# APPENDIX C.

# WETLAND DETERMINATION DATA FORMS

# APPENDIX D.

# PHOTOGRAPHIC MONITORING OF REPRESENTATIVE WETLANDS

# WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site: Newark Areas 3 & 4 City/County: Newark/Alameda Sampling Date: 26 March 2007
Applicant/Owner: Sobrato Development Companies State: California Sampling Point: SP 1
Investigator(s): A. Breen, K. Hardwicke Section/Township/Range: 7/05 S/01 W
Landform (hillslope, terrace, etc.): agricultural field Local Relief (concave, convex, none): Convex Slope (%): 0%
Subregion (LRR): Mediterranean California (C) Lat: 37 30' 39" Long: 122 0' 37" Datum: NAD 83
Soil Map Unit Name: Omni silty clay loam, strongly saline NWI classification none
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
Are Vegetation X Soil ____ or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____ Soil ____ or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes X No _____
Hydric Soil Present? Yes X No _____
Wetland Hydrology Present? Yes _____ No X

**Is the Sampled Area within a Wetland?** Yes _____ No X

Remarks:
Low rainfall year; soil dry, vegetation slightly stunted, but flowers. Planted agricultural field. Hydric soil features considered historic. No wetland hydrology.

## VEGETATION

| Tree Stratum (Use scientific names) | Absolute Cover % | Dominant Species? | Indicator Status |
|---|---|---|---|
| 1. *none* | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| Total Cover: | 0 | | |

| Sapling/Shrub Stratum | | | |
|---|---|---|---|
| 1. *none* | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| Total Cover: | 0 | | |

| Herb Stratum | | | |
|---|---|---|---|
| 1. *Avena fatua* | 8 | | NOL |
| 2. *Melilotus indicus* | 3 | | FAC |
| 3. *Medicago polymorpha* | 7 | | NOL |
| 4. *Lolium multiflorum* | 65 | X | FAC |
| 5. *Picris echioides* | 2 | | FAC |
| 6. *Hordeum hystrix* | 12 | | FAC |
| 7. *Lotus corniculatus* | trace | | FAC |
| 8. | | | |
| Total Cover: | 97 | | |

| Woody Vine Stratum | | | |
|---|---|---|---|
| 1. *none* | | | |
| 2. | | | |
| Total Cover: | 0 | | |

% Bare Ground in Herb Stratum 20 % Cover of Biotic Crust 0

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)
Total Number of Dominant Species Across All Strata: 1 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

**Prevalence Index worksheet:**

| Total % Cover of: | | Multiply by: |
|---|---|---|
| OBL species | x 1 = | |
| FACW species | x 2 = | |
| FAC species | x 3 = | |
| FACU species | x 4 = | |
| UPL Species | x 5 = | |
| Column totals | (A) | (B) |

Prevalence Index = B/A = _____

**Hydrophytic Vegetation Indicators:**

X Dominance Text is >50%
___ Prevalence Index is ≤3.0[1]
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
X Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

**Hydrophytic Vegetation Present?** Yes X No _____

Remarks:
Disced and planted agricultural field with historic wetland soils. Managed plant communities; vigor and stress responses to wetland conditions.

## SOIL

Sampling Point: **SP 1**

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

| Depth (inches) | Matrix Color (moist) | Matrix % | Redox Features Color (moist) | Redox % | Type[1] | Loc[2] | Texture | Remarks |
|---|---|---|---|---|---|---|---|---|
| 0-10 | 10 YR 3/1 | 100 | --- | 0 | | | silty clay loam | disced, crumbly |
| * | | | | | | | | |

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

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

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

**Indicators for Problematic Hydric Soils[3]:**

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

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present.

**Restrictive Layer (If present):**

Type: plow pan

Depth (inches): 7

Hydric **Soil Present?** Yes X No ___

Remarks:

Homogeneous, disced soils to "plow pan" of compacted soil. Historic hydric soils.

* SCS describes high value/low chroma horizon below the Ap.

## HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (any one indicator is sufficient)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) **(Nonriverine)**
- ___ Sediment Deposits (B2) **(Nonriverine)**
- ___ Drift Deposits (B3) **(Nonriverine)**
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Plowed Soils (C6)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) **(Riverine)**
- ___ Sediment Deposits (B2) **(Riverine)**
- ___ Drift Deposits (B3) (Riverine)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Thin Muck Surface (C7)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

**Field Observations:**

Surface Water Present? Yes ___ No X Depth (inches): ___

Water Table Present? Yes ___ No X Depth (inches): ___

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

**Wetland Hydrology Present?** Yes ___ No X

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

Remarks:

May be wet in some years for very short duration. Appears to be mainly afffected by surface hydrology.

# WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site: Newark Areas 3 & 4 City/County: Newark/Alameda Sampling Date: 26 March 2007
Applicant/Owner: Sobrato Development Companies State: California Sampling Point: SP 2
Investigator(s): A. Breen, K. Hardwicke Section/Township/Range: 7/05 S/01 W
Landform (hillslope, terrace, etc.): agricultural field Local Relief (concave, convex, none): Convex Slope (%): 0%
Subregion (LRR): Mediterranean California (C) Lat: 37 30' 36" Long: 122 0' 36" Datum: NAD 83
Soil Map Unit Name: Omni silty clay loam, strongly saline NWI classification none
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
Are Vegetation X Soil ____ or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____ Soil ____ or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

| | | | | | |
|---|---|---|---|---|---|
| Hydrophytic Vegetation Present? | Yes X | No ____ | **Is the Sampled Area within a Wetland?** | Yes ____ | No X |
| Hydric Soil Present? | Yes X | No ____ | | | |
| Wetland Hydrology Present? | Yes ____ | No X | | | |

Remarks:
Disced agricultural field in historic hydric soils. Hydric soil features considered historic. No wetland hydrology.

## VEGETATION

| Tree Stratum (Use scientific names) | Absolute Cover % | Dominant Species? | Indicator Status |
|---|---|---|---|
| 1. *none* | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| Total Cover: | 0 | | |
| **Sapling/Shrub Stratum** | | | |
| 1. *none* | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| Total Cover: | 0 | | |
| **Herb Stratum** | | | |
| 1. *Lolium multiflorum* | 69 | X | FAC |
| 2. *Avena fatua* | 3 | | NOL |
| 3. *Medicago polymorpha* | 4 | | NOL |
| 4. *Poa annua* | trace | | FACW |
| 5. | | | |
| 6. | | | |
| 7. | | | |
| 8. | | | |
| Total Cover: | 76 | | |
| **Woody Vine Stratum** | | | |
| 1. *none* | | | |
| 2. | | | |
| Total Cover: | 0 | | |

% Bare Ground in Herb Stratum 15 % Cover of Biotic Crust 0

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

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

**Prevalence Index worksheet:**

| Total % Cover of: | | Multiply by: |
|---|---|---|
| OBL species | ____ x 1 = | ____ |
| FACW species | ____ x 2 = | ____ |
| FAC species | ____ x 3 = | ____ |
| FACU species | ____ x 4 = | ____ |
| UPL Species | ____ x 5 = | ____ |
| Column totals | ____ (A) | ____ (B) |

Prevalence Index = B/A = ____

**Hydrophytic Vegetation Indicators:**

X Dominance Text Is >50%
____ Prevalence Index is ≤3.0[1]
____ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
X Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

**Hydrophytic Vegetation Present?** Yes X No ____

Remarks:
Stunted growth, good cover. Managed plant communities; vigor and stress responses to wetland conditions.

## SOIL

Sampling Point: **SP 2**

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

| Depth (inches) | Matrix Color (moist) | Matrix % | Redox Features Color (moist) | Redox % | Type[1] | Loc[2] | Texture | Remarks |
|---|---|---|---|---|---|---|---|---|
| 1-10 | 10 YR 3/1 | 100 | --- | 0 | | | silty clay loam | disced, homogenous to plow pan |
| * | | | | | | | | |

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

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

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

**Indicators for Problematic Hydric Soils[3]:**

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

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present.

**Restrictive Layer (If present):**

Type: plow pan

Depth (inches): 8

**Hydric Soil Present?** Yes X No ___

Remarks:

* SCS describes high value/low chroma horizon below the Ap.

## HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (any one indicator is sufficient)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) **(Nonriverine)**
- ___ Sediment Deposits (B2) **(Nonriverine)**
- ___ Drift Deposits (B3) **(Nonriverine)**
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Plowed Soils (C6)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) **(Riverine)**
- ___ Sediment Deposits (B2) **(Riverine)**
- ___ Drift Deposits (B3) (Riverine)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Thin Muck Surface (C7)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

**Field Observations:**

Surface Water Present? Yes ___ No X Depth (inches): ___

Water Table Present? Yes ___ No X Depth (inches): ___

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

**Wetland Hydrology Present?** Yes ___ No X

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

Remarks:

Somewhat moist soil but no saturation.

# WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site: Newark Areas 3 & 4 City/County: Newark/Alameda Sampling Date: 26 March 2007
Applicant/Owner: Sobrato Development Companies State: California Sampling Point: SP 3
Investigator(s): A. Breen, K. Hardwicke Section/Township/Range: 7/05 S/01 W
Landform (hillslope, terrace, etc.): agricultural field Local Relief (concave, convex, none): Concave Slope (%): 0%
Subregion (LRR): Mediterranean California (C) Lat: 37 30' 36" Long: 122 0' 35" Datum: NAD 83
Soil Map Unit Name: Omni sily clay loam, strongly saline NWI classification Palustrine, farmed (Pf)
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ___ No X (If no, explain in Remarks.)
Are Vegetation X Soil ___ or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes X No ___
Are Vegetation ___ Soil ___ or Hydrology ___ naturally problematic? (If needed, explain any answers in Remarks.)

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

| | | | | | |
|---|---|---|---|---|---|
| Hydrophytic Vegetation Present? | Yes ___ | No X | **Is the Sampled Area within a Wetland?** | Yes X | No ___ |
| Hydric Soil Present? | Yes X | No ___ | | | |
| Wetland Hydrology Present? | Yes X | No ___ | | | |

Remarks:
Disced agricultural field on historic hydric soils near cattail spring driven by surface hydrology, although may be influenced by seep. Hydric soil features considered contemporary.

## VEGETATION

| Tree Stratum (Use scientific names) | Absolute Cover % | Dominant Species? | Indicator Status |
|---|---|---|---|
| 1. *none* | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| Total Cover: | 0 | | |
| **Sapling/Shrub Stratum** | | | |
| 1. *none* | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| Total Cover: | 0 | | |
| **Herb Stratum** | | | |
| 1. *Lolium multiflorum* | 4 | X | FAC |
| 2. *Melilotus indicus* | 10 | X | FAC |
| 3. *Polygonum arenastrum* | <1 | | FAC |
| 4. *Picris echioides* | trace | | FAC |
| 5. *Lathyrus sp.* | trace | | — |
| 6. *Avena fatua* | 10 | X | NOL |
| 7. *Poa annua* | 5 | X | FACW |
| 8. *Brassica nigra* | trace | | NOL |
| Total Cover: | 29.5 | | |
| **Woody Vine Stratum** | | | |
| 1. *none* | | | |
| 2. | | | |
| Total Cover: | 0 | | |

% Bare Ground in Herb Stratum 60 % Cover of Biotic Crust 0

**Dominance Test worksheet:**

| | | |
|---|---|---|
| Number of Dominant Species That Are OBL, FACW, or FAC: | 1 | (A) |
| Total Number of Dominant Species Across All Strata: | 2 | (B) |
| Percent of Dominant Species That Are OBL, FACW, or FAC: | 50% | (A/B) |

**Prevalence Index worksheet:**

| Total % Cover of: | | | Multiply by: |
|---|---|---|---|
| OBL species | 0 | x 1 = | 0 |
| FACW species | 5 | x 2 = | 10 |
| FAC species | 14.5 | x 3 = | 43.5 |
| FACU species | 0 | x 4 = | 0 |
| UPL Species | 10 | x 5 = | 50 |
| Column totals | 29.5 (A) | | 93.5 (B) |

Prevalence Index = B/A = 3.16

Hydrophytic Vegetation Indicators:

___ Dominance Text is >50%
___ Prevalence Index is ≤3.0[1]
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
X Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

**Hydrophytic Vegetation Present?** Yes ___ No X

Remarks:
Managed plant communities; vigor and stress responses to wetland conditions.

## SOIL

Sampling Point: **SP 3**

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

| Depth (inches) | Matrix Color (moist) | Matrix % | Redox Features Color (moist) | Redox % | Type[1] | Loc[2] | Texture | Remarks |
|---|---|---|---|---|---|---|---|---|
| 0-10 | 10 YR 3/1 | 100 | — | 0 | | | silty clay loam | homogenized, disced field |
| * | | | | | | | | |

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

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

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

**Indicators for Problematic Hydric Soils[3]:**

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

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present.

**Restrictive Layer (If present):**

Type: plow pan

Depth (inches): 5

Hydric **Soil Present?** **Yes** X **No** ___

Remarks:

Hydric soil confirmed through comprehensive year-long monitoring, area is saturated for 2 weeks or more of growing season. Aquic moisture regime.

* SCS describes high value/low chroma horizon below the Ap.

## HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (any one indicator is sufficient)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- X Water Marks (B1) **(Nonriverine)**
- ___ Sediment Deposits (B2) **(Nonriverine)**
- ___ Drift Deposits (B3) **(Nonriverine)**
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-stained Leaves (B9)
- X Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Plowed Soils (C6)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) **(Riverine)**
- ___ Sediment Deposits (B2) **(Riverine)**
- ___ Drift Deposits (B3) (Riverine)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Thin Muck Surface (C7)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

**Field Observations:**

Surface Water Present? Yes ___ No X Depth (inches): ___

Water Table Present? Yes ___ No X Depth (inches): ___

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

**Wetland Hydrology Present?** **Yes** X **No** ___

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

Comprehensive photo and site monitoring (11/06-5/07)

Remarks:

Soil moist during spring survey period 1 week after rain when remainder (upland) was dry.

# WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site: Newark Areas 3 & 4 City/County: Newark/Alameda Sampling Date: 26 March 2007
Applicant/Owner: Sobrato Development Companies State: California Sampling Point: SP 4
Investigator(s): A. Breen, K. Hardwicke Section/Township/Range: 7/05 S/01 W
Landform (hillslope, terrace, etc.): agricultural field Local Relief (concave, convex, none): Concave Slope (%): 0%
Subregion (LRR): Mediterranean California (C) Lat: 37 30' 35" Long: 122 0' 35" Datum: NAD 83
Soil Map Unit Name: Omni silty clay loam, strongly saline NWI classification Palustrine, farmed (Pf)
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ___ No X (If no, explain in Remarks.)
Are Vegetation X Soil ___ or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes X No ___
Are Vegetation ___ Soil ___ or Hydrology ___ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes ___ No X
Hydric Soil Present? Yes X No ___
Wetland Hydrology Present? Yes X No ___

**Is the Sampled Area within a Wetland?** Yes X No ___

Remarks:
Hydric soil features considered contemporary.

## VEGETATION

| Tree Stratum (Use scientific names) | Absolute Cover % | Dominant Species? | Indicator Status |
|---|---|---|---|
| 1. *none* | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| Total Cover: | 0 | | |

| Sapling/Shrub Stratum | | | |
|---|---|---|---|
| 1. *none* | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| Total Cover: | 0 | | |

| Herb Stratum | | | |
|---|---|---|---|
| 1. *Avena fatua* | 16 | X | NOL |
| 2. *Melilotus indicus* | 10 | X | FAC |
| 3. *Poa annua* | 3 | X | FACW |
| 4. *Lolium multiflorum* | 1 | X | FAC |
| 5. *Picris echioides* | trace | | FAC |
| 6. | | | |
| 7. | | | |
| 8. | | | |
| Total Cover: | 30 | | |

| Woody Vine Stratum | | | |
|---|---|---|---|
| 1. *none* | | | |
| 2. | | | |
| Total Cover: | 0 | | |

% Bare Ground in Herb Stratum 50 % Cover of Biotic Crust 0

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)
Total Number of Dominant Species Across All Strata: 2 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A/B)

**Prevalence Index worksheet:**

| Total % Cover of: | | | Multiply by: |
|---|---|---|---|
| OBL species | 0 | x 1 = | 0 |
| FACW species | 3 | x 2 = | 6 |
| FAC species | 11 | x 3 = | 33 |
| FACU species | 0 | x 4 = | 0 |
| UPL Species | 16 | x 5 = | 80 |
| Column totals | 30 (A) | | 119 (B) |

Prevalence Index = B/A = 3.96

Hydrophytic Vegetation Indicators:

___ Dominance Text is >50%
___ Prevalence Index is ≤3.0[1]
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
X Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

**Hydrophytic Vegetation Present?** Yes ___ No X

Remarks:
Sparse vegetation within wet area near cattail seep. Managed plant communities; vigor and stress responses to wetland conditions.

## SOIL

Sampling Point: **SP 4**

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

| Depth | Matrix | | Redox Features | | | | | |
|---|---|---|---|---|---|---|---|---|
| (inches) | Color (moist) | % | Color (moist) | % | Type[1] | Loc[2] | Texture | Remarks |
| 0-10 | 10 YR 3/1 | 100 | 7.5 YR 3/3 | 5 | C | RC | silty clay loam | disced, homgenized |
| * | | | | | | | | |

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

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

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

**Indicators for Problematic Hydric Soils[3]:**

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present.

**Restrictive Layer (If present):**

Type: plow pan

Depth (inches): 10

Hydric **Soil Present?** Yes X No ___

Remarks:

* SCS describes high value/low chroma horizon below the Ap.

## HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (any one indicator is sufficient)

| | | | | | |
|---|---|---|---|---|---|
| ___ | Surface Water (A1) | ___ | Salt Crust (B11) | ___ | Water Marks (B1) (Riverine) |
| ___ | High Water Table (A2) | ___ | Biotic Crust (B12) | ___ | Sediment Deposits (B2) (Riverine) |
| ___ | Saturation (A3) | ___ | Aquatic Invertebrates (B13) | ___ | Drift Deposits (B3) (Riverine) |
| X | Water Marks (B1) (Nonriverine) | ___ | Hydrogen Sulfide Odor (C1) | ___ | Drainage Patterns (B10) |
| ___ | Sediment Deposits (B2) (Nonriverine) | ___ | Oxidized Rhizospheres along Living Roots (C3) | ___ | Dry-Season Water Table (C2) |
| ___ | Drift Deposits (B3) (Nonriverine) | ___ | Presence of Reduced Iron (C4) | ___ | Thin Muck Surface (C7) |
| ___ | Surface Soil Cracks (B6) | ___ | Recent Iron Reduction in Plowed Soils (C6) | ___ | Crayfish Burrows (C8) |
| ___ | Inundation Visible on Aerial Imagery (B7) | ___ | Other (Explain in Remarks) | ___ | Saturation Visible on Aerial Imagery (C9) |
| ___ | Water-stained Leaves (B9) | | | ___ | Shallow Aquitard (D3) |
| | | | | ___ | FAC-Neutral Test (D5) |

Secondary Indicators (2 or more required)

**Field Observations:**

Surface Water Present? Yes ___ No X Depth (Inches): ___

Water Table Present? Yes ___ No X Depth (inches): ___

Saturation Present? (includes capillary fringe) Yes ___ No X Depth (Inches): ___

**Wetland Hydrology Present?** Yes X No ___

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

Remarks:

During sping survey period, soil still moist after 1 week of no rain.

# WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site: Newark Areas 3 & 4 City/County: Newark/Alameda Sampling Date: 26 March 2007
Applicant/Owner: Sobrato Development Companies State: California Sampling Point: SP 5
Investigator(s): A. Breen, K. Hardwicke Section/Township/Range: 7/05 S/01 W
Landform (hillslope, terrace, etc.): agricultural field Local Relief (concave, convex, none): Concave Slope (%): 0%
Subregion (LRR): Mediterranean California (C) Lat: 37 30' 40" Long: 122 0' 23" Datum: NAD 83
Soil Map Unit Name: Omni silty clay loam, strongly saline NWI classification none
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ No ____ (If no, explain in Remarks.)
Are Vegetation X Soil ____ or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____ Soil ____ or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes X No ____
Hydric Soil Present? Yes X No ____
Wetland Hydrology Present? Yes X No ____

**Is the Sampled Area within a Wetland?** Yes X No ____

Remarks:
Disced agricultural field near cattail seep. Vegetation chlorotic, flowering but at 7-10" (stunted). Soil moist. Hydric soil features considered contemporary.

## VEGETATION

| Tree Stratum (Use scientific names) | Absolute Cover % | Dominant Species? | Indicator Status |
|---|---|---|---|
| 1. *none* | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| Total Cover: | 0 | | |
| **Sapling/Shrub Stratum** | | | |
| 1. *none* | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| Total Cover: | 0 | | |
| **Herb Stratum** | | | |
| 1. *Triticum aestivum* | 5 | | NOL |
| 2. *Melilotus indicus* | 8 | | FAC |
| 3. *Lolium multiflorum* | 75 | X | FAC |
| 4. *Picris echioides* | trace | | FAC |
| 5. | | | |
| 6. | | | |
| 7. | | | |
| 8. | | | |
| Total Cover: | 88 | | |
| **Woody Vine Stratum** | | | |
| 1. *none* | | | |
| 2. | | | |
| Total Cover: | 0 | | |

% Bare Ground in Herb Stratum 5 % Cover of Biotic Crust 0

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)
Total Number of Dominant Species Across All Strata: 1 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

**Prevalence Index worksheet:**

| Total % Cover of: | | Multiply by: |
|---|---|---|
| OBL species | x 1 = | |
| FACW species | x 2 = | |
| FAC species | x 3 = | |
| FACU species | x 4 = | |
| UPL Species | x 5 = | |
| Column totals | (A) | (B) |

Prevalence Index = B/A =

**Hydrophytic Vegetation Indicators:**

X Dominance Test is >50%
___ Prevalence Index is ≤3.0[1]
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
X Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

**Hydrophytic Vegetation Present?** Yes X No ____

Remarks:
Thick vegetation dominated by Lolium and wheat that are stunted and flowering at 8-10". Managed plant communities; vigor and stress responses to wetland conditions.

## SOIL

Sampling Point: SP 5

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

| Depth (inches) | Matrix Color (moist) | Matrix % | Redox Features Color (moist) | Redox % | Type[1] | Loc[2] | Texture | Remarks |
|---|---|---|---|---|---|---|---|---|
| 0-10 | 10 YR 3/1 | 100 | — | 0 | | | silty clay loam | disced field, homogenous |
| * | | | | | | | | |

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

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

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

**Indicators for Problematic Hydric Soils[3]:**

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

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present.

**Restrictive Layer (if present):**

Type: plow pan

Depth (inches): 6

Hydric Soil Present? Yes X No ___

Remarks:

Hydric soil confirmed through comprehensive year-long monitoring, area is saturated for 2 weeks or more of growing season. Aquic moisture regime.

* SCS describes high value/low chroma horizon below the Ap.

## HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (any one indicator is sufficient)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- X Water Marks (B1) (Nonriverine)
- ___ Sediment Deposits (B2) (Nonriverine)
- ___ Drift Deposits (B3) (Nonriverine)
- ___ Surface Soil Cracks (B6)
- X Inundation Visible on Aerial Imagery (B7)
- ___ Water-stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Plowed Soils (C6)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (Riverine)
- ___ Sediment Deposits (B2) (Riverine)
- ___ Drift Deposits (B3) (Riverine)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Thin Muck Surface (C7)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

**Field Observations:**

Surface Water Present? Yes ___ No X Depth (inches): ___

Water Table Present? Yes ___ No X Depth (inches): ___

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

**Wetland Hydrology Present?** Yes X No ___

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

Comprehensive photo and site monitoring (11/06-5/07)

Remarks:

Soil is moist.

# WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site: Newark Areas 3 & 4 City/County: Newark/Alameda Sampling Date: 26 March 2007
Applicant/Owner: Sobrato Development Companies State: California Sampling Point: SP 6
Investigator(s): A. Breen, K. Hardwicke Section/Township/Range: 7/05 S/01 W
Landform (hillslope, terrace, etc.): agricultural field Local Relief (concave, convex, none): Concave Slope (%): 0%
Subregion (LRR): Mediterranean California (C) Lat: 37 30' 42" Long: 122 0' 27" Datum: NAD 83
Soil Map Unit Name: Omni silty clay loam, strongly saline NWI classification none
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation X Soil ____ or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____ Soil ____ or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes X No ____
Hydric Soil Present? Yes X No ____
Wetland Hydrology Present? Yes X No ____

**Is the Sampled Area within a Wetland?** Yes X No ____

Remarks:
Hydric soil features considered contemporary.

## VEGETATION

| Tree Stratum (Use scientific names) | Absolute Cover % | Dominant Species? | Indicator Status |
|---|---|---|---|
| 1. *none* | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| Total Cover: | 0 | | |
| **Sapling/Shrub Stratum** | | | |
| 1. *none* | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| Total Cover: | 0 | | |
| **Herb Stratum** | | | |
| 1. *Avena fatua* | 15 | | NOL |
| 2. *Polygonum arenastrum* | 1 | | FAC |
| 3. *Melilotus indicus* | 4 | | FAC |
| 4. *Lolium multiflorum* | 52 | X | FAC |
| 5. *Picris echioides* | trace | | FAC |
| 6. | | | |
| 7. | | | |
| 8. | | | |
| Total Cover: | 72 | | |
| **Woody Vine Stratum** | | | |
| 1. *none* | | | |
| 2. | | | |
| Total Cover: | 0 | | |

% Bare Ground in Herb Stratum 12 % Cover of Biotic Crust 0

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A/B)

**Prevalence Index worksheet:**

| Total % Cover of: | | | Multiply by: |
|---|---|---|---|
| OBL species | 0 | x 1 = | 0 |
| FACW species | 0 | x 2 = | 0 |
| FAC species | 57 | x 3 = | 171 |
| FACU species | 0 | x 4 = | 0 |
| UPL Species | 15 | x 5 = | 75 |
| Column totals | 72 (A) | | 176 (B) |

Prevalence Index = B/A = 2.44

Hydrophytic Vegetation Indicators:

____ Dominance Text is >50%
X Prevalence Index is ≤3.0[1]
____ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
X Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

**Hydrophytic Vegetation Present?** Yes X No ____

Remarks:
Avena is tall and flowering; Lolium is shorter and not flowering. Managed plant communities; vigor and stress responses to wetland conditions.

## SOIL

Sampling Point: SP 6

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

| Depth (inches) | Matrix Color (moist) | Matrix % | Redox Features Color (moist) | Redox % | Type[1] | Loc[2] | Texture | Remarks |
|---|---|---|---|---|---|---|---|---|
| 0-10 | 10 YR 3/1 | 100 | — | 0 | | | silty clay loam | homogenized |
| * | | | | | | | | |

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

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

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

**Indicators for Problematic Hydric Soils[3]:**

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

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present.

**Restrictive Layer (If present):**

Type: plow layer

Depth (inches): 6

Hydric **Soil Present?** Yes X **No** ___

Remarks:

Hydric soil confirmed through comprehensive year-long monitoring, area is saturated for 2 weeks or more of growing season. Aquic moisture regime.

* SCS describes high value/low chroma horizon below the Ap.

## HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (any one indicator is sufficient)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- X Water Marks (B1) **(Nonriverine)**
- ___ Sediment Deposits (B2) **(Nonriverine)**
- ___ Drift Deposits (B3) **(Nonriverine)**
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Plowed Soils (C6)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) **(Riverine)**
- ___ Sediment Deposits (B2) **(Riverine)**
- ___ Drift Deposits (B3) (Riverine)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Thin Muck Surface (C7)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

**Field Observations:**

Surface Water Present? Yes ___ No X Depth (Inches): ___

Water Table Present? Yes ___ No X Depth (inches): ___

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

**Wetland Hydrology Present?** Yes X **No** ___

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

Year-long photo and site monitoring (11/06-5/07)

Remarks:

# WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site: Newark Areas 3 & 4 City/County: Newark/Alameda Sampling Date: 26 March 2007
Applicant/Owner: Sobrato Development Companies State: California Sampling Point: SP 7
Investigator(s): A. Breen, K. Hardwicke Section/Township/Range: 7/05 S/01 W
Landform (hillslope, terrace, etc.): agricultural field Local Relief (concave, convex, none): Convex Slope (%): 0%
Subregion (LRR): Mediterranean California (C) Lat: 37 30' 43" Long: 122 0' 28" Datum: NAD 83
Soil Map Unit Name: Omni silty clay loam, strongly saline NWI classification none
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation X Soil ____ or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____ Soil ____ or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

| | | | | | |
|---|---|---|---|---|---|
| Hydrophytic Vegetation Present? | Yes ____ | No X | **Is the Sampled Area within a Wetland?** | Yes ____ | No X |
| Hydric Soil Present? | Yes X | No ____ | | | |
| Wetland Hydrology Present? | Yes ____ | No X | | | |

Remarks:
Disced agricultural field. Moist soils. Stunted vegetation growth with low ground cover. Hydric soil features considered historic. No wetland hydrology.

## VEGETATION

| Tree Stratum (Use scientific names) | Absolute Cover % | Dominant Species? | Indicator Status |
|---|---|---|---|
| 1. *none* | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| Total Cover: | 0 | | |
| **Sapling/Shrub Stratum** | | | |
| 1. *none* | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| Total Cover: | 0 | | |
| **Herb Stratum** | | | |
| 1. *Avena fatua* | 25 | X | NOL |
| 2. *Melilotus indicus* | 22 | X | FAC |
| 3. *Medicago polymorpha* | 3 | X | NOL |
| 4. *Polygonum arenastrum* | 1 | | FAC |
| 5. *Chenopodium album* | trace | | FAC |
| 6. *Lolium multiflorum* | 1 | | FAC |
| 7. | | | |
| 8. | | | |
| Total Cover: | 52 | | |
| **Woody Vine Stratum** | | | |
| 1. *none* | | | |
| 2. | | | |
| Total Cover: | 0 | | |

% Bare Ground in Herb Stratum 35 % Cover of Biotic Crust 0

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A/B)

**Prevalence Index worksheet:**

| Total % Cover of: | | Multiply by: |
|---|---|---|
| OBL species | x 1 = | |
| FACW species | x 2 = | |
| FAC species | x 3 = | |
| FACU species | x 4 = | |
| UPL Species | x 5 = | |
| Column totals | (A) | (B) |

Prevalence Index = B/A =

**Hydrophytic Vegetation Indicators:**

____ Dominance Test is >50%
____ Prevalence Index is ≤3.0[1]
____ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
X Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

**Hydrophytic Vegetation Present?** Yes ____ No X

Remarks:
Managed plant communities; vigor and stress responses to wetland conditions.

# WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site: Newark Areas 3 & 4 City/County: Newark/Alameda Sampling Date: 26 March 2007
Applicant/Owner: Sobrato Development Companies State: California Sampling Point: SP 7
Investigator(s): A. Breen, K. Hardwicke Section/Township/Range: 7/05 S/01 W
Landform (hillslope, terrace, etc.): agricultural field Local Relief (concave, convex, none): Convex Slope (%): 0%
Subregion (LRR): Mediterranean California (C) Lat: 37 30' 43" Long: 122 0' 28" Datum: NAD 83
Soil Map Unit Name: Omni silty clay loam, strongly saline NWI classification none
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation X Soil ____ or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____ Soil ____ or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

| | | | | | |
|---|---|---|---|---|---|
| Hydrophytic Vegetation Present? | Yes ____ | No X | **Is the Sampled Area within a Wetland?** | Yes ____ | No X |
| Hydric Soil Present? | Yes X | No ____ | | | |
| Wetland Hydrology Present? | Yes ____ | No X | | | |

Remarks:
Disced agricultural field. Moist soils. Stunted vegetation growth with low ground cover. Hydric soil features considered historic. No wetland hydrology.

## VEGETATION

| Tree Stratum (Use scientific names) | Absolute Cover % | Dominant Species? | Indicator Status |
|---|---|---|---|
| 1. *none* | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| Total Cover: | 0 | | |
| **Sapling/Shrub Stratum** | | | |
| 1. *none* | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| Total Cover: | 0 | | |
| **Herb Stratum** | | | |
| 1. *Avena fatua* | 25 | X | NOL |
| 2. *Melilotus indicus* | 22 | X | FAC |
| 3. *Medicago polymorpha* | 3 | X | NOL |
| 4. *Polygonum arenastrum* | 1 | | FAC |
| 5. *Chenopodium album* | trace | | FAC |
| 6. *Lolium multiflorum* | 1 | | FAC |
| 7. | | | |
| 8. | | | |
| Total Cover: | 52 | | |
| **Woody Vine Stratum** | | | |
| 1. *none* | | | |
| 2. | | | |
| Total Cover: | 0 | | |

% Bare Ground in Herb Stratum 35 % Cover of Biotic Crust 0

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A/B)

**Prevalence Index worksheet:**

| Total % Cover of: | | Multiply by: |
|---|---|---|
| OBL species | x 1 = | |
| FACW species | x 2 = | |
| FAC species | x 3 = | |
| FACU species | x 4 = | |
| UPL Species | x 5 = | |
| Column totals | (A) | (B) |

Prevalence Index = B/A =

**Hydrophytic Vegetation Indicators:**

____ Dominance Test is >50%
____ Prevalence Index is ≤3.0[1]
____ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
X Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

**Hydrophytic Vegetation Present?** Yes ____ No X

Remarks:
Managed plant communities; vigor and stress responses to wetland conditions.

## SOIL

Sampling Point: SP 7

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

| Depth (Inches) | Matrix Color (moist) | Matrix % | Redox Features Color (moist) | Redox % | Type[1] | Loc[2] | Texture | Remarks |
|---|---|---|---|---|---|---|---|---|
| 0-12 | 10 YR 3/1 | 100 | --- | 0 | | | silty clay loam | dry, historic hydric soil |
| * | | | | | | | | |

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

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

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

**Indicators for Problematic Hydric Soils[3]:**

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

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present.

**Restrictive Layer (If present):**

Type: plow layer

Depth (inches): 12

**Hydric Soil Present?** Yes X No ___

Remarks:

Historic mottles evident around old cattail rhizomes.

* SCS describes high value/low chroma horizon below the Ap.

## HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (any one indicator is sufficient)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (Nonriverine)
- ___ Sediment Deposits (B2) (Nonriverine)
- ___ Drift Deposits (B3) (Nonriverine)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Plowed Soils (C6)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (Riverine)
- ___ Sediment Deposits (B2) (Riverine)
- ___ Drift Deposits (B3) (Riverine)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Thin Muck Surface (C7)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

**Field Observations:**

Surface Water Present? Yes ___ No X Depth (inches): ___

Water Table Present? Yes ___ No X Depth (inches): ___

Saturation Present? Yes ___ No X Depth (inches): ___

(includes capillary fringe)

**Wetland Hydrology Present?** Yes ___ No X

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

Remarks:

Soil is dry in upper 12 inches.

# WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site: Newark Areas 3 & 4 City/County: Newark/Alameda Sampling Date: 26 March 2007
Applicant/Owner: Sobrato Development Companies State: California Sampling Point: SP 8
Investigator(s): A. Breen, K. Hardwicke Section/Township/Range: 7/05 S/01 W
Landform (hillslope, terrace, etc.): agricultural field Local Relief (concave, convex, none): Convex Slope (%): 0%
Subregion (LRR): Mediterranean California (C) Lat: 37 30' 46" Long: 122 0' 30" Datum: NAD 83
Soil Map Unit Name: Omni silty clay loam, strongly saline NWI classification none
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation X Soil ____ or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____ Soil ____ or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

| | | | | | |
|---|---|---|---|---|---|
| Hydrophytic Vegetation Present? | Yes ____ | No X | **Is the Sampled Area within a Wetland?** | Yes ____ | No X |
| Hydric Soil Present? | Yes X | No ____ | | | |
| Wetland Hydrology Present? | Yes ____ | No X | | | |

Remarks:
Disced agricultural field. Soil very dry and crumbly. High cover, tall vegetation with mustard. Hydric soil features considered historic. No wetland hydrology.

## VEGETATION

| Tree Stratum (Use scientific names) | Absolute Cover % | Dominant Species? | Indicator Status |
|---|---|---|---|
| 1. *none* | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| Total Cover: | 0 | | |
| **Sapling/Shrub Stratum** | | | |
| 1. *none* | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| Total Cover: | 0 | | |
| **Herb Stratum** | | | |
| 1. *Avena fatua* | 30 | X | NOL |
| 2. *Lolium multiflorum* | 40 | X | FAC |
| 3. *Brassica nigra* | 3 | | NOL |
| 4. *Melilotus indicus* | 5 | | FAC |
| 5. *Medicago polymorpha* | 5 | | NOL |
| 6. *Hordeum vulgare* | 1 | | NOL |
| 7. | | | |
| 8. | | | |
| Total Cover: | 84 | | |
| **Woody Vine Stratum** | | | |
| 1. *none* | | | |
| 2. | | | |
| Total Cover: | 0 | | |

% Bare Ground in Herb Stratum 15 % Cover of Biotic Crust 0

**Dominance Test worksheet:**

| | | |
|---|---|---|
| Number of Dominant Species That Are OBL, FACW, or FAC: | 1 | (A) |
| Total Number of Dominant Species Across All Strata: | 2 | (B) |
| Percent of Dominant Species That Are OBL, FACW, or FAC: | 50% | (A/B) |

**Prevalence Index worksheet:**

| Total % Cover of: | | | Multiply by: |
|---|---|---|---|
| OBL species | 0 | x 1 = | 0 |
| FACW species | 0 | x 2 = | 0 |
| FAC species | 45 | x 3 = | 135 |
| FACU species | 0 | x 4 = | 0 |
| UPL Species | 39 | x 5 = | 195 |
| Column totals | 84 (A) | | 330 (B) |

Prevalence Index = B/A = 3.9

Hydrophytic Vegetation Indicators:

____ Dominance Text is >50%
____ Prevalence Index is ≤3.0[1]
____ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
X Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

**Hydrophytic Vegetation Present?** Yes ____ No X

Remarks:
Managed plant communities; vigor and stress responses to wetland conditions.

## SOIL

Sampling Point: **SP 8**

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

| Depth | Matrix | | Redox Features | | | | | |
|---|---|---|---|---|---|---|---|---|
| (inches) | Color (moist) | % | Color (moist) | % | Type[1] | Loc[2] | Texture | Remarks |
| 0-16 | 10 YR 3/1 | 100 | — | 0 | | | silty clay loam | |
| * | | | | | | | | |

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

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

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

**Indicators for Problematic Hydric Soils[3]:**

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

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present.

**Restrictive Layer (If present):**

Type: plow pan

Depth (Inches): 16

Hydric **Soil Present?** Yes X No ___

Remarks:

* SCS describes high value/low chroma horizon below the Ap.

## HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (any one indicator is sufficient)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Plowed Soils (C6)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (Riverine)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Thin Muck Surface (C7)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

**Field Observations:**

Surface Water Present? Yes ___ No X Depth (inches): ___

Water Table Present? Yes ___ No X Depth (Inches): ___

Saturation Present? Yes ___ No X Depth (inches): ___

(Includes capillary fringe)

**Wetland Hydrology Present?** Yes ___ No X

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

Remarks:

Dry soil with good cover of tall, thick vegetation. No sign of active hydrology.

# WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site: Newark Areas 3 & 4 City/County: Newark/Alameda Sampling Date: 26 March 2007
Applicant/Owner: Sobrato Development Companies State: California Sampling Point: SP 9
Investigator(s): A. Breen Section/Township/Range: 0/05 S/01 W
Landform (hillslope, terrace, etc.): agricultural field Local Relief (concave, convex, none): Concave Slope (%): 0%
Subregion (LRR): Mediterranean California (C) Lat: 37 29' 57" Long: 122 0' 29" Datum: NAD 83
Soil Map Unit Name: Omni silty clay loam, strongly saline NWI classification Palustrine, farmed (Pf)
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation X Soil ____ or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____ Soil ____ or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes X No ____
Hydric Soil Present? Yes X No ____
Wetland Hydrology Present? Yes X No ____

**Is the Sampled Area within a Wetland?** Yes X No ____

Remarks:
Low rainfall for year. Disced agricultural field, planted with barley and oats. Hydric soil features considered contemporary.

## VEGETATION

| Tree Stratum (Use scientific names) | Absolute Cover % | Dominant Species? | Indicator Status |
|---|---|---|---|
| 1. *none* | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| Total Cover: | 0 | | |
| **Sapling/Shrub Stratum** | | | |
| 1. *none* | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| Total Cover: | 0 | | |
| **Herb Stratum** | | | |
| 1. *Mesembranthemum nodiflorum* | >1 | | NOL |
| 2. *Cotula coronopifolia* | >1 | | FACW |
| 3. *Spergularia macrotheca* | >1 | | FAC |
| 4. *Lolium multiflorum* | >1 | | FAC |
| 5. | | | |
| 6. | | | |
| 7. | | | |
| 8. | | | |
| Total Cover: | 2 | | |
| **Woody Vine Stratum** | | | |
| 1. *none* | | | |
| 2. | | | |
| Total Cover: | 0 | | |

% Bare Ground in Herb Stratum 99 % Cover of Biotic Crust 0

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC. 75% (A/B)

**Prevalence Index worksheet:**

| Total % Cover of: | | Multiply by: |
|---|---|---|
| OBL species | x 1 = | |
| FACW species | x 2 = | |
| FAC species | x 3 = | |
| FACU species | x 4 = | |
| UPL Species | x 5 = | |
| Column totals | (A) | (B) |

Prevalence Index = B/A =

**Hydrophytic Vegetation Indicators:**

X Dominance Text is >50%
____ Prevalence Index Is ≤3.0[1]
____ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
X Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

**Hydrophytic Vegetation Present?** Yes X No ____

Remarks:
Saline scald area with signs of inundation and no vegetation. All plant species 2" high and some flowering at this height. Managed plant communities; vigor and stress responses to wetland conditions.

## SOIL

Sampling Point: **SP 9**

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

| Depth | Matrix | | Redox Features | | | | | |
|---|---|---|---|---|---|---|---|---|
| (inches) | Color (moist) | % | Color (moist) | % | Type[1] | Loc[2] | Texture | Remarks |
| 0-10 | 10 YR 3/2 | 95 | 7.5 YR 4/6 | 5 | C | PL | clay loam | disced, homogenized soil |
| * | | | | | | | | |

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

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

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

**Indicators for Problematic Hydric Soils[3]:**

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

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present.

**Restrictive Layer (If present):**

Type: plow layer

Depth (inches): 14 inches to compacted

Hydric **Soil Present?** Yes X **No** ___

Remarks:

Very few roots; many historic mottles.

* SCS describes high value/low chroma horizon below the Ap.

## HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (any one indicator is sufficient)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- X Water Marks (B1) **(Nonriverine)**
- X Sediment Deposits (B2) **(Nonriverine)**
- ___ Drift Deposits (B3) **(Nonriverine)**
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Plowed Soils (C6)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) **(Riverine)**
- ___ Sediment Deposits (B2) **(Riverine)**
- ___ Drift Deposits (B3) (Riverine)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Thin Muck Surface (C7)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

**Field Observations:**

| | | | |
|---|---|---|---|
| Surface Water Present? | Yes ___ | No X | Depth (Inches): ___ |
| Water Table Present? | Yes ___ | No X | Depth (inches): ___ |
| Saturation Present? (includes capillary fringe) | Yes ___ | No X | Depth (inches): ___ |

**Wetland Hydrology Present? Yes** X **No** ___

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

Remarks:

Slightly depressed saline area with little germination and stunted growth of vegetation.

# WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site: Newark Areas 3 & 4 City/County: Newark/Alameda Sampling Date: 26 March 2007
Applicant/Owner: Sobrato Development Companies State: California Sampling Point: SP 10
Investigator(s): A. Breen Section/Township/Range: 0/05 S/01 W
Landform (hillslope, terrace, etc.): agricultural field Local Relief (concave, convex, none): Convex Slope (%): 0%
Subregion (LRR): Mediterranean California (C) Lat: 37 29' 58" Long: 122 0' 28" Datum: NAD 83
Soil Map Unit Name: Omni silty clay loam, strongly saline NWI classification Palustrine, farmed (Pf)
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation X Soil ____ or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____ Soil ____ or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

| | | | | | |
|---|---|---|---|---|---|
| Hydrophytic Vegetation Present? | Yes ____ | No X | **Is the Sampled Area within a Wetland?** | Yes ____ | No X |
| Hydric Soil Present? | Yes X | No ____ | | | |
| Wetland Hydrology Present? | Yes ____ | No X | | | |

Remarks:

## VEGETATION

| Tree Stratum (Use scientific names) | Absolute Cover % | Dominant Species? | Indicator Status |
|---|---|---|---|
| 1. *none* | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| Total Cover: | 0 | | |
| **Sapling/Shrub Stratum** | | | |
| 1. *none* | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| Total Cover: | 0 | | |
| **Herb Stratum** | | | |
| 1. *Lolium multiflorum* | 15 | X | FAC |
| 2. *Triticum aestivum* | 10 | X | NOL |
| 3. *Mesembryanthemum nodiflorum* | trace | | NOL |
| 4. *Cotula coronopifolia* | trace | | FACW |
| 5. *Hordeum hystrix* | 1 | | FAC |
| 6. | | | |
| 7. | | | |
| 8. | | | |
| Total Cover: | 25.5 | | |
| **Woody Vine Stratum** | | | |
| 1. *none* | | | |
| 2. | | | |
| Total Cover: | 0 | | |

% Bare Ground in Herb Stratum 60 % Cover of Biotic Crust 0

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A/B)

**Prevalence Index worksheet:**

| Total % Cover of: | | Multiply by: |
|---|---|---|
| OBL species | x 1 = | |
| FACW species | x 2 = | |
| FAC species | x 3 = | |
| FACU species | x 4 = | |
| UPL Species | x 5 = | |
| Column totals | (A) | (B) |

Prevalence Index = B/A =

**Hydrophytic Vegetation Indicators:**

___ Dominance Text is >50%
___ Prevalence Index is ≤3.0[1]
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
X Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

**Hydrophytic Vegetation Present?** Yes ____ No X

Remarks:
Managed plant communities; vigor and stress responses to wetland conditions.

## SOIL

Sampling Point: **SP 10**

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

| Depth | Matrix | | Redox Features | | | | | |
|---|---|---|---|---|---|---|---|---|
| (Inches) | Color (moist) | % | Color (moist) | % | Type[1] | Loc[2] | Texture | Remarks |
| 0-10 | 2.5 Y 4/2 | 100 | --- | 0 | | | clay loam | homogenized soil |
| * | | | | | | | | |

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

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

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

**Indicators for Problematic Hydric Soils[3]:**

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

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present.

**Restrictive Layer (If present):**

Type: Ap

Depth (inches): 6

Hydric **Soil Present?** Yes X No ___

Remarks:

Disced soil in agricultural field of historic hydric soils.

* SCS describes high value/low chroma horizon below the Ap.

## HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (any one indicator is sufficient)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) **(Nonriverine)**
- ___ Sediment Deposits (B2) **(Nonriverine)**
- ___ Drift Deposits (B3) **(Nonriverine)**
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Plowed Soils (C6)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) **(Riverine)**
- ___ Sediment Deposits (B2) **(Riverine)**
- ___ Drift Deposits (B3) (Riverine)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Thin Muck Surface (C7)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

**Field Observations:**

Surface Water Present? Yes ___ No X Depth (inches): ___

Water Table Present? Yes ___ No X Depth (inches): ___

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

**Wetland Hydrology Present?** Yes ___ No X

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

Remarks:

# WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site: Newark Areas 3 & 4 City/County: Newark/Alameda Sampling Date: 26 March 2007
Applicant/Owner: Sobrato Development Companies State: California Sampling Point: SP 11
Investigator(s): A. Breen Section/Township/Range: 0/05 S/01 W
Landform (hillslope, terrace, etc.): agricultural field Local Relief (concave, convex, none): Convex Slope (%): 0%
Subregion (LRR): Mediterranean California (C) Lat: 37 30' 0" Long: 122 0' 28" Datum: NAD 83
Soil Map Unit Name: Omni silty clay loam, strongly alkne NWI classification Palustrine farmed, Pf
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
Are Vegetation X Soil ____ or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
Are Vegetation ____ Soil ____ or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes _____ No X
Hydric Soil Present? Yes X No _____
Wetland Hydrology Present? Yes _____ No X

**Is the Sampled Area within a Wetland?** Yes _____ No X

Remarks:
Hydric soil features considered historic. No wetland hydrology.

## VEGETATION

| Tree Stratum (Use scientific names) | Absolute Cover % | Dominant Species? | Indicator Status |
|---|---|---|---|
| 1. *none* | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| Total Cover: | 0 | | |

| Sapling/Shrub Stratum | | | |
|---|---|---|---|
| 1. *none* | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| Total Cover: | 0 | | |

| Herb Stratum | | | |
|---|---|---|---|
| 1. *Melilotus indicus* | trace | | FAC |
| 2. *Hordeum hystrix* | trace | | FAC |
| 3. *Triticum aestivum* | 18 | X | NOL |
| 4. *Lolium multiflorum* | 25 | X | FAC |
| 5. *Frankenia salina* | <1 | | FACW |
| 6. *Polygonum arenastrum* | 2 | | FAC |
| 7. | | | |
| 8. | | | |
| Total Cover: | 45.5 | | |

| Woody Vine Stratum | | | |
|---|---|---|---|
| 1. *none* | | | |
| 2. | | | |
| Total Cover: | 0 | | |

% Bare Ground in Herb Stratum 60 % Cover of Biotic Crust _____

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A/B)

**Prevalence Index worksheet:**

| Total % Cover of: | | Multiply by: |
|---|---|---|
| OBL species | x 1 = | |
| FACW species | x 2 = | |
| FAC species | x 3 = | |
| FACU species | x 4 = | |
| UPL Species | x 5 = | |
| Column totals | (A) | (B) |

Prevalence Index = B/A = _____

**Hydrophytic Vegetation Indicators:**

___ Dominance Test is >50%
___ Prevalence Index is ≤3.0[1]
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
X Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

**Hydrophytic Vegetation Present?** Yes _____ No X

Remarks:
Some salt crust, chlorosis, plants flowering (wheat flowering at 16"). Managed plant communities; vigor and stress responses to wetland conditions.

## SOIL

Sampling Point: **SP 11**

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

| Depth | Matrix | | Redox Features | | | | | |
|---|---|---|---|---|---|---|---|---|
| (inches) | Color (moist) | % | Color (moist) | % | Type[1] | Loc[2] | Texture | Remarks |
| 0-10 | 10 YR 3/2 | 100 | — | 0 | | | clay loam | homogenized soils |
| * | | | | | | | | |

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

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

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

**Indicators for Problematic Hydric Soils[3]:**

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

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present.

**Restrictive Layer (If present):**

Type: Ap

Depth (inches): 4

Hydric **Soil Present?** Yes X No ___

Remarks:

Histic mottles from tidal channels evidence historic hydric soils. No mottles on living roots.

* SCS describes high value/low chroma horizon below the Ap.

## HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (any one indicator is sufficient)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) **(Nonriverine)**
- ___ Sediment Deposits (B2) **(Nonriverine)**
- ___ Drift Deposits (B3) **(Nonriverine)**
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Plowed Soils (C6)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) **(Riverine)**
- ___ Sediment Deposits (B2) **(Riverine)**
- ___ Drift Deposits (B3) (Riverine)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Thin Muck Surface (C7)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

**Field Observations:**

Surface Water Present? Yes ___ No X Depth (inches): ___

Water Table Present? Yes ___ No X Depth (inches): ___

Saturation Present? Yes ___ No X Depth (inches): ___

(Includes capillary fringe)

**Wetland Hydrology Present?** Yes ___ No X

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

Comprehensive long-term (11/06-5/07) photo and site monitoring.

Remarks:

Saline area with bare ground evident but not topographically depressed. Elevated from SP 9 and surrounding "wetland" areas.

# WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site: Newark Areas 3 & 4 City/County: Newark/Alameda Sampling Date: 26 March 2007
Applicant/Owner: Sobrato Development Companies State: California Sampling Point: SP 12
Investigator(s): A. Breen Section/Township/Range: 0/05 S/01 W
Landform (hillslope, terrace, etc.): agricultural field Local Relief (concave, convex, none): Convex Slope (%): 0%
Subregion (LRR): Mediterranean California (C) Lat: 37 30' 4" Long: 122 0' 41" Datum: NAD 83
Soil Map Unit Name: Reyes clay, drained NWI classification Palustrine farmed, Pf
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation X Soil ____ or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____ Soil ____ or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes X No ____
Hydric Soil Present? Yes X No ____
Wetland Hydrology Present? Yes ____ No X

**Is the Sampled Area within a Wetland?** Yes ____ No X

Remarks:

## VEGETATION

| Tree Stratum (Use scientific names) | Absolute Cover % | Dominant Species? | Indicator Status |
|---|---|---|---|
| 1. *none* | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| Total Cover: | 0 | | |
| **Sapling/Shrub Stratum** | | | |
| 1. *none* | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| Total Cover: | 0 | | |
| **Herb Stratum** | | | |
| 1. *Hordeum hystrix* | 79 | X | FAC |
| 2. *Melilotus indicus* | trace | | FAC |
| 3. *Brassica nigra* | 1 | | NOL |
| 4. *Lolium multiflorum* | 3 | | FAC |
| 5. | | | |
| 6. | | | |
| 7. | | | |
| 8. | | | |
| Total Cover: | 83 | | |
| **Woody Vine Stratum** | | | |
| 1. *none* | | | |
| 2. | | | |
| Total Cover: | 0 | | |

% Bare Ground in Herb Stratum 10 % Cover of Biotic Crust ____

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

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

**Prevalence Index worksheet:**

| Total % Cover of: | | Multiply by: |
|---|---|---|
| OBL species | x 1 = | |
| FACW species | x 2 = | |
| FAC species | x 3 = | |
| FACU species | x 4 = | |
| UPL Species | x 5 = | |
| Column totals | (A) | (B) |

Prevalence Index = B/A =

**Hydrophytic Vegetation Indicators:**

X Dominance Test is >50%
____ Prevalence Index is ≤3.0[1]
____ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
____ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

**Hydrophytic Vegetation Present?** Yes X No ____

Remarks:
Efflorescent salt crust present. Stunted vegetation growth, but flowering. Managed plant communities; vigor and stress responses to wetland conditions.

## SOIL

Sampling Point: **SP 12**

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

| Depth (inches) | Matrix Color (moist) | Matrix % | Redox Features Color (moist) | Redox % | Type[1] | Loc[2] | Texture | Remarks |
|---|---|---|---|---|---|---|---|---|
| 0-12 | 10 YR 3/2 | 100 | — | 0 | | | clay loam | homogenized, disced soil |
| * | | | | | | | | |

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

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

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

**Indicators for Problematic Hydric Soils[3]:**

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

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present.

**Restrictive Layer (If present):**

Type: Ap

Depth (inches): 12

Hydric **Soil Present?** Yes X No ___

Remarks:

Efflorescent salt crust present; soil dry.

* Soils do not match the SCS description for this series.

## HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (any one indicator is sufficient)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (Nonriverine)
- ___ Sediment Deposits (B2) (Nonriverine)
- ___ Drift Deposits (B3) (Nonriverine)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Plowed Soils (C6)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (Riverine)
- ___ Sediment Deposits (B2) (Riverine)
- ___ Drift Deposits (B3) (Riverine)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Thin Muck Surface (C7)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

**Field Observations:**

Surface Water Present? Yes ___ No X Depth (inches): ___

Water Table Present? Yes ___ No X Depth (inches): ___

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

**Wetland Hydrology Present?** Yes ___ No X

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

Remarks:

Salt crust not a result of previous inundation/evaporation, but is fluffy and efflorescent.

# WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site: Newark Areas 3 & 4 City/County: Newark/Alameda Sampling Date: 26 March 2007
Applicant/Owner: Sobrato Development Companies State: California Sampling Point: SP 13
Investigator(s): A. Breen Section/Township/Range: 0/05 S/01 W
Landform (hillslope, terrace, etc.): agricultural field Local Relief (concave, convex, none): None Slope (%): 0%
Subregion (LRR): Mediterranean California (C) Lat: Long: Datum: NAD 83
Soil Map Unit Name: Reyes clay, drained NWI classification Pulustrine farmed, Pf
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
Are Vegetation X Soil or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No
Are Vegetation Soil or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes X No
Hydric Soil Present? Yes X No
Wetland Hydrology Present? Yes No X

**Is the Sampled Area within a Wetland?** Yes No X

Remarks:

## VEGETATION

| Tree Stratum (Use scientific names) | Absolute Cover % | Dominant Species? | Indicator Status |
|---|---|---|---|
| 1. *none* | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| Total Cover: | 0 | | |
| **Sapling/Shrub Stratum** | | | |
| 1. *none* | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| Total Cover: | 0 | | |
| **Herb Stratum** | | | |
| 1. *Hordeum hystrix* | 20 | X | FAC |
| 2. *Lolium multiflorum* | 15 | X | FAC |
| 3. *Brassica nigra* | 35 | X | NOL |
| 4. *Polygonum arenastrum* | trace | | FAC |
| 5. | | | |
| 6. | | | |
| 7. | | | |
| 8. | | | |
| Total Cover: | 70 | | |
| **Woody Vine Stratum** | | | |
| 1. *none* | | | |
| 2. | | | |
| Total Cover: | 0 | | |

% Bare Ground in Herb Stratum 25 % Cover of Biotic Crust

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)
Total Number of Dominant Species Across All Strata: 3 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 66% (A/B)

**Prevalence Index worksheet:**

| Total % Cover of: | | Multiply by: |
|---|---|---|
| OBL species | x 1 = | |
| FACW species | x 2 = | |
| FAC species | x 3 = | |
| FACU species | x 4 = | |
| UPL Species | x 5 = | |
| Column totals | (A) | (B) |

Prevalence Index = B/A =

**Hydrophytic Vegetation Indicators:**

X Dominance Text is >50%
Prevalence Index is ≤3.0[1]
Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
X Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

**Hydrophytic Vegetation Present?** Yes X No

Remarks:
Vegetation tall and flowering at 16-20 inches in height with lots of mustard. Soil dry. Managed plant communities; vigor and stress responses to wetland conditions.

## SOIL

Sampling Point: **SP 13**

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

| Depth (inches) | Matrix Color (moist) | Matrix % | Redox Features Color (moist) | Redox % | Type[1] | Loc[2] | Texture | Remarks |
|---|---|---|---|---|---|---|---|---|
| 0-14 | 10 YR 3/1 | 100 | — | 0 | | | clay loam | homogenized soil |
| * | | | | | | | | |

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

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

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

**Indicators for Problematic Hydric Soils[3]:**

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

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present.

**Restrictive Layer (If present):**

Type: Ap

Depth (inches): 14

Hydric **Soil Present?** **Yes** X **No** ___

Remarks:

Salt crust present in dry soil; no mottles near rooting layer.

* Soils do not match the SCS description for this series.

## HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (any one indicator is sufficient)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) **(Nonriverine)**
- ___ Sediment Deposits (B2) **(Nonriverine)**
- ___ Drift Deposits (B3) **(Nonriverine)**
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Plowed Soils (C6)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) **(Riverine)**
- ___ Sediment Deposits (B2) **(Riverine)**
- ___ Drift Deposits (B3) (Riverine)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Thin Muck Surface (C7)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

**Field Observations:**

Surface Water Present? Yes ___ No X Depth (inches): ___

Water Table Present? Yes ___ No X Depth (inches): ___

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

**Wetland Hydrology Present? Yes** ___ **No** X

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

Remarks:

# WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site: Newark Areas 3 & 4 City/County: Newark/Alameda Sampling Date: 26 March 2007
Applicant/Owner: Sobrato Development Companies State: California Sampling Point: SP 14
Investigator(s): A. Breen Section/Township/Range: 0/05 S/01 W
Landform (hillslope, terrace, etc.): agricultural field Local Relief (concave, convex, none): Convex Slope (%): 0%
Subregion (LRR): Mediterranean California (C) Lat: 37 30' 3" Long: 122 0' 44" Datum: NAD 83
Soil Map Unit Name: Reyes clay, drained NWI classification Palustrine farmed, Pf
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation X Soil ____ or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____ Soil ____ or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes X No ____
Hydric Soil Present? Yes X No ____
Wetland Hydrology Present? Yes X No ____

**Is the Sampled Area within a Wetland?** Yes X No ____

Remarks:

## VEGETATION

| Tree Stratum (Use scientific names) | Absolute Cover % | Dominant Species? | Indicator Status |
|---|---|---|---|
| 1. *none* | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| Total Cover: | 0 | | |
| **Sapling/Shrub Stratum** | | | |
| 1. *none* | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| Total Cover: | 0 | | |
| **Herb Stratum** | | | |
| 1. *Melilotus indicus* | trace | | FAC |
| 2. *Lolium multiflorum* | 14 | X | FAC |
| 3. *Mesembryanthemum nodiflorum* | trace | | NOL |
| 4. *Triticum aestivum* | 7 | X | NI |
| 5. *Hordeum hystrix* | 9 | X | FAC |
| 6. | | | |
| 7. | | | |
| 8. | | | |
| Total Cover: | 30 | | |
| **Woody Vine Stratum** | | | |
| 1. *none* | | | |
| 2. | | | |
| Total Cover: | 0 | | |

% Bare Ground In Herb Stratum 70 % Cover of Biotic Crust ____

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)
Total Number of Dominant Species Across All Strata: 3 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 66% (A/B)

**Prevalence Index worksheet:**

| Total % Cover of: | | Multiply by: |
|---|---|---|
| OBL species | x 1 = | |
| FACW species | x 2 = | |
| FAC species | x 3 = | |
| FACU species | x 4 = | |
| UPL Species | x 5 = | |
| Column totals | (A) | (B) |

Prevalence Index = B/A = ____

**Hydrophytic Vegetation Indicators:**

X Dominance Text is >50%
____ Prevalence Index is ≤3.0[1]
____ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
X Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

**Hydrophytic Vegetation Present?** Yes X No ____

Remarks:
Salt crust present, possibly stunting growth. Vegetation chlorotic and stunted; flowering at 5-inches (Lolium and wheat). Managed plant communities; vigor and stress responses to wetland conditions.

## SOIL

Sampling Point: **SP 14**

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

| Depth | Matrix | | Redox Features | | | | | |
|---|---|---|---|---|---|---|---|---|
| (Inches) | Color (moist) | % | Color (moist) | % | Type[1] | Loc[2] | Texture | Remarks |
| 0-10 | 10 YR 4/2 | 100 | --- | 0 | | | clay loam | |
| * | | | | | | | | |

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

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

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

**Indicators for Problematic Hydric Soils[3]:**

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

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present.

**Restrictive Layer (If present):**

Type: Ap

Depth (inches): 7

Hydric **Soil Present?** Yes X No ___

Remarks:

* Soils do not match the SCS description for this series.

## HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (any one indicator is sufficient)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) **(Nonriverine)**
- ___ Sediment Deposits (B2) **(Nonriverine)**
- ___ Drift Deposits (B3) **(Nonriverine)**
- X Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Plowed Soils (C6)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) **(Riverine)**
- ___ Sediment Deposits (B2) **(Riverine)**
- ___ Drift Deposits (B3) (Riverine)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Thin Muck Surface (C7)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

**Field Observations:**

Surface Water Present? Yes ___ No X Depth (inches): ___

Water Table Present? Yes ___ No X Depth (inches): ___

Saturation Present? Yes ___ No X Depth (inches): ___

(Includes capillary fringe)

**Wetland Hydrology Present? Yes X No ___**

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

Remarks:

No clear topographical difference. Cracking on soil surface, but stunted vegetation may be due to salt.

# WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site: Newark Areas 3 & 4 City/County: Newark/Alameda Sampling Date: 26 March 2007
Applicant/Owner: Sobrato Development Companies State: California Sampling Point: SP 15
Investigator(s): A. Breen Section/Township/Range: 0/05 S/01 W
Landform (hillslope, terrace, etc.): agricultural field Local Relief (concave, convex, none): None Slope (%): 0%
Subregion (LRR): Mediterranean California (C) Lat: 37 30' 3" Long: 122 0' 15" Datum: NAD 83
Soil Map Unit Name: Omni silty clay loam, strongly saline NWI classification Palustrine farmed, Pf
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation X Soil ____ or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____ Soil ____ or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes ____ No X
Hydric Soil Present? Yes X No ____
Wetland Hydrology Present? Yes ____ No X

**Is the Sampled Area within a Wetland?** Yes ____ No X

Remarks:
Hydric soil features considered historic. No wetland hydrology.

## VEGETATION

| Tree Stratum (Use scientific names) | Absolute Cover % | Dominant Species? | Indicator Status |
|---|---|---|---|
| 1. *none* | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| Total Cover: | 0 | | |

| Sapling/Shrub Stratum | | | |
|---|---|---|---|
| 1. *none* | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| Total Cover: | 0 | | |

| Herb Stratum | | | |
|---|---|---|---|
| 1. *Brassica nigra* | 11 | | NOL |
| 2. *Avena fatua* | 37 | X | NOL |
| 3. *Beta vulgaris* | 10 | | FACU |
| 4. *Melilotus indicus* | <1 | | FAC |
| 5. *Polygonum arenastrum* | 1 | | FAC |
| 6. *Lolium multiflorum* | 10 | | FAC |
| 7. | | | |
| 8. | | | |
| Total Cover: | 69.5 | | |

| Woody Vine Stratum | | | |
|---|---|---|---|
| 1. *none* | | | |
| 2. | | | |
| Total Cover: | 0 | | |

% Bare Ground in Herb Stratum 40 % Cover of Biotic Crust ____

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)
Total Number of Dominant Species Across All Strata: 1 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 0% (A/B)

**Prevalence Index worksheet:**

| Total % Cover of: | | Multiply by: |
|---|---|---|
| OBL species | x 1 = | |
| FACW species | x 2 = | |
| FAC species | x 3 = | |
| FACU species | x 4 = | |
| UPL Species | x 5 = | |
| Column totals | (A) | (B) |

Prevalence Index = B/A = ____

**Hydrophytic Vegetation Indicators:**

____ Dominance Text is >50%
____ Prevalence Index is ≤3.0[1]
____ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
X Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

**Hydrophytic Vegetation Present?** Yes ____ No X

Remarks:
Vegetation slightly chlorotic, flowering at 16-inches (Avena and Lolium). Managed plant communities; vigor and stress responses to wetland conditions.

## SOIL

Sampling Point: **SP 15**

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

| Depth | Matrix | | Redox Features | | | | | |
|---|---|---|---|---|---|---|---|---|
| (Inches) | Color (moist) | % | Color (moist) | % | Type[1] | Loc[2] | Texture | Remarks |
| 0-10 | 10 YR 3/1 | 100 | — | 0 | | | clay loam | homogenous soil |
| * | | | | | | | | |

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

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

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

**Indicators for Problematic Hydric Soils[3]:**

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

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present.

**Restrictive Layer (If present):**

Type: Ap

Depth (Inches): 6

Hydric **Soil Present?** **Yes** X **No** ___

Remarks:

* SCS describes high value/low chroma horizon below the Ap.

## HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (any one Indicator is sufficient)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) **(Nonriverine)**
- ___ Sediment Deposits (B2) **(Nonriverine)**
- ___ Drift Deposits (B3) **(Nonriverine)**
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Plowed Soils (C6)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) **(Riverine)**
- ___ Sediment Deposits (B2) **(Riverine)**
- ___ Drift Deposits (B3) (Riverine)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Thin Muck Surface (C7)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

**Field Observations:**

Surface Water Present? Yes ___ No X Depth (Inches): ___

Water Table Present? Yes ___ No X Depth (Inches): ___

Saturation Present? (includes capillary fringe) Yes ___ No X Depth (Inches): ___

**Wetland Hydrology Present?** **Yes** ___ **No** X

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

Remarks:

# WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site: Newark Areas 3 & 4xer City/County: Newark/Alameda Sampling Date: 26 March 2007
Applicant/Owner: Sobrato Development Companies State: California Sampling Point: SP 16
Investigator(s): A. Breen Section/Township/Range: 0/05 S/01 W
Landform (hillslope, terrace, etc.): agricultural field Local Relief (concave, convex, none): Convex Slope (%): 0%
Subregion (LRR): Mediterranean California (C) Lat: 37 30' 1" Long: 122 0' 16" Datum: NAD 83
Soil Map Unit Name: Omni silty clay loam, strongly saline NWI classification Palustrine farmed, Pf
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation X Soil ____ or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ____ No ____
Are Vegetation ____ Soil ____ or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes X No ____
Hydric Soil Present? Yes X No ____
Wetland Hydrology Present? Yes ____ No X

**Is the Sampled Area within a Wetland?** Yes ____ No X

Remarks:
Hydric soil features considered historic. No wetland hydrology.

## VEGETATION

| Tree Stratum (Use scientific names) | Absolute Cover % | Dominant Species? | Indicator Status |
|---|---|---|---|
| 1. *none* | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| Total Cover: | 0 | | |
| **Sapling/Shrub Stratum** | | | |
| 1. *none* | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| Total Cover: | 0 | | |
| **Herb Stratum** | | | |
| 1. *Poa annua* | 10 | X | FACW- |
| 2. *Lolium multiflorum* | 12 | X | FAC |
| 3. *Beta vulgaris* | 7 | | FACU |
| 4. *Avena fatua* | 7 | | NOL |
| 5. *Brassica nigra* | trace | | NOL |
| 6. *Polygonum arenastrum* | trace | | FAC |
| 7. *Hordeum hystrix* | 7 | | FAC |
| 8. | | | |
| Total Cover: | 43 | | |
| **Woody Vine Stratum** | | | |
| 1. *none* | | | |
| 2. | | | |
| Total Cover: | 0 | | |

% Bare Ground in Herb Stratum 25 % Cover of Biotic Crust ____

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)
Total Number of Dominant Species Across All Strata: 2 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

**Prevalence Index worksheet:**

| Total % Cover of: | | Multiply by: |
|---|---|---|
| OBL species | x 1 = | |
| FACW species | x 2 = | |
| FAC species | x 3 = | |
| FACU species | x 4 = | |
| UPL Species | x 5 = | |
| Column totals | (A) | (B) |

Prevalence Index = B/A = ____

**Hydrophytic Vegetation Indicators:**

X Dominance Text is >50%
___ Prevalence Index is ≤3.0[1]
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
X Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

**Hydrophytic Vegetation Present?** Yes X No ____

Remarks:
Managed plant communities; vigor and stress responses to wetland conditions.

## SOIL

Sampling Point: **SP 16**

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

| Depth | Matrix | | Redox Features | | | | | |
|---|---|---|---|---|---|---|---|---|
| (inches) | Color (moist) | % | Color (moist) | % | Type[1] | Loc[2] | Texture | Remarks |
| 0-10 | 10 YR 3/1 | 100 | --- | 0 | | | clay loam | homogenous, disced soil |
| * | | | | | | | | |

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

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

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

**Indicators for Problematic Hydric Soils[3]:**

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

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present.

**Restrictive Layer (If present):**

Type: Ap

Depth (inches): 5

Hydric **Soil Present?** Yes X No ___

Remarks:

Efflorescent salt crust present.

* SCS describes high value/low chroma horizon below the Ap.

## HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (any one indicator is sufficient)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) **(Nonriverine)**
- ___ Sediment Deposits (B2) **(Nonriverine)**
- ___ Drift Deposits (B3) **(Nonriverine)**
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Plowed Soils (C6)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) **(Riverine)**
- ___ Sediment Deposits (B2) **(Riverine)**
- ___ Drift Deposits (B3) (Riverine)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Thin Muck Surface (C7)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

**Field Observations:**

Surface Water Present? Yes ___ No X Depth (inches): ___

Water Table Present? Yes ___ No X Depth (inches): ___

Saturation Present? Yes ___ No X Depth (inches): ___

(Includes capillary fringe)

**Wetland Hydrology Present? Yes** ___ **No** X

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

Remarks:

Salt crust from salinity, not inundation.

# WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site: Newark Areas 3 & 4 City/County: Newark/Alameda Sampling Date: 26 March 2007
Applicant/Owner: Sobrato Development Companies State: California Sampling Point: SP 17
Investigator(s): A. Breen Section/Township/Range: 0/05 S/01 W
Landform (hillslope, terrace, etc.): agricultural field Local Relief (concave, convex, none): Convex Slope (%): 0%
Subregion (LRR): Mediterranean California (C) Lat: 37 30' 1" Long: 122 0' 16" Datum: NAD 83
Soil Map Unit Name: Omni silty clay loam, strongly saline NWI classification Palustrine farmed, Pf
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
Are Vegetation X Soil ____ or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
Are Vegetation ____ Soil ____ or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes X No _____
Hydric Soil Present? Yes X No _____
Wetland Hydrology Present? Yes _____ No X

**Is the Sampled Area within a Wetland?** Yes _____ No X

Remarks:
Hydric soil features considered historic. No wetland hydrology.

## VEGETATION

| Tree Stratum (Use scientific names) | Absolute Cover % | Dominant Species? | Indicator Status |
|---|---|---|---|
| 1. *none* | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| Total Cover: | 0 | | |
| **Sapling/Shrub Stratum** | | | |
| 1. *none* | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| Total Cover: | 0 | | |
| **Herb Stratum** | | | |
| 1. *Lolium multiflorum* | 58 | X | FAC |
| 2. *Brassica nigra* | trace | | NOL |
| 3. *Melilotus indicus* | trace | | FAC |
| 4. *Avena fatua* | 4 | | NOL |
| 5. *Polygonum arenastrum* | 2 | | FAC |
| 6. *Malvella leprosa* | trace | | FAC |
| 7. *Beta vulgaris* | trace | | FACU |
| 8. *Chenopodium album* | trace | | FAC |
| 9. *Hordeum vulgare* | 3 | | NOL |
| Total Cover: | 67 | | |
| **Woody Vine Stratum** | | | |
| 1. *none* | | | |
| 2. | | | |
| Total Cover: | 0 | | |

% Bare Ground in Herb Stratum 25 % Cover of Biotic Crust _____

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

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

**Prevalence Index worksheet:**

| Total % Cover of: | | Multiply by: |
|---|---|---|
| OBL species | x 1 = | |
| FACW species | x 2 = | |
| FAC species | x 3 = | |
| FACU species | x 4 = | |
| UPL Species | x 5 = | |
| Column totals | (A) | (B) |

Prevalence Index = B/A = _____

**Hydrophytic Vegetation Indicators:**

X Dominance Text is >50%
___ Prevalence Index is ≤3.0[1]
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
X Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

**Hydrophytic Vegetation Present?** Yes X No _____

Remarks:
Salt present, plants flowering at 12-Inches (Lolium) and 8-Inches (Avena). Managed plant communities; vigor and stress responses to wetland conditions.

## SOIL

Sampling Point: **SP 17**

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

| Depth | Matrix | | Redox Features | | | | | |
|---|---|---|---|---|---|---|---|---|
| (inches) | Color (moist) | % | Color (moist) | % | Type[1] | Loc[2] | Texture | Remarks |
| 0-12 | 10 YR 3/1 | 100 | --- | 0 | | | clay loam | homogenous |
| * | | | | | | | | |

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

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

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

**Indicators for Problematic Hydric Soils[3]:**

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

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present.

**Restrictive Layer (If present):**

Type: Ap

Depth (Inches): 12

Hydric **Soil Present?** Yes X No ___

Remarks:

* SCS describes high value/low chroma horizon below the Ap.

## HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (any one indicator is sufficient)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) **(Nonriverine)**
- ___ Sediment Deposits (B2) **(Nonriverine)**
- ___ Drift Deposits (B3) **(Nonriverine)**
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Plowed Soils (C6)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) **(Riverine)**
- ___ Sediment Deposits (B2) **(Riverine)**
- ___ Drift Deposits (B3) (Riverine)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Thin Muck Surface (C7)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

**Field Observations:**

Surface Water Present? Yes ___ No X Depth (inches): ___

Water Table Present? Yes ___ No X Depth (inches): ___

Saturation Present? (includes capillary fringe) Yes ___ No X Depth (Inches): ___

**Wetland Hydrology Present?** Yes ___ No X

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

Remarks:

No clear wetland hydrology.

# WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site: Newark Areas 3 & 4 City/County: Newark/Alameda Sampling Date: 26 March 2007
Applicant/Owner: Sobrato Development Companies State: California Sampling Point: SP 18
Investigator(s): A. Breen Section/Township/Range: 0/05 S/01 W
Landform (hillslope, terrace, etc.): agricultural field Local Relief (concave, convex, none): Concave Slope (%): 0%
Subregion (LRR): Mediterranean California (C) Lat: 37 29' 59" Long: 122 0' 17" Datum: NAD 83
Soil Map Unit Name: Omni silty clay loam, strongly saline NWI classification Palustrine farmed, Pf
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
Are Vegetation X Soil ____ or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____ Soil ____ or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes X No _____
Hydric Soil Present? Yes X No _____
Wetland Hydrology Present? Yes X No _____

**Is the Sampled Area within a Wetland?** Yes X No _____

Remarks:
Hydric soil features considered historic. No wetland hydrology.

## VEGETATION

| Tree Stratum (Use scientific names) | Absolute Cover % | Dominant Species? | Indicator Status |
|---|---|---|---|
| 1. none | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| Total Cover: | 0 | | |

| Sapling/Shrub Stratum | | | |
|---|---|---|---|
| 1. none | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| Total Cover: | 0 | | |

| Herb Stratum | | | |
|---|---|---|---|
| 1. *Avena fatua* | 8 | X | NOL |
| 2. *Lolium multiflorum* | 10 | X | FAC |
| 3. *Poa annua* | 10 | X | FACW- |
| 4. *Cotula coronopifolia* | trace | | FACW+ |
| 5. *Polygonum arenastrum* | trace | | FAC |
| 6. *Beta vulgaris* | 2 | | NOL |
| 7. *Medicago polymorpha* | 1 | | NOL |
| 8. *Brassica nigra* | trace | | NOL |
| 9. *Malvella leprosa* | trace | | FAC |
| 10. *Hordeum vulgare* | trace | | NOL |
| Total Cover: | 31 | | |

| Woody Vine Stratum | | | |
|---|---|---|---|
| 1. none | | | |
| 2. | | | |
| Total Cover: | 0 | | |

% Bare Ground in Herb Stratum 75 % Cover of Biotic Crust _____

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 66% (A/B)

**Prevalence Index worksheet:**

| Total % Cover of: | | Multiply by: |
|---|---|---|
| OBL species | x 1 = | |
| FACW species | x 2 = | |
| FAC species | x 3 = | |
| FACU species | x 4 = | |
| UPL Species | x 5 = | |
| Column totals | (A) | (B) |

Prevalence Index = B/A = _____

**Hydrophytic Vegetation Indicators:**

X Dominance Test is >50%
___ Prevalence Index is ≤3.0[1]
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
X Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

**Hydrophytic Vegetation Present?** Yes X No _____

Remarks:
Chlorotic and flowering at 5-inches (stunted). Salt crust present. Managed plant communities; vigor and stress responses to wetland conditions.

## SOIL

Sampling Point: **SP 18**

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

| Depth | Matrix | | Redox Features | | | | | |
|---|---|---|---|---|---|---|---|---|
| (inches) | Color (moist) | % | Color (moist) | % | Type[1] | Loc[2] | Texture | Remarks |
| 0-4 | 10 YR 4/1 | 97 | 7.5YR 4/5 | 3 | C | PL | clay loam | homogenous, disced; historic mottles |
| 4-14 | 10 YR 2/1 | 98 | 7.5YR 4/5 | 2 | C | PL | clay | homogenous, disced; historic mottles |
| * | | | | | | | | |

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

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

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

**Indicators for Problematic Hydric Soils[3]:**

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

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present.

**Restrictive Layer (If present):**

Type: Ap

Depth (Inches): 4

**Hydric Soil Present?** Yes X No ___

Remarks:

Soil is moist compared to SP 17 and prior in this transect. Salt crust present.

* SCS describes high value/low chroma horizon below the Ap.

## HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (any one indicator is sufficient)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) **(Nonriverine)**
- ___ Sediment Deposits (B2) **(Nonriverine)**
- ___ Drift Deposits (B3) **(Nonriverine)**
- X Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-stained Leaves (B9)
- X Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Plowed Soils (C6)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) **(Riverine)**
- ___ Sediment Deposits (B2) **(Riverine)**
- ___ Drift Deposits (B3) **(Riverine)**
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Thin Muck Surface (C7)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

**Field Observations:**

Surface Water Present? Yes ___ No X Depth (inches): ___

Water Table Present? Yes ___ No X Depth (inches): ___

Saturation Present? (Includes capillary fringe) Yes ___ No X Depth (Inches): ___

**Wetland Hydrology Present?** Yes X No ___

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

Remarks:

Salt crust hard, occurs with soil cracking from inundation.

# WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site: Newark Areas 3 & 4 City/County: Newark/Alameda Sampling Date: 26 March 2007
Applicant/Owner: Sobrato Development Companies State: California Sampling Point: SP 19
Investigator(s): A. Breen Section/Township/Range: 0/05 S/01 W
Landform (hillslope, terrace, etc.): agricultural field Local Relief (concave, convex, none): Convex Slope (%): 0%
Subregion (LRR): Mediterranean California (C) Lat: 37 30' 5" Long: 121 59' 56" Datum: NAD 83
Soil Map Unit Name: Omni silty clay loam, strongly saline NWI classification Palustrine farmed, Pf
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
Are Vegetation X Soil ____ or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
Are Vegetation ____ Soil ____ or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

| | | | | | |
|---|---|---|---|---|---|
| Hydrophytic Vegetation Present? | Yes ____ | No X | **Is the Sampled Area within a Wetland?** | Yes ____ | No X |
| Hydric Soil Present? | Yes X | No ____ | | | |
| Wetland Hydrology Present? | Yes ____ | No X | | | |

Remarks:
Hydric soil features considered historic. No wetland hydrology.

## VEGETATION

| Tree Stratum (Use scientific names) | Absolute Cover % | Dominant Species? | Indicator Status |
|---|---|---|---|
| 1. *none* | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| Total Cover: | 0 | | |
| **Sapling/Shrub Stratum** | | | |
| 1. *none* | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| Total Cover: | 0 | | |
| **Herb Stratum** | | | |
| 1. *Lolium multiflorum* | 45 | X | FAC |
| 2. *Avena fatua* | 45 | X | NOL |
| 3. *Melilotus indicus* | 1 | | FAC |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| 7. | | | |
| 8. | | | |
| Total Cover: | 91 | | |
| **Woody Vine Stratum** | | | |
| 1. *none* | | | |
| 2. | | | |
| Total Cover: | 0 | | |

% Bare Ground in Herb Stratum 10 % Cover of Biotic Crust _____

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A/B)

**Prevalence Index worksheet:**

| Total % Cover of: | | Multiply by: |
|---|---|---|
| OBL species | x 1 = | |
| FACW species | x 2 = | |
| FAC species | x 3 = | |
| FACU species | x 4 = | |
| UPL Species | x 5 = | |
| Column totals | (A) | (B) |

Prevalence Index = B/A = _____

**Hydrophytic Vegetation Indicators:**

____ Dominance Text is >50%
____ Prevalence Index is ≤3.0[1]
____ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
X Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

**Hydrophytic Vegetation Present?** Yes ____ No X

Remarks:
Flowering at 18-20 inches tall. Managed plant communities; vigor and stress responses to wetland conditions.

## SOIL

Sampling Point: **SP 19**

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

| Depth | Matrix | | Redox Features | | | | | |
|---|---|---|---|---|---|---|---|---|
| (inches) | Color (moist) | % | Color (moist) | % | Type[1] | Loc[2] | Texture | Remarks |
| 0-12 | 10 YR 3/1 | 100 | — | 0 | | | clay loam | homogenous, disced |
| * | | | | | | | | |

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

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

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

**Indicators for Problematic Hydric Soils[3]:**

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

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present.

**Restrictive Layer (If present):**

Type: Ap

Depth (inches): 12

**Hydric Soil Present?** Yes X **No** ___

Remarks:

* SCS describes high value/low chroma horizon below the Ap.

## HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (any one indicator is sufficient)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) **(Nonriverine)**
- ___ Sediment Deposits (B2) **(Nonriverine)**
- ___ Drift Deposits (B3) **(Nonriverine)**
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Plowed Soils (C6)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) **(Riverine)**
- ___ Sediment Deposits (B2) **(Riverine)**
- ___ Drift Deposits (B3) (Riverine)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Thin Muck Surface (C7)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

**Field Observations:**

Surface Water Present? Yes ___ No X Depth (inches): ___

Water Table Present? Yes ___ No X Depth (inches): ___

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

**Wetland Hydrology Present? Yes** ___ **No** X

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

Remarks:

# WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site: Newark Areas 3 & 4 City/County: Newark/Alameda Sampling Date: 26 March 2007
Applicant/Owner: Sobrato Development Companies State: California Sampling Point: SP 20
Investigator(s): A. Breen Section/Township/Range: 0/05 S/01 W
Landform (hillslope, terrace, etc.): agricultural field Local Relief (concave, convex, none): None Slope (%): 0%
Subregion (LRR): Mediterranean California (C) Lat: 37 30' 4" Long: 121 59' 55" Datum: NAD 83
Soil Map Unit Name: Omni silty clay loam, strongly saline NWI classification Palustrine farmed, Pf
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation X Soil ____ or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____ Soil ____ or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

| | | | | |
|---|---|---|---|---|
| Hydrophytic Vegetation Present? | Yes ____ | No X | Is the Sampled Area within a Wetland? | Yes X No ____ |
| Hydric Soil Present? | Yes X | No ____ | | |
| Wetland Hydrology Present? | Yes X | No ____ | | |

Remarks:
Hydric soil features considered historic. No wetland hydrology.

## VEGETATION

| Tree Stratum (Use scientific names) | Absolute Cover % | Dominant Species? | Indicator Status |
|---|---|---|---|
| 1. *none* | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| Total Cover: | 0 | | |
| **Sapling/Shrub Stratum** | | | |
| 1. *none* | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| Total Cover: | 0 | | |
| **Herb Stratum** | | | |
| 1. *Poa annua* | 8 | | FACW |
| 2. *Avena fatua* | 17 | X | NOL |
| 3. *Lolium multiflorum* | 5 | | FAC |
| 4. *Melilotus indicus* | 12 | X | FAC |
| 5. *Beta vulgaris* | trace | | FACU |
| 6. | | | |
| 7. | | | |
| 8. | | | |
| Total Cover: | 42 | | |
| **Woody Vine Stratum** | | | |
| 1. *none* | | | |
| 2. | | | |
| Total Cover: | 0 | | |

% Bare Ground in Herb Stratum 40 % Cover of Biotic Crust ____

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A/B)

**Prevalence Index worksheet:**

| Total % Cover of: | | | Multiply by: |
|---|---|---|---|
| OBL species | 0 | x 1 = | 0 |
| FACW species | 8 | x 2 = | 16 |
| FAC species | 17 | x 3 = | 51 |
| FACU species | 0 | x 4 = | 0 |
| UPL Species | 17 | x 5 = | 85 |
| Column totals | 42 (A) | | 152 (B) |

Prevalence Index = B/A = 3.61

Hydrophytic Vegetation Indicators:

____ Dominance Text is >50%
____ Prevalence Index is ≤3.0[1]
____ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
X Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

**Hydrophytic Vegetation Present?** Yes ____ No X

Remarks:
Vegetation chlorotic. Salt crust present. Flowering at 8-inches. Managed plant communities; vigor and stress responses to wetland conditions.

## SOIL

Sampling Point: **SP20**

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

| Depth | Matrix | | Redox Features | | | | | |
|---|---|---|---|---|---|---|---|---|
| (inches) | Color (moist) | % | Color (moist) | % | Type[1] | Loc[2] | Texture | Remarks |
| 0-3 | 10 YR 3/2 | 100 | -- | 0 | | | clay loam | homogenous, disced |
| 3-12 | 10 YR 3/1 | 100 | — | 0 | | | clay | |
| * | | | | | | | | |

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

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

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

**Indicators for Problematic Hydric Soils[3]:**

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

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present.

**Restrictive Layer (If present):**

Type: Ap

Depth (inches): 12

Hydric **Soil Present?** Yes X No ___

Remarks:

Salt crust. Soil moist. Hydric soil confirmed through comprehensive year-long monitoring, area is saturated for 2 weeks or more of growing season. Aquic moisture regime.

* SCS describes high value/low chroma horizon below the Ap.

## HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (any one indicator is sufficient)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) **(Nonriverine)**
- ___ Sediment Deposits (B2) **(Nonriverine)**
- ___ Drift Deposits (B3) **(Nonriverine)**
- X Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Plowed Soils (C6)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) **(Riverine)**
- ___ Sediment Deposits (B2) **(Riverine)**
- ___ Drift Deposits (B3) (Riverine)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Thin Muck Surface (C7)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

**Field Observations:**

Surface Water Present? Yes ___ No X Depth (Inches): ___

Water Table Present? Yes ___ No X Depth (inches): ___

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

**Wetland Hydrology Present?** Yes X No ___

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

Remarks:

# WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site: Newark Areas 3 & 4 City/County: Newark/Alameda Sampling Date: 26 March 2007
Applicant/Owner: Sobrato Development Companies State: California Sampling Point: **SP 21**
Investigator(s): A. Breen Section/Township/Range: 0/05 S/01 W
Landform (hillslope, terrace, etc.): agricultural field Local Relief (concave, convex, none): Concave Slope (%): 0%
Subregion (LRR): Mediterranean California (C) Lat: 37 30' 3" Long: 121 59' 53" Datum: NAD 83
Soil Map Unit Name: Omni silty clay loam, strongly saline NWI classification Palustrine farmed, Pf
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
Are Vegetation X Soil ___ or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes X No
Are Vegetation ___ Soil ___ or Hydrology ___ naturally problematic? (If needed, explain any answers in Remarks.)

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

| | | | |
|---|---|---|---|
| Hydrophytic Vegetation Present? | Yes | No X | **Is the Sampled Area within a Wetland?** Yes X No |
| Hydric Soil Present? | Yes X | No | |
| Wetland Hydrology Present? | Yes X | No | |

Remarks:
Hydric soil features considered historic. No wetland hydrology.

## VEGETATION

| Tree Stratum (Use scientific names) | Absolute Cover % | Dominant Species? | Indicator Status |
|---|---|---|---|
| 1. *none* | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| Total Cover: | 0 | | |
| **Sapling/Shrub Stratum** | | | |
| 1. *none* | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| Total Cover: | 0 | | |
| **Herb Stratum** | | | |
| 1. *Melilotus indicus* | 2 | | FAC |
| 2. *Poa annua* | 15 | X | FACW |
| 3. *Avena fatua* | 11 | X | NOL |
| 4. *Beta vulgaris* | trace | | FACU |
| 5. | | | |
| 6. | | | |
| 7. | | | |
| 8. | | | |
| Total Cover: | 28 | | |
| **Woody Vine Stratum** | | | |
| 1. *none* | | | |
| 2. | | | |
| Total Cover: | 0 | | |

% Bare Ground in Herb Stratum 75 % Cover of Biotic Crust

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A/B)

**Prevalence Index worksheet:**

| Total % Cover of: | | | Multiply by: |
|---|---|---|---|
| OBL species | 0 | x 1 = | 0 |
| FACW species | 15 | x 2 = | 30 |
| FAC species | 2 | x 3 = | 6 |
| FACU species | 0 | x 4 = | 0 |
| UPL Species | 11 | x 5 = | 55 |
| Column totals | 28 (A) | | 91 (B) |

Prevalence Index = B/A = 3.25

Hydrophytic Vegetation Indicators:

___ Dominance Text is >50%
___ Prevalence Index is ≤3.0[1]
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
X Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

**Hydrophytic Vegetation Present?** Yes ___ No X

Remarks:
Vegetation very chlorotic and stunted; no flowering. Managed plant communities; vigor and stress responses to wetland conditions.

## SOIL

Sampling Point: **SP 21**

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

| Depth | Matrix | | Redox Features | | | | | |
|---|---|---|---|---|---|---|---|---|
| (inches) | Color (moist) | % | Color (moist) | % | Type[1] | Loc[2] | Texture | Remarks |
| 0-10 | 10 YR 3/1 | 100 | — | 0 | | | clay loam | homogenous, disced |
| * | | | | | | | | |

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

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

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

**Indicators for Problematic Hydric Soils[3]:**

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present.

**Restrictive Layer (if present):**

Type: Ap

Depth (inches): 8

Hydric **Soil Present?** Yes X No ___

Remarks:

Salt crust present. Soil very wet. Vegetation very stunted.Hydric soil confirmed through comprehensive year-long monitoring, area is saturated for 2 weeks or more of growing season. Aquic moisture regime.

* SCS describes high value/low chroma horizon below the Ap.

## HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (any one indicator is sufficient)

| | | | | | |
|---|---|---|---|---|---|
| | Surface Water (A1) | X | Salt Crust (B11) | | Water Marks (B1) (Riverine) |
| | High Water Table (A2) | | Biotic Crust (B12) | | Sediment Deposits (B2) (Riverine) |
| | Saturation (A3) | | Aquatic Invertebrates (B13) | | Drift Deposits (B3) (Riverine) |
| | Water Marks (B1) (Nonriverine) | | Hydrogen Sulfide Odor (C1) | | Drainage Patterns (B10) |
| X | Sediment Deposits (B2) (Nonriverine) | | Oxidized Rhizospheres along Living Roots (C3) | | Dry-Season Water Table (C2) |
| | Drift Deposits (B3) (Nonriverine) | | Presence of Reduced Iron (C4) | | Thin Muck Surface (C7) |
| X | Surface Soil Cracks (B6) | | Recent Iron Reduction in Plowed Soils (C6) | | Crayfish Burrows (C8) |
| | Inundation Visible on Aerial Imagery (B7) | | Other (Explain in Remarks) | | Saturation Visible on Aerial Imagery (C9) |
| | Water-stained Leaves (B9) | | | | Shallow Aquitard (D3) |
| | | | | | FAC-Neutral Test (D5) |

Secondary Indicators (2 or more required)

**Field Observations:**

Surface Water Present? Yes ___ No X Depth (inches): ___

Water Table Present? Yes ___ No X Depth (inches): ___

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

**Wetland Hydrology Present?** Yes X No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:
Comprehensive long-term (11/06-5/07) photo and site monitoring.

Remarks:

Soil moist. Hard salt crust occurs w/ surface cracking, from inundation/evaporation.

# WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site: Newark Areas 3 & 4 City/County: Newark/Alameda Sampling Date: 26 March 2007
Applicant/Owner: Sobrato Development Companies State: California Sampling Point: SP 22
Investigator(s): A. Breen Section/Township/Range: 0/05 S/01 W
Landform (hillslope, terrace, etc.): agricultural field Local Relief (concave, convex, none): Convex Slope (%): 0%
Subregion (LRR): Mediterranean California (C) Lat: 37 30' 4" Long: 121 59' 55" Datum: NAD 83
Soil Map Unit Name: Reyes clay, drained NWI classification Palustrine farmed, Pf
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation X Soil ____ or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____ Soil ____ or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

| | | | | | |
|---|---|---|---|---|---|
| Hydrophytic Vegetation Present? | Yes ____ | No X | **Is the Sampled Area within a Wetland?** | Yes ____ | No X |
| Hydric Soil Present? | Yes X | No ____ | | | |
| Wetland Hydrology Present? | Yes ____ | No X | | | |

Remarks:
Hydric soil features considered historic. No wetland hydrology.

## VEGETATION

| Tree Stratum (Use scientific names) | Absolute Cover % | Dominant Species? | Indicator Status |
|---|---|---|---|
| 1. *none* | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| Total Cover: | 0 | | |
| **Sapling/Shrub Stratum** | | | |
| 1. *none* | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| Total Cover: | 0 | | |
| **Herb Stratum** | | | |
| 1. *Brassica nigra* | 18 | X | NOL |
| 2. *Bromus diandrus* | 18 | X | NI |
| 3. *Hordeum murinum* | 12 | | NI |
| 4. *Lolium multiflorum* | 20 | X | FAC |
| 5. *Medicago polymorpha* | trace | | NOL |
| 6. *Avena fatua* | 3 | | NOL |
| 7. | | | |
| 8. | | | |
| Total Cover: | 71 | | |
| **Woody Vine Stratum** | | | |
| 1. *none* | | | |
| 2. | | | |
| Total Cover: | 0 | | |

% Bare Ground in Herb Stratum 20 % Cover of Biotic Crust ____

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 33% (A/B)

**Prevalence Index worksheet:**

| Total % Cover of: | | Multiply by: |
|---|---|---|
| OBL species | x 1 = | |
| FACW species | x 2 = | |
| FAC species | x 3 = | |
| FACU species | x 4 = | |
| UPL Species | x 5 = | |
| Column totals | (A) | (B) |

Prevalence Index = B/A = ____

**Hydrophytic Vegetation Indicators:**

____ Dominance Text is >50%
____ Prevalence Index is ≤3.0[1]
____ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
X Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

**Hydrophytic Vegetation Present?** Yes ____ No X

Remarks:
Plants flowering at 18-20 inches. Soil dry. No chlorosis or stunting present. Managed plant communities; vigor and stress responses to wetland conditions.

## SOIL

Sampling Point: **SP22**

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

| Depth | Matrix | | Redox Features | | | | | |
|---|---|---|---|---|---|---|---|---|
| (inches) | Color (moist) | % | Color (moist) | % | Type[1] | Loc[2] | Texture | Remarks |
| 0-10 | 10 YR 3/1 | 100 | --- | 0 | | | clay loam | |
| * | | | | | | | | |

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

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

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

**Indicators for Problematic Hydric Soils[3]:**

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

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present.

**Restrictive Layer (if present):**

Type: Ap

Depth (inches): 20

Hydric **Soil Present?** **Yes** X **No** ___

Remarks:

* Soils do not match the SCS description for this series.

## HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (any one indicator is sufficient)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Plowed Soils (C6)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (Riverine)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Thin Muck Surface (C7)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

**Field Observations:**

Surface Water Present? Yes ___ No X Depth (inches): ___

Water Table Present? Yes ___ No X Depth (inches): ___

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

**Wetland Hydrology Present?** **Yes** ___ **No** X

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

Remarks:

# WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site: Newark Areas 3 & 4 City/County: Newark/Alameda Sampling Date: 26 March 2007
Applicant/Owner: Sobrato Development Companies State: California Sampling Point: SP 23
Investigator(s): A. Breen Section/Township/Range: 0/05 S/01 W
Landform (hillslope, terrace, etc.): agricultural field Local Relief (concave, convex, none): None Slope (%): 0%
Subregion (LRR): Mediterranean California (C) Lat: 37 30' 6" Long: 121 59' 57" Datum: NAD 83
Soil Map Unit Name: Reyes clay, drained NWI classification Palustrine farmed, Pf
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation X Soil ____ or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____ Soil ____ or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes ____ No X
Hydric Soil Present? Yes X No ____
Wetland Hydrology Present? Yes X No ____

**Is the Sampled Area within a Wetland?** Yes X No ____

Remarks:
Hydric soil features considered contemporary.

## VEGETATION

| Tree Stratum (Use scientific names) | Absolute Cover % | Dominant Species? | Indicator Status |
|---|---|---|---|
| 1. *none* | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| Total Cover: | 0 | | |
| **Sapling/Shrub Stratum** | | | |
| 1. *none* | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| Total Cover: | 0 | | |
| **Herb Stratum** | | | |
| 1. *Poa annua* | 8 | X | FACW |
| 2. *Lolium multiflorum* | 1 | | FAC |
| 3. *Hordeum hystrix* | 8 | X | FAC |
| 4. *Spergularia macrotheca* | trace | | FAC |
| 5. | | | |
| 6. | | | |
| 7. | | | |
| 8. | | | |
| Total Cover: | 17 | | |
| **Woody Vine Stratum** | | | |
| 1. *none* | | | |
| 2. | | | |
| Total Cover: | 0 | | |

% Bare Ground in Herb Stratum 80 % Cover of Biotic Crust ____

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A/B)

**Prevalence Index worksheet:**

| Total % Cover of: | | | Multiply by: |
|---|---|---|---|
| OBL species | 0 | x 1 = | 0 |
| FACW species | 8 | x 2 = | 16 |
| FAC species | 1.2 | x 3 = | 3.6 |
| FACU species | 0 | x 4 = | 0 |
| UPL Species | 8 | x 5 = | 40 |
| Column totals | 17.2 (A) | | 59.6 (B) |

Prevalence Index = B/A = 3.46

Hydrophytic Vegetation Indicators:

____ Dominance Text is >50%
____ Prevalence Index is ≤3.0[1]
____ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
X Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

**Hydrophytic Vegetation Present?** Yes ____ No X

Remarks:
Stunted growth (all vegetation less than 3-inches tall), sparsely covered. Moist soil. Flowering at 3-inches. Managed plant communities; vigor and stress responses to wetland conditions.

## SOIL

Sampling Point: **SP23**

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

| Depth | Matrix | | Redox Features | | | | | |
|---|---|---|---|---|---|---|---|---|
| (inches) | Color (moist) | % | Color (moist) | % | Type[1] | Loc[2] | Texture | Remarks |
| 0-10 | 10 YR 3/1 | 100 | --- | 0 | | | clay loam | |
| * | | | | | | | | |

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

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

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

**Indicators for Problematic Hydric Soils[3]:**

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

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present.

**Restrictive Layer (If present):**

Type: Ap

Depth (inches): 6

Hydric **Soil Present?** Yes X **No** ___

Remarks:

Hydric soil confirmed through comprehensive year-long monitoring, area is saturated for 2 weeks or more of growing season. Aquic moisture regime.

* Soils do not match the SCS description for this series.

## HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (any one indicator is sufficient)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- X Water Marks (B1) **(Nonriverine)**
- ___ Sediment Deposits (B2) **(Nonriverine)**
- ___ Drift Deposits (B3) **(Nonriverine)**
- X Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Plowed Soils (C6)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) **(Riverine)**
- ___ Sediment Deposits (B2) **(Riverine)**
- ___ Drift Deposits (B3) (Riverine)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Thin Muck Surface (C7)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

**Field Observations:**

Surface Water Present? Yes ___ No X Depth (inches): ___

Water Table Present? Yes ___ No X Depth (inches): ___

Saturation Present? (includes capillary fringe) Yes ___ No X Depth (Inches): ___

**Wetland Hydrology Present?** Yes X No ___

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

Remarks:

# WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site: Newark Areas 3 & 4 City/County: Newark/Alameda Sampling Date: 26 March 2007
Applicant/Owner: Sobrato Development Companies State: California Sampling Point: SP 24
Investigator(s): A. Breen Section/Township/Range: 8/05 S/01 W
Landform (hillslope, terrace, etc.): agricultural field Local Relief (concave, convex, none): None Slope (%): 0%
Subregion (LRR): Mediterranean California (C) Lat: 37 30' 11" Long: 122 0' 9" Datum: NAD 83
Soil Map Unit Name: Omni silty clay loam, strongly saline NWI classification Palustrine farmed, Pf
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation X Soil ____ or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____ Soil ____ or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes X No ____
Hydric Soil Present? Yes X No ____
Wetland Hydrology Present? Yes X No ____

**Is the Sampled Area within a Wetland?** Yes X No ____

Remarks:
Seep wetland Hydric soil features considered contemporary.

## VEGETATION

| Tree Stratum (Use scientific names) | Absolute Cover % | Dominant Species? | Indicator Status |
|---|---|---|---|
| 1. *none* | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| Total Cover: | 0 | | |
| **Sapling/Shrub Stratum** | | | |
| 1. *none* | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| Total Cover: | 0 | | |
| **Herb Stratum** | | | |
| 1. *Hordeum hystrix* | 60 | X | FAC |
| 2. *Melilotus indicus* | 25 | X | FAC |
| 3. *Medicago polymorpha* | 5 | | NOL |
| 4. *Triticum aestivum* | 6 | | NOL |
| 5. | | | |
| 6. | | | |
| 7. | | | |
| 8. | | | |
| Total Cover: | 96 | | |
| **Woody Vine Stratum** | | | |
| 1. *none* | | | |
| 2. | | | |
| Total Cover: | 0 | | |

% Bare Ground in Herb Stratum 3 % Cover of Biotic Crust ____

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)
Total Number of Dominant Species Across All Strata: 2 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

**Prevalence Index worksheet:**

| Total % Cover of: | | Multiply by: |
|---|---|---|
| OBL species | x 1 = | |
| FACW species | x 2 = | |
| FAC species | x 3 = | |
| FACU species | x 4 = | |
| UPL Species | x 5 = | |
| Column totals | (A) | (B) |

Prevalence Index = B/A = ____

**Hydrophytic Vegetation Indicators:**

X Dominance Text is >50%
___ Prevalence Index is ≤3.0[1]
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
X Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

**Hydrophytic Vegetation Present?** Yes X No ____

Remarks:
Managed plant communities; vigor and stress responses to wetland conditions.

## SOIL

Sampling Point: **SP 24**

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

| Depth | Matrix | | Redox Features | | | | | |
|---|---|---|---|---|---|---|---|---|
| (Inches) | Color (moist) | % | Color (moist) | % | Type[1] | Loc[2] | Texture | Remarks |
| 0-10 | 10 YR 2/1 | 100 | — | 0 | | | clay loam | homogenous |
| * | | | | | | | | |

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

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

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

**Indicators for Problematic Hydric Soils[3]:**

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present.

**Restrictive Layer (If present):**

Type: Ap

Depth (inches): 12

Hydric **Soil Present?** Yes X **No** ____

Remarks:

Soil moist. Hydric soils confirmed through comprehensive monitoring data showing this wetland to be saturated/inundated > 2 weeks of growing season. Aquic moisture regime.

* SCS describes high value/low chroma horizon below the Ap.

## HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (any one indicator is sufficient)

| | | | |
|---|---|---|---|
| | Surface Water (A1) | | Salt Crust (B11) |
| | High Water Table (A2) | | Biotic Crust (B12) |
| | Saturation (A3) | | Aquatic Invertebrates (B13) |
| X | Water Marks (B1) (Nonriverine) | | Hydrogen Sulfide Odor (C1) |
| | Sediment Deposits (B2) (Nonriverine) | | Oxidized Rhizospheres along Living Roots (C3) |
| | Drift Deposits (B3) (Nonriverine) | | Presence of Reduced Iron (C4) |
| X | Surface Soil Cracks (B6) | | Recent Iron Reduction in Plowed Soils (C6) |
| | Inundation Visible on Aerial Imagery (B7) | | Other (Explain in Remarks) |
| | Water-stained Leaves (B9) | | |

Secondary Indicators (2 or more required)

| | |
|---|---|
| | Water Marks (B1) (Riverine) |
| | Sediment Deposits (B2) (Riverine) |
| | Drift Deposits (B3) (Riverine) |
| | Drainage Patterns (B10) |
| | Dry-Season Water Table (C2) |
| | Thin Muck Surface (C7) |
| | Crayfish Burrows (C8) |
| | Saturation Visible on Aerial Imagery (C9) |
| | Shallow Aquitard (D3) |
| | FAC-Neutral Test (D5) |

**Field Observations:**

Surface Water Present? Yes ____ No X Depth (inches): ____

Water Table Present? Yes ____ No X Depth (inches): ____

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

**Wetland Hydrology Present?** Yes X **No** ____

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

Comprehensive, long-term (11/06-5/07) site and photo monitoring data

Remarks:

# WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site: Newark Areas 3 & 4 City/County: Newark/Alameda Sampling Date: 26 March 2007
Applicant/Owner: Sobrato Development Companies State: California Sampling Point: SP 25
Investigator(s): A. Breen Section/Township/Range: 8/05 S/01 W
Landform (hillslope, terrace, etc.): agricultural field Local Relief (concave, convex, none): None Slope (%): 0%
Subregion (LRR): Mediterranean California (C) Lat: 37 30' 16" Long: 122 0' 7" Datum: NAD 83
Soil Map Unit Name: Omni silty clay loam, strongly saline NWI classification Palustrine farmed, Pf
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation X Soil ____ or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____ Soil ____ or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes ____ No X
Hydric Soil Present? Yes X No ____
Wetland Hydrology Present? Yes X No ____

**Is the Sampled Area within a Wetland?** Yes X No ____

Remarks:
Seep wetland. Hydric soil features considered contemporary.

## VEGETATION

| Tree Stratum (Use scientific names) | Absolute Cover % | Dominant Species? | Indicator Status |
|---|---|---|---|
| 1. *none* | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| Total Cover: | 0 | | |
| **Sapling/Shrub Stratum** | | | |
| 1. *none* | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| Total Cover: | 0 | | |
| **Herb Stratum** | | | |
| 1. *Polygonum arenastrum* | 1 | | FAC |
| 2. *Lotus corniculatus* | 2 | | FAC |
| 3. *Medicago polymorpha* | 10 | X | NOL |
| 4. *Melilotus indicus* | 25 | X | FAC |
| 5. *Triticum aestivum* | 12 | X | NOL |
| 6. *Picris echioides* | 1 | | FAC |
| 7. *Hordeum hystrix* | trace | | FAC |
| 8. *Lolium multiflorum* | trace | | FAC |
| 9. *Brassica nigra* | trace | | NOL |
| Total Cover: | 51 | | |
| **Woody Vine Stratum** | | | |
| 1. *none* | | | |
| 2. | | | |
| Total Cover: | 0 | | |

% Bare Ground in Herb Stratum 45 % Cover of Biotic Crust ____

**Dominance Test worksheet:**

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

**Prevalence Index worksheet:**

| Total % Cover of: | | Multiply by: |
|---|---|---|
| OBL species | x 1 = | |
| FACW species | x 2 = | |
| FAC species | x 3 = | |
| FACU species | x 4 = | |
| UPL Species | x 5 = | |
| Column totals | (A) | (B) |

Prevalence Index = B/A = ____

**Hydrophytic Vegetation Indicators:**

____ Dominance Test is >50%
____ Prevalence Index is ≤3.0[1]
____ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
X Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

**Hydrophytic Vegetation Present?** Yes ____ No X

Remarks:
Chlorotic. Flowering at 20-inches. Very wet (glistening) soil. Managed plant communities; vigor and stress responses to wetland conditions.

## SOIL

Sampling Point: **SP 25**

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

| Depth | Matrix | | Redox Features | | | | | |
|---|---|---|---|---|---|---|---|---|
| (Inches) | Color (moist) | % | Color (moist) | % | Type[1] | Loc[2] | Texture | Remarks |
| 0-10 | 10 YR 2/1 | 100 | -- | 0 | | | clay loam | wet |
| * | | | | | | | | |

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

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

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

**Indicators for Problematic Hydric Soils[3]:**

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

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present.

**Restrictive Layer (If present):**

Type: Ap

Depth (inches): 14

Hydric **Soil Present?** Yes X No ___

Remarks:

Hydric soil confirmed through comprehensive monitoring data showing saturated/inundated soils for > 2 weeks of growing season. Aquic moisture regime.

* SCS describes high value/low chroma horizon below the Ap.

## HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (any one indicator is sufficient)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) **(Nonriverine)**
- X Sediment Deposits (B2) **(Nonriverine)**
- ___ Drift Deposits (B3) **(Nonriverine)**
- X Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Plowed Soils (C6)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) **(Riverine)**
- ___ Sediment Deposits (B2) **(Riverine)**
- ___ Drift Deposits (B3) (Riverine)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Thin Muck Surface (C7)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

**Field Observations:**

Surface Water Present? Yes ___ No X Depth (inches): ___

Water Table Present? Yes ___ No X Depth (inches): ___

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

**Wetland Hydrology Present?** Yes X No ___

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

Comprehensive, long-term (11/06-5/07) site and photo monitoring.

Remarks:

# WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site: Newark Areas 3 & 4 City/County: Newark/Alameda Sampling Date: 26 March 2007
Applicant/Owner: Sobrato Development Companies State: California Sampling Point: SP 26
Investigator(s): A. Breen Section/Township/Range: 8/05 S/01 W
Landform (hillslope, terrace, etc.): agricultural field Local Relief (concave, convex, none): Convex Slope (%): 0%
Subregion (LRR): Mediterranean California (C) Lat: 37 30' 14" Long: 122 0' 7" Datum: NAD 83
Soil Map Unit Name: Omni silty clay loam, strongly saline NWI classification None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation X Soil ____ or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____ Soil ____ or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes ____ No X
Hydric Soil Present? Yes X No ____
Wetland Hydrology Present? Yes ____ No X

**Is the Sampled Area within a Wetland?** Yes ____ No X

Remarks:
Hydric soil features considered historic. No wetland hydrology.

## VEGETATION

| Tree Stratum (Use scientific names) | Absolute Cover % | Dominant Species? | Indicator Status |
|---|---|---|---|
| 1. *none* | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| Total Cover: | 0 | | |
| **Sapling/Shrub Stratum** | | | |
| 1. *none* | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| Total Cover: | 0 | | |
| **Herb Stratum** | | | |
| 1. *Lolium multiflorum* | 57 | X | FAC |
| 2. *Triticum aestivum* | 25 | X | NOL |
| 3. *Melilotus indicus* | 4 | | FAC |
| 4. *Lotus corniculatus* | trace | | FAC |
| 5. | | | |
| 6. | | | |
| 7. | | | |
| 8. | | | |
| Total Cover: | 86 | | |
| **Woody Vine Stratum** | | | |
| 1. *none* | | | |
| 2. | | | |
| Total Cover: | 0 | | |

% Bare Ground in Herb Stratum 10 % Cover of Biotic Crust ____

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)
Total Number of Dominant Species Across All Strata: 2 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A/B)

**Prevalence Index worksheet:**

| Total % Cover of: | | Multiply by: |
|---|---|---|
| OBL species | x 1 = | |
| FACW species | x 2 = | |
| FAC species | x 3 = | |
| FACU species | x 4 = | |
| UPL Species | x 5 = | |
| Column totals | (A) | (B) |

Prevalence Index = B/A = ____

**Hydrophytic Vegetation Indicators:**

____ Dominance Test is >50%
____ Prevalence Index is ≤3.0[1]
____ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
X Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

**Hydrophytic Vegetation Present?** Yes ____ No X

Remarks:
Flowering. Soil dry compared to SP 25. Managed plant communities; vigor and stress responses to wetland conditions.

## SOIL

Sampling Point: **SP 26**

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

| Depth | Matrix | | Redox Features | | | | | |
|---|---|---|---|---|---|---|---|---|
| (inches) | Color (moist) | % | Color (moist) | % | Type[1] | Loc[2] | Texture | Remarks |
| 0-10 | 10 YR 2/1 | 100 | --- | 0 | | | clay loam | |
| * | | | | | | | | |

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

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

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

**Indicators for Problematic Hydric Soils[3]:**

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

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present.

**Restrictive Layer (If present):**

Type: Ap

Depth (inches): 9

Hydric **Soil Present?** Yes X No ___

Remarks:

Soil dry, friable.

* SCS describes high value/low chroma horizon below the Ap.

## HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (any one indicator is sufficient)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) **(Nonriverine)**
- ___ Sediment Deposits (B2) **(Nonriverine)**
- ___ Drift Deposits (B3) **(Nonriverine)**
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Plowed Soils (C6)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) **(Riverine)**
- ___ Sediment Deposits (B2) **(Riverine)**
- ___ Drift Deposits (B3) (Riverine)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Thin Muck Surface (C7)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

**Field Observations:**

Surface Water Present? Yes ___ No X Depth (inches): ___

Water Table Present? Yes ___ No X Depth (inches): ___

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

**Wetland Hydrology Present? Yes** ___ **No** X

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

Remarks:

# WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site: Newark Areas 3 & 4 City/County: Newark/Alameda Sampling Date: 27 March 2007
Applicant/Owner: Sobrato Development Companies State: California Sampling Point: SP 27
Investigator(s): A. Breen Section/Township/Range: 8/05 S/01 W
Landform (hillslope, terrace, etc.): agricultural field Local Relief (concave, convex, none): None Slope (%): 0%
Subregion (LRR): Mediterranean California (C) Lat: 37 30' 33" Long: 122 0' 16" Datum: NAD 83
Soil Map Unit Name: Omni silty clay loam, strongly saline NWI classification None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation X Soil ____ or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____ Soil ____ or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

| | | | | | |
|---|---|---|---|---|---|
| Hydrophytic Vegetation Present? | Yes ____ | No X | **Is the Sampled Area within a Wetland?** | Yes ____ | No X |
| Hydric Soil Present? | Yes X | No ____ | | | |
| Wetland Hydrology Present? | Yes ____ | No X | | | |

Remarks:
Sample point is near railroad tracks in mustard field. The soil is dry, and canopy height is over 30-inches. Ground cover is nearly 100%. Hydric soil features considered historic. No wetland hydrology.

## VEGETATION

| Tree Stratum (Use scientific names) | Absolute Cover % | Dominant Species? | Indicator Status |
|---|---|---|---|
| 1. *none* | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| Total Cover: | 0 | | |
| **Sapling/Shrub Stratum** | | | |
| 1. *none* | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| Total Cover: | 0 | | |
| **Herb Stratum** | | | |
| 1. *Triticum aestivum* | 50 | X | NOL |
| 2. *Avena fatua* | <1 | | NOL |
| 3. *Brassica nigra* | 45 | X | NOL |
| 4. *Lolium multiflorum* | trace | | |
| 5. | | | |
| 6. | | | |
| 7. | | | |
| 8. | | | |
| Total Cover: | 95.5 | | |
| **Woody Vine Stratum** | | | |
| 1. *none* | | | |
| 2. | | | |
| Total Cover: | 0 | | |

% Bare Ground in Herb Stratum 2 % Cover of Biotic Crust ____

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0% (A/B)

**Prevalence Index worksheet:**

| Total % Cover of: | | Multiply by: |
|---|---|---|
| OBL species | x 1 = | |
| FACW species | x 2 = | |
| FAC species | x 3 = | |
| FACU species | x 4 = | |
| UPL Species | x 5 = | |
| Column totals | (A) | (B) |

Prevalence Index = B/A = ____

**Hydrophytic Vegetation Indicators:**

____ Dominance Text is >50%
____ Prevalence Index is ≤3.0[1]
____ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
X Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

**Hydrophytic Vegetation Present?** Yes ____ No X

Remarks:
Vegetation is thick, green, flowering, and tall. Managed plant communities; vigor and stress responses to wetland conditions.

## SOIL

Sampling Point: **SP 27**

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

| Depth | Matrix | | Redox Features | | | | | |
|---|---|---|---|---|---|---|---|---|
| (inches) | Color (moist) | % | Color (moist) | % | Type[1] | Loc[2] | Texture | Remarks |
| 0-10 | 10 YR 3/1 | 100 | — | 0 | | | silty clay loam | homogenous, disced field |
| * | | | | | | | | |

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

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

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

**Indicators for Problematic Hydric Soils[3]:**

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

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present.

**Restrictive Layer (If present):**

Type: Ap

Depth (inches): 14

**Hydric Soil Present?** Yes X **No** ___

Remarks:

* SCS describes high value/low chroma horizon below the Ap.

## HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (any one indicator is sufficient)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) **(Nonriverine)**
- ___ Sediment Deposits (B2) **(Nonriverine)**
- ___ Drift Deposits (B3) **(Nonriverine)**
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Plowed Soils (C6)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) **(Riverine)**
- ___ Sediment Deposits (B2) **(Riverine)**
- ___ Drift Deposits (B3) (Riverine)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Thin Muck Surface (C7)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

**Field Observations:**

Surface Water Present? Yes ___ No X Depth (inches): ___

Water Table Present? Yes ___ No X Depth (inches): ___

Saturation Present? Yes ___ No X Depth (inches): ___

(Includes capillary fringe)

**Wetland Hydrology Present? Yes** ___ **No** X

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

Remarks:

Upland with no active wetland hydrology.

# WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site: Newark Areas 3 & 4 City/County: Newark/Alameda Sampling Date: 27 March 2007
Applicant/Owner: Sobrato Development Companies State: California Sampling Point: SP 28
Investigator(s): A. Breen Section/Township/Range: 8/05 S/01 W
Landform (hillslope, terrace, etc.): agricultural field Local Relief (concave, convex, none): None Slope (%): 0%
Subregion (LRR): Mediterranean California (C) Lat: 37 30' 32" Long: 122 0' 18" Datum: NAD 83
Soil Map Unit Name: Omni silty clay loam, strongly saline NWI classification None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
Are Vegetation X Soil ____ or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____ Soil ____ or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

| | | | | | |
|---|---|---|---|---|---|
| Hydrophytic Vegetation Present? | Yes ____ | No X | **Is the Sampled Area within a Wetland?** | Yes ____ | No X |
| Hydric Soil Present? | Yes X | No ____ | | | |
| Wetland Hydrology Present? | Yes ____ | No X | | | |

Remarks:
Transition area with more upland characteristics than wetland characteristics. Soil very dry, canopy not stunted, vegetation flowering and not chlorotic. Hydric soil features considered historic. No wetland hydrology.

## VEGETATION

| Tree Stratum (Use scientific names) | Absolute Cover % | Dominant Species? | Indicator Status |
|---|---|---|---|
| 1. *none* | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| Total Cover: | 0 | | |
| **Sapling/Shrub Stratum** | | | |
| 1. *none* | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| Total Cover: | 0 | | |
| **Herb Stratum** | | | |
| 1. *Avena fatua* | 3 | | NOL |
| 2. *Brassica nigra* | 3 | | NOL |
| 3. *Triticum aestivum* | 50 | X | NOL |
| 4. *Melilotus indicus* | 2 | | FAC |
| 5. *Medicago polymorpha* | 3 | | NOL |
| 6. *Polygonum arenastrum* | trace | | FAC |
| 7. *Phalaris paradoxa* | trace | | NOL |
| 8. | | | |
| Total Cover: | 61 | | |
| **Woody Vine Stratum** | | | |
| 1. *none* | | | |
| 2. | | | |
| Total Cover: | 0 | | |

% Bare Ground in Herb Stratum 20 % Cover of Biotic Crust _____

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0% (A/B)

**Prevalence Index worksheet:**

| Total % Cover of: | | Multiply by: |
|---|---|---|
| OBL species | x 1 = | |
| FACW species | x 2 = | |
| FAC species | x 3 = | |
| FACU species | x 4 = | |
| UPL Species | x 5 = | |
| Column totals | (A) | (B) |

Prevalence Index = B/A = _____

**Hydrophytic Vegetation Indicators:**

____ Dominance Text is >50%
____ Prevalence Index is ≤3.0[1]
____ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
X Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

**Hydrophytic Vegetation Present?** Yes ____ No X

Remarks:
Upland vegetation dominates, is tall, flowering, and not chlorotic. Managed plant communities; vigor and stress responses to wetland conditions.

## SOIL

Sampling Point: **SP 28**

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

| Depth | Matrix | | Redox Features | | | | | |
|---|---|---|---|---|---|---|---|---|
| (inches) | Color (moist) | % | Color (moist) | % | Type[1] | Loc[2] | Texture | Remarks |
| 0-9 | 10 YR 3/1 | 100 | — | 0 | | | clay loam | disced, homogenous |
| 10-12 | 10 YR 3/1 | 99 | 5 YR 4/5 | >1 | C | PL | clay loam | historic mottles |
| * | | | | | | | | |

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

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

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

**Indicators for Problematic Hydric Soils[3]:**

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

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present.

**Restrictive Layer (If present):**

Type: Ap

Depth (inches): 12

Hydric **Soil Present?** Yes X No ___

Remarks:

Soil is dry. Some historic mottles at 10-12 inches, but no living roots.

* SCS describes high value/low chroma horizon below the Ap.

## HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (any one indicator is sufficient)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) **(Nonriverine)**
- ___ Sediment Deposits (B2) **(Nonriverine)**
- ___ Drift Deposits (B3) **(Nonriverine)**
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Plowed Soils (C6)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) **(Riverine)**
- ___ Sediment Deposits (B2) **(Riverine)**
- ___ Drift Deposits (B3) (Riverine)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Thin Muck Surface (C7)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

**Field Observations:**

Surface Water Present? Yes ___ No X Depth (inches): ___

Water Table Present? Yes ___ No X Depth (inches): ___

Saturation Present? Yes ___ No X Depth (inches): ___

(Includes capillary fringe)

**Wetland Hydrology Present?** Yes ___ No X

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

Remarks:

No clear wetland hydrology.

# WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site: Newark Areas 3 & 4 City/County: Newark/Alameda Sampling Date: 27 March 2007
Applicant/Owner: Sobrato Development Companies State: California Sampling Point: SP 29
Investigator(s): A. Breen Section/Township/Range: 8/05 S/01 W
Landform (hillslope, terrace, etc.): agricultural field Local Relief (concave, convex, none): None Slope (%): 0%
Subregion (LRR): Mediterranean California (C) Lat: 37 30' 31" Long: 122 0' 18" Datum: NAD 83
Soil Map Unit Name: Omni silty clay loam, strongly saline NWI classification None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
Are Vegetation X Soil ____ or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____ Soil ____ or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

| | | | | |
|---|---|---|---|---|
| Hydrophytic Vegetation Present? | Yes ____ | No X | **Is the Sampled Area within a Wetland?** | Yes ____ No X |
| Hydric Soil Present? | Yes X | No ____ | | |
| Wetland Hydrology Present? | Yes ____ | No X | | |

Remarks:
Sample point is within the boundary of wetland and upland. Vegetation is slightly stunted and chlorotic, but flowering. Hydric soil features considered historic. No wetland hydrology.

## VEGETATION

| Tree Stratum (Use scientific names) | Absolute Cover % | Dominant Species? | Indicator Status |
|---|---|---|---|
| 1. *none* | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| Total Cover: | 0 | | |
| **Sapling/Shrub Stratum** | | | |
| 1. *none* | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| Total Cover: | 0 | | |
| **Herb Stratum** | | | |
| 1. *Melilotus indicus* | 25 | X | FAC |
| 2. *Medicago polymorpha* | 10 | | NOL |
| 3. *Triticum aestivum* | 2 | | NOL |
| 4. *Hordeum hystrix* | 45 | X | FAC |
| 5. | | | |
| 6. | | | |
| 7. | | | |
| 8. | | | |
| Total Cover: | 82 | | |
| **Woody Vine Stratum** | | | |
| 1. *none* | | | |
| 2. | | | |
| Total Cover: | 0 | | |

% Bare Ground in Herb Stratum 25 % Cover of Biotic Crust ____

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

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

**Prevalence Index worksheet:**

| Total % Cover of: | | Multiply by: |
|---|---|---|
| OBL species | ____ x 1 = | ____ |
| FACW species | ____ x 2 = | ____ |
| FAC species | ____ x 3 = | ____ |
| FACU species | ____ x 4 = | ____ |
| UPL Species | ____ x 5 = | ____ |
| Column totals | ____ (A) | ____ (B) |

Prevalence Index = B/A = ____

**Hydrophytic Vegetation Indicators:**

X Dominance Text is >50%
____ Prevalence Index is ≤3.0[1]
____ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
X Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

**Hydrophytic Vegetation Present?** Yes X No ____

Remarks:
Transition zone with slightly chlorotic vegetation, flowering. Soil is dry. Vegetation is stunted (4-6 inches tall) with good (approx. 75%) ground cover. Managed plant communities; vigor and stress responses to wetland conditions.

## SOIL

Sampling Point: **SP 29**

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

| Depth (inches) | Matrix Color (moist) | Matrix % | Redox Features Color (moist) | Redox % | Type[1] | Loc[2] | Texture | Remarks |
|---|---|---|---|---|---|---|---|---|
| 0-12 | 10 YR 3/1 | 100 | --- | 0 | | | clay loam | disced |
| * | | | | | | | | |

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

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

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

**Indicators for Problematic Hydric Soils[3]:**

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

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present.

**Restrictive Layer (If present):**

Type: Ap

Depth (inches): 7

Hydric **Soil Present?** Yes X No ___

Remarks:

Soil dry during survey period.Soils not saturated in upper 12" for > 2 weeks of growing season.

* SCS describes high value/low chroma horizon below the Ap.

## HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (any one indicator is sufficient)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) **(Nonriverine)**
- ___ Sediment Deposits (B2) **(Nonriverine)**
- ___ Drift Deposits (B3) **(Nonriverine)**
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Plowed Soils (C6)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) **(Riverine)**
- ___ Sediment Deposits (B2) **(Riverine)**
- ___ Drift Deposits (B3) (Riverine)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Thin Muck Surface (C7)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

**Field Observations:**

Surface Water Present? Yes ___ No X Depth (inches): ___

Water Table Present? Yes ___ No X Depth (inches): ___

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

**Wetland Hydrology Present? Yes** ___ **No** X

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

Comprehensive, long-term (11/06-5/07) photo and site monitoring.

Remarks:

# WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site: Newark Areas 3 & 4 City/County: Newark/Alameda Sampling Date: 27 March 2007
Applicant/Owner: Sobrato Development Companies State: California Sampling Point: SP 30
Investigator(s): A. Breen Section/Township/Range: 7/05 S/01 W
Landform (hillslope, terrace, etc.): agricultural field Local Relief (concave, convex, none): Concave Slope (%): 0%
Subregion (LRR): Mediterranean California (C) Lat: 37 30' 29" Long: 122 0' 25" Datum: NAD 83
Soil Map Unit Name: Omni silty clay loam, strongly saline NWI classification Palustrine farmed, Pf
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
Are Vegetation X Soil ____ or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____ Soil ____ or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes X No _____
Hydric Soil Present? Yes X No _____
Wetland Hydrology Present? Yes X No _____

**Is the Sampled Area within a Wetland?** Yes X No _____

Remarks:
Sample point is near cattail/scirpus marsh. Soil is very moist, canopy height is stunted (<1 inch), and ground cover is low. Hydric soil features considered contemporary.

## VEGETATION

| Tree Stratum (Use scientific names) | Absolute Cover % | Dominant Species? | Indicator Status |
|---|---|---|---|
| 1. *none* | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| Total Cover: | 0 | | |

| Sapling/Shrub Stratum | | | |
|---|---|---|---|
| 1. *none* | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| Total Cover: | 0 | | |

| Herb Stratum | | | |
|---|---|---|---|
| 1. *Hordeum hystrix* | 30 | X | FAC |
| 2. *Poa annua* | 40 | X | FACW |
| 3. *Triticum aestivum* | 2 | | NOL |
| 4. *Melilotus indicus* | 1 | | FAC |
| 5. | | | |
| 6. | | | |
| 7. | | | |
| 8. | | | |
| Total Cover: | 73 | | |

| Woody Vine Stratum | | | |
|---|---|---|---|
| 1. *none* | | | |
| 2. | | | |
| Total Cover: | 0 | | |

% Bare Ground in Herb Stratum 10 % Cover of Biotic Crust _____

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

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

**Prevalence Index worksheet:**

| Total % Cover of: | | Multiply by: |
|---|---|---|
| OBL species | x 1 = | |
| FACW species | x 2 = | |
| FAC species | x 3 = | |
| FACU species | x 4 = | |
| UPL Species | x 5 = | |
| Column totals | (A) | (B) |

Prevalence Index = B/A = _____

**Hydrophytic Vegetation Indicators:**

X Dominance Text is >50%
___ Prevalence Index is ≤3.0[1]
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
X Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

**Hydrophytic Vegetation Present?** Yes X No _____

Remarks:
Managed plant communities; vigor and stress responses to wetland conditions.

## SOIL

Sampling Point: **SP 30**

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

| Depth | Matrix | | Redox Features | | | | | |
|---|---|---|---|---|---|---|---|---|
| (inches) | Color (moist) | % | Color (moist) | % | Type[1] | Loc[2] | Texture | Remarks |
| 0-10 | 10 YR 3/1 | 100 | — | 0 | | | clay loam | no mottles |
| * | | | | | | | | |

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

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

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

**Indicators for Problematic Hydric Soils[3]:**

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present.

**Restrictive Layer (if present):**

Type: Ap

Depth (inches): 6

Hydric **Soil Present?** **Yes** X **No** ____

Remarks:

Hydric soil confirmed with monitoring, soil saturated for > 2 weeks of growing season. Aquic moisture regime.

* SCS describes high value/low chroma horizon below the Ap.

## HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (any one indicator is sufficient)

| | | | |
|---|---|---|---|
| | Surface Water (A1) | | Salt Crust (B11) |
| | High Water Table (A2) | | Biotic Crust (B12) |
| | Saturation (A3) | | Aquatic Invertebrates (B13) |
| | Water Marks (B1) (Nonriverine) | | Hydrogen Sulfide Odor (C1) |
| | Sediment Deposits (B2) (Nonriverine) | | Oxidized Rhizospheres along Living Roots (C3) |
| | Drift Deposits (B3) (Nonriverine) | | Presence of Reduced Iron (C4) |
| X | Surface Soil Cracks (B6) | | Recent Iron Reduction in Plowed Soils (C6) |
| | Inundation Visible on Aerial Imagery (B7) | | Other (Explain in Remarks) |
| | Water-stained Leaves (B9) | | |

Secondary Indicators (2 or more required)

| | |
|---|---|
| | Water Marks (B1) (Riverine) |
| | Sediment Deposits (B2) (Riverine) |
| | Drift Deposits (B3) (Riverine) |
| | Drainage Patterns (B10) |
| | Dry-Season Water Table (C2) |
| | Thin Muck Surface (C7) |
| | Crayfish Burrows (C8) |
| | Saturation Visible on Aerial Imagery (C9) |
| | Shallow Aquitard (D3) |
| | FAC-Neutral Test (D5) |

**Field Observations:**

Surface Water Present? Yes ____ No X Depth (inches): ____

Water Table Present? Yes ____ No X Depth (inches): ____

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

**Wetland Hydrology Present?** **Yes** X **No** ____

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

Comprehensive, long-term (11/06-5/07) photo ans site monitoring.

Remarks:

# WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site: Newark Areas 3 & 4 City/County: Newark/Alameda Sampling Date: 3 April 2007
Applicant/Owner: Sobrato Development Companies State: California Sampling Point: SP 31
Investigator(s): K. Hardwicke Section/Township/Range: 7/05 S/01 W
Landform (hillslope, terrace, etc.): levee side Local Relief (concave, convex, none): Convex Slope (%): 25%
Subregion (LRR): Mediterranean California (C) Lat: 37 30' 24" Long: 122 0' 44" Datum: NAD 83
Soil Map Unit Name: Reyes clay, drained NWI classification PEMHh
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation ____ Soil ____ or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____ Soil ____ or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

| | | | | | |
|---|---|---|---|---|---|
| Hydrophytic Vegetation Present? | Yes ____ | No X | **Is the Sampled Area within a Wetland?** | Yes ____ | No X |
| Hydric Soil Present? | Yes ____ | No X | | | |
| Wetland Hydrology Present? | Yes ____ | No X | | | |

Remarks:
Sample site is located approximately 2/3 up a levee side (on slope) adjacent to marsh. The area has a lot of litter. Hydric soil features considered historic. No wetland hydrology.

## VEGETATION

| Tree Stratum (Use scientific names) | Absolute Cover % | Dominant Species? | Indicator Status |
|---|---|---|---|
| 1. *none* | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| Total Cover: | 0 | | |
| **Sapling/Shrub Stratum** | | | |
| 1. *none* | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| Total Cover: | 0 | | |
| **Herb Stratum** | | | |
| 1. *Avena fatua* | 8 | | NOL |
| 2. *Bromus diandrus* | 56 | X | NI |
| 3. *Distichlis spicata* | 14 | | FACW |
| 4. *Eschscholzia californica* | 5 | | NOL |
| 5. | | | |
| 6. | | | |
| 7. | | | |
| 8. | | | |
| Total Cover: | 83 | | |
| **Woody Vine Stratum** | | | |
| 1. *none* | | | |
| 2. | | | |
| Total Cover: | 0 | | |

% Bare Ground in Herb Stratum 15 % Cover of Biotic Crust ____

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

**Prevalence Index worksheet:**

| Total % Cover of: | | Multiply by: |
|---|---|---|
| OBL species | x 1 = | |
| FACW species | x 2 = | |
| FAC species | x 3 = | |
| FACU species | x 4 = | |
| UPL Species | x 5 = | |
| Column totals | (A) | (B) |

Prevalence Index = B/A =

**Hydrophytic Vegetation Indicators:**

- ____ Dominance Text is >50%
- ____ Prevalence Index is ≤3.0[1]
- ____ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- X Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

**Hydrophytic Vegetation Present?** Yes ____ No X

Remarks:
Bromus diandrus is flowering at 10-inches tall; Avena at 24-inches. Soil is very dry. Managed plant communities; vigor and stress responses to wetland conditions.

## SOIL

Sampling Point: **SP 31**

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

| Depth | Matrix | | Redox Features | | | | | |
|---|---|---|---|---|---|---|---|---|
| (inches) | Color (moist) | % | Color (moist) | % | Type[1] | Loc[2] | Texture | Remarks |
| 0-16 | 10 YR 4/4 | 100 | --- | 0 | | | clay loam | |

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

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

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

**Indicators for Problematic Hydric Soils[3]:**

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

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present.

**Restrictive Layer (If present):**

Type: gravel

Depth (inches): 16

Hydric **Soil Present?** **Yes** ___ **No** X

Remarks:

Man-made levee, soil from fill..

## HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (any one indicator is sufficient)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) **(Nonriverine)**
- ___ Sediment Deposits (B2) **(Nonriverine)**
- ___ Drift Deposits (B3) **(Nonriverine)**
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Plowed Soils (C6)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) **(Riverine)**
- ___ Sediment Deposits (B2) **(Riverine)**
- ___ Drift Deposits (B3) (Riverine)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Thin Muck Surface (C7)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

**Field Observations:**

Surface Water Present? Yes ___ No X Depth (inches): ___

Water Table Present? Yes ___ No X Depth (inches): ___

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

**Wetland Hydrology Present?** **Yes** ___ **No** X

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

Remarks:

no apparent wetland hydrology. Elevated approximately 10-feet from wetland, so clearly surface flows drain to the wetland.

# WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site: Newark Areas 3 & 4 City/County: Newark/Alameda Sampling Date: 3 April 2007
Applicant/Owner: Sobrato Development Companies State: California Sampling Point: SP 32
Investigator(s): K. Hardwicke Section/Township/Range: 7/05 S/01 W
Landform (hillslope, terrace, etc.): edge of unvegetated flat Local Relief (concave, convex, none): None Slope (%): 0%
Subregion (LRR): Mediterranean California (C) Lat: 37 30' 24" Long: 122 0' 43" Datum: NAD 83
Soil Map Unit Name: Reyes clay, drained NWI classification PEMHh
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation ____ Soil ____ or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____ Soil ____ or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes X No ____
Hydric Soil Present? Yes X No ____
Wetland Hydrology Present? Yes X No ____

**Is the Sampled Area within a Wetland?** Yes X No ____

Remarks:
Hydric soil features considered contemporary.

## VEGETATION

| Tree Stratum (Use scientific names) | Absolute Cover % | Dominant Species? | Indicator Status |
|---|---|---|---|
| 1. *none* | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| Total Cover: | 0 | | |
| **Sapling/Shrub Stratum** | | | |
| 1. *none* | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| Total Cover: | 0 | | |
| **Herb Stratum** | | | |
| 1. *Salicornia virginica* | 97 | X | OBL |
| 2. *Frankenia salina* | trace | | FACW+ |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| 7. | | | |
| 8. | | | |
| Total Cover: | 97 | | |
| **Woody Vine Stratum** | | | |
| 1. *none* | | | |
| 2. | | | |
| Total Cover: | 0 | | |

% Bare Ground in Herb Stratum 2 % Cover of Biotic Crust ____

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

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

**Prevalence Index worksheet:**

| Total % Cover of: | | Multiply by: |
|---|---|---|
| OBL species | ____ x 1 = | ____ |
| FACW species | ____ x 2 = | ____ |
| FAC species | ____ x 3 = | ____ |
| FACU species | ____ x 4 = | ____ |
| UPL Species | ____ x 5 = | ____ |
| Column totals | ____ (A) | ____ (B) |

Prevalence Index = B/A = ____

**Hydrophytic Vegetation Indicators:**

X Dominance Text is >50%
____ Prevalence Index is ≤3.0[1]
____ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
X Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

**Hydrophytic Vegetation Present?** Yes X No ____

Remarks:
Good canopy cover; soil saturated at 1-inch. Managed plant communities; vigor and stress responses to wetland conditions.

## SOIL

Sampling Point: **SP 32**

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

| Depth | Matrix | | Redox Features | | | | | |
|---|---|---|---|---|---|---|---|---|
| (inches) | Color (moist) | % | Color (moist) | % | Type[1] | Loc[2] | Texture | Remarks |
| 0-4 | 5PB 2.5/1 | 90 | 5GY 4/1 | 10 | D | M | silty clay | soil is saturated, mucky |

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

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

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

**Indicators for Problematic Hydric Soils[3]:**

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

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present.

**Restrictive Layer (If present):**

Type: ___

Depth (inches): ___

Hydric **Soil Present?** Yes X No ___

Remarks:

Soil contains red algal deposits.

## HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (any one indicator is sufficient)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1) (Nonriverine)
- X Sediment Deposits (B2) (Nonriverine)
- ___ Drift Deposits (B3) (Nonriverine)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-stained Leaves (B9)
- ___ Salt Crust (B11)
- X Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Plowed Soils (C6)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (Riverine)
- ___ Sediment Deposits (B2) (Riverine)
- ___ Drift Deposits (B3) (Riverine)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Thin Muck Surface (C7)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

**Field Observations:**

| | | | |
|---|---|---|---|
| Surface Water Present? | Yes ___ | No X | Depth (inches): ___ |
| Water Table Present? | Yes X | No ___ | Depth (inches): 2 |
| Saturation Present? (Includes capillary fringe) | Yes X | No ___ | Depth (inches): 1 |

**Wetland Hydrology Present?** Yes X No ___

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

Remarks:

Algae is present at sample point.

# WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site: Newark Areas 3 & 4 City/County: Newark/Alameda Sampling Date: 29 March 2007
Applicant/Owner: Sobrato Development Companies State: California Sampling Point: SP 33
Investigator(s): E. Kentner Section/Township/Range: 0/05 S/01 W
Landform (hillslope, terrace, etc.): agricultural field Local Relief (concave, convex, none): Convex Slope (%): 0%
Subregion (LRR): Mediterranean California (C) Lat: 37 29' 50" Long: 122 0' 19" Datum: NAD 83
Soil Map Unit Name: Omni silty clay loam, strongly saline NWI classification Palustrine farmed, Pf
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
Are Vegetation X Soil ____ or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____ Soil ____ or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes X No ____
Hydric Soil Present? Yes X No ____
Wetland Hydrology Present? Yes ____ No X

**Is the Sampled Area within a Wetland?** Yes ____ No X

Remarks:
Sample point is dry, with moderate ground cover and canopy height. Vegetation is slightly chlorotic. Soil shows signs of historic, but not current, mottles.

## VEGETATION

| Tree Stratum (Use scientific names) | Absolute Cover % | Dominant Species? | Indicator Status |
|---|---|---|---|
| 1. *none* | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| Total Cover: | 0 | | |

| Sapling/Shrub Stratum | | | |
|---|---|---|---|
| 1. *none* | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| Total Cover: | 0 | | |

| Herb Stratum | | | |
|---|---|---|---|
| 1. *Lolium multiflorum* | 12 | X | FAC |
| 2. *Hordeum hystrix* | 8 | X | FAC |
| 3. *Triticum aestivum* | <1 | | NOL |
| 4. *Polygonum arenastrum* | trace | | FAC |
| 5. *Avena fatua* | 4 | | NOL |
| 6. | | | |
| 7 | | | |
| 8. | | | |
| Total Cover: | 24.5 | | |

| Woody Vine Stratum | | | |
|---|---|---|---|
| 1. *none* | | | |
| 2. | | | |
| Total Cover: | 0 | | |

% Bare Ground in Herb Stratum 30 % Cover of Biotic Crust ____

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

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

**Prevalence Index worksheet:**

| Total % Cover of: | | Multiply by: |
|---|---|---|
| OBL species | x 1 = | |
| FACW species | x 2 = | |
| FAC species | x 3 = | |
| FACU species | x 4 = | |
| UPL Species | x 5 = | |
| Column totals | (A) | (B) |

Prevalence Index = B/A = ____

**Hydrophytic Vegetation Indicators:**

X Dominance Text is >50%
____ Prevalence Index is ≤3.0[1]
____ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
X Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

**Hydrophytic Vegetation Present?** Yes X No ____

Remarks:
Plants flowering at 8-12 inches. Managed plant communities; vigor and stress responses to wetland conditions.

## SOIL

Sampling Point: **SP 33**

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

| Depth | Matrix | | Redox Features | | | | | |
|---|---|---|---|---|---|---|---|---|
| (inches) | Color (moist) | % | Color (moist) | % | Type[1] | Loc[2] | Texture | Remarks |
| 0-8 | 10 YR 4/1 | 100 | --- | 0 | | | silty clay | no salt crust |
| 8-10 | 10 YR 4/1 | 98 | 5 YR 3/4 | 2 | C | PL | silty clay | |
| * | | | | | | | | |

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

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

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

**Indicators for Problematic Hydric Soils[3]:**

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

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present.

**Restrictive Layer (If present):**

Type: Ap

Depth (inches): 8

Hydric **Soil Present?** **Yes** X **No** ___

Remarks:

Soil very dry, historic mottles only (deep, not with living roots).

* SCS describes high value/low chroma horizon below the Ap.

## HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (any one indicator is sufficient)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) **(Nonriverine)**
- ___ Sediment Deposits (B2) **(Nonriverine)**
- ___ Drift Deposits (B3) **(Nonriverine)**
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Plowed Soils (C6)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) **(Riverine)**
- ___ Sediment Deposits (B2) **(Riverine)**
- ___ Drift Deposits (B3) (Riverine)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Thin Muck Surface (C7)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

**Field Observations:**

Surface Water Present? Yes ___ No X Depth (inches): ___

Water Table Present? Yes ___ No X Depth (inches): ___

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

**Wetland Hydrology Present?** **Yes** ___ **No** X

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

Remarks:

No evidence supporting wetland hydrology.

# WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site: Newark Areas 3 & 4 City/County: Newark/Alameda Sampling Date: 29 March 2007
Applicant/Owner: Sobrato Development Companies State: California Sampling Point: SP 34
Investigator(s): E. Kentner Section/Township/Range: 0/05 S/01 W
Landform (hillslope, terrace, etc.): agricultural field Local Relief (concave, convex, none): Convex Slope (%): 0%
Subregion (LRR): Mediterranean California (C) Lat: 37 29' 49" Long: 122 0' 19" Datum: NAD 83
Soil Map Unit Name: Omni silty clay loam, strongly saline NWI classification Palustrine farmed, Pf
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
Are Vegetation X Soil ____ or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____ Soil ____ or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

| | | | | | |
|---|---|---|---|---|---|
| Hydrophytic Vegetation Present? | Yes ____ | No X | **Is the Sampled Area within a Wetland?** | Yes ____ | No X |
| Hydric Soil Present? | Yes X | No ____ | | | |
| Wetland Hydrology Present? | Yes ____ | No X | | | |

Remarks:
Sample point located in disced agricultural field. Soil was very dry. Vegetation height was average, ground cover was good, but vegetation was slightly chlorotic, although flowering. Historic mottles observed.

## VEGETATION

| Tree Stratum (Use scientific names) | Absolute Cover % | Dominant Species? | Indicator Status |
|---|---|---|---|
| 1. *none* | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| Total Cover: | 0 | | |
| **Sapling/Shrub Stratum** | | | |
| 1. *none* | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| Total Cover: | 0 | | |
| **Herb Stratum** | | | |
| 1. *Hordeum hystrix* | 15 | X | FAC |
| 2. *Avena fatua* | 8 | X | NOL |
| 3. *Lolium multiflorum* | 4 | | FAC |
| 4. *Triticum aestivum* | trace | | NOL |
| 5. *Polygonum arenastrum* | trace | | FAC |
| 6. | | | |
| 7. | | | |
| 8. | | | |
| Total Cover: | 27 | | |
| **Woody Vine Stratum** | | | |
| 1. *none* | | | |
| 2. | | | |
| Total Cover: | 0 | | |

% Bare Ground in Herb Stratum 50 % Cover of Biotic Crust _____

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A/B)

**Prevalence Index worksheet:**

| Total % Cover of: | | Multiply by: |
|---|---|---|
| OBL species | x 1 = | |
| FACW species | x 2 = | |
| FAC species | x 3 = | |
| FACU species | x 4 = | |
| UPL Species | x 5 = | |
| Column totals | (A) | (B) |

Prevalence Index = B/A = _____

**Hydrophytic Vegetation Indicators:**

____ Dominance Text is >50%
____ Prevalence Index is ≤3.0[1]
____ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
X Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

**Hydrophytic Vegetation Present?** Yes ____ No X

Remarks:
Slight chlorosis, no salt crust. Vegetation flowering at 6-inches (Hordeum), 10-inches (Lolium), and 14-inches (Avena). Managed plant communities; vigor and stress responses to wetland conditions.

## SOIL

Sampling Point: SP 34

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

| Depth | Matrix | | Redox Features | | | | | |
|---|---|---|---|---|---|---|---|---|
| (Inches) | Color (moist) | % | Color (moist) | % | Type[1] | Loc[2] | Texture | Remarks |
| 0-10 | 10 YR 4/1 | 98 | 5 YR 5/4 | 2 | C | PL | silty clay | |
| * | | | | | | | | |

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

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

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

**Indicators for Problematic Hydric Soils[3]:**

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

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present.

**Restrictive Layer (If present):**

Type: Ap

Depth (inches): 10

**Hydric Soil Present?** Yes X No ___

Remarks:

Historic mottles.

* SCS describes high value/low chroma horizon below the Ap.

## HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (any one indicator is sufficient)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (Nonriverine)
- ___ Sediment Deposits (B2) (Nonriverine)
- ___ Drift Deposits (B3) (Nonriverine)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Plowed Soils (C6)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (Riverine)
- ___ Sediment Deposits (B2) (Riverine)
- ___ Drift Deposits (B3) (Riverine)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Thin Muck Surface (C7)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

**Field Observations:**

Surface Water Present? Yes ___ No X Depth (inches): ___

Water Table Present? Yes ___ No X Depth (inches): ___

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

**Wetland Hydrology Present?** Yes ___ No X

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

Remarks:

No apparent wetland hydrology.

# WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site: Newark Areas 3 & 4 City/County: Newark/Alameda Sampling Date: 29 March 2007
Applicant/Owner: Sobrato Development Companies State: California Sampling Point: 35
Investigator(s): E. Kentner Section/Township/Range: 0/05 S/01 W
Landform (hillslope, terrace, etc.): agricultural field Local Relief (concave, convex, none): Concave Slope (%): 0%
Subregion (LRR): Mediterranean California (C) Lat: 37 29' 48" Long: 122 0' 20" Datum: NAD 83
Soil Map Unit Name: Reyes clay, drained NWI classification Palustrine farmed, Pf
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
Are Vegetation X Soil ____ or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____ Soil ____ or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes ____ No X
Hydric Soil Present? Yes X No ____
Wetland Hydrology Present? Yes X No ____

**Is the Sampled Area within a Wetland?** Yes X No ____

Remarks:
Sample point located near low topographic point (wet) in landscape. Soil somewhat moist, canopy reduced in stature, vegetation slightly chlorotic and sparse. Historic redox features present in soil.

## VEGETATION

| Tree Stratum (Use scientific names) | Absolute Cover % | Dominant Species? | Indicator Status |
|---|---|---|---|
| 1. *none* | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| Total Cover: | 0 | | |
| **Sapling/Shrub Stratum** | | | |
| 1. *none* | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| Total Cover: | 0 | | |
| **Herb Stratum** | | | |
| 1. *Lolium multiflorum* | 5 | | FAC |
| 2. *Avena fatua* | 8 | X | NOL |
| 3. *Hordeum hystrix* | 12 | X | FAC |
| 4. *Polygonum arenastrum* | trace | | FAC |
| 5. *Cotula coronopifolia* | 1 | | FACW |
| 6. *Spergularia macrotheca* | 1 | | FAC |
| 7. *Triticum aestivum* | trace | | NOL |
| 8. *Brassica nigra* | trace | | NOL |
| 9. *Beta vulgaris* | trace | | FACU |
| Total Cover: | 27 | | |
| **Woody Vine Stratum** | | | |
| 1. *none* | | | |
| 2. | | | |
| Total Cover: | 0 | | |

% Bare Ground in Herb Stratum 60 % Cover of Biotic Crust ____

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)
Total Number of Dominant Species Across All Strata: 2 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 50 (A/B)

**Prevalence Index worksheet:**

| Total % Cover of: | | | Multiply by: |
|---|---|---|---|
| OBL species | 0 | x 1 = | 0 |
| FACW species | 1 | x 2 = | 2 |
| FAC species | 18 | x 3 = | 54 |
| FACU species | 0 | x 4 = | 0 |
| UPL Species | 8 | x 5 = | 40 |
| Column totals | 27 (A) | | 90 (B) |

Prevalence Index = B/A = 3.5

Hydrophytic Vegetation Indicators:

____ Dominance Text is >50%
____ Prevalence Index is ≤3.0[1]
____ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
____
X Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

**Hydrophytic Vegetation Present?** Yes ____ No X

Remarks:
No salt crust present. Vegetation flowering a 8-inches (Lolium and Hordeum) and 10-inches (Avena). Vegetation slightly chlorotic. Managed plant communities; vigor and stress responses to wetland conditions.

## SOIL

Sampling Point: **SP 35**

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

| Depth | Matrix | | Redox Features | | | | | |
|---|---|---|---|---|---|---|---|---|
| (inches) | Color (moist) | % | Color (moist) | % | Type[1] | Loc[2] | Texture | Remarks |
| 0-12 | 10 YR 3/1 | 95 | 5 YR 5/6 | 5 | C | PL | clay | historic redox features observed |
| * | | | | | | | | |

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

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

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

**Indicators for Problematic Hydric Soils[3]:**

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

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present.

**Restrictive Layer (If present):**

Type: Ap

Depth (inches): 12

Hydric **Soil Present?** **Yes** X **No** ___

Remarks:

Low chroma, hydric soils (on County hydric soils list). Historic mottling (with no roots) present.

* SCS describes high value/low chroma horizon below the Ap.

## HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (any one indicator is sufficient)

| | | | |
|---|---|---|---|
| ___ | Surface Water (A1) | ___ | Salt Crust (B11) |
| ___ | High Water Table (A2) | ___ | Biotic Crust (B12) |
| ___ | Saturation (A3) | ___ | Aquatic Invertebrates (B13) |
| ___ | Water Marks (B1) (Nonriverine) | ___ | Hydrogen Sulfide Odor (C1) |
| ___ | Sediment Deposits (B2) (Nonriverine) | ___ | Oxidized Rhizospheres along Living Roots (C3) |
| ___ | Drift Deposits (B3) (Nonriverine) | ___ | Presence of Reduced Iron (C4) |
| X | Surface Soil Cracks (B6) | ___ | Recent Iron Reduction in Plowed Soils (C6) |
| ___ | Inundation Visible on Aerial Imagery (B7) | ___ | Other (Explain in Remarks) |
| ___ | Water-stained Leaves (B9) | | |

Secondary Indicators (2 or more required)

| | |
|---|---|
| ___ | Water Marks (B1) (Riverine) |
| ___ | Sediment Deposits (B2) (Riverine) |
| ___ | Drift Deposits (B3) (Riverine) |
| ___ | Drainage Patterns (B10) |
| ___ | Dry-Season Water Table (C2) |
| ___ | Thin Muck Surface (C7) |
| ___ | Crayfish Burrows (C8) |
| ___ | Saturation Visible on Aerial Imagery (C9) |
| ___ | Shallow Aquitard (D3) |
| ___ | FAC-Neutral Test (D5) |

**Field Observations:**

| | | | |
|---|---|---|---|
| Surface Water Present? | Yes ___ | No X | Depth (inches): ___ |
| Water Table Present? | Yes ___ | No X | Depth (inches): ___ |
| Saturation Present? (includes capillary fringe) | Yes ___ | No X | Depth (inches): ___ |

**Wetland Hydrology Present?** **Yes** X **No** ___

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

Remarks:

# WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site: Newark Areas 3 & 4 City/County: Newark/Alameda Sampling Date: 29 March 2007
Applicant/Owner: Sobrato Development Companies State: California Sampling Point: **SP 36**
Investigator(s): E. Kentner Section/Township/Range: 0/05 S/01 W
Landform (hillslope, terrace, etc.): agricultural field Local Relief (concave, convex, none): Concave Slope (%): 0%
Subregion (LRR): Mediterranean California (C) Lat: 37 29' 51" Long: 122 0' 18" Datum: NAD 83
Soil Map Unit Name: Omni silty clay loam, strongly saline NWI classification Palustrine farmed, Pf
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
Are Vegetation X Soil ____ or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
Are Vegetation ____ Soil ____ or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes X No _____
Hydric Soil Present? Yes X No _____
Wetland Hydrology Present? Yes X No _____

**Is the Sampled Area within a Wetland?** Yes X No _____

Remarks:
Hydric soil features considered contemporary.

## VEGETATION

| Tree Stratum (Use scientific names) | Absolute Cover % | Dominant Species? | Indicator Status |
|---|---|---|---|
| 1. *none* | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| Total Cover: | 0 | | |
| **Sapling/Shrub Stratum** | | | |
| 1. *none* | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| Total Cover: | 0 | | |
| **Herb Stratum** | | | |
| 1. *Avena fatua* | 10 | X | NOL |
| 2. *Cotula coronopifolia* | 2 | | FACW |
| 3. *Polygonum arenastrum* | 2 | | FAC |
| 4. *Spergularia macrotheca* | 10 | X | FAC |
| 5. *Beta vulgaris* | <1 | | FACU |
| 6. *Poa annua* | 1 | | FACW |
| 7. *Hordeum hystrix* | <1 | | FAC |
| 8. *Lolium multiflorum* | <1 | | FAC |
| 9. *Mesembranthemum nodiflorum* | <1 | | NOL |
| Total Cover: | 27 | | |
| **Woody Vine Stratum** | | | |
| 1. *none* | | | |
| 2. | | | |
| Total Cover: | 0 | | |

% Bare Ground in Herb Stratum 50 % Cover of Biotic Crust _____

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

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

**Prevalence Index worksheet:**

| Total % Cover of: | | Multiply by: |
|---|---|---|
| OBL species | x 1 = | |
| FACW species | x 2 = | |
| FAC species | x 3 = | |
| FACU species | x 4 = | |
| UPL Species | x 5 = | |
| Column totals | (A) | (B) |

Prevalence Index = B/A = _____

**Hydrophytic Vegetation Indicators:**

X Dominance Test is >50%
___ Prevalence Index is ≤3.0[1]
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
X Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

**Hydrophytic Vegetation Present?** Yes X No _____

Remarks:
Vegetation average height, not chlorotic, and flowering at 14-inches (Avena) and 10-inches (Lolium). Managed plant communities; vigor and stress responses to wetland conditions.

## SOIL

Sampling Point: **SP 36**

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

| Depth | Matrix | | Redox Features | | | | | |
|---|---|---|---|---|---|---|---|---|
| (inches) | Color (moist) | % | Color (moist) | % | Type[1] | Loc[2] | Texture | Remarks |
| 0-10 | 10 YR 3/1 | 95 | 2.5 YR 4/8 | 5 | C | RC | silty clay | redox features distinct |
| * | | | | | | | | |

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

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

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

**Indicators for Problematic Hydric Soils[3]:**

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

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present.

**Restrictive Layer (If present):**

Type: Ap

Depth (inches): 6

Hydric **Soil Present?** Yes X No ___

Remarks:

Soil not very wet, but not "bone dry" either.

* SCS describes high value/low chroma horizon below the Ap.

## HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (any one indicator is sufficient)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- X Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Plowed Soils (C6)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (Riverine)
- X Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Thin Muck Surface (C7)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

**Field Observations:**

Surface Water Present? Yes ___ No X Depth (inches): ___

Water Table Present? Yes ___ No X Depth (inches): ___

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

**Wetland Hydrology Present?** Yes X No ___

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

Remarks:

# WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site: Newark Areas 3 & 4 City/County: Newark/Alameda Sampling Date: 29 March 2007
Applicant/Owner: Sobrato Development Companies State: California Sampling Point: SP 37
Investigator(s): E. Kentner Section/Township/Range: 0/05 S/01 W
Landform (hillslope, terrace, etc.): agricultural field Local Relief (concave, convex, none): Concave Slope (%): 0%
Subregion (LRR): Mediterranean California (C) Lat: 37 29' 53" Long: 122 0' 18" Datum: NAD 83
Soil Map Unit Name: Omni silty clay loam, strongly saline NWI classification Palustrine farmed, Pf
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation X Soil ____ or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____ Soil ____ or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes X No ____
Hydric Soil Present? Yes X No ____
Wetland Hydrology Present? Yes X No ____

**Is the Sampled Area within a Wetland?** Yes X No ____

Remarks:
Hydric soil features considered contemporary.

## VEGETATION

| Tree Stratum (Use scientific names) | Absolute Cover % | Dominant Species? | Indicator Status |
|---|---|---|---|
| 1. *none* | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| Total Cover: | 0 | | |
| **Sapling/Shrub Stratum** | | | |
| 1. *none* | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| Total Cover: | 0 | | |
| **Herb Stratum** | | | |
| 1. *Avena fatua* | 1 | X | NOL |
| 2. *Salicornia virginica* | <1 | | OBL |
| 3. *Chenopodium album* | 1 | X | FAC |
| 4. *Cotula coronopifolia* | 1 | X | FACW |
| 5. *Poa annua* | 1 | X | FACW |
| 6. *Spergularia macrotheca* | <1 | | FAC |
| 7. *Mesembranthemum nodiflorum* | <1 | | NOL |
| 8. | | | |
| Total Cover: | 5.5 | | |
| **Woody Vine Stratum** | | | |
| 1. *none* | | | |
| 2. | | | |
| Total Cover: | 0 | | |

% Bare Ground in Herb Stratum 90 % Cover of Biotic Crust ____

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)
Total Number of Dominant Species Across All Strata: 4 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 75% (A/B)

**Prevalence Index worksheet:**

| Total % Cover of: | | Multiply by: |
|---|---|---|
| OBL species | ____ x 1 = | ____ |
| FACW species | ____ x 2 = | ____ |
| FAC species | ____ x 3 = | ____ |
| FACU species | ____ x 4 = | ____ |
| UPL Species | ____ x 5 = | ____ |
| Column totals | ____ (A) | ____ (B) |

Prevalence Index = B/A = ____

**Hydrophytic Vegetation Indicators:**

X Dominance Test is >50%
____ Prevalence Index is ≤3.0[1]
____ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
X Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

**Hydrophytic Vegetation Present?** Yes X No ____

Remarks:
Vegetation stunted somewhat with slight chlorosis; flowering at 12-inches (Avena) and 2-inches (Poa). No salt crust. Managed plant communities; vigor and stress responses to wetland conditions.

## SOIL

Sampling Point: **SP 37**

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

| Depth | Matrix | | Redox Features | | | | | |
|---|---|---|---|---|---|---|---|---|
| (inches) | Color (moist) | % | Color (moist) | % | Type[1] | Loc[2] | Texture | Remarks |
| 0–10 | 10 YR 3/1 | 100 | --- | 0 | | | clay | redox features obscure |
| * | | | | | | | | |

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

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

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

**Indicators for Problematic Hydric Soils[3]:**

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

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present.

**Restrictive Layer (If present):**

Type: Ap

Depth (inches): 3

Hydric **Soil Present?** Yes X **No** ___

Remarks:

Soil moist during survey period. Hydric soil confirmed by monitoring showing > 2 weeks saturation/inundation during the growing season.

* SCS describes high value/low chroma horizon below the Ap.

## HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (any one indicator is sufficient)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) **(Nonriverine)**
- ___ Sediment Deposits (B2) **(Nonriverine)**
- ___ Drift Deposits (B3) **(Nonriverine)**
- X Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Plowed Soils (C6)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) **(Riverine)**
- ___ Sediment Deposits (B2) **(Riverine)**
- ___ Drift Deposits (B3) (Riverine)
- X Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Thin Muck Surface (C7)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

**Field Observations:**

Surface Water Present? Yes ___ No X Depth (inches): ___

Water Table Present? Yes ___ No X Depth (inches): ___

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

**Wetland Hydrology Present? Yes** X **No** ___

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

Aerial photos document wet areas. Comprehensive, long-term (11/06-5/07) site and photo monitoring.

Remarks:

Slightly depressed area in historically wet area.

# WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site: Newark Areas 3 & 4 City/County: Newark/Alameda Sampling Date: 29 March 2007
Applicant/Owner: Sobrato Development Companies State: California Sampling Point: **SP 38**
Investigator(s): E. Kentner Section/Township/Range: 0/05 S/01 W
Landform (hillslope, terrace, etc.): agricultural field Local Relief (concave, convex, none): Concave Slope (%): 0%
Subregion (LRR): Mediterranean California (C) Lat: 37 29' 54" Long: 122 0' 18" Datum: NAD 83
Soil Map Unit Name: Omni silty clay loam, strongly saline NWI classification Palustrine farmed, Pf
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation X Soil ____ or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____ Soil ____ or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes X No ____
Hydric Soil Present? Yes X No ____
Wetland Hydrology Present? Yes X No ____

**Is the Sampled Area within a Wetland?** Yes X No ____

Remarks:
Sample point located in depression. Canopy height is <1-inch, ground cover is ~4%, salt crust present, not flowering, no chlorosis. Hydric soil features considered contemporary.

## VEGETATION

| Tree Stratum (Use scientific names) | Absolute Cover % | Dominant Species? | Indicator Status |
|---|---|---|---|
| 1. *none* | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| Total Cover: | 0 | | |
| **Sapling/Shrub Stratum** | | | |
| 1. *none* | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| Total Cover: | 0 | | |
| **Herb Stratum** | | | |
| 1. *Salicornia virginica* | <1 | X | OBL |
| 2. *Avena fatua* | <1 | X | NOL |
| 3. *Beta vulgaris* | <1 | X | FACU |
| 4. *Poa annua* | <1 | X | FACW |
| 5. *Polygonum arenastrum* | <1 | X | FAC |
| 6. *Spergularia macrotheca* | <1 | X | FAC |
| 7. *Malvella leprosa* | <1 | X | FAC |
| 8. | | | |
| Total Cover: | 3.5 | | |
| **Woody Vine Stratum** | | | |
| 1. *none* | | | |
| 2. | | | |
| Total Cover: | 0 | | |

% Bare Ground in Herb Stratum 95 % Cover of Biotic Crust ____

**Dominance Test worksheet:**

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

Total Number of Dominant Species Across All Strata: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 71% (A/B)

**Prevalence Index worksheet:**

| Total % Cover of: | | Multiply by: |
|---|---|---|
| OBL species | x 1 = | |
| FACW species | x 2 = | |
| FAC species | x 3 = | |
| FACU species | x 4 = | |
| UPL Species | x 5 = | |
| Column totals | (A) | (B) |

Prevalence Index = B/A = ____

**Hydrophytic Vegetation Indicators:**

X Dominance Text is >50%
____ Prevalence Index Is ≤3.0[1]
____ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
X Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

**Hydrophytic Vegetation Present?** Yes X No ____

Remarks:
Avena flowering at 12-inches. Managed plant communities; vigor and stress responses to wetland conditions.

## SOIL

Sampling Point: **SP 38**

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

| Depth | Matrix | | Redox Features | | | | | |
|---|---|---|---|---|---|---|---|---|
| (inches) | Color (moist) | % | Color (moist) | % | Type[1] | Loc[2] | Texture | Remarks |
| 0-10 | 10 YR 4/1 | 95 | 2.5 YR 3/1 | 4 | D | M | clay | concretion/dark mottles |
| * | | | 10 YR 7/1 | 1 | C | M | | salt inclusions |

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

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

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

**Indicators for Problematic Hydric Soils[3]:**

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

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present.

**Restrictive Layer (If present):**

Type: Ap

Depth (inches): 4

Hydric **Soil Present?** Yes X No ___

Remarks:

Soil is moist.

* SCS describes high value/low chroma horizon below the Ap.

## HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (any one indicator is sufficient)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) **(Nonriverine)**
- ___ Sediment Deposits (B2) **(Nonriverine)**
- ___ Drift Deposits (B3) **(Nonriverine)**
- X Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Plowed Soils (C6)
- ___ Other (Explain In Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) **(Riverine)**
- ___ Sediment Deposits (B2) **(Riverine)**
- ___ Drift Deposits (B3) (Riverine)
- X Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Thin Muck Surface (C7)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

**Field Observations:**

Surface Water Present? Yes ___ No X Depth (inches): ___

Water Table Present? Yes ___ No X Depth (inches): ___

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

**Wetland Hydrology Present?** Yes X No ___

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

Remarks:

Slightly depressed area with large contributing watershed of slightly elevated surroundings.

# WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site: Newark Areas 3 & 4 City/County: Newark/Alameda Sampling Date: 29 March 2007
Applicant/Owner: Sobrato Development Companies State: California Sampling Point: SP 39
Investigator(s): E. Kentner Section/Township/Range: 0/05 S/01 W
Landform (hillslope, terrace, etc.): agricultural field Local Relief (concave, convex, none): None Slope (%): 0%
Subregion (LRR): Mediterranean California (C) Lat: 37 29' 55" Long: 122 0' 18" Datum: NAD 83
Soil Map Unit Name: Omni silty clay loam, strongly saline NWI classification Palustrine farmed, Pf
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation X Soil ____ or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____ Soil ____ or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

| | | | | | |
|---|---|---|---|---|---|
| Hydrophytic Vegetation Present? | Yes ____ | No X | **Is the Sampled Area within a Wetland?** | Yes X | No ____ |
| Hydric Soil Present? | Yes X | No ____ | | | |
| Wetland Hydrology Present? | Yes X | No ____ | | | |

Remarks:
Sample point located in moist area with moderately tall vegetation of low ground cover. Small amount of salt crust and chlorosis. Hydric soil features considered contemporary.

## VEGETATION

| Tree Stratum (Use scientific names) | Absolute Cover % | Dominant Species? | Indicator Status |
|---|---|---|---|
| 1. *none* | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| Total Cover: | 0 | | |
| **Sapling/Shrub Stratum** | | | |
| 1. *none* | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| Total Cover: | 0 | | |
| **Herb Stratum** | | | |
| 1. *Avena fatua* | 5 | X | NOL |
| 2. *Lolium multiflorum* | <1 | | FAC |
| 3. *Cotula coronopifolia* | 1 | | FACW |
| 4. *Spergularia macrotheca* | 2 | X | FAC |
| 5. *Polygonum arenastrum* | <1 | | FAC |
| 6. *Poa annua* | <1 | | FACW |
| 7. *Beta vulgaris* | <1 | | FACU |
| 8. *Chenopodium album* | <1 | | FAC |
| 9. *Hordeum hystrix* | <1 | | FAC |
| Total Cover: | 10.5 | | |
| **Woody Vine Stratum** | | | |
| 1. *none* | | | |
| 2. | | | |
| Total Cover: | 0 | | |

% Bare Ground in Herb Stratum 87 % Cover of Biotic Crust ____

**Dominance Test worksheet:**

| | | |
|---|---|---|
| Number of Dominant Species That Are OBL, FACW, or FAC: | 1 | (A) |
| Total Number of Dominant Species Across All Strata: | 2 | (B) |
| Percent of Dominant Species That Are OBL, FACW, or FAC: | 50 | (A/B) |

**Prevalence Index worksheet:**

| Total % Cover of: | | | Multiply by: |
|---|---|---|---|
| OBL species | 0 | x 1 = | 0 |
| FACW species | 1.5 | x 2 = | 3 |
| FAC species | 4 | x 3 = | 12 |
| FACU species | 0.5 | x 4 = | 2 |
| UPL Species | 5 | x 5 = | 25 |
| Column totals | 11 (A) | | 42 (B) |

Prevalence Index = B/A = 3.8

Hydrophytic Vegetation Indicators:

- ____ Dominance Text is >50%
- ____ Prevalence Index is ≤3.0[1]
- ____ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- X Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

**Hydrophytic Vegetation Present?** Yes ____ No X

Remarks:
Avena and Lolium flowering at 12-inches. Chlorosis present, with some salt crust. Managed plant communities; vigor and stress responses to wetland conditions.

## SOIL

Sampling Point: **SP 39**

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

| Depth | Matrix | | Redox Features | | | | | |
|---|---|---|---|---|---|---|---|---|
| (inches) | Color (moist) | % | Color (moist) | % | Type[1] | Loc[2] | Texture | Remarks |
| 0-10 | 10 YR 3/1 | 95 | 2.5 YR 4/8 | 3 | C | RC | clay | Fe concentrations |
| * | | | N 2.5/ | 2 | C | M | | Mn concretions |

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

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

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

**Indicators for Problematic Hydric Soils[3]:**

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

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present.

**Restrictive Layer (If present):**

Type: Ap

Depth (inches): 6

**Hydric Soil Present?** Yes X **No** ___

Remarks:

Soil moist.

* SCS describes high value/low chroma horizon below the Ap.

## HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (any one indicator is sufficient)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) **(Nonriverine)**
- ___ Sediment Deposits (B2) **(Nonriverine)**
- ___ Drift Deposits (B3) **(Nonriverine)**
- X Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Plowed Soils (C6)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) **(Riverine)**
- ___ Sediment Deposits (B2) **(Riverine)**
- ___ Drift Deposits (B3) (Riverine)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Thin Muck Surface (C7)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

**Field Observations:**

Surface Water Present? Yes ___ No X Depth (inches): ___

Water Table Present? Yes ___ No X Depth (inches): ___

Saturation Present? Yes ___ No X Depth (inches): ___

(Includes capillary fringe)

**Wetland Hydrology Present?** Yes ___ **No** X

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

Remarks:

Sample point slightly depressed from surroundings.

# WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site: Newark Areas 3 & 4 City/County: Newark/Alameda Sampling Date: 29 March 2007
Applicant/Owner: Sobrato Development Companies State: California Sampling Point: SP 40
Investigator(s): E. Kentner Section/Township/Range: 0/05 S/01 W
Landform (hillslope, terrace, etc.): agricultural field Local Relief (concave, convex, none): Convex Slope (%): 0%
Subregion (LRR): Mediterranean California (C) Lat: 37 30' 7" Long: 122 0' 29" Datum: NAD 83
Soil Map Unit Name: Omni silty clay loam, strongly saline NWI classification Palustrine farmed, Pf
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation X Soil ____ or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____ Soil ____ or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

| | | | | | |
|---|---|---|---|---|---|
| Hydrophytic Vegetation Present? | Yes ____ | No X | **Is the Sampled Area within a Wetland?** | Yes ____ | No X |
| Hydric Soil Present? | Yes X | No ____ | | | |
| Wetland Hydrology Present? | Yes ____ | No X | | | |

Remarks:
Sample point located in saline area. Vegetation growth normal (not stunted), no chlorosis, high percent cover of vegetation. Hydric soil features considered historic. No wetland hydrology.

## VEGETATION

| Tree Stratum (Use scientific names) | Absolute Cover % | Dominant Species? | Indicator Status |
|---|---|---|---|
| 1. *none* | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| Total Cover: | 0 | | |
| **Sapling/Shrub Stratum** | | | |
| 1. *none* | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| Total Cover: | 0 | | |
| **Herb Stratum** | | | |
| 1. *Triticum aestivum* | 70 | X | NOL |
| 2. *Brassica nigra* | 13 | | NOL |
| 3. *Lolium multiflorum* | 15 | | FAC |
| 4. *Hordeum hystrix* | 4 | | FAC |
| 5. *Malva neglecta* | <1 | | NOL |
| 6. *Beta vulgaris* | 15 | | FACU |
| 7. *Polygonum arenastrum* | 5 | | FAC |
| 8. *Avena fatua* | <1 | | NOL |
| Total Cover: | 123 | | |
| **Woody Vine Stratum** | | | |
| 1. *none* | | | |
| 2. | | | |
| Total Cover: | 0 | | |

% Bare Ground in Herb Stratum 1 % Cover of Biotic Crust ____

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0% (A/B)

**Prevalence Index worksheet:**

| Total % Cover of: | | Multiply by: |
|---|---|---|
| OBL species | x 1 = | |
| FACW species | x 2 = | |
| FAC species | x 3 = | |
| FACU species | x 4 = | |
| UPL Species | x 5 = | |
| Column totals | (A) | (B) |

Prevalence Index = B/A = ____

**Hydrophytic Vegetation Indicators:**

____ Dominance Text is >50%
____ Prevalence Index is ≤3.0[1]
____ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
X Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

**Hydrophytic Vegetation Present?** Yes ____ No X

Remarks:
Wheat and Lolium flowering at 24-inches, mustard at 32-inches, Hordeum at 20-inches. Managed plant communities; vigor and stress responses to wetland conditions.

## SOIL

Sampling Point: **SP 40**

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

| Depth | Matrix | | Redox Features | | | | | |
|---|---|---|---|---|---|---|---|---|
| (inches) | Color (moist) | % | Color (moist) | % | Type[1] | Loc[2] | Texture | Remarks |
| 0-10 | 10 YR 3/1 | 100 | --- | 0 | | | clay | no mottles observed |
| * | | | | | | | | |

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

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

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

**Indicators for Problematic Hydric Soils[3]:**

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

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present.

**Restrictive Layer (If present):**

Type: Ap

Depth (inches): 6

Hydric **Soil Present?** Yes X No ___

Remarks:

Low chroma soil, but very dry.

* SCS describes high value/low chroma horizon below the Ap.

## HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (any one indicator is sufficient)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (Nonriverine)
- ___ Sediment Deposits (B2) (Nonriverine)
- ___ Drift Deposits (B3) (Nonriverine)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Plowed Soils (C6)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (Riverine)
- ___ Sediment Deposits (B2) (Riverine)
- ___ Drift Deposits (B3) (Riverine)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Thin Muck Surface (C7)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

**Field Observations:**

Surface Water Present? Yes ___ No X Depth (inches): ___

Water Table Present? Yes ___ No X Depth (inches): ___

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

**Wetland Hydrology Present?** Yes ___ No X

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

Remarks:

Topographically elevated.

# WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site: Newark Areas 3 & 4 City/County: Newark/Alameda Sampling Date: 29 March 2007
Applicant/Owner: Sobrato Development Companies State: California Sampling Point: SP 41
Investigator(s): E. Kentner Section/Township/Range: 0/05 S/01 W
Landform (hillslope, terrace, etc.): agricultural field Local Relief (concave, convex, none): Convex Slope (%): 0%
Subregion (LRR): Mediterranean California (C) Lat: 37 30' 6" Long: 122 0' 27" Datum: NAD 83
Soil Map Unit Name: Omni silty clay loam, strongly saline NWI classification Palustrine farmed, Pf
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation X Soil ____ or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____ Soil ____ or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

| | | | | | |
|---|---|---|---|---|---|
| Hydrophytic Vegetation Present? | Yes ____ | No X | **Is the Sampled Area within a Wetland?** | Yes ____ | No X |
| Hydric Soil Present? | Yes X | No ____ | | | |
| Wetland Hydrology Present? | Yes ____ | No X | | | |

Remarks:
Dry soil, average canopy height, mild chlorosis with efflorescent some salt crust. Hydric soil features considered historic. No wetland hydrology.

## VEGETATION

| Tree Stratum (Use scientific names) | Absolute Cover % | Dominant Species? | Indicator Status |
|---|---|---|---|
| 1. *none* | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| Total Cover: | 0 | | |
| **Sapling/Shrub Stratum** | | | |
| 1. *none* | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| Total Cover: | 0 | | |
| **Herb Stratum** | | | |
| 1. *Triticum aestivum* | 6 | | NOL |
| 2. *Lolium multiflorum* | 50 | X | FAC |
| 3. *Avena fatua* | 18 | X | NOL |
| 4. *Hordeum hystrix* | 5 | | FAC |
| 5. *Beta vulgaris* | 5 | | FACU |
| 6. *Brassica nigra* | <1 | | NOL |
| 7. *Poa annua* | <1 | | FACW |
| 8. *Polygonum arenastrum* | <1 | | FAC |
| Total Cover: | 85.5 | | |
| **Woody Vine Stratum** | | | |
| 1. *none* | | | |
| 2. | | | |
| Total Cover: | 0 | | |

% Bare Ground in Herb Stratum 10 % Cover of Biotic Crust ____

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A/B)

**Prevalence Index worksheet:**

| Total % Cover of: | | Multiply by: |
|---|---|---|
| OBL species | ____ x 1 = | ____ |
| FACW species | ____ x 2 = | ____ |
| FAC species | ____ x 3 = | ____ |
| FACU species | ____ x 4 = | ____ |
| UPL Species | ____ x 5 = | ____ |
| Column totals | ____ (A) | ____ (B) |

Prevalence Index = B/A = ____

**Hydrophytic Vegetation Indicators:**

____ Dominance Text is >50%
____ Prevalence Index is ≤3.0[1]
____ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
X Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

**Hydrophytic Vegetation Present?** Yes ____ No X

Remarks:
Wheat and Hordeum flowering at 15-inches, Lolium and Avena flowering at 18-inches. Salinity reducing stature. Managed plant communities; vigor and stress responses to wetland conditions.

## SOIL

Sampling Point: **SP 41**

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

| Depth | Matrix | | Redox Features | | | | | |
|---|---|---|---|---|---|---|---|---|
| (inches) | Color (moist) | % | Color (moist) | % | Type[1] | Loc[2] | Texture | Remarks |
| 0-10 | 10 YR 3/1 | 100 | --- | 0 | | | clay | no mottles |
| * | | | | | | | | |

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

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

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

**Indicators for Problematic Hydric Soils[3]:**

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

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present.

**Restrictive Layer (If present):**

Type: Ap

Depth (inches): 8

Hydric **Soil Present?** Yes X No ___

Remarks:

Low chroma, very dry soil.

* SCS describes high value/low chroma horizon below the Ap.

## HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (any one indicator is sufficient)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) **(Nonriverine)**
- ___ Sediment Deposits (B2) **(Nonriverine)**
- ___ Drift Deposits (B3) **(Nonriverine)**
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Plowed Soils (C6)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) **(Riverine)**
- ___ Sediment Deposits (B2) **(Riverine)**
- ___ Drift Deposits (B3) (Riverine)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Thin Muck Surface (C7)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

**Field Observations:**

Surface Water Present? Yes ___ No X Depth (Inches): ___

Water Table Present? Yes ___ No X Depth (inches): ___

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

**Wetland Hydrology Present?** Yes ___ No X

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

Remarks:

Topographically elevated from wet areas to south. Salt crust efflorescent, not a result of ponding.

# WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site: Newark Areas 3 & 4 City/County: Newark/Alameda Sampling Date: 29 March 2007
Applicant/Owner: Sobrato Development Companies State: California Sampling Point: SP 42
Investigator(s): E. Kentner Section/Township/Range: 0/05 S/01 W
Landform (hillslope, terrace, etc.): agricultural field Local Relief (concave, convex, none): Convex Slope (%): 0%
Subregion (LRR): Mediterranean California (C) Lat: 37 30' 6" Long: 122 0' 27" Datum: NAD 83
Soil Map Unit Name: Omni silty clay loam, strongly saline NWI classification Palustrine farmed, Pf
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation X Soil ____ or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____ Soil ____ or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes X No ____
Hydric Soil Present? Yes X No ____
Wetland Hydrology Present? Yes ____ No X
**Is the Sampled Area within a Wetland?** Yes ____ No X

Remarks:
Sample point located in saline-affected area. Vegetation is stunted (flowering at 4-inches), and soil is moist, but not saturated.

## VEGETATION

| Tree Stratum (Use scientific names) | Absolute Cover % | Dominant Species? | Indicator Status |
|---|---|---|---|
| 1. *none* | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| Total Cover: | 0 | | |
| **Sapling/Shrub Stratum** | | | |
| 1. *none* | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| Total Cover: | 0 | | |
| **Herb Stratum** | | | |
| 1. *Hordeum hystrix* | 25 | X | FAC |
| 2. *Brassica nigra* | <1 | | NOL |
| 3. *Medicago polymorpha* | <1 | | NOL |
| 4. *Beta vulgaris* | <1 | | FACU |
| 5. *Avena fatua* | <1 | | NOL |
| 6. *Melilotus indicus* | <1 | | FAC |
| 7. *Lolium multiflorum* | <1 | | FAC |
| 8. | | | |
| Total Cover: | 28 | | |
| **Woody Vine Stratum** | | | |
| 1. *none* | | | |
| 2. | | | |
| Total Cover: | 0 | | |

% Bare Ground in Herb Stratum 70 % Cover of Biotic Crust ____

**Dominance Test worksheet:**
Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)
Total Number of Dominant Species Across All Strata: 1 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

**Prevalence Index worksheet:**

| Total % Cover of: | | Multiply by: |
|---|---|---|
| OBL species | x 1 = | |
| FACW species | x 2 = | |
| FAC species | x 3 = | |
| FACU species | x 4 = | |
| UPL Species | x 5 = | |
| Column totals | (A) | (B) |

Prevalence Index = B/A =

**Hydrophytic Vegetation Indicators:**
X Dominance Test is >50%
____ Prevalence Index is ≤3.0[1]
____ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
X Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

**Hydrophytic Vegetation Present?** Yes X No ____

Remarks:
Vegetation stunted, but not chlorotic. Avena flowering at 8-inches and Hordeum and Brassica at 4-inches. Managed plant communities; vigor and stress responses to wetland conditions.

## SOIL

Sampling Point: **SP 42**

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

| Depth | Matrix | | Redox Features | | | | | |
|---|---|---|---|---|---|---|---|---|
| (inches) | Color (moist) | % | Color (moist) | % | Type[1] | Loc[2] | Texture | Remarks |
| 0-10 | 2.5 Y 3/1 | 100 | --- | 0 | | | clay loam | no apparent mottles |
| * | | | | | | | | |

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

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

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

**Indicators for Problematic Hydric Soils[3]:**

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

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present.

**Restrictive Layer (If present):**

Type: Ap

Depth (inches): 4

Hydric **Soil Present?** **Yes** X **No** ___

Remarks:

* SCS describes high value/low chroma horizon below the Ap.

## HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (any one indicator is sufficient)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Plowed Soils (C6)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (Riverine)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Thin Muck Surface (C7)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

**Field Observations:**

Surface Water Present? Yes ___ No X Depth (Inches): ___

Water Table Present? Yes ___ No X Depth (inches): ___

Saturation Present? Yes ___ No X Depth (inches): ___
(Includes capillary fringe)

**Wetland Hydrology Present?** **Yes** ___ **No** X

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

Remarks:

No apparent wetland hydrology. Appears to drain to south from point elevation data, not a closed depression.

# WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site: Newark Areas 3 & 4 City/County: Newark/Alameda Sampling Date: 29 March 2007
Applicant/Owner: Sobrato Development Companies State: California Sampling Point: SP 43
Investigator(s): E. Kentner Section/Township/Range: 0/05 S/01 W
Landform (hillslope, terrace, etc.): agricultural field Local Relief (concave, convex, none): Convex Slope (%): 0%
Subregion (LRR): Mediterranean California (C) Lat: 37 30' 5" Long: 122 0' 25" Datum: NAD 83
Soil Map Unit Name: Omni silty clay loam, strongly saline NWI classification Palustrine farmed, Pf
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation X Soil ____ or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____ Soil ____ or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes X No ____
Hydric Soil Present? Yes X No ____
Wetland Hydrology Present? Yes ____ No X
**Is the Sampled Area within a Wetland?** Yes ____ No X

Remarks:
Sample point located within saline scald area. Vegetation is stunted and very slightly chlorotic, soil is moist but not sat. Topographically elevated. Hydric soil features considered historic. No wetland hydrology.

## VEGETATION

| Tree Stratum (Use scientific names) | Absolute Cover % | Dominant Species? | Indicator Status |
|---|---|---|---|
| 1. *none* | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| Total Cover: | 0 | | |

| Sapling/Shrub Stratum | | | |
|---|---|---|---|
| 1. *none* | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| Total Cover: | 0 | | |

| Herb Stratum | | | |
|---|---|---|---|
| 1. *Hordeum hystrix* | 8 | X | FAC |
| 2. *Beta vulgaris* | <1 | | FACU |
| 3. *Avena fatua* | <1 | | NOL |
| 4. *Poa annua* | 6 | X | FACW |
| 5. *Polygonum arenastrum* | trace | | FAC |
| 6. *Cotula coronopifolia* | trace | | FACW |
| 7. | | | |
| 8. | | | |
| Total Cover: | 15 | | |

| Woody Vine Stratum | | | |
|---|---|---|---|
| 1. *none* | | | |
| 2. | | | |
| Total Cover: | 0 | | |

% Bare Ground in Herb Stratum 80 % Cover of Biotic Crust ____

**Dominance Test worksheet:**
Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)
Total Number of Dominant Species Across All Strata: 2 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

**Prevalence Index worksheet:**

| Total % Cover of: | | Multiply by: |
|---|---|---|
| OBL species | x 1 = | |
| FACW species | x 2 = | |
| FAC species | x 3 = | |
| FACU species | x 4 = | |
| UPL Species | x 5 = | |
| Column totals | (A) | (B) |

Prevalence Index = B/A =

**Hydrophytic Vegetation Indicators:**
X Dominance Text is >50%
___ Prevalence Index is ≤3.0[1]
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
X Problematic Hydrophytic Vegetation[1] (Explain)
[1]Indicators of hydric soil and wetland hydrology must be present.

**Hydrophytic Vegetation Present?** Yes X No ____

Remarks:
Soil moist, but salinity stunting growth (Hordeum flowering at 4-inches). Managed plant communities; vigor and stress responses to wetland conditions.

## SOIL

Sampling Point: **SP 43**

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

| Depth | Matrix | | Redox Features | | | | | |
|---|---|---|---|---|---|---|---|---|
| (Inches) | Color (moist) | % | Color (moist) | % | Type[1] | Loc[2] | Texture | Remarks |
| 0-10 | 10 YR 4/1 | 100 | --- | 0 | | | clay loam | no apparent mottles |
| * | | | | | | | | |

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

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

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

**Indicators for Problematic Hydric Soils[3]:**

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

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present.

**Restrictive Layer (If present):**

Type: Ap

Depth (inches): 12

Hydric **Soil Present?** Yes X No ___

Remarks:

Soil lightly moist with efflorescent salt crust.

* SCS describes high value/low chroma horizon below the Ap.

## HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (any one indicator is sufficient)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) **(Nonriverine)**
- ___ Sediment Deposits (B2) **(Nonriverine)**
- ___ Drift Deposits (B3) **(Nonriverine)**
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Plowed Soils (C6)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) **(Riverine)**
- ___ Sediment Deposits (B2) **(Riverine)**
- ___ Drift Deposits (B3) (Riverine)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Thin Muck Surface (C7)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

**Field Observations:**

Surface Water Present? Yes ___ No X Depth (Inches): ___

Water Table Present? Yes ___ No X Depth (inches): ___

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

**Wetland Hydrology Present? Yes** ___ **No** X

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

Remarks:

Sample point topographically elevated from areas south; contributes to wetlands to south.

# WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site: Newark Areas 3 & 4 City/County: Newark/Alameda Sampling Date: 29 March 2007
Applicant/Owner: Sobrato Development Companies State: California Sampling Point: SP 44
Investigator(s): E. Kentner Section/Township/Range: 0/05 S/01 W
Landform (hillslope, terrace, etc.): agricultural field Local Relief (concave, convex, none): None Slope (%): 0%
Subregion (LRR): Mediterranean California (C) Lat: 37 30' 3" Long: 122 0' 23" Datum: NAD 83
Soil Map Unit Name: Omni silty clay loam, strongly saline NWI classification Palustrine farmed, Pf
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation X Soil ____ or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____ Soil ____ or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

| | | | | | |
|---|---|---|---|---|---|
| Hydrophytic Vegetation Present? | Yes ____ | No X | Is the Sampled Area within a Wetland? | Yes ____ | No X |
| Hydric Soil Present? | Yes X | No ____ | | | |
| Wetland Hydrology Present? | Yes ____ | No X | | | |

Remarks:
Sample point dry in saline area (scald) with moderate vegetation height and low ground cover. Hydric soil features considered historic. No wetland hydrology.

## VEGETATION

| Tree Stratum (Use scientific names) | Absolute Cover % | Dominant Species? | Indicator Status |
|---|---|---|---|
| 1. *none* | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| Total Cover: | 0 | | |
| **Sapling/Shrub Stratum** | | | |
| 1. *none* | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| Total Cover: | 0 | | |
| **Herb Stratum** | | | |
| 1. *Triticum aestivum* | 8 | X | NOL |
| 2. *Melilotus indicus* | <1 | | FAC |
| 3. *Beta vulgaris* | 1 | | FACU |
| 4. *Lolium multiflorum* | 12 | X | FAC |
| 5. *Polygonum arenastrum* | <1 | | FAC |
| 6. *Hordeum hystrix* | <1 | | FAC |
| 7. *Brassica nigra* | <1 | | NOL |
| 8. | | | |
| Total Cover: | 23 | | |
| **Woody Vine Stratum** | | | |
| 1. *none* | | | |
| 2. | | | |
| Total Cover: | 0 | | |

% Bare Ground in Herb Stratum 70 % Cover of Biotic Crust ____

**Dominance Test worksheet:**

| | | |
|---|---|---|
| Number of Dominant Species That Are OBL, FACW, or FAC: | 1 | (A) |
| Total Number of Dominant Species Across All Strata: | 2 | (B) |
| Percent of Dominant Species That Are OBL, FACW, or FAC: | 50% | (A/B) |

**Prevalence Index worksheet:**

| Total % Cover of: | | | Multiply by: |
|---|---|---|---|
| OBL species | 0 | x 1 = | 0 |
| FACW species | 0 | x 2 = | 0 |
| FAC species | 13.5 | x 3 = | 40.5 |
| FACU species | 1 | x 4 = | 4 |
| UPL Species | 8.5 | x 5 = | 34 |
| Column totals | 23 (A) | | 78.5 (B) |

Prevalence Index = B/A = 3.4

Hydrophytic Vegetation Indicators:

____ Dominance Text is >50%
____ Prevalence Index is ≤3.0[1]
____ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
X Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

**Hydrophytic Vegetation Present?** Yes ____ No X

Remarks:
Vegetation slightly chlorotic and flowering at 18-inches (wheat), 12-inches (Lolium), 9-inches (Brassica), and 5-inches (Hordeum). Managed plant communities; vigor and stress responses to wetland conditions.

## SOIL

Sampling Point: **SP 44**

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

| Depth | Matrix | | Redox Features | | | | | |
|---|---|---|---|---|---|---|---|---|
| (inches) | Color (moist) | % | Color (moist) | % | Type[1] | Loc[2] | Texture | Remarks |
| 0-10 | 2.5 YR 2.5/1 | 100 | — | 0 | | | clay loam | no mottles observed |
| * | | | | | | | | |

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

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

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

**Indicators for Problematic Hydric Soils[3]:**

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

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present.

**Restrictive Layer (If present):**

Type: Ap

Depth (inches): 4

Hydric **Soil Present?** Yes X No ___

Remarks:

Low chroma, soil dry.

* SCS describes high value/low chroma horizon below the Ap.

## HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (any one indicator is sufficient)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (Nonriverine)
- ___ Sediment Deposits (B2) (Nonriverine)
- ___ Drift Deposits (B3) (Nonriverine)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Plowed Soils (C6)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (Riverine)
- ___ Sediment Deposits (B2) (Riverine)
- ___ Drift Deposits (B3) (Riverine)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Thin Muck Surface (C7)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

**Field Observations:**

Surface Water Present? Yes ___ No X Depth (inches): ___

Water Table Present? Yes ___ No X Depth (inches): ___

Saturation Present? Yes ___ No X Depth (inches): ___

(Includes capillary fringe)

**Wetland Hydrology Present? Yes** ___ **No** X

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

Remarks:

Sample point is topographically higher than areas to south and appears to convey surface runoff to wetlands to the south.

# WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site: Newark Areas 3 & 4 City/County: Newark/Alameda Sampling Date: 30 March 2007
Applicant/Owner: Sobrato Development Companies State: California Sampling Point: SP 45
Investigator(s): E. Kentner Section/Township/Range: 0/05 S/01 W
Landform (hillslope, terrace, etc.): agricultural field Local Relief (concave, convex, none): Convex Slope (%): 0%
Subregion (LRR): Mediterranean California (C) Lat: 37 30' 0" Long: 122 0' 42" Datum: NAD 83
Soil Map Unit Name: Reyes clay, drained NWI classification Palustrine farmed, Pf
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation X Soil ____ or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____ Soil ____ or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes ____ No X
Hydric Soil Present? Yes X No ____
Wetland Hydrology Present? Yes ____ No X

**Is the Sampled Area within a Wetland?** Yes ____ No X

Remarks:
Soil dry, plants flowering, no salt crust apparent, no chlorosis, average height canopy with good cover. Hydric soil features considered historic. No wetland hydrology.

## VEGETATION

| Tree Stratum (Use scientific names) | Absolute Cover % | Dominant Species? | Indicator Status |
|---|---|---|---|
| 1. *none* | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| Total Cover: | 0 | | |
| **Sapling/Shrub Stratum** | | | |
| 1. *none* | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| Total Cover: | 0 | | |
| **Herb Stratum** | | | |
| 1. *Hordeum hystrix* | 75 | X | FAC |
| 2. *Brassica nigra* | 2 | | NOL |
| 3. *Triticum aestivum* | <1 | | NOL |
| 4. *Lolium multiflorum* | 1 | | FAC |
| 5. *Hordeum vulgare* | <1 | | NOL |
| 6. | | | |
| 7. | | | |
| 8. | | | |
| Total Cover: | 79 | | |
| **Woody Vine Stratum** | | | |
| 1. *none* | | | |
| 2. | | | |
| Total Cover: | 0 | | |

% Bare Ground in Herb Stratum 10 % Cover of Biotic Crust ____

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)
Total Number of Dominant Species Across All Strata: 1 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

**Prevalence Index worksheet:**

| Total % Cover of: | | Multiply by: |
|---|---|---|
| OBL species | x 1 = | |
| FACW species | x 2 = | |
| FAC species | x 3 = | |
| FACU species | x 4 = | |
| UPL Species | x 5 = | |
| Column totals | (A) | (B) |

Prevalence Index = B/A =

**Hydrophytic Vegetation Indicators:**

X Dominance Text is >50%
___ Prevalence Index is ≤3.0[1]
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
X Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

**Hydrophytic Vegetation Present?** Yes X No ____

Remarks:
H. hystrix flowering at 10-inches, Brassica at 26-inches, remainder at 14-inches. Managed plant communities; vigor and stress responses to wetland conditions.

## SOIL

Sampling Point: **SP 45**

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

| Depth | Matrix | | Redox Features | | | | | |
|---|---|---|---|---|---|---|---|---|
| (inches) | Color (moist) | % | Color (moist) | % | Type[1] | Loc[2] | Texture | Remarks |
| 0-10 | 10 YR 3/1 | 100 | — | 0 | | | clay loam | no mottles |
| * | | | | | | | | |

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

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

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

**Indicators for Problematic Hydric Soils[3]:**

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

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present.

**Restrictive Layer (If present):**

Type: Ap

Depth (inches): 6

Hydric **Soil Present?** Yes X No ___

Remarks:

Soil dry with no mottles.

* Soils do not match the SCS description for this series.

## HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (any one indicator is sufficient)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (Nonriverine)
- ___ Sediment Deposits (B2) (Nonriverine)
- ___ Drift Deposits (B3) (Nonriverine)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Plowed Soils (C6)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (Riverine)
- ___ Sediment Deposits (B2) (Riverine)
- ___ Drift Deposits (B3) (Riverine)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Thin Muck Surface (C7)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

**Field Observations:**

Surface Water Present? Yes ___ No X Depth (inches): ___

Water Table Present? Yes ___ No X Depth (inches): ___

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

**Wetland Hydrology Present?** Yes ___ No X

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

Remarks:

No apparent wetland hydrology.

# WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site: Newark Areas 3 & 4 City/County: Newark/Alameda Sampling Date: 29 March 2007
Applicant/Owner: Sobrato Development Companies State: California Sampling Point: SP 46
Investigator(s): E. Kentner Section/Township/Range: 0/05 S/01 W
Landform (hillslope, terrace, etc.): agricultural field Local Relief (concave, convex, none): None Slope (%): 0%
Subregion (LRR): Mediterranean California (C) Lat: 37 30' 0" Long: 122 0' 42" Datum: NAD 83
Soil Map Unit Name: Reyes clay, drained NWI classification Palustrine farmed, Pf
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation X Soil ____ or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____ Soil ____ or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes X No ____
Hydric Soil Present? Yes X No ____
Wetland Hydrology Present? Yes ____ No X

**Is the Sampled Area within a Wetland?** Yes ____ No X

Remarks:
Soil dry, vegetation average, slight salt crust. Hydric soil features considered historic. No wetland hydrology.

## VEGETATION

| Tree Stratum (Use scientific names) | Absolute Cover % | Dominant Species? | Indicator Status |
|---|---|---|---|
| 1. *none* | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| Total Cover: | 0 | | |
| **Sapling/Shrub Stratum** | | | |
| 1. *none* | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| Total Cover: | 0 | | |
| **Herb Stratum** | | | |
| 1. *Hordeum hystrix* | 55 | X | FAC |
| 2. *Lolium multiflorum* | 14 | | FAC |
| 3. *Mesembranthemum nodiflorum* | <1 | | NOL |
| 4. *Salicornia virginica* | <1 | | OBL |
| 5. *Cotula coronopifolia* | <1 | | FACW |
| 6. *Poa annua* | 3 | | FACW |
| 7. *Chenopodium album* | <1 | | FAC |
| 8. | | | |
| Total Cover: | 74 | | |
| **Woody Vine Stratum** | | | |
| 1. *none* | | | |
| 2. | | | |
| Total Cover: | 0 | | |

% Bare Ground in Herb Stratum 15 % Cover of Biotic Crust ____

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

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

**Prevalence Index worksheet:**

| Total % Cover of: | | Multiply by: |
|---|---|---|
| OBL species | x 1 = | |
| FACW species | x 2 = | |
| FAC species | x 3 = | |
| FACU species | x 4 = | |
| UPL Species | x 5 = | |
| Column totals | (A) | (B) |

Prevalence Index = B/A = ____

**Hydrophytic Vegetation Indicators:**

X Dominance Text is >50%
____ Prevalence Index is ≤3.0[1]
____ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
X Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

**Hydrophytic Vegetation Present?** Yes X No ____

Remarks:
Soil dry. Vegetation mildly chlorotic and flowering at 10-inches (Hordeum) and 12-inches (Lolium). Slight efflorescent salt crust. Managed plant communities; vigor and stress responses to wetland conditions.

## SOIL

Sampling Point: **SP 46**

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

| Depth | Matrix | | Redox Features | | | | | |
|---|---|---|---|---|---|---|---|---|
| (inches) | Color (moist) | % | Color (moist) | % | Type[1] | Loc[2] | Texture | Remarks |
| 0-12 | 10 YR 3/1 | 100 | --- | 0 | | | clay loam | no mottles |
| * | | | | | | | | |

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

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

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

**Indicators for Problematic Hydric Soils[3]:**

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

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present.

**Restrictive Layer (If present):**

Type: Ap

Depth (inches): 12

Hydric **Soil Present?** Yes X No ___

Remarks:

Soil dry. No mottles.

* Soils do not match the SCS description for this series.

## HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (any one indicator is sufficient)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) **(Nonriverine)**
- ___ Sediment Deposits (B2) **(Nonriverine)**
- ___ Drift Deposits (B3) **(Nonriverine)**
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Plowed Soils (C6)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) **(Riverine)**
- ___ Sediment Deposits (B2) **(Riverine)**
- ___ Drift Deposits (B3) (Riverine)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Thin Muck Surface (C7)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

**Field Observations:**

Surface Water Present? Yes ___ No X Depth (inches): ___

Water Table Present? Yes ___ No X Depth (inches): ___

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

**Wetland Hydrology Present?** Yes ___ No X

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

Remarks:

Depressed area adjacent is moist.

# WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site: Newark Areas 3 & 4 City/County: Newark/Alameda Sampling Date: 30 March 2007
Applicant/Owner: Sobrato Development Companies State: California Sampling Point: SP 47
Investigator(s): E. Kentner Section/Township/Range: 0/05 S/01 W
Landform (hillslope, terrace, etc.): agricultural field Local Relief (concave, convex, none): Convex Slope (%): 0%
Subregion (LRR): Mediterranean California (C) Lat: 37 29' 58" Long: 122 0' 40" Datum: NAD 83
Soil Map Unit Name: Reyes clay, drained NWI classification Palustrine farmed, Pf
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation X Soil ____ or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____ Soil ____ or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes X No ____
Hydric Soil Present? Yes X No ____
Wetland Hydrology Present? Yes ____ No X

**Is the Sampled Area within a Wetland?** Yes ____ No X

Remarks:
Soil dry, vegetation height average (flowering) with low ground cover in saline scald area. Hydric soil features considered historic. No wetland hydrology.

## VEGETATION

| Tree Stratum (Use scientific names) | Absolute Cover % | Dominant Species? | Indicator Status |
|---|---|---|---|
| 1. *none* | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| Total Cover: | 0 | | |

| Sapling/Shrub Stratum | | | |
|---|---|---|---|
| 1. *none* | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| Total Cover: | 0 | | |

| Herb Stratum | | | |
|---|---|---|---|
| 1. *Lolium multiflorum* | 20 | X | FAC |
| 2. *Triticum aestivum* | 10 | X | NOL |
| 3. *Hordeum hystrix* | 8 | X | FAC |
| 4. *Bromus diandrus* | <1 | | NI |
| 5. *Brassica nigra* | <1 | | NOL |
| 6. | | | |
| 7. | | | |
| 8. | | | |
| Total Cover: | 39 | | |

| Woody Vine Stratum | | | |
|---|---|---|---|
| 1. *none* | | | |
| 2. | | | |
| Total Cover: | 0 | | |

% Bare Ground in Herb Stratum 60 % Cover of Biotic Crust ____

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)
Total Number of Dominant Species Across All Strata: 3 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 66 (A/B)

**Prevalence Index worksheet:**

| Total % Cover of: | | Multiply by: |
|---|---|---|
| OBL species | x 1 = | |
| FACW species | x 2 = | |
| FAC species | x 3 = | |
| FACU species | x 4 = | |
| UPL Species | x 5 = | |
| Column totals | (A) | (B) |

Prevalence Index = B/A =

**Hydrophytic Vegetation Indicators:**

X Dominance Text is >50%
___ Prevalence Index is ≤3.0[1]
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
X Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

**Hydrophytic Vegetation Present?** Yes X No ____

Remarks:
Vegetation flowering at 20-inches (wheat) 14-inches (Lolium), 9-inches (Hordeum), and 8-inches (Brassica). Mild chlorosis. Managed plant communities; vigor and stress responses to wetland conditions.

## SOIL

Sampling Point: **SP 47**

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

| Depth | Matrix | | Redox Features | | | | | |
|---|---|---|---|---|---|---|---|---|
| (Inches) | Color (moist) | % | Color (moist) | % | Type[1] | Loc[2] | Texture | Remarks |
| 0-10 | 10 YR 3/1 | 100 | --- | 0 | | | clay | no mottles |
| * | | | | | | | | |

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

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

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

**Indicators for Problematic Hydric Soils[3]:**

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

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present.

**Restrictive Layer (If present):**

Type: Ap

Depth (Inches): 10

Hydric **Soil Present?** Yes X No ___

Remarks:

Soil dry; efflorescent salt crust.

* Soils do not match the SCS description for this series.

## HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (any one indicator is sufficient)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (Nonriverine)
- ___ Sediment Deposits (B2) (Nonriverine)
- ___ Drift Deposits (B3) (Nonriverine)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Plowed Soils (C6)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (Riverine)
- ___ Sediment Deposits (B2) (Riverine)
- ___ Drift Deposits (B3) (Riverine)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Thin Muck Surface (C7)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

**Field Observations:**

Surface Water Present? Yes ___ No X Depth (Inches): ___

Water Table Present? Yes ___ No X Depth (inches): ___

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

**Wetland Hydrology Present?** Yes ___ No X

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

Remarks:

No apparent wetland hydrology.

# WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site: Newark Areas 3 & 4 City/County: Newark/Alameda Sampling Date: 30 March 2007
Applicant/Owner: Sobrato Development Companies State: California Sampling Point: SP 48
Investigator(s): E. Kentner Section/Township/Range: 0/05 S/01 W
Landform (hillslope, terrace, etc.): agricultural field Local Relief (concave, convex, none): Convex Slope (%): 0%
Subregion (LRR): Mediterranean California (C) Lat: 37 29' 58" Long: 122 0' 39" Datum: NAD 83
Soil Map Unit Name: Reyes clay, drained NWI classification Palustrine farmed, Pf
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation X Soil ____ or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____ Soil ____ or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes X No ____
Hydric Soil Present? Yes X No ____
Wetland Hydrology Present? Yes ____ No X

**Is the Sampled Area within a Wetland?** Yes ____ No X

Remarks:
Soil dry, salt scald area, vegetation chlorotic and flowering at 20-inches, low cover. Hydric soil features considered historic. No wetland hydrology.

## VEGETATION

| Tree Stratum (Use scientific names) | Absolute Cover % | Dominant Species? | Indicator Status |
|---|---|---|---|
| 1. *none* | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| Total Cover: | 0 | | |
| **Sapling/Shrub Stratum** | | | |
| 1. *none* | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| Total Cover: | 0 | | |
| **Herb Stratum** | | | |
| 1. *Triticum aestivum* | 3 | | NOL |
| 2. *Lolium multiflorum* | 12 | X | FAC |
| 3. *Cotula coronopifolia* | <1 | | FACW |
| 4. *Mesembranthemum nodiflorum* | <1 | | NOL |
| 5. *Spergularia macrotheca* | 2 | | FAC |
| 6. | | | |
| 7. | | | |
| 8. | | | |
| Total Cover: | 18 | | |
| **Woody Vine Stratum** | | | |
| 1. *none* | | | |
| 2. | | | |
| Total Cover: | 0 | | |

% Bare Ground in Herb Stratum 80 % Cover of Biotic Crust ____

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

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

**Prevalence Index worksheet:**

| Total % Cover of: | | Multiply by: |
|---|---|---|
| OBL species | x 1 = | |
| FACW species | x 2 = | |
| FAC species | x 3 = | |
| FACU species | x 4 = | |
| UPL Species | x 5 = | |
| Column totals | (A) | (B) |

Prevalence Index = B/A = ____

**Hydrophytic Vegetation Indicators:**

X Dominance Text is >50%
___ Prevalence Index is ≤3.0[1]
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
X Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

**Hydrophytic Vegetation Present?** Yes X No ____

Remarks:
Vegetation chlorotic. Salt crust. Vegetation flowering at 20-inches (wheat) and 11-inches (Lolium). Managed plant communities; vigor and stress responses to wetland conditions.

## SOIL

Sampling Point: **SP 48**

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

| Depth | Matrix | | Redox Features | | | | | |
|---|---|---|---|---|---|---|---|---|
| (inches) | Color (moist) | % | Color (moist) | % | Type[1] | Loc[2] | Texture | Remarks |
| 0-10 | 10 YR 3/1 | 95 | 5 YR 3/4 | 5 | C | RC | clay | |
| * | | | | | | | | |

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

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

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

**Indicators for Problematic Hydric Soils[3]:**

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present.

**Restrictive Layer (If present):**

Type: Ap

Depth (inches): 10

Hydric **Soil Present?** Yes X No ____

Remarks:

Likely historically hydric.

* Soils do not match the SCS description for this series.

## HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (any one indicator is sufficient)

| | | | | | |
|---|---|---|---|---|---|
| | Surface Water (A1) | | Salt Crust (B11) | | Water Marks (B1) (**Riverine**) |
| | High Water Table (A2) | | Biotic Crust (B12) | | Sediment Deposits (B2) (**Riverine**) |
| | Saturation (A3) | | Aquatic Invertebrates (B13) | | Drift Deposits (B3) (Riverine) |
| | Water Marks (B1) (**Nonriverine**) | | Hydrogen Sulfide Odor (C1) | | Drainage Patterns (B10) |
| | Sediment Deposits (B2) (**Nonriverine**) | | Oxidized Rhizospheres along Living Roots (C3) | | Dry-Season Water Table (C2) |
| | Drift Deposits (B3) (**Nonriverine**) | | Presence of Reduced Iron (C4) | | Thin Muck Surface (C7) |
| | Surface Soil Cracks (B6) | | Recent Iron Reduction in Plowed Soils (C6) | | Crayfish Burrows (C8) |
| | Inundation Visible on Aerial Imagery (B7) | | Other (Explain in Remarks) | | Saturation Visible on Aerial Imagery (C9) |
| | Water-stained Leaves (B9) | | | | Shallow Aquitard (D3) |
| | | | | | FAC-Neutral Test (D5) |

Secondary Indicators (2 or more required)

**Field Observations:**

Surface Water Present? Yes ____ No X Depth (inches): ____

Water Table Present? Yes ____ No X Depth (inches): ____

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

**Wetland Hydrology Present? Yes** ____ **No** X

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

Remarks:

Surface runoff to south wetland area.

# WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site: Newark Areas 3 & 4 City/County: Newark/Alameda Sampling Date: 30 March 2007
Applicant/Owner: Sobrato Development Companies State: California Sampling Point: SP 49
Investigator(s): E. Kentner Section/Township/Range: 0/05 S/01 W
Landform (hillslope, terrace, etc.): agricultural field Local Relief (concave, convex, none): None Slope (%): 0%
Subregion (LRR): Mediterranean California (C) Lat: 37 29' 55" Long: 122 0' 40" Datum: NAD 83
Soil Map Unit Name: Reyes clay, drained NWI classification Palustrine farmed, Pf
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation X Soil ____ or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____ Soil ____ or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes ____ No X
Hydric Soil Present? Yes X No ____
Wetland Hydrology Present? Yes ____ No X

**Is the Sampled Area within a Wetland?** Yes ____ No X

Remarks:
Hydric soil features considered historic. No wetland hydrology.

## VEGETATION

| Tree Stratum (Use scientific names) | Absolute Cover % | Dominant Species? | Indicator Status |
|---|---|---|---|
| 1. *none* | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| Total Cover: | 0 | | |

| Sapling/Shrub Stratum | | | |
|---|---|---|---|
| 1. *none* | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| Total Cover: | 0 | | |

| Herb Stratum | | | |
|---|---|---|---|
| 1. *Triticum aestivum* | 12 | X | NOL |
| 2. *Lolium multiflorum* | 18 | X | FAC |
| 3. *Hordeum vulgare* | <1 | | NOL |
| 4. *Hordeum hystrix* | <1 | | FAC |
| 5. *Poa annua* | <1 | | FACW |
| 6. | | | |
| 7. | | | |
| 8. | | | |
| Total Cover: | 35 | | |

| Woody Vine Stratum | | | |
|---|---|---|---|
| 1. *none* | | | |
| 2. | | | |
| Total Cover: | 0 | | |

% Bare Ground in Herb Stratum 60 % Cover of Biotic Crust ____

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)
Total Number of Dominant Species Across All Strata: 2 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A/B)

**Prevalence Index worksheet:**

| Total % Cover of: | | Multiply by: |
|---|---|---|
| OBL species | x 1 = | |
| FACW species | x 2 = | |
| FAC species | x 3 = | |
| FACU species | x 4 = | |
| UPL Species | x 5 = | |
| Column totals | (A) | (B) |

Prevalence Index = B/A =

**Hydrophytic Vegetation Indicators:**

____ Dominance Text is >50%
____ Prevalence Index is ≤3.0[1]
____ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
X Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

**Hydrophytic Vegetation Present?** Yes ____ No X

Remarks:
Vegetation flowering at 24-inches (wheat), 18-inches (Lolium and H. vulgare). Managed plant communities; vigor and stress responses to wetland conditions.

## SOIL

Sampling Point: **SP 49**

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

| Depth | Matrix | | Redox Features | | | | | |
|---|---|---|---|---|---|---|---|---|
| (inches) | Color (moist) | % | Color (moist) | % | Type[1] | Loc[2] | Texture | Remarks |
| 0-10 | 10 YR 4/1 | 100 | — | 0 | | | clay | no mottles |
| * | | | | | | | | |

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

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

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

**Indicators for Problematic Hydric Soils[3]:**

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

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present.

**Restrictive Layer (If present):**

Type: Ap

Depth (inches): 8

Hydric **Soil Present?** **Yes** X **No** ___

Remarks:

Soil dry.

* Soils do not match the SCS description for this series.

## HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (any one indicator is sufficient)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Plowed Soils (C6)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (Riverine)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Thin Muck Surface (C7)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

**Field Observations:**

Surface Water Present? Yes ___ No X Depth (Inches): ___

Water Table Present? Yes ___ No X Depth (Inches): ___

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

**Wetland Hydrology Present?** **Yes** ___ **No** X

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

Remarks:

No apparent wetland hydrology.

# WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site: Newark Areas 3 & 4 City/County: Newark/Alameda Sampling Date: 30 March 2007
Applicant/Owner: Sobrato Development Companies State: California Sampling Point: SP 50
Investigator(s): E. Kentner Section/Township/Range: 0/05 S/01 W
Landform (hillslope, terrace, etc.): agricultural field Local Relief (concave, convex, none): Concave Slope (%): 0%
Subregion (LRR): Mediterranean California (C) Lat: 37 30' 12" Long: 122 0' 15" Datum: NAD 83
Soil Map Unit Name: Omni silty clay loam, strongly saline or drained series NWI classification Palustrine farmed, Pf
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
Are Vegetation X Soil ____ or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____ Soil ____ or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes X No _____
Hydric Soil Present? Yes X No _____
Wetland Hydrology Present? Yes X No _____

**Is the Sampled Area within a Wetland?** Yes X No _____

Remarks:
Very wet soil (nearly saturated), good ground cover, slight chlorosis, no salt crust, seep wetland. Hydric soil features considered contemporary.

## VEGETATION

| Tree Stratum (Use scientific names) | Absolute Cover % | Dominant Species? | Indicator Status |
|---|---|---|---|
| 1. *none* | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| Total Cover: | 0 | | |
| **Sapling/Shrub Stratum** | | | |
| 1. *none* | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| Total Cover: | 0 | | |
| **Herb Stratum** | | | |
| 1. *Hordeum hystrix* | 80 | X | FAC |
| 2. *Triticum aestivum* | 2 | | NOL |
| 3. *Melilotus indicus* | 3 | | FAC |
| 4. *Medicago polymorpha* | 1 | | NOL |
| 5. | | | |
| 6. | | | |
| 7. | | | |
| 8. | | | |
| Total Cover: | 86 | | |
| **Woody Vine Stratum** | | | |
| 1. *none* | | | |
| 2. | | | |
| Total Cover: | 0 | | |

% Bare Ground in Herb Stratum 12 % Cover of Biotic Crust _____

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

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

**Prevalence Index worksheet:**

| Total % Cover of: | | Multiply by: |
|---|---|---|
| OBL species | x 1 = | |
| FACW species | x 2 = | |
| FAC species | x 3 = | |
| FACU species | x 4 = | |
| UPL Species | x 5 = | |
| Column totals | (A) | (B) |

Prevalence Index = B/A = _____

**Hydrophytic Vegetation Indicators:**

X Dominance Text Is >50%
___ Prevalence Index is ≤3.0[1]
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
X Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

**Hydrophytic Vegetation Present?** Yes X No _____

Remarks:
Vegetation flowering at 10-inches (Hordeum) and 14-inches (wheat). Managed plant communities; vigor and stress responses to wetland conditions.

## SOIL

Sampling Point: **SP 50**

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

| Depth (inches) | Matrix Color (moist) | Matrix % | Redox Features Color (moist) | Redox % | Type[1] | Loc[2] | Texture | Remarks |
|---|---|---|---|---|---|---|---|---|
| 0-10 | N 2.5/ | 100 | --- | 0 | | | clay loam | no mottles |
| * | | | | | | | | |

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

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

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

**Indicators for Problematic Hydric Soils[3]:**

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

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present.

**Restrictive Layer (If present):**

Type: Ap

Depth (inches): 8

**Hydric Soil Present?** Yes X No ___

Remarks:

Soil very wet; no salt crust.

* SCS describes high value/low chroma horizon below the Ap.

## HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (any one indicator is sufficient)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1) **(Nonriverine)**
- ___ Sediment Deposits (B2) **(Nonriverine)**
- ___ Drift Deposits (B3) **(Nonriverine)**
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Plowed Soils (C6)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) **(Riverine)**
- ___ Sediment Deposits (B2) **(Riverine)**
- ___ Drift Deposits (B3) (Riverine)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Thin Muck Surface (C7)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

**Field Observations:**

Surface Water Present? Yes ___ No X Depth (inches): ___

Water Table Present? Yes ___ No X Depth (inches): ___

Saturation Present? (includes capillary fringe) Yes X No ___ Depth (inches): 4

**Wetland Hydrology Present?** Yes X No ___

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

Remarks:

Very wet, at topographic low point.

# WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site: Newark Areas 3 & 4 City/County: Newark/Alameda Sampling Date: 30 March 2007
Applicant/Owner: Sobrato Development Companies State: California Sampling Point: SP 51
Investigator(s): E. Kentner Section/Township/Range: 0/05 S/01 W
Landform (hillslope, terrace, etc.): agricultural field Local Relief (concave, convex, none): Convex Slope (%): 0%
Subregion (LRR): Mediterranean California (C) Lat: 37 30' 12" Long: 122 0' 16" Datum: NAD 83
Soil Map Unit Name: Omni silty clay loam, strongly saline or drained series NWI classification Palustrine farmed, Pf
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
Are Vegetation X Soil ____ or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____ Soil ____ or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes X No ____
Hydric Soil Present? Yes X No ____
Wetland Hydrology Present? Yes ____ No X

**Is the Sampled Area within a Wetland?** Yes ____ No X

Remarks:
Dry site with no chlorosis and very high vegetation cover. Hydric soil features considered historic. No wetland hydrology.

## VEGETATION

| Tree Stratum (Use scientific names) | Absolute Cover % | Dominant Species? | Indicator Status |
|---|---|---|---|
| 1. *none* | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| Total Cover: | 0 | | |
| **Sapling/Shrub Stratum** | | | |
| 1. *none* | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| Total Cover: | 0 | | |
| **Herb Stratum** | | | |
| 1. *Triticum aestivum* | 8 | | NOL |
| 2. *Bromus diandrus* | 12 | | NI |
| 3. *Hordeum hystrix* | 65 | X | FAC |
| 4. *Melilotus indicus* | 15 | | FAC |
| 5. *Medicago polymorpha* | 5 | | NOL |
| 6. *Lolium multiflorum* | <1 | | FAC |
| 7. *Brassica nigra* | <1 | | NOL |
| 8. | | | |
| Total Cover: | 106 | | |
| **Woody Vine Stratum** | | | |
| 1. *none* | | | |
| 2. | | | |
| Total Cover: | 0 | | |

% Bare Ground in Herb Stratum 1 % Cover of Biotic Crust ____

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)
Total Number of Dominant Species Across All Strata: 1 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

**Prevalence Index worksheet:**

| Total % Cover of: | | Multiply by: |
|---|---|---|
| OBL species | x 1 = | |
| FACW species | x 2 = | |
| FAC species | x 3 = | |
| FACU species | x 4 = | |
| UPL Species | x 5 = | |
| Column totals | (A) | (B) |

Prevalence Index = B/A = ____

**Hydrophytic Vegetation Indicators:**

X Dominance Test is >50%
____ Prevalence Index is ≤3.0[1]
____ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
X Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

**Hydrophytic Vegetation Present?** Yes X No ____

Remarks:
Vegetation not stunted and flowering at 15-inches (Bromus, Hordeum, and Lolium). Topographic rise of 1-foot. Managed plant communities; vigor and stress responses to wetland conditions.

## SOIL

Sampling Point: **SP 51**

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

| Depth | Matrix | | Redox Features | | | | | |
|---|---|---|---|---|---|---|---|---|
| (inches) | Color (moist) | % | Color (moist) | % | Type[1] | Loc[2] | Texture | Remarks |
| 0-10 | N 2.5/ | 100 | --- | 0 | | | clay loam | no mottles |
| * | | | | | | | | |

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

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

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

**Indicators for Problematic Hydric Soils[3]:**

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

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present.

**Restrictive Layer (If present):**

Type: Ap

Depth (inches): 4

Hydric **Soil Present?** **Yes** X **No** ___

Remarks:

Soil dry, no mottles.

* SCS describes high value/low chroma horizon below the Ap.

## HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (any one indicator is sufficient)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) **(Nonriverine)**
- ___ Sediment Deposits (B2) **(Nonriverine)**
- ___ Drift Deposits (B3) **(Nonriverine)**
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Plowed Soils (C6)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) **(Riverine)**
- ___ Sediment Deposits (B2) **(Riverine)**
- ___ Drift Deposits (B3) (Riverine)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Thin Muck Surface (C7)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

**Field Observations:**

Surface Water Present? Yes ___ No X Depth (inches): ___

Water Table Present? Yes ___ No X Depth (inches): ___

Saturation Present? (includes capillary fringe) Yes ___ No X Depth (Inches): ___

**Wetland Hydrology Present?** **Yes** ___ **No** X

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

Remarks:

No apparent wetland hydrology.

# WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site: Newark Areas 3 & 4 City/County: Newark/Alameda Sampling Date: 30 March 2007
Applicant/Owner: Sobrato Development Companies State: California Sampling Point: SP 52
Investigator(s): E. Kentner Section/Township/Range: 0/05 S/01 W
Landform (hillslope, terrace, etc.): agricultural field Local Relief (concave, convex, none): Convex Slope (%): 0%
Subregion (LRR): Mediterranean California (C) Lat: 37 30' 12" Long: 122 0' 18" Datum: NAD 83
Soil Map Unit Name: Omni silty clay loam, strongly saline or drained series NWI classification Palustrine farmed, Pf
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation X Soil ____ or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____ Soil ____ or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes ____ No X
Hydric Soil Present? Yes X No ____
Wetland Hydrology Present? Yes ____ No X

**Is the Sampled Area within a Wetland?** Yes ____ No X

Remarks:
Soil dry, good vegetation height and cover, no salt crust. Hydric soil features considered historic. No wetland hydrology.

## VEGETATION

| Tree Stratum (Use scientific names) | Absolute Cover % | Dominant Species? | Indicator Status |
|---|---|---|---|
| 1. *none* | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| Total Cover: | 0 | | |
| **Sapling/Shrub Stratum** | | | |
| 1. *none* | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| Total Cover: | 0 | | |
| **Herb Stratum** | | | |
| 1. *Hordeum hystrix* | 15 | X | FAC |
| 2. *Triticum aestivum* | 22 | X | NOL |
| 3. *Medicago polymorpha* | 14 | X | NOL |
| 4. *Melilotus indicus* | 14 | X | FAC |
| 5. | | | |
| 6. | | | |
| 7. | | | |
| 8. | | | |
| Total Cover: | 65 | | |
| **Woody Vine Stratum** | | | |
| 1. *none* | | | |
| 2. | | | |
| Total Cover: | 0 | | |

% Bare Ground in Herb Stratum 30 % Cover of Biotic Crust ____

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)
Total Number of Dominant Species Across All Strata: 4 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A/B)

**Prevalence Index worksheet:**

| Total % Cover of: | | Multiply by: |
|---|---|---|
| OBL species | x 1 = | |
| FACW species | x 2 = | |
| FAC species | x 3 = | |
| FACU species | x 4 = | |
| UPL Species | x 5 = | |
| Column totals | (A) | (B) |

Prevalence Index = B/A = ____

**Hydrophytic Vegetation Indicators:**

____ Dominance Text is >50%
____ Prevalence Index is ≤3.0[1]
____ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
X Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

**Hydrophytic Vegetation Present?** Yes ____ No X

Remarks:
Flowering at 15-inches (Hordeum) and 22-inches (wheat). Topographic high point. Managed plant communities; vigor and stress responses to wetland conditions.

## SOIL

Sampling Point: **SP 52**

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

| Depth (inches) | Matrix Color (moist) | Matrix % | Redox Features Color (moist) | Redox % | Type[1] | Loc[2] | Texture | Remarks |
|---|---|---|---|---|---|---|---|---|
| 0-10 | N 2.5/ | 100 | -- | 0 | | | clay loam | no mottles |
| * | | | | | | | | |

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

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

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

**Indicators for Problematic Hydric Soils[3]:**

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present.

**Restrictive Layer (If present):**

Type: Ap

Depth (inches): 6

Hydric **Soil Present?** Yes X No ___

Remarks:

* SCS describes high value/low chroma horizon below the Ap.

## HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (any one indicator is sufficient)

| | | | | | |
|---|---|---|---|---|---|
| ___ | Surface Water (A1) | ___ | Salt Crust (B11) | ___ | Water Marks (B1) (**Riverine**) |
| ___ | High Water Table (A2) | ___ | Biotic Crust (B12) | ___ | Sediment Deposits (B2) (**Riverine**) |
| ___ | Saturation (A3) | ___ | Aquatic Invertebrates (B13) | ___ | Drift Deposits (B3) (Riverine) |
| ___ | Water Marks (B1) (**Nonriverine**) | ___ | Hydrogen Sulfide Odor (C1) | ___ | Drainage Patterns (B10) |
| ___ | Sediment Deposits (B2) (**Nonriverine**) | ___ | Oxidized Rhizospheres along Living Roots (C3) | ___ | Dry-Season Water Table (C2) |
| ___ | Drift Deposits (B3) (**Nonriverine**) | ___ | Presence of Reduced Iron (C4) | ___ | Thin Muck Surface (C7) |
| ___ | Surface Soil Cracks (B6) | ___ | Recent Iron Reduction in Plowed Soils (C6) | ___ | Crayfish Burrows (C8) |
| ___ | Inundation Visible on Aerial Imagery (B7) | ___ | Other (Explain in Remarks) | ___ | Saturation Visible on Aerial Imagery (C9) |
| ___ | Water-stained Leaves (B9) | | | ___ | Shallow Aquitard (D3) |
| | | | | ___ | FAC-Neutral Test (D5) |

Secondary Indicators (2 or more required)

**Field Observations:**

Surface Water Present? Yes ___ No X Depth (Inches): ___

Water Table Present? Yes ___ No X Depth (Inches): ___

Saturation Present? Yes ___ No X Depth (inches): ___

(Includes capillary fringe)

**Wetland Hydrology Present?** Yes ___ No X

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

Remarks:

No apparent wetland hydrology.

# WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site: Newark Areas 3 & 4 City/County: Newark/Alameda Sampling Date: 30 March 2007
Applicant/Owner: Sobrato Development Companies State: California Sampling Point: SP 53
Investigator(s): E. Kentner Section/Township/Range: 0/05 S/01 W
Landform (hillslope, terrace, etc.): agricultural field Local Relief (concave, convex, none): Concave Slope (%): 0%
Subregion (LRR): Mediterranean California (C) Lat: 37 30' 12" Long: 122 0' 21" Datum: NAD 83
Soil Map Unit Name: Omni silty clay loam, strongly saline or drained series NWI classification Palustrine farmed, Pf
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation X Soil ____ or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____ Soil ____ or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes X No ____
Hydric Soil Present? Yes X No ____
Wetland Hydrology Present? Yes X No ____

**Is the Sampled Area within a Wetland?** Yes X No ____

Remarks:
Soil moist/wet, no chlorosis, slightly stunted vegetation growth. Hydric soil features considered contemporary.

## VEGETATION

| Tree Stratum (Use scientific names) | Absolute Cover % | Dominant Species? | Indicator Status |
|---|---|---|---|
| 1. *none* | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| Total Cover: | 0 | | |
| **Sapling/Shrub Stratum** | | | |
| 1. *none* | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| Total Cover: | 0 | | |
| **Herb Stratum** | | | |
| 1. *Melilotus indicus* | 70 | X | FAC |
| 2. *Triticum aestivum* | 6 | | NOL |
| 3. *Hordeum hystrix* | 1 | | FAC |
| 4. *Medicago polymorpha* | 2 | | NOL |
| 5. | | | |
| 6. | | | |
| 7. | | | |
| 8. | | | |
| Total Cover: | | | |
| **Woody Vine Stratum** | | | |
| 1. *none* | | | |
| 2. | | | |
| Total Cover: | 0 | | |

% Bare Ground in Herb Stratum 12 % Cover of Biotic Crust ____

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

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

**Prevalence Index worksheet:**

| Total % Cover of: | | Multiply by: |
|---|---|---|
| OBL species | x 1 = | |
| FACW species | x 2 = | |
| FAC species | x 3 = | |
| FACU species | x 4 = | |
| UPL Species | x 5 = | |
| Column totals | (A) | (B) |

Prevalence Index = B/A = ____

**Hydrophytic Vegetation Indicators:**

X Dominance Text is >50%
___ Prevalence Index is ≤3.0[1]
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
X Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

**Hydrophytic Vegetation Present?** Yes X No ____

Remarks:
Wheat flowering at 12-inches. Managed plant communities; vigor and stress responses to wetland conditions.

## SOIL

Sampling Point: **SP 53**

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

| Depth | Matrix | | Redox Features | | | | | |
|---|---|---|---|---|---|---|---|---|
| (inches) | Color (moist) | % | Color (moist) | % | Type[1] | Loc[2] | Texture | Remarks |
| 0-10 | N 2.5/ | 100 | — | 0 | | | clay loam | no mottles |
| * | | | | | | | | |

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

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

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

**Indicators for Problematic Hydric Soils[3]:**

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

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present.

**Restrictive Layer (If present):**

Type: Ap

Depth (Inches): 4

**Hydric Soil Present?** Yes X No ___

Remarks:

Soil moist.

* SCS describes high value/low chroma horizon below the Ap.

## HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (any one indicator is sufficient)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1) **(Nonriverine)**
- ___ Sediment Deposits (B2) **(Nonriverine)**
- ___ Drift Deposits (B3) **(Nonriverine)**
- X Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Plowed Soils (C6)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) **(Riverine)**
- ___ Sediment Deposits (B2) **(Riverine)**
- ___ Drift Deposits (B3) (Riverine)
- X Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Thin Muck Surface (C7)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

**Field Observations:**

Surface Water Present? Yes ___ No X Depth (inches): ___

Water Table Present? Yes ___ No X Depth (inches): ___

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

**Wetland Hydrology Present?** Yes X No ___

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

Remarks:

Lower topographically than adjacent upland areas. Saturation for long duration.

# WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site: Newark Areas 3 & 4 City/County: Newark/Alameda Sampling Date: 30 March 2007
Applicant/Owner: Sobrato Development Companies State: California Sampling Point: **SP 54**
Investigator(s): E. Kentner Section/Township/Range: 0/05 S/01 W
Landform (hillslope, terrace, etc.): agricultural field Local Relief (concave, convex, none): None Slope (%): 0%
Subregion (LRR): Mediterranean California (C) Lat: 37 30' 12" Long: 122 0' 22" Datum: NAD 83
Soil Map Unit Name: Omni silty clay loam, strongly saline or drained series NWI classification Palustrine farmed, Pf
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation X Soil ____ or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____ Soil ____ or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes X No ____
Hydric Soil Present? Yes X No ____
Wetland Hydrology Present? Yes X No ____

**Is the Sampled Area within a Wetland?** Yes X No ____

Remarks:
Hydric soil features considered contemporary.

## VEGETATION

| Tree Stratum (Use scientific names) | Absolute Cover % | Dominant Species? | Indicator Status |
|---|---|---|---|
| 1. *none* | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| Total Cover: | 0 | | |
| **Sapling/Shrub Stratum** | | | |
| 1. *none* | | | |
| 2. | | | |
| 3 | | | |
| 4. | | | |
| 5. | | | |
| Total Cover: | 0 | | |
| **Herb Stratum** | | | |
| 1. *Hordeum hystrix* | 8 | X | FAC |
| 2. *Beta vulgaris* | <1 | | FACU |
| 3. *Poa annua* | 4 | X | FACW |
| 4. *Spergularia macrotheca* | <1 | | FAC |
| 5. | | | |
| 6. | | | |
| 7. | | | |
| 8. | | | |
| Total Cover: | 13 | | |
| **Woody Vine Stratum** | | | |
| 1. *none* | | | |
| 2. | | | |
| Total Cover: | 0 | | |

% Bare Ground in Herb Stratum 70 % Cover of Biotic Crust ____

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

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

**Prevalence Index worksheet:**

| Total % Cover of: | | Multiply by: |
|---|---|---|
| OBL species | x 1 = | |
| FACW species | x 2 = | |
| FAC species | x 3 = | |
| FACU species | x 4 = | |
| UPL Species | x 5 = | |
| Column totals | (A) | (B) |

Prevalence Index = B/A = ____

**Hydrophytic Vegetation Indicators:**

X Dominance Text is >50%
____ Prevalence Index is ≤3.0[1]
____ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
X Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

**Hydrophytic Vegetation Present?** Yes X No ____

Remarks:
Many snail shells on ground. Vegetation stunted and not flowering (Hordeum is 3-inches tall). Managed plant communities; vigor and stress responses to wetland conditions.

## SOIL

Sampling Point: **SP 54**

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

| Depth | Matrix | | Redox Features | | | | | |
|---|---|---|---|---|---|---|---|---|
| (inches) | Color (moist) | % | Color (moist) | % | Type[1] | Loc[2] | Texture | Remarks |
| 0-10 | N 2.5/ | 100 | --- | 0 | | | clay loam | no mottles |
| * | | | | | | | | |

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

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

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

**Indicators for Problematic Hydric Soils[3]:**

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

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present.

**Restrictive Layer (If present):**

Type: Ap

Depth (inches): 6

Hydric Soil Present? Yes X No ___

Remarks:

Soil wet, not saturated.

* SCS describes high value/low chroma horizon below the Ap.

## HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (any one indicator is sufficient)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1) (Nonriverine)
- ___ Sediment Deposits (B2) (Nonriverine)
- ___ Drift Deposits (B3) (Nonriverine)
- X Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- X Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Plowed Soils (C6)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (Riverine)
- ___ Sediment Deposits (B2) (Riverine)
- ___ Drift Deposits (B3) (Riverine)
- X Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Thin Muck Surface (C7)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

**Field Observations:**

Surface Water Present? Yes ___ No X Depth (inches): ___

Water Table Present? Yes ___ No X Depth (inches): ___

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

**Wetland Hydrology Present?** Yes ___ No X

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

Remarks:

Clearly supported by nearby marsh and seasonal surface run-off. Saturation for long duration.

# WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site: Newark Areas 3 & 4 City/County: Newark/Alameda Sampling Date: 5 April 2007
Applicant/Owner: Sobrato Development Companies State: California Sampling Point: SP 55
Investigator(s): A. Breen Section/Township/Range: 8/05 S/01 W
Landform (hillslope, terrace, etc.): agricultural field Local Relief (concave, convex, none): Convex Slope (%): 0%
Subregion (LRR): Mediterranean California (C) Lat: 37° 30' 46" N Long: 122° 0' 11" W Datum: NAD 83
Soil Map Unit Name: Omni silty clay loam, strongly saline NWI classification Palustrine farmed, Pf
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
Are Vegetation X Soil ____ or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____ Soil ____ or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

| | | | | | |
|---|---|---|---|---|---|
| Hydrophytic Vegetation Present? | Yes ____ | No X | **Is the Sampled Area within a Wetland?** | Yes ____ | No X |
| Hydric Soil Present? | Yes X | No ____ | | | |
| Wetland Hydrology Present? | Yes ____ | No X | | | |

Remarks:
Ruderal margin on agricultural field dominated by upland species adjacent to flood control channel. Hydric soil features considered historic. No wetland hydrology.

## VEGETATION

| Tree Stratum (Use scientific names) | Absolute Cover % | Dominant Species? | Indicator Status |
|---|---|---|---|
| 1. *none* | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| Total Cover: | 0 | | |
| **Sapling/Shrub Stratum** | | | |
| 1. *none* | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| Total Cover: | 0 | | |
| **Herb Stratum** | | | |
| 1. *Carduus pycnocephalus* | 10 | X | NOL |
| 2. *Bromus diandrus* | 30 | X | NI |
| 3. *Brassica nigra* | 3 | | NOL |
| 4. *Raphanus sativus* | 10 | X | NOL |
| 5. *Brassica rapa* | 3 | | NOL |
| 6. *Urtica dioica* | 2 | | FACW |
| 7. *Picris echioides* | 3 | | FAC |
| 8. *Avena fatua* | trace | | NOL |
| 9. *Hordeum hystrix* | trace | | FAC |
| Total Cover: | 61 | | |
| **Woody Vine Stratum** | | | |
| 1. *none* | | | |
| 2. | | | |
| Total Cover: | 0 | | |

% Bare Ground in Herb Stratum 15 % Cover of Biotic Crust _____

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

**Prevalence Index worksheet:**

| Total % Cover of: | | Multiply by: |
|---|---|---|
| OBL species | ____ x 1 = | ____ |
| FACW species | ____ x 2 = | ____ |
| FAC species | ____ x 3 = | ____ |
| FACU species | ____ x 4 = | ____ |
| UPL Species | ____ x 5 = | ____ |
| Column totals | ____ (A) | ____ (B) |

Prevalence Index = B/A = _____

**Hydrophytic Vegetation Indicators:**

____ Dominance Text is >50%
____ Prevalence Index is ≤3.0[1]
____ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
X Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

**Hydrophytic Vegetation Present?** Yes ____ No X

Remarks:
Margin of agricultural field dominated by upland species. Vegetation flowering Bromus (36-inches). Raphanus (40-inches), Avena (20-inches), and Hordeum (12-inches). Managed plant communities; vigor and stress responses to wetland conditions.

## SOIL

Sampling Point: **SP 55**

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

| Depth | Matrix | | Redox Features | | | | | |
|---|---|---|---|---|---|---|---|---|
| (inches) | Color (moist) | % | Color (moist) | % | Type[1] | Loc[2] | Texture | Remarks |
| 0-10 | 10 YR 2/1 | 100 | — | 0 | | | clay | very low chroma |
| * | | | | | | | | |

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

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

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

**Indicators for Problematic Hydric Soils[3]:**

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

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present.

**Restrictive Layer (If present):**

Type: ___

Depth (inches): ___

Hydric **Soil Present?** **Yes** X **No** ___

Remarks:

No mottles observed, soil moist.

* SCS describes high value/low chroma horizon below the Ap.

## HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (any one indicator is sufficient)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) **(Nonriverine)**
- ___ Sediment Deposits (B2) **(Nonriverine)**
- ___ Drift Deposits (B3) **(Nonriverine)**
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Plowed Soils (C6)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) **(Riverine)**
- ___ Sediment Deposits (B2) **(Riverine)**
- ___ Drift Deposits (B3) (Riverine)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Thin Muck Surface (C7)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

**Field Observations:**

Surface Water Present? Yes ___ No X Depth (inches): ___

Water Table Present? Yes ___ No X Depth (inches): ___

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

**Wetland Hydrology Present?** **Yes** ___ **No** X

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

Remarks:

Some cracks in clay, but topographically slightly higher than field.

# WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site: Newark Areas 3 & 4 City/County: Newark/Alameda Sampling Date: 5 April 2007
Applicant/Owner: Sobrato Development Companies State: California Sampling Point: SP 56
Investigator(s): A. Breen Section/Township/Range: 8/05 S/01 W
Landform (hillslope, terrace, etc.): agricultural field Local Relief (concave, convex, none): Convex Slope (%): 0%
Subregion (LRR): Mediterranean California (C) Lat: 37° 30' 47" N Long: 122° 0' 11" W Datum: NAD 83
Soil Map Unit Name: Omni silty clay loam, strongly saline NWI classification Palustrine farmed, Pf
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
Are Vegetation X Soil ____ or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____ Soil ____ or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

| | | | | | |
|---|---|---|---|---|---|
| Hydrophytic Vegetation Present? | Yes ____ | No X | **Is the Sampled Area within a Wetland?** | Yes ____ | No X |
| Hydric Soil Present? | Yes X | No ____ | | | |
| Wetland Hydrology Present? | Yes ____ | No X | | | |

Remarks:
In lighter signature portion of disced agricultural field. No vegetation, soil moist, soil fluffed. Gradual topographical rise of less than 1-foot (high point). Hydric soil features considered historic. No wetland hydrology.

## VEGETATION

| Tree Stratum (Use scientific names) | Absolute Cover % | Dominant Species? | Indicator Status |
|---|---|---|---|
| 1. *none* | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| Total Cover: | 0 | | |

| Sapling/Shrub Stratum | | | |
|---|---|---|---|
| 1. *none* | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| Total Cover: | 0 | | |

| Herb Stratum | | | |
|---|---|---|---|
| 1. *none* | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| 7. | | | |
| 8. | | | |
| Total Cover: | 0 | | |

| Woody Vine Stratum | | | |
|---|---|---|---|
| 1. *none* | | | |
| 2. | | | |
| Total Cover: | 0 | | |

% Bare Ground in Herb Stratum 100 % Cover of Biotic Crust _____

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 0 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0% (A/B)

**Prevalence Index worksheet:**

| Total % Cover of: | | Multiply by: |
|---|---|---|
| OBL species | x 1 = | |
| FACW species | x 2 = | |
| FAC species | x 3 = | |
| FACU species | x 4 = | |
| UPL Species | x 5 = | |
| Column totals | (A) | (B) |

Prevalence Index = B/A = _____

**Hydrophytic Vegetation Indicators:**

____ Dominance Test is >50%
____ Prevalence Index is ≤3.0[1]
____ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
X Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

**Hydrophytic Vegetation Present?** Yes ____ No X

Remarks:
Disced agricultural field. Remnant (brown) Brassica rapa, Capsella bursa-pastoris, and Poa annua. Managed plant communities; vigor and stress responses to wetland conditions.

## SOIL

Sampling Point: **SP 56**

**Profile Description: (Describe to the depth needed to document the Indicator or confirm the absence of Indicators.)**

| Depth | Matrix | | Redox Features | | | | | |
|---|---|---|---|---|---|---|---|---|
| (inches) | Color (moist) | % | Color (moist) | % | Type[1] | Loc[2] | Texture | Remarks |
| 0-10 | 10 YR 4/1 | 100 | -- | 0 | | | clay | gravel, debris within profile |
| * | | | | | | | | |

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

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

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

**Indicators for Problematic Hydric Soils[3]:**

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

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present.

**Restrictive Layer (If present):**

Type: Ap

Depth (inches): 6

Hydric **Soil Present?** **Yes** X **No** ___

Remarks:

Low chroma, soil moist.

* SCS describes high value/low chroma horizon below the Ap.

## HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (any one indicator is sufficient)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) **(Nonriverine)**
- ___ Sediment Deposits (B2) **(Nonriverine)**
- ___ Drift Deposits (B3) **(Nonriverine)**
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Plowed Soils (C6)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) **(Riverine)**
- ___ Sediment Deposits (B2) **(Riverine)**
- ___ Drift Deposits (B3) (Riverine)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Thin Muck Surface (C7)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

**Field Observations:**

Surface Water Present? Yes ___ No X Depth (inches): ___

Water Table Present? Yes ___ No X Depth (inches): ___

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

**Wetland Hydrology Present?** **Yes** ___ **No** X

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

Remarks:

No apparent wetland hydrology. Topographically higher than rest of field.

# WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site: Newark Areas 3 & 4 City/County: Newark/Alameda Sampling Date: 5 April 2007
Applicant/Owner: Sobrato Development Companies State: California Sampling Point: SP 57
Investigator(s): A. Breen Section/Township/Range: 8/05 S/01 W
Landform (hillslope, terrace, etc.): agricultural field Local Relief (concave, convex, none): None Slope (%): 0%
Subregion (LRR): Mediterranean California (C) Lat: 37° 30' 47" N Long: 122° 0' 9" W Datum: NAD 83
Soil Map Unit Name: Omni silty clay loam, strongly saline NWI classification Palustrine farmed, Pf
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation X Soil ____ or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____ Soil ____ or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes ____ No X
Hydric Soil Present? Yes X No ____
Wetland Hydrology Present? Yes ____ No X

**Is the Sampled Area within a Wetland?** Yes ____ No X

Remarks:
Within very dark signature on aerial within midddle of field. Low chroma soils with some moisture. Hydric soil features considered historic. No wetland hydrology.

## VEGETATION

| Tree Stratum (Use scientific names) | Absolute Cover % | Dominant Species? | Indicator Status |
|---|---|---|---|
| 1. *none* | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| Total Cover: | 0 | | |

| Sapling/Shrub Stratum | | | |
|---|---|---|---|
| 1. *none* | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| Total Cover: | 0 | | |

| Herb Stratum | | | |
|---|---|---|---|
| 1. *Beta vulgaris* | trace | | FACU |
| 2. *Brassica nigra* | trace | | NOL |
| 3. *Amsinckia sp.* | trace | | — |
| 4. *Urtica dioica* | trace | | FACW |
| 5. | | | |
| 6. | | | |
| 7. | | | |
| 8. | | | |
| Total Cover: | | | |

| Woody Vine Stratum | | | |
|---|---|---|---|
| 1. *none* | | | |
| 2. | | | |
| Total Cover: | 0 | | |

% Bare Ground in Herb Stratum 99 % Cover of Biotic Crust ____

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)
Total Number of Dominant Species Across All Strata: 0 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 0% (A/B)

**Prevalence Index worksheet:**

| Total % Cover of: | | Multiply by: |
|---|---|---|
| OBL species | x 1 = | |
| FACW species | x 2 = | |
| FAC species | x 3 = | |
| FACU species | x 4 = | |
| UPL Species | x 5 = | |
| Column totals | (A) | (B) |

Prevalence Index = B/A = ____

**Hydrophytic Vegetation Indicators:**

____ Dominance Text is >50%
____ Prevalence Index is ≤3.0[1]
____ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
X Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

**Hydrophytic Vegetation Present?** Yes ____ No X

Remarks:
Recently disced, bare soil. Managed plant communities; vigor and stress responses to wetland conditions.

## SOIL

Sampling Point: **SP 57**

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

| Depth | Matrix | | Redox Features | | | | | |
|---|---|---|---|---|---|---|---|---|
| (inches) | Color (moist) | % | Color (moist) | % | Type[1] | Loc[2] | Texture | Remarks |
| 0-10 | 10 YR 3/1 | 100 | --- | 0 | | | clay | |
| * | | | | | | | | |

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

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

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

**Indicators for Problematic Hydric Soils[3]:**

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

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present.

**Restrictive Layer (If present):**

Type: ___

Depth (inches): ___

Hydric **Soil Present?** Yes X No ___

Remarks:

Very low chroma, moist soil.

* SCS describes high value/low chroma horizon below the Ap.

## HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (any one indicator is sufficient)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (Nonriverine)
- ___ Sediment Deposits (B2) (Nonriverine)
- ___ Drift Deposits (B3) (Nonriverine)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Plowed Soils (C6)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (Riverine)
- ___ Sediment Deposits (B2) (Riverine)
- ___ Drift Deposits (B3) (Riverine)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Thin Muck Surface (C7)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

**Field Observations:**

Surface Water Present? Yes ___ No X Depth (inches): ___

Water Table Present? Yes ___ No X Depth (inches): ___

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

**Wetland Hydrology Present?** Yes ___ No X

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

Remarks:

Entire field shows almost no topographical difference. Adjacent to channel to north and jurisdictional ditch to south.

# WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site: Newark Areas 3 & 4 City/County: Newark/Alameda Sampling Date: 19 April 2006
Applicant/Owner: Sobrato Development Companies State: California Sampling Point: SP 58
Investigator(s): L. Infante Section/Township/Range: 8/05 S/01 W
Landform (hillslope, terrace, etc.): perennial wetland Local Relief (concave, convex, none): Concave Slope (%): 0%
Subregion (LRR): Mediterranean California (C) Lat: 37 30' 16" Long: 122 0' 0" Datum: NAD 83
Soil Map Unit Name: Omni silty clay loam, strongly saline NWI classification none
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
Are Vegetation X Soil X or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____ Soil ____ or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes X No _____
Hydric Soil Present? Yes X No _____
Wetland Hydrology Present? Yes X No _____

**Is the Sampled Area within a Wetland?** Yes X No _____

Remarks:
Hydric soil features considered contemporary.

## VEGETATION

| Tree Stratum (Use scientific names) | Absolute Cover % | Dominant Species? | Indicator Status |
|---|---|---|---|
| 1. *none* | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| Total Cover: | 0 | | |
| **Sapling/Shrub Stratum** | | | |
| 1. *none* | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| Total Cover: | 0 | | |
| **Herb Stratum** | | | |
| 1. *Typha latifolia* | 1 | | OBL |
| 2. *Scirpus robustus* | 15 | X | OBL |
| 3. *Salicornia virginica* | 20 | X | OBL |
| 4. *Polypogon monspeliensis* | 35 | X | FACW+ |
| 5. *Cotula coronopifolia* | 5 | | FACW |
| 6. *Picris echioides* | 5 | | FAC |
| 7. *Melilotus indicus* | 2 | | FAC |
| 8. | | | |
| Total Cover: | 83 | | |
| **Woody Vine Stratum** | | | |
| 1. *none* | | | |
| 2. | | | |
| Total Cover: | 0 | | |

% Bare Ground in Herb Stratum 15 % Cover of Biotic Crust _____

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

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

**Prevalence Index worksheet:**

| Total % Cover of: | | Multiply by: |
|---|---|---|
| OBL species | x 1 = | |
| FACW species | x 2 = | |
| FAC species | x 3 = | |
| FACU species | x 4 = | |
| UPL Species | x 5 = | |
| Column totals | (A) | (B) |

Prevalence Index = B/A = _____

**Hydrophytic Vegetation Indicators:**

X Dominance Text Is >50%
___ Prevalence Index is ≤3.0[1]
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
X Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

**Hydrophytic Vegetation Present?** Yes X No _____

Remarks:
Deeper areas beneath towers solely dominated by Typha latifolia. Scirpus and scattered Salicornia near edges. Managed plant communities; vigor and stress responses to wetland conditions.

## SOIL

Sampling Point: **SP 58**

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

| Depth | Matrix | | Redox Features | | | | | |
|---|---|---|---|---|---|---|---|---|
| (inches) | Color (moist) | % | Color (moist) | % | Type[1] | Loc[2] | Texture | Remarks |
| 0-16 | 10 YR 3/1 | 100 | — | 0 | | | loam | gravel fill inclusions |

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

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

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

**Indicators for Problematic Hydric Soils[3]:**

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

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present.

**Restrictive Layer (If present):**

Type: ___

Depth (inches): ___

Hydric **Soil Present?** Yes X No ___

Remarks:

Low chroma, reducing conditions, aquic moisture regime (inundates for <3 months), few mottles (faint). Strong sulfidic odor. Area comprised entirely of imported fill material.

## HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (any one indicator is sufficient)

- X Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (Nonriverine)
- ___ Sediment Deposits (B2) (Nonriverine)
- ___ Drift Deposits (B3) (Nonriverine)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Plowed Soils (C6)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (Riverine)
- ___ Sediment Deposits (B2) (Riverine)
- ___ Drift Deposits (B3) (Riverine)
- X Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Thin Muck Surface (C7)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

**Field Observations:**

Surface Water Present? Yes X No ___ Depth (inches): 12

Water Table Present? Yes ___ No X Depth (inches): 0

Saturation Present? (includes capillary fringe) Yes ___ No X Depth (inches): 0

**Wetland Hydrology Present?** Yes X No ___

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

Remarks:

Sample point located in deep "native" topographic depression below transmission lines.

# WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site: Newark Areas 3 & 4 City/County: Newark/Alameda Sampling Date: 19 April 2006
Applicant/Owner: Sobrato Development Companies State: California Sampling Point: SP 59
Investigator(s): L. Infante Section/Township/Range: 8/05 S/01 W
Landform (hillslope, terrace, etc.): upland "fill" island Local Relief (concave, convex, none): None Slope (%): 0%
Subregion (LRR): Mediterranean California (C) Lat: 37 30' 15" Long: 122 0' 0" Datum: NAD 83
Soil Map Unit Name: Omni silty clay loam, strongly saline NWI classification none
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation X Soil X or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____ Soil ____ or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

| | | | | | |
|---|---|---|---|---|---|
| Hydrophytic Vegetation Present? | Yes X | No ____ | **Is the Sampled Area within a Wetland?** | Yes ____ | No X |
| Hydric Soil Present? | Yes ____ | No X | | | |
| Wetland Hydrology Present? | Yes ____ | No X | | | |

Remarks:
Sample point located in upland "finger" in disturbed wetland area.

## VEGETATION

| Tree Stratum (Use scientific names) | Absolute Cover % | Dominant Species? | Indicator Status |
|---|---|---|---|
| 1. *none* | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| Total Cover: | 0 | | |
| **Sapling/Shrub Stratum** | | | |
| 1. *none* | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| Total Cover: | 0 | | |
| **Herb Stratum** | | | |
| 1. *Cynodon dactylon* | 30 | X | FAC |
| 2. *Lolium multiflorum* | 15 | X | FAC |
| 3. *Geranium dissectum* | 20 | X | NOL |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| 7. | | | |
| 8. | | | |
| Total Cover: | 65 | | |
| **Woody Vine Stratum** | | | |
| 1. *none* | | | |
| 2. | | | |
| Total Cover: | 0 | | |

% Bare Ground in Herb Stratum 35 % Cover of Biotic Crust ____

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 66% (A/B)

**Prevalence Index worksheet:**

| Total % Cover of: | | Multiply by: |
|---|---|---|
| OBL species | x 1 = | |
| FACW species | x 2 = | |
| FAC species | x 3 = | |
| FACU species | x 4 = | |
| UPL Species | x 5 = | |
| Column totals | (A) | (B) |

Prevalence Index = B/A = ____

**Hydrophytic Vegetation Indicators:**

X Dominance Text is >50%
____ Prevalence Index is ≤3.0[1]
____ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
X Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

**Hydrophytic Vegetation Present?** Yes X No ____

Remarks:
Managed plant communities; vigor and stress responses to wetland conditions.

## SOIL

Sampling Point: **SP 59**

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

| Depth | Matrix | | Redox Features | | | | | |
|---|---|---|---|---|---|---|---|---|
| (inches) | Color (moist) | % | Color (moist) | % | Type[1] | Loc[2] | Texture | Remarks |
| 0-16 | 10 YR 3/1 | 100 | — | 0 | | | clay loam | fill gravel present |

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

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

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

**Indicators for Problematic Hydric Soils[3]:**

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

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present.

**Restrictive Layer (If present):**

Type: _____

Depth (inches): _____

Hydric **Soil Present?** **Yes** ___ **No** X

Remarks:

Low chroma soils are mixed with heterogenous fill. Disturbed soils. Area comprised entirely of imported fill material.

## HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (any one indicator is sufficient)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) **(Nonriverine)**
- ___ Sediment Deposits (B2) **(Nonriverine)**
- ___ Drift Deposits (B3) **(Nonriverine)**
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Plowed Soils (C6)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) **(Riverine)**
- ___ Sediment Deposits (B2) **(Riverine)**
- ___ Drift Deposits (B3) (Riverine)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Thin Muck Surface (C7)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

**Field Observations:**

Surface Water Present? Yes ___ No X Depth (inches): ___

Water Table Present? Yes ___ No X Depth (inches): ___

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

**Wetland Hydrology Present?** **Yes** ___ **No** X

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

Remarks:

# WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site: Newark Areas 3 & 4 City/County: Newark/Alameda Sampling Date: 19 April 2006
Applicant/Owner: Sobrato Development Companies State: California Sampling Point: **SP 60**
Investigator(s): L. Infante Section/Township/Range: 8/05 S/01 W
Landform (hillslope, terrace, etc.): perennial wetland Local Relief (concave, convex, none): Concave Slope (%): 0%
Subregion (LRR): Mediterranean California (C) Lat: 37 30' 15" Long: 122 0' 0" Datum: NAD 83
Soil Map Unit Name: Omni silty clay loam, strongly saline NWI classification none
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation X Soil X or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____ Soil ____ or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes X No ____
Hydric Soil Present? Yes X No ____
Wetland Hydrology Present? Yes X No ____

**Is the Sampled Area within a Wetland?** Yes X No ____

Remarks:
Hydric soil features considered contemporary.

## VEGETATION

| Tree Stratum (Use scientific names) | Absolute Cover % | Dominant Species? | Indicator Status |
|---|---|---|---|
| 1. *none* | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| Total Cover: | 0 | | |
| **Sapling/Shrub Stratum** | | | |
| 1. *none* | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| Total Cover: | 0 | | |
| **Herb Stratum** | | | |
| 1. *Salicornia virginica* | 90 | X | OBL |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| 7. | | | |
| 8. | | | |
| Total Cover: | 90 | | |
| **Woody Vine Stratum** | | | |
| 1. *none* | | | |
| 2. | | | |
| Total Cover: | 0 | | |

% Bare Ground in Herb Stratum 10 % Cover of Biotic Crust ____

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

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

**Prevalence Index worksheet:**

| Total % Cover of: | | Multiply by: |
|---|---|---|
| OBL species | ____ x 1 = | ____ |
| FACW species | ____ x 2 = | ____ |
| FAC species | ____ x 3 = | ____ |
| FACU species | ____ x 4 = | ____ |
| UPL Species | ____ x 5 = | ____ |
| Column totals | ____ (A) | ____ (B) |

Prevalence Index = B/A = ____

**Hydrophytic Vegetation Indicators:**

X Dominance Text Is >50%
___ Prevalence Index is ≤3.0[1]
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
X Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

**Hydrophytic Vegetation Present?** Yes X No ____

Remarks:
Managed plant communities; vigor and stress responses to wetland conditions.

## SOIL

Sampling Point: **SP 60**

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

| Depth (inches) | Matrix Color (moist) | Matrix % | Redox Features Color (moist) | Redox % | Type[1] | Loc[2] | Texture | Remarks |
|---|---|---|---|---|---|---|---|---|
| 0-16 | 10 YR 4/1 | 90 | 10 YR 4/3 | 10 | C | RC | sandy clay loam | |

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

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

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

**Indicators for Problematic Hydric Soils[3]:**

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

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present.

**Restrictive Layer (If present):**

Type: ___

Depth (inches): ___

Hydric **Soil Present?** Yes X No ___

Remarks:

Disturbed fill soils. Inclusions present. Area comprised entirely of imported fill material.

## HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (any one indicator is sufficient)

- X Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) **(Nonriverine)**
- ___ Sediment Deposits (B2) **(Nonriverine)**
- ___ Drift Deposits (B3) **(Nonriverine)**
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Plowed Soils (C6)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) **(Riverine)**
- ___ Sediment Deposits (B2) **(Riverine)**
- ___ Drift Deposits (B3) (Riverine)
- X Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Thin Muck Surface (C7)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

**Field Observations:**

Surface Water Present? Yes X No ___ Depth (inches): 5

Water Table Present? Yes ___ No X Depth (inches): ___

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

**Wetland Hydrology Present?** Yes X No ___

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

Remarks:

Ponded water observed at this location for 3+ months.

# WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site: Newark Areas 3 & 4 City/County: Newark/Alameda Sampling Date: 19 April 2006
Applicant/Owner: Sobrato Development Companies State: California Sampling Point: SP 61
Investigator(s): L. Infante Section/Township/Range: 8/05 S/01 W
Landform (hillslope, terrace, etc.): disturbed seasonal wetland Local Relief (concave, convex, none): Concave Slope (%): 0%
Subregion (LRR): Mediterranean California (C) Lat: 37 30' 15" Long: 121 59' 59" Datum: NAD 83
Soil Map Unit Name: Omni silty clay loam, strongly saline NWI classification none
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
Are Vegetation X Soil X or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____ Soil ____ or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes X No _____
Hydric Soil Present? Yes X No _____
Wetland Hydrology Present? Yes X No _____

**Is the Sampled Area within a Wetland?** Yes X No _____

Remarks:
Ponding observed in this area for 3+ months. Wheatgrass likely planted or brought in with fill soil; occurs both in wetland and upland transition areas. Hydric soil features considered contemporary.

## VEGETATION

| Tree Stratum (Use scientific names) | Absolute Cover % | Dominant Species? | Indicator Status |
|---|---|---|---|
| 1. *none* | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| Total Cover: | 0 | | |
| **Sapling/Shrub Stratum** | | | |
| 1. *none* | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| Total Cover: | 0 | | |
| **Herb Stratum** | | | |
| 1. *Elytrigia elongata* | 10 | X | NOL |
| 2. *Salicornia virginica* | 35 | X | OBL |
| 3. *Scirpus robustus* | 20 | X | OBL |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| 7. | | | |
| 8. | | | |
| Total Cover: | 65 | | |
| **Woody Vine Stratum** | | | |
| 1. *none* | | | |
| 2. | | | |
| Total Cover: | 0 | | |

% Bare Ground in Herb Stratum 15 % Cover of Biotic Crust _____

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 66% (A/B)

**Prevalence Index worksheet:**

| Total % Cover of: | | Multiply by: |
|---|---|---|
| OBL species | x 1 = | |
| FACW species | x 2 = | |
| FAC species | x 3 = | |
| FACU species | x 4 = | |
| UPL Species | x 5 = | |
| Column totals | (A) | (B) |

Prevalence Index = B/A = _____

**Hydrophytic Vegetation Indicators:**

X Dominance Text is >50%
___ Prevalence Index is ≤3.0[1]
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
X Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

**Hydrophytic Vegetation Present?** Yes X No _____

Remarks:
Scattered Salicornia and Scirpus in area. Managed plant communities; vigor and stress responses to wetland conditions.

## SOIL

Sampling Point: **SP 61**

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

| Depth (inches) | Matrix Color (moist) | Matrix % | Redox Features Color (moist) | Redox % | Type[1] | Loc[2] | Texture | Remarks |
|---|---|---|---|---|---|---|---|---|
| 0-16 | 10 YR 4/1 | 100 | --- | 0 | | | clay loam | |

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

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

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

**Indicators for Problematic Hydric Soils[3]:**

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

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present.

**Restrictive Layer (If present):**

Type: _____

Depth (inches): _____

Hydric **Soil Present?** Yes X No ___

Remarks:

Some inclusions of very dark clay material and gravel. Mottles faint. Disturbed. Hydric soil confirmed by observation of ponding for very long duration during growing season. Area comprised entirely of imported fill material.

## HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (any one indicator is sufficient)

| | | | |
|---|---|---|---|
| X | Surface Water (A1) | ___ | Salt Crust (B11) |
| ___ | High Water Table (A2) | ___ | Biotic Crust (B12) |
| ___ | Saturation (A3) | ___ | Aquatic Invertebrates (B13) |
| ___ | Water Marks (B1) **(Nonriverine)** | ___ | Hydrogen Sulfide Odor (C1) |
| ___ | Sediment Deposits (B2) **(Nonriverine)** | ___ | Oxidized Rhizospheres along Living Roots (C3) |
| ___ | Drift Deposits (B3) **(Nonriverine)** | ___ | Presence of Reduced Iron (C4) |
| ___ | Surface Soil Cracks (B6) | ___ | Recent Iron Reduction in Plowed Soils (C6) |
| ___ | Inundation Visible on Aerial Imagery (B7) | ___ | Other (Explain in Remarks) |
| ___ | Water-stained Leaves (B9) | | |

Secondary Indicators (2 or more required)

| | |
|---|---|
| ___ | Water Marks (B1) **(Riverine)** |
| ___ | Sediment Deposits (B2) **(Riverine)** |
| ___ | Drift Deposits (B3) (Riverine) |
| ___ | Drainage Patterns (B10) |
| ___ | Dry-Season Water Table (C2) |
| ___ | Thin Muck Surface (C7) |
| ___ | Crayfish Burrows (C8) |
| ___ | Saturation Visible on Aerial Imagery (C9) |
| ___ | Shallow Aquitard (D3) |
| ___ | FAC-Neutral Test (D5) |

**Field Observations:**

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

Water Table Present? Yes ___ No X Depth (inches): ___

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

**Wetland Hydrology Present? Yes X No ___**

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

Remarks:

# WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site: Newark Areas 3 & 4 City/County: Newark/Alameda Sampling Date: 19 April 2006
Applicant/Owner: Sobrato Development Companies State: California Sampling Point: SP 62
Investigator(s): L. Infante Section/Township/Range: 8/05 S/01 W
Landform (hillslope, terrace, etc.): upland Local Relief (concave, convex, none): Convex Slope (%): 0%
Subregion (LRR): Mediterranean California (C) Lat: 37 30' 14" Long: 121 59' 59" Datum: NAD 83
Soil Map Unit Name: Omni silty clay loam, strongly saline NWI classification none
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation X Soil X or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____ Soil ____ or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

| | | | | |
|---|---|---|---|---|
| Hydrophytic Vegetation Present? | Yes ____ | No X | Is the Sampled Area within a Wetland? | Yes ____ No X |
| Hydric Soil Present? | Yes ____ | No X | | |
| Wetland Hydrology Present? | Yes ____ | No X | | |

Remarks:

## VEGETATION

| Tree Stratum (Use scientific names) | Absolute Cover % | Dominant Species? | Indicator Status |
|---|---|---|---|
| 1. *none* | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| Total Cover: | 0 | | |
| **Sapling/Shrub Stratum** | | | |
| 1. *none* | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| Total Cover: | 0 | | |
| **Herb Stratum** | | | |
| 1. *Elytrigia elongata* | 15 | X | NOL |
| 2. *Geranium dissectum* | 25 | X | NOL |
| 3. *Bromus diandrus* | 30 | X | NI |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| 7. | | | |
| 8. | | | |
| Total Cover: | 70 | | |
| **Woody Vine Stratum** | | | |
| 1. *none* | | | |
| 2. | | | |
| Total Cover: | 0 | | |

% Bare Ground in Herb Stratum ____ % Cover of Biotic Crust ____

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC. 0% (A/B)

**Prevalence Index worksheet:**

| Total % Cover of: | | Multiply by: |
|---|---|---|
| OBL species | ____ x 1 = | ____ |
| FACW species | ____ x 2 = | ____ |
| FAC species | ____ x 3 = | ____ |
| FACU species | ____ x 4 = | ____ |
| UPL Species | ____ x 5 = | ____ |
| Column totals | ____ (A) | ____ (B) |

Prevalence Index = B/A = ____

**Hydrophytic Vegetation Indicators:**

____ Dominance Text is >50%
____ Prevalence Index is ≤3.0[1]
____ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
X Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

**Hydrophytic Vegetation Present?** Yes ____ No X

Remarks:
Managed plant communities; vigor and stress responses to wetland conditions.

## SOIL

Sampling Point: **SP 62**

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

| Depth | Matrix | | Redox Features | | | | | |
|---|---|---|---|---|---|---|---|---|
| (Inches) | Color (moist) | % | Color (moist) | % | Type[1] | Loc[2] | Texture | Remarks |
| 0-16 | 10 YR 4/2 | 100 | — | 0 | | | clay loam | gravel present |

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

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

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

**Indicators for Problematic Hydric Soils[3]:**

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

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present.

**Restrictive Layer (if present):**

Type: _____

Depth (inches): _____

Hydric **Soil Present?** **Yes** ___ **No** X

Remarks:

Area comprised entirely of imported fill material.

## HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (any one indicator is sufficient)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) **(Nonriverine)**
- ___ Sediment Deposits (B2) **(Nonriverine)**
- ___ Drift Deposits (B3) **(Nonriverine)**
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Plowed Soils (C6)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) **(Riverine)**
- ___ Sediment Deposits (B2) **(Riverine)**
- ___ Drift Deposits (B3) (Riverine)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Thin Muck Surface (C7)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

**Field Observations:**

Surface Water Present? Yes ___ No X Depth (inches): ___

Water Table Present? Yes ___ No X Depth (inches): ___

Saturation Present? Yes ___ No X Depth (inches): ___

(Includes capillary fringe)

**Wetland Hydrology Present? Yes** ___ **No** X

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

Remarks:

# WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site: Newark Areas 3 & 4 City/County: Newark/Alameda Sampling Date: 19 April 2006
Applicant/Owner: Sobrato Development Companies State: California Sampling Point: SP 63
Investigator(s): L. Infante Section/Township/Range: 8/05 S/01 W
Landform (hillslope, terrace, etc.): perennial wetland Local Relief (concave, convex, none): Concave Slope (%): 0%
Subregion (LRR): Mediterranean California (C) Lat: 37 30' 15" Long: 122 0' 1" Datum: NAD 83
Soil Map Unit Name: Omni silty clay loam, strongly saline NWI classification PEMCf
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation X Soil X or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____ Soil ____ or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes X No ____
Hydric Soil Present? Yes X No ____
Wetland Hydrology Present? Yes X No ____

**Is the Sampled Area within a Wetland?** Yes X No ____

Remarks:
Hydric soil features considered contemporary.

## VEGETATION

| Tree Stratum (Use scientific names) | Absolute Cover % | Dominant Species? | Indicator Status |
|---|---|---|---|
| 1. *none* | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| Total Cover: | 0 | | |
| **Sapling/Shrub Stratum** | | | |
| 1. *none* | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| Total Cover: | 0 | | |
| **Herb Stratum** | | | |
| 1. *Salicornia virginica* | 30 | X | OBL |
| 2. *Plantago coronopus* | 15 | X | FAC |
| 3. *Cotula coronopifolia* | 15 | X | FACW |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| 7. | | | |
| 8. | | | |
| Total Cover: | 60 | | |
| **Woody Vine Stratum** | | | |
| 1. *none* | | | |
| 2. | | | |
| Total Cover: | 0 | | |

% Bare Ground in Herb Stratum 10 % Cover of Biotic Crust ____

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

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

**Prevalence Index worksheet:**

| Total % Cover of: | | Multiply by: |
|---|---|---|
| OBL species | x 1 = | |
| FACW species | x 2 = | |
| FAC species | x 3 = | |
| FACU species | x 4 = | |
| UPL Species | x 5 = | |
| Column totals | (A) | (B) |

Prevalence Index = B/A = ____

**Hydrophytic Vegetation Indicators:**

X Dominance Text is >50%
____ Prevalence Index is ≤3.0[1]
____ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
X Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

**Hydrophytic Vegetation Present?** Yes X No ____

Remarks:
"Natural" basin topography with salt marsh species just southwest of transmission lines. Managed plant communities; vigor and stress responses to wetland conditions.

## SOIL

Sampling Point: **SP 63**

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

| Depth | Matrix | | Redox Features | | | | | |
|---|---|---|---|---|---|---|---|---|
| (inches) | Color (moist) | % | Color (moist) | % | Type[1] | Loc[2] | Texture | Remarks |
| 0-4 | 10 YR 3/2 | 100 | --- | 0 | | | clay loam | coarse fill material present |
| 4-16 | 10 YR 5/1 | 100 | — | 0 | | | silty clay | |

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

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

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

**Indicators for Problematic Hydric Soils[3]:**

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

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present.

**Restrictive Layer (If present):**

Type: ___

Depth (inches): ___

Hydric **Soil Present?** **Yes** X **No** ___

Remarks:

Strong sulfidic odor, observed aquic moisture regime, 4-16 inch soils may be native. Mottles faint. Area comprised entirely of imported fill material.

## HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (any one indicator is sufficient)

- X Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Plowed Soils (C6)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (Riverine)
- X Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Thin Muck Surface (C7)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

**Field Observations:**

Surface Water Present? Yes X No ___ Depth (inches): 6

Water Table Present? Yes ___ No X Depth (inches): ___

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

**Wetland Hydrology Present?** **Yes** X **No** ___

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

Remarks:

# WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site: Newark Areas 3 & 4 City/County: Newark/Alameda Sampling Date: 19 April 2006
Applicant/Owner: Sobrato Development Companies State: California Sampling Point: SP 64
Investigator(s): L. Infante Section/Township/Range: 8/05 S/01 W
Landform (hillslope, terrace, etc.): upland transition Local Relief (concave, convex, none): None Slope (%): 0%
Subregion (LRR): Mediterranean California (C) Lat: 37 30' 15" Long: 122 0' 1" Datum: NAD 83
Soil Map Unit Name: Omni silty clay loam, strongly saline NWI classification PEMCf
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation X Soil X or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____ Soil ____ or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes X No ____
Hydric Soil Present? Yes ____ No X
Wetland Hydrology Present? Yes ____ No X

**Is the Sampled Area within a Wetland?** Yes ____ No X

Remarks:

## VEGETATION

| Tree Stratum (Use scientific names) | Absolute Cover % | Dominant Species? | Indicator Status |
|---|---|---|---|
| 1. *none* | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| Total Cover: | 0 | | |

| Sapling/Shrub Stratum | | | |
|---|---|---|---|
| 1. *none* | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| Total Cover: | 0 | | |

| Herb Stratum | | | |
|---|---|---|---|
| 1. *Cynodon dactylon* | 28 | X | FAC |
| 2. *Medicago polymorpha* | 15 | X | NOL |
| 3. *Plantago coronopus* | 10 | X | FAC |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| 7. | | | |
| 8. | | | |
| Total Cover: | 53 | | |

| Woody Vine Stratum | | | |
|---|---|---|---|
| 1. *none* | | | |
| 2. | | | |
| Total Cover: | 0 | | |

% Bare Ground in Herb Stratum 20 % Cover of Biotic Crust ____

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)
Total Number of Dominant Species Across All Strata: 3 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 66% (A/B)

**Prevalence Index worksheet:**

| Total % Cover of: | | Multiply by: |
|---|---|---|
| OBL species | x 1 = | |
| FACW species | x 2 = | |
| FAC species | x 3 = | |
| FACU species | x 4 = | |
| UPL Species | x 5 = | |
| Column totals | (A) | (B) |

Prevalence Index = B/A = ____

**Hydrophytic Vegetation Indicators:**

X Dominance Text is >50%
____ Prevalence Index is ≤3.0[1]
____ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
X Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

**Hydrophytic Vegetation Present?** Yes X No ____

Remarks:
Managed plant communities; vigor and stress responses to wetland conditions.

## SOIL

Sampling Point: **SP 64**

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

| Depth | Matrix | | Redox Features | | | | | |
|---|---|---|---|---|---|---|---|---|
| (inches) | Color (moist) | % | Color (moist) | % | Type[1] | Loc[2] | Texture | Remarks |
| 0-8 | 10 YR 3/2 | 100 | — | 0 | | | clay loam | coarse fill inclusions |
| 8-16 | 10 YR 3/2 | 90 | | | | | clay loam | dark clay inclusions |
| | 10 YR 3/1 | 10 | | | | | clay | |

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

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

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

**Indicators for Problematic Hydric Soils[3]:**

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

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present.

**Restrictive Layer (If present):**

Type: ___

Depth (inches): ___

Hydric **Soil Present?** Yes ___ **No** X

Remarks:

Area comprised entirely of imported fill material.

## HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (any one indicator is sufficient)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) **(Nonriverine)**
- ___ Sediment Deposits (B2) **(Nonriverine)**
- ___ Drift Deposits (B3) **(Nonriverine)**
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Plowed Soils (C6)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) **(Riverine)**
- ___ Sediment Deposits (B2) **(Riverine)**
- ___ Drift Deposits (B3) (Riverine)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Thin Muck Surface (C7)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

**Field Observations:**

| | | | |
|---|---|---|---|
| Surface Water Present? | Yes ___ | No X | Depth (inches): 0 |
| Water Table Present? | Yes ___ | No X | Depth (inches): >16 |
| Saturation Present? (includes capillary fringe) | Yes X | No ___ | Depth (inches): 12 |

**Wetland Hydrology Present?** Yes ___ **No** X

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

Remarks:

Water moves laterally into pit at a depth of approximately 12-inches, but no visible water table.

# WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site: Newark Areas 3 & 4 City/County: Newark/Alameda Sampling Date: 19 April 2006
Applicant/Owner: Sobrato Development Companies State: California Sampling Point: SP 65
Investigator(s): L. Infante Section/Township/Range: 8/05 S/01 W
Landform (hillslope, terrace, etc.): disturbed seasonal wetland Local Relief (concave, convex, none): Concave Slope (%): 0%
Subregion (LRR): Mediterranean California (C) Lat: 37 30' 14" Long: 122 0' 2" Datum: NAD 83
Soil Map Unit Name: Omni silty clay loam, strongly saline NWI classification PEMCf
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation X Soil X or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____ Soil ____ or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes X No ____
Hydric Soil Present? Yes X No ____
Wetland Hydrology Present? Yes X No ____

**Is the Sampled Area within a Wetland?** Yes X No ____

Remarks:
Hydric soil features considered contemporary.

## VEGETATION

| Tree Stratum (Use scientific names) | Absolute Cover % | Dominant Species? | Indicator Status |
|---|---|---|---|
| 1. *none* | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| Total Cover: | 0 | | |

| Sapling/Shrub Stratum | | | |
|---|---|---|---|
| 1. *none* | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| Total Cover: | 0 | | |

| Herb Stratum | | | |
|---|---|---|---|
| 1. *Salicornia virginica* | 45 | X | OBL |
| 2. *Plantago coronopus* | 20 | X | FAC |
| 3. *Picris echioides* | 5 | | FAC |
| 4. *Cynodon dactylon* | 10 | X | FAC |
| 5. | | | |
| 6. | | | |
| 7. | | | |
| 8. | | | |
| Total Cover: | 80 | | |

| Woody Vine Stratum | | | |
|---|---|---|---|
| 1. *none* | | | |
| 2. | | | |
| Total Cover: | 0 | | |

% Bare Ground in Herb Stratum 15 % Cover of Biotic Crust ____

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 66% (A/B)

**Prevalence Index worksheet:**

| Total % Cover of: | | Multiply by: |
|---|---|---|
| OBL species | x 1 = | |
| FACW species | x 2 = | |
| FAC species | x 3 = | |
| FACU species | x 4 = | |
| UPL Species | x 5 = | |
| Column totals | (A) | (B) |

Prevalence Index = B/A = ____

**Hydrophytic Vegetation Indicators:**

X Dominance Test is >50%
____ Prevalence Index is ≤3.0[1]
____ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
X Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

**Hydrophytic Vegetation Present?** Yes X No ____

Remarks:
Managed plant communities; vigor and stress responses to wetland conditions.

## SOIL

Sampling Point: **SP 65**

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

| Depth | Matrix | | Redox Features | | | | | |
|---|---|---|---|---|---|---|---|---|
| (inches) | Color (moist) | % | Color (moist) | % | Type[1] | Loc[2] | Texture | Remarks |
| 0-8 | 10 YR 3/2 | 100 | — | 0 | | | clay loam | |
| 8-16 | 10 YR 3/2 | 90 | 10 YR 3/1 | 10 | C | M | clay loam | Mn concretions |

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

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

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

**Indicators for Problematic Hydric Soils[3]:**

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

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present.

**Restrictive Layer (If present):**

Type: ___

Depth (inches): ___

Hydric **Soil Present?** Yes X No ___

Remarks:

Area comprised entirely of imported fill material.

## HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (any one indicator is sufficient)

- X Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) **(Nonriverine)**
- ___ Sediment Deposits (B2) **(Nonriverine)**
- ___ Drift Deposits (B3) **(Nonriverine)**
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Plowed Soils (C6)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) **(Riverine)**
- ___ Sediment Deposits (B2) **(Riverine)**
- ___ Drift Deposits (B3) (Riverine)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Thin Muck Surface (C7)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

**Field Observations:**

Surface Water Present? Yes X No ___ Depth (inches): 2

Water Table Present? Yes ___ No X Depth (inches): 0

Saturation Present? (includes capillary fringe) Yes ___ No X Depth (inches): 0

**Wetland Hydrology Present?** Yes X No ___

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

Remarks:

Low area within fill. Collects water and supports ruderal hydrophytes and pickleweed.

# WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site: Newark Areas 3 & 4 City/County: Newark/Alameda Sampling Date: 19 April 2006
Applicant/Owner: Sobrato Development Companies State: California Sampling Point: SP 66
Investigator(s): L. Infante Section/Township/Range: 8/05 S/01 W
Landform (hillslope, terrace, etc.): upland Local Relief (concave, convex, none): Convex Slope (%): 0%
Subregion (LRR): Mediterranean California (C) Lat: 37 30' 14" Long: 122 0' 2" Datum: NAD 83
Soil Map Unit Name: Omni silty clay loam, strongly saline NWI classification Palustrine farmed, Pf
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation X Soil X or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____ Soil ____ or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes ____ No X
Hydric Soil Present? Yes ____ No X
Wetland Hydrology Present? Yes ____ No X

**Is the Sampled Area within a Wetland?** Yes ____ No X

Remarks:

## VEGETATION

| Tree Stratum (Use scientific names) | Absolute Cover % | Dominant Species? | Indicator Status |
|---|---|---|---|
| 1. *none* | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| Total Cover: | 0 | | |

| Sapling/Shrub Stratum | | | |
|---|---|---|---|
| 1. *none* | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| Total Cover: | 0 | | |

| Herb Stratum | | | |
|---|---|---|---|
| 1. *Conium maculatum* | 65 | X | FACW |
| 2. *Raphanus sativus* | 30 | X | NOL |
| 3. *Medicago polymorpha* | 5 | | NOL |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| 7. | | | |
| 8. | | | |
| Total Cover: | 100 | | |

| Woody Vine Stratum | | | |
|---|---|---|---|
| 1. *none* | | | |
| 2. | | | |
| Total Cover: | 0 | | |

% Bare Ground in Herb Stratum 5 % Cover of Biotic Crust ____

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A/B)

**Prevalence Index worksheet:**

| Total % Cover of: | | Multiply by: |
|---|---|---|
| OBL species | x 1 = | |
| FACW species | x 2 = | |
| FAC species | x 3 = | |
| FACU species | x 4 = | |
| UPL Species | x 5 = | |
| Column totals | (A) | (B) |

Prevalence Index = B/A = ____

**Hydrophytic Vegetation Indicators:**

____ Dominance Text is >50%
____ Prevalence Index is ≤3.0[1]
____ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
X Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

**Hydrophytic Vegetation Present?** Yes ____ No X

Remarks:
Managed plant communities; vigor and stress responses to wetland conditions.

## SOIL

Sampling Point: **SP 66**

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

| Depth | Matrix | | Redox Features | | | | | |
|---|---|---|---|---|---|---|---|---|
| (Inches) | Color (moist) | % | Color (moist) | % | Type[1] | Loc[2] | Texture | Remarks |
| 0-16 | 10 YR 4/2 | 100 | -- | 0 | | | clay loam | gravel present |

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

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

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

**Indicators for Problematic Hydric Soils[3]:**

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

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present.

**Restrictive Layer (If present):**

Type: ___

Depth (inches): ___

Hydric **Soil Present?** Yes ___ **No** X

Remarks:

Area comprised entirely of imported fill material.

## HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (any one indicator is sufficient)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) **(Nonriverine)**
- ___ Sediment Deposits (B2) **(Nonriverine)**
- ___ Drift Deposits (B3) **(Nonriverine)**
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Plowed Soils (C6)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) **(Riverine)**
- ___ Sediment Deposits (B2) **(Riverine)**
- ___ Drift Deposits (B3) (Riverine)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Thin Muck Surface (C7)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

**Field Observations:**

Surface Water Present? Yes ___ No X Depth (inches): ___

Water Table Present? Yes ___ No X Depth (inches): ___

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

**Wetland Hydrology Present? Yes** ___ **No** X

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

Remarks:

Mounded, fill soil.

# WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site: Newark Areas 3 & 4 City/County: Newark/Alameda Sampling Date: 19 April 2006
Applicant/Owner: Sobrato Development Companies State: California Sampling Point: SP 67
Investigator(s): L. Infante Section/Township/Range: 8/05 S/01 W
Landform (hillslope, terrace, etc.): perennial wetland Local Relief (concave, convex, none): Concave Slope (%): 0%
Subregion (LRR): Mediterranean California (C) Lat: 37 30' 14" Long: 122 0' 3" Datum: NAD 83
Soil Map Unit Name: Omni silty clay loam, strongly saline NWI classification Palustrine farmed, Pf
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
Are Vegetation X Soil X or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____ Soil ____ or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes X No _____
Hydric Soil Present? Yes X No _____
Wetland Hydrology Present? Yes X No _____

**Is the Sampled Area within a Wetland?** Yes X No _____

Remarks:
Hydric soil features considered contemporary.

## VEGETATION

| Tree Stratum (Use scientific names) | Absolute Cover % | Dominant Species? | Indicator Status |
|---|---|---|---|
| 1. *none* | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| Total Cover: | 0 | | |

| Sapling/Shrub Stratum | | | |
|---|---|---|---|
| 1. *none* | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| Total Cover: | 0 | | |

| Herb Stratum | | | |
|---|---|---|---|
| 1. *Salicornia virginica* | 90 | X | OBL |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| 7. | | | |
| 8. | | | |
| Total Cover: | | | |

| Woody Vine Stratum | | | |
|---|---|---|---|
| 1. *none* | | | |
| 2. | | | |
| Total Cover: | 0 | | |

% Bare Ground in Herb Stratum 25 % Cover of Biotic Crust _____

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

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

**Prevalence Index worksheet:**

| Total % Cover of: | | Multiply by: |
|---|---|---|
| OBL species | x 1 = | |
| FACW species | x 2 = | |
| FAC species | x 3 = | |
| FACU species | x 4 = | |
| UPL Species | x 5 = | |
| Column totals | (A) | (B) |

Prevalence Index = B/A = _____

**Hydrophytic Vegetation Indicators:**

X Dominance Text is >50%
___ Prevalence Index is ≤3.0[1]
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
X Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

**Hydrophytic Vegetation Present?** Yes X No _____

Remarks:
Managed plant communities; vigor and stress responses to wetland conditions.

## SOIL

Sampling Point: **SP 67**

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

| Depth | Matrix | | Redox Features | | | | | |
|---|---|---|---|---|---|---|---|---|
| (inches) | Color (moist) | % | Color (moist) | % | Type[1] | Loc[2] | Texture | Remarks |
| 0-3 | 10 YR 4/2 | 100 | — | 0 | | | clay loam | gravel present |
| 3-16 | 10 YR 4/2 | 100 | — | 0 | | | clay loam | dark clay inclusions |

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

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

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

**Indicators for Problematic Hydric Soils[3]:**

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

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present.

**Restrictive Layer (If present):**

Type: ___

Depth (inches): ___

Hydric **Soil Present?** Yes X No ___

Remarks:

Assumed peraquic moisture regime based on observations of prolonged inundation. Mottles faint. Area comprised entirely of imported fill material.

## HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (any one indicator is sufficient)

- X Surface Water (A1)
- ___ High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1) **(Nonriverine)**
- ___ Sediment Deposits (B2) **(Nonriverine)**
- ___ Drift Deposits (B3) **(Nonriverine)**
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Plowed Soils (C6)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) **(Riverine)**
- ___ Sediment Deposits (B2) **(Riverine)**
- ___ Drift Deposits (B3) (Riverine)
- X Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Thin Muck Surface (C7)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

**Field Observations:**

Surface Water Present? Yes X No ___ Depth (Inches): 18

Water Table Present? Yes ___ No X Depth (inches): 0

Saturation Present? (includes capillary fringe) Yes ___ No X Depth (inches): 0

**Wetland Hydrology Present?** Yes X No ___

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

Remarks:

# WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site: Newark Areas 3 & 4 City/County: Newark/Alameda Sampling Date: 19 April 2006
Applicant/Owner: Sobrato Development Companies State: California Sampling Point: SP 68
Investigator(s): L. Infante Section/Township/Range: 8/05 S/01 W
Landform (hillslope, terrace, etc.): upland Local Relief (concave, convex, none): Convex Slope (%): 0%
Subregion (LRR): Mediterranean California (C) Lat: 37 30' 14" Long: 122 0' 3" Datum: NAD 83
Soil Map Unit Name: Omni silty clay loam, strongly saline NWI classification Palustrine farmed, Pf
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation X Soil X or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____ Soil ____ or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes ____ No X
Hydric Soil Present? Yes ____ No X
Wetland Hydrology Present? Yes ____ No X

**Is the Sampled Area within a Wetland?** Yes ____ No X

Remarks:

## VEGETATION

| Tree Stratum (Use scientific names) | Absolute Cover % | Dominant Species? | Indicator Status |
|---|---|---|---|
| 1. *none* | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| Total Cover: | 0 | | |
| **Sapling/Shrub Stratum** | | | |
| 1. *none* | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| Total Cover: | 0 | | |
| **Herb Stratum** | | | |
| 1. *Cortaderia selloana* | 15 | X | NOL |
| 2. *Bromus diandrus* | 20 | X | NI |
| 3. *Plantago coronopus* | 10 | X | FAC |
| 4. *Medicago polymorpha* | 15 | X | NOL |
| 5. | | | |
| 6. | | | |
| 7. | | | |
| 8. | | | |
| Total Cover: | 60 | | |
| **Woody Vine Stratum** | | | |
| 1. *none* | | | |
| 2. | | | |
| Total Cover: | 0 | | |

% Bare Ground in Herb Stratum 15 % Cover of Biotic Crust ____

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0% (A/B)

**Prevalence Index worksheet:**

| Total % Cover of: | | Multiply by: |
|---|---|---|
| OBL species | x 1 = | |
| FACW species | x 2 = | |
| FAC species | x 3 = | |
| FACU species | x 4 = | |
| UPL Species | x 5 = | |
| Column totals | (A) | (B) |

Prevalence Index = B/A = ____

**Hydrophytic Vegetation Indicators:**

____ Dominance Text Is >50%
____ Prevalence Index is ≤3.0[1]
____ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
X Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

**Hydrophytic Vegetation Present?** Yes ____ No X

Remarks:
Managed plant communities; vigor and stress responses to wetland conditions.

## SOIL

Sampling Point: **SP 68**

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

| Depth | Matrix | | Redox Features | | | | | |
|---|---|---|---|---|---|---|---|---|
| (inches) | Color (moist) | % | Color (moist) | % | Type[1] | Loc[2] | Texture | Remarks |
| 0-16 | 10 YR 4/3 | 100 | -- | 0 | | | clay loam | fill present |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

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

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

**Indicators for Problematic Hydric Soils[3]:**

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

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present.

**Restrictive Layer (If present):**

Type: ___

Depth (inches): ___

**Hydric Soil Present?** **Yes** ___ **No** X

Remarks:

Area comprised entirely of imported fill material.

## HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (any one indicator is sufficient)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) **(Nonriverine)**
- ___ Sediment Deposits (B2) **(Nonriverine)**
- ___ Drift Deposits (B3) **(Nonriverine)**
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Plowed Soils (C6)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) **(Riverine)**
- ___ Sediment Deposits (B2) **(Riverine)**
- ___ Drift Deposits (B3) (Riverine)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Thin Muck Surface (C7)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

**Field Observations:**

Surface Water Present? Yes ___ No X Depth (inches): ___

Water Table Present? Yes ___ No X Depth (inches): ___

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

**Wetland Hydrology Present?** **Yes** ___ **No** X

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

Remarks:

No hydrology indicative of wetland observed.

# WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site: Newark Areas 3 & 4 City/County: Newark/Alameda Sampling Date: 19 April 2006
Applicant/Owner: Sobrato Development Companies State: California Sampling Point: SP 69
Investigator(s): L. Infante Section/Township/Range: 8/05 S/01 W
Landform (hillslope, terrace, etc.): seasonal wetland Local Relief (concave, convex, none): Concave Slope (%): 0%
Subregion (LRR): Mediterranean California (C) Lat: 37 30' 14" Long: 122 0' 3" Datum: NAD 83
Soil Map Unit Name: Omni silty clay loam, strongly saline NWI classification Palustrine farmed, Pf
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation X Soil X or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____ Soil ____ or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes X No ____
Hydric Soil Present? Yes X No ____
Wetland Hydrology Present? Yes X No ____

**Is the Sampled Area within a Wetland?** Yes X No ____

Remarks:
Transition between upland, non-nativefill and Salicornia wetland. Boundary expected to vary slightly with annual rainfall patterns.

## VEGETATION

| Tree Stratum (Use scientific names) | Absolute Cover % | Dominant Species? | Indicator Status |
|---|---|---|---|
| 1. *none* | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| Total Cover: | 0 | | |
| **Sapling/Shrub Stratum** | | | |
| 1. *none* | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| Total Cover: | 0 | | |
| **Herb Stratum** | | | |
| 1. *Salicornia virginica* | 15 | X | OBL |
| 2. *Plantago coronopus* | 20 | X | FAC |
| 3. *Juncus bufonius* | 20 | X | FACW+ |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| 7. | | | |
| 8. | | | |
| Total Cover: | 55 | | |
| **Woody Vine Stratum** | | | |
| 1. *none* | | | |
| 2. | | | |
| Total Cover: | 0 | | |

% Bare Ground in Herb Stratum 30 % Cover of Biotic Crust ____

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

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

**Prevalence Index worksheet:**

| Total % Cover of: | | Multiply by: |
|---|---|---|
| OBL species | x 1 = | |
| FACW species | x 2 = | |
| FAC species | x 3 = | |
| FACU species | x 4 = | |
| UPL Species | x 5 = | |
| Column totals | (A) | (B) |

Prevalence Index = B/A = ____

**Hydrophytic Vegetation Indicators:**

X Dominance Test is >50%
___ Prevalence Index is ≤3.0[1]
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
X Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

**Hydrophytic Vegetation Present?** Yes X No ____

Remarks:
Sample point located in transitional area between upland fill and Salicornia wetland. Plantago dominant. Managed plant communities; vigor and stress responses to wetland conditions.

## SOIL

Sampling Point: **SP 69**

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

| Depth | Matrix | | Redox Features | | | | | |
|---|---|---|---|---|---|---|---|---|
| (inches) | Color (moist) | % | Color (moist) | % | Type[1] | Loc[2] | Texture | Remarks |
| 0-3 | 10 YR 4/2 | 100 | --- | 0 | | | clay loam | gravel present |
| 3-16 | 10 YR 4/2 | 100 | --- | 0 | | | clay loam | dark clay inclusions |

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

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

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

**Indicators for Problematic Hydric Soils[3]:**

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

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present.

**Restrictive Layer (If present):**

Type: ___

Depth (inches): ___

Hydric **Soil Present?** Yes X No ___

Remarks:

Soil disturbed fill. Aquic moisture regime. Mottles faint. Area comprised entirely of imported fill material.

## HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (any one indicator is sufficient)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) **(Nonriverine)**
- X Sediment Deposits (B2) **(Nonriverine)**
- ___ Drift Deposits (B3) **(Nonriverine)**
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Plowed Soils (C6)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) **(Riverine)**
- ___ Sediment Deposits (B2) **(Riverine)**
- ___ Drift Deposits (B3) (Riverine)
- X Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Thin Muck Surface (C7)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

**Field Observations:**

Surface Water Present? Yes ___ No X Depth (inches): ___

Water Table Present? Yes ___ No X Depth (inches): ___

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

**Wetland Hydrology Present?** Yes X No ___

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

Remarks:

# WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site: Newark Areas 3 & 4 City/County: Newark/Alameda Sampling Date: 19 April 2006
Applicant/Owner: Sobrato Development Companies State: California Sampling Point: SP 70
Investigator(s): L. Infante Section/Township/Range: 8/05 S/01 W
Landform (hillslope, terrace, etc.): seasonal wetland Local Relief (concave, convex, none): Concave Slope (%): 0%
Subregion (LRR): Mediterranean California (C) Lat: 37 30' 13" Long: 122 0' 1" Datum: NAD 83
Soil Map Unit Name: Omni silty clay loam, strongly saline NWI classification Palustrine farmed, Pf
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation X Soil X or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____ Soil ____ or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes X No ____
Hydric Soil Present? Yes X No ____
Wetland Hydrology Present? Yes X No ____

**Is the Sampled Area within a Wetland?** Yes X No ____

Remarks:
Area also includes a distinct pit (other waters) 3-feet deep.

## VEGETATION

| Tree Stratum (Use scientific names) | Absolute Cover % | Dominant Species? | Indicator Status |
|---|---|---|---|
| 1. *none* | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| Total Cover: | 0 | | |
| **Sapling/Shrub Stratum** | | | |
| 1. *none* | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| Total Cover: | 0 | | |
| **Herb Stratum** | | | |
| 1. *Glyceria sp.* | 5 | X | — |
| 2. *Scirpus robustus* | 10 | X | OBL |
| 3. *Plantago coronopus* | 10 | X | FAC |
| 4. *Juncus effusus* | 15 | X | OBL |
| 5. | | | |
| 6. | | | |
| 7. | | | |
| 8. | | | |
| Total Cover: | 40 | | |
| **Woody Vine Stratum** | | | |
| 1. *none* | | | |
| 2. | | | |
| Total Cover: | 0 | | |

% Bare Ground in Herb Stratum 35 % Cover of Biotic Crust ____

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)
Total Number of Dominant Species Across All Strata: 4 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 75% (A/B)

**Prevalence Index worksheet:**

| Total % Cover of: | | Multiply by: |
|---|---|---|
| OBL species | ____ x 1 = | ____ |
| FACW species | ____ x 2 = | ____ |
| FAC species | ____ x 3 = | ____ |
| FACU species | ____ x 4 = | ____ |
| UPL Species | ____ x 5 = | ____ |
| Column totals | ____ (A) | ____ (B) |

Prevalence Index = B/A = ____

**Hydrophytic Vegetation Indicators:**

X Dominance Text is >50%
___ Prevalence Index is ≤3.0[1]
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
X Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

**Hydrophytic Vegetation Present?** Yes X No ____

Remarks:
Glyceria not in flower so unable to key to species. Managed plant communities; vigor and stress responses to wetland conditions.

## SOIL

Sampling Point: **SP 70**

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

| Depth | Matrix | | Redox Features | | | | | |
|---|---|---|---|---|---|---|---|---|
| (Inches) | Color (moist) | % | Color (moist) | % | Type[1] | Loc[2] | Texture | Remarks |
| 0-16 | 10 YR 4/1 | 100 | — | 0 | | | clay loam | gravel present |

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

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

| | | | | | |
|---|---|---|---|---|---|
| | Histosol (A1) | | Sandy Redox (S5) | | **Indicators for Problematic Hydric Soils[3]:** |
| | Histic Epipedon (A2) | | Stripped Matrix (S6) | | 1 cm Muck (A9) **(LRR C)** |
| | Black Histic (A3) | | Loamy Mucky Mineral (F1) | | 2 cm Muck (A10) **(LRR B)** |
| | Hydrogen Sulfide (A4) | | Loamy Gleyed Matrix (F2) | | Reduced Vertic (F18) |
| | Stratified Layers (A5) **(LRR C)** | | Depleted Matrix (F3) | | Red Parent Material (TF2) |
| | 1 cm Muck (A9) **(LRR D)** | X | Redox Dark Surface (F6) | X | Other (Explain in Remarks) |
| | Depleted Below Dark Surface (A11) | | Depleted Dark Surface (F7) | | |
| | Thick Dark Surface (A12) | | Redox Depressions (F8) | | |
| | Sandy Mucky Mineral (S1) | | Vernal Pools (F9) | | [3] Indicators of hydrophytic vegetation and wetland hydrology must be present. |
| | Sandy Gleyed Matrix (S4) | | | | |

**Restrictive Layer (If present):**

Type: _____

Depth (inches): _____

**Hydric Soil Present?** Yes X No ____

Remarks:

Disturbed soils, hydric due to length of inundation during growing season. Mottles faint. Aquic moisture regime. Area comprised entirely of imported fill material.

## HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (any one indicator is sufficient)

| | | | | | Secondary Indicators (2 or more required) |
|---|---|---|---|---|---|
| X | Surface Water (A1) | | Salt Crust (B11) | | Water Marks (B1) **(Riverine)** |
| | High Water Table (A2) | X | Biotic Crust (B12) | | Sediment Deposits (B2) **(Riverine)** |
| X | Saturation (A3) | | Aquatic Invertebrates (B13) | | Drift Deposits (B3) (Riverine) |
| | Water Marks (B1) **(Nonriverine)** | | Hydrogen Sulfide Odor (C1) | | Drainage Patterns (B10) |
| | Sediment Deposits (B2) **(Nonriverine)** | | Oxidized Rhizospheres along Living Roots (C3) | | Dry-Season Water Table (C2) |
| | Drift Deposits (B3) **(Nonriverine)** | | Presence of Reduced Iron (C4) | | Thin Muck Surface (C7) |
| | Surface Soil Cracks (B6) | | Recent Iron Reduction in Plowed Soils (C6) | | Crayfish Burrows (C8) |
| | Inundation Visible on Aerial Imagery (B7) | | Other (Explain in Remarks) | | Saturation Visible on Aerial Imagery (C9) |
| | Water-stained Leaves (B9) | | | | Shallow Aquitard (D3) |
| | | | | | FAC-Neutral Test (D5) |

**Field Observations:**

Surface Water Present? Yes X No ____ Depth (Inches): 6-24

Water Table Present? Yes ____ No X Depth (inches): ____

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

**Wetland Hydrology Present?** Yes X No ____

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

Remarks:

Substantial algal growth.

# WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site: Newark Areas 3 & 4 City/County: Newark/Alameda Sampling Date: 19 April 2006
Applicant/Owner: Sobrato Development Companies State: California Sampling Point: SP 71
Investigator(s): L. Infante Section/Township/Range: 8/05 S/01 W
Landform (hillslope, terrace, etc.): upland Local Relief (concave, convex, none): Convex Slope (%): 0%
Subregion (LRR): Mediterranean California (C) Lat: 37 30' 13" Long: 122 0' 1" Datum: NAD 83
Soil Map Unit Name: Omni silty clay loam, strongly saline NWI classification PEMCf
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation X Soil X or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____ Soil ____ or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes ____ No X
Hydric Soil Present? Yes ____ No X
Wetland Hydrology Present? Yes ____ No X

**Is the Sampled Area within a Wetland?** Yes ____ No X

Remarks:

## VEGETATION

| Tree Stratum (Use scientific names) | Absolute Cover % | Dominant Species? | Indicator Status |
|---|---|---|---|
| 1. *none* | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| Total Cover: | 0 | | |

| Sapling/Shrub Stratum | | | |
|---|---|---|---|
| 1. *none* | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| Total Cover: | 0 | | |

| Herb Stratum | | | |
|---|---|---|---|
| 1. *Bromus diandrus* | 30 | X | NI |
| 2. *Bromus hordeaceus* | 15 | X | FACU- |
| 3. *Lolium multiflorum* | 5 | | FAC |
| 4. *Lotus corniculatus* | 20 | X | FAC |
| 5. *Plantago coronopus* | 5 | | FAC |
| 6. | | | |
| 7. | | | |
| 8. | | | |
| Total Cover: | 75 | | |

| Woody Vine Stratum | | | |
|---|---|---|---|
| 1. *none* | | | |
| 2. | | | |
| Total Cover: | 0 | | |

% Bare Ground in Herb Stratum 10 % Cover of Biotic Crust ____

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 33% (A/B)

**Prevalence Index worksheet:**

| Total % Cover of: | | Multiply by: |
|---|---|---|
| OBL species | x 1 = | |
| FACW species | x 2 = | |
| FAC species | x 3 = | |
| FACU species | x 4 = | |
| UPL Species | x 5 = | |
| Column totals | (A) | (B) |

Prevalence Index = B/A =

**Hydrophytic Vegetation Indicators:**

___ Dominance Text is >50%
___ Prevalence Index is ≤3.0[1]
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
X Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

**Hydrophytic Vegetation Present?** Yes ____ No X

Remarks:
Managed plant communities; vigor and stress responses to wetland conditions.

## SOIL

Sampling Point: **SP 71**

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

| Depth | Matrix | | Redox Features | | | | | |
|---|---|---|---|---|---|---|---|---|
| (inches) | Color (moist) | % | Color (moist) | % | Type[1] | Loc[2] | Texture | Remarks |
| 0-16 | 10 YR 4/3 | 100 | --- | 0 | | | sandy clay loam | coarse sand |

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

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

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

**Indicators for Problematic Hydric Soils[3]:**

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

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present.

**Restrictive Layer (If present):**

Type: _____

Depth (inches): _____

**Hydric Soil Present?** Yes_____ No X

Remarks:

Area comprised entirely of imported fill material.

## HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (any one indicator is sufficient)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) **(Nonriverine)**
- ___ Sediment Deposits (B2) **(Nonriverine)**
- ___ Drift Deposits (B3) **(Nonriverine)**
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Plowed Soils (C6)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) **(Riverine)**
- ___ Sediment Deposits (B2) **(Riverine)**
- ___ Drift Deposits (B3) (Riverine)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Thin Muck Surface (C7)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

**Field Observations:**

Surface Water Present? Yes_____ No X Depth (inches):_____

Water Table Present? Yes_____ No X Depth (inches):_____

Saturation Present? Yes_____ No X Depth (Inches):_____

(includes capillary fringe)

**Wetland Hydrology Present?** Yes_____ No X

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

Remarks:

# WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site: Newark Areas 3 & 4 City/County: Newark/Alameda Sampling Date: 19 April 2006
Applicant/Owner: Sobrato Development Companies State: California Sampling Point: SP 72
Investigator(s): L. Infante Section/Township/Range: 8/05 S/01 W
Landform (hillslope, terrace, etc.): ruderal Local Relief (concave, convex, none): Concave Slope (%): 0%
Subregion (LRR): Mediterranean California (C) Lat: 37 30' 18" Long: 122 0' 1" Datum: NAD 83
Soil Map Unit Name: Omni silty clay loam, strongly saline NWI classification none
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation X Soil X or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____ Soil ____ or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes ____ No X
Hydric Soil Present? Yes ____ No X
Wetland Hydrology Present? Yes X No ____

**Is the Sampled Area within a Wetland?** Yes ____ No X

Remarks:
Rapidly drying depression within non-native annual grassland/non-native herbaceous areas.

## VEGETATION

| Tree Stratum (Use scientific names) | Absolute Cover % | Dominant Species? | Indicator Status |
|---|---|---|---|
| 1. *none* | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| Total Cover: | 0 | | |

| Sapling/Shrub Stratum | | | |
|---|---|---|---|
| 1. *none* | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| Total Cover: | 0 | | |

| Herb Stratum | | | |
|---|---|---|---|
| 1. *Hordeum murinum ssp. leporinum* | 40 | X | NI |
| 2. *Lotus corniculatus* | 2 | | FAC |
| 3. *Avena fatua* | 10 | X | NOL |
| 4. *Vicia sativa* | trace | | FACU |
| 5. *Geranium dissectum* | 10 | X | NOL |
| 6. *Rumex crispus* | trace | | FACW- |
| 7. *Lolium multiflorum* | trace | | FAC |
| 8. *Bromus diandrus* | 5 | | NI |
| Total Cover: | 68 | | |

| Woody Vine Stratum | | | |
|---|---|---|---|
| 1. *none* | | | |
| 2. | | | |
| Total Cover: | 0 | | |

% Bare Ground in Herb Stratum 5 % Cover of Biotic Crust ____

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

**Prevalence Index worksheet:**

| Total % Cover of: | | Multiply by: |
|---|---|---|
| OBL species | x 1 = | |
| FACW species | x 2 = | |
| FAC species | x 3 = | |
| FACU species | x 4 = | |
| UPL Species | x 5 = | |
| Column totals | (A) | (B) |

Prevalence Index = B/A = ____

**Hydrophytic Vegetation Indicators:**

- ____ Dominance Text is >50%
- ____ Prevalence Index is ≤3.0[1]
- ____ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- X Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

**Hydrophytic Vegetation Present?** Yes ____ No X

Remarks:
Managed plant communities; vigor and stress responses to wetland conditions.

## SOIL

Sampling Point: **SP 72**

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

| Depth | Matrix | | Redox Features | | | | | |
|---|---|---|---|---|---|---|---|---|
| (inches) | Color (moist) | % | Color (moist) | % | Type[1] | Loc[2] | Texture | Remarks |
| 0-16 | 10 YR 4/1 | 100 | — | 0 | | | clay | |

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

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

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

**Indicators for Problematic Hydric Soils[3]:**

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

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present.

**Restrictive Layer (If present):**

Type: ___

Depth (Inches): ___

Hydric **Soil Present?** Yes ___ **No** X

Remarks:

Rapidly drying soils not saturated for sufficient duration to support wetland species. Area comprised entirely of imported fill material.

## HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (any one indicator is sufficient)

- X Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) **(Nonriverine)**
- ___ Sediment Deposits (B2) **(Nonriverine)**
- ___ Drift Deposits (B3) **(Nonriverine)**
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Plowed Soils (C6)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) **(Riverine)**
- ___ Sediment Deposits (B2) **(Riverine)**
- ___ Drift Deposits (B3) (Riverine)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Thin Muck Surface (C7)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

**Field Observations:**

Surface Water Present? Yes X No ___ Depth (Inches): 3

Water Table Present? Yes ___ No X Depth (inches): ___

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

**Wetland Hydrology Present?** Yes X No ___

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

Remarks:

Inundation likely occurs for short duration with flashy ponding during years of heavy rainfall.

# WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site: Newark Areas 3 & 4 City/County: Newark/Alameda Sampling Date: 19 April 2006
Applicant/Owner: Sobrato Development Companies State: California Sampling Point: SP 73
Investigator(s): L. Infante Section/Township/Range: 8/05 S/01 W
Landform (hillslope, terrace, etc.): upland Local Relief (concave, convex, none): Convex Slope (%): 0%
Subregion (LRR): Mediterranean California (C) Lat: 37 30' 18" Long: 122 0' 0" Datum: NAD 83
Soil Map Unit Name: Omni silty clay loam, strongly saline NWI classification none
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation X Soil X or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____ Soil ____ or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes ____ No X
Hydric Soil Present? Yes ____ No X
Wetland Hydrology Present? Yes ____ No X

**Is the Sampled Area within a Wetland?** Yes ____ No X

Remarks:

## VEGETATION

| Tree Stratum (Use scientific names) | Absolute Cover % | Dominant Species? | Indicator Status |
|---|---|---|---|
| 1. *none* | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| Total Cover: | 0 | | |

| Sapling/Shrub Stratum | | | |
|---|---|---|---|
| 1. *none* | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| Total Cover: | 0 | | |

| Herb Stratum | | | |
|---|---|---|---|
| 1. *Avena fatua* | 10 | X | NOL |
| 2. *Bromus diandrus* | 40 | X | NI |
| 3. *Geranium dissectum* | 20 | X | NOL |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| 7. | | | |
| 8. | | | |
| Total Cover: | 70 | | |

| Woody Vine Stratum | | | |
|---|---|---|---|
| 1. | | | |
| 2. | | | |
| Total Cover: | | | |

% Bare Ground in Herb Stratum 10 % Cover of Biotic Crust ____

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

**Prevalence Index worksheet:**

| Total % Cover of: | | Multiply by: |
|---|---|---|
| OBL species | x 1 = | |
| FACW species | x 2 = | |
| FAC species | x 3 = | |
| FACU species | x 4 = | |
| UPL Species | x 5 = | |
| Column totals | (A) | (B) |

Prevalence Index = B/A =

**Hydrophytic Vegetation Indicators:**

____ Dominance Text Is >50%
____ Prevalence Index is ≤3.0[1]
____ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
X Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

**Hydrophytic Vegetation Present?** Yes ____ No X

Remarks:
Managed plant communities; vigor and stress responses to wetland conditions.

## SOIL

Sampling Point: **SP 73**

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

| Depth | Matrix | | Redox Features | | | | | |
|---|---|---|---|---|---|---|---|---|
| (inches) | Color (moist) | % | Color (moist) | % | Type[1] | Loc[2] | Texture | Remarks |
| 0-16 | 10 YR 4/1 | 100 | --- | 0 | | | clay | |

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

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

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

**Indicators for Problematic Hydric Soils[3]:**

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

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present.

**Restrictive Layer (If present):**

Type: _____

Depth (inches): _____

**Hydric Soil Present?** Yes ___ **No** X

Remarks:

No sign of reducing conditions. Area comprised entirely of imported fill material.

## HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (any one indicator is sufficient)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) **(Nonriverine)**
- ___ Sediment Deposits (B2) **(Nonriverine)**
- ___ Drift Deposits (B3) **(Nonriverine)**
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Plowed Soils (C6)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) **(Riverine)**
- ___ Sediment Deposits (B2) **(Riverine)**
- ___ Drift Deposits (B3) (Riverine)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Thin Muck Surface (C7)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

**Field Observations:**

Surface Water Present? Yes ___ No X Depth (inches): ___

Water Table Present? Yes ___ No X Depth (inches): ___

Saturation Present? Yes ___ No X Depth (inches): ___

(Includes capillary fringe)

**Wetland Hydrology Present?** Yes ___ **No** X

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

Remarks:

No apparent wetland hydrology.

# WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site: Newark Areas 3 & 4 City/County: Newark/Alameda Sampling Date: 19 April 2006
Applicant/Owner: Sobrato Development Companies State: California Sampling Point: SP 74
Investigator(s): L. Infante Section/Township/Range: 8/05 S/01 W
Landform (hillslope, terrace, etc.): seasonal aquatic Local Relief (concave, convex, none): None Slope (%): 0%
Subregion (LRR): Mediterranean California (C) Lat: 37 30' 10" Long: 122 0' 1" Datum: NAD 83
Soil Map Unit Name: Omni silty clay loam, strongly saline NWI classification Palustrine farmed, Pf
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
Are Vegetation X Soil X or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____ Soil ____ or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes X No ____
Hydric Soil Present? Yes ____ No X
Wetland Hydrology Present? Yes X No ____

**Is the Sampled Area within a Wetland?** Yes ____ No X

Remarks:
Sample point located in shallow ( up to 1.5 feet), ponded depression that is 90% aquatic. Potential waters of the U.S., but not a wetland.

## VEGETATION

| Tree Stratum (Use scientific names) | Absolute Cover % | Dominant Species? | Indicator Status |
|---|---|---|---|
| 1. *none* | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| Total Cover: | 0 | | |
| **Sapling/Shrub Stratum** | | | |
| 1. *none* | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| Total Cover: | 0 | | |
| **Herb Stratum** | | | |
| 1. *Rumex salicifolius* | < 1 | X | OBL |
| 2. *Geranium dissectum* | 2 | X | NOL |
| 3. *Hordeum hystrix* | < 1 | X | FAC |
| 4. *Distichlis spicata* | < 1 | X | FACW |
| 5. | | | |
| 6. | | | |
| 7. | | | |
| 8. | | | |
| Total Cover: | 3 | | |
| **Woody Vine Stratum** | | | |
| 1. *none* | | | |
| 2. | | | |
| Total Cover: | 0 | | |

% Bare Ground in Herb Stratum 10 % Cover of Biotic Crust ____

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)
Total Number of Dominant Species Across All Strata: 4 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 75% (A/B)

**Prevalence Index worksheet:**

| Total % Cover of: | | Multiply by: |
|---|---|---|
| OBL species | x 1 = | |
| FACW species | x 2 = | |
| FAC species | x 3 = | |
| FACU species | x 4 = | |
| UPL Species | x 5 = | |
| Column totals | (A) | (B) |

Prevalence Index = B/A = ____

**Hydrophytic Vegetation Indicators:**

X Dominance Text is >50%
___ Prevalence Index is ≤3.0[1]
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
X Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

**Hydrophytic Vegetation Present?** Yes X No ____

Remarks:
Disturbed site. Managed plant communities; vigor and stress responses to wetland conditions.

## SOIL

Sampling Point: **SP 74**

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

| Depth | Matrix | | Redox Features | | | | | |
|---|---|---|---|---|---|---|---|---|
| (inches) | Color (moist) | % | Color (moist) | % | Type[1] | Loc[2] | Texture | Remarks |
| 0-4 | — | 100 | — | 0 | | | n/a | gravel fill |
| 4-16 | 10 YR 4/2 | 100 | — | 0 | | | gravelly clay loam | |

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

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

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

**Indicators for Problematic Hydric Soils[3]:**

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

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present.

**Restrictive Layer (If present):**

Type: ___

Depth (inches): ___

**Hydric Soil Present?** Yes ___ **No** X

Remarks:

Soils highly compacted fill. Area comprised entirely of imported fill material.

## HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (any one indicator is sufficient)

- X Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (Nonriverine)
- X Sediment Deposits (B2) (Nonriverine)
- ___ Drift Deposits (B3) (Nonriverine)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Plowed Soils (C6)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (Riverine)
- ___ Sediment Deposits (B2) (Riverine)
- ___ Drift Deposits (B3) (Riverine)
- X Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Thin Muck Surface (C7)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

**Field Observations:**

| | | | |
|---|---|---|---|
| Surface Water Present? | Yes X | No ___ | Depth (inches): 8 |
| Water Table Present? | Yes ___ | No X | Depth (inches): ___ |
| Saturation Present? (includes capillary fringe) | Yes ___ | No X | Depth (inches): ___ |

**Wetland Hydrology Present?** Yes X No ___

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

Remarks:

# WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site: Newark Areas 3 & 4 City/County: Newark/Alameda Sampling Date: 19 April 2006
Applicant/Owner: Sobrato Development Companies State: California Sampling Point: SP 75
Investigator(s): L. Infante Section/Township/Range: 8/05 S/01 W
Landform (hillslope, terrace, etc.): upland Local Relief (concave, convex, none): Convex Slope (%): 0%
Subregion (LRR): Mediterranean California (C) Lat: 37 30' 10" Long: 122 0' 0" Datum: NAD 83
Soil Map Unit Name: Omni silty clay loam, strongly saline NWI classification Palustrine farmed, Pf
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation X Soil X or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____ Soil ____ or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

| | | | | |
|---|---|---|---|---|
| Hydrophytic Vegetation Present? | Yes ____ | No X | **Is the Sampled Area within a Wetland?** | Yes ____ No X |
| Hydric Soil Present? | Yes ____ | No X | | |
| Wetland Hydrology Present? | Yes ____ | No X | | |

Remarks:

## VEGETATION

| Tree Stratum (Use scientific names) | Absolute Cover % | Dominant Species? | Indicator Status |
|---|---|---|---|
| 1. *none* | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| Total Cover: | 0 | | |
| **Sapling/Shrub Stratum** | | | |
| 1. *none* | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| Total Cover: | 0 | | |
| **Herb Stratum** | | | |
| 1. *Bromus diandrus* | 25 | X | NI |
| 2. *Avena fatua* | 10 | X | NOL |
| 3. *Geranium dissectum* | 30 | X | NOL |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| 7. | | | |
| 8. | | | |
| Total Cover: | 65 | | |
| **Woody Vine Stratum** | | | |
| 1. *none* | | | |
| 2. | | | |
| Total Cover: | 0 | | |

% Bare Ground in Herb Stratum 5 % Cover of Biotic Crust ____

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0% (A/B)

**Prevalence Index worksheet:**

| Total % Cover of: | | Multiply by: |
|---|---|---|
| OBL species | x 1 = | |
| FACW species | x 2 = | |
| FAC species | x 3 = | |
| FACU species | x 4 = | |
| UPL Species | x 5 = | |
| Column totals | (A) | (B) |

Prevalence Index = B/A = ____

**Hydrophytic Vegetation Indicators:**

____ Dominance Text is >50%
____ Prevalence Index is ≤3.0[1]
____ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
X Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

**Hydrophytic Vegetation Present?** Yes ____ No X

Remarks:
Managed plant communities; vigor and stress responses to wetland conditions.

## SOIL

Sampling Point: **SP 75**

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

| Depth | Matrix | | Redox Features | | | | | |
|---|---|---|---|---|---|---|---|---|
| (inches) | Color (moist) | % | Color (moist) | % | Type[1] | Loc[2] | Texture | Remarks |
| 0-16 | 10 YR 4/2 | 100 | --- | 0 | | | gravelly loam | |

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

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

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

**Indicators for Problematic Hydric Soils[3]:**

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

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present.

**Restrictive Layer (If present):**

Type: ___

Depth (Inches): ___

Hydric **Soil Present?** **Yes** ___ **No** X

Remarks:

Area comprised entirely of imported fill material.

## HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (any one indicator is sufficient)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) **(Nonriverine)**
- ___ Sediment Deposits (B2) **(Nonriverine)**
- ___ Drift Deposits (B3) **(Nonriverine)**
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Plowed Soils (C6)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) **(Riverine)**
- ___ Sediment Deposits (B2) **(Riverine)**
- ___ Drift Deposits (B3) (Riverine)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Thin Muck Surface (C7)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

**Field Observations:**

Surface Water Present? Yes ___ No X Depth (inches): ___

Water Table Present? Yes ___ No X Depth (inches): ___

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

**Wetland Hydrology Present?** **Yes** ___ **No** X

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

Remarks:

No wetland hydrology observed.

# WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site: Newark Areas 3 & 4 City/County: Newark/Alameda Sampling Date: 17 August 2007
Applicant/Owner: Sobrato Development Companies State: California Sampling Point: SP 76
Investigator(s): A. Breen Section/Township/Range: 8/05 S/01 W
Landform (hillslope, terrace, etc.): agricultural field Local Relief (concave, convex, none): None Slope (%): 0%
Subregion (LRR): Mediterranean California (C) Lat: 37° 30' 44" N Long: 121° 59' 44" W Datum: NAD 83
Soil Map Unit Name: Omni silty clay loam, strongly saline NWI classification None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation X Soil ____ or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____ Soil ____ or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

| | | | | | |
|---|---|---|---|---|---|
| Hydrophytic Vegetation Present? | Yes ____ | No X | Is the Sampled Area within a Wetland? | Yes ____ | No X |
| Hydric Soil Present? | Yes X | No ____ | | | |
| Wetland Hydrology Present? | Yes ____ | No X | | | |

Remarks:
Low chroma soils with some moisture. Hydric soil features considered historic. No wetland hydrology.

## VEGETATION

| Tree Stratum (Use scientific names) | Absolute Cover % | Dominant Species? | Indicator Status |
|---|---|---|---|
| 1. *none* | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| Total Cover: | 0 | | |
| **Sapling/Shrub Stratum** | | | |
| 1. *none* | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| Total Cover: | 0 | | |
| **Herb Stratum** | | | |
| 1. *none* | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| 7. | | | |
| 8. | | | |
| Total Cover: | | | |
| **Woody Vine Stratum** | | | |
| 1. *none* | | | |
| 2. | | | |
| Total Cover: | 0 | | |

% Bare Ground in Herb Stratum 99 % Cover of Biotic Crust ____

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 0 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0% (A/B)

**Prevalence Index worksheet:**

| Total % Cover of: | | Multiply by: |
|---|---|---|
| OBL species | ____ x 1 = | ____ |
| FACW species | ____ x 2 = | ____ |
| FAC species | ____ x 3 = | ____ |
| FACU species | ____ x 4 = | ____ |
| UPL Species | ____ x 5 = | ____ |
| Column totals | ____ (A) | ____ (B) |

Prevalence Index = B/A = ____

**Hydrophytic Vegetation Indicators:**

____ Dominance Text is >50%
____ Prevalence Index is ≤3.0[1]
____ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
X Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

**Hydrophytic Vegetation Present?** Yes ____ No X

Remarks:
Recently disced, bare soil.

## SOIL

Sampling Point: **SP 76**

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

| Depth | Matrix | | Redox Features | | | | | |
|---|---|---|---|---|---|---|---|---|
| (inches) | Color (moist) | % | Color (moist) | % | Type[1] | Loc[2] | Texture | Remarks |
| 0-10 | 10 YR 3/1 | 100 | — | 0 | | | clay | |
| * | | | | | | | | |

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

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

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

**Indicators for Problematic Hydric Soils[3]:**

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

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present.

**Restrictive Layer (If present):**

Type: ___

Depth (inches): ___

**Hydric Soil Present?** Yes X No ___

Remarks:

Very low chroma

* SCS describes high value/low chroma horizon below the Ap.

## HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (any one indicator is sufficient)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) **(Nonriverine)**
- ___ Sediment Deposits (B2) **(Nonriverine)**
- ___ Drift Deposits (B3) **(Nonriverine)**
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Plowed Soils (C6)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) **(Riverine)**
- ___ Sediment Deposits (B2) **(Riverine)**
- ___ Drift Deposits (B3) (Riverine)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Thin Muck Surface (C7)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

**Field Observations:**

Surface Water Present? Yes ___ No X Depth (inches): ___

Water Table Present? Yes ___ No X Depth (inches): ___

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

**Wetland Hydrology Present? Yes** ___ **No** X

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

Remarks:

Entire field shows almost no topographical difference.

# WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site: Newark Areas 3 & 4 City/County: Newark/Alameda Sampling Date: 17 August 2007
Applicant/Owner: Sobrato Development Companies State: California Sampling Point: SP 77
Investigator(s): A. Breen Section/Township/Range: 8/05 S/01 W
Landform (hillslope, terrace, etc.): agricultural field near irrigated, landscaped area Local Relief (concave, convex, none): None Slope (%): 0%
Subregion (LRR): Mediterranean California (C) Lat: 37° 30' 44" N Long: 121° 59' 43" W Datum: NAD 83
Soil Map Unit Name: Omni silty clay loam, strongly saline NWI classification None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation X Soil ____ or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____ Soil ____ or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes X No ____
Hydric Soil Present? Yes X No ____
Wetland Hydrology Present? Yes X No ____

**Is the Sampled Area within a Wetland?** Yes X No ____

Remarks:
Within very dark signature on aerial within midddle of field. Low chroma soils with moisture from irrigated, landscaped area. Artificial hydrology and wetland features resulting from over-watering of landscaped features adjacent to this area.

## VEGETATION

| Tree Stratum (Use scientific names) | Absolute Cover % | Dominant Species? | Indicator Status |
|---|---|---|---|
| 1. *none* | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| Total Cover: | 0 | | |
| **Sapling/Shrub Stratum** | | | |
| 1. *none* | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| Total Cover: | 0 | | |
| **Herb Stratum** | | | |
| 1. *Polypogon maritimus* | 20 | | OBL |
| 2. *Brassica nigra* | 5 | | NOL |
| 3. *Chenopodium album* | 10 | | FAC |
| 4. *Cyperus eragrostis* | 1 | | FACW |
| 5. | | | |
| 6. | | | |
| 7. | | | |
| 8. | | | |
| Total Cover: | | | |
| **Woody Vine Stratum** | | | |
| 1. *none* | | | |
| 2. | | | |
| Total Cover: | 0 | | |

% Bare Ground in Herb Stratum 70 % Cover of Biotic Crust ____

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

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

**Prevalence Index worksheet:**

| Total % Cover of: | | Multiply by: |
|---|---|---|
| OBL species | x 1 = | |
| FACW species | x 2 = | |
| FAC species | x 3 = | |
| FACU species | x 4 = | |
| UPL Species | x 5 = | |
| Column totals | (A) | (B) |

Prevalence Index = B/A = ____

**Hydrophytic Vegetation Indicators:**

____ Dominance Text is >50%
____ Prevalence Index is ≤3.0[1]
____ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
X Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

**Hydrophytic Vegetation Present?** Yes X No ____

Remarks:
Recently disced, near irrigated, landscaped area

## SOIL

Sampling Point: **SP 77**

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

| Depth | Matrix | | Redox Features | | | | | |
|---|---|---|---|---|---|---|---|---|
| (inches) | Color (moist) | % | Color (moist) | % | Type[1] | Loc[2] | Texture | Remarks |
| 0-10 | 10 YR 3/1 | 100 | -- | 0 | | | clay | |
| * | | | | | | | | |

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

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

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

**Indicators for Problematic Hydric Soils[3]:**

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

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present.

**Restrictive Layer (If present):**

Type: ___

Depth (inches): ___

Hydric **Soil Present?** Yes X No ___

Remarks:

Very low chroma, moist soil.

* SCS describes high value/low chroma horizon below the Ap.

## HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (any one indicator is sufficient)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (Nonriverine)
- ___ Sediment Deposits (B2) (Nonriverine)
- ___ Drift Deposits (B3) (Nonriverine)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Plowed Soils (C6)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (Riverine)
- ___ Sediment Deposits (B2) (Riverine)
- ___ Drift Deposits (B3) (Riverine)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Thin Muck Surface (C7)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

**Field Observations:**

Surface Water Present? Yes ___ No X Depth (inches): ___

Water Table Present? Yes ___ No X Depth (inches): ___

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

**Wetland Hydrology Present?** Yes X No ___

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

Remarks:

Entire field shows almost no topographical difference.

# WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site: Newark Areas 3 & 4 City/County: Newark/Alameda Sampling Date: 17 August 2007
Applicant/Owner: Sobrato Development Companies State: California Sampling Point: SP78
Investigator(s): A. Breen Section/Township/Range: 8/05 S/01 W
Landform (hillslope, terrace, etc.): agricultural field Local Relief (concave, convex, none): None Slope (%): 0%
Subregion (LRR): Mediterranean California (C) Lat: 37° 30' 54" N Long: 121° 59' 52" W Datum: NAD 83
Soil Map Unit Name: Omni silty clay loam, strongly saline NWI classification None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation X Soil ____ or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____ Soil ____ or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

| | | | | | |
|---|---|---|---|---|---|
| Hydrophytic Vegetation Present? | Yes ____ | No X | **Is the Sampled Area within a Wetland?** | Yes ____ | No X |
| Hydric Soil Present? | Yes X | No ____ | | | |
| Wetland Hydrology Present? | Yes ____ | No X | | | |

Remarks:
Hydric soil features considered historic. No wetland hydrology.

## VEGETATION

| Tree Stratum (Use scientific names) | Absolute Cover % | Dominant Species? | Indicator Status |
|---|---|---|---|
| 1. *none* | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| Total Cover: | 0 | | |
| **Sapling/Shrub Stratum** | | | |
| 1. *none* | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| Total Cover: | 0 | | |
| **Herb Stratum** | | | |
| 1. *none* | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| 7. | | | |
| 8. | | | |
| Total Cover: | | | |
| **Woody Vine Stratum** | | | |
| 1. *none* | | | |
| 2. | | | |
| Total Cover: | 0 | | |

% Bare Ground in Herb Stratum 99 % Cover of Biotic Crust ____

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 0 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0% (A/B)

**Prevalence Index worksheet:**

| Total % Cover of: | | Multiply by: |
|---|---|---|
| OBL species | x 1 = | |
| FACW species | x 2 = | |
| FAC species | x 3 = | |
| FACU species | x 4 = | |
| UPL Species | x 5 = | |
| Column totals | (A) | (B) |

Prevalence Index = B/A = ____

**Hydrophytic Vegetation Indicators:**

____ Dominance Text is >50%
____ Prevalence Index is ≤3.0[1]
____ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
X Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

**Hydrophytic Vegetation Present?** Yes ____ No X

Remarks:
Recently disced, bare soil. Managed plant communities; vigor and stress responses to wetland conditions.

## SOIL

Sampling Point: **SP 78**

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

| Depth (inches) | Matrix Color (moist) | Matrix % | Redox Features Color (moist) | Redox % | Type[1] | Loc[2] | Texture | Remarks |
|---|---|---|---|---|---|---|---|---|
| 0-10 | 10 YR 3/1 | 100 | — | 0 | | | clay | |
| * | | | | | | | | |

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

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

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

**Indicators for Problematic Hydric Soils[3]:**

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

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present.

**Restrictive Layer (If present):**

Type: _____

Depth (inches): _____

Hydric **Soil Present?** Yes X No ___

Remarks:

Very low chroma, moist soil.

* SCS describes high value/low chroma horizon below the Ap.

## HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (any one indicator is sufficient)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) **(Nonriverine)**
- ___ Sediment Deposits (B2) **(Nonriverine)**
- ___ Drift Deposits (B3) **(Nonriverine)**
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Plowed Soils (C6)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) **(Riverine)**
- ___ Sediment Deposits (B2) **(Riverine)**
- ___ Drift Deposits (B3) (Riverine)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Thin Muck Surface (C7)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

**Field Observations:**

Surface Water Present? Yes ___ No X Depth (inches): ___

Water Table Present? Yes ___ No X Depth (inches): ___

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

**Wetland Hydrology Present? Yes** ___ **No** X

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

Remarks:

Disced field with no apparent topography, near Cherry Avenue.

# WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site: Newark Areas 3 & 4 City/County: Newark/Alameda Sampling Date: 17 August 2007
Applicant/Owner: Sobrato Development Companies State: California Sampling Point: SP 79
Investigator(s): A. Breen Section/Township/Range: 8/05 S/01 W
Landform (hillslope, terrace, etc.): agricultural field Local Relief (concave, convex, none): None Slope (%): 0%
Subregion (LRR): Mediterranean California (C) Lat: 37° 30' 55" N Long: 121° 59' 52" W Datum: NAD 83
Soil Map Unit Name: Omni silty clay loam, strongly saline NWI classification None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation X Soil ____ or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____ Soil ____ or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes X No ____
Hydric Soil Present? Yes X No ____
Wetland Hydrology Present? Yes X No ____

**Is the Sampled Area within a Wetland?** Yes X No ____

Remarks:
Low chroma soils with some moisture. Wetland features due to over-irrigation (artificial) of adjacent landscaped areas. No wetland hydrology.

## VEGETATION

| Tree Stratum (Use scientific names) | Absolute Cover % | Dominant Species? | Indicator Status |
|---|---|---|---|
| 1. *none* | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| Total Cover: | 0 | | |
| **Sapling/Shrub Stratum** | | | |
| 1. *none* | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| Total Cover: | 0 | | |
| **Herb Stratum** | | | |
| 1. *Beta vulgaris* | 10 | | FACU |
| 2. *Brassica nigra* | 4 | | NOL |
| 3. *Cyperus Eragrostis* | 10 | | --- |
| 4. *Agrostis avenacea* | 10 | | FACW |
| 5. | | | |
| 6. | | | |
| 7. | | | |
| 8. | | | |
| Total Cover: | | | |
| **Woody Vine Stratum** | | | |
| 1. *none* | | | |
| 2. | | | |
| Total Cover: | 0 | | |

% Bare Ground in Herb Stratum 60 % Cover of Biotic Crust ____

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 0 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0% (A/B)

**Prevalence Index worksheet:**

| Total % Cover of: | | Multiply by: |
|---|---|---|
| OBL species | x 1 = | |
| FACW species | x 2 = | |
| FAC species | x 3 = | |
| FACU species | x 4 = | |
| UPL Species | x 5 = | |
| Column totals | (A) | (B) |

Prevalence Index = B/A = ____

**Hydrophytic Vegetation Indicators:**

____ Dominance Text is >50%
____ Prevalence Index is ≤3.0[1]
____ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
X Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

**Hydrophytic Vegetation Present?** Yes X No ____

Remarks:
Hydrophytes related to overflow of irrigation water from landscaped areas Vigor and stress responses to wetland conditions.

## SOIL

Sampling Point: **SP 79**

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

| Depth (inches) | Matrix Color (moist) | Matrix % | Redox Features Color (moist) | Redox % | Type[1] | Loc[2] | Texture | Remarks |
|---|---|---|---|---|---|---|---|---|
| 0-10 | 10 YR 3/1 | 100 | --- | 0 | | | clay | |
| * | | | | | | | | |

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

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

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

**Indicators for Problematic Hydric Soils[3]:**

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

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present.

**Restrictive Layer (If present):**

Type: ___

Depth (inches): ___

**Hydric Soil Present?** Yes X **No** ___

Remarks:

Very low chroma, moist soil.

* SCS describes high value/low chroma horizon below the Ap.

## HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (any one indicator is sufficient)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1) **(Nonriverine)**
- ___ Sediment Deposits (B2) **(Nonriverine)**
- ___ Drift Deposits (B3) **(Nonriverine)**
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Plowed Soils (C6)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) **(Riverine)**
- ___ Sediment Deposits (B2) **(Riverine)**
- ___ Drift Deposits (B3) (Riverine)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Thin Muck Surface (C7)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

**Field Observations:**

Surface Water Present? Yes ___ No X Depth (inches): ___

Water Table Present? Yes ___ No X Depth (inches): ___

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

**Wetland Hydrology Present?** Yes X **No** ___

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

Remarks:

Entire field shows almost no topographical difference. Artificial wetland related to irrigated, landscaped areas

**Appendix D. Photographic Monitoring of 3 Representative Wetlands at 5 Monitoring Dates in 2007; with Total Inches of Precipitation and % of the Season Total at Each Date.**

| | January 3, 2007: 5.23", 34% | February 13, 2007: 8.26", 54% | March 6, 2007: 10.53", 68% | March 20, 2007: 11.28", 73% | April 3, 2007: 12.88", 84% |
|---|---|---|---|---|---|
| Wetland A: Hydrology influenced primarily by a freshwater seep, with additional input from incident rainfall, water collects on gentle slope near levee | | | | | |
| | No ponded water | Wetter, but still not significantly ponded | Full charge, *Typha* growing in foreground | Still near full charge in extent and depth | Drier, but still ponding some water |
| Wetland B: Hydrology influenced primarily by **incident rainfall,** water collects seasonally in a discrete depression | | | | | |
| | Incident rainfall ponding within depression | Depression approaching fully charged state | Full charge, furthest extent of ponding | Depression has dried out significantly | Completely dry at surface |
| Wetland C: Hydrology primarily influenced by **ground-water** sources, resulting in extensive, perennial, brackish ponding | | | | | |
| | Already shows significant ponding. | Essentially similar to earlier in season | Essentially similar to earlier in season | Essentially similar to earlier in season | Essentially similar to earlier in season |