a low drainage area that runs to a larger drainage ditch
alkali scald*

Revised 3/01

2006 WETLAND DELINEATION FORMS

Routine Wetland Determination

1987 Corps Wetland Delineation Manual

Project/Site: Colusa Generating Station	Date: 9/22/2006
Applicant/owner:	County: Colusa
Investigator(s): Justin Whitfield, Melissa Newman	State: CA
	S/T/R:
Do normal circumstances exist on the site? <input type="checkbox"/> Yes <input type="checkbox"/> No	Community ID: Transect ID: Plot ID: 10u
Is the site significantly disturbed (atypical situation)? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Is the area a potential problem area? <input type="checkbox"/> Yes <input type="checkbox"/> No	
Explanation of atypical or problem area: grazed	

VEGETATION (For *strata, indicate T = tree; S = shrub; H = herb; V = vine)

Dominant Plant Species	*Stratum	% cover	Indicator	Dominant Plant Species	*Stratum	% cover	Indicator
<i>Hemizonia congesta</i> ssp. <i>congesta</i>	H	15	not listed				
<i>Hordeum murinum</i> ssp. <i>leporinum</i>	H	50	Not listed				
<i>Lolium perenne</i>	H	10	FAC*				

HYDROPHYTIC VEGETATION INDICATORS:

% of dominants OBL, FACW, & FAC: 0

Check all indicators that apply and explain below:

<input type="checkbox"/> Visual observation of plant species growing in areas of prolonged inundation/saturation	<input type="checkbox"/> Physiological/reproductive adaptations
<input type="checkbox"/> Morphological adaptations	<input type="checkbox"/> Wetland plant database
<input type="checkbox"/> Technical Literature	<input type="checkbox"/> Personal knowledge of regional plant communities
	<input type="checkbox"/> Other (explain)

Hydrophytic vegetation present? Yes No

Rationale for decision/Remarks:

HYDROLOGY

Is it the growing season? Yes No

Based on: Soil temp (record temp)
 Other (explain)

Depth of inundation: _____ inches

Depth to free water in pit: _____ inches

Depth to saturated soil: _____ inches

Recorded Data (Describe in Remarks):
Check all that apply & explain below:
 Stream, lake or gage data
 Aerial photographs
 Other

No Recorded Data Available

WETLAND HYDROLOGY INDICATORS

Primary Indicators:

- Inundated
- Saturated in Upper 12 Inches
- Water Marks
- Drift Lines
- Sediment Deposits
- Drainage Patterns in Wetlands

Secondary Indicators (2 or more Required):

- Oxidized Root Channels in Upper 12 Inches
- Water-Stained Leaves
- Local Soil Survey Data
- FAC-Neutral Test
- Other (Explain in Remarks)

Wetland hydrology present? Yes No
 Rationale for decision/remarks:

SOILS Plot ID:
 Map Unit Name (Series and Phase) :
 Taxonomy (subgroup) Drainage Class
Field observations confirm mapped type? Yes
 No

Profile Description

Depth (inches)	Horizon	Matrix color (Munsell moist)	Mottle colors (Munsell moist)	Mottle abundance size and contrast	Texture, concretions, structure, etc.	Drawing of soil profile (match description)
0-6	A	10YR 5/3	7.5YR 5/6	few, fine, and faint	silty clay loam	
6-10	B	10YR 4/2	7.5YR 5/6	common, medium, and faint	silty clay loam	

Hydric Soil Indicators: (check all that apply)

<input type="checkbox"/> Histosol <input type="checkbox"/> Histic Epipedon <input type="checkbox"/> Sulfidic Odor <input type="checkbox"/> Aquic Moisture Regime <input type="checkbox"/> Reducing Conditions <input type="checkbox"/> Gleyed or Low-Chroma (=1) matrix	<input checked="" type="checkbox"/> Matrix chroma ≤ 2 with mottles <input type="checkbox"/> Mg or Fe Concretions <input type="checkbox"/> High Organic Content in Surface Layer of Sandy Soils <input type="checkbox"/> Organic Streaking in Sandy Soils <input type="checkbox"/> Listed on National/Local Hydric Soils List <input type="checkbox"/> Other (explain in remarks)
--	--

Hydric soils present? Yes No
 Rationale for decision/Remarks:

Wetland Determination

Hydrophytic vegetation present?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Hydric soils present?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Wetland hydrology present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Is the sampling point within a wetland?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No

Rationale/Remarks:

NOTES:

Routine Wetland Determination

1987 Corps Wetland Delineation Manual

Project/Site: Colusa Generating Station	Date: 9/22/2006
Applicant/owner:	County: Colusa
Investigator(s): Justin Whitfield, Melissa Newman	State: CA
	S/T/R:
Do normal circumstances exist on the site? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Community ID:
Is the site significantly disturbed (atypical situation)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Transect ID:
Is the area a potential problem area? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Plot ID: 10w
Explanation of atypical or problem area: grazed	

VEGETATION (For *strata, indicate T = tree; S = shrub; H = herb; V = vine)

Dominant Plant Species	*Stratum	% cover	Indicator	Dominant Plant Species	*Stratum	% cover	Indicator
<i>Eryngium vaseyi</i>	H	5	FACW	<i>Lolium perenne</i>	H	10	FAC*
<i>Grindelia camporum</i>	H	5	FACU				
<i>Polypogon monspeliensis</i>	H	10	FACW+				
<i>Hemizonia congesta</i> ssp. <i>congesta</i>	H	1	not listed				
<i>Crypsis schoenoides</i>	H	50	OBL				
<i>Hemizonia parryi</i>	H	1	FAC				

HYDROPHYTIC VEGETATION INDICATORS:

% of dominants OBL, FACW, & FAC: a 100% according to 50/20 rule.

Check all indicators that apply and explain below:

<input type="checkbox"/> Visual observation of plant species growing in areas of prolonged inundation/saturation	<input type="checkbox"/> Physiological/reproductive adaptations
<input type="checkbox"/> Morphological adaptations	<input type="checkbox"/> Wetland plant database
<input type="checkbox"/> Technical Literature	<input type="checkbox"/> Personal knowledge of regional plant communities
	<input type="checkbox"/> Other (explain)

Hydrophytic vegetation present? Yes No

Rationale for decision/Remarks:

<p>HYDROLOGY</p> <p>Is it the growing season? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>Based on: <input type="checkbox"/> Soil temp (record temp) <input type="checkbox"/> Other (explain)</p> <p>Depth of inundation: _____ inches</p> <p>Depth to free water in pit: _____ inches</p> <p>Depth to saturated soil: _____ inches</p> <p><input type="checkbox"/> Recorded Data (Describe in Remarks): Check all that apply & explain below: <input type="checkbox"/> Stream, lake or gage data <input type="checkbox"/> Aerial photographs <input type="checkbox"/> Other</p> <p><input type="checkbox"/> No Recorded Data Available</p>	<p style="text-align: center;">WETLAND HYDROLOGY INDICATORS</p> <p>Primary Indicators:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Inundated <input type="checkbox"/> Saturated in Upper 12 Inches <input type="checkbox"/> Water Marks <input type="checkbox"/> Drift Lines <input type="checkbox"/> Sediment Deposits <input checked="" type="checkbox"/> Drainage Patterns in Wetlands <p>Secondary Indicators (2 or more Required):</p> <ul style="list-style-type: none"> <input type="checkbox"/> Oxidized Root Channels in Upper 12 Inches <input type="checkbox"/> Water-Stained Leaves <input type="checkbox"/> Local Soil Survey Data <input type="checkbox"/> FAC-Neutral Test <input type="checkbox"/> Other (Explain in Remarks)
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Wetland hydrology present? **Yes** **No**
 Rationale for decision/remarks: very heavy soil cracking and large deep hoofprints

SOILS Plot ID:
 Map Unit Name (Series and Phase) : Drainage Class
 Taxonomy (subgroup) Field observations confirm mapped type? Yes No

Profile Description						
Depth (inches)	Horizon	Matrix color (Munsell moist)	Mottle colors (Munsell moist)	Mottle abundance size and contrast	Texture, concretions, structure, etc.	Drawing of soil profile (match description)
0-8	A	10YR 4/2	7.5YR 4/6	common, medium, and distinct	silty clay loam	

Hydric Soil Indicators: (check all that apply)

<input type="checkbox"/> Histosol <input type="checkbox"/> Histic Epipedon <input type="checkbox"/> Sulfidic Odor <input type="checkbox"/> Aquic Moisture Regime <input type="checkbox"/> Reducing Conditions <input type="checkbox"/> Gleyed or Low-Chroma (=1) matrix	<input checked="" type="checkbox"/> Matrix chroma ≤ 2 with mottles <input type="checkbox"/> Mg or Fe Concretions <input type="checkbox"/> High Organic Content in Surface Layer of Sandy Soils <input type="checkbox"/> Organic Streaking in Sandy Soils <input type="checkbox"/> Listed on National/Local Hydric Soils List <input type="checkbox"/> Other (explain in remarks)
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Hydric soils present? **Yes** **No**
 Rationale for decision/Remarks:

Wetland Determination

Hydrophytic vegetation present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Hydric soils present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Wetland hydrology present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Is the sampling point within a wetland?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No

Rationale/Remarks:

NOTES:

Routine Wetland Determination

1987 Corps Wetland Delineation Manual

Project/Site: Colusa Generating Station	Date: 9/22/2006
Applicant/owner:	County: Colusa
Investigator(s): Justin Whitfield, Melissa Newman	State: CA
	S/T/R:
Do normal circumstances exist on the site? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Community ID: Transect ID: Plot ID: 11u
Is the site significantly disturbed (atypical situation)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Is the area a potential problem area? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Explanation of atypical or problem area: grazed	

VEGETATION (For *strata, indicate T = tree; S = shrub; H = herb; V = vine)

Dominant Plant Species	*Stratum	% cover	Indicator	Dominant Plant Species	*Stratum	% cover	Indicator
<i>Hordeum murinum ssp. leporinum</i>	H	20	Not listed				
<i>Lolium perenne</i>	H	30	FAC*				
<i>Plantago elongata</i>	H	10	FACW*				
<i>Bromus hordeaceus</i>	H	25	Not listed				

HYDROPHYTIC VEGETATION INDICATORS:

% of dominants OBL, FACW, & FAC: 33 according to 50/20 rule.

Check all indicators that apply and explain below:

<input type="checkbox"/> Visual observation of plant species growing in areas of prolonged inundation/saturation	<input type="checkbox"/> Physiological/reproductive adaptations
<input type="checkbox"/> Morphological adaptations	<input type="checkbox"/> Wetland plant database
<input type="checkbox"/> Technical Literature	<input type="checkbox"/> Personal knowledge of regional plant communities
	<input type="checkbox"/> Other (explain)

Hydrophytic vegetation present? Yes No

Rationale for decision/Remarks:

HYDROLOGY

Is it the growing season? Yes No

Based on: Soil temp (record temp)
 Other (explain)

Depth of inundation: _____ inches

Depth to free water in pit: _____ inches

Depth to saturated soil: _____ inches

Recorded Data (Describe in Remarks):
Check all that apply & explain below:
 Stream, lake or gage data
 Aerial photographs
 Other

No Recorded Data Available

WETLAND HYDROLOGY INDICATORS

Primary Indicators:

- Inundated
- Saturated in Upper 12 Inches
- Water Marks
- Drift Lines
- Sediment Deposits
- Drainage Patterns in Wetlands

Secondary Indicators (2 or more Required):

- Oxidized Root Channels in Upper 12 Inches
- Water-Stained Leaves
- Local Soil Survey Data
- FAC-Neutral Test
- Other (Explain in Remarks)

Routine Wetland Determination

1987 Corps Wetland Delineation Manual

Project/Site: Colusa Generating Station	Date: 9/22/2006
Applicant/owner:	County: Colusa
Investigator(s): Justin Whitfield, Melissa Newman	State: CA
	S/T/R:
Do normal circumstances exist on the site? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Community ID:
Is the site significantly disturbed (atypical situation)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Transect ID:
Is the area a potential problem area? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Plot ID: 11w
Explanation of atypical or problem area: grazed	

VEGETATION (For *strata, indicate T = tree; S = shrub; H = herb; V = vine)

Dominant Plant Species	*Stratum	% cover	Indicator	Dominant Plant Species	*Stratum	% cover	Indicator
<i>Polypogon monspeliensis</i>	H	10	FACW+				
<i>Hordeum murinum ssp. leporinum</i>	H	20	not listed				
<i>Crypsis schoenoides</i>	H	40	OBL				

HYDROPHYTIC VEGETATION INDICATORS:

% of dominants OBL, FACW, & FAC: 50% according to 50/20 rule.

Check all indicators that apply and explain below:

<input type="checkbox"/> Visual observation of plant species growing in areas of prolonged inundation/saturation	<input type="checkbox"/> Physiological/reproductive adaptations
<input type="checkbox"/> Morphological adaptations	<input type="checkbox"/> Wetland plant database
<input type="checkbox"/> Technical Literature	<input type="checkbox"/> Personal knowledge of regional plant communities
	<input type="checkbox"/> Other (explain)

Hydrophytic vegetation present? Yes No

Rationale for decision/Remarks:

<p>HYDROLOGY</p> <p>Is it the growing season? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>Based on: <input type="checkbox"/> Soil temp (record temp) <input type="checkbox"/> Other (explain)</p> <p>Depth of inundation: _____ inches</p> <p>Depth to free water in pit: _____ inches</p> <p>Depth to saturated soil: _____ inches</p> <p><input type="checkbox"/> Recorded Data (Describe in Remarks): Check all that apply & explain below: <input type="checkbox"/> Stream, lake or gage data <input type="checkbox"/> Aerial photographs <input type="checkbox"/> Other</p> <p><input type="checkbox"/> No Recorded Data Available</p>	<p style="text-align: center;">WETLAND HYDROLOGY INDICATORS</p> <p>Primary Indicators:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Inundated <input type="checkbox"/> Saturated in Upper 12 Inches <input type="checkbox"/> Water Marks <input type="checkbox"/> Drift Lines <input type="checkbox"/> Sediment Deposits <input checked="" type="checkbox"/> Drainage Patterns in Wetlands <p>Secondary Indicators (2 or more Required):</p> <ul style="list-style-type: none"> <input type="checkbox"/> Oxidized Root Channels in Upper 12 Inches <input type="checkbox"/> Water-Stained Leaves <input type="checkbox"/> Local Soil Survey Data <input type="checkbox"/> FAC-Neutral Test <input type="checkbox"/> Other (Explain in Remarks)
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Wetland hydrology present? **Yes** **No**
 Rationale for decision/remarks:

SOILS Plot ID:
 Map Unit Name (Series and Phase) : Drainage Class
 Taxonomy (subgroup) Field observations confirm mapped type? Yes
 No

Profile Description

Depth (inches)	Horizon	Matrix color (Munsell moist)	Mottle colors (Munsell moist)	Mottle abundance size and contrast	Texture, concretions, structure, etc.	Drawing of soil profile (match description)
0-8	A	10YR 4/2	7.5YR 5/6	many, coarse, prominent	silty clay loam	

Hydric Soil Indicators: (check all that apply)

<input type="checkbox"/> Histosol <input type="checkbox"/> Histic Epipedon <input type="checkbox"/> Sulfidic Odor <input type="checkbox"/> Aquic Moisture Regime <input type="checkbox"/> Reducing Conditions <input type="checkbox"/> Gleyed or Low-Chroma (=1) matrix	<input checked="" type="checkbox"/> Matrix chroma ≤ 2 with mottles <input type="checkbox"/> Mg or Fe Concretions <input type="checkbox"/> High Organic Content in Surface Layer of Sandy Soils <input type="checkbox"/> Organic Streaking in Sandy Soils <input type="checkbox"/> Listed on National/Local Hydric Soils List <input type="checkbox"/> Other (explain in remarks)
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Hydric soils present? **Yes** **No**
 Rationale for decision/Remarks:

Wetland Determination

Hydrophytic vegetation present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Hydric soils present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Wetland hydrology present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Is the sampling point within a wetland?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No

Rationale/Remarks:

NOTES:

Routine Wetland Determination

1987 Corps Wetland Delineation Manual

Project/Site: Colusa Generating Station	Date: 9/22/2006
Applicant/owner:	County: Colusa
Investigator(s): Justin Whitfield, Melissa Newman	State: CA
	S/T/R:
Do normal circumstances exist on the site? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Community ID: Transect ID: Plot ID: 12u
Is the site significantly disturbed (atypical situation)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Is the area a potential problem area? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Explanation of atypical or problem area: grazed	

VEGETATION (For *strata, indicate T = tree; S = shrub; H = herb; V = vine)

Dominant Plant Species	*Stratum	% cover	Indicator	Dominant Plant Species	*Stratum	% cover	Indicator
<i>Hemizonia congesta</i> ssp. <i>congesta</i>	H	20	not listed				
<i>Taeniatherum caput-medusae</i>	H	60	not listed				
<i>Centaurea solstitialis</i>	H	5	not listed				

HYDROPHYTIC VEGETATION INDICATORS:

% of dominants OBL, FACW, & FAC: 0

Check all indicators that apply and explain below:

<input type="checkbox"/> Visual observation of plant species growing in areas of prolonged inundation/saturation	<input type="checkbox"/> Physiological/reproductive adaptations
<input type="checkbox"/> Morphological adaptations	<input type="checkbox"/> Wetland plant database
<input type="checkbox"/> Technical Literature	<input type="checkbox"/> Personal knowledge of regional plant communities
	<input type="checkbox"/> Other (explain)

Hydrophytic vegetation present? Yes No

Rationale for decision/Remarks:

HYDROLOGY

Is it the growing season? Yes No

Based on: Soil temp (record temp)
 Other (explain)

Depth of inundation: _____ inches

Depth to free water in pit: _____ inches

Depth to saturated soil: _____ inches

Recorded Data (Describe in Remarks):
Check all that apply & explain below:
 Stream, lake or gage data
 Aerial photographs
 Other

No Recorded Data Available

WETLAND HYDROLOGY INDICATORS

Primary Indicators:

- Inundated
- Saturated in Upper 12 Inches
- Water Marks
- Drift Lines
- Sediment Deposits
- Drainage Patterns in Wetlands

Secondary Indicators (2 or more Required):

- Oxidized Root Channels in Upper 12 Inches
- Water-Stained Leaves
- Local Soil Survey Data
- FAC-Neutral Test
- Other (Explain in Remarks)

Wetland hydrology present? Yes No
 Rationale for decision/remarks:

SOILS Plot ID:
 Map Unit Name (Series and Phase) : Drainage Class
 Taxonomy (subgroup) Field observations confirm mapped type? Yes
 No

Profile Description

Depth (inches)	Horizon	Matrix color (Munsell moist)	Mottle colors (Munsell moist)	Mottle abundance size and contrast	Texture, concretions, structure, etc.	Drawing of soil profile (match description)
0-6	A	10YR 4/3	NA	NA	silty clay loam	

Hydric Soil Indicators: (check all that apply)

<input type="checkbox"/> Histosol <input type="checkbox"/> Histic Epipedon <input type="checkbox"/> Sulfidic Odor <input type="checkbox"/> Aquic Moisture Regime <input type="checkbox"/> Reducing Conditions <input type="checkbox"/> Gleyed or Low-Chroma (=1) matrix	<input type="checkbox"/> Matrix chroma ≤ 2 with mottles <input type="checkbox"/> Mg or Fe Concretions <input type="checkbox"/> High Organic Content in Surface Layer of Sandy Soils <input type="checkbox"/> Organic Streaking in Sandy Soils <input type="checkbox"/> Listed on National/Local Hydric Soils List <input type="checkbox"/> Other (explain in remarks)
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Hydric soils present? Yes No
 Rationale for decision/Remarks:

Wetland Determination

Hydrophytic vegetation present?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Hydric soils present?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Wetland hydrology present?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Is the sampling point within a wetland?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No

Rationale/Remarks:

NOTES:

Routine Wetland Determination

1987 Corps Wetland Delineation Manual

Project/Site: Colusa Generating Station	Date: 9/22/2006
Applicant/owner:	County: Colusa
Investigator(s): Justin Whitfield, Melissa Newman	State: CA
	S/T/R:
Do normal circumstances exist on the site? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Community ID:
Is the site significantly disturbed (atypical situation)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Transect ID:
Is the area a potential problem area? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Plot ID: 12w
Explanation of atypical or problem area: grazed	

VEGETATION (For *strata, indicate T = tree; S = shrub; H = herb; V = vine)

Dominant Plant Species	*Stratum	% cover	Indicator	Dominant Plant Species	*Stratum	% cover	Indicator
<i>Crypsis schoenoides</i>	H	10	OBL				
<i>Polypogon monspeliensis</i>	H	5	FACW+				
<i>Hemizonia congesta</i> ssp. <i>congesta</i>	H	5	not listed				
<i>Lolium perenne</i>	H	25	FAC*				
<i>Hordeum murinum</i> ssp. <i>leporinum</i>	H	15	not listed				

HYDROPHYTIC VEGETATION INDICATORS:

% of dominants OBL, FACW, & FAC: 66% according to 50/20 rule.

Check all indicators that apply and explain below:

<input type="checkbox"/> Visual observation of plant species growing in areas of prolonged inundation/saturation	<input type="checkbox"/> Physiological/reproductive adaptations
<input type="checkbox"/> Morphological adaptations	<input type="checkbox"/> Wetland plant database
<input type="checkbox"/> Technical Literature	<input type="checkbox"/> Personal knowledge of regional plant communities
	<input type="checkbox"/> Other (explain)

Hydrophytic vegetation present? Yes No

Rationale for decision/Remarks:

HYDROLOGY

Is it the growing season? Yes No

Based on: Soil temp (record temp)
 Other (explain)

Depth of inundation: _____ inches

Depth to free water in pit: _____ inches

Depth to saturated soil: _____ inches

Recorded Data (Describe in Remarks):
 Check all that apply & explain below:
 Stream, lake or gage data
 Aerial photographs
 Other

No Recorded Data Available

WETLAND HYDROLOGY INDICATORS

Primary Indicators:

- Inundated
- Saturated in Upper 12 Inches
- Water Marks
- Drift Lines
- Sediment Deposits
- Drainage Patterns in Wetlands

Secondary Indicators (2 or more Required):

- Oxidized Root Channels in Upper 12 Inches
- Water-Stained Leaves
- Local Soil Survey Data
- FAC-Neutral Test
- Other (Explain in Remarks)

Wetland hydrology present? **Yes** **No**
 Rationale for decision/remarks: no culvert and it is isolated, but hydrology because of soil cracking. Appears it was created by the road installation because of the plants present, no vernal pool plants.

SOILS Plot ID:
 Map Unit Name (Series and Phase) :
 Taxonomy (subgroup) Drainage Class
Field observations confirm mapped type? Yes
 No

Profile Description						
Depth (inches)	Horizon	Matrix color (Munsell moist)	Mottle colors (Munsell moist)	Mottle abundance size and contrast	Texture, concretions, structure, etc.	Drawing of soil profile (match description)
0-8	A	10YR 3/2	7.5YR 4/4	many, coarse, prominent	silty clay loam	

Hydric Soil Indicators: (check all that apply)

<input type="checkbox"/> Histosol <input type="checkbox"/> Histic Epipedon <input type="checkbox"/> Sulfidic Odor <input type="checkbox"/> Aquic Moisture Regime <input type="checkbox"/> Reducing Conditions <input type="checkbox"/> Gleyed or Low-Chroma (=1) matrix	<input checked="" type="checkbox"/> Matrix chroma ≤ 2 with mottles <input type="checkbox"/> Mg or Fe Concretions <input type="checkbox"/> High Organic Content in Surface Layer of Sandy Soils <input type="checkbox"/> Organic Streaking in Sandy Soils <input type="checkbox"/> Listed on National/Local Hydric Soils List <input type="checkbox"/> Other (explain in remarks)
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Hydric soils present? **Yes** **No**
 Rationale for decision/Remarks:

Wetland Determination

Hydrophytic vegetation present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Hydric soils present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Wetland hydrology present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Is the sampling point within a wetland?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No

Rationale/Remarks:

NOTES:

Routine Wetland Determination

1987 Corps Wetland Delineation Manual

Project/Site: Colusa Generating Station	Date: 10/10/2006
Applicant/owner:	County: Colusa
Investigator(s): Justin Whitfield, Melissa Newman	State: CA
	S/T/R:
Do normal circumstances exist on the site? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Community ID:
Is the site significantly disturbed (atypical situation)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Transect ID:
Is the area a potential problem area? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Plot ID: 13
Explanation of atypical or problem area: vegetation grazed, cut down and dead	

VEGETATION (For *strata, indicate T = tree; S = shrub; H = herb; V = vine)

Dominant Plant Species	*Stratum	% cover	Indicator	Dominant Plant Species	*Stratum	% cover	Indicator
<i>Plantago elongata</i>	H	10	FACW*	<i>Hemizonia congesta ssp. congesta</i>	H	1	not listed
<i>Bromus hordeaceus</i>	H	30	Not listed				
<i>Lolium perenne</i>	H	15	FAC*				
<i>Hordeum murinum</i>	H	5	not listed				
<i>Hemizonia parryi</i>	H	1	FAC				
<i>Lactuca serriola</i>	H	1	FAC				

HYDROPHYTIC VEGETATION INDICATORS:

% of dominants OBL, FACW, & FAC: 66 according to 50/20 rule.

Check all indicators that apply and explain below:

<input type="checkbox"/> Visual observation of plant species growing in areas of prolonged inundation/saturation	<input type="checkbox"/> Physiological/reproductive adaptations
<input type="checkbox"/> Morphological adaptations	<input type="checkbox"/> Wetland plant database
<input type="checkbox"/> Technical Literature	<input type="checkbox"/> Personal knowledge of regional plant communities
	<input type="checkbox"/> Other (explain)

Hydrophytic vegetation present? Yes No

Rationale for decision/Remarks:

<p>HYDROLOGY</p> <p>Is it the growing season? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>Based on: <input type="checkbox"/> Soil temp (record temp) <input type="checkbox"/> Other (explain)</p> <p>Depth of inundation: _____ inches</p> <p>Depth to free water in pit: _____ inches</p> <p>Depth to saturated soil: _____ inches</p> <p><input type="checkbox"/> Recorded Data (Describe in Remarks): Check all that apply & explain below: <input type="checkbox"/> Stream, lake or gage data <input type="checkbox"/> Aerial photographs <input type="checkbox"/> Other</p> <p><input type="checkbox"/> No Recorded Data Available</p>	<p style="text-align: center;">WETLAND HYDROLOGY INDICATORS</p> <p>Primary Indicators:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Inundated <input type="checkbox"/> Saturated in Upper 12 Inches <input type="checkbox"/> Water Marks <input type="checkbox"/> Drift Lines <input type="checkbox"/> Sediment Deposits <input type="checkbox"/> Drainage Patterns in Wetlands <p>Secondary Indicators (2 or more Required):</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Oxidized Root Channels in Upper 12 Inches <input type="checkbox"/> Water-Stained Leaves <input type="checkbox"/> Local Soil Survey Data <input type="checkbox"/> FAC-Neutral Test <input type="checkbox"/> Other (Explain in Remarks)
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Wetland hydrology present? Yes No

Rationale for decision/remarks: hydrology potentially present during other times of the year; evidence of soil cracking; possibly wet during other times of the year

SOILS Plot ID:

Map Unit Name (Series and Phase) : Drainage Class

Taxonomy (subgroup) Field observations confirm mapped type? Yes No

Profile Description						
Depth (inches)	Horizon	Matrix color (Munsell moist)	Mottle colors (Munsell moist)	Mottle abundance size and contrast	Texture, concretions, structure, etc.	Drawing of soil profile (match description)
0-3	A	10YR 3/2	NA		clay	
3-12	B	4/3	NA		clay	

Hydric Soil Indicators: (check all that apply)

<input type="checkbox"/> Histosol <input type="checkbox"/> Histic Epipedon <input type="checkbox"/> Sulfidic Odor <input type="checkbox"/> Aquic Moisture Regime <input type="checkbox"/> Reducing Conditions <input type="checkbox"/> Gleyed or Low-Chroma (=1) matrix	<input type="checkbox"/> Matrix chroma ≤ 2 with mottles <input type="checkbox"/> Mg or Fe Concretions <input type="checkbox"/> High Organic Content in Surface Layer of Sandy Soils <input type="checkbox"/> Organic Streaking in Sandy Soils <input type="checkbox"/> Listed on National/Local Hydric Soils List <input type="checkbox"/> Other (explain in remarks)
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Hydric soils present? Yes No

Rationale for decision/Remarks:

Wetland Determination

Hydrophytic vegetation present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Hydric soils present?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Wetland hydrology present?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Is the sampling point within a wetland?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No

Rationale/Remarks: Although hydrology, and plants, may change, soils do not exhibit wetland features; therefore, this is not likely a wetland.

NOTES:

Revised 3/01

Routine Wetland Determination

1987 Corps Wetland Delineation Manual

Project/Site: Colusa Generating Station	Date: 10/10/2006
Applicant/owner:	County: Colusa
Investigator(s): Justin Whitfield, Melissa Newman	State: CA
	S/T/R:
Do normal circumstances exist on the site? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Community ID: Transect ID: Plot ID: 14
Is the site significantly disturbed (atypical situation)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Is the area a potential problem area? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Explanation of atypical or problem area: vegetation grazed, cut down and dead	

VEGETATION (For *strata, indicate T = tree; S = shrub; H = herb; V = vine)

Dominant Plant Species	*Stratum	% cover	Indicator	Dominant Plant Species	*Stratum	% cover	Indicator
<i>Plantago elongata</i>	H	20	FACW*	<i>Hordeum murinum</i>	H	1	not listed
<i>Bromus hordeaceus</i>	H	25	Not listed				
<i>Lolium perenne</i>	H	10	FAC*				
<i>Taeniatherum caput-medusae</i>	H	30	not listed				
<i>Hemizonia parryi</i>	H	1	FAC				
<i>Lepidium latipes</i>	H	1	OBL				

HYDROPHYTIC VEGETATION INDICATORS:

% of dominants OBL, FACW, & FAC: 33 according to the 50/20 rule.

Check all indicators that apply and explain below:

<input type="checkbox"/> Visual observation of plant species growing in areas of prolonged inundation/saturation	<input type="checkbox"/> Physiological/reproductive adaptations
<input type="checkbox"/> Morphological adaptations	<input type="checkbox"/> Wetland plant database
<input type="checkbox"/> Technical Literature	<input type="checkbox"/> Personal knowledge of regional plant communities
	<input type="checkbox"/> Other (explain)

Hydrophytic vegetation present? Yes No

Rationale for decision/Remarks:

HYDROLOGY

Is it the growing season? Yes No

Based on: Soil temp (record temp)
 Other (explain)

Depth of inundation: _____ inches

Depth to free water in pit: _____ inches

Depth to saturated soil: _____ inches

Recorded Data (Describe in Remarks):
Check all that apply & explain below:
 Stream, lake or gage data
 Aerial photographs
 Other

No Recorded Data Available

WETLAND HYDROLOGY INDICATORS

Primary Indicators:

- Inundated
- Saturated in Upper 12 Inches
- Water Marks
- Drift Lines
- Sediment Deposits
- Drainage Patterns in Wetlands

Secondary Indicators (2 or more Required):

- Oxidized Root Channels in Upper 12 Inches
- Water-Stained Leaves
- Local Soil Survey Data
- FAC-Neutral Test
- Other (Explain in Remarks)

Wetland hydrology present? Yes No

Rationale for decision/remarks: hydrology potentially present during other times of the year; evidence of soil cracking; possibly wet during other times of the year

SOILS Plot ID:

Map Unit Name (Series and Phase) : Drainage Class

Taxonomy (subgroup) Field observations confirm mapped type? Yes
 No

Profile Description

Depth (inches)	Horizon	Matrix color (Munsell moist)	Mottle colors (Munsell moist)	Mottle abundance size and contrast	Texture, concretions, structure, etc.	Drawing of soil profile (match description)
0-14	A	10YR 4/2	NA		clay	

Hydric Soil Indicators: (check all that apply)

<input type="checkbox"/> Histosol <input type="checkbox"/> Histic Epipedon <input type="checkbox"/> Sulfidic Odor <input type="checkbox"/> Aquic Moisture Regime <input type="checkbox"/> Reducing Conditions <input type="checkbox"/> Gleyed or Low-Chroma (=1) matrix	<input type="checkbox"/> Matrix chroma ≤ 2 with mottles <input type="checkbox"/> Mg or Fe Concretions <input type="checkbox"/> High Organic Content in Surface Layer of Sandy Soils <input type="checkbox"/> Organic Streaking in Sandy Soils <input type="checkbox"/> Listed on National/Local Hydric Soils List <input type="checkbox"/> Other (explain in remarks)
--	--

Hydric soils present? Yes No

Rationale for decision/Remarks:

Wetland Determination

Hydrophytic vegetation present?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Hydric soils present?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Wetland hydrology present?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Is the sampling point within a wetland?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No

Rationale/Remarks: Although hydrology and plants may change, soils do not exhibit wetland features; therefore, this is not likely a wetland.

NOTES:

Routine Wetland Determination

1987 Corps Wetland Delineation Manual

Project/Site: Colusa Generating Station	Date: 10/10/2006
Applicant/owner:	County: Colusa
Investigator(s): Justin Whitfield, Melissa Newman	State: CA
	S/T/R:
Do normal circumstances exist on the site? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Community ID: Transect ID: Plot ID: 15
Is the site significantly disturbed (atypical situation)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Is the area a potential problem area? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Explanation of atypical or problem area: vegetation grazed, cut down and dead	

VEGETATION (For *strata, indicate T = tree; S = shrub; H = herb; V = vine)							
Dominant Plant Species	*Stratum	% cover	Indicator	Dominant Plant Species	*Stratum	% cover	Indicator
<i>Crypsis schoenoides</i>	H	35	OBL				
<i>Lolium perenne</i>	H	10	FAC*				
<i>Hemizonia parryi</i>	H	5	FAC				
<i>Lactuca serriola</i>	H	25	FAC				

HYDROPHYTIC VEGETATION INDICATORS:

% of dominants OBL, FACW, & FAC: 100 according to the 50/20 rule.

Check all indicators that apply and explain below:

<input type="checkbox"/> Visual observation of plant species growing in areas of prolonged inundation/saturation	<input type="checkbox"/> Physiological/reproductive adaptations
<input type="checkbox"/> Morphological adaptations	<input type="checkbox"/> Wetland plant database
<input type="checkbox"/> Technical Literature	<input type="checkbox"/> Personal knowledge of regional plant communities
	<input type="checkbox"/> Other (explain)

Hydrophytic vegetation present? Yes No

Rationale for decision/Remarks:

HYDROLOGY

Is it the growing season? Yes No

Based on: Soil temp (record temp)
 Other (explain)

Depth of inundation: _____ inches

Depth to free water in pit: _____ inches

Depth to saturated soil: _____ inches

Recorded Data (Describe in Remarks):
Check all that apply & explain below:
 Stream, lake or gage data
 Aerial photographs
 Other

No Recorded Data Available

WETLAND HYDROLOGY INDICATORS

Primary Indicators:

- Inundated
- Saturated in Upper 12 Inches
- Water Marks
- Drift Lines
- Sediment Deposits
- Drainage Patterns in Wetlands

Secondary Indicators (2 or more Required):

- Oxidized Root Channels in Upper 12 Inches
- Water-Stained Leaves
- Local Soil Survey Data
- FAC-Neutral Test
- Other (Explain in Remarks)

Wetland hydrology present? Yes No
 Rationale for decision/remarks: deep soil cracking/fissures

SOILS Plot ID:
 Map Unit Name (Series and Phase) : Drainage Class
 Taxonomy (subgroup) Field observations confirm mapped type? Yes
 No

Profile Description

Depth (inches)	Horizon	Matrix color (Munsell moist)	Mottle colors (Munsell moist)	Mottle abundance size and contrast	Texture, concretions, structure, etc.	Drawing of soil profile (match description)
0-12	A	10YR 4/2	NA		clay	

Hydric Soil Indicators: (check all that apply)

<input type="checkbox"/> Histosol <input type="checkbox"/> Histic Epipedon <input type="checkbox"/> Sulfidic Odor <input type="checkbox"/> Aquic Moisture Regime <input type="checkbox"/> Reducing Conditions <input type="checkbox"/> Gleyed or Low-Chroma (=1) matrix	<input type="checkbox"/> Matrix chroma ≤ 2 with mottles <input type="checkbox"/> Mg or Fe Concretions <input type="checkbox"/> High Organic Content in Surface Layer of Sandy Soils <input type="checkbox"/> Organic Streaking in Sandy Soils <input type="checkbox"/> Listed on National/Local Hydric Soils List <input type="checkbox"/> Other (explain in remarks)
--	--

Hydric soils present? Yes No
 Rationale for decision/Remarks:

Wetland Determination

Hydrophytic vegetation present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Hydric soils present?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Wetland hydrology present?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Is the sampling point within a wetland?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No

Rationale/Remarks: Although hydrology, and plants, may change, soils do not exhibit wetland features; therefore, this is not likely a wetland.

NOTES:

Routine Wetland Determination

1987 Corps Wetland Delineation Manual

Project/Site: Colusa Generating Station	Date: 8-24-06
Applicant/owner:	County: Colusa
Investigator(s): Steve Leach, Lorena Solorzano-Vincent	State: CA
	S/T/R:
Do normal circumstances exist on the site? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Community ID: Seasonal Swale
Is the site significantly disturbed (atypical situation)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Transect ID: SW-1
Is the area a potential problem area? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Plot ID: SW-1A
Explanation of atypical or problem area:	

VEGETATION (For *strata, indicate T = tree; S = shrub; H = herb; V = vine)

Dominant Plant Species	*Stratum	% cover	Indicator	Dominant Plant Species	*Stratum	% cover	Indicator
<i>Cynodon dactylon</i>	H	70	FAC				
<i>Hordeum marinum</i>	H	5	FAC				
<i>Lotus corniculatus</i>	H	20	FAC				
<i>Rumex crispus</i>	H	2	FAC				
<i>Lactuca sp.</i>	H	5	FAC				
<i>Convolvulus arvensis</i>	H						

HYDROPHYTIC VEGETATION INDICATORS:

% of dominants OBL, FACW, & FAC: 100% according to 50/20 rule.

Check all indicators that apply and explain below:

<input type="checkbox"/> Visual observation of plant species growing in areas of prolonged inundation/saturation	<input type="checkbox"/> Physiological/reproductive adaptations
<input type="checkbox"/> Morphological adaptations	<input type="checkbox"/> Wetland plant database
<input checked="" type="checkbox"/> Technical Literature	<input type="checkbox"/> Personal knowledge of regional plant communities
	<input type="checkbox"/> Other (explain)

Hydrophytic vegetation present? Yes No

Rationale for decision/Remarks:

<p>HYDROLOGY</p> <p>Is it the growing season? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>Based on: <input type="checkbox"/> Soil temp (record temp) <input type="checkbox"/> Other (explain)</p> <p>Depth of inundation: _____ inches</p> <p>Depth to free water in pit: _____ inches</p> <p>Depth to saturated soil: _____ inches</p> <p><input type="checkbox"/> Recorded Data (Describe in Remarks): Check all that apply & explain below: <input type="checkbox"/> Stream, lake or gage data <input type="checkbox"/> Aerial photographs <input type="checkbox"/> Other</p> <p><input type="checkbox"/> No Recorded Data Available</p>	<p style="text-align: center;">WETLAND HYDROLOGY INDICATORS</p> <p>Primary Indicators:</p> <p><input type="checkbox"/> Inundated <input type="checkbox"/> Saturated in Upper 12 Inches <input type="checkbox"/> Water Marks <input type="checkbox"/> Drift Lines <input type="checkbox"/> Sediment Deposits <input checked="" type="checkbox"/> Drainage Patterns in Wetlands</p> <p>Secondary Indicators (2 or more Required):</p> <p><input type="checkbox"/> Oxidized Root Channels in Upper 12 Inches <input type="checkbox"/> Water-Stained Leaves <input type="checkbox"/> Local Soil Survey Data <input type="checkbox"/> FAC-Neutral Test <input type="checkbox"/> Other (Explain in Remarks)</p>
---	--

Wetland hydrology present? **Yes** **No**
 Rationale for decision/remarks: natural swlae topography indicates drainage pattern that would collect surface runoff

SOILS Plot ID:
 Map Unit Name (Series and Phase) : Drainage Class
 Taxonomy (subgroup) Field observations confirm mapped type? Yes No

Profile Description						
Depth (inches)	Horizon	Matrix color (Munsell moist)	Mottle colors (Munsell moist)	Mottle abundance size and contrast	Texture, concretions, structure, etc.	Drawing of soil profile (match description)
0-6	A	10YR 3/2	7.5YR 4/4	mod./high	clay loam	

Hydric Soil Indicators: (check all that apply)

<input type="checkbox"/> Histosol <input type="checkbox"/> Histic Epipedon <input type="checkbox"/> Sulfidic Odor <input type="checkbox"/> Aquic Moisture Regime <input type="checkbox"/> Reducing Conditions <input type="checkbox"/> Gleyed or Low-Chroma (=1) matrix	<input checked="" type="checkbox"/> Matrix chroma ≤ 2 with mottles <input type="checkbox"/> Mg or Fe Concretions <input type="checkbox"/> High Organic Content in Surface Layer of Sandy Soils <input type="checkbox"/> Organic Streaking in Sandy Soils <input type="checkbox"/> Listed on National/Local Hydric Soils List <input type="checkbox"/> Other (explain in remarks)
--	---

Hydric soils present? **Yes** **No**
 Rationale for decision/Remarks:

Wetland Determination

Hydrophytic vegetation present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Hydric soils present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Wetland hydrology present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Is the sampling point within a wetland?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No

Rationale/Remarks:

NOTES:

Routine Wetland Determination

1987 Corps Wetland Delineation Manual

Project/Site: Colusa Generating Station	Date: 8-24-06
Applicant/owner:	County: Colusa
Investigator(s): Steve Leach, Lorena Solorzano-Vincent	State: CA
	S/T/R:
Do normal circumstances exist on the site? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Community ID: Seasonal Swale Transect ID: VP-1 Plot ID: VP-1A
Is the site significantly disturbed (atypical situation)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Is the area a potential problem area? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Explanation of atypical or problem area:	

VEGETATION (For *strata, indicate T = tree; S = shrub; H = herb; V = vine)

Dominant Plant Species	*Stratum	% cover	Indicator	Dominant Plant Species	*Stratum	% cover	Indicator
Polypogon monspeliensis	H	60	OBL	bare		20	
<i>Crypsis schoeroides</i>	H	30	OBL				
<i>Hordeum marinum</i>	H	10	FAC				
<i>Plagiobothrys stipitatus</i>	H	2	OBL				

HYDROPHYTIC VEGETATION INDICATORS:

% of dominants OBL, FACW, & FAC: 100% according to 50/20 rule.

Check all indicators that apply and explain below:

<input type="checkbox"/> Visual observation of plant species growing in areas of prolonged inundation/saturation	<input type="checkbox"/> Physiological/reproductive adaptations
<input type="checkbox"/> Morphological adaptations	<input type="checkbox"/> Wetland plant database
<input checked="" type="checkbox"/> Technical Literature	<input type="checkbox"/> Personal knowledge of regional plant communities
	<input type="checkbox"/> Other (explain)

Hydrophytic vegetation present? Yes No

Rationale for decision/Remarks:

<p>HYDROLOGY</p> <p>Is it the growing season? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>Based on: <input type="checkbox"/> Soil temp (record temp) <input type="checkbox"/> Other (explain)</p> <p>Depth of inundation: _____ inches</p> <p>Depth to free water in pit: _____ inches</p> <p>Depth to saturated soil: _____ inches</p> <p><input type="checkbox"/> Recorded Data (Describe in Remarks): Check all that apply & explain below: <input type="checkbox"/> Stream, lake or gage data <input type="checkbox"/> Aerial photographs <input type="checkbox"/> Other</p> <p><input type="checkbox"/> No Recorded Data Available</p>	<p style="text-align: center;">WETLAND HYDROLOGY INDICATORS</p> <p>Primary Indicators:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Inundated <input type="checkbox"/> Saturated in Upper 12 Inches <input type="checkbox"/> Water Marks <input type="checkbox"/> Drift Lines <input type="checkbox"/> Sediment Deposits <input checked="" type="checkbox"/> Drainage Patterns in Wetlands <p>Secondary Indicators (2 or more Required):</p> <ul style="list-style-type: none"> <input type="checkbox"/> Oxidized Root Channels in Upper 12 Inches <input type="checkbox"/> Water-Stained Leaves <input type="checkbox"/> Local Soil Survey Data <input type="checkbox"/> FAC-Neutral Test <input type="checkbox"/> Other (Explain in Remarks)
---	---

Wetland hydrology present? Yes No

Rationale for decision/remarks: seasonally ponded depression, deep hoof prints: 6-8 inches deep.

SOILS						Plot ID:
Map Unit Name (Series and Phase) :				Drainage Class		
Taxonomy (subgroup)				Field observations confirm mapped type? <input type="checkbox"/> Yes <input type="checkbox"/> No		
Profile Description						
Depth (inches)	Horizon	Matrix color (Munsell moist)	Mottle colors (Munsell moist)	Mottle abundance size and contrast	Texture, concretions, structure, etc.	Drawing of soil profile (match description)
0-6	A	10YR 3/2	7.5YR 4/4	few/low	silty clay loam	
Hydric Soil Indicators: (check all that apply)						
<input type="checkbox"/> Histosol <input type="checkbox"/> Histic Epipedon <input type="checkbox"/> Sulfidic Odor <input type="checkbox"/> Aquic Moisture Regime <input type="checkbox"/> Reducing Conditions <input type="checkbox"/> Gleyed or Low-Chroma (=1) matrix				<input checked="" type="checkbox"/> Matrix chroma \leq 2 with mottles <input type="checkbox"/> Mg or Fe Concretions <input type="checkbox"/> High Organic Content in Surface Layer of Sandy Soils <input type="checkbox"/> Organic Streaking in Sandy Soils <input type="checkbox"/> Listed on National/Local Hydric Soils List <input type="checkbox"/> Other (explain in remarks)		
Hydric soils present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No						
Rationale for decision/Remarks:						
Wetland Determination						
Hydrophytic vegetation present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No						
Hydric soils present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No						
Wetland hydrology present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No						
Is the sampling point within a wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No						
Rationale/Remarks:						

NOTES:

Revised 3/01

APPENDIX H2
NATURAL DIVERSITY DATA BASE SURVEY FORMS

California Natural Community Field Survey Form

Mail to:
 Natural Diversity Data Base
 California Dept. of Fish and Game
 1416 Ninth Street
 Sacramento, CA 95914
 (916) 324-6857

For office use only	
Source Code _____	Quad Code _____
Community Code _____	Occ # _____
Map Index # _____	Update Y _____ N _____

Please provide as much of the following information as you can. Please attach a map (if possible, based on the USGS 7.5 minute series) showing the site's location and boundaries. Use the back if needed.

Community name: Northern Claypan Vernal Pool

Reporter: Jonathan Stead Phone (510) 874-1780
 Affiliation and Address URS Corp, 500 12th St. suite 200, Oakland, CA 94607

Date of field work: March-June, 2001 County: _____

Location (Please attach/submit map): located between the Glenn-Colusa Canal and the PG&E Compressor Station

Quad name: Sites 7.5' T18N R4W 1/4 of 1/4 sec 3b Meridian _____
 UTM Zone 18N Northing 4358000 Easting 564000
 Landowner/Manager: _____ Photographs: Slide Print
 Elevation: 130 feet Aspect: _____ Slope (indicate % or °) _____ Drainage: _____
 Site acreage: _____ Evidence of disturbance/threats: some evidence that herbicides may be draining from the PG&E compressor station into the vernal pool; heavy grazing
 Current land use: cattle grazing
 Substrate/Soils: _____

General description of community: alkaline vernal pool complex surrounded by annual grasslands, rice fields & PG&E Compressor Station. some mima-mound topography present

Any Special Plants or Animals present: California ground squirrels, clam shrimp, gopher snake observed in area on map; burrowing owl and horreled lark observed in immediate vicinity but not in area on map

Successional status/Evidence of regeneration of dominant taxa: _____

Overall site quality: Excellent _____ Good _____ Fair Poor _____ Comments: _____

Basis for report: Remote image _____ Binocular/Telescopic survey _____
 Windshield survey _____ Brief walk-thru Detailed survey _____ Other _____

Relevé: In the space below, indicate each species cover % within the following growth form categories:

<p><u>Trees</u></p>	<p><u>Shrubs</u></p>	<p><u>Herbs/Graminoids</u> <u>Callitriche marginata</u> <u>Deschampsia danthonioides</u> <u>Downingia insignis</u> <u>Eryngium vaseyi</u> <u>Gratiola heterosepala</u> <u>Juncus bufonius</u> <u>Lasthenia fremontii</u> <u>Lilaea scilloides</u> <u>Limnanthes douglasii</u></p>
---------------------	----------------------	--

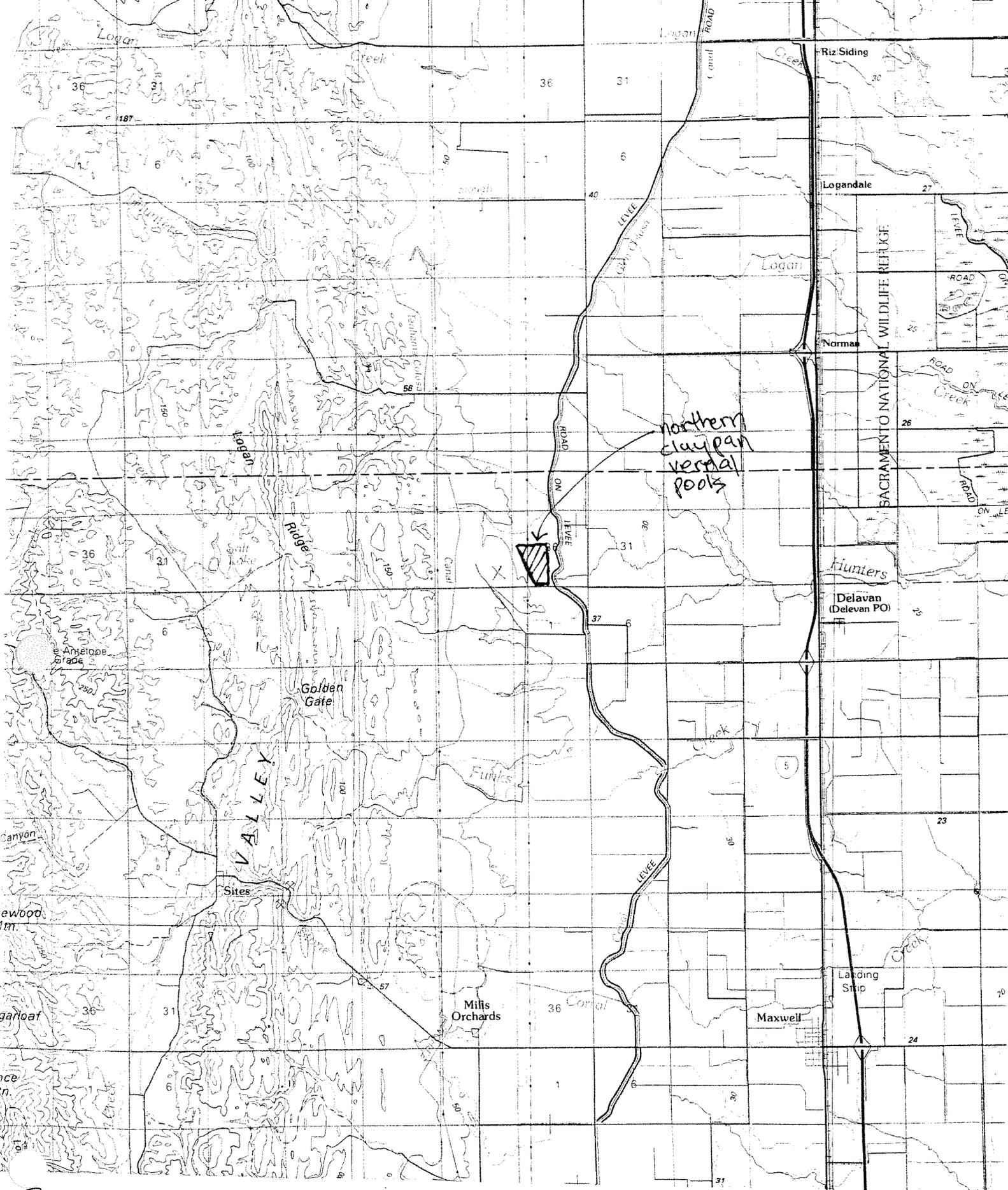
Continue on back if needed. Thank you for your contribution.

Trees

Shrubs

Herbs/Graminoids

Lythrum hyssopifolium
Pitularia americana
Pogogyne zizyphoroides
Psilocarphus brevissimus
Tillaea aquatica



From Lakeport 1:100,000 USGS topo

California Native Species Field Survey Form

Mail to:
 Natural Diversity Database
 California Department of Fish and Game
 1416 Ninth Street, 12th Floor
 Sacramento, CA 95814

For Office Use Only

Source Code _____ Quad Code _____
 Elm Code _____ Occ. No. _____
 EO Index No. _____ Map Index No. _____

Date of Field Work: 5 - 10 - 2001
month day year

Scientific Name: Athene cunicularia hypugea

Common Name: western burrowing owl

Species Found? yes no _____ if not, why?
 Total No. Individuals 2 owls Subsequent Visit? yes no
 Is this an existing NDDDB occurrence? _____ no unk.
Yes, Occ. #
 Collection? If yes: _____
Number Museum / Herbarium

Reporter: Jonathan Stead
 Address: URS Corp, 500 12th St Suite 200,
Oakland, CA 94607
 Phone: (510) 874-1780

Plant Information

Phenology: _____
% vegetative % flowering % fruiting

Animal Information

Age Structure: 2
adults # juveniles # unknown
 breeding wintering burrow site rookery nesting other

Location (please also attach or draw map on back)

burrows located just west of the PG&E Compressor Station

County: Colusa Landowner / Mgr.: _____
 Quad Name: Sites 7.5' USGS Elevation: 190 feet
 T 18N R 4W ne 1/4 of se 1/4 of Section 35 T _____ R _____ 1/4 of _____ 1/4 of Section _____
 UTM: Zone: 10 (10, 11) Datum: _____ (NAD83, NAD27, WG584, other)
 Source: USGS 7.5' Quad (GPS, map & type, etc.) GPS Accuracy Point: (circle one) <80m <150m <300m
 UTM Coordinates 43 56 000 N 5 64 000 E

Habitat Description (plant communities, dominants, associates, substrates/soils, aspects/slope)
rolling hills, annual grassland habitat at transition between valley floor and low Coast Range foothills. dominant plant species include Centaurea solstitialis, Taeniatherum caput-medusae, Avena spp., Bromus diandrus, Bromus botrys and beranium dissectum. Two owls observed occupying burrows (2 entrances) likely dug by coyotes. Based on time of observation and behavior of owls, assumed to be a breeding pair.
 Other rare species? horned lark in vicinity

Site Information Overall site quality: Excellent Good Fair Poor

Current / surrounding land use: cattle grazing, next to PG&E Compressor Station

Visible disturbances / possible threats: development of a proposed power plant

Comments: Other active burrows observed in vicinity during spring 2001, including 1 burrow in T17N, R4W, section 1 (previously documented occ. #162) and a few active burrows in same section (35), SW 1/4 of ne 1/4 of section 35.

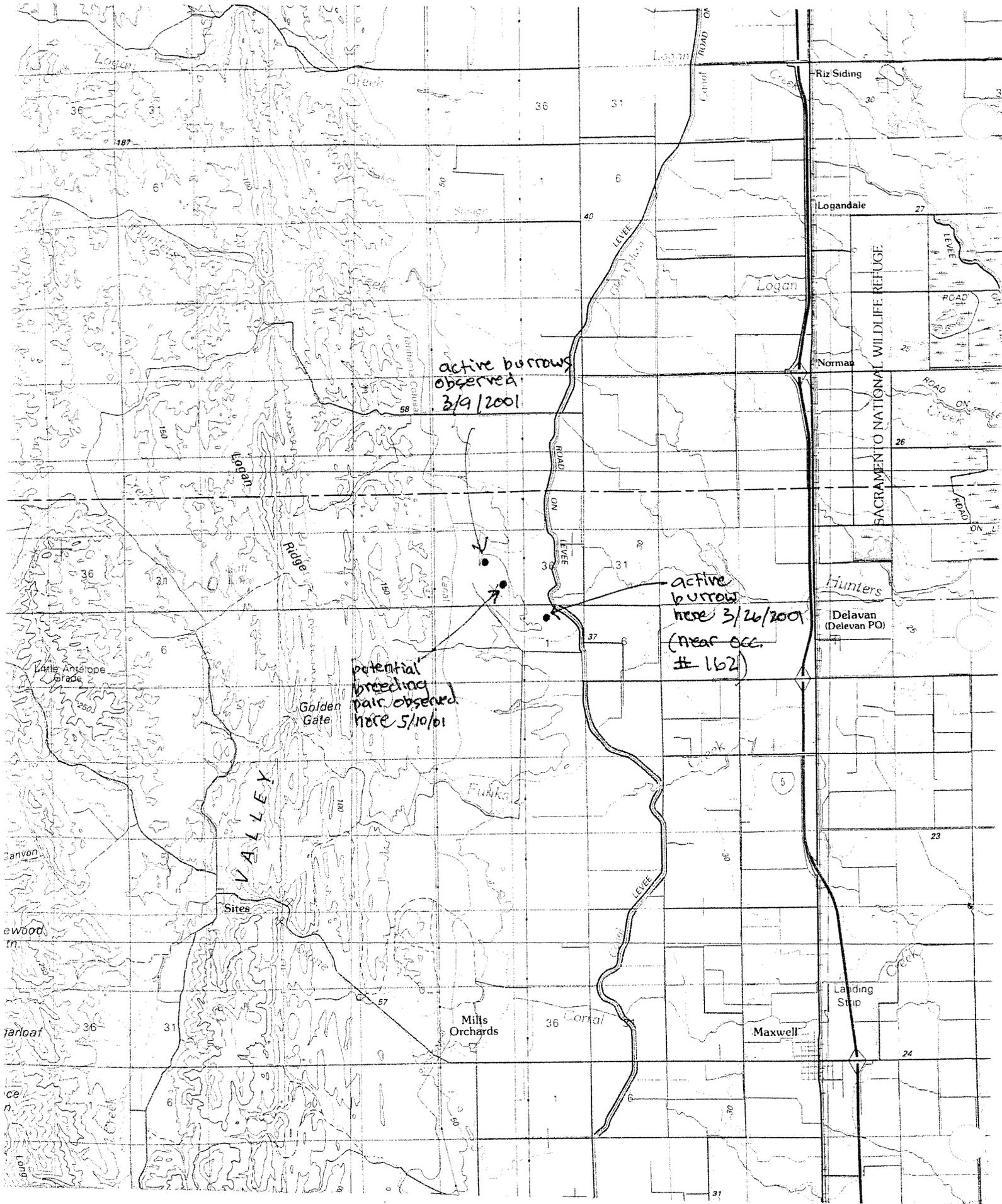
Determination: (check one or more, and fill in blanks)

_____ Keyed (cite reference): _____
 _____ Compared with specimen housed at: _____
 _____ Compared with photo / drawing in: _____
 By another person (name): Corinna W & Jonathan Stead
 Other: recognized from past experience

Photographs: (check one or more) Slide Print

Plant / animal _____
 Habitat _____
 Diagnostic feature _____

May we obtain duplicates at our expense? yes no



active burrows
observed
3/9/2001

potential
breeding
pair observed
here 5/10/01

active
burrow
here 3/26/2001
(near occ.
162)

From Lakeport 1:100,000 USGS TOPO

California Native Species Field Survey Form

Mail to:
 Natural Diversity Database
 California Department of Fish and Game
 1416 Ninth Street, 12th Floor
 Sacramento, CA 95814

For Office Use Only

Source Code _____ Quad Code _____
 Elm Code _____ Occ. No. _____
 EO Index No. _____ Map Index No. _____

Date of Field Work: 5 - 10 - 2001
month day year

Scientific Name: Eremophila alpestris

Common Name: California horned lark

Species Found? yes no _____ If not, why? _____

Total No. Individuals 10 Subsequent Visit? yes no

Is this an existing NDDDB occurrence? _____ Yes, Occ. # no unk.

Collection? If yes: _____
Number Museum / Herbarium

Reporter: Jonathan Stead
 Address: UBS Corp, 500 12th St Suite 200,
Oakland, CA 94607
 Phone: (510) 874-1780

Plant Information

Phenology: _____
% vegetative % flowering % fruiting

Animal Information

Age Structure: 10
adults # juveniles # unknown
 likely breeding wintering burrow site rookery likely nesting other

Location (please also attach or draw map on back)
horned larks observed north and west of PG&E Compressor Station, at various locations
in the eastern 1/2 of Section 35

County: Colusa Landowner / Mgr.: _____

Quad Name: Sites 7.5' USGS Elevation: _____

T 18N R 4W _____ 1/4 of _____ 1/4 of Section 35 T _____ R _____ 1/4 of _____ 1/4 of Section _____

UTM: Zone: 10 (10, 11) Datum: _____ (NAD83, NAD27, WG584, other)

Source: USGS 7.5' Quad (GPS, map & type, etc.) GPS Accuracy Point: (circle one) <80m <150m <300m

UTM Coordinates 4358000N 564000E

Habitat Description (plant communities, dominants, associates, substrates/soils, aspects/slope)

horned larks mostly observed in more alkali portions of annual grasslands in low rolling hills and flats of transition area between Valley floor and low Coast Range foothills.
Plant species found in the alkali portions of the annual grasslands include
Agriolops trioncalis, Atriplex fruticulosa, Crassula sp., Cressa truxillensis, Erodium botrys, Plantago coronopus, Spergularia nuba and Trifolium hirtum.

Other rare species? burrowing owl in immediate vicinity

Site Information Overall site quality: Excellent Good Fair Poor

Current / surrounding land use: grazing cattle, next to PG&E Compressor Station

Visible disturbances / possible threats: potential habitat loss due to proposed power plant

Comments: multiple observations, no nest observations, but based on
time of observations, horned larks may be breeding here

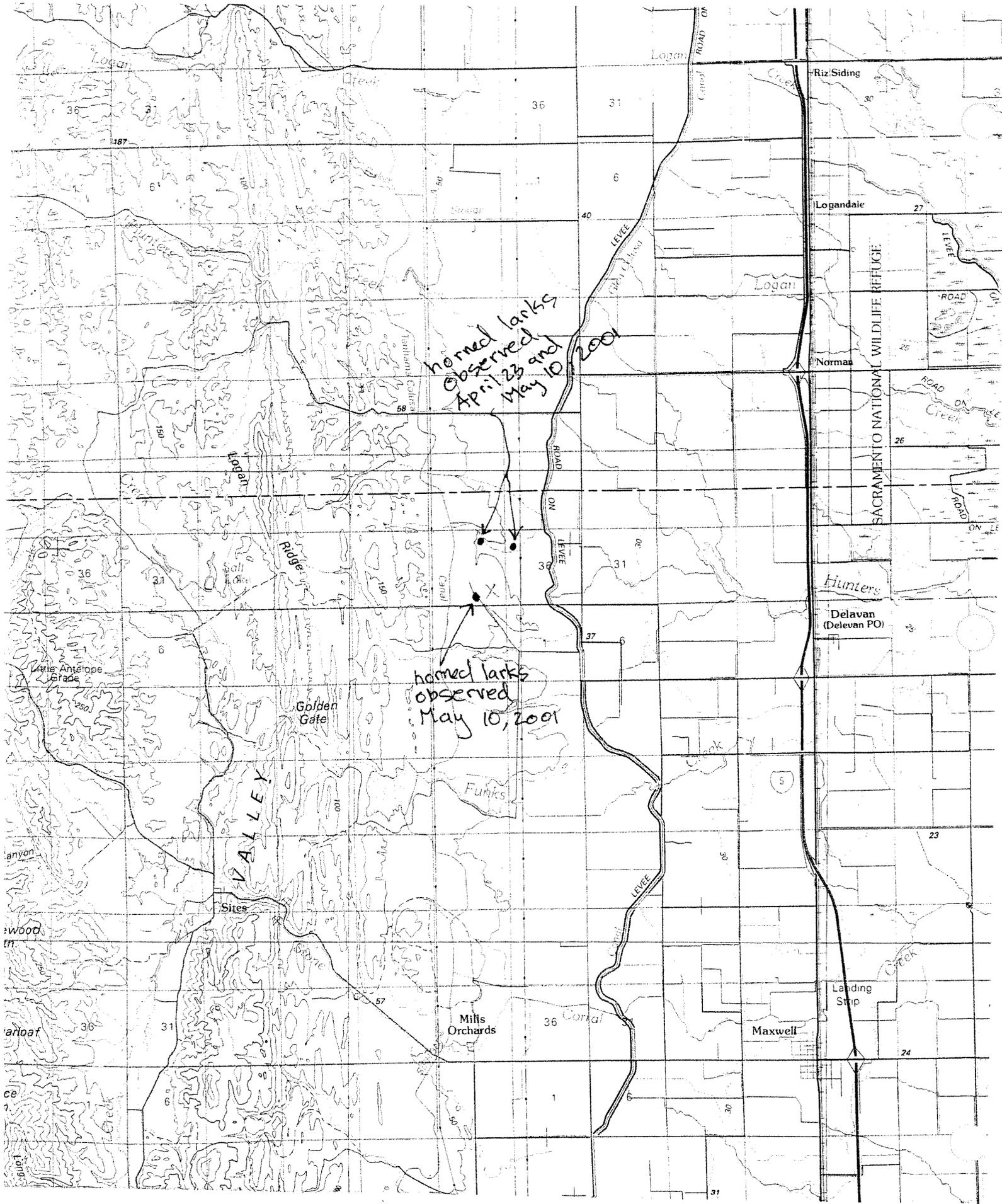
Verification: (check one or more, and fill in blanks)

Keyed (cite reference): Stokes Field Guide to Birds: Western Region
 Compared with specimen housed at: _____
 Compared with photo / drawing in: _____
 By another person (name): Corinna Lu & Jonathan Stead
 Other: _____

Photographs: (check one or more)

Slide _____ Print _____
 Plant / animal _____
 Habitat _____
 Diagnostic feature _____

May we obtain duplicates at our expense? yes no



From Lakeport 1:100,000 USGS TOPO

California Native Species Field Survey Form

Mail to:
 Natural Diversity Database
 California Department of Fish and Game
 1416 Ninth Street, 12th Floor
 Sacramento, CA 95814

For Office Use Only

Source Code _____ Quad Code _____
 Elm Code _____ Occ. No. _____
 EO Index No. _____ Map Index No. _____

Date of Field Work: 5 - 10 - 2001
month day year

Scientific Name: Plegadis chibi

Common Name: White-faced ibis

Species Found? yes no _____ if not, why?
 Total No. Individuals 200 Subsequent Visit? yes no
 Is this an existing NDDB occurrence? _____ no unk.
Yes, Occ. #
 Collection? If yes: _____
Number Museum / Herbarium

Reporter: Jonathan Stead
 Address: URS Corp, 500 12th St. Suite 200,
Oakland, CA 94607
 Phone: (510) 874-1780

Plant Information

Phenology: _____
% vegetative % flowering % fruiting

Animal Information

Age Structure: 200
adults # juveniles # unknown
 breeding wintering burrow site rookery nesting other

Location (please also attach or draw map on back)

200 white-faced ibis observed foraging over a 2 day period in flooded rice field immediately north of Dicks Rd, where it intersects McDermott Rd, in southern 1/2 of section 31 and SW corner of section 32.
 County: Colusa Landowner / Mgr.: _____
 Quad Name: Maxwell 7.5' USGS Elevation: _____
 T 18N R 3W 1/4 of _____ 1/4 of Section 31 T 18N R 3W 1/4 of _____ 1/4 of Section 32
 UTM: Zone: 10 (10, 11) Datum: _____ (NAD83, NAD27, WG584, other)
 Source: USGS 7.5' Quad GPS, map & type, etc.) GPS Accuracy Point: (circle one) <80m <150m <300m
 UTM Coordinates _____

Habitat Description (plant communities, dominants, associates, substrates/soils, aspects/slope)

birds observed foraging in same place for over 2 day period. habitat consists of artificially flooded rice fields.

Other rare species? _____

Site Information Overall site quality: Excellent Good Fair Poor

Current / surrounding land use: rice farming, wheat farming

Visible disturbances / possible threats: _____

Comments: _____

Determination: (check one or more, and fill in blanks)

Keyed (cite reference): Stokes field guide to birds, Western region
 Compared with specimen housed at: _____
 Compared with photo / drawing in: _____
 By another person (name): Corinna Lu & Jonathan Stead
 Other: _____

Photographs: (check one or more)

Plant / animal	Slide	Print
Habitat	_____	_____
Diagnostic feature	_____	_____

May we obtain duplicates at our expense? yes no

