

*Apéndice 2*

*Determinación Jurisdiccional de Humedales*

## **Determinación Jurisdiccional de Humedales**

### **Nota al Lector:**

Posterior a la emisión de este estudio se modificó el Plano Conceptual del Proyecto Residencial Finca Barrancas. El Proyecto según redefinido mantiene el número original de unidades, aproximadamente 2,300. El límite del predio propuesto fue modificado en su porción noreste, reduciéndose el área del predio. Estos cambios no modifican las conclusiones del estudio de referencia.

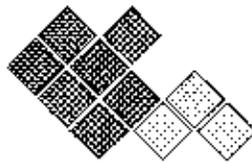
**Wetland Jurisdictional Determination Study**

**Barrancas Property  
Ponce, Puerto Rico**

PREPARED FOR:

**PICERNE REAL ESTATE GROUP**

PREPARED BY:



**CSA Group**

San Juan, Puerto Rico

June 2003

---

**CSA GROUP**

---

**TABLE OF CONTENTS**

TABLE OF CONTENTS..... i

1.0. Executive Summary ..... 1

2.0. Introduction and Project Description ..... 2

3.0. Site Description ..... 4

    3.1. Soils..... 4

    3.2. National Wetland Inventory..... 5

    3.3. Flood Zones ..... 5

4.0. Approach and Methodology..... 6

5.0. Results and Discussion..... 8

6. References ..... 9

    Figures

    Appendices

**LIST OF TABLES**

    Table 1: Soil Series within Barrancas Property

**LIST OF APPENDICES**

    Appendix A: Figures

    Appendix B: Data Forms

    Appendix C: Photographic Documentation

---

## 1.0. EXECUTIVE SUMMARY

CSA Group was contracted by Picerne Real Estate Group to perform a Wetland Jurisdictional Determination (WJD) Study for Barrancas property in the Municipality of Ponce, to comply with the regulatory requirements of the U.S. Army Corps of Engineers (USACE), by virtue of Section 404 of the Clean Water Act of 1972, as amended. The project consists of a housing development in a parcel of 230 acres. A total of 2,300 housing units are proposed to be constructed within the Property.

This report is divided into the following sections:

- ❖ Site Description;
- ❖ Approach and Methodology;
- ❖ Results and Discussion; and,
- ❖ Conclusions and Recommendations.

Appendix 1 includes Site location, Soil survey, National Wetland Inventory, and Flood Zones, maps. Appendices 2 and 3 include photographic documentation of the study area and the Data Forms (from the 1987 Corps of Engineers Wetland Delineation Manual) that summarize the data gathered during field visits, respectively.

Based in the information obtained, this study reveals that no jurisdictional wetland areas are found within Barrancas property. Details on the findings of this study are explained in the following sections.

---

## 2.0. INTRODUCTION AND PROJECT DESCRIPTION

CSA Group was contracted by Picerme Real Estate Group to perform a WJD Study for Barrancas Property in the Municipality of Ponce, to comply with the regulatory requirements of the USACE, by virtue of Section 404 of the Clean Water Act of 1972, as amended. The project consists of a housing development in a parcel of 230 acres. A total of 2,300 housing units are proposed to be constructed within the Property.

This report is divided into the following sections:

- ❖ Site Description;
- ❖ Approach and Methodology;
- ❖ Results and Discussion; and,
- ❖ Conclusions and Recommendations.

Appendix 1 includes Site location, Soil survey, National Wetland Inventory, and Flood Zones, maps. Appendices 2 and 3 include photographic documentation of the study area and the Data Forms (from the 1987 Corps of Engineers Wetland Delineation Manual) that summarize the data gathered during field visits, respectively.

The following personnel conducted the WJD Study for Barrancas Property, in May 2003:

Walter E. Soler-Figueroa, Biologist and Wetland Specialist;

Rubén Rivera, Agronomist and Soil Scientist;

Jorge L. Coll, Biologist and Wetland Specialist;

José Salguero, Field Biologist and Plant Specialist; and

Agustín Lizardi, Field Biologist and Plant Specialist.

---

The following personnel of CSA Group provided additional support:

Andrew Campos, GIS Analyst

Francisco De Castro, Senior Scientist revised the manuscript and provided technical guidance.

### 3.0. SITE DESCRIPTION

Barrancas property (the Property), which is approximately 230 acres, is located in South-central Puerto Rico, in the Municipality of Ponce (see Figure 1) between Machuelo Abajo and Sabanetas wards. It is delimited by the Río Bucaná to the West; and by various properties adjacent to roads PR-52, PR-10, and PR-14.

### 3.1. SOILS

The soils found at the Property consist of the series: Aguilita Gravelly Clay Loam, Yauco Silty Clay Loam, and Cintrona Clay (see Figure 2). The topography of the Property consists mostly of hills ranging from 30 to 100 meters above mean sea level. Table 1 shows the soil series that are found within the study area.

Table 1. Soil series within Barrancas property.

Soil Series	Soil Description
Aguilita Gravelly Clay Loam	Well-drained, calcareous, moderately steep to very steep soil on foot of slopes, side slopes, and rounded hiltops in the semi-arid area. Moderately permeable.
Yauco Silty Clay Loam	Strongly sloping soil on small rounded hills and foot slopes below the limestone hills. Medium runoff. Erosion is a hazard. Generally use as pasture. Sprinkler irrigation can be used to control erosion if irrigation water is available.
Cintrona Clay	Poorly drained, calcareous, nearly level soils on slightly concave terrain in the flood plains of the semiarid area. Runoff is slow, and the soil is not subject to erosion.

---

### **3.2. NATIONAL WETLAND INVENTORY**

The National Wetland Inventory Map is shown in **Figure 3**. As demonstrated in this figure, neither wetlands nor rivers are found within the Property, however canalized Río Bucaná is found to the West and out of the Property.

### **3.3. FLOOD ZONES**

**Figure 5** shows that there are no flood zones within the Property. The closest flood zone is the canalized Río Bucaná, which is classified as Zone 2 (500-year rain).

---

#### 4.0. APPROACH AND METHODOLOGY

A three-phased approach was used for the WJD Study for the Property. The approach used followed the "Routine Determination with an onsite inspection necessary" method described in the *1987 Corps of Engineers Wetland Delineation Manual* for areas greater than five acres, given that the study area is approximately 230 acres.

Phase 1 of the study was a screening level analysis to identify those sites within the study area that may constitute jurisdictional wetlands under Section 404 of the Clean Water Act. The screening analysis was performed using a Geographic Information System (GIS) loaded with the following data from the region:

- Soil series;
- Hydrography;
- Geology;
- Topography;
- Flood zones; and,
- National Wetland Inventory (NWI).

The data gathered from this phase provided specific and important information on the location of potential wetland sites.

Phase 2 of the investigation was a series of preliminary site visits to the potential wetland areas identified during phase 1. These visits validated the data that was drawn together during the previous phase. They also helped to prepare a fieldwork plan for the site.

---

The following tasks were carried out during this phase:

- Visual inspection of the site and identification of landscape features;
- Identification of plant communities;
- Selection of a representative area within each plant community to establish a sampling point (soil pit);
- Identification of dominant plant species from the various strata within a 20-foot radius of the soil pit;
- Characterization of the soil properties and colors in the soil pit;
- Description of the hydrology around and within the soil pit;
- Photographic documentation of the site, soil pits and vegetation;
- Collection of soil and plant samples for future reference, and;
- Wetland Delineation and GPS documentation.

Phase 3 of the study was the analysis of the gathered information and the determination of jurisdiction, of possible wetland sites within the Property, under the USACE.

---

## 5.0. RESULTS AND DISCUSSION

No wetland areas were found within the Property. Most of the Property consists of hills covered with vegetation typically found in the south area of Puerto Rico, where it is adapted to live under dry conditions.

To the West side of the Property and nearby canalized Río Bucaná East bank, an area collects the runoff waters from the west side of the property. Careful examination of this area, which is a canal, confirms the information of the NWI Maps, which indicates that there are no wetlands within the Property. Appendix C contains the data forms with the information collected during this study within the sampling points. Figure 5 includes the location of the sampling points. This area ends in a culvert that drains the runoff water to the Río Bucaná. Apparently, this canal area was made during the canalization activities of the Río Bucaná.

The dominant vegetation within the area is Cow cane (*Arundo donax*) classified as FAC in the 1988 *National List of Plants that Occur in Wetlands, USFWS*. No hydrology indicators were found within the canal. The soil found within this area corresponds to the series Yauco silty clay loam. This soil is not considered as a hydric soil. Appendix C includes the photographic documentation related to the sampling points.

It seems that this area serves as a local drainage, which collects water during heavy rain events and drains it to Río Bucaná.

---

## 6. REFERENCES

- Acevedo-Rodríguez, P. and Woodbury, R. O. 1985. *Los bejucos de Puerto Rico*. Volumen 1. General Technical Report S0-85. New Orleans, LA: U.S. Department of Agriculture, Forest Service, Southern Forest Experiment Station. 331 pp.
- Boccheciamp, R.A. 1977. *Soil Survey of Ponce Area of Eastern Puerto Rico*. U.S.D.A. Soil Conservation Service. 103 pp. plus appendices.
- Cowardin, L. M., Carter, V., Golct, F. C. and LaRoe, E. T. 1979. *Classification of Wetlands and Deepwater Habitats of the United States*. U.S. Department of Interior, Fish and Wildlife Service, Office of Biological Services, Washington, D.C. 83 pp. plus appendices.
- FJCWD (Federal Interagency Committee for Wetland Delineation). 1989. *Federal Manual for Identifying and Delineating Jurisdictional Wetlands*. U.S. Army Corps of Engineers, U.S. Environmental Protection Agency, U.S. Fish and Wildlife Service, and U.S.D.A. Soil Conservation Service, Washington, D.C. Cooperative technical publication. 76 pp. plus appendices.
- Graf, A. B. 1992. *Tropica: Color Cyclopedia of Exotic Plants and Trees*. Fourth edition. Roehrs Company, East Rutherford, N.J. 1,152 pp.
- Liogier, H. A. 1985. *Descriptive Flora of Puerto Rico and adjacent islands*. Volumes I-V. Editorial de la Universidad de Puerto Rico, Río Piedras, PR.
- Little, E. L. and Wadsworth, F. H. 1974. *Common Trees of Puerto Rico and the Virgin Islands*. Agricultural Handbook No. 249. U.S. Department of Agriculture, Forest Service. Washington, D.C. 556 pp.
- Lyon, J. G. 1993. *Practical Handbook for Wetland Identification and Delineation*. Lewis Publishers, Boca Raton, FL. 157 pp.
- Más, E.G. and García Molinari, O. 1990. *Guía Ilustrada de Yerbas Comunes en Puerto Rico*. Servicio de Extensión Agrícola, Universidad de Puerto Rico, Recinto Universitario de Mayagüez, Colegio de Ciencias Agrícolas. 103 pp.
- Mitsch, W.J. and Gosselink, J.G. 1993. *Wetlands*. John Wiley & Sons, New York. 772 pp.
- Tyner, R. W. 1999. *Wetland Indicators: A Guide to Wetland Identification, Delineation, Classification and Mapping*. CRC Press LLC, Boca Raton, FL. 392 pp.
- USDAFS [U.S. Department of Agriculture, Forest Service]. 2000. *Bio-ecología de Árboles de Nativos y Exóticos de Puerto Rico*, General Technical Report IITF-15-2000.

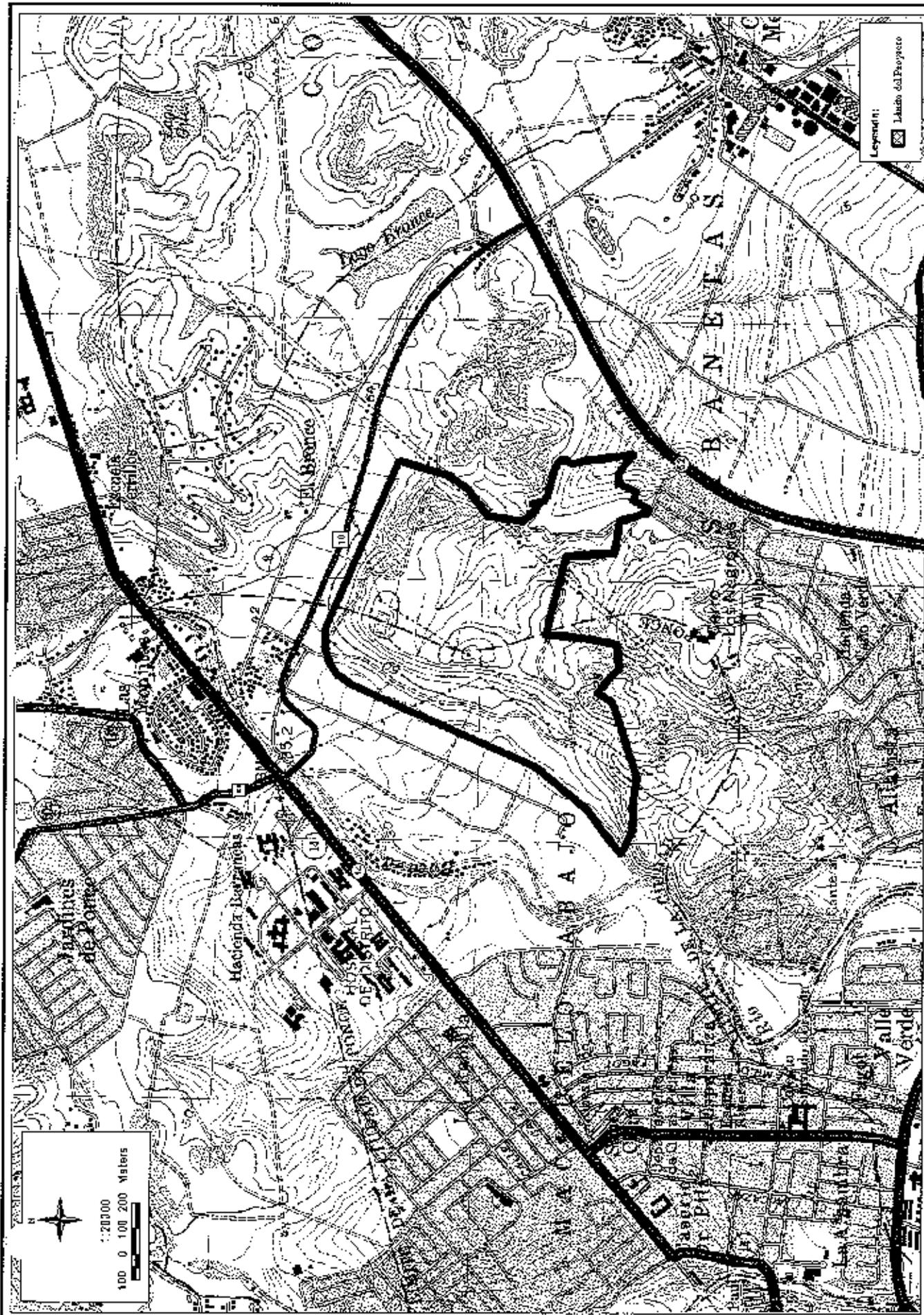
---

## **Appendices**

---

## **Appendix A**

### **Figures**



C.S.A. Group

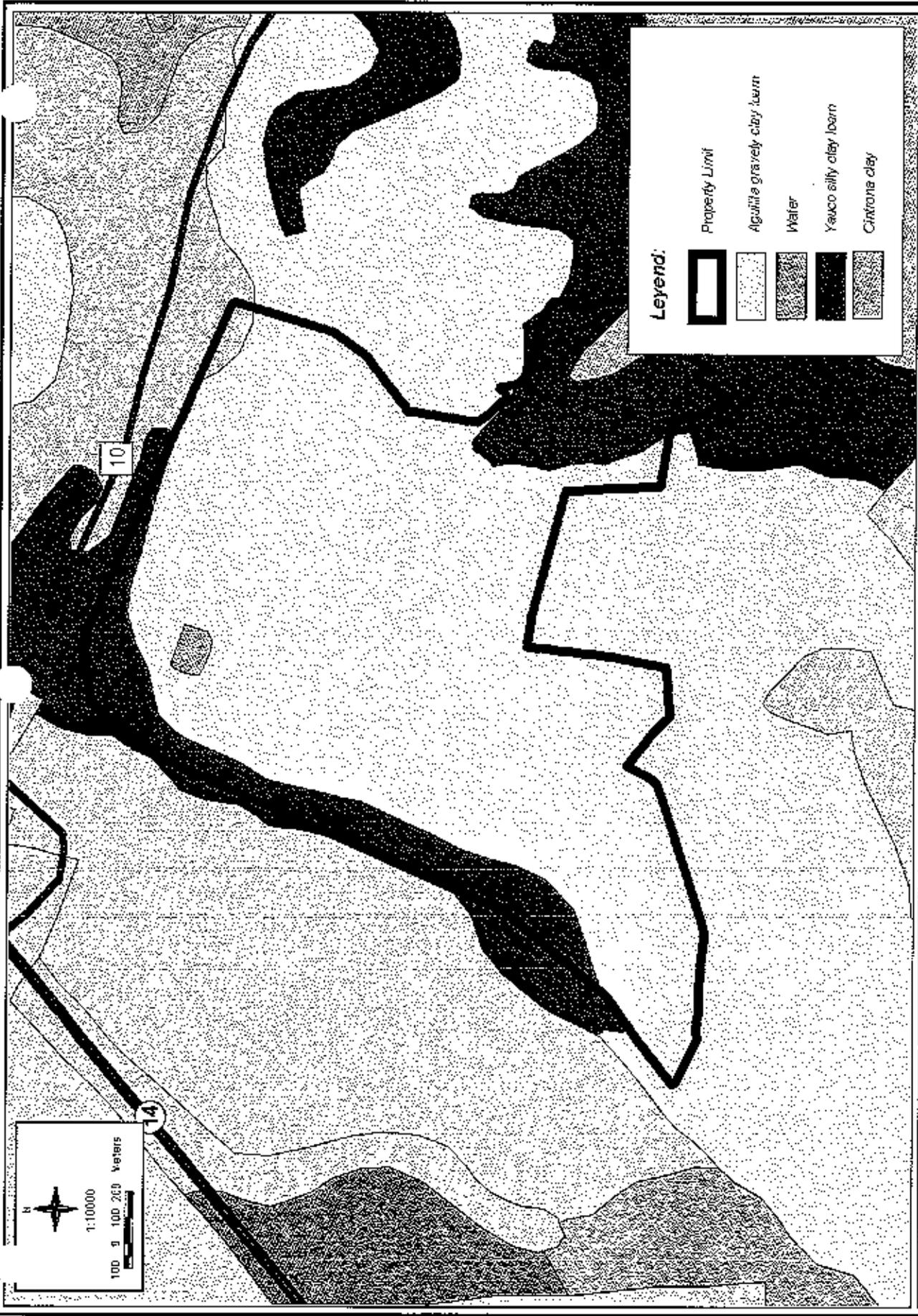
Figure 1: Site Location Map

Wetland Jurisdictional Determination Study-Barrancas Property-Ponce, Puerto Rico



THIS DOCUMENT IS THE PROPERTY OF C.S.A. GROUP AND IS NOT TO BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM, WITHOUT THE WRITTEN PERMISSION OF C.S.A. GROUP.

2008 PROSPECTIVE BARRANCAS PROPERTY, PUNCE, PR. A. Campos (19/04/08)



**Figure 2: Soil Survey Map**  
 Wetland Jurisdictional Determination Study-Barrancas Property-Ponce, Puerto Rico



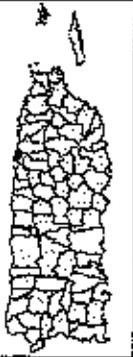
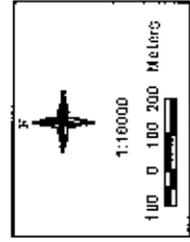
THESE DOCUMENTS, THE CONTENT AND THE MAPS AND DESIGNS HEREIN, ARE THE PROPERTY OF GSA GROUP AND IS NOT TO BE USED, IN WHOLE OR IN PART, FOR ANY OTHER PROJECT WITHOUT THE WRITTEN AUTHORIZATION OF GSA GROUP. © 2004 GSA GROUP. ALL RIGHTS RESERVED.



**Figure 3: National Wetland Inventory Map**  
 Wetland Jurisdictional Determination Study-Barrancas Property-Ponce, Puerto Rico

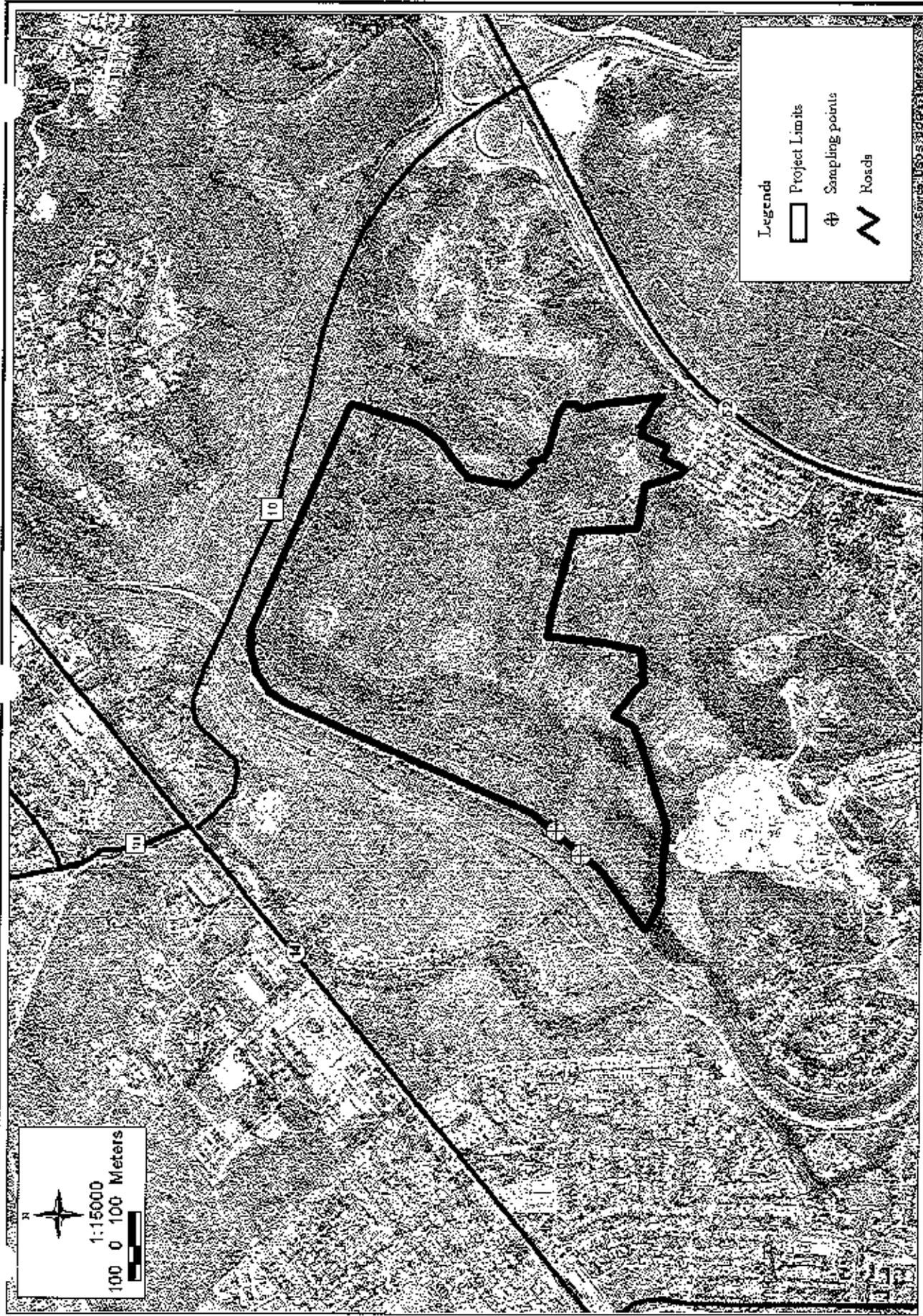


- Legend:**
- L1UBHh - Lacustrine, limnetic, unconsolidated bottom, permanently flooded, diked/impound
  - PEM1A - Palustrine, emergent, persistent, temporarily flooded
  - PEM1C - Palustrine, emergent, persistent, seasonally flooded
  - PEM1Cb - Palustrine, emergent, persistent, seasonally flooded, diked/impound
  - R2UBHx - Riverine, lower perennial, unconsolidated bottom, permanently flooded, excavated
  - RASB/Cx - Riverine, intermittent, streambed, seasonally flooded, excavated
  - U - Upland



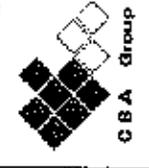
THIS DOCUMENT IS UNCLASSIFIED EXCEPT WHERE SHOWN OTHERWISE. IT IS THE PROPERTY OF CSA GROUP AND IS LOANED TO YOU BY THE NATIONAL ARCHIVES. IT IS TO BE REPRODUCED AND TRANSMITTED IN ANY FORM AND BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM, WITHOUT PERMISSION FROM THE NATIONAL ARCHIVES OF COLLEGE PARK, MARYLAND.





Legend

-  Project Limits
-  Sampling points
-  Roads



**Figure 5: Sampling Points**

Wetland Jurisdictional Determination Study-Barrancas Property-Ponce, Puerto Rico



THIS DOCUMENT IS UNCLASSIFIED, AND THE DESIGNATION INFORMATION HEREIN IS IN THE PUBLIC DOMAIN. IT IS THE PROPERTY OF CSA GROUP AND IS NOT TO BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM, WITHOUT THE WRITTEN PERMISSION OF CSA GROUP.

2023-09-09 14:01:18 27 Aug 2023 14:01:18 1800039.5X11

---

## **Appendix B**

### **Data Forms**

**DATA FORM**  
**ROUTINE WETLAND DETERMINATION**  
**(1987 COE Wetlands Delineation Manual)**

Project/Site: <u>Barrancas Property</u> Applicant/Owner: <u>Picerna Real State Group</u> Investigators: <u>Soler/Coll/Lizardi/Salguero/Rivera</u>	Date: <u>May 8, 2003</u> County: <u>Ponce</u> State: <u>PR</u>
Do Normal Circumstances exist on the site? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Is the site significantly disturbed (Atypical Situation)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Is the area a potential Problem Area? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No (If needed, explain on reverse.)	Community ID: <u>DFB</u> Transect ID: <u>1</u> Plot ID: <u>1</u>

**VEGETATION**

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <u>Arundo donax</u>	<u>Herbaceous</u>	<u>FAC</u>	1. _____	_____	_____
2. _____	_____	_____	2. _____	_____	_____
3. _____	_____	_____	3. _____	_____	_____
4. _____	_____	_____	4. _____	_____	_____
5. _____	_____	_____	5. _____	_____	_____
6. _____	_____	_____	6. _____	_____	_____
7. _____	_____	_____	7. _____	_____	_____
8. _____	_____	_____	8. _____	_____	_____

Percent of dominant species that are OBL, FACW, or FAC (excluding FAC-): **100%**

Remarks: Percentages by aerial coverage: Arundo donax 100%

**HYDROLOGY**

<input checked="" type="checkbox"/> Recorded Data (Described in Remarks) <input type="checkbox"/> Stream, Lake, or Tide Gauge <input checked="" type="checkbox"/> Aerial Photographs <input checked="" type="checkbox"/> Others <input type="checkbox"/> No Recorded Data Available	<b>Wetland Hydrology Indicators:</b> <b>Primary Indicators</b> <input type="checkbox"/> Inundated <input type="checkbox"/> Saturated in Upper 12 Inches <input type="checkbox"/> Water Marks <input type="checkbox"/> Drift Lines <input type="checkbox"/> Sediment Deposits <input type="checkbox"/> Drainage Patterns in Wetlands <b>Secondary Indicators (2 or more required):</b> <input type="checkbox"/> Oxidized Root Channels in Upper 12 inches <input type="checkbox"/> Water-Stained Leaves <input type="checkbox"/> Local Soil Survey Data <input type="checkbox"/> FAC-Neutral Test <input type="checkbox"/> Other (Explain in Remarks)
<b>Field Observations</b>  Depth of Surface Water (in)  Depth to Free Water in Pit = (in)  Depth to Saturated Soil = (in)	Remarks: Sampling point located within a local runoff canal that drains collected water from heavy rain events in to Río Bucaná via a metal corrugated culvert.

**Barrancas Property (DFB-I-1)**

**SOILS**

Map Unit Name (Series and Phase):		<u>Yauco silty clay loam</u>	Drainage Class:		<u>Well Drained</u>
Taxonomy (Subgroup):		<u>Typic Calcixstols/Mollisols</u>	Confirm Mapped Type?		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Profile Description					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance / Contrast	Texture, Concretions Structure, etc
0-18	A	10YR 3/2	N/A	N/A	Silty clay loam-
Hydric Soil Indicators:					
<input type="checkbox"/> Histosol		<input type="checkbox"/> Concretions			
<input type="checkbox"/> Histic Epipedon		<input type="checkbox"/> High Organic Content in Surface Layer in Sandy Soils			
<input type="checkbox"/> Sulfidic Odor		<input type="checkbox"/> Organic Streaking in Sandy Soils			
<input type="checkbox"/> Aquatic Moisture Regime		<input type="checkbox"/> Listed on Local Hydric Soils List			
<input type="checkbox"/> Reducing Conditions		<input type="checkbox"/> Listed on National Hydric Soils List			
<input type="checkbox"/> Gleyed or Low-Chroma Colors		<input type="checkbox"/> Other (Explain in Remarks)			
Remarks: No hydric soil indicators found within the sampling point.					

**WETLAND DETERMINATION**

Hydrophytic Vegetation Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Is this Sampling Point Within a Wetland? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Wetland Hydrology Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Hydric Soils Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Remarks: Although, no wetland indicators where found, the vegetation found within the sampling point is classified as FAC.		

**DATA FORM**  
**ROUTINE WETLAND DETERMINATION**  
(1987 COE Wetlands Delineation Manual)

Project/Site: <u>Barrancas Property</u> Applicant/Owner: <u>Piceme Real State Group</u> Investigators: <u>Soler/Coll/Lizardi/Salguero/Rivera</u>	Date: <u>May 8, 2003</u> County: <u>Ponce</u> State: <u>PR</u>
Do Normal Circumstances exist on the site? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Is the site significantly disturbed (Atypical Situation)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Is the area a potential Problem Area? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No (If needed, explain on reverse.)	Community ID: <u>DFB</u> Transect ID: <u>1</u> Plot ID: <u>2</u>

**VEGETATION**

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <u>Arundo donax</u>	<u>Herbaceous</u>	<u>FAC</u>	1. _____	_____	_____
2. _____	_____	_____	2. _____	_____	_____
3. _____	_____	_____	3. _____	_____	_____
4. _____	_____	_____	4. _____	_____	_____
5. _____	_____	_____	5. _____	_____	_____
6. _____	_____	_____	6. _____	_____	_____
7. _____	_____	_____	7. _____	_____	_____
8. _____	_____	_____	8. _____	_____	_____

Percent of dominant species that are OBL, FACW, or FAC (excluding FAC-): **100%**

Remarks: Percentages by aerial coverage: Arundo donax      100%

**HYDROLOGY**

<input checked="" type="checkbox"/> Recorded Data (Described in Remarks) <input type="checkbox"/> Stream, Lake, or Tide Gauge <input checked="" type="checkbox"/> Aerial Photographs <input checked="" type="checkbox"/> Others <input type="checkbox"/> No Recorded Data Available	<b>Wetland Hydrology Indicators:</b> <b>Primary Indicators</b> <input type="checkbox"/> Inundated <input type="checkbox"/> Saturated in Upper 12 Inches <input type="checkbox"/> Water Marks <input type="checkbox"/> Drift Lines <input type="checkbox"/> Sediment Deposits <input type="checkbox"/> Drainage Patterns in Wetlands <b>Secondary Indicators (2 or more required):</b> <input type="checkbox"/> Oxidized Root Channels in Upper 12 inches <input type="checkbox"/> Water-Stained Leaves <input type="checkbox"/> Local Soil Survey Data <input type="checkbox"/> FAC-Neutral Test <input type="checkbox"/> Other (Explain in Remarks)
<b>Field Observations</b>  Depth of Surface Water      (in)  Depth to Free Water in Pit      ± (in)  Depth to Saturated Soil      ± (in)	
Remarks: Sampling point located within a local runoff canal that drains collected water from heavy rain events in to Río Bucaná via a metal corrugated culvert.	

**Barrancas Property (DFB-I-2)**

**SOILS**

Map Unit Name (Series and Phase):		<u>Yauco silty clay loam</u>	Drainage Class:		<u>Well Drained</u>
Taxonomy (Subgroup):		<u>Typic Calciustolls/Mollisols</u>	Confirm Mapped Type?		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
<b>Profile Description</b>					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance / Contrast	Texture, Concretions Structure, etc
0-18	A	10YR 3/2	N/A	N/A	Silty clay loam-
Hydric Soil Indicators:					
<input type="checkbox"/> Histosol		<input type="checkbox"/> Concretions			
<input type="checkbox"/> Histic Epipedon		<input type="checkbox"/> High Organic Content in Surface Layer in Sandy Soils			
<input type="checkbox"/> Sulfidic Odor		<input type="checkbox"/> Organic Streaking in Sandy Soils			
<input type="checkbox"/> Aquatic Moisture Regime		<input type="checkbox"/> Listed on Local Hydric Soils List			
<input type="checkbox"/> Reducing Conditions		<input type="checkbox"/> Listed on National Hydric Soils List			
<input type="checkbox"/> Gleyed or Low-Chroma Colors		<input type="checkbox"/> Other (Explain in Remarks)			
Remarks: No hydric soil indicators found within the sampling point.					

**WETLAND DETERMINATION**

Hydrophytic Vegetation Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Is this Sampling Point Within a Wetland? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Wetland Hydrology Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Hydric Soils Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Remarks: Although, no wetland indicators where found, the vegetation found within the sampling point is classified as FAC.		

---

## **Appendix C**

### **Photographic Documentation**



Photo 1: Vegetation found within sampling points, which is dominated by Cow cane (*Arundo donax*).



Photo 2: Soil pit located within sampling point DFB-I-1.



Photo 3: Soil pit located within sampling point DFB-I-2.