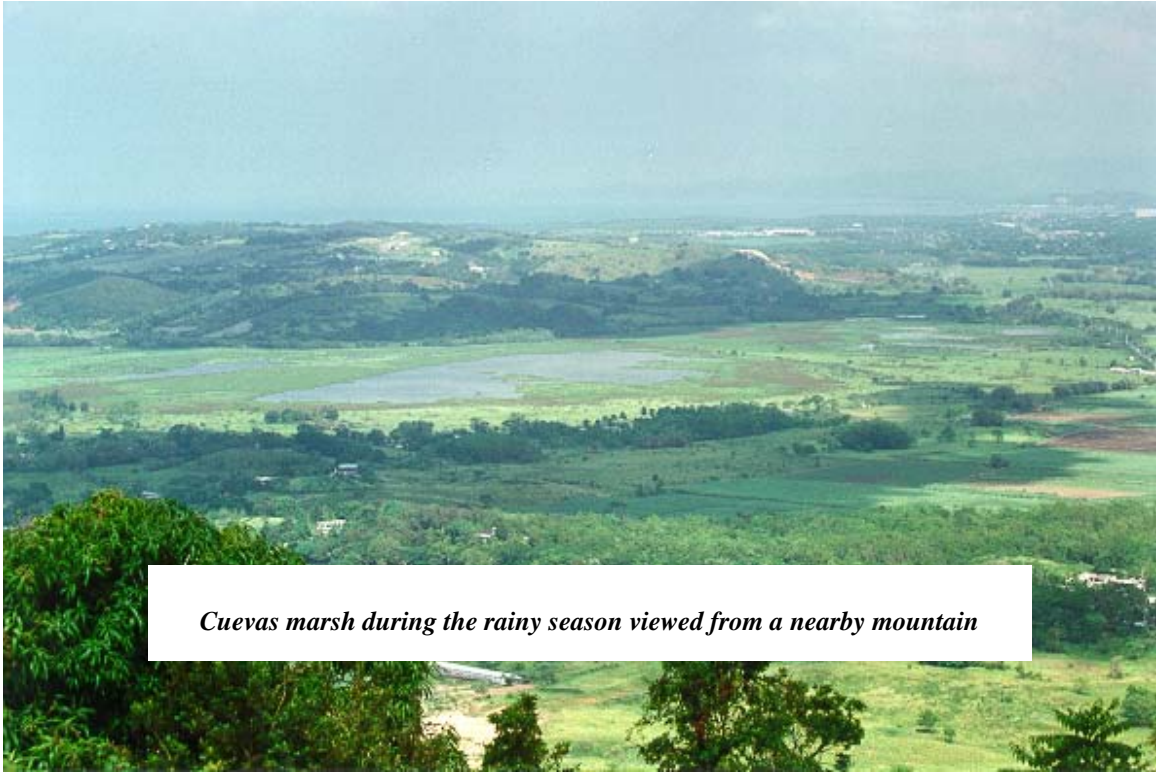


**PRELIMINARY PROPOSAL TO DEVELOP THE CUEVAS MARSH  
ECOLOGICAL RESERVE AT CABO ROJO, PUERTO RICO**



*Cuevas marsh during the rainy season viewed from a nearby mountain*

**Submitted by:**

**Caborrojeños Pro-Salud y Ambiente, Inc.**

**October 1999**

**“A 501(c)(3) non-profit corporation certified by the U.S. Internal Revenue Service”**

## TABLE OF CONTENTS

Objectives.....	1
Capabilities of the proponent.....	1
Justification.....	1
Ecological Value of the Resource.....	2
Potential Partners.....	2
Management Plan & Conservation Actions.....	2
Long Term Goals.....	3
Projected Costs of the Project.....	3
Funding Strategy.....	4

## **Objectives**

1. Save from further deterioration by acquisition in fee title and conversion into a wildlife reserve approximately 292 contiguous “cuerdas” known collectively as the Cuevas marsh.
2. Restore the marsh to enhance its characteristics as prime habitat for waterfowl, shorebirds and other migratory and resident birds. The land will be protected in perpetuity and enhanced to restore the area’s natural hydrology.
3. By creating a living museum the reserve will serve as an educational and research center to educate the general public regarding the benefits of a fresh-water marsh ecosystem.
4. Improve water quality levels in the Cabo Rojo aquifer by protecting a significant portion of its watershed.

## **Capabilities of the proponent**

Caborrojeños Pro Salud y Ambiente, Inc. (CPSA) is a non-profit corporation registered at the Puerto Rico’s State Department on September 1991 and certified by the Internal Revenue Service as a 501(c)3 corporation. The Corporation was established with the mission of educating about conservation and environmental protection and to promote a sustainable development through the ecotourism and the preservation of the natural and cultural resources of Cabo Rojo. The organization has eight years of experience on community activities and volunteer work that include environmental and cultural festivals, beach clean up campaigns, recycling campaigns, talks, seminars and activities in schools. During the past two years the CPSA has been a partner with the municipal, state and federal government in an effort to restore the Cabo Rojo Lighthouse and its surrounding 300 acres from the Boquerón State Forest in a worldclass ecotourism destination. Also it joined efforts with federal and state entities in achieving the critical mass of support that eventually accomplished the goal of acquiring for conservation and wildlife manage the 1,200 acres of the Cabo Rojo Salt Flats. At this moment the organization has 33 active members and an office located in Betances street #34 in the city’s downtown. The group is very diverse comprising university professors, graduate students, government employees, businessmen, fishermen, schoolteachers, and other community leaders.

## **Justification**

High pressure of urban development in Cabo Rojo, particularly in recent years, has placed an undue strain on the unique natural resources of this coastal municipality in the southwestern tip of the Island of Puerto Rico. Cabo Rojo experienced 22.3% growth from its 1990 population of 38,521 to an estimate of 47,105 in 1997 according to U.S. Bureau of the Census. This is one of the highest growth rates on the Commonwealth for that period. Also a popular tourist destination for local and off-Island tourists, Cabo Rojo floating population on weekend holidays may increase by an additional 100,000 persons. The Cuevas marsh is the only fresh water significant body of water in Cabo Rojo and together with the mangrove lagoons and coastal salt flats, most of which are already protected because of their ecological value, is a major resting place for migratory waterfowl, shore birds and land birds. It also provides critical habitat for resident endangered waterfowl such as the ruddy duck and the West Indian whistling

tree duck, as well as for the short-eared owl and the white crowned pigeon, among others. The Cuevas marsh is also the main aquifer for supplying water to the residents of Cabo Rojo, a city that lies less than a mile to the South, according to the U.S. Geological Survey. Nevertheless, it is privately owned and deteriorates rapidly as a wildlife habitat and could fall prey to urban developers in the near future as the city and its suburbs continues to grow engulfing the surrounding plains. Caborrojeños has approached the owner of a farm of approximately 292 “cuerdas”<sup>1</sup> where the most permanent portion of the marsh is located and he is willing to sell based on an appraisal of the fair market value of the property conducted by a licensed professional. This farm, located near road PR-103, holds an appropriate mix of upland and permanent marsh that with relatively little investment can be restored and significantly enhanced for waterfowl, shorebirds and other migratory bird habitat. Aerial photo of the property and several close-ups as well as a location map is included as attachment.

### **Ecological Value of the Resource**

The Cuevas marsh is listed in the National Wetlands Inventory of the U.S. Fish and Wildlife Service in the Puerto Real Quadrangle<sup>2</sup> (see exhibit). It is mostly classified as “Palustrine Open Water Permanently Flooded” and “Palustrine Emergent Persistent Semipermanently Flooded”. The P.R. Department of Natural Resources also considers it as a critical wetland and migratory bird habitat in its Critical Coastal Wildlife Areas Document.<sup>3</sup>

### **Potential Partners**

- U.S. Fish & Wildlife Service Boquerón Field Office
- P.R. Department of Environmental & Natural Resources
- P.R. Conservation Trust
- P.R. Conservation Foundation
- Local Environmental Groups
- Private Industry & Foundations
- P.R. Environmental Quality Board
- U.S. Environmental Protection Agency
- The Nature Conservancy

### **Management Plan & Conservation Actions**

The area will be open to the public for fishing, hiking, birdwatching, environmental education and other recreational activities having negligible impacts. No hunting will be permitted within the boundaries of the reserve. Limited agricultural activities may be permitted in the uplands. Caborrojeños will establish collaborative agreements with the Fish & Wildlife Service Boqueron Office and the P.R. Department of Natural & Environmental Resources to obtain their technical assistance in developing and implementing an appropriate resource

---

<sup>1</sup> “One cuerda” is equivalent to .97 acre.

<sup>2</sup> National Wetlands Inventory, Puerto Real Quadrangle Fish & Wildlife Service, U.S. Department of the Interior, 1985.

<sup>3</sup> Critical Coastal Wildlife Areas of Puerto Rico, Department of Natural Resources, Julio Cardona and Manuel Rivera, Scientific Research Area, Commonwealth of Puerto Rico, September 1988.

management and conservation plan. Other partners collaboration will be sought as needed. Our assessment reflect that the following conservation actions are required:

1. Promote more stable water levels by eliminating man made drainage ditches.
2. Fencing the perimeters of the reserve to prevent cattle from adjoining farms and unauthorized trespassers, including hunters.
3. Reforestation efforts in the uplands particularly planting royal palms and other trees that provide food and shelter for the white crowned pigeon and the West Indian Tree Duck. In some areas of the swamp indigenous marsh plants that provide shelter and food for waterfowl and shorebirds must substitute a stinging brush that during long periods of drought has propagated and could be considered as a non-desirable specie.

### **Long Term Goals**

The acquisition of the proposed farm will facilitate the restoration of the major part of Cuevas marsh and provide an adequate buffer zone. However, in the long term Caborrojeños will also pursue to, either acquire or secure for preservation through conservation easements, approximately 200 additional acres of adjoining farms that belong to three different owners. Caborrojeños will also seek financial support to build an educational and research center facility in the boundaries of the Reserve near road PR-103. This facility will serve also as the headquarters of the corporation that at the present time rents an office in the town. The Reserve contemplates also interpretative trails, launching ramp, observation towers and educational exhibitions.

### **Projected Costs of the Project**

The major cost component of the project is the acquisition of the land, which the owner is willing to sell at its fair market price based on an appraisal. Nevertheless, we learned that he recently turned down an offer of \$1,200 per “cuerda”. Also recently, the P.R. Aqueduct & Server Authority purchased from him a tract a little less than an acre for the equivalent of \$3,000 per “cuerda” for a deep well. During informal conversations he ventured that a reasonable asking price should be near \$2,000 per “cuerda”. On our judgement an appraisal will yield a price per “cuerda” between \$1,200 to \$2,200. Considering the amount ventured by the owner the cost of the land could be no higher than \$584,000. Other costs associated to acquisition that must be considered are surveying and legal. Since among Caborrojeños there are professionals within those disciplines we foresee these costs to be eventually much less than the regular market fee. The contemplated conservation actions like fencing, ditch modification reforestation and habitat enhancement will be conducted by volunteers which would also lower the costs. While further analysis of this matter is needed legal, surveying and initial conservation measures in our judgement could not surpass \$75,000. Based on these the total cost of the project could amount around \$659,000.

A least preferred alternative to reduce project costs will be to buy a little over two thirds of the farm or 200 “cuerdas” reducing the extension of the uplands associated to the marsh. While the owner has expressed its disposition to segregate the farm this is an alternative only to consider if funding to acquire the farm intact cannot be secured. The total cost of the project in this option could amount around \$460,000.

### **Funding Strategy**

The North American Wetlands Conservation Council, under the authorization of the North American Wetland Conservation Act of 1989 as amended, can provide grants of up to \$1 million to support projects that match the grant request by at least a 1 to 1 ratio and provide long-term conservation of wetlands and associated uplands through habitat protection, restoration and enhancement and exhibit innovative partnership. Caborrojeños is an eligible applicant for this program and preliminary research indicates that the project has the ecological merit need to be successfully considered. Nevertheless, research indicates that recent successful projects had a matching ratio of around 1.5 to 1. Based on this CPSA could solicit a grant of \$219,000 but will needed to raise \$440,000 in commitment from partners and from its own funds. The deadline to submit proposals under this program in March 31, 2000. If the project is to be pursued for the next funding cycle an appraisal must be ordered and an option to buy secured from the owner as soon as possible. Simultaneously, the potential partners must be approached and presented with the project to ascertain if sufficient matching funds can be committed by the application deadline.

In the case that the least preferred option of acquisition must be executed then the grant amount would be \$155,000 and the partner’s commitment in turn must be \$305,000. If this is finally the Caborrojeños will try to obtain an option of the remaining tract providing additional time to raise the required funding.