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# ***APPENDIX L***

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*Waters of the United State Delineation*

**DRAFT 1-29-04**

**INVESTIGATION OF  
THE PRESENCE OF WATERS OF THE UNITED STATES  
WITHIN THE PROPOSED GAMING FACILITY  
FEDERATED INDIANS OF GRATON RANCHERIA  
SONOMA COUNTY, CALIFORNIA**

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## 1.0 INTRODUCTION

### 1.1 Scope

At the request of representatives of Station Casinos, The Huffman-Broadway Group, Inc. (HBG) conducted an investigation of the geographic extent of possible wetland areas or other types of waters potentially subject to regulation by the Corps of Engineers (Corps) under the Clean Water Act.

### 1.2 Project Location

The site is an approximately 360-acre agricultural parcel on the western boundary of Rohnert Park, Sonoma County, California (Figures 1 and 2). It is bounded on the north by Wilfred Avenue, by Stony Point Road on the west and Whistler Avenue on the east. Stony Point Road forms the western boundary of the site. The southern boundary is approximated by Rohnert Park Expressway and the Laguna de Santa Rosa Flood Control Channel. The eastern boundary of the site is partially defined by Labath Channel (Rohnert Park city limits). A southward extension of north-south-trending Langner Avenue, east of Whistler Avenue, is the easternmost extent of the property; an east-west trending property boundary connects the Whistler and Langner Avenue portions of the eastern boundary.

The site is bifurcated by the Bellevue-Wilfred Channel, also identified on area maps as the North Branch of the Laguna de Santa Rosa. This manmade flood control channel was constructed some time between 1953 and 1965, based on a review of historical aerial photographs taken in those years. Remnants of a stream that historically flowed north-south across the site are visible in aerial photographs about 500 feet west of the Bellevue-Wilfred Channel. Remnants of another historical streambed are evident in the northeastern portion of the site. The study area consists of a relatively flat topography, with elevations above sea level ranging from 81 feet in the southwest to 88 feet in the northwest.

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## 2.0 DELINEATION METHODOLOGY

HBG conducted on-site evaluations of the subject property between August and December 2003. In conducting these evaluations, existing land forms, as well as associated vegetation, hydrology and soil conditions were studied to identify sites that would likely contain wetlands or other waters of the United States as defined by the Clean Water Act. These sites were classified using the U.S. Fish and Wildlife Services' *Classification System for Wetland and Deepwater Habitats*.<sup>1</sup> The landward extent or boundary of these sites was further defined using the 1987 *Corps of Engineers Wetlands Delineation Manual*,<sup>2</sup> supplemented by applicable Corps and EPA regulations, and Corps regulatory guidance letters.

### 2.1 Section 404 - Wetlands

Under Section 404 of the Clean Water Act the Corps is mandated to regulate activities that result in the discharge of dredged or fill material into waters of the United States. Pursuant to the Clean Water Act, the Corps' regulatory definition of wetlands is: ". . . those sites that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions".<sup>3</sup> Implicit in the regulatory definition is the need for a site to meet certain water, soil, and vegetation criteria in order to qualify as a federally regulated wetland. What is implicit in the regulatory definition is made explicit in the 1987 Manual, which identifies the key diagnostic criteria for determining the presence of wetlands as:

- 1) Wetland Hydrology: Inundation or saturation to the surface during the growing season.
- 2) Hydric Soils: Soils classified as hydric or that possess characteristics associated with reducing soil conditions.
- 3) Predominance of Wetland Vegetation: Vegetation classified as facultative, facultative wet, or obligates according to its tolerance of saturated soil conditions.<sup>4</sup>

Specific criteria used to determine the presence or absence of wetland hydrology, soil and vegetation conditions are as follows:

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<sup>1</sup> Cowardin, L.M., V. Carter, F.C. Golet and E.T. LaRoe. 1979. *Classification of Wetlands and Deepwater Habitats of the United States*, U.S. Fish and Wildlife Service, Office of Biological Services. Washington D.C. Publ. No. FWS/OBS-79/31

<sup>2</sup> Anon. 1987. *Corps of Engineers Wetlands Delineation Manual (Technical Report Y-87-1)*, Department of the Army, Waterways Experiment Station. Technical Report Y-87-1 (hereinafter, 1987 Manual).

<sup>3</sup> 33 C.F.R. § 328.3(b).

<sup>4</sup> 1987 Manual, pp. 13 and 14.

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## 2.1.1 Wetland Hydrology

The 1987 Manual states that the diagnostic environmental characteristics indicative of wetland hydrology conditions are: "the site is inundated either permanently or periodically at mean water depths less than or equal to 6.6 feet, or the soil is saturated to the surface at some time during the growing season of the prevalent vegetation" (1987 Manual, p. 14). According to the Manual, indicators of hydrologic conditions that occur in wetlands may include:

<b>Primary Indicators</b>	<b>Secondary Indicators</b>
Watermarks	Oxidized Rhizospheres Associated with Living Roots
Drift Lines	Water-Stained Leaves
Water-Borne Sediment Deposits	FAC-Neutral Test
Drainage Patterns Within Wetlands	Local Soil Survey Data

Department of the Army, U.S. Army Corps of Engineers, Washington, D.C., *Memorandum - Subject: Clarification and Interpretation of the 1987 Manual*, dated March 8, 1992 provides further clarification that:

"Areas which are seasonally inundated and/or saturated to the surface for a consecutive number of days for more than 12.5 percent of the growing season are wetlands, provided the soil and vegetation parameters are met. Areas wet between 5 percent and 12.5 percent of the growing season in most years (see Table 5, page 36 of the 1987 Manual) may or may not be wetlands. Sites saturated to the surface for less than 5 percent of the growing season are non-wetlands. Wetland hydrology exists if field indicators are present as described herein and in the enclosed data sheet."

## 2.1.2 Hydric Soils

The Corps' 1987 Manual states that the diagnostic environmental characteristics indicative of wetland soil conditions are met where "soils are present and have been classified as hydric, or they possess characteristics that are associated with reducing soil conditions" (1987 Manual, p.14). According to the Manual, indicators of soils developed under reducing conditions may include:

1. Organic soils (Histosols)
2. Histic epipedons
3. Sulfidic material
4. Aquic or peraquic moisture regime

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5. Reducing soil conditions
6. Soil colors (chroma of 2 or less)
7. Soil appearing on hydric soils list and
8. Iron and manganese concretions

The Corps Memorandum, dated 20 February 1992, entitled Regional Interpretation of the 1987 Manual, states that the most recent version of National Technical Committee for Hydric Soils (NTCHS) hydric soil criteria will be used. At this writing, criteria published in the June 1991 Hydric Soils of the United States are current. These soil criteria specify at least 15 consecutive days of saturation or 7 days of inundation (flooding or ponding) during the growing season in most years.

A *hydric soil* as defined by the NTCHS (Federal Register, July 13, 1994, Volume 59, No. 133, page 35680) as a soil that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part. The most recent version of the NTCHS's hydric soils criteria reflects those soils that are likely to meet this definition.

1. All Histosols except Folists, or
2. Soils in Aquic suborders, great groups, or subgroups, Albolls suborder, Aquisalids, Pachic subgroups, or Cumulic subgroups that are:
  - a. somewhat poorly drained with a water table equal to 0.0 foot (ft) from the surface during the growing season, or
  - b. poorly drained or very poorly drained and have either:
    - (i) water table equal to 0.0 ft during the growing season if textures are coarse sand, sand, or fine sand in all layers within 20 inches (in), or for other soils
    - (ii) water table at less than or equal to 0.5 ft from the surface during the growing season if permeability is equal to or greater than 6.0 in/hour (h) in all layers within 20 in, or
    - (iii) water table at less than or equal to 1.0 ft from the surface during the growing season if permeability is less than 6.0 in/h in any layer within 20 in, or
3. Soils that are frequently ponded for long duration (7 to 30 days) or very long duration (30 + days) during the growing season, or
4. Soils that are frequently flooded for long duration (7 to 30 days) or very long duration (30+ days) during the growing season.



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### 2.1.3 Predominance of Wetland Vegetation

The 1987 Manual states that the diagnostic environmental characteristics indicating wetland vegetation conditions are met when the prevalent vegetation (more than 50%) consists of macrophytes that are typically adapted to sites having hydrologic and soil conditions described above. In addition, hydrophytic species, due to morphological, physiological, and/or reproductive adaptation(s), have the ability to grow, effectively compete, reproduce, and/or persist in anaerobic soil conditions. Indicators of vegetation associated with wetlands include:

1. More than 50% of the dominant species are rated as Obligate ("OBL"), Facultative Wet ("FACW"), or Facultative ("FAC") on lists of plant species that occur in wetlands;<sup>5</sup>
2. Visual observations of plant species growing in sites of prolonged inundation or soil saturation; and
3. Reports in the technical literature indicating the prevalent vegetation is commonly found in saturated soils" (1987 Manual).

It is important to note that, although there is a high probability that one would expect to find obligate, facultative wet and facultative plants growing in wetlands, there is also a significant possibility that the obligate, facultative wet, and facultative species will occur in sites that do not exhibit wetland soil and/or wetland hydrology conditions.

### 2.2 Section 404 - Other Waters of the United States

In addition to wetlands, the site was examined to determine the presence of other waters of the United States, including other special aquatic sites that would be subject to Corps regulation under the Clean Water Act. The definitions used in delineating these other waters of the United States included the following:

- 1) Other Special Aquatic Sites: In addition to wetlands, EPA's 404(b)(1) Guidelines list mud flats, vegetated shallows, and coral reefs as other types of special aquatic sites.
  - (a) Mud Flats: ". . . broad flat areas along the sea coast and in coastal rivers to the head of tidal influence and in inland lakes, ponds, and riverine systems. . . . Coastal mud flats are exposed at extremely low tides and inundated at high tides with the water table at or near the surface of the substrate. The substrate of mud flats contains organic material and particles smaller in size than sand. They are either unvegetated or vegetated only by algal mats."<sup>6</sup>

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<sup>5</sup> Reed, P B 1988 National List of Plant Species That Occur in Wetlands: California (Region 0) Biological Report 88(26 10) May 1988 National Ecology Research Center, National Wetlands Inventory, U S Fish and Wildlife Service, St Petersburg, FL

<sup>6</sup> 40 C F R ' 230 42.

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- (b) Vegetated Shallows: ". . . permanently inundated areas that under normal circumstances support communities of rooted aquatic vegetation, such as turtle grass and eelgrass in estuarine or marine systems . . ." <sup>7</sup>
- (c) Coral Reefs: ". . . the skeletal deposit, usually of calcareous or siliceous materials, produced by the vital activities of anthozoan polyps or other invertebrate organisms present in growing portions of the reef." <sup>8</sup>
- 2) Territorial Seas: The limit of jurisdiction in the territorial seas is measured from the baseline in a seaward direction a distance of three nautical miles. <sup>9</sup>
- 3) Tidal Waters of the United States: "The landward limits of jurisdiction in tidal waters extends to the high tide line . . ." or, when adjacent non-tidal waters of the United States are present, to the limits of jurisdiction for such non-tidal waters. <sup>10</sup> High tide is further defined to include the line reached by spring high tides and other high tides that occur with periodic frequency. <sup>11</sup>
- 4) Non-tidal Waters of the United States: In the absence of adjacent wetlands, the jurisdiction extends to the ordinary high water mark, or when adjacent wetlands are present, the jurisdiction extends beyond the ordinary high water mark to the limit of the adjacent wetlands. <sup>12</sup>

### 2.3 Mapping

The aerial photography used to prepare the wetland maps was produced by Aero-Geodetic Corporation. The geographic extent of wetlands and other waters of the United States identified in these aerial maps were then field verified (groundtruthed) by Robert A. Karn & Associates, Inc. through fill-in and detail topography, using GPS (Global Positioning Systems).

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<sup>7</sup> 40 C.F.R. ' 230.43  
<sup>8</sup> 40 C.F.R. ' 230.44.  
<sup>9</sup> 33 C.F.R. ' 328.4(a).  
<sup>10</sup> 33 C.F.R. ' 328.4(b).  
<sup>11</sup> 33 C.F.R. ' 328.3(d)  
<sup>12</sup> 33 C.F.R. ' 328.4(c)(1) and (2).

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## 3.0 TECHNICAL FINDINGS

The site was investigated in its entirety from August through November 2003, according to the methodology described in Section 2.0. Subsequent to an initial field reconnaissance in December 2003 and January 2004, study site selection was based on an examination of sites which would likely pond, flood or saturate based on their geographic position, soil permeability and drainage characteristics (as determined by NRCS, formerly SCS, soils mapping and random test pits dug with a sharp-shooter) in relationship to well drained upland sites. A total of over 800 soil pits were analyzed during the investigation. The following discussion reports the hydrology, soil and vegetation conditions observed at the study site during the course of the investigation.

### 3.1 Soil Conditions

A review of the NRCS Soil Survey for Sonoma County, California indicates the presence of three soil series on the site: CeA-Clear Lake clay series, 0-2% slopes, the WhA-Wright loam series, wet 0-2% slopes, and the WoA-Wright loam series, shallow, wet, 0-2% slopes series, (Attachment 3). A review of the national list for hydric soils (December 1987) and Sonoma County hydric soils list (March 1992) indicate Clear Lake clay to be a hydric soil and the two Wright loam series as being non hydric. It is important to note, however, that although a soil for a particular site may be classified as a hydric soil by the NRCS listing, it can nevertheless fail to be hydric and presently exhibit wetland soil characteristics if it has become effectively drained (Corps 1987).

The Clear Lake series (all three soil series as described by the 1972 Soil Survey for Sonoma County, California) consists of poorly drained soils formed on old alluvial fans derived from basic and sedimentary rock. Elevations range from 20 to 300 feet above mean sea level. Permeability is slow and runoff is slow to very slow. There is no hazard of erosion. This soil is mainly used for farming and pasture.

The Wright series consists of somewhat poorly drained and moderately well drained loams that have a clay subsoil, underlain by old valley plain alluvium of mixed origin. Elevation ranges from 70 to 300 feet. Permeability is moderate and runoff slow to very slow. There is no hazard of erosion. This soil is used mainly for dryland and irrigated pasture.

A total of over 800 soil pits were dug using a sharp shooter style shovel to a maximum depth of 12 inches for the evaluation of wetland hydrology and vegetation conditions (Attachment 5). The soils found on site were classified as having or not having indicators of wetland soil conditions using the methodology in the 1987 Manual. Soils which were presently hydric were typically black (10YR 2/1) clays with light redoximorphic features (10 YR 4/6 mottles) or 10 YR 3/2 with prominent redoximorphic features (10 YR 4/6 mottles). Soils with redoximorphic features were also found in the upland areas surrounding the channels. However, the redoximorphic features are most likely the result of continual heavy irrigation during the dry season.

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**Table 1. Hydrologic Characteristics of Soil Types Found During On-Site Investigations<sup>1</sup> and Review of NRCS Soils Survey Data**

Indicator Observed	Wright Loam	Wright Loam, ponded	Clear Lake Clay
Map Unit Symbol	WhA	WoA	CeA
Landform	Floodplain	Floodplain	Floodplain
Slope	0-2%	0-2%	0-2%
Groundwater (depth to surface) <sup>1</sup>	3-5'	3-5'	3-5'
Flooding <sup>1</sup>	Frequent	Frequent	Frequent
Duration <sup>1</sup>	Long	Long	Very-Long
Drainage Class <sup>2</sup>	Somewhat poorly drained	Somewhat poorly drained	Poorly Drained
Permeability <sup>2</sup>	Moderate	Moderate	Slow
Runoff <sup>2</sup>	Slow to Very Slow	Slow to Very Slow	Slow to Very Slow

<sup>1</sup>Information is from field survey data sheets.

<sup>2</sup>From 1990 NRCS Soil Survey for Sonoma County, California

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**Table 2. Wetland Soil Indicators Found During On-Site Investigations<sup>1</sup>**

Indicator Observed	Wright Series Loam, Wet	Wright Series Loam	Clear Lake Clay
Map Unit Symbol	WhA	WoA	CeA
Land Form	Floodplain	Floodplain	Floodplain/ historic channel/ depressional areas
Histosol			
Histic Epipedon			
Sulfidic Odor			
Aquic Moisture Regime	X	X	X
Gleyed or Low-Chroma Colors	X	X	X
Redoximorphic features (mottles)	X	X	X
Concretions			
High Organic Content in Surface Layer in Sandy Soil			
Organic Streaking in Sandy Soil			
Listed on Local Hydric Soil List			X
Listed on National Hydric Soil List			X

<sup>1</sup>Data taken from field data sheets.

### 3.2 Hydrology Conditions

The project site is located in the Santa Rosa flood plain. The Santa Rosa Flood Control Channel (SRFCC) runs through the site; the straight channel replaces the weaving drainage which formerly existed on the project site.

The majority of the site has been in agricultural production for decades. While the area southwest of the SRFCC has been fallowed and a small parcel off of Whistler Avenue was not used for agricultural purposes, the rest of the site is still currently used for agricultural purposes. However, the entire site has undergone significant human disturbance. These disturbances

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include plowing, heavy and continuous irrigation during the summer months, grazing, and sediment discharges to adjacent water courses caused by grazing and agricultural activities.

The property is mostly flat pasture land with occasional depressions and drainages. Indicators of wetland hydrology were strong throughout the majority of the site, especially the presence of redoximorphic features and oxidized rhizospheres. Some of these indicators appeared in areas where they would not typically be present. This could be the result of decades of heavy irrigation, both in areas which are presently irrigated and in historically irrigated areas. Also, areas surrounding the historic drainage, previous to the SRFCC, showed wetland features. These features were predominantly redoximorphic features and oxidized rhizospheres, but also included sediment deposits (Table 3; also see Attachment 4). Some depressed areas appear to be caused by livestock and vehicular traffic, while others are natural.

**Table 3. Wetland Hydrology Indicators Found During On-Site Investigations<sup>1</sup>**

Indicator Observed		Wright Series Loam, Wet	Wright Series Loam	Clear Lake Clay
Map Unit Symbol		WhA	WoA	CeA
Land Form <sup>2</sup>		Floodplain	Floodplain	Floodplain
Recorded Data <sup>2</sup>				X
Inundated/Ponded <sup>2 &amp; 3</sup>				X
Saturated in Upper 12 inches <sup>3</sup>		X	X	X
Water Marks				
Drift Lines				
Sediment Deposits				X
Drainage Patterns in Wetlands				
Oxidized Rhizospheres:	Old Roots	X	X	X
	Young Roots	X	X	X
Water Stained Leaves				
Local/Federal Soil Survey Data				
FAC-Neutral Test		X	X	X

<sup>1</sup> Data taken from field data sheets.

<sup>2</sup> On-site photographs.

<sup>3</sup> Sufficient to meet criteria defined by Corps 1987 Methodology and subsequent official guidance documentation.

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### 3.3 Vegetation Conditions

A prevalence of wetland vegetation was found associated with depressional areas and an abandoned stream channel. Also, some of the irrigated fields contained wetland plant growth. The dominant vegetation includes curly dock (*Rumex crispus*), barnyard grass (*Echinochloa crusgalli*), spiny cocklebur (*Xanthium spinosum*), rough cocklebur (*Xanthium strumarium*), and yellow bristle grass (*Setaria glauca*). The most common upland vegetation was mustard (*Brassica Rapa*), which occurred along many boundaries in the western portion of the site. Attachment 5 provides a complete list of plant species encountered on and immediately adjacent to the site. The list is based on a site visit on August 10, 2003.

### 3.4 Areas Meeting the Technical Criteria for Wetlands

Based on the evaluation which was conducted following the Corps 1987 Methodology and subsequent guidance documents, it was determined that a total of 53.9 acres of temporarily flooded palustrine emergent wetlands and 1.43 acres of drainage channels occur within the study site (Attachment 6). The acreage of wetlands found on the various land forms evaluated at the site is shown in Table 4 below.

**Table 4. Acreages of Wetlands Sites Identified using the Corps 1987 Methodology**

NATIONAL WETLANDS INVENTORY HABITAT TYPE	LAND FORM	ACRES
Temporarily Flooded Palustrine Emergent Wetlands	Depressional Areas	53.9
Temporarily Flooded Palustrine Emergent Wetlands	Drainage Channels	1.43
<b>TOTAL</b>		<b>55.33</b>

### 3.5 Other Aquatic Habitats Found

No unvegetated shorelines, ponded areas or other aquatic habitats were found which would qualify as "other waters of the United States."

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### 4.0 AREAS POTENTIALLY REGULATED BY THE CORPS OF ENGINEERS

The EPA and Corps regulations define wetlands as "those sites that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar sites" (40 C.F.R. ' 230.3(t); 33 C.F.R. ' 328.3(b)).

The term "waters of the United States" is defined in 40 C.F.R. ' 328.3(a) as:

- (1) All waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;
- (2) All interstate waters including interstate wetlands;
- (3) All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation or destruction of which could affect interstate or foreign commerce including any such waters:
  - (i) which are or could be used by interstate or foreign travelers for recreational or other purposes; or
  - (ii) from which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or
  - (iii) which are used or could be used for industrial purpose by industries in interstate commerce.
- (4) All impoundments of waters otherwise defined as waters of the United States under the definition;
- (5) Tributaries of waters identified in paragraphs [1-4] of this section;
- (6) The territorial sea;
- (7) Wetlands adjacent to waters (other than waters that are themselves wetlands) identified in paragraphs [1-6] of this section (40 C.F.R. ' 230.3(s); 33 C.F.R. ' 328.3(a)).



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Notwithstanding the regulatory definition of waters of the United States, however, in the November 13, 1986 Federal Register preamble to Army Corps of Engineers regulations, "waters of the United States" is said to be interpreted by the U.S. Environmental Protection Agency (EPA) to include areas:

- a. Which are or would be used as habitat by birds protected by Migratory Bird Treaties; or
- b. Which are or would be used as habitat by other migratory birds which cross state lines; or
- c. Which are or would be used as habitat for endangered species; or
- d. Used to irrigate crops sold in interstate commerce (51 Fed. Reg. 41217).

However, in light of the recent U.S. Supreme Court decision (January 9, 2001)<sup>14</sup>, "a" and "b" above, at a minimum, no longer apply for the regulation of isolated waters.

### 4.1 Section 404 - Wetlands and Other Waters of the United States Potentially Subject To Corps Regulation

A total of 55.33 acres of wetlands are potentially regulated by the Corps under Section 404 of the Clean Water Act. Table 5 summarizes these acreages. Attachment 6 shows the location of these areas. No other types of waters of the United States are found on the project site.

**Table 5. Acreages of Wetlands and Other Waters Potentially Subject to Corps Regulation**

LAND FORM	National Wetlands Inventory Habitat Type	Acres	
		Wetlands and other waters of the U.S. determined Present using Corps 1987 manual and guiding documents	Potentially Subject to Corps Regulation
Depressional Areas <sup>1</sup>	Temporarily Flooded Palustrine Emergent Wetlands	53.9	53.9
Drainage Ditches	Temporarily Flooded Palustrine Emergent Wetlands with open water area	1.43	1.43
	<b>TOTAL</b>	<b>55.33</b>	<b>55.33</b>

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### 5.0 AREAS POTENTIALLY EXEMPT FROM CORPS JURISDICTION

A number of exemptions from Clean Water Act regulations exist for areas that would otherwise qualify as waters of the United States. These exemptions fall into two basic categories: (1) discretionary, and (2) non-discretionary.

#### 5.1 Discretionary Exemptions

As described in the preamble discussion of the Corps regulations in the November 13, 1986 *Federal Register*, certain areas which meet the technical definition of wetlands generally are not considered waters of the U.S. [33 CFR 328.3(a)]. Such areas include:

- (a) Non-tidal drainage and irrigation ditches excavated on dryland;
- (b) Artificially irrigated areas which would revert to upland if the irrigation ceased;
- (c) Artificial lakes or ponds created by excavating and/or diking dryland to collect and retain water and which are used exclusively for such purposes as stock watering, irrigation, settling basins, or rice growing;
- (d) Artificial reflecting or swimming pools or other small ornamental bodies of water created by excavating and/or diking dry land to retain water for primarily aesthetic reasons; and
- (e) Water filled depressions created in dry land incidental to construction activity and pits excavated in dry land for the purpose of obtaining fill, sand, or gravel unless and until the construction or excavation operation is abandoned and the resulting body of water meets the definition of waters of the United States.

It should be noted that the Corps and EPA reserve the right to determine that a particular waterbody within these categories is a water of the United States on a case-by-case basis.

#### 5.2 Non-Discretionary Exemptions

In addition to the discretionary exemptions described above, the Corps' regulations contain a non-discretionary exemption for waste treatment systems designed to meet the requirements of the Clean Water Act [33 CFR 328.3(a) (7)]. Such areas, which include treatment ponds and lagoons, are not considered waters of the U.S.

#### Discussion

Aquatic resources on the Rohnert Park site were examined with respect to the above exemptions from Clean Water Act regulations. Through this analysis, HBG determined that **none** of the resources meet the above described exemption criteria.

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### 6.0 AREAS POTENTIALLY NOT SUBJECT TO CORPS JURISDICTION

#### Areas Not Regulated by the Corps

On the basis of the recent U.S. Supreme Court decision *Solid Waste Agency of Northern Cook County v. United States Army Corps of Engineers*, some isolated wetlands may be disclaimed from Corps jurisdiction providing they meet the following criteria: (1) non-tidal, (2) non-navigable, (3) not hydrologically connected to navigable waters, and (4) not subject to foreign or interstate commerce. Areas meeting the regulatory definitions of wetlands on the Rohnert Park site were reviewed to determine whether they could be disclaimed from Corps jurisdiction as isolated wetlands. Although several wetlands on the project site are hydrologically isolated, all of them are adjacent to San Francisco Bay, a navigable waterway, precluding their being disclaimed based on the SWANCC decision.

#### Discussion

Aquatic resources on the Rohnert Park site were examined with respect to the above criteria. Through this analysis, HBG determined that **none** of the aquatic habitats examined met the above described criteria for establishing that Corps jurisdiction is not present.

## DRAFT 1-29-04

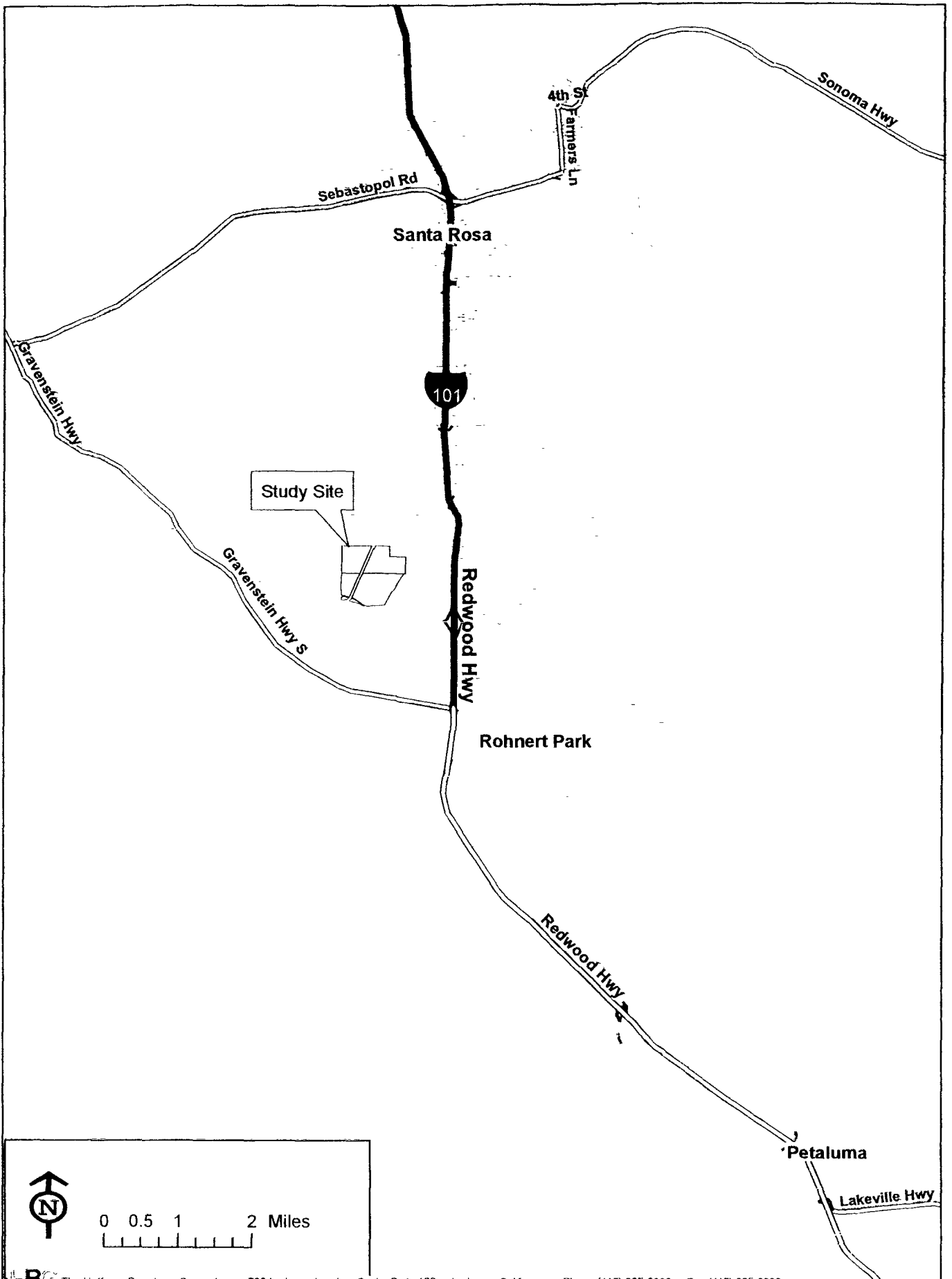
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- U.S. Department of Agriculture, Natural Resources Conservation Service. 1990. *Soil Survey of Sonoma County, California*.



DRAFT 1-29-04

**Attachment 1.**  
**Site Location Map**



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**Attachment 1. Site Location Map**

**DRAFT 1-29-04**

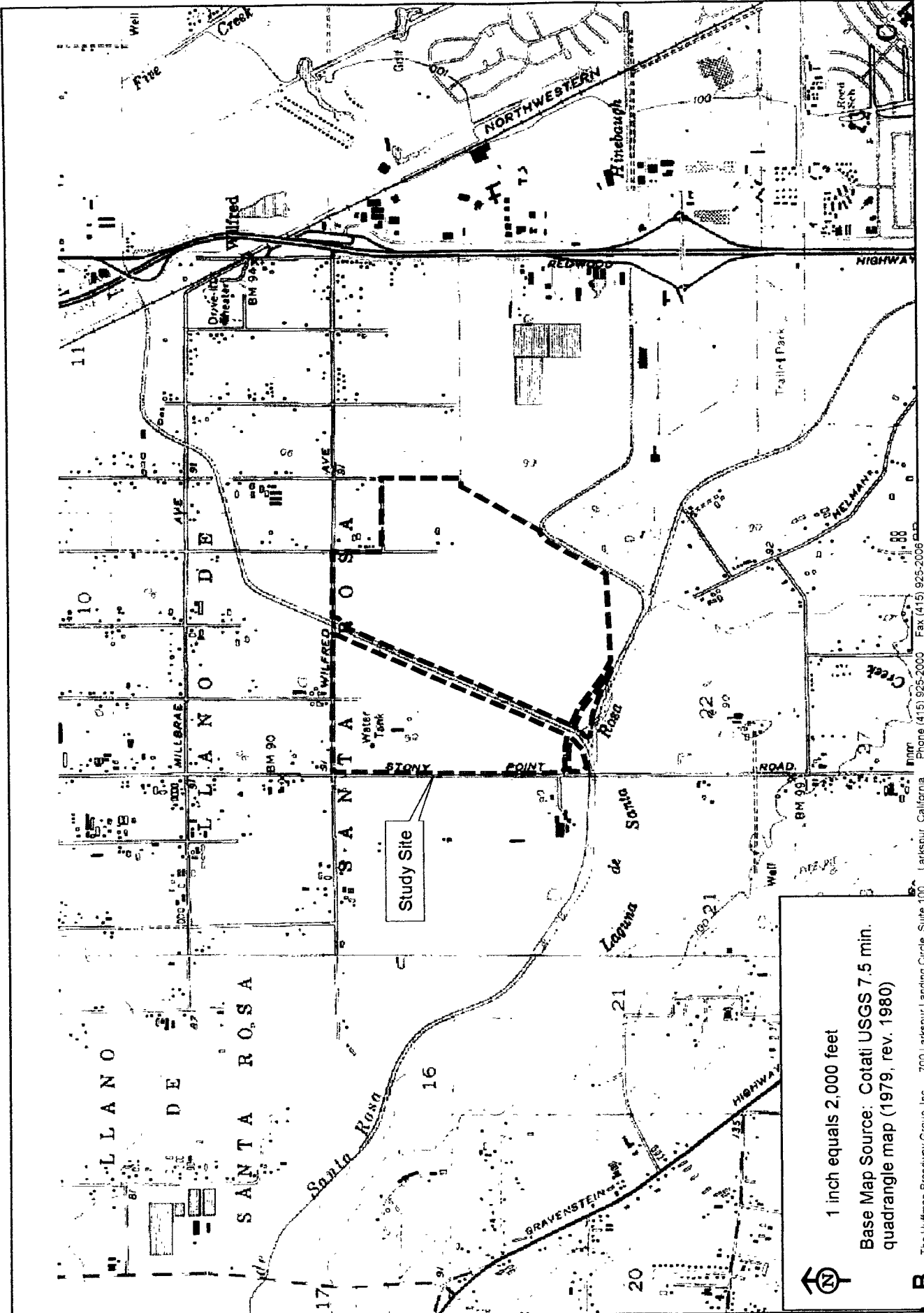
## Attachment 2



DRAFT 1-29-04

**Attachment 2.**

**USGS Topographic Map with Location of the Rohnert Park Site**



1 inch equals 2,000 feet

Base Map Source: Cotati USGS 7.5 min. quadrangle map (1979, rev. 1980)

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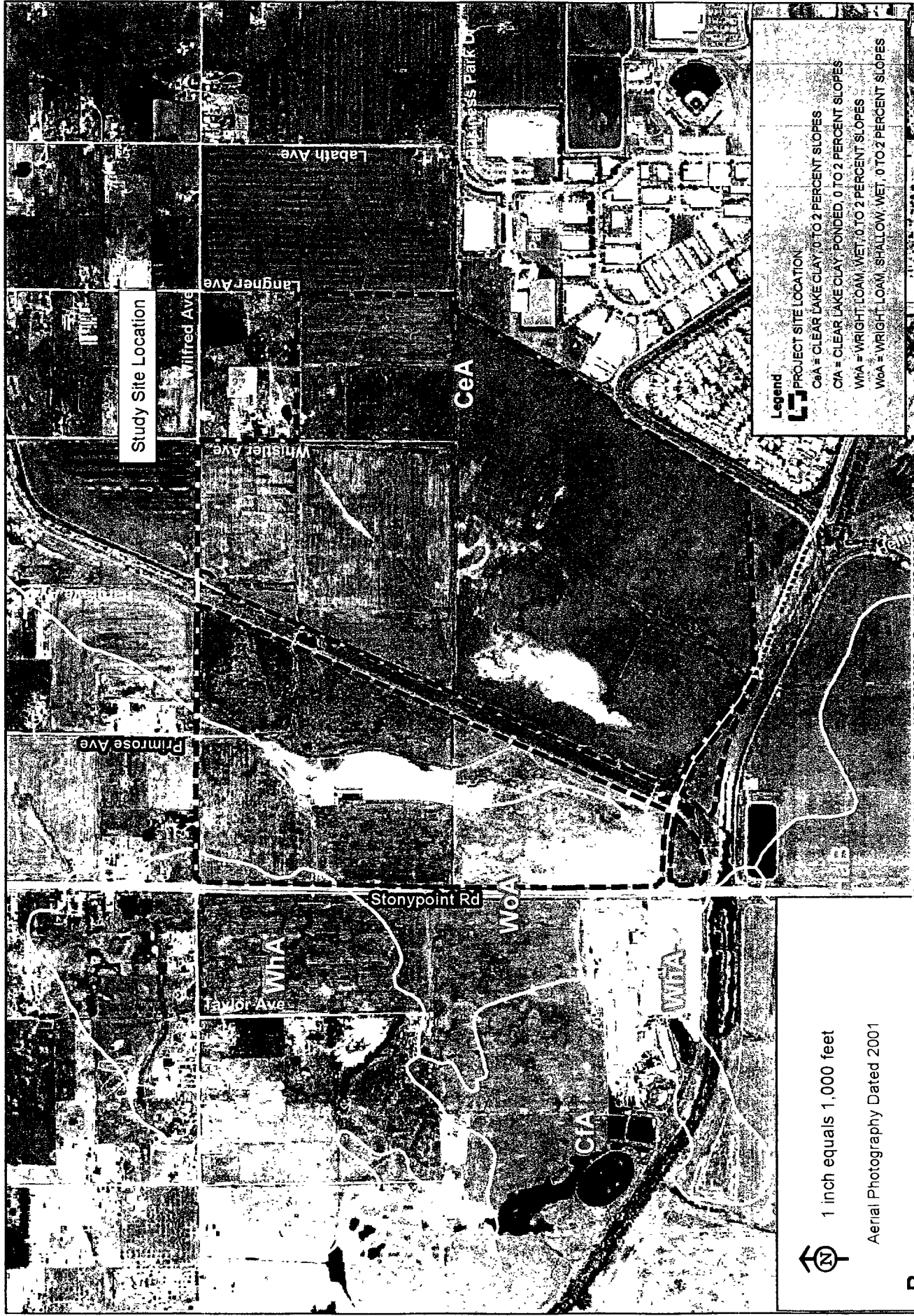
**Attachment 2. USGS Topographic Map of Study Site**

**DRAFT 1-29-04**

**Attachment 3**

DRAFT 1-29-04

**Attachment 3.**  
**NRCS Soil Survey Map**



1 inch equals 1,000 feet

Aerial Photography Dated 2001

**Legend**

**PROJECT SITE LOCATION**

- C6A = CLEAR LAKE CLAY, 0 TO 2 PERCENT SLOPES
- CIA = CLEAR LAKE CLAY, PONDED, 0 TO 2 PERCENT SLOPES
- W6A = WRIGHT LOAM, WET, 0 TO 2 PERCENT SLOPES
- W6A = WRIGHT LOAM, SHALLOW, WET, 0 TO 2 PERCENT SLOPES

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**Attachment 3. NRCS Soil Survey Map**

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**Attachment 4.**

**Data Sheets and Sample Location for Detailed Analysis of Wetland Indicators**

[In Process; Additional Data Collection and Analysis Occurring Through 2004 Rainy Season]





# DRAFT 1-29-04

## **Attachment 5. List of Plant Species Encountered within the Rohnert Park Site at the Proposed Mitigation Site**

Through field visit 10/8/03

FLOWERING PLANTS (ANGIOSPERMAE - DICOTYLEDONEAE)

### ACERACEAE

*Acer negundo* ssp. *californicum*

### AMARANTHACEAE

\**Amaranthus hybridus*

### APIACEAE

\**Conium maculatum*

\**Daucus carota*

*Eryngium aristulatum* var. *aristulatum*

*Eryngium armatum*

\**Foeniculum vulgare*

\**Torilis arvensis*

### ASTERACEAE

*Artemisia douglasiana*

\**Carduus pycnocephalus*

\**Carthamus lanatus*

\**Centaurea calcitrapa*

\**Centaurea solstitialis*

\**Cichorium intybus*

\**Cirsium vulgare*

*Euthamia occidentalis*

*Hemizonia congesta* ssp. *congesta*

\**Hypochaeris radicata*

\**Lactuca serriola*

\**Lactuca saligna*

\**Leontodon taraxacoides* ssp. *taraxacoides*

\**Picris echioides*

\**Senecio vulgaris*

\**Silybum marianum*

\**Sonchus asper*

\**Sonchus oleraceus*

\**Taraxacum officinale*

\**Tragopogon porrifolius*

*Xanthium spinosum*

*Xanthium strumarium*

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## BRASSICACEAE

- \**Brassica rapa*
- \**Coronopus didymus*
- \**Lepidium pinnatifidum*
- \**Raphanus sativus*

## CARYOPHYLLACEAE

- \**Spargula arvensis*
- \**Stellaria media*

## CHENOPODIACEAE

- Atriplex triangularis*
- Chenopodium berlandieri*
- \**Chenopodium strictum* var. *glaucophyllum*

## CONVOLVULACEAE

- \**Convolvulus arvensis*

## CUSCUTACEAE

- Cuscuta californica* var. *californica*

## DIPSACACEAE

- \**Dipsacus fullonum*

## EUPHORBIACEAE

- (\*?) *Chamaesyce* cf. *polycarpa*
- Eremocarpus setigerus*

## FABACEAE

- \**Lotus corniculatus*
- \**Melilotus alba*
- \**Trifolium fragiferum*
- \**Trifolium hirtum*
- \**Trifolium repens*

## FAGACEAE

- Quercus lobata*

## GERANIACEAE

- \**Erodium moschatum*

## JUGLANDACEAE

- \**Juglans californica* var. *hindsii*
- \**Juglans regia*

# DRAFT 1-29-04

## LAMIACEAE

*Mentha arvensis*

## LYTHRACEAE

\**Lythrum hyssopifolium*

## MALVACEAE

\**Malva parviflora*

## OLEACEAE

*Fraxinus latifolia*

## ONAGRACEAE

*Epilobium brachycarpum*

*Epilobium pygmaeum* (= *Boisduvalia glabella*)

\**Ludwigia peploides* ssp. *montevidensis*

## PLANTAGINACEAE

\**Plantago lanceolata*

\**Plantago major*

## POLYGONACEAE

\**Polygonum arenastrum*

*Polygonum hydropiperoides*

*Polygonum lapathifolium*

\**Polygonum prolificum*

*Polygonum punctatum*

\**Rumex crispus*

\**Rumex pulcher*

*Rumex salicifolius* var. *transitorius*

## PORTULACACEAE

\**Portulaca oleracea*

## ROSACEAE

\**Prunus* sp.

\**Rubus discolor*

## SALICACEAE

*Populus fremontii*

*Salix laevigata*

*Salix lasiolepis*

*Salix lucida* ssp. *Lasiandra*

# DRAFT 1-29-04

## FLOWERING PLANTS (ANGIOSPERMAE - MONOCOTYLEDONEAE)

### ALISMATACEAE

*Alisma plantago-aquatica*

### CYPERACEAE

*Cyperus eragrostis*

\**Scirpus tuberosus*

### JUNCACEAE

*Juncus patens*

*Juncus tenuis*

### LILIACEAE

(\*?) *Allium* sp.

*Chlorogalum pomeridianum*

### POACEAE

\**Avena barbata*

\**Bromus catharticus*

\**Bromus diandrus*

\**Bromus hordeaceus*

\**Bromus secalinus*

\**Crypsis schoenoides*

\**Dactylis glomerata*

\**Digitaria sanguinalis*

*Distichlis spicata*

\**Echinochloa colona*

\**Echinochloa crus-galli*

\**Festuca arundinacea*

*Glyceria occidentalis*

\**Holcus lanatus*

*Hordeum brachyantherum*

\**Hordeum marinum* ssp. *gussoneanum*

*Leymus triticoides*

\**Lolium multiflorum*

\**Lolium perenne*

\**Panicum dichotomiflorum*

\**Phalaris aquatica*

\**Polypogon monspeliensis*

*Setaria gracilis*

### TYPHACEAE

*Typha domingensis*

*Typha latifolia*

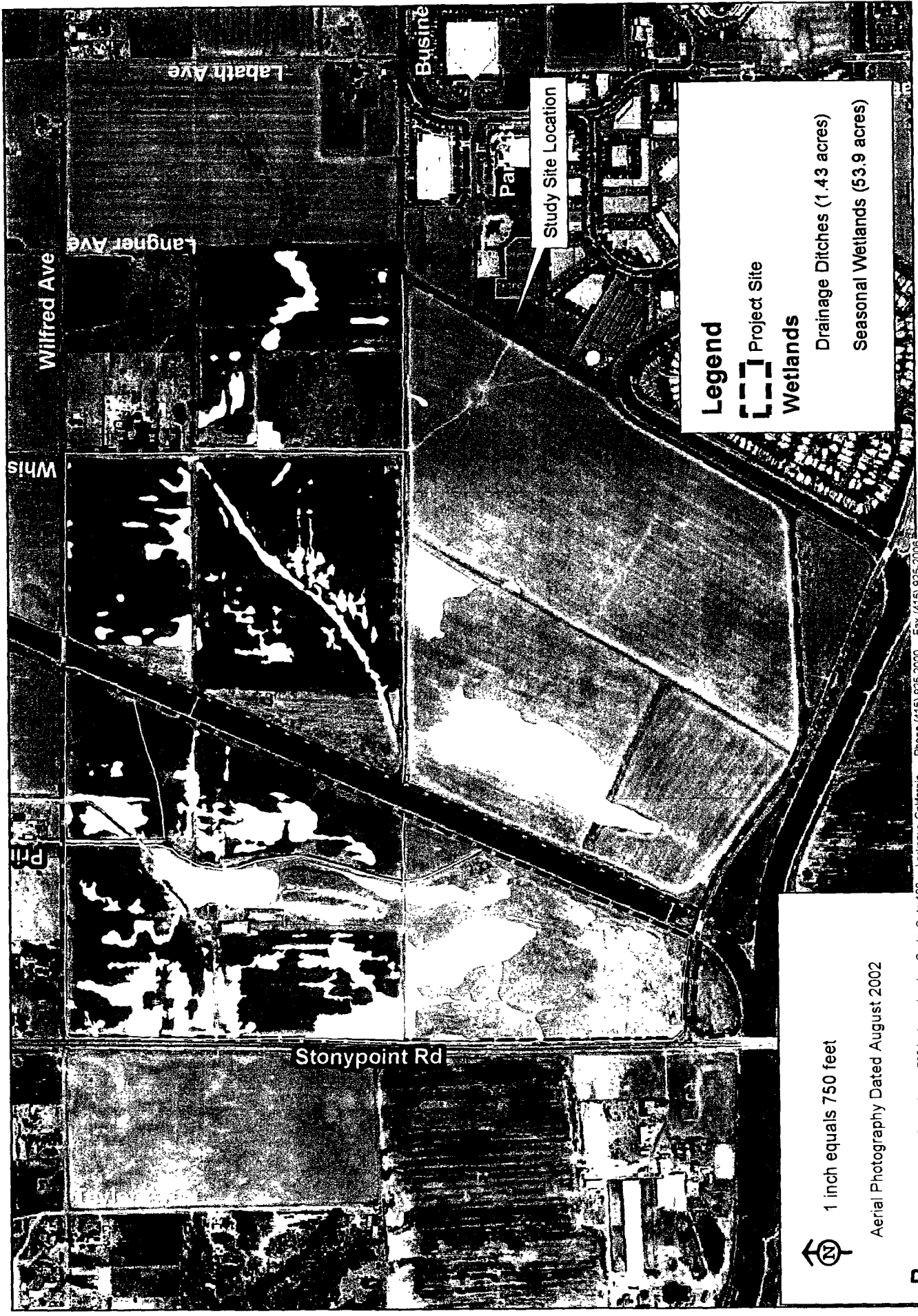
\*Species introduced or naturalized in the study area



DRAFT 1-29-04

**Attachment 6.**

**Wetlands & Other Waters of the U.S.  
Potentially Subject to Corps Jurisdiction**



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