

# ENVIRONMENTAL ASSESSMENT And Finding of No Significant Impact

January 2002

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## FLOOD CONTROL FEATURES FOR BECHARA INDUSTRIAL AREA, Rio Puerto Nuevo Flood Control Project San Juan / Guaynabo, Puerto Rico.

LEAD AGENCY: U.S. Army Corps of Engineers, Jacksonville District

COOPERATING AGENCY: Puerto Rico Department of Natural and  
Environmental Resources (DNER), representing the Commonwealth of  
Puerto Rico.



U.S. Army Corps  
of Engineers  
Jacksonville District



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REPLY TO  
ATTENTION OF

## **FINDING OF NO SIGNIFICANT IMPACT**

I have reviewed the Environmental Assessment (EA) prepared for the recommended flood damage reduction plan in the Bechara Industrial Area (BIA) of the Rio Puerto Nuevo, Puerto Rico, Federal Flood Control Project. The action recommended is clean out of Puerto Nuevo Canal, extension of this canal northward to the edge of the Puerto Rico Ports Authority Property as an open, trapezoidal, earthen canal, and then excavation, pile installation, and construction of a pile-supported, concrete, double bay rectangular box culvert that will reach San Juan Bay at the Puerto Nuevo piers. The recommended plan differs from the option for BIA discussed in the 1985 Final Environmental Impact Statement and the plan described in the 1992 General Design Memorandum and 1993 EA/FONSI for the Rio Puerto Nuevo Project. I conclude that the recommended plan will have no significant adverse impact on the quality of the human environment. This conclusion is based on information analyzed in the new EA prepared for this Plan segment, which is herein incorporated by reference. It also reflects pertinent information obtained from other agencies and special interest groups having jurisdiction by law and/or special expertise, and on comments and recommendations obtained during interagency scoping and coordination. Reasons for this conclusion are, in summary,

1. The project as designed will not impact historic properties or existing residences. The project area is commercial and industrial.
2. Water quality will not be degraded, because most segments of drainage canal and culvert will be excavated "in the dry", using all appropriate methods for control of erosion and sedimentation of adjoining lands. The existing Water Quality Certificate for the Rio Puerto Nuevo Flood Control project, with its conditions and limitations, will be applied to the proposed work. No violations of water quality standards will occur.
3. No rare, unique, threatened or endangered species have been identified in the project area, and none will be affected by the project. There will not be adverse effects on populations, life stages or habitat of commercially important marine fish. A beneficial effect will be re-connection of upper Puerto Nuevo canal to tide, for the first time in 30 years.
4. The project has been determined to be consistent with the Puerto Rico Coastal Management Program.
5. Excavation and channel cleaning will remove 1 acre of land-locked mangroves ( 0.4 Functional Units, or FU) at the north (blind) end of the existing Puerto Nuevo River. After the channel in this area is widened and deepened, tidal flushing will be restored, and mangrove vegetation may re-establish itself. Adjacent mangroves, outside the project footprint, may benefit from restoration of the tidal connection. Deposit of materials on the power line right of way and construction of access roads and ramps will convert 7.5 acres of marshy emergent non-mangrove wetlands (2.25 FU) into uplands. Mitigation is proposed by creation of an additional 2.65 FU of mangrove wetlands along the Margarita channel or in San Juan Bay, to replace all estuarine functions lost due to construction of both the channel and levee. The recommended plan is the option with the smallest footprint over regulatory wetlands, of the four options evaluated.
6. A level-1 survey and assessment for the presence of hazardous, toxic or radioactive waste materials (HTRW), conducted in 1998 and updated in 2000, indicated no known or suspected materials were located in the project footprint. However, a diesel fuel dispensing and storage station was located inside the footprint in the Ports Authority Area. This station will be relocated prior to construction or removed by the project contractor.

7. Public benefits include reduction in flood-caused business losses in the Bechara Industrial Park and along Kennedy Avenue, and increased public safety due to reduced flooding along Kennedy Avenue itself, and elimination, for the most part, of traffic snarls caused during road flooding.

In consideration of the information summarized, I find that the proposed action will not significantly affect the human environment and does not require an Environmental Impact Statement.

29 MARCH 2008  
Date

James G. May  
Colonel, U.S. Army  
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## SYNOPSIS

This Environmental Assessment (EA) describes the plan recommended to provide flood control for the Bechara Industrial Area (BIA), also called Kennedy-Bechara sector, of the authorized Rio Puerto Nuevo (RPN), Puerto Rico, Flood Control Project. The RPN Project was authorized under the Water Resources Development Act of 1986. General design documentation was completed in 1991, accompanied by a new Environmental Assessment (EA), with a Finding of No Significant Impact (FONSI) signed in 1993. Project construction began in 1995. Flood control for the BIA was authorized as part of the RPN Project.

New hydrologic and topographic information generated by the Puerto Rico Government in the mid-1990's, after the RPN project was in construction, indicated that the 1993 design for Bechara, which was based on gravity drainage to the south through the Margarita Levee, would not function without modification. Local agencies examined drainage alternatives that proposed two or more large pump stations to remove the water to Caño Martín Peña and Quebrada Margarita. At the local sponsor's request, USACE examined proposed new flood control alternatives, in addition to a modification of the previous design, in detail, and is recommending a gravity drainage plan. The recommended plan consists of the following features: a drainage canal inside BIA that extends from the Bechara Industrial Park, located south of Kennedy Avenue, to San Juan Bay. The channel begins as a rectangular earthen canal 3 feet deep extending through the park to a point north of Kennedy Avenue, continuing northward as a trapezoidal, 8.0- to 10.33-foot deep and 25 foot wide earthen channel, which then transitions into an underground double bay rectangular concrete box culvert under the Puerto Nuevo port facilities. The bottom of the box culvert would be supported on piles to minimize the volume of excavation in the soft substrate. The recommended alternative would adversely affect 1 acre of mangroves on the north side of Kennedy Avenue during drainage canal construction. The second major project feature is the "Margarita" levee, which will protect the BIA from flooding originating in the upper Quebrada Margarita drainage. Alignment of this levee in the recommended plan would be different from the previously coordinated "GDM alignment." The recommended levee would be shorter and would fall mostly over an existing, formerly filled power line right of way. Lands along the levee alignment are raised above surrounding lands, but have characteristics of emergent wetlands, which will be permanently converted to uplands. About 7.5 acres of the levee footprint are jurisdictional wetlands. A "desktop" wetland evaluation was made using the "E-WRAP" method. Resulting scores were 0.4 functional units (FU) per acre for the 1 acre mangrove footprint and 0.3 FU per acre or 2.25 FU for the 7.5 acres of levee footprint. Mitigation (determined through the NEPA evaluation process for this work and agreed with by Commonwealth and Federal resource agencies) is proposed for the 2.65 FU of wetland loss by mangrove planting farther south in the historic river bed at the Rupert Armstrong parcel. The recommended alternative would dispose of excess excavated material as overbuild on the Margarita levee, or, at the Contractor's option, the

contractor would be permitted to remove it to an approved upland site. No additional wetlands fill would be permitted for excavated material disposal.

In coordination with the State Historic Preservation Officer (SHPO) USACE has determined that no historic properties will be affected by the recommended plan. No residents or residential areas will be affected by the proposed construction. Water quality will not be adversely affected. No disposal of excavated material in wetlands is proposed, other than deposition of material to build the Margarita levee. Coordination with the US Fish and Wildlife Service resulted in a draft Coordination Act Report. No species protected under the US Endangered Species Act or the Commonwealth of Puerto Rico Endangered Species Regulation were identified within the work area, or are likely to be affected. Coordination was also carried out with the National Marine Fisheries Service under provisions of the Magnuson-Stevens Fishery Conservation and Management Act. No adverse effects on commercial or recreational fisheries were determined.

## **1.00 SUMMARY**

### **1.1 Major Conclusions and Findings.**

The proposed action is construction of an open channel and underground box culvert to provide gravity drainage to the Bechara sector (Bechara Industrial Area, BIA) of the Rio Puerto Nuevo, Puerto Rico Flood Control Project. The proposed action is in the National interest and can be constructed while protecting the human environment from unacceptable impacts. Benefits of the channel/culvert will be a substantial reduction in economic and human losses due to high waters on roads and highways, traffic delays, and commercial property loss and damage due to flooding in the area. Adverse impacts will include an estimated loss of about 7.5 acres of disturbed emergent wetlands and 1 acre of mangroves due to channel extension and levee construction. Mitigation proposed for the mangrove and emergent wetlands is based on the results of a desktop "E-WRAP" analysis that found that the mangroves represented 0.4 Functional Units (FU), and the levee footprint wetlands represent 2.25 FU, of wetlands habitat that will be adversely affected by project construction. Project environmental benefits would include restoration of tidal flushing to the wetland parcel located north of Kennedy Avenue. To compensate for the overall wetlands functional loss, mitigation is proposed. The Corps would create 2.65 FU of mangrove vegetation, either by restoring additional lands north of the Margarita channel in the Rupert Armstrong parcel, or by creating additional mangrove habitat north of Martín Peña Channel at San Juan Bay.

### **1.2 Summary of The Proposed Action.**

The proposed action, selected after an alternatives analysis and design refinement in cooperation with participating Commonwealth sponsors, is construction of a gravity drainage channel and culvert for the BIA, also called the Kennedy-Bechara area. The proposed flood control feature would run from the old "Puerto Nuevo" canal, beginning at a pump station inside Bechara Industrial Park, toward the north, passing under Kennedy Avenue as at present, bordering the east edge of the "PRIDCO" parcel, which is mangrove covered, and then extending farther north, following roughly the old river course to the edge of Ports Authority property. The channel will cross Ports Authority property, intercepting its local drainage, as an underground, pile supported, two-bay concrete culvert. It will empty into San Juan Bay at the Puerto Nuevo piers, just west of the end of the SeaLand cranes. The Margarita Levee, discussed in the 1993 General Design Memorandum (GDM) would be built along an existing, somewhat elevated power line right-of-way, with ramp access provided at intervals for power line service. Excavated material would be deposited as top-dressing on the Margarita levee, or, at the contractor's option, excess material could be transported off site to an approved upland disposal site. This alternative would not drain the rest of the PRIDCO parcel. The recommended plan would require

2-3 years for completion of construction, due to its complexity and the need to stage carefully to allow for normal port operations, but once built it would function without high operations or pump maintenance costs.

### **1.3 Areas of Controversy.**

The major controversy associated with the overall Rio Puerto Nuevo Flood Control Project was and is its adverse effect on mangrove wetland cover and other green spaces in metro San Juan. The improvements to the main channel cut into both banks to provide a wider flood channel, converting 19.5 acres of mangrove wetlands into open water, when built to the upper end of tide water (U.S. Army Corps of Engineers, 1993). Negotiated mitigation for this impact was creation of 30 acres of mangrove wetlands along the project. Project design incorporated the 30 acres of new mangroves. The RPN Project is shown, in construction stages, as Plate 1. Mangrove mitigation was to include: areas outside the mouth of Martín Peña channel (to the northeast), areas along RPN itself, on the southeast river bank, and areas along both sides of Margarita Creek. This "GDM" plan did not contemplate further excavation or fill in BIA wetlands. Flood control for BIA was to be provided by a battery of four flap gated culverts draining passively from BIA to the south, through the "Margarita" levee, into Margarita Creek.

This EA discusses Corps evaluation of several considered alternatives to drain BIA, and the recommended plan. Alternatives were developed in 1998-99 and coordinated publicly through a Notice of Intent to Prepare an EIS, followed by a public scoping letter, in October 1999. As originally proposed there were two new gravity options, a new pumped drainage option and a modified "GDM" option that also required pumpage. The preliminary channel options would have adversely affected additional wetlands acreage (the "PRIDCO" mangrove parcel, north of Kennedy Avenue), while the pump options depended on large electric or diesel-operated pumps to function (refer to Appendix D, Coordination). Public comments during scoping concentrated on pump reliability, and minimizing the footprint of project features on wetlands. Conservation of the few remaining San Juan mangroves also emerged as a major decision factor in selecting a recommended alternative. Environmental agencies, including the project sponsor, Fish and Wildlife Service (FWS), National Marine Fisheries Service (NMFS) and Environmental Protection Agency (EPA) criticized alternatives with a large footprint and the proposal to use a mangrove covered wetland for disposal of excavated material. The single most significant public issue during formal "scoping," other than the flooding itself, was avoidance of further adverse effects on remnant wetlands.

In response to this issue, the gravity drainage alternatives were reformulated to avoid excessive channeling in, drainage of or disposal over, the PRIDCO parcel wetlands. Remaining controversy, as indicated by scoping comments, is related to project size, distrust of structural flood control measures

and concerns with reducing further wetland loss due to the project. To the greatest practicable extent the recommended plan addresses these concerns by avoiding wetland use for disposal and minimizing other wetlands impacts, consistent with providing the authorized level of flood protection. The Corps has made a proposed determination that the recommended plan, with wetlands mitigation, is not likely to adversely affect environmental resources in the San Juan area, and that an Environmental Impact Statement (EIS) is not required. In March, 2000, the Corps published a Notice of Cancellation of Notice of Intent to publish an Environmental Impact Statement for the Bechara segment of the RPN project in the Federal Register.

#### **1.4 Permits, Concurrences and Certifications required.**

Construction of the recommended features is covered in the Water Quality Certificate for the overall Project, previously issued by the Puerto Rico Environmental Quality Board (EQB). This Certificate, which has no expiration date, specifies the Margarita levee but does not address channeling the lowermost Puerto Nuevo Canal inside the BIA. Since the work is Federal work within an existing drainage path, the U.S. Environmental Protection Agency (EPA) stated that a permit under the National Pollutant Discharge Elimination System (NPDES) would not be required. Concurrences with the proposed plan will be sought and obtained from the Puerto Rico Department of Natural and Environmental Resources (river bank, flood control and water resources jurisdiction); Puerto Rico Planning Board (coordination island-wide of land use and construction projects as well as Coastal Program consistency determinations) and the Puerto Rico Ports Authority (landowner of the Puerto Nuevo Port facilities) as well as other government landowners in project lands. The State Historic Preservation Officer (SHPO) concurred (by letter dated September 24, 2001) with a USACE determination of no effect on historic resources. The project was coordinated under the Endangered Species Act and the Fish and Wildlife Coordination Act with the US Fish and Wildlife Service (FWS). It was also coordinated under the Magnuson-Stevens Fishery Management and Coordination Act with the National Marine Fisheries Service, and with the Environmental Protection Agency (EPA) under the provisions of the National Environmental Policy Act (NEPA) and Clean Air Act. The Puerto Rico Planning Board determined this work to be in compliance with the Puerto Rico Coastal Management Plan, as shown in Appendix A to this report (letter of October 9, 2001).

## **2.00 ISSUES, CONCERNS AND OBJECTIVES**

### **2.1 Rio Puerto Nuevo and BIA project History**

The Río Piedras/Río Puerto Nuevo is a single river. It is the principal drainage of the western half of San Juan, covering about 25 square miles. It rises in the foothills south of Río Piedras and now ends near the western end of Martín Peña

channel, though it originally flowed into San Juan Bay at the location of the Port Authority docks. In the 1950's the river mouth and lowermost  $\frac{3}{4}$  mile of channel were re-routed to the east, to empty into Martín Peña Channel. In the early 1960's, after the river had been diverted, the Puerto Rico Ports Authority began to build the Puerto Nuevo Port complex, and the USACE dredged the new Puerto Nuevo Navigation Channel in San Juan Harbor to serve these docks. Creation of the Puerto Nuevo port area and diversion of the River stimulated public, commercial and industrial development along John F. Kennedy Avenue, and the Avenue became a major arterial road for port traffic and commuters. The Bechara Industrial Park is part of this commercial/industrial development. The new port was built over fill deposited into the area north of Kennedy Avenue (formerly all mangrove swamp). This fill effectively "plugged" the lower end of the natural Puerto Nuevo River drainage and did not provide an alternate outlet for drainage north of Margarita Creek. Lands to the south of Kennedy Avenue within the BIA catchment area, the "PRIDCO" parcels, and the road itself, flood regularly, blocking port traffic and commuter and commercial traffic between urban San Juan and outlying commercial and residential areas west of San Juan. Expressway PR-22, the De Diego Expressway, is an alternate route that does not flood, but does not provide access to the Port, and cannot carry all two-way traffic entering and leaving San Juan from the west. Channeling the main river, now underway, will not provide efficient drainage for BIA without pumping or providing an alternative outlet to the bay. Providing efficient drainage to this area has become a high priority for the Sponsor and other Commonwealth of Puerto Rico agencies.

## **2.2 Purpose of the Federal Project.**

The purpose of the authorized Rio Puerto Nuevo Flood Control Project (RPN Project) of the U.S. Army Corps of Engineers (Corps) is to protect lives and property from damages attributable to a 1% exceedance probability flood along the River and its tributaries. This level of protection is commonly called "100-year" flood protection. The whole project will provide 11.2 miles of channel improvements to the river and five major tributaries, Quebradas Margarita, Josefina, Doña Ana, Buena Vista, and Guaracanal. The project is shown on Plate 1. After publication of a Survey Report and Final EIS in 1985, the RPN Project was authorized by the Water Resources Development Act of 1986. A General Design Memorandum and Environmental Assessment were prepared for overall project design in 1991-93. Construction of the main channel began in 1995. The Puerto Rico Department of Natural and Environmental Resources is the local sponsor for the RPN Project, which includes the BIA improvements. Protection for the BIA segment was authorized under the original project. The means of providing the protection have undergone revision in light of new data on topography and hydrology.

## **2.3 Cooperating Agency Purpose and Objectives.**

The RPN project is a high priority project for several Commonwealth agencies and the Municipality of San Juan. The Puerto Rico Department of Natural and Environmental Resources (DNER) is the sponsor, representing its own interests in flood control and the interests of other Puerto Rico agencies. Kennedy Avenue has been undergoing widening, replacement of "bottleneck" intersections and repaving, under jurisdiction of the Puerto Rico Department of Public Works, Highways Authority. The Puerto Nuevo dock and warehousing area is being reorganized by the Puerto Rico Ports Authority (PRPA). The San Juan Municipal Public Works Department operates the San Juan Landfill on lands adjacent to Bechara and the lower Río Puerto Nuevo, and has redesigned drainage for its lands. Flooding has been a problem during several rainy season flood events during the 1990's, causing massive traffic tie-ups and severe damage in auto dealerships, warehouses and other commercial facilities in the industrial park. The joint purpose of Commonwealth agencies is to provide flood protection to existing infrastructure and facilities, facilitate traffic flow along the major arterial road and avoid injuries and potential loss of life due to flood-related traffic accidents. Another purpose is to develop a cost-effective and low maintenance solution that is minimally dependent on electricity or presence of an around the clock team of operators in order to work.

## **3.00 ALTERNATIVES ANALYSIS.**

Alternatives considered are illustrated on Plates 2 through 5 and compared in Table 1. These alternatives arose as part of ongoing design considerations. Their potential costs and benefits were discussed in a Value Engineering Study prepared by Jacksonville District USACE in May 1999. They were later presented to sponsoring agencies, which concurred in selecting a recommended alternative (gravity drainage option, with box culvert under the Port) in late 1999. All of the alternatives discussed below are functional: they would provide drainage for the 100-year flood inside the BIA. They differ in construction costs, real estate costs, operations and maintenance costs, mechanical considerations and natural resources impacts.

### **3.1 No Action or "Base Plan" Alternative**

In the context of the RPN overall project, the no action alternative would be to build the "GDM" plan. This plan is based on draining the entire catchment to the south, into Margarita Creek, as illustrated in Plate 2. Features of this plan include: 1) cleaning out the existing "Puerto Nuevo Canal" inside Bechara Industrial Park and north of Kennedy Avenue, replacing the Marginal Sur bridge on Kennedy Avenue, regrading Puerto Nuevo Canal in BIA to create a gradient toward the south; 2) building an earthen, trapezoidal connector canal between the Puerto Nuevo Canal and Margarita Levee; 3) Building the 6,100 foot long Margarita levee and 4) installing a 1,000 cfs (cubic feet per second) capacity



pump station in this levee. The original "base" design indicated this area would be drained passively by four, 72 inch diameter flap-gated culverts through the levee. The design was conditionally endorsed by environmental agencies, based on a Fish and Wildlife Coordination Act Report included in the 1984 Final Environmental Impact Statement (FEIS). More detailed studies of the topography and hydrology of BIA showed that, in order to obtain efficient southward drainage, a large (1,000 cubic feet per second, cfs) pump station would be needed at the "Margarita levee" to actively force water into the abandoned river channel, and a connector canal would need to be built to carry water from the north into the southern area. The "base plan" levee alignment, discussed as mostly over uplands in the 1993 EA, is now known to cover mostly jurisdictional wetlands. The "base plan" levee alignment would run over 6,100 feet, and together with the sump and connector canals, cover a wetlands footprint of 17.3 acres and cause a loss of at least 5 WRAP Functional Units. This alternative would require excavation of 14,200 cubic yards of material (in Puerto Nuevo canal and the new connector canal), and fill deposition over the "GDM levee route" to create the Margarita levee (to be built just on the north side of the re-shaped Margarita Channel). The 1,000 cubic feet per second (cfs) pump station would be either electric or diesel, and would pump during flood stages, but would require constant manning and regular inspection to assure it would function when needed.

The Base Plan and another pumped drainage plan, New Alternative 3, have the advantages that they would not interfere significantly with traffic patterns inside the port area. With a correctly sized pump they would provide full flood drainage for BIA. The no action alternative further would not affect mangroves on the blind northern end of the Puerto Nuevo Canal (old river bed) north of Kennedy Avenue. Drawbacks to this plan include a relatively long and wide levee footprint, requiring relatively large amounts of fill, through jurisdictional wetlands. The base plan has potentially the largest adverse impact on jurisdictional wetlands at 17.3 acres. Another drawback is the relatively high maintenance requirements for the electric or diesel pump or pumps (estimated at nearly \$12 million over the life of the project). Perhaps the most serious potential drawback to this and other pumped drainage plans is dependence on a pump to function during large tropical storms or hurricanes. Puerto Rico is in the hurricane zone and recent years have shown the island's vulnerability to these recurring storms. It is routine for the government to de-activate electric power lines just before the main brunt of hurricane-force winds is expected to strike an area, in order to avoid potential loss of life due to downed power lines. This protects civilians as well as power authority field repair crews, but it means that an electric pump, or a diesel pump operated by remote electric switching, would be vulnerable to loss of power at the time it might be needed most. Pumps operated from a diesel engine would not suffer this drawback, but the engines would require constant maintenance, as well as operators on-site to turn them on and monitor them when needed. Since the BIA is not a residential area, it was felt by some engineers and government representatives that a locally operated

pump might not receive the priority attention, between flood events, that would allow it to operate efficiently during floods. Therefore an attempt was made to develop options that would allow drainage of the BIA by gravity.

### **3.2 New Alternative 1 (The Kennedy Avenue Open Channel Option).**

This gravity-drained alternative is illustrated on Plate 3. It would begin with cleanout of the Puerto Nuevo Canal in BIA, starting at the local storm drainage pump station for the industrial park and extending to the north. It would require replacement of the South Marginal Road bridge at Kennedy Avenue. The drainage canal would emerge on the north side of Kennedy Avenue to turn right (north-eastward). From this point it would run along the north side of Kennedy Avenue, to discharge into Caño Martín Peña. The drainage channel would have to fit between the Ports Authority's Puerto Nuevo operations area and the north shoulder of Kennedy Avenue, and probably would have to be a vertical walled channel reinforced with sheet pile. It would drain by gravity into Caño Martín Peña, just north of the Kennedy Avenue bridge. The existing king pile and panel wall at this point along Caño Martín Peña would have to be removed to provide a drainage outlet into the channel. The Margarita levee would be realigned to run along an existing power line right of way that is already elevated above the surrounding lands. The new levee alignment would reduce the quantity of fill required, because it could be lower and shorter than the "base plan" or no action levee.

This alternative would require excavation of an estimated 250,000 cubic yards of material and would remove 1.5 acres of mangroves (1 acre in the old Puerto Nuevo river end and 0.5 acres at Caño Martín Peña; 0.8 Functional Units, according to a desktop WRAP analysis by USACE biologists). The levee alignment would be identical under all new alternatives, that is, along an existing power line right of way that encompasses about 7.5 acres of marshy, emergent wetlands. This alternative would require additional mitigation for the emergent wetland loss of 2.2 Functional Units. The large amount of excavated material to be generated under this alternative would have to be disposed of off-site on an upland to be identified by the project contractor. The large quantity of excavated material, high cost of the required real estate easements, relatively high cost of construction for a long, sheet pile reinforced channel in a narrow right-of way, worked together to make this new alternative more costly to build than either pumped drainage option. It also had the potential to interfere (during its construction) with traffic in the port area. A potential advantage of the open channel configuration would be that it could be easily cleaned of accumulated sediments. A drawback, at the point of discharge, would be that during major flood events water in the canal might be impounded by high water levels in the main river (the point of discharge), delaying drainage and causing short-lived local flooding.

### **3.3 New Alternative 2 (Box Culvert Under Port).**

This Alternative is illustrated on Plate 4. It would begin as in New Alternative 1, with a clean-out of the old Puerto Nuevo Canal, and would extend north under Kennedy Avenue as before, but then it would continue to extend north-north west into and under the Ports Authority property, where it would become an underground, concrete-lined, pile supported, double bay culvert. This alignment alternative for the channel would empty into San Juan Bay at the Ports Authority docks, just southwest of the western end of the SeaLand crane. The Margarita levee would be realigned as in New Alternative 1, to run over a power line right of way in order to reduce the quantity of fill involved and limit impacts over undisturbed wetlands. Alternative 2 would require excavation of approximately 75,000 cubic yards of material, to be disposed of on the realigned levee or carried off-site to an upland disposal area (to be located by the Contractor). This alternative would clear 1 acre of mangroves at the blind north end of the Puerto Nuevo Canal (north of Kennedy Avenue) with a corresponding loss of 0.4 Functional Units, according to a desktop WRAP analysis performed by USACE biologists. Its impact over the emergent wetlands due to the levee and access roads would be 7.5 acres and 2.2 Functional Units.

Advantages to Alternative 2 include the following: 1) it would reduce wetlands impact of the drainage channel, as compared to Alt 1, because the mangroves at Caño Martín Peña would not be affected; 2) construction cost of the combined open earthen channel and pile supported concrete box culvert is expected to be less than the cost of the long channel parallel to Kennedy Avenue; 3) this alternative provides a much shorter, more efficient drainage route for BIA than the Kennedy Avenue channel.

### **3.4 New Alternative 3 (Pumped drainage with realigned Margarita Levee).**

This Alternative would combine the large pump station and sump with the shorter, "new" alignment of the Margarita Levee over the power line right of way. It would require excavation of approximately 95,000 cubic yards of material, would remove no mangroves, and fill or excavate 11.3 acres of emergent wetlands under the levee, sump and pump. As with the other alternatives, a desktop E-WRAP analysis indicated a Functional Unit value per acre of the emergent wetlands as 0.3. This alternative would require replacement of 3.4 WRAP units of wetlands. It has the advantage of no potential adverse effect on the mangroves north of Kennedy Avenue, but pump operations, as in the case of the "no action" alternative, may be problematic. The potential operations and maintenance cost of this alternative appeared higher than that of either gravity drainage alternative.

### 3.5 Comparison of Alternatives and Selection of the recommended plan.

Table 1 compares the alternatives in terms of construction cost, operations and maintenance cost, quantity of excavated material they would generate, wetlands impacted, and functionality. Although New Alternative 3 has the least impact on mangrove wetlands, considerations of reliability, operability and relative cost clearly favor the gravity drainage options. Among gravity drainage options, the more cost effective and efficient gravity drainage option was also the less environmentally adverse. The recommended alternative is identified as New Alternative 2, gravity drainage by box culvert under the port.

**Table 1.** Alternatives to control flooding in the Kennedy-Bechara area. Environmental impacts, cost and other considerations.

Option Item	GDM or "base" plan	New Alt. 1: Open Kennedy Ave Channel	New Alt. 2: Box Culvert Under Port	New Alt. 3: Revised Pump Station and Levee
Excavated material for disposal, cu yd	14,200	250,000	75,000	94,518
Levee footprint on wetlands, acres and HU WRAP FU per acre = 0.3	Levee 13.2 acres	7.5 acres (previously filled)  WRAP FU= 2.2	7.5 acres (previously filled)  WRAP FU=2.2	7.5 acres (previously filled) sump 0.8 acres connector canal 3.3 acres Total 11.3 acres WRAP FU =3.4
Channel excavation of Mangroves WRAP FU per acre = 0.4 for blind river end; 0.8 for Martin Peña	sump 0.8 acres; connector canal 3.3 acres  Total 17.3 acres WRAP FU = 5.9	1 ac mangroves N of Kennedy Bridge; 0.5 acres along Kennedy Ave near Caño Martín Peña  Total 1.5 Acres WRAP FU 0.8	1-acre mangroves N of Kennedy Bridge.  Total 1 acre WRAP FU=0.4	None
Mitigation, FU	5.9 (highest)	2.8	2.6 (lowest)	3.4
Construction cost	High due to poor soil conditions, high cost of pump.	High: Sheet pile lined channel is expensive due to length	High: box culvert construction is expensive.	Higher than box culvert due to poor soils and high cost of pump)
Operations and Maintenance Cost	High. Pump motors require regular maintenance and constant staffing.	Low	Low	High. See "base plan" comments, pump motor maintenance and staffing.
Real Estate Cost	Low: most lands government owned and already acquired.	High: lands along Kennedy Ave have high RE value	Mod-High. Less RE than Option 1	Low: most lands government owned and already acquired
Efficiency and Reliability	Moderate: pump must be staffed around the clock and requires regular maintenance to function.	Good: project drains continuously as with natural channel; some backwater effect at outlet during high floods	Best: due to short distance to outlet, project drains continuously as with natural channel. No backwater effect at San Juan Bay.	Moderate: (see base plan) pump requires regular maintenance and source of energy.

As part of a Value Engineering Study, the Margarita Levee was moved from its location in the general design memorandum (parallel along the north side of the Margarita Channel) to its current location along the south side of the Bechara Industrial Area. By relocating the levee, the levee's length was reduced from 6,100 feet to 3,500 feet, and the total area impacted by the levee's footprint was reduced from 17.2 acres of wetlands (levee footprint only) to a total of 7.5 acres of emergent wetlands.

The new levee alignment was selected to correspond with an existing construction/access berm between two high voltage electrical transmission lines. Due to weak soils in the area, the existing berm has subsided some since it was originally constructed. Lack of maintenance has allowed the berm to become heavily vegetated. The Puerto Rico electrical power Authority (PREPA) currently owns the right-of-way, transmission lines, and access berm. By selecting the PREPA access berm for improvement for flood control levee, previously undisturbed areas of wetlands remain unaffected by the flood control project, and PREPA's existing maintenance access to the transmission lines is preserved and improved.

Also, the estimated cost of improving the existing berm is substantially less than the cost to build a floodwall. The current estimated construction cost for the margarita Levee is \$541,000. The cost to construct a floodwall would be over \$5,000,000 due to the length of the wall (3,500 feet), the height of floodwall stages in the Margarita Channel, and the weak soils in the area.

## **4.00 EXISTING ENVIRONMENT**

### **4.1 Location, Physiography and Drainage**

The study area is the last segment of the Río Piedras/Puerto Nuevo River through the municipalities of San Juan and Guaynabo. This area is nearly flat, but slopes slightly to the north, toward San Juan Bay. Kennedy Avenue, which bisects the area from southwest to northeast, is a major arterial road serving the port area, the municipality of Cataño, and the western San Juan suburbs of Guaynabo and Bayamón. Flooding along Kennedy Avenue originates locally in the Bechara area and is also partly caused by overflow of upper Margarita Creek. The Margarita levee will eliminate the risk of flooding from upstream, but further improvements are needed to conduct drainage from the watershed to the sea. The current route of the downstream Puerto Nuevo River channel is man-made from a point near the Highway 22 bridge over this river, to its mouth in Caño Martín Peña. The abandoned river segment is known as Puerto Nuevo Canal. Although it may be seen from Bechara Industrial Park (East Side) and Kennedy Avenue, it is a blind canal with no outlet, and often holds only a minimal quantity of water in the dry season. Near the re-routed main channel, the old river channel can be traced (as seen from the north side of PR-22) as a series of oxbows and sloughs filled with giant aquatic herbs (mostly

*Colocasia*). Only after flooding with several feet of water, will it drain “backwards” into Margarita Creek or the “new” Puerto Nuevo Channel. By this time water has entered buildings in the Bechara Industrial Area and has flooded portions of Kennedy Avenue, causing traffic backups, accidents and the damages to property and income the recommended plan is designed to prevent.

#### **4.2 Land Use in the Bechara segment.**

Land use in the project segment is public, industrial, commercial and transport related. Public facilities in the area along the bay include a fuel pipeline terminus, a major electric power generating station and the Ports facilities. Inland the area includes the main San Juan wastewater treatment plant, San Juan Municipal Public Works headquarters, including the San Juan Municipal Landfill, which has its own drainage system, and the many businesses that have located along Kennedy Avenue or inside Bechara Industrial Park, including insurance, banks, automobile dealerships, a lumberyard, moving and storage companies, wholesale warehouse facilities and others. Lands of the PRPA are used for loading and off-loading, storage and distribution of (mostly) containerized cargo. There are a diesel refueling station and some storage tanks inside the PRPA property in the affected area. Kennedy Avenue is a major east-west artery. Traffic exiting the port at Kennedy Avenue may proceed eastward to make a connection to San Juan, or with Las Americas Expressway (PR-52) and thus arrive at other island towns, including Cages, Humacao, Ponce and Mayaguez; or it may turn westward to continue along the north coast to Guaynabo, Bayamon, Arecibo or Aguadilla. South of Kennedy Avenue, land use is a mix of public (San Juan Public Works, and the landfill) and private (Bechara Industrial Park). No private residences are known in the area. Most of the land has been filled. Some parcels were used for previous disposal of dredged materials or fill. The most recent fill occurred over a large parcel at the West Side of Bechara Industrial Park, including lands that will be under the West End of the realigned Margarita levee. A large raised electric power line right of way constitutes the rest of the proposed levee footprint. Virtually the only land that still has more or less natural plant cover is the abandoned river bed itself and a small parcel located between Quebrada Margarita (Margarita Creek) and the Bechara Industrial Park, a remnant of the “Rupert Armstrong” parcel, property of the Puerto Rico Government. Its cover, described in the 1984 EIS and the 1993 EA, has been reduced overall during the past 15 years, due to encroachment of fills from the north and west, some related to businesses in Bechara Industrial Park and some related to auto dealerships located farther to the west along Kennedy Avenue. Rupert Armstrong has also been used as a dredged materials disposal site as shown by the remnants of old perimeter dikes north of Margarita Creek.

### **4.3 Cultural Resources.**

Previous studies of historic resources were conducted for the Survey Report and Environmental Impact Statement (EIS) written for the RPN project. The recommended levee alignment and the gravity drainage features described here have not previously been surveyed for the Rio Puerto Nuevo Federal Project. However, since the alignment of the levee is all along an old raised power line, and the drainage canal follows an existing canal in its exposed portion, no historic resources are expected to be present. The Corps is in the process of coordinated the project information with the Puerto State Historic Preservation Officer (SHPO), which determined that there were no Cultural or Historic resources in the work area.

### **4.4 Fish and Wildlife Resources.**

The U.S. Fish and Wildlife Service (FWS) prepared a Coordination Act Report (CAR) for the original Survey Report and EIS for the RPN Flood Control Project. This CAR, dated 1980, was annexed to the EIS. It described the mangroves at the mouth of Rio Puerto Nuevo/Martín Peña Channel in detail, but only briefly described the vegetation of the levee area

Historically, the project area was all part of the Puerto Nuevo Estuary and the open waters of San Juan Bay. The original river mouth was located approximately inland from the west end of the existing Ports Authority piers, just east of the power plant (Ports Authority lands were extended into the bay in the early 1960's through deposition of fill over submerged bottoms). The original mangrove habitat must have been the best avian habitat in San Juan Bay, but now only a few relict stands remain in the project area. Wildlife habitats now present in the area include the relict mangroves, grassy open areas with mixed shrub and tree cover on the Rupert Armstrong parcel, the abandoned river course (wild aroids), as well as road and sidewalk margins, generally covered by common grasses or exotic ornamental trees and shrubs

The following paragraph, taken from the previous (1993) EA for the RPN project area, is still a good basic description of wildlife:

"Original habitat throughout the work area consisted of estuarine wetlands. Since development over fill has eliminated most estuarine and wetlands habitat, the area does not presently support a great abundance or diversity of wildlife, with the exception of birds. . In addition to well-known feral urban fauna like city pigeons, cats, dogs, mongoose, rats and mice, open green areas also support a considerable avian population dominated by seed, nectar and insect-eaters, including finches, bananaquits, grassquits, kingbirds, ground and zenaida doves, European rock doves, anis and others. At least one pair of red-tailed hawks generally patrols the lower river, usually nesting somewhere on the grounds of the Experiment Station. The Station, especially the south parcel, and the University of Puerto Rico main campus (nearby but not affected by the project) provide the best avian forest habitat in urban San Juan, due mainly to the large

numbers of mature trees preserved there. Any green space, however, offers some wildlife habitat. Exotic bird species are common and are often associated with the wooded or grassy parts of the river corridor; they may include whydahs, many species of finches, parakeets, conures and some introduced parrots. Migratory birds often seen, even in the city, include water thrushes, peregrine falcon, warblers, kingfishers and the spotted sandpiper. Herpetofauna includes the large exotic toad Bufo marinus, the white-lipped frog, and lizards including the common grass anole, the tree anole Anolis cristatellus and the ground lizard Ameiva exsul."

#### **4.5 Federally Managed Fisheries and EFH**

Marine fish are not found in the now dead-ended Puerto Nuevo canal. This water body does not naturally drain to the south, and has no connection to tide. It serves rather as a linear sump that collects runoff water from surrounding parcels. Other than a few mosquito fish, it does not provide habitat for estuarine species, and it is too shallow to shelter tolerant freshwater species such as tilapia. San Juan Bay, the intended receiving water of the re-connected channel, has a fish fauna best characterized as estuarine, with an admixture of marine species in the outer Bay during certain seasons. In the deep Puerto Nuevo navigation channel, which is part of the inner Bay, waters are more or less anoxic and turbid, and do not serve as significant fish habitat for most species. This situation is not expected to change in the near future

#### **4.6 Endangered Species.**

In 1993, when overall RPN project plans were coordinated, two endangered species were identified as inhabiting the general project area. They were: the brown pelican (Caribbean population, endangered) and the yellow-shouldered blackbird (endemic, endangered). Further coordination led to a determination that the project would not adversely affect either species. FWS concurred with that determination. More recent coordination indicates that the yellow-shouldered blackbird has not been observed in the Rio Puerto Nuevo area for many years. Pelicans still fish and loaf in parts of San Juan Bay, but they do not frequent the Bechara area, where the waterfront is lined by commercial wharves and no roosts are present. In the bay, both manatees and sea turtles (both endangered) have been observed in the northern, clearer water areas, but no sightings are known from the commercial port area of the inner bay. No Federally listed species or Commonwealth of Puerto Rico species of special concern are believed to inhabit the project area. Habitat conditions are not expected to improve significantly in the near future. The USACE coordinated with FWS and NMFS on endangered species. No endangered species issues surfaced for this project and none were addressed in the extensive correspondence between the USFWS and the USACE.



#### 4.7 Wetlands.

Only remnants of the original wetlands persist in the Bechara area. Both mangrove and freshwater emergent wetlands are present. There are two relicts of the old San Juan insular forest (a mangrove forest) in or near the project area. They are mangrove-covered parcels owned by the Puerto Rico Industrial Development Company (PRIDCO). One such parcel was called the "PRIDCO" parcel in early scoping correspondence for this project. It will be traversed, on its East Side, by the proposed gravity drainage channel, but is no longer proposed for dredged material disposal. It is dominated by red and black mangroves, near the blind channel end, and by mixed facultative wetland trees and grasses farther away from the channel. The mangroves of the PRIDCO parcel are "perched" (located in a topographic position above tide levels). They are growing over old dredged material (probably dating from the early 1960's) at elevations ranging from +2 to +3. feet. These mangroves grew up from propagules pumped in along with the dredged material, or have been carried into the lands by birds or mammals, and are surviving due to the high salt content of the dredged material. Such isolated stands have low functional value, because there is no tidal or flood interchange with the bay. Likewise, there is no export of detritus to the bay, and they cannot serve as developmental habitat for estuarine or marine fishes or invertebrates. They are valuable habitat for resident and migratory songbirds, however. A desktop "EWRAP" analysis of the PRIDCO parcel assigned a functional unit value of 0.4FU per acre. The functional condition of this stand cannot improve unless it can be reconnected to tide. The other pure mangrove parcel, which also belongs to PRIDCO, is located on the south side of Kennedy Avenue, northeast of the canal footprint, and will not be affected.

Other wetlands in the project area include the mixed wetland remnants of the "Rupert Armstrong parcel", now greatly decreased due to encroachment of fill by auto dealerships along Kennedy Avenue. Vegetation in the areas north and south of the proposed levee footprint (the power line right of way) was described as a wetlands/uplands mix by FWS in 1981.

"The southeast portion of (the Rupert Armstrong parcel) comprises 1.4 hectares of mangroves. This forest is relatively dry and not as dense as the one of the other (south) side of the berm. It is nearly a pure stand of white mangrove..., while the other nearby forests are predominantly blacks with some whites. The (other) areas...are transitional in that there is a mixture of species, some of which are characteristic of wetlands and some characteristic of uplands. Portions of these are vegetated with a thicket of leather fern (Acrostichum aureum) which is characteristic of wetland conditions. In some spots the Acrostichum forms pure stands and could be considered a wetland; in others it is intermixed with upland tree species. By far the most common of these trees is the tall albizia (Albizia procera). Less abundant trees are the African Tulip Tree (Spathodea campanulata) and the Australian pine (Casuarina equisetifolia). The central upland portion of the...area is mainly a grassland sparsely wooded by tall Albizia trees. The most common grass is Panicum maximum. In other places there is a cover of morning

glory vines. The upland sites indicate that the area has been disturbed in some fashion. Most likely the area was at one time a mangrove forest that was filled either as a dump or as a previous dredged material disposal area. (J. Blankenship, 1981)."

The observations of the biologist were correct. This parcel is an old dredged material disposal area. The amount of mangrove cover on the "Rupert Armstrong" farm appears to have decreased over the past 20 years. However, a considerable part of the Rupert Armstrong lands located south of the proposed Bechara Levee and north of Quebrada Margarita are now slated to become a mangrove creation area for the overall Rio Puerto Nuevo project (refer to Plate 1).

The abandoned bed of the Puerto Nuevo river extends as a thin, meandering slough between the bridge at PR-22 and the local pump station inside BIA. The river path can be traced as a green line of wetland grasses and giant aroids. It still provides local habitat for amphibians and some birds, and it will not be affected by the proposed gravity drain.

#### **4.8 Socioeconomic setting.**

The last segment of the Rio Puerto Nuevo drainage includes the busy commercial offices along Avenida Kennedy and inside the Bechara Industrial Park, as well as the Port. The area is entirely composed of public, commercial and industrial activities. Floods along Kennedy Avenue and its feeder roads occur when floodwaters are backed up inside BIA until they reach the level of the roadway. BIA itself houses a major moving and storage company, various wholesale businesses and warehouses, a large hardware-lumber business, and several auto and truck retail and service businesses. Floods inside the industrial park reach into the first floors of warehouses and showroom floors, causing financial losses. Because it is close to the port and to the business centers of Hato Rey, Santurce, Miramar and old San Juan, the BIA is a desirable area for business location. However, existing businesses in this area had been subject to frequent flood damage.

#### **4.9 Infrastructure.**

Kennedy Avenue is a major traffic artery, with branches providing access to Cataño and the rest of the north coast as Highways PR- 185 and PR-2. On the south side of BIA, limited access highway PR-22, the José De Diego Expressway, runs from Santurce to a point just west of Arecibo. Although PR-22 was built above the 100-year flood level, Kennedy Avenue and its accesses are subject to flooding. Other major infrastructure elements in the area include the previously mentioned power line, a major trunk sewer (a land outfall connecting the San Juan and Bayamon wastewater treatment plants and ocean outfall), the San Juan municipal landfill and Public Works Department, and the Puerto Nuevo Port Area, operated by the Puerto Rico Ports Authority.

#### **4.10 Hydrology.**

The work area falls within the 100-year floodplain of the Puerto Nuevo River. It is the lowermost drainage basin of this river, and is located north of Highway PR-22. The BIA naturally drains to the north, but this drainage is impeded by the topographic "dam" created by the fill inside the Port Authorities property. Ponding of rainwater behind this man-made "dam" and localized flooding will continue to occur until alternative flood control measures are provided.

#### **4.11 Aesthetic resources.**

Visual resources of the area are limited. The tall hill of the San Juan landfill dominates most views. Looking from Kennedy Avenue to the north, the cranes of the port and the smokestacks of the Puerto Nuevo power plant dominate the view. From this same road looking south, only a line of business concerns can be seen. From the elevated roadway of highway PR-22 (westbound), one can still see a few acres of green in the Rupert Armstrong parcel and along the abandoned river channel. In general vistas are urban and commercial.

#### **4.12 Water Quality.**

The recommended plan will discharge to San Juan Bay at the Puerto Nuevo docks. No discharges to Quebrada Margarita or the Puerto Nuevo River are planned. Existing water quality at the Puerto Nuevo piers is poor to fair, according to studies recently completed for the San Juan Bay Estuary Program. Problem contaminants include dissolved oxygen (too low), total and fecal coliforms (too high) and nutrients (too high) (*Webb and Gomez-Gomez*. 1998) and *Kennedy et al.* 1996). Water quality in the existing Puerto Nuevo Canal is not known, but it is expected to be influenced by the character of the watershed, which is about 50% vegetated and 50% urban/commercial.

#### **4.13 Air Quality.**

Currently, the BIA airshed frequently violates Puerto Rico air quality standards for fine particulates. Non-compliance is due to pollution from power plants, industrial facilities, and motor vehicles and the "downwind" position of the BIA relative to salt spray and major San Juan emitters. No major new sources of emission form part of the Rio Puerto Nuevo Project or this segment. As population in San Juan inevitably grows and road traffic increases proportionately, air quality problems cannot be expected to improve.

#### **4.14 Noise.**

The project area is urban and industrial, and contains two major arterial roads. Daytime high sound levels, caused mostly by heavy traffic and port loading activities, are typical. There are no schools, hospitals or residential neighborhoods in the area. The noise environment is not expected to change or improve in the future, as the area is entirely industrial and commercial.

#### **4.15 Hazardous, Toxic and/or Radioactive Waste.**

Preliminary research (background information, literature search, etc.) revealed that no known sources of HTRW materials existed in the project footprint. A Civil Works Environmental Audit as defined in ER-1165-2-1132 for HTRW materials was carried out in March of 1998 and again in November of 2000. The following signs of potential HTRW problems were identified: adjacent landfill and water treatment plant; buildings; diesel fueling station, above ground storage tanks and transport areas (inside the Port property). Surrounding areas have been tested with negative results. The potential areas of concern are not within the project footprint, except for the diesel station and the above ground storage tanks.

### **5.00 ENVIRONMENTAL CONSEQUENCES OF THE RECOMMENDED PLAN**

#### **5.1 General and temporary environmental impacts during construction.**

Construction of the recommended plan will lead to periodic interruption or re-routing of Port traffic at the Puerto Nuevo piers, increased congestion on Avenida Kennedy (during extension of the Puerto Nuevo Canal north of the bridge and replacement of the South Marginal Road bridge), temporary increases of turbidity in the canal, and temporary increases of turbidity at the Bay outfall, when the channel is broken through. Depending on staging of the Canal cleanout, there will also be some temporary increases in traffic inside BIA, adjacent to the Canal. These conditions are expected to return to normal when construction is complete. All appropriate measures, such as silt fences, hay bales, etc., will be used to avoid and minimize mobilization of exposed soils and sedimentation of waterways. These measures will be part of project environmental specifications, as is customary.

#### **5.2 Effects on Land Use.**

The recommended project is expected to intensify land use in the Industrial Park, as it will decrease the risk of damage to building structures and contents. Outside the Park and Port lands, most of the undeveloped lands are government owned wetlands. Wetlands development will be controlled, as at present, by Section 404 of the Clean Water Act.

### **5.3 Cultural Resources.**

No historic properties have been identified on project lands. In accordance with the National Historic Preservation Act, the Corps has made a preliminary determination of "no historic properties affected," confirmed by the SHPO.

### **5.4 Fish and Wildlife Resources**

**Fish.** Re-connection of the lower Puerto Nuevo Canal with the Bay will probably lead to an invasion of salt water and estuarine species, mostly small fish and crustaceans, into this canal. Connection of the canal to tide will not decrease water quality of the receiving body, which is so anoxic and turbid that normal, low flow discharges of the Canal may actually improve water quality of Bay waters. Tidal connection will potentially increase the species diversity of the two mangrove parcels. However, the productivity and colonization of the drainage by estuarine organisms will be limited by water quality in the adjacent harbor waters, where oxygen is generally deficient. There may be some potential for colonization of the concrete lined lower culvert with barnacles. Tidal flushing of the lower Canal will be restored.

**Wildlife.** Wildlife will be displaced or eliminated from the 1.0 acre of mangroves that will be cleared for channel improvements, and from the 7.5 acres of transitional wetland vegetation under the power line right of way that will be converted into the new Margarita levee. The trapezoidal-walled upper Bechara channel may provide foraging habitat for wading birds, a habitat type now virtually absent in this sub-basin. The mitigation proposed for wetland loss is creation of an additional 5 acres of mangrove habitat on or off-project. This will more than compensate for loss of the mangrove habitat, but it will not replace the emergent habitat of the existing power line corridor. The wildlife habitat loss under this corridor is not considered significant.

## **5.5 Essential Fish Habitat Assessment.**

The landlocked canal and levee alignment are not now habitat for commercial fish species managed under PL94-265, as they have been isolated from tide for more than 40 years. The waters of San Juan Bay are Essential Fish Habitat, according to the Caribbean Fisheries Management Council, for juvenile forms of many reef dwelling fish (especially members of the snapper and grouper families) as well as reproductive habitat for estuarine species including snook and tarpon. However, within the inner Bay, the Puerto Nuevo Navigation Channel (the water body that will receive the discharge from the box culvert) is not presently of significant value as habitat for adults or juvenile forms of these species, due to the lack of bottom cover, shelter, forage and anoxic character of its waters (dissolved oxygen values below 4 ppm). The Corps does not expect a significant change in the EFH characteristics of the Puerto Nuevo Navigation Channel as a result of building the recommended plan, although there may be a slight decrease in salinity and a slight water quality improvement overall as a result of the change. This determination (no effect on EFH or managed species) was concurred with by the National Marine Fisheries Service (NMFS) on March 24, 2001.

## **5.6 Endangered species.**

The immediate project area does not contain endangered species habitat and no Federally designated species will be affected. The Corps coordinated this determination with U.S. Fish and Wildlife Service and the National Marine Fisheries Service. No endangered or threatened species were identified.

## **5.7 Wetlands**

A total of (1.0 + 7.5) or 8.5 acres, and 2.75 functional units, of wetlands, will be converted to open water(channel extension) or upland (levee and accesses) by the recommended plan. The wetlands under the proposed levee footprint are not of very high quality, and they are already raised above the level of surrounding lands. Their functional value was assessed at only 0.3 FU per acre. It is not considered desirable to try to replicate this transitional habitat elsewhere. Because the new channel-culvert will be in contact with tide, mangroves may repopulate its open, trapezoidal upstream section, but drainage considerations will require periodic cleaning, and no credit is claimed for this re-vegetation. Mitigation by off-site creation of a mangrove stand is proposed. It is believed that 5 acres of created mangroves, either along the new Margarita Channel or along the old Puerto Nuevo River channel between BIA and the landfill, or at the north side of the mouth of Martín Peña channel, would provide full replacement for the affected wetlands. The exact option will be selected after full public and agency coordination of this Assessment and receipt of comments and recommendations.

## **5.8 Socioeconomic impacts.**

No permanent adverse impacts are expected. Nuisance interruptions to traffic and port activities will be minimized by contract staging. Adverse effects will be more than offset by the benefits of reduced flooding, reduced days of lost commuter time, reduced inventory losses and greater public safety. There will be no adverse impacts to residential centers, and removal of most flooding problems along the Kennedy Avenue corridor may improve the quality of the commute, on the average.

## **5.9 Effects on Infrastructure and Public Facilities**

The proposed project will require replacement of part of the road, electrical distribution and Port infrastructure (south Marginal Road bridge at Avenida Kennedy and Puerto Nuevo Canal; Margarita levee). Access to the existing power line will be assured by incorporation of a number of access ramps into the levee footprint. These ramps are illustrated on Plate 8. The canal extension has been designed to avoid adverse effects on the San Juan-Bayamón trunk sewer. Construction under the port facilities will be carefully staged to minimize disruption of road circulation patterns, and will avoid major structures such as unloading cranes or dispatch stations. As noted in Paragraphs 4.15 and 5.15, a diesel fuel dispensing station and associated aboveground tanks are located in the project footprint. These facilities will have to be removed.

## **5.10 Hydrologic effects**

The recommended plan will re-connect the Puerto Nuevo Canal to San Juan Bay, re-establishing its natural condition as a tidal estuary and providing gravity drainage for floods, up to a flood with a recurrence frequency of 1% (the "100-year flood") originating in the lower basin.

## **5.11 Aesthetic Effects**

No adverse effects on the visual resources of the project area are anticipated. The levee is relatively low and will run over an elevated power line right of way. Levee sides will be grassed and are not expected to be visually obtrusive. The lower drainage canal will run underground and will not be visible from the surface.

## **5.12 Water Quality Effects**

Excavation and clean-out of the Puerto Nuevo Canal may cause some temporary turbidity increases in its waters, but best construction practices will minimize these effects and limit them to the immediate construction area. Water

quality of the flood drainage from BIA is expected to be at least as good as that of the water at depth in the Puerto Nuevo Navigation Channel at the point of outfall, and it may introduce some oxygen into this rather anaerobic bay environment.

### **5.13 Air Quality Effects**

Construction of the recommended plan does not involve use of any major emitters or generation of significant emissions of pollutants. Operation of the BIA segment will not affect air quality, as a gravity drainage plan will not require motorized pumps.

### **5.14 Noise**

Some additional noise will be generated during construction by common earth-moving machinery, pile drivers (inside the Port lands), dump trucks and other construction vehicles. However, there are no residences to be affected, and no unusual noises are expected. Construction will comply with Environmental Quality Board Regulations for noise levels in industrial and non-residential areas. Once construction is complete the project will not generate any noise.

### **5.15 Hazardous, Toxic or Radioactive Waste**

The diesel dispensing station and storage tanks found within the Port property are within the project boundaries and will be removed and properly disposed of by the Corps contractor. It is anticipated that a large amount of domestic refuse will be found during excavation, as in previous work in the area. The work will not impact the existing landfill in the area.

### **5.16 Cumulative Impacts**

Building the recommended plan will convert 1 acre of mangrove wetlands into open water, and convert 7.5 acres of mixed emergent wetlands into uplands (levee). This is in addition to the 20 acres of mangroves already converted into open water by previously phases of the RPN project. The cumulative impact of the overall RPN project is therefore 21 acres of mangroves and 7.5 acres of freshwater wetlands lost, to be replaced under the currently negotiated overall mitigation plan for RPN. This plan calls for creation of 30 acres of replacement mangrove wetlands, at the mouth of Caño Martín Peña, along the lower riverbank, and along the Margarita Creek in the Rupert Armstrong parcel. When, as expected, the BIA flood control plan is built, some intensification of land use (on already developed sites, such as the Bechara Industrial Park), may occur. However, remaining wetlands in the area are all government owned. Their use is regulated under section 404 of the Federal Clean Water Act. No other cumulative environmental impacts are expected.



### **5.17 Relationship between short-term uses of the environment and Maintenance and Enhancement of Long-term Productivity**

No short-term uses of the environment are proposed. The cleaned out channel and levee are permanent features of the RPN project. Excavated materials not used in levee building will be disposed of off project lands at an upland site to be located by the contractor.

## **6.00 COMMITMENTS AND SPECIAL CONDITIONS.**

### **6.1 Wetlands mitigation**

A revised wetland mitigation plan for the overall RPN project is under development. Although the Corps believes the current mitigation planned to be sufficient under NEPA, a contractor will be utilized to determine whether any enhanced mitigation options exist in the mitigation area. At this time the Corps plans to replace the functions of the estimated 1 acre of mangrove wetland and 7.5 acres of disturbed freshwater wetlands (power line right-of-way) by creation of 2.6 Functional Units (FU) of mangrove wetlands. This is estimated to be equivalent to about 5 acres of newly created mangroves, adjacent to a tidal water body. This will be added to the existing mitigation for the overall RPN project. Any mitigation area would be managed and maintained by the PR DNER.

### **6.2 Tank Removals.**

The diesel fuel station and above ground storage tanks that fall under the project footprint will be removed and disposed of in accordance with Federal and Commonwealth of Puerto Rico law.

## **7.00 SUMMARY OF COMPLIANCE WITH ENVIRONMENTAL LAWS AND REGULATIONS**

### **7.1 National Environmental Policy Act , as amended (NEPA)**

Two Public Notices were published in the Federal Register regarding the BIA segment of the RPN project. A Notice of Intent (NOI) to prepare a Supplemental Environmental Impact Statement (SEIS) was published in the Federal Register of September 9, 1999. A scoping letter was circulated to interested parties on October 6, 1999. In response to scoping and the NOI, several agencies commented that minimizing the project footprint was desirable, and use of the mangrove wetlands of the PRIDCO parcel for disposal was not acceptable. The project was re-evaluated and it was determined that the recommended plan could be built without use of an on-site disposal area, by utilizing the excavated

material for levee top-dressing and access ramps, and stipulating an off-site (upland) disposal option in the construction contract. Based on this change, a second Notice (Cancellation of the Notice of Intent) was published in the Federal Register of March 15, 2000.

This Environmental Assessment (EA), including the Proposed Finding of No Significant Impact (P-FONSI) was circulated under NEPA and the Coastal Zone Management Act (CZMA) regulations for 45 days beginning on the date on the Letter of Transmittal.

## **7.2 Endangered Species Act of 1973, as amended**

No Federally-listed endangered or threatened species were identified by the Corps in the immediate project area, and no adverse effects on the species known from the general San Juan Bay area are expected. The FWS and NMFS did not identify any endangered or threatened species, either.

## **7.3 Fish and Wildlife Coordination Act of 1958, as amended.**

The FWS issued a draft Coordination Act Report on July 10, 2001. The indications of the FWS are that the information provided in that document is the final one and that they have not released the CAR as a final document waiting on a mitigation plan. The recommendations and comments of the FWS are considered as the final ones.

## **7.4 National Historic Preservation Act of 1966, as amended**

Historic preservation coordination with the State Historic Preservation Officer (SHPO), was completed on September 24, 2001, in accordance with Section 106 of the National Historic Preservation Act of 1966, as amended, 36 CFR Part 800. No historic or cultural properties were identified in the work area.

## **7.5 Clean Water Act of 1972, as amended**

The study is in compliance. A Water Quality Certificate had been issued previously for the overall RPN project. This Certificate had no expiration date. The Environmental Quality Board of Puerto Rico (EQB) issued a new WQC on April 6, 2001.

## **7.6 Clean Air Act of 1972, as amended**

The study/project site is in a non-compliance zone for air quality, according to the Puerto Rico Environmental Quality Board, but no additional emissions are expected as a result of project construction or operations. The proposed work is

not industrial in nature, and other than negligible muffler emissions from the construction machinery, no aerial release of substances will take place. Circulation of this Report/EA will fulfill public coordination requirements of Section 9 of the Clean Air Act and NEPA.

#### **7.7 Coastal Zone Management Act of 1972, as amended**

The proposed work is within the Coastal Zone of Puerto Rico. A determination of consistency of the project with the Puerto Rico Coastal Management Program was provided along with the Project EIS in 1985, and again in 1993. On March 15, 2001, the PRPB stated that this work was consistent with the Puerto Rico Land Use Plan.

#### **7.8 Farmland Protection Policy Act of 1981**

No prime or unique farmland is located in the project area. Lands in the lowermost Puerto Nuevo are fill, urban land and former mangrove forest (tidal swamp). This law is not applicable.

#### **7.9 Wild and Scenic River Act of 1968, as amended**

There are no designated Wild and Scenic rivers in Puerto Rico. This act is not applicable.

#### **7.10 Estuary Protection Act of 1968**

San Juan Bay Estuary System is a designated site of the U.S. Environmental Protection Agency's National Estuary Program. The proposed project does not conflict with the Comprehensive Conservation and Management Plan (CCMP) for San Juan Bay Estuary. The proposed point of discharge is the Puerto Nuevo Navigation Channel, and the discharge will consist of localized rainwater run-off.

#### **7.11 Resource Conservation and Recovery Act of 1976, as amended, and Toxic Substances Control Act of 1976, as amended**

No items regulated under these laws or other laws related to hazardous, toxic or radioactive waste substances have been discovered or likely to exist in the study and project area, except for the fuels used in the cited diesel fuel dispensing area and above ground storage tanks. Removal or relocation of these tanks will be part of the contract, if not previously completed by the Puerto Rico Ports Authority..

#### **7.12 Magnuson-Stevens Fishery Conservation and Management Act, as amended**

In accordance with the regulations adopted by the Caribbean Fisheries Management Council, all of San Juan Bay is designated Essential Fish Habitat (EFH) for juvenile forms of reef dwelling and open water species, and as adult habitat for estuarine species. An EFH assessment was made. In spite of their "EFH" designation the inner bay ship channels, especially Army Terminal Channel and Puerto Nuevo Channel, are not of significant value to commercially important marine fish species. Water quality in these deep channels is poor, as discussed in Paragraph 5.5 of this EA. Furthermore, neither the existing Puerto Nuevo Canal nor the levee area can currently provide EFH, as they are within an isolated wetland system not connected to salt water. Re-connecting Puerto Nuevo Canal so that it discharges to the inner harbor may at some point create additional juvenile and estuarine fish habitat, and will not degrade any existing habitat. The Corps made a preliminary determination that the recommended plan will not result in any adverse effects on EFH. The National Marine Fisheries Service (NMFS) concurred under the provisions of the Act and declined to give any recommendations, by letter dated March 24, 2001.

#### **7.13 E.O. 11990 Protection of Wetlands**

This order requires that Federal Agencies avoid impacts to wetlands unless there are no practicable alternatives. It further requires that Federal Agencies minimize losses to the beneficial values of wetlands and preserve and enhance the beneficial values of wetlands. The recommended plan is the alternative that minimizes wetland impacts. Full replacement of lost Functional Units in accordance with the WRAP evaluation is proposed. Other than non-construction of a flood control alternative for the Bechara reach of Río Puerto Nuevo, there is no footprint for the levee/canal that would further reduce adverse wetland impacts.

#### **7.14 E.O. 11988 Floodplain Management**

This E.O. requires that Federal agencies: (a) avoid development in the floodplain unless it is the only practicable alternative; (b) reduce the hazard and risk associated with floods; (c) minimize the impact of floods on human safety, health and welfare; and (d) restore and preserve the natural and beneficial values of the floodplain. The proposed work intends to reduce flooding risks in a coastal floodplain that is nearly totally developed. It would not increase the current risk of floods in the area, nor will it induce development of the floodplain outside the footprint of existing developed areas.

## **7.15 E.O. 12898 Environmental Justice**

This Order prohibits disproportionately adverse Federal project effects on minority and low-income populations, and requires that such populations be included in the plan formulation and coordination process. The proposed work is in compliance. BIA is a non-residential area, and no resident populations, minority or otherwise, would be impacted by any considered alternative.

## **8.00 COORDINATION AND PUBLIC INVOLVEMENT.**

Public coordination of the BIA segment of the RPN project began in early 1999 in interagency meetings held in Puerto Rico. A Notice of Intent to publish and coordinate a Supplement to the Final EIS for the RPN-BIA project was published in the Federal Register of September 9, 1999. After the public scoping period raised no additional new issues, and the project was modified to avoid disposal of excavated material over mangrove wetlands, the Notice was cancelled by a Notice of Cancellation on March 15, 2000. This EA was coordinated with agencies and interested parties for a period of 45 days, beginning on February 22, 2001. Comments are enclosed as attachment D.

## **9.00 LIST OF PREPARERS.**

This Environmental Assessment was originally written by Barbara B. Cintrón, Biologist, with additional input and final revision provided by Esteban Jiménez, Biologist. Other preparers were: Ivan Acosta, Civil Engineer, and David J. McCullough, Archeologist, all of the Planning Division, Jacksonville District, Corps of Engineers. Project descriptions were provided by Ed Morente, Civil Engineer, Jana Tanner, Civil Engineer, Jack Fross, Civil Engineer, and Robert J. Newman, Project Manager.

## **10.00 REFERENCES**

Blankenship, J. 1981. Addendum to 1980 Environmental Assessment for Rio Puerto Nuevo: New proposed disposal area (Rupert Armstrong Parcel). U.S. Fish and Wildlife Service, Division of Ecological Services, Mayaguez, Puerto Rico.

Kennedy, R. J., J. J. Hains, W.A. Boyd, J. Lemons, F. Hermann, D. Honnel, P. Howell, C. Way, F. Fernández, T. Miller-Way, R.R. Twilley. 1996. San Juan Bay and Estuary Study: Water Quality Data Collection. U.S. Army Corps of Engineers, Waterways Experiment Station, Vicksburg, MS. Miscellaneous Paper EL-96-9.

URS Greiner Woodward Clyde, Inc. 1999. Detail Design Report, for Bechara Industrial Area/Kennedy Avenue, Flood Control Plan, San Juan, Puerto Rico. Prepared for Jacksonville District, U.S. Army Corps of Engineers..

U.S. Army Corps of Engineers, Jacksonville District. 1993. Environmental Assessment and Finding of No Significant Impact (to Accompany General Design Memorandum), Rio Puerto Nuevo Flood Control Project, San Juan, Puerto Rico.

U.S. Army Corps of Engineers. 1984. Survey Report and Final Environmental Impact Statement, Rio Puerto Nuevo Flood Control Project, San Juan, Puerto Rico.

U.S. Department of Commerce and Puerto Rico Department of Natural Resources, 1978. Puerto Rico Coastal management program and Final Environmental Impact Statement.

U.S. Fish and Wildlife Service, 1980. "Environmental Assessment, Río Puerto Nuevo Flood Control Project", Division of Ecological Services, Mayaguez, Puerto Rico.

Webb, Richard M. T. and Fernando Gómez-Gómez. 1998. Synoptic Survey of Water Quality and Bottom Sediments, San Juan Bay Estuary System, Puerto Rico, December 1994-July 1995. Water Resources Investigation Report 97-4144. United States Geological Survey, in coop. with Puerto Rico Department of Natural and Environmental Resources and U.S. Environmental Protection Agency. San Juan P.R. 70 p.

## **LIST OF PLATES, BECHARA INDUSTRIAL AREA ENVIRONMENTAL ASSESSMENT**

Plate 1. Overall Rio Puerto Nuevo Project, showing contract reaches and the Bechara segment in context.

Plate 2. “No Action” or GDM plan, with connector canal and pump station added.

Plate 3. New Option 1: Long open gravity drainage channel, parallel to Kennedy Ave.

Plate 4. New Option 2: Box culvert, north trending under Port facilities.

Plate 5. New Option 3: Pump station with “new” Margarita levee alignment

Plate 6. Recommended plan (New Option 2), Overall view.

Plate 7. Detail of Recommended plan showing channel impacts on mangroves (solid thick line)

Plate 8. Detail of Recommended plan showing levee impacts (thick line)

Plate 1. Overall Rio Puerto Nuevo Project, showing contract reaches and the Bechara segment in context.



# " Overview of the Rio Puerto Nuevo Project "

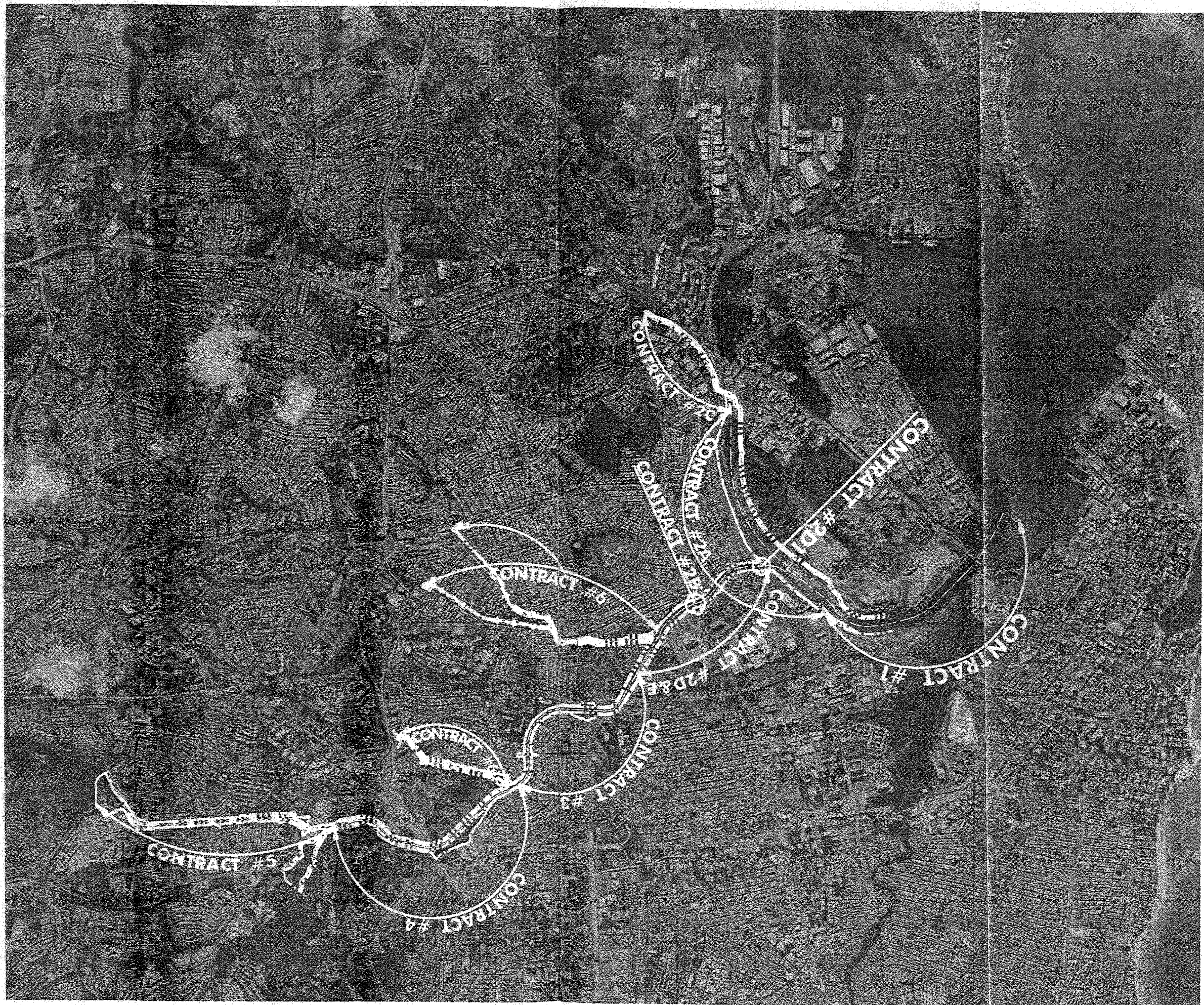


Plate 2. "No Action" or GDM plan, with connector canal and pump station added.



BECHARA INDUSTRIAL AREA  
BASE PLAN: GDM LEVEE WITH PUMP STATION

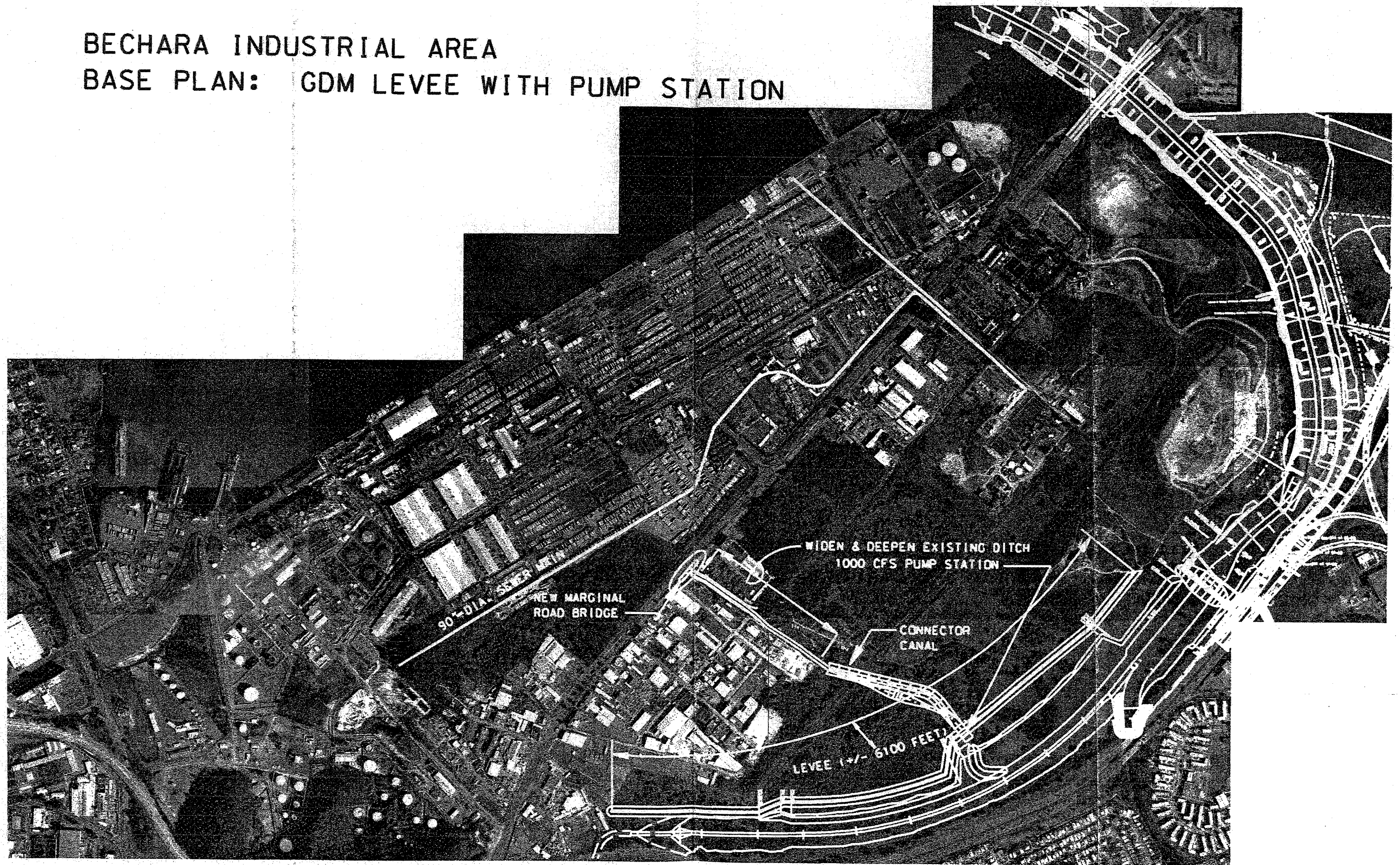


Plate 3. New Option 1: Long open gravity drainage channel, parallel to Kennedy Ave.



BECHARA INDUSTRIAL AREA  
OPTION 1: OPEN CHANNEL ALONG KENNEDY AVE

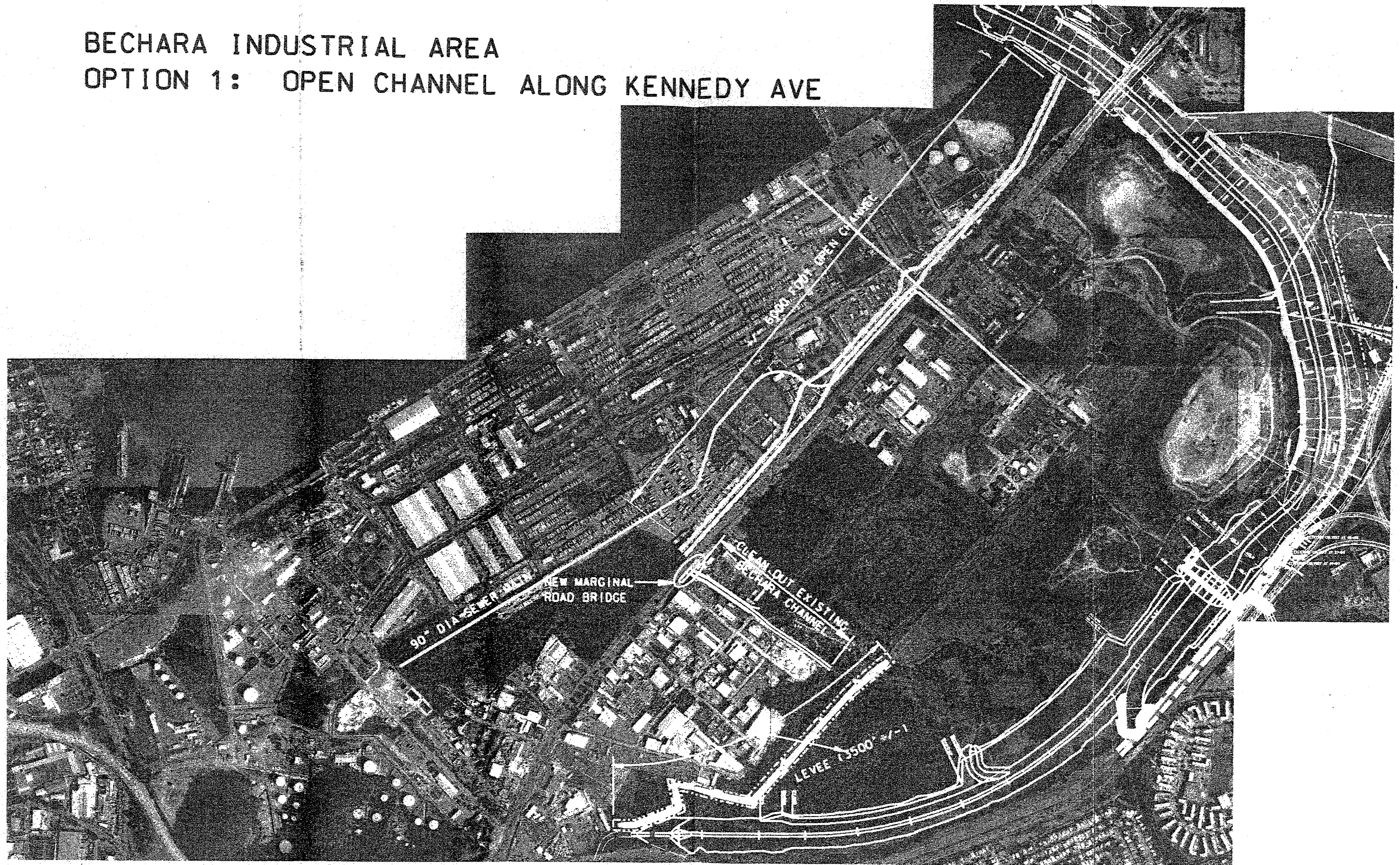


Plate 4. New Option 2: Box culvert, north trending under Port facilities.



BECHARA INDUSTRIAL AREA  
OPTION 2: BOX CULVERT UNDER PORT FACILITIES

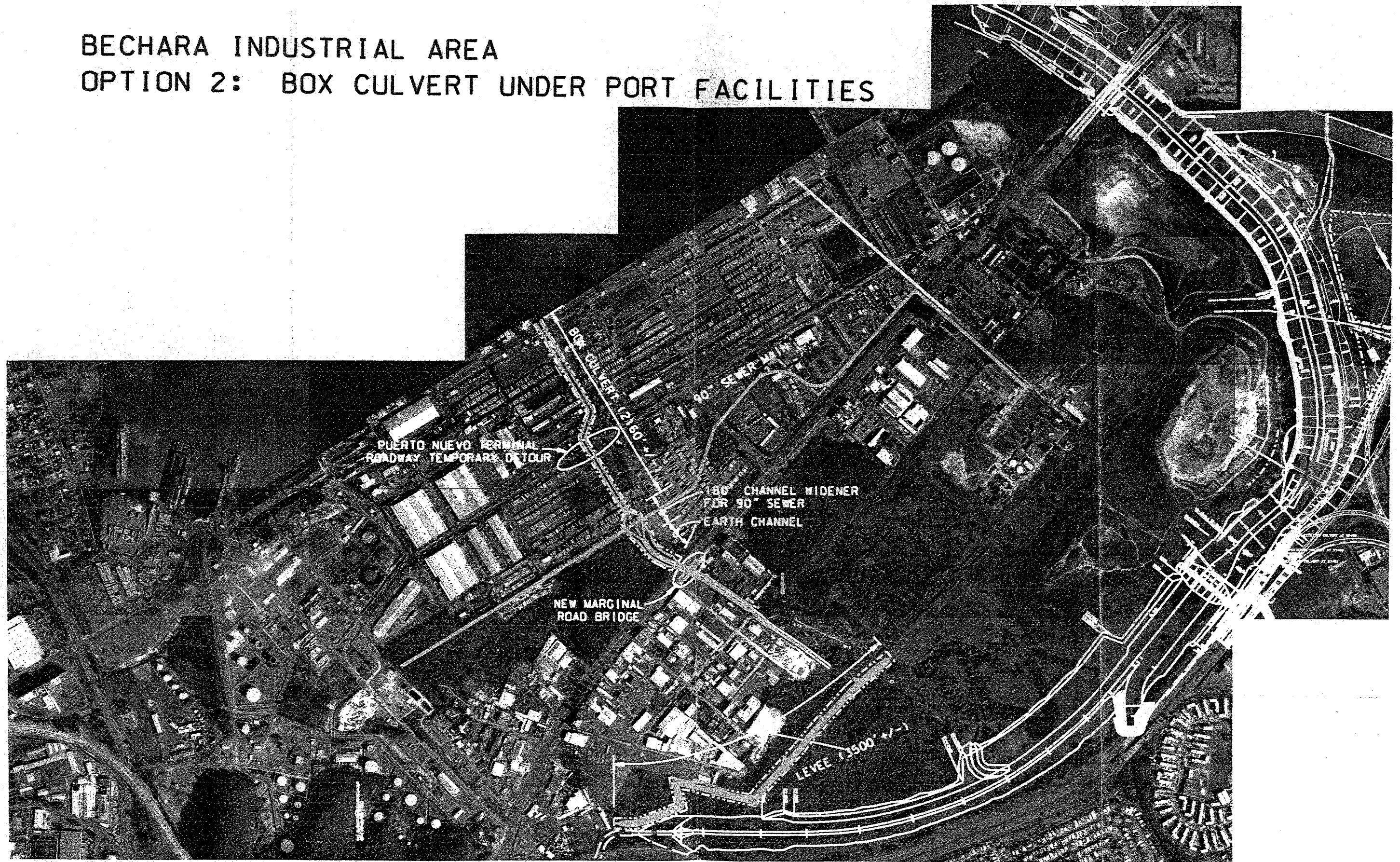


Plate 5. New Option 3: Pump station with "new" Margarita levee alignment



BECHARA INDUSTRIAL AREA  
OPTION 3: LEVEE WITH PUMP STATION

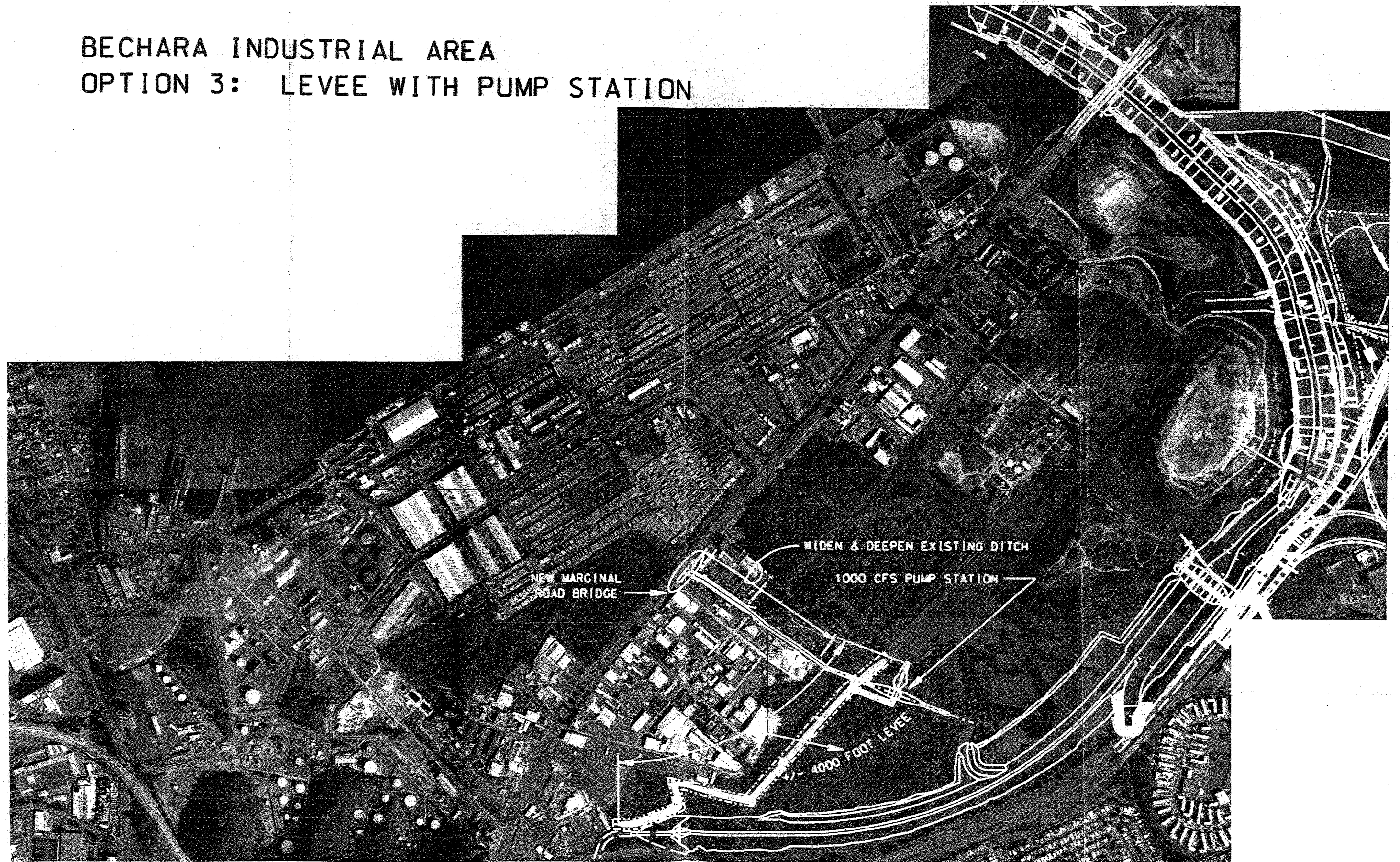
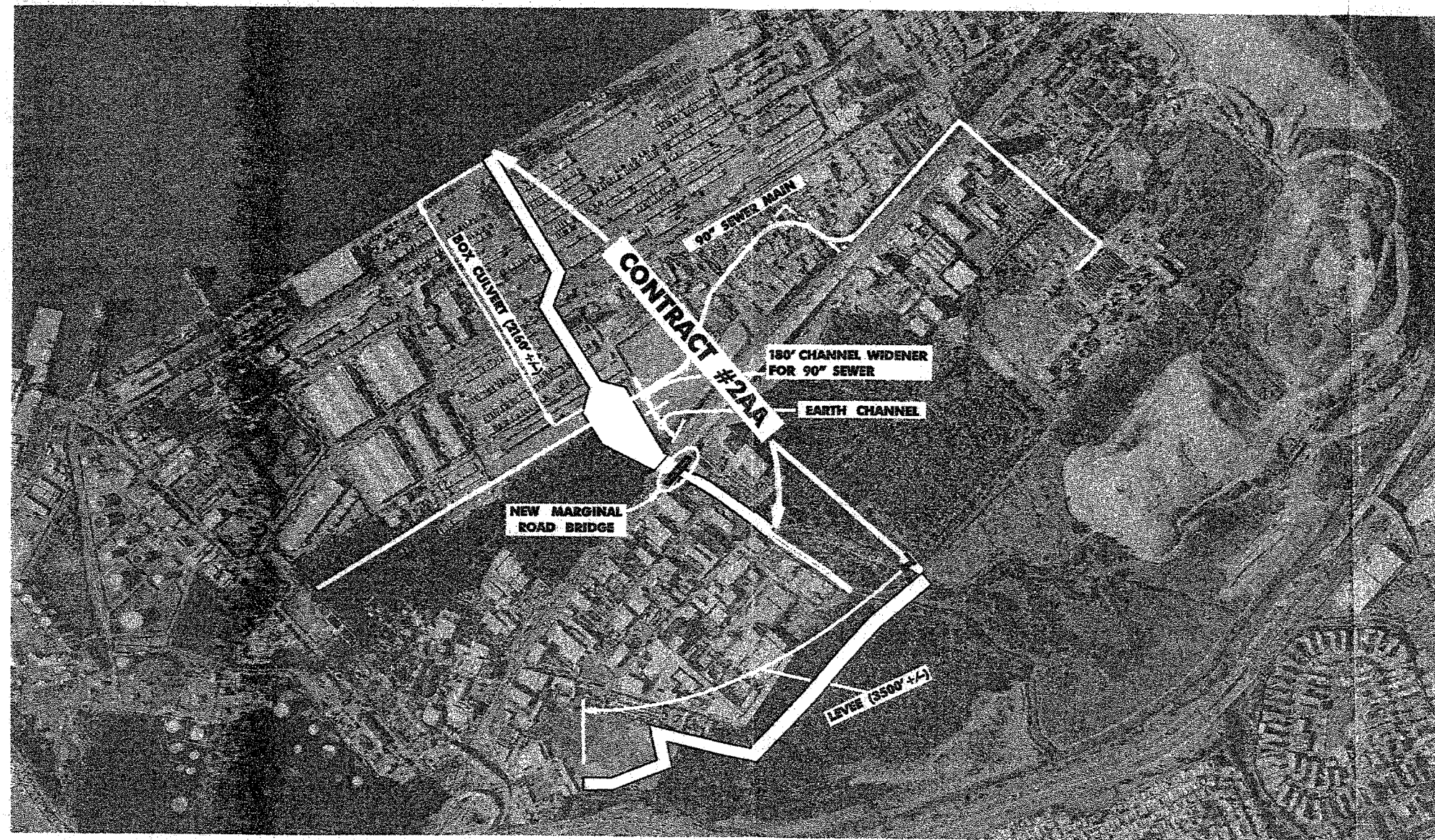


Plate 6. Recommended plan (Option 2), Overall view.





**" RECOMMENDED PLAN - OVERALL VIEW "**

US Army Corps  
of Engineers  
Memphis District  
SAFETY ON THE JOB  
DEPENDS ON YOU

DEPARTMENT OF THE ARMY  
ENGINEERING DISTRICT OFFICE  
MEMPHIS, TENNESSEE

PROJECT NO.	DATE
BY	IN CHARGE
CHECKED BY	DATE
APPROVED BY	DATE

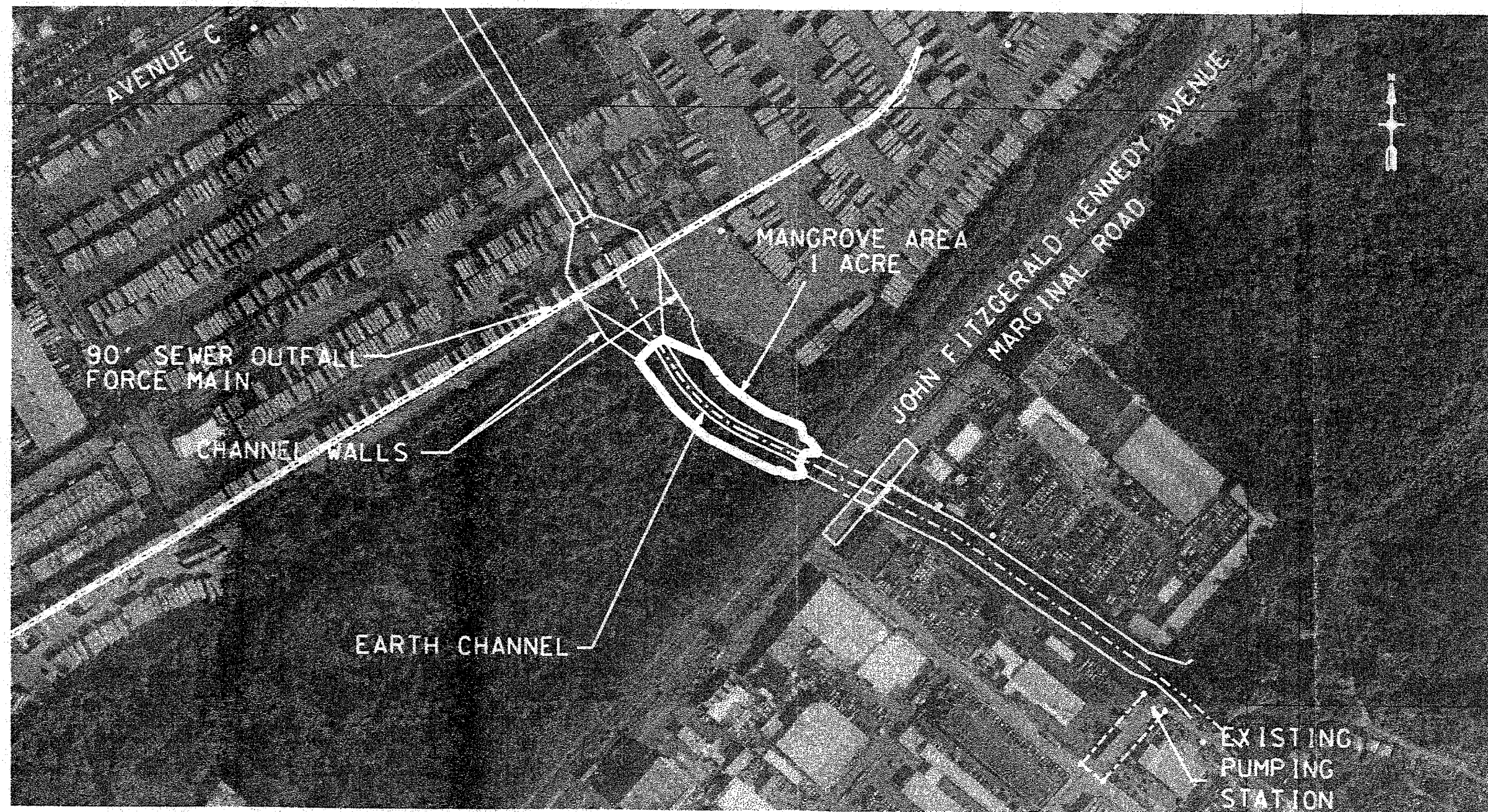
**PLATE 6**  
**OVERALL VIEW**

DRAWING NO.

PLATE 6 OF 8

Plate 7. Detail of Recommended plan showing channel impacts on mangroves  
(solid thick line)





**" RECOMMENDED PLAN - MANGROVE IMPACTS "**

U.S. Army Corps  
of Engineers  
Jacksonville District  
SAFETY ON THIS JOB  
DEPENDS ON YOU

DEPARTMENT OF THE ARMY  
JACKSONVILLE DISTRICT  
JACKSONVILLE, FLORIDA

PL. NO. 100-100-100  
DATE 10/1/68  
BY J. L. BROWN  
CHECKED BY J. L. BROWN  
D.O. FILE NO.

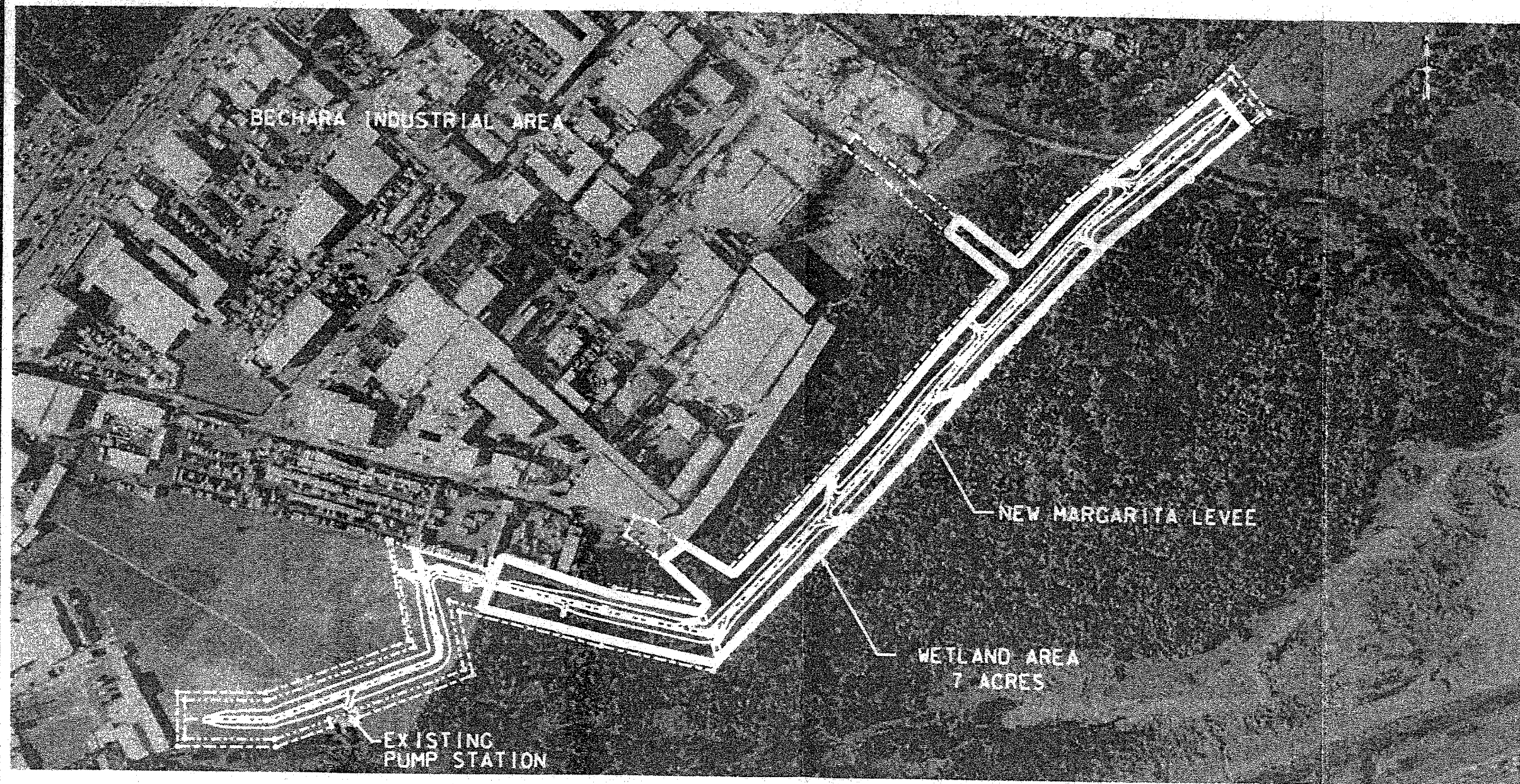
PLATE 7  
MANGROVE IMPACTS

DRAWING NO.

PLATE 7 OF 8

Plate 8. Detail of Recommended plan showing levee impacts (thick line)





**" RECOMMENDED PLAN - LEVEE IMPACTS "**

US Army Corps  
of Engineers  
Jacksonville District  
SAFETY ON THIS JOB  
DEPENDS ON YOU

DEPARTMENT OF THE ARMY  
JACKSONVILLE DISTRICT OFFICE  
JACKSONVILLE, FLORIDA

DATE: 02/28/80  
D.O.F. FILE NO.

PLATE 8  
LEVEE IMPACTS

DRAWING NO.

PLATE 8 OF 8

**ATTACHMENTS**  
**BECHARA SEGMENT, RIO PUERTO NUEVO FLOOD CONTROL**  
**PROJECT, SAN JUAN, PUERTO RICO**



## **LIST OF ATTACHMENTS TO THE ENVIRONMENTAL ASSESSMENT**

**Attachment A. Puerto Rico Coastal Management Plan Determination of  
Consistency and Concurrence letter CZ-2001-0620-144.**

**Attachment B. Clean Water Act Section 404 (b)(1) Evaluation**

**Attachment C. Fish and Wildlife Coordination Act Report**

**Attachment D. Public and Agency Coordination.**

**ATTACHMENT A**

**PUERTO RICO COASTAL MANAGEMENT PROGRAM  
CERTIFICATION OF CONSISTENCY AND FORM**

## **PUERTO RICO COASTAL MANAGEMENT PROGRAM EVALUATION AND DETERMINATION OF CONSISTENCY**

Introduction. In compliance with Section 307 of the Coastal Zone Management Act (CZMA) and its implementing Regulation (15 CFR 930.39), the U.S. Army Corps of Engineers has evaluated the consistency of the BIA Segment flood control plan of the Rio Puerto Nuevo Flood Control Project with the Puerto Rico Coastal Management Program (PRCMP). The environmental assessment (EA) that accompanies this Determination describes the study conclusions, alternatives considered, and environmental consequences of the proposed action, which is construction of the gravity drainage box culvert across Ports Authority lands.

This project has been evaluated in the light of its potential to partially resolve a serious flooding problem affecting an urban core area, thereby contributing to social and economic development of the affected human community. The recommended project will cause minimal adverse effects on natural and cultural resources, and no effects in residential areas. It consists of an earthen levee to be located mostly along a previously disturbed and partially elevated power line right-of-way, cleanout of a pre-existing earthen channel inside Bechara Industrial Area (BIA) and a pile supported, concrete lined double bay culvert to be excavated and built under the Puerto Nuevo dock area of the Puerto Rico Ports Authority. Flooding in coastal areas is a problem cited in the PRCMP. Provision of flood control for established communities, when non-structural alternatives are not feasible, is an objective of the Plan. This recommended project responds to that alternative.

The recommended project also responds to the other general policies of the PRCMP. One acre of mangroves will be directly affected by channel improvements just north of Avenida Kennedy. 5 acres of emergent (disturbed) wetlands will be affected along the levee footprint. The recommended plan is the plan with the least adverse impact on mangrove and other wetlands, of the four action options evaluated. No Commonwealth Forests, beaches, coral reefs, coastal lagoons, Natural Register eligible historic properties, fish and wildlife resources, or threatened or endangered species have been identified in the project footprint; and no significant elements of islandwide infrastructure will be adversely impacted. Provisions have been made for access to affected infrastructure, such as the power line right of way, by building points of access into the levee design.

Planning Division  
Environmental Branch

OCT 24 2001

Ms. Wanda Capó  
Acting President  
Attn: Ms. Rose A. Ortiz  
Commonwealth of Puerto Rico  
Office of the Governor  
Planning Board  
Minillas Government Center  
Post Office Box 41119  
San Juan, Puerto Rico 00940-1119

Dear Ms. Capó:

Please refer to your letter of October 9, 2001 (copy enclosed). After consideration of responses from the FWS, and the Underwater Archeology Council (UAC), your agency has conditioned issuance of a Puerto Rico Coastal Management certification based on the comments provided by both agencies. FWS's main issue is to minimize the direct and indirect impact on wetlands by moving the proposed levee alignment. Also, the UAC requested a phase level IA-IB subaquatic archeological survey be performed in the project area.

The concerns of the FWS had been addressed in the August 20, 2001, letter (copy enclosed) sent to that agency. The FWS stated in its various communications that it had concerns for the fill placed on the existing Puerto Rico Electrical Power Authority (PREPA) easement, cutting off the water flow to the wetlands to the north. The FWS stated that it foresees that wetland area being subject to development. It is that area which it considers to be subject to 'secondary impacts'. The solution proposed by the FWS is to construct the levy in the existing wetlands north of the PREPA easement and directly adjacent to the existing Bechara Industrial Area (BIA).

As explained in our letter of August 20, 2001, the area is currently under a binding conservation easement, which precludes any activity in the area. Any developmental activity into the area would constitute trespassing. Also, the Corps is mandated to avoid the filling of existing functional wetlands when a viable alternative is available. In this case, the PREPA easement consists of wetlands previously filled. Placement of fill upon fill there will constitute the least damaging alternative.

The wetland impacts have been reduced from 7.5 acres to 5 acres of transitional wetlands. The Corps addresses this issue in the Environmental Assessment. Mitigation areas have been identified in the project plans and mitigation work will begin as soon as the construction phase of the project is completed.

With respect to your request for Phase IA and IB subaquatic archeological survey, there are no subaquatic project features that could affect historic properties. The terrestrial project alignment has not been surveyed for historic properties. However, because of the extensive history of ground disturbance and fill activity in the project area, the Corps has determined that no historic properties listed on or eligible for listing on the National Register of Historic Places exist in the proposed project's area of potential effect. This determination was made in compliance with Section 106 of the National Historic Preservation Act of 1966, as amended, and in consultation with the Puerto Rico State Historic Preservation Officer (SHPO). In a letter dated September 24, 2001, the SHPO concurred with this determination (enclosure 2). The Corps has fulfilled the requirements of the NHPA and no further cultural resources investigations will be undertaken.

For the above reasons, the Corps requests that the conditional Coastal Management Plan consistency certification be changed to full certification. Please direct any communications to Mr. Esteban Jiménez at the letterhead address, or at telephone numbers 904-232-2115/Fax 904-232-3442.

Sincerely,

*J. C. Duck*

James C. Duck  
Chief, Planning Division

Enclosures

bcc:  
CESAJ-DP-I (Gonzalez)  
CESAJ-DS

fhl

cc:

DNER, San Juan

COE, Planning, San Juan

COE, Planning, Jacksonville

EPA, New York

EPA, San Juan

CZM, Washington, DC

EQB, Scientific Assessment Division

COE, Dennis Barnett, Atlanta



October 9, 2001

James C. Duck  
Chief, Planning Division  
Department of the Army  
Jacksonville District Corps of Engineers  
P.O. Box 4970  
Jacksonville, Florida 32232-0019

**Federal Consistency Determination**  
**CZ-2001-0620-144**  
**Flood Control Features for Bechara Industrial Area**  
**San Juan, Puerto Rico**

Dear Mr. Duck:

This letter is in response to your application for Certification of Consistency with the Puerto Rico Coastal Management Program (PRCMP) to construct a trapezoidal 8.0–10.33-foot, gravity drainage channel, a combination of an earthen channel and concrete box culvert to carry the floodwater from Bechara Industrial Park, located south of Kennedy Avenue, to San Juan Bay, routing this drain under the Puerto Nuevo port facilities at Bechara Industrial Sector, San Juan, Puerto Rico.

The review period of the certificate began on August 13, 2001. The certification was sent to the State Historic Preservation Office (SHPO), the Underwater Archeology Council, the Fish & Wildlife Service (FWS), the Department of Natural and Environmental Resources (DNER), the San Juan Bay Estuary Program and the Municipality of San Juan for comments. Public notices to the community and organizations were also issued.

During the evaluation period, comments from the FWS, the Underwater Archeology Council, and SHPO were received. Comments of the DNER, the Municipality of San Juan and the San Juan Bay Estuary Program were not received during the evaluation period. The Fish & Wildlife Service commented that the proposed project will impact more than the estimated 7.5 acres of wetland stated in the document because the secondary impacts are not being taken into account by the Corps Planning Section. The FWS informed that no mitigation plan has yet developed for this area, so they recommend that the Certification for this project not be issued until the direct and indirect impacts to wetlands are determined, and a mitigation plan is developed. The Underwater Archeology Council commented that the project is located in an area of high archeological sensitivity, so they require archeological studies phase level IA-IB. SHPO stated that according to their records no historic properties are located within the project's area of potential effects.

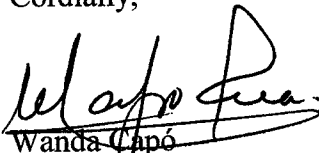
Pursuant to the Federal Consistency Procedures and the information submitted, the Puerto Rico Planning Board, has determined that **the proposed project is consistent with the Puerto Rico Coastal Management Program under the following conditions:**

- 1- The U.S. Corps of Engineers should address the FWS concerns and negotiate the most adequate mitigation plan in order to avoid and minimize the direct and indirect impacts on wetlands. (See letter included as enclosure)**
- 2- The U.S. Corps of Engineers should fulfill the requirement of the Underwater Archeology Council. (See letter included as enclosure)**

Pursuant to 15 CFR 930.4, we should inform that if the above mentioned conditions are not satisfied, or the applicant informs that the mentioned conditions are not acceptable, or the Federal agency notify that the application cannot be approved as amended by the State Agency's conditions, all the parties shall treat the State conditional concurrence letter as an objection pursuant to 15 CFR 930.63.

This final determination does not exempt the project to comply with any other procedures or permits of other State and Federal agencies. If you have any questions concerning this matter do not hesitate to contact Miss Rose A. Ortiz at 726-0289 or 723-6200, ext. 2020.

Cordially,

  
Wanda Capó  
Acting President

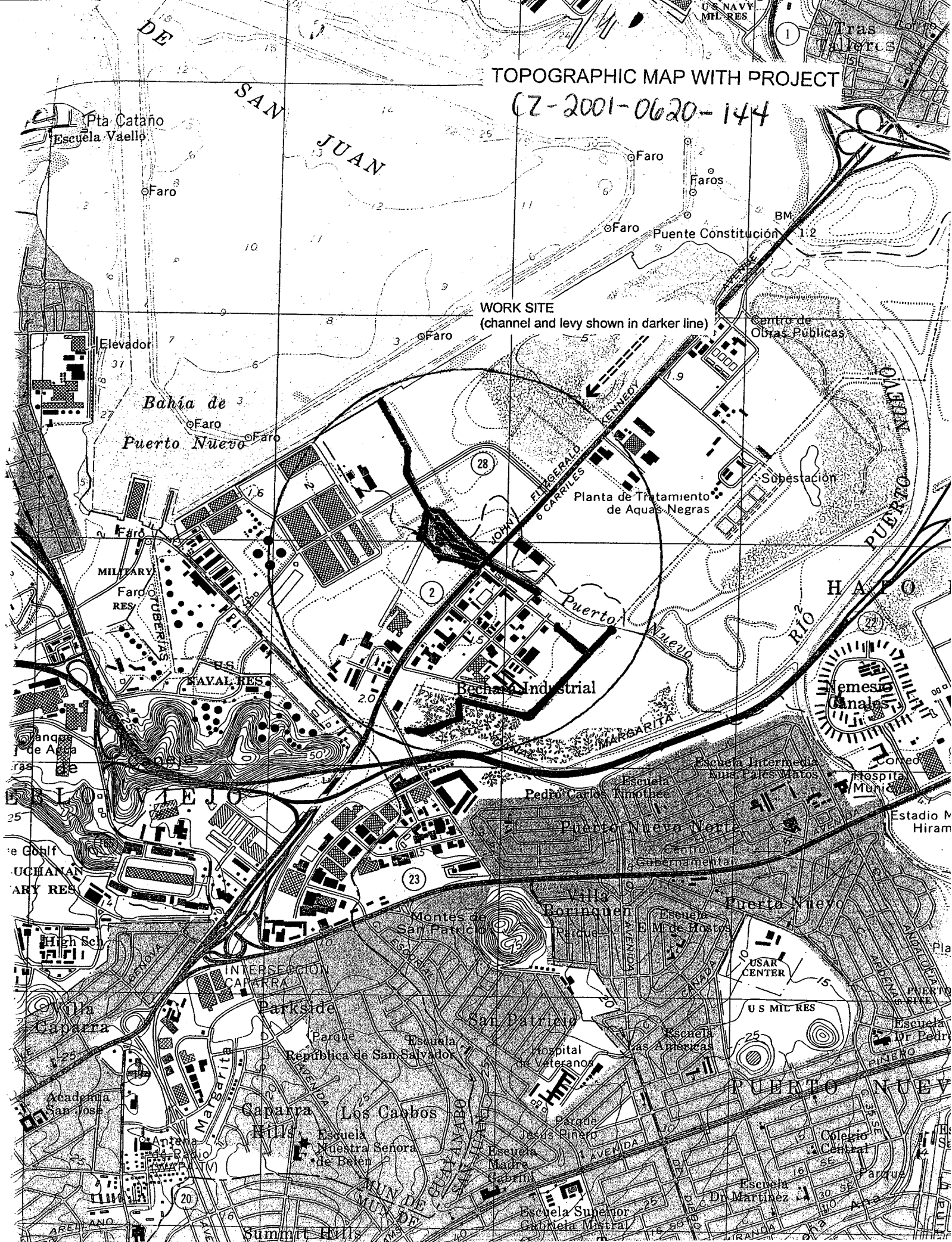
Enclosure: Letters Site Plan

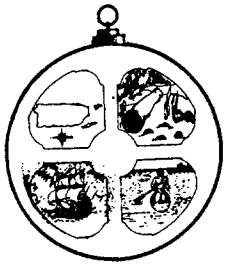
c: Jeffrey Benoit, OCRM, Maryland  
Edwin Muñiz, CoE, San Juan  
Ernesto Díaz, PRCMO, DNER, San Juan  
Wanda García, EQB, San Juan  
Eng. Agustín F. Carbó Lugo, San Juan Bay Estuary Program

NAR/RAO/mir



CZ-2001-0620-144





## **Consejo para la Conservación y Estudio de Sitios y Recursos Arqueológicos Subacuáticos**

**El Arsenal, La Puntilla, Viejo San Juan, Apartado 4184, San Juan, Puerto Rico 00902-4184  
Tels. (809) 722-3769, Fax 723-4799**

14 de septiembre del 2001

Marissa Tollinchi  
Secretaria  
Junta de Planificación  
P.O. Box 41119  
San Juan, PR 00940-1119

ASUNTO: CZ-2001-0620-144  
SAN JUAN

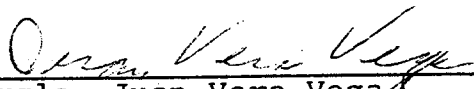
Estimada señora Tollinchi:

El Consejo para la Protección del Patrimonio Arqueológico Subacuático, ha evaluado los documentos recibidos en relación al proyecto descrito en referencia.

El proyecto ubica en un área de alta sensibilidad arqueológica, por lo cual, se hace menester requerir estudios arqueológicos a nivel Fase IA-IB.

Favor de referir los resultados para evaluación.

Cordialmente,

  
Arglo. Juan Vera Vega  
Director  
Oficina del Consejo de Arqueología Subacuática

drs

EL A. DE P.R.  
JUNTA DE PLANIFICACION  
ZONA COSTANERA  
2001 OCT -9 A 8:52  
FECHA \_\_\_\_\_ HORA \_\_\_\_\_



# United States Department of the Interior

## FISH AND WILDLIFE SERVICE

Boqueron Field Office

P.O. Box 491

Boqueron, Puerto Rico 00622

September 28, 2001



Ms. Marissa Tollinchi  
Secretary  
Puerto Rico Planning Board  
PO Box 41119  
San Juan, PR 00940-1119

01 OCT -3 AM 10:38  
OFFICE OF THE SECRETARY  
U.S. DEPARTMENT OF THE INTERIOR  
WASHINGTON, D.C. 20503

Re: CZ-2001-0620-144, US Army Corps of  
Engineers, Bechara Industrial Area, Puerto Nuevo

Dear Ms. Tollinchi:

The US Army Corps of Engineers is requesting Coastal Zone Consistency for the Bechara Industrial Area section of the Puerto Nuevo Flood Control Project. Enclosed is a report that the Service provided to the Corps regarding the project.

The project as currently proposed will impact more than the estimated 7.5 acres of wetlands stated in the document. This is because secondary impacts of the project are not being taken into account by the Corps Planning Section. No mitigation plan has yet to be developed for this area, and wetland impacts are still not fully quantified. We recommend that a CZM certificate for this project not be issued until the direct and indirect impacts to wetlands are determined and a mitigation plan is developed for the area.

Thank you for the opportunity to comment on this action, if you have any questions please contact Felix Lopez of my staff at 851-7297 ext. 26.

Sincerely,

James P. Oland  
Field Supervisor

fhl

cc:

DNER, San Juan

COE, Planning, San Juan

COE, Planning, Jacksonville

EPA, New York

EPA, San Juan

CZM, Washington, DC

EQB, Scientific Assessment Division

COE, Dennis Barnett, Atlanta



## United States Department of the Interior

### FISH AND WILDLIFE SERVICE

Boqueron Field Office  
Carr. 301, KM 5.1, Bo. Corozo  
P.O. Box 491  
Boqueron, PR 00622



January 17, 2002

*Planning Section*

Ms. Norma I. Alvira Ruiz  
Director, Land Use Planning  
Puerto Rico Planning Board  
PO Box 41119  
San Juan, PR 00940-1119

U.S. ARMY  
CORPS OF ENGINEERS  
ANTILLES OFFICE  
REGULATORY SECTION  
02 JAN 22 PM 3:17

Re: CZ-2001-0620-144, US Army Corps of  
Engineers, Bechara Flood Control

Dear Ms. Alvira:

This is to follow up the January 16, 2002, meeting with Planning Board, the US Army Corps of Engineers, DNER and other concerned agencies, to discuss the above Coastal Zone Consistency Certificate. At that meeting the Corps once again stated that moving the proposed levee against the Bechara Industrial Area (BIA) is not feasible and that the mangrove to remain between the BIA and the levee is part of the Nuevo Centro de San Juan mitigation and protected by a conservation easement. This additional work is being added to the Corps Puerto Nuevo Flood Control project at the request of the Commonwealth Government. The Service expressed its concern that although the mangrove area may not be impacted by the levee, it will become isolated on three sides by the BIA and the Corps project. The Service believes that although the mangrove may remain it will be degraded by lack of adequate hydrology and drainage.

During the meeting the Corps agreed to review the overall mitigation plan for the Rio Puerto Nuevo Flood Control project and seek additional mitigation opportunities. The Service agrees with this and had recommended that the mangroves associated with the BIA be included in the Corps mitigation calculations in our previous correspondence with the Corps. Revision of the mitigation plan should be carried out as soon as possible with input from both Federal and Commonwealth resource agencies.

Therefore, if the Corps agrees to revise the mitigation plan for the entire project area to assure that proper compensatory mitigation is carried out for wetland impacts the Service would not have any objections to the issuance of a CZM certificate for this action.

Thank you for the opportunity to comment on this action, if you have any questions please do not hesitate to contact our office.

Sincerely,

A handwritten signature in black ink, appearing to read 'Félix López', with a stylized flourish at the end.

Félix López  
Acting Field Supervisor

cc:

DNER, San Juan  
COE, Planning, San Juan ✓  
COE, Planning, Jacksonville  
SJBE, San Juan

**ATTACHMENT B**  
**CLEAN WATER ACT SECTION 404 (b)(1) EVALUATION**



**ESTADO LIBRE ASOCIADO DE PUERTO RICO  
OFICINA DE LA GOBERNADORA  
JUNTA DE CALIDAD AMBIENTAL**

6 de abril de 2001

DADA 1687-01

**SR. JAMES C. DUCK  
JEFE  
DIVISION DE PLANIFICACION  
DEPARTAMENTO DE LA DEFENSA  
CUERPO DE INGENIEROS DE LOS ESTADOS UNIDOS  
AVE. PONCE DE LEON #400  
SAN JUAN, PUERTO RICO 00901-3299**

**Asunto: DN 01-0644 (ARMY)  
PROYECTO CONTROL DE INUNDACIONES  
CANAL PUERTO NUEVO/AREA INDUSTRIAL BECHARA  
SAN JUAN / GUAYNABO, PUERTO RICO**

Estimado señor Duck:

La Junta de Calidad Ambiental ha analizado el documento ambiental sometido para el proyecto de referencia. El mismo consiste en la realización de labores de limpieza, excavación, instalación de pilotes entre otros como parte de las labores remediativas para controlar las inundaciones en el área.

Entendemos que al presentar el mismo su instrumentalidad ha cumplido con la fase de evaluar el posible impacto ambiental de la acción propuesta, de acuerdo con el Artículo 4(c) de la Ley Sobre Política Pública Ambiental, Ley Número 9 del 18 de junio de 1970, según enmendada. No obstante, para una mejor realización de la acción propuesta esta Junta emite las siguientes recomendaciones:

1. Previo a dar comienzo a la construcción o efectuar algún movimiento de tierra, deben obtener de esta Junta los siguientes permisos:
  - a. Permiso de Fuente de Emisión (PFE) para el polvo fugitivo durante la fase de construcción.
  - b. Para realizar una Actividad Generante de Desperdicios Sólidos (Formulario DS-3).
  - c. Permiso para el Control de la Erosión y Prevención de la Sedimentación.
2. De tener alguna descarga de escorrentía a cualquier cuerpo de agua durante la construcción, deberán consultar con la Agencia Federal de Protección Ambiental para determinar si dicha descarga requiere un permiso "NPDES" de acuerdo al Código Federal de Reglamentación Número 40, Sección 122.26 (b) (14) (x).



PÁGINA 2

Sr. James C. Duck

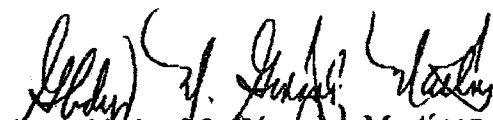
DN-01-0644 (ARMY)

6 de abril de 2001

3. Durante la fase de construcción, deberán tomar las medidas necesarias para evitar que residuos de sustancias orgánicas e inorgánicas tales como: aceites, combustibles u otras sustancias químicas, puedan ser arrastradas por la escorrentía y ganen acceso a cualquier cuerpo de agua o al sistema pluvial.
4. La construcción de la estación de bomba deberá cumplir con el requisito de 15 metros de separación de zona de amortiguamiento de cualquier estructura existente o a construirse. La parcela de la estación de bomba deberá estar pavimentada.
5. Para la remoción de los tanques para almacenar combustible deberán obtener los correspondientes permisos del Area de Calidad de Agua de esta Junta.
6. Cumplir con el Reglamento sobre Zonas Susceptibles a Inundaciones (Reglamento Núm.. 13) de la Junta de Planificación.
7. Deberán mantener los camiones de carga que se utilicen para transportar material, desechos de relleno y/o de construcción cubiertos con toldos, mientras estén en movimiento para evitar generación de emisiones de particulado.
8. El almacenaje, manejo y disposición de los desperdicios sólidos a generarse durante la fase de construcción, debe realizarse en conformidad con la reglamentación vigente
9. Durante la fase de construcción del proyecto, se debe cumplir con el Reglamento para el Control de la Contaminación por Ruido, en lo relacionado al nivel de sonido máximo permitido.
10. Cumplir con las recomendaciones y requerimientos de todas las agencias estatales y federales que han sido consultadas respecto al proyecto propuesto.

Agradecemos su cooperación por mantener y conservar nuestro ambiente.

Cordialmente,

  
Dra. Gladys M. González Martínez  
Presidenta

DN01-0644(ARMY)-cf-wf

Ag-2005-1-6-a-1



Junta  
de Calidad  
Ambiental

AG-AFR-idn

JUN 11 1993

JUN 11 1993

Sr. Pedro L. Ruberté  
Secretario Auxiliar Interino  
Area Control de Inundaciones  
Departamento de Recursos Naturales  
Apartado 5887  
Puerta de Tierra, Puerto Rico. 00906

Re: Certificado de Calidad de Agua  
Control de Inundaciones  
Río Puerto Nuevo  
San Juan, Puerto Rico ✓

Estimado señor Ruberté:

Hemos recibido y evaluado la solicitud de Certificado de Calidad de Agua para un permiso del Cuerpo de Ingenieros de los Estados Unidos para la canalización del Río Puerto Nuevo y sus cinco quebradas tributarias: Quebrada Margarita, Josefina, Doña Ana, Buena Vista y Guaracanal. Las obras propuestas conllevan la canalización y mejoras a canales existentes a lo largo de unos 17.9 kilómetros del Río Puerto Nuevo y sus afluentes. El proyecto incluye lo siguiente:

- a. Río Puerto Nuevo (Canal Principal). Canalización de unos 10.4 kilómetros de canal desde su desembocadura en la Bahía de San Juan hasta la Avenida Winston Churchill en El Señorial. Las obras incluyen 2.7 kilómetros de tablaestacado en un canal trapezoidal y 7.7 kilómetros de canal de hormigón. En este canal también habrá dos estructuras para la disipación de energía, dos estructuras de confluencia a alta velocidad y en la parte superior de la cuenca dos vasijas de sedimentación equipadas con vertederos laterales de salida.
- b. Quebrada Margarita. Las mejoras a esta quebrada consistirán en la ampliación del canal existente por una distancia de unos 2.8 kilómetros, de los cuales 1.1 kilómetros consiste de un canal rectangular de hormigón y 1.6 kilómetros de canal trapezoidal.

*Velando por la pureza que usted desea, en el ambiente que le rodea.*

- c. Quebrada Josefina. Las mejoras consisten de un canal de hormigón de 2.3 kilómetros desde su desembocadura en el Río Puerto Nuevo hasta las cercanías del Hospital de Veteranos.
- d. Quebrada Doña Ana. Esta quebrada también se canalizará en hormigón por una distancia de 1.0 kilómetro.
- e. Quebrada Buena Vista. En el caso de esta quebrada se propone desviarla, con un canal de hormigón de 1.2 kilómetros cruzando terrenos que aún no están desarrollados cerca de la Estación Experimental y el propuesto Jardín Botánico. Las obras incluyen una estructura de confluencia a alta velocidad con el canal principal.
- f. Quebrada Guaracanal. En esta área se propone una sección rectangular de hormigón de unos 819 pies de largo. Habrá una vasija de sedimentación de 6.5 acres con un vertedero lateral de salida de 150 pies de largo.

Las mejoras propuestas requerirán la excavación de aproximadamente 6.5 millones de yardas cúbicas de material. Se anticipa que 2.8 millones de yardas cúbicas excavadas del canal del Río Puerto Nuevo y 0.7 millón de yardas cúbicas excavadas del canal de la Quebrada Margarita serán depositadas mar afuera. Las restantes 3.0 millones de yardas cúbicas de material excavado serán depositadas en áreas designadas para esto. Dos áreas han sido indicadas, una a lo largo del canal del Río Puerto Nuevo y la otra a lo largo de la Quebrada Margarita.

Las obras de canalización propuestas requieren el reemplazo de 17 puentes, la modificación de 8 y la construcción de 5 nuevos puentes (incluyendo dos nuevos puentes peatonales).

Los puentes a reemplazarse son: puente de la Avenida Roosevelt, puente en la Notre Dame, puente de la PR 176, puente peatonal en San Gerardo, puente de la Avenida Piñero, puente de la Avenida Andalucía, puente peatonal Josefina, puente de la Avenida Américo Miranda (sobre Quebrada Josefina), puentes en las siguientes calles: 31 SE, 21 SE, 9na SE y 54 SE, puente en la Américo Miranda (sobre Quebrada Doña Ana), puentes en las calle 29 SE y en la calle 21 SE, puente en la calle 4 y puente de la PR 21.

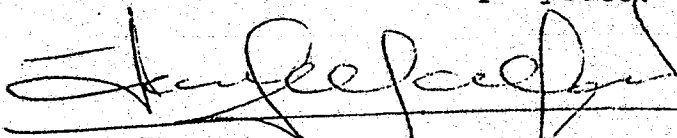
Sr. Pedro L. Ruberté  
Certificado de Calidad de Agua  
Página 3

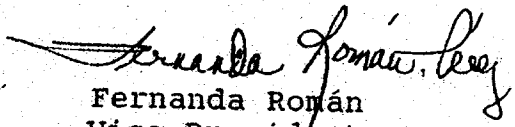
El plan de mitigación por los impactos ambientales de las obras incluye la siembra de mangles a lo largo de la parte inferior del Río Puerto Nuevo, designar como reserva natural los mangles en el área del Puente de la Constitución y otras actividades tales como restauración de humedales en otros sectores.

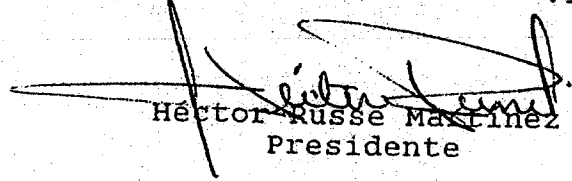
La parte del proyecto desarrollado en la Bahía de San Juan está localizado en área clasificada como SC y el resto del proyecto está localizado en área clasificada SD por el Reglamento de Estándares de Calidad de Agua.

Conforme a la Sección 401 (a) (1) de la Ley Federal de Agua Limpia (la Ley), posterior a la debida consideración de los límites de efluente o estándares establecidos bajo las Secciones 301, 302, 303, 306 y 307 de la Ley, si alguno, y luego de tomar en consideración la clasificación aplicable y estándares que regulan la calidad de las aguas de Puerto Rico, se certifica que existe una certeza razonable, según determinado por la Junta de Calidad Ambiental, de que el proyecto permitido no violará los estándares de calidad de agua aplicables si se cumplen con las limitaciones de la Tabla A-1. Las condiciones especificadas en la tabla antes mencionada, deberán ser incorporadas en el permiso federal para satisfacer las provisiones de la Sección 401 (d) de la Ley.

Esta certificación aplica solamente a los efectos que esta actividad pudiera tener en la calidad de las aguas según definido por las regulaciones y no a otros efectos ecológicos, biológicos o ambientales que puedan resultar del proyecto. Esta Junta se reserva el derecho de comentar en fecha posterior sobre algún otro aspecto ambiental del proyecto.

  
Francisco J. Martín-Caso  
Miembro Asociado

  
Fernanda Román  
Vice Presidente

  
Héctor Russe Martínez  
Presidente

cc: Sr. Carmelo Cáez

TABLA A-1

PARAMETRO	LIMITACION
Sólidos Suspendidos, Coloidales o Sedimentables	Los sólidos provenientes de las obras o sus desperdicios no deberán ocasionar asentamientos, o ser nocivos a aquellos usos específicos de las aguas.
Aceite y Grasa	Las aguas de Puerto Rico deberán estar substancialmente libres de aceites y grasas flotantes no derivados del petróleo, así como de aceites y grasas derivados del petróleo.
Oxígeno Disuelto	Contendrá no menos de 5.0 mg/l excepto cuando causas naturales ocasionen una depresión en este valor.
pH	Deberá siempre permanecer entre 7.3 y 8.5 excepto cuando fenómenos naturales ocasionen que el valor de pH salga fuera de este rango.
Color	No excederá de 15 unidades de acuerdo con los estándares colorimétricos del estándar platino-cobalto, excepto a causas naturales. Disponiéndose que, en casos donde el cuerpo de agua normalmente excede este valor, se podrá utilizar el mecanismo provisto bajo la sección 6.10 de este Reglamento para desarrollar criterios sitio específico.
Turbiedad	No excederá 10 unidades nefelométricas de turbiedad (NTU).

(Translation)

Commonwealth of Puerto Rico  
Environmental Quality Board

AG-AFR-idn  
JUN 11 1993

Mr. Pedro L. Ruberté  
Acting Assistant Secretary  
Flood Control Area  
Department of Natural Resources  
Box 5887  
Puerta de Tierra, PR 00906

Re: Water Quality Certificate  
Flood Control  
Río Puerto Nuevo  
San Juan, PR

Dear Mr. Ruberté:

We have received and evaluated the above referenced application for a Water Quality Certificate for a Corps of Engineers Permit for the channelization of the Puerto Nuevo River and its five tributary streams: Quebrada Margarita, Josefina, Doña Ana, Buena Vista and Guaracanal. The proposed works include channelization and improvement to existing channels along some 17.9 kilometers of the Puerto Nuevo River and tributaries. The project includes the following:

a. Puerto Nuevo River (main channel). Channelization of 10.4 kilometers, from its mouth at San Juan Bay up to Avenida Winston Churchill in El Señorial. Works include 2.7 km of bulkhead construction on a trapezoidal channel and 7.7 kilometers of concrete channel. Along this channel there will be two energy-dissipating structures, two high-velocity channel junctions, and in the upper watershed, two sediment basins with lateral spillways.

b. Quebrada Margarita. Improvements to this stream will include widening of the existing stream along 2.8 kilometers, of which 1.1 km will consist of a rectangular concrete channel and 1.6 km will consist of trapezoidal earthen channel.

c. Quebrada Josefina. Improvements consist of an earthen channel 2.3 km long from its mouth at the Puerto Nuevo river, upstream to the vicinity of Veterans Hospital.

d. Quebrada Doña Ana. This stream will also be channeled in concrete for 1.0 kilometer.

e. Quebrada Buena Vista. In the case of this stream, it will be re-routed through a concrete channel 1.2 km long, which

will cross undeveloped lands near the Experiment Station and proposed Botanical Garden. Improvements include a high velocity junction with the main channel.

f. Quebrada Guara canal. In this section a rectangular concrete channel is proposed, 819 feet long. There will be a sediment basin of 6.5 acres, with a 150-foot long lateral spillway.

The proposed improvements will require the excavation of approximately 6.5 million cubic yards of material. It is expected that 2.8 million cubic yards of material from the main channel and 0.7 million cubic yards from the Quebrada Margarita channel will be deposited offshore in the sea. The remaining 3 million cubic yards of excavated material will be deposited in designated land areas. Two such areas have been indicated, one along the Puerto Nuevo River and one along Quebrada Margarita

The proposed channel improvement works require replacement of 17 bridges, modifications to 8 and construction of 5 new bridges (including two new pedestrian bridges).

The bridges to be replaced are: Roosevelt Avenue, Notre Dame Avenue bridge, PR 176 bridge, Avenida Piñeiro bridge, Andalucía Avenue bridge, Josefina pedestrian bridge, Ave. Americo Miranda bridge (over Quebrada Josefina), and bridges on the following streets: 31 SE, 21 SE, 9th SE and 54 SE, second Ave. Américo Miranda bridge (over Quebrada Doña Ana), bridges on streets 29 SE and 21 SE, bridge on street 4 and bridge on PR 21

The mitigation plan for the environmental impact of the proposed works includes planting mangroves along the lower Río Puerto Nuevo, designation of the Constitution Bridge mangroves as a natural reserve and other activities such as wetland restoration in other areas.

The part of the project that will occur in San Juan Bay is in waters classified SC and the rest of the project is in waters classified SD by the Water Quality Standards Regulation.

In conformity with Section 401 (a) (1) of the Federal Clean Water Act (the Law), after due consideration of effluent limitation or standards established under Sections 301, 302, 303, 306, and 307 of the Law, if any, and after taking into consideration the applicable classification and standards that regulate water quality in Puerto Rico, it is certified that there is a reasonable certainty, as determined by the Environmental Quality Board, that the permitted project will not violate applicable water quality standards if the limits cited in Table A-1 are complied with. The conditions specified in the abovementioned table must be incorporated in the federal permit to satisfy the provisions of Section 401 (d) of the Law.

## Condiciones Especiales

1. La Junta de Calidad Ambiental (JCA) al emitir este Certificado de Calidad de Agua (CCA), no releva al solicitante, Departamento de Recursos Naturales, de su responsabilidad de obtener permiso y/o autorizaciones adicionales de la JCA, según requerido por la Ley. La emisión del CCA no puede considerarse como una autorización para llevar a cabo actividades que no estén específicamente cubiertos en el CCA.
2. El Departamento de Recursos Naturales, deberá implantar el Plan de Mitigación propuesto.
3. El Departamento de Recursos Naturales, deberá cumplir con las condiciones especiales antes mencionadas. De no hacerlo así, el CCA concedido por la JCA será nulo inmediatamente.



This Certificate applies only to the effects that this activity might have on the quality of waters as defined by regulations, and not to ecological, biological or environmental effects incurred as a result of the project. This Board reserves the right to comment at any future date on any other environmental aspect of the project.

(signed)

Francisco Martín-Caso  
Associate Member

Fernanda Roman  
Vice President

Hector Russe Martínez  
President

cc: Mr. Carmelo Caez

(This is a standard table included with all EQB WQC's. It is basically a re-statement of Puerto Rico's Water Quality Standards Regulation.)

TABLE A-1

PARAMETER	LIMITATION
Suspended, colloidal or settleable solids	Solids produced by works or their discharges shall not cause sedimentation or be detrimental to specified uses of receiving waters.
Oil and grease	Waters of Puerto Rico shall be substantially free of floating oils and greases, whether non-petroleum derived or petroleum-derived.
Dissolved Oxygen	Shall be no less than 5 mg/l except when lower values are due to natural causes.
pH	Shall fluctuate only between 6.0 and 9.0 except when higher or lower values are due to natural causes.
Color	Shall not be greater than 15 units according to colorimetric standards of the Platinum-cobalt scale, except when due to natural causes. Provided that, in cases where the water body normally exceeds this value, the mechanism provided in Section 6.10 of this Regulation may be used to develop site-specific criteria.
Turbidity	Shall not exceed 10 nephelometric turbidity units (NTU).

## **Special Conditions**

1. The Environmental Quality Board (EQB), on issuance of this Water Quality Certificate (WQC), does not relieve the applicant, the Department of Natural Resources, of its responsibility for obtaining additional permits and/or authorizations from EQB, as may be required by law. The issuance of the WQC may not be considered as an authorization to carry out any activity that is not specifically covered in the WQC.
2. The Department of Natural Resources must implement the proposed Mitigation Plan.
3. The Department of Natural Resources must comply with the above Special Condition. If it does not, the WQC issued by EQB shall be immediately nullified.

**ATTACHMENT C. FISH AND WILDLIFE COORDINATION ACT  
CORRESPONDENCE**

In accordance with procedures adopted under the Fish and Wildlife Coordination Act, the Corps has transferred funding to the Caribbean Field Office, U.S. Fish and Wildlife Service, to obtain information and recommendations regarding fish and wildlife resources in the project area and the recommended plan. A Coordination Act Report from the US Fish and Wildlife Service (FWS) was received, dated July 10, 2001. Comments from the FWS Coordination Act Report and value engineering assessments for the BIA drainage are incorporated below.

The letter reproduced on the next page was received in response to early scoping. FWS objected, in its scoping response, to inclusion of the BIA in the project apparently because it requires some construction (a levee, plus widening of Margarita Creek) in the "Rupert Armstrong" parcel of Commonwealth-owned lands. This objection is not relevant, as the Bechara Area was part of the original (Congressionally authorized) RPN project, and was always expected to receive protection from a 1% recurrence interval flood. The conservation easement over the "Rupert Armstrong" parcel referenced in the FWS letter contains a paragraph that explicitly excludes "lands required for construction of the Rio Puerto Nuevo Flood Control Project." The rest of the parcel is not under control of the Corps or its local sponsor for this project (DNER). However, by re-aligning the "Margarita" levee over an existing power line right-of-way, the Corps is in effect minimizing the adverse consequences of construction of this segment over the referenced parcel. These lands (The power line right of way) are already irreversibly altered by previous deposit and compaction of fill.

The "Nazario Plan" and first permit referenced in the FWS letter was developed by a consultant to the Municipio of San Juan, and refers to drainage for the landfill and San Juan Municipal Public Works area. This consultant also proposed a plan to drain BIA, which is discussed in this EA as New Alternative 3. Table 1 shows that this plan would impact at least 3 acres more wetlands in the Bechara area than the plan recommended in this EA. Its greatest drawback, in addition to its high maintenance and operations cost, is the danger of depending on a pump during major floods associated with tropical storms, when an operator might not be present and an automated (electric) switching system might not be functional.

Mr. James P. Oland  
Attn: Mr. Felix Lopez  
US Fish and Wildlife Service  
P O Box 491  
Boqueron, Puerto Rico 00622

Dear Mr. Oland:

This letter responds to yours of October 10, 2001, regarding the area of existing mangrove vegetation south of the Bechara Industrial Area (BIA) and north of the existing power line easement of the Puerto Rico Electrical Power Authority (PREPA).

The Corps believes and has indicated in previous correspondence, that the periodic overflowing of the Puerto Nuevo River (eastern limit of the approximately 2 acres of forested and herbaceous wetland), together with the continued inflow of stormwater from the northern BIA, and groundwater seepage, will maintain a hydrology regime sufficient for the continued existence of the mangrove area. Indeed, raising the PREPA easement two more feet from the current four will result in a reduction although not a complete cessation of the overflow and influence of the Margarita Creek over the area north of the PREPA easement. Given enough rainfall, the waters of Margarita Creek retain the potential to defeat the barrier presented by the PREPA power line easement at the four or six foot height.

Any 'unauthorized and clandestine' fill in the conservation area south of the BIA and north of the PREPA easement will be an open trespass and law violation, and would constitute a matter for regulatory enforcement under Section 404 of the Clean Water Act. The reference in the DEA to the BIA area being desirable for business and development refers to the area north of the conservation easement and in no way should be construed to mean the area already preserved by means of a binding conservation easement. It does not follow that by preventing flooding of the BIA through the conservation easement area, encroachment of the BIA into the conservation easement area will be stimulated, abetted, or somehow be made legal.

The Corps cannot act on the FWS suggestion that the existing PREPA easement, which acts as a levee, be moved against the BIA. Any fill removal or placement would be the responsibility of the local agency administering the conservation easement. And any such replacement of fill would leave the PREPA easement impacts in place, while causing more impacts further north. It would also isolate stormwater influx from the BIA from flowing into the adjacent mangrove wetlands, while maintaining in place the PREPA power line easement to restrict part of the overflow of Margarita Creek.

A maximum total impact to a functional equivalency of 5 acres of wetlands was considered. This resulted in the establishment of wetland creation mitigation that will be enacted upon completion of the construction phase. No additional impacts are expected from the placement of two additional feet of fill in the fill area of the PREPA power line easement. It is for this reason that no further mitigation is offered.

Sincerely,

James C. Duck  
Chief, Planning Division

Enclosures

bcc: CESAJ-DP-I (Gonzalez)  
CESAJ-DS

Jiménez/CESAJ-PD-EP/ej/2115  
Acosta/CESAJ-PD-EP  
Dugger/CESAJ-PD-E  
Gonzalez/CESAJ-DP-I  
Duck/ CESAJ-PD

**L:/GROUP/pdep/JIMENEZ/FWS Reply Oct 2001**



# United States Department of the Interior

## FISH AND WILDLIFE SERVICE

Boqueron Field Office  
P.O. Box 491  
Boqueron, Puerto Rico 00622



October 10, 2001

Mr. James C. Duck  
Chief, Planning Division  
US Army Corps of Engineers  
PO Box 4970  
Jacksonville, FL 32232-0019

Re: Bechara Industrial Area

Dear Mr. Duck:

This is in response to your reply regarding our draft Coordination Act Report for the Bechara Industrial Area. Our concerns were centered on an area of mangroves that would be isolated between the industrial area and the proposed Margarita Levee. The construction of flood control works as currently proposed would essentially turn that mangrove wetland into a ponding area for internal drainage. There seems to be some confusion concerning our comments and recommendations.

The acreage of mangroves to be isolated between the Margarita Levee and the BIA is not known. One of our recommendations was to determine the area to be isolated. A rough estimate is about 2 acres of forested and herbaceous wetlands. The 1 acres of mangrove impacts that is mentioned in your reply apparently refers to the estimated acreage of mangroves north of Kennedy Avenue that will be adversely affected during the proposed drainage canal construction.

Our Draft CAR does not discuss the conservation easements on the Rupert Armstrong parcels. That is mentioned in the February 2001, Corps Draft EA as a response to previous comments from the Service.

The point we were attempting to make in the Draft CAR is that the mangrove wetlands between the proposed Margarita Levee and the BIA will be significantly degraded as a result of the proposed project. The Draft EA states that this area has been subject to clandestine and unauthorized filling of wetlands. Aerial photos in the Draft EA attest to this. The DEA also states that the BIA is a desirable area for business and its development has been constrained by frequent flooding. Once this risk is eliminated it is expected that the BIA will expand. The only new area for expansion will be the wetland isolated behind the levee.

The Service's CAR presented two options regarding the expansion of the BIA. One was to move the levee up against the existing BIA. With this option, wetland impacts would increase but could



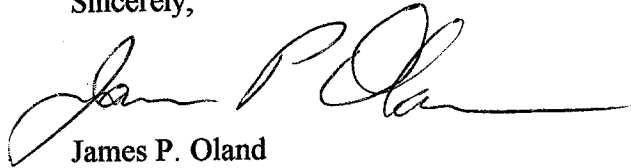
be adequately compensated with onsite mitigation. The remaining wetlands would not be influenced by the levee. The second would be to mitigate for the loss of functions and values that will occur when the wetland area is cut off by the levee. Your letter does not address the latter option. As stated in our CAR, to assume that this mangrove will remain and continue to function, wedged between the BIA and the Margarita Levee is ingenuous.

We continue to believe that this area should be added to the mitigation calculation and included in the final mitigation plan. We also made some mitigation recommendations in the Draft CAR, that were not addressed in your response.

As stated in our previous letter, a final CAR will be written once a mitigation plan is developed and included in the Final EA. We hope to continue working with your planning personnel both in Jacksonville and in San Juan.

If you have any questions please contact Felix Lopez of my staff at 787-851-7297.

Sincerely,

A handwritten signature in black ink, appearing to read 'James P. Oland', with a long horizontal flourish extending to the right.

James P. Oland  
Field Supervisor

cc:

COE, San Juan

DNER, Flood Control, San Juan

COE, Dennis Barnett, Atlanta

PRPB, CZM, San Juan



United States Department of the Interior

FISH AND WILDLIFE SERVICE

Boqueron Field Office  
P.O. Box 491  
Boqueron, Puerto Rico 00622

July 10, 2001



Mr. James C. Duck  
Chief, Planning Division  
US Army Corps of Engineers  
PO Box 4970  
Jacksonville, FL 32232-0019

Dear Mr. Duck:

Enclosed is a Draft Coordination Act Report for the Bechara Industrial Area. This report is written in accordance with Section 2(b) of the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 USC 661 et. seq.). A final Coordination Act Report will be issued once a mitigation plan is developed.

If you have any questions please contact Felix Lopez of my staff a 787-851-7297.

Sincerely,

Susan Silander  
Acting Field Supervisor

cc:  
COE, San Juan  
DNER, Flood Control, San Juan

**Coordination Act Report  
Flood Control Features for Bechara Industrial Area  
Rio Puerto Nuevo Flood Control Project**

**Felix Lopez  
US Fish and Wildlife Service  
Boqueron, Puerto Rico**

## **Executive Summary**

The US Army Corps of Engineers is proposing to include the Bechara Industrial Area (BIA) into the already authorized Rio Puerto Nuevo Flood Control Project. The Recommended Plan consists of a drainage canal inside the BIA ending in San Juan Bay. The recommended alternative would directly impact one acre of mangrove wetlands. A levee is the second major project feature. The Margarita levee will protect the BIA from floods originating in Quebrada Margarita. The main levee route will follow an existing power line right-of-way. About 7.5 acres of emergent wetlands will be impacted by the levee. A mitigation plan for wetland impacts has not yet been developed.

The Service recommended in the past that the Margarita levee be relocated north, to be adjacent to the BIA. Although this would impact additional mangrove wetlands it would act as a physical barrier to the BIA from further expansion into wetlands. The current design will isolate several acres of basin mangroves between the BIA and the levee. The Service believes that the loss of functional value of these wetlands isolated by the levee should be included in the calculations for compensatory mitigation.

When the Rio Puerto Nuevo Flood Control Project was authorized, the project did not contemplate any excavation or fill in the BIA wetlands. However new hydrologic information indicated that the previous design for Bechara would not function without modification. Previous plans would have impacted additional mangrove areas or depended on electrical pumps to provide drainage. The new plan provides gravity drainage north to San Juan Bay. The project proposes to create 5 acres of mangrove habitat on or off site as mitigation.

## Existing Conditions

The flooding of the BIA is caused partly by the overflow from Quebrada Margarita. The other cause for flooding is the remnant Puerto Nuevo Canal, this was once the Rio Puerto Nuevo which flowed into San Juan Bay. This river was redirected east to Caño Martin Peña during port development in the 1960's, leaving a blind canal. The Bechara canal, also called the Puerto Nuevo canal in the Draft EA, is supposed to drain the BIA and although it connects to Quebrada Margarita, it drains only after flooding with several feet of water. By the time the canal overflows into Quebrada Margarita, water has flooded most of the BIA and Kennedy Avenue. The BIA is a mix of warehouses and businesses that cover several acres. The area is bordered by Kennedy Avenue to the north and ends abruptly on the south in mangrove wetlands. Many of the businesses have been clandestinely expanding their lots south into the wetlands for years.

North of Kennedy Avenue the canal ends in a basin mangrove forest that is part of an undeveloped industrial lot owned by PRIDCO. From there extends the port development which is built up on fill that is 2-3 meters above the adjacent mangroves. .

## Terrestrial Resources

### Levee Route

The proposed levee will follow the existing PR Power Authority electric power line right of way. Vegetation here varies from cattails and leather fern (*Acrostichum spp*) in the lower portions to vine covered grasslands in the higher portions. This area is highly disturbed by the regular maintenance of the power lines (See photos 1 & 2). An estimated 7.5 acres of transitional wetlands is expected to be impacted by the levee. North of the proposed levee is a basin mangrove comprised mostly of black mangroves (*Avicennia nitida*) and leather fern with some white (*Laguncularia racemosa*) and red (*Rhizophora mangle*) mangroves intermixed. On the upland interface there are West Indian almond (*Terminalia catappa*), African tulip tree (*Spathodea campanulata*), and castor bean (*Ricinus communis*). This basin mangrove will be isolated by the proposed levee and the BIA. Already parts of this mangrove have been impacted by clandestine expansion of the lots in BIA. The latest such expansion was made by the hardware store Maderas 3C which borders the mangroves. The proposed construction right of way will impact a portion of these mangrove wetlands. Since this area will become isolated by the levee construction (see photo 3), the Service believes it should be added to the mitigation calculations. Once the levee provides protection from flooding this area will be the logical

acquisition zone for the BIA. To assume that this mangrove will remain in spite of existing regulations after the construction of the levee, is ingenuous.

The proposed levee plans call for two main access ramps from the BIA. This will bisect a lot that belongs to Maderas 3C. Based on aerial photos, this area was most likely mangrove wetlands at one time and may have been illegally filled (see photo 4). Representatives from the hardware store indicated that they have plans to use this lot for future expansion or to rent. We recommend shifting the east ramp to an existing roadway which provides access to the Bechara canal. This roadway is clearly visible on the project aerial photographs and is an existing right of way.

### **Earth Channel**

The proposed plan calls for an earth channel to be built north of Kennedy Avenue through a mangrove area belonging to PRIDCO. This will convert into a culvert that will continue north through the facilities belonging to CSX lines and into San Juan Bay. The proposed staging area east of the channel also belongs to CSX and is currently being rented by Trailer Bridge for container storage and transport.

The PRIDCO wetlands are comprised mostly of red and black mangrove and leather fern associated with the channel and its hydrology. As one approaches the CSX facilities the vegetation grades into uplands composed of large almond trees, úcar (*Bucida buceras*), guamá (*Pithecollobium dulce*), tan-tan (*Leucaena glauca*), and (*Sesbania spp*). Both tan-tan and *Sesbania* form thickets near the disturbed areas belonging to CSX (see photo 5). Although the construction of the earth channel is not supposed to significantly alter the hydrology of the remaining mangrove wetlands, it will impact an estimated 1 acre of mangroves. It is not clear however, if this one acre of impacts includes the construction right of way, the permanent right of way, or the actual channel itself. We recommend that wetland impacts should be calculated using the construction right of way since this is the area that will be used by the contractor to perform all work and wetlands within that area will be impacted.

### **Bechara Channel**

Bechara Channel is an open earth channel 3-4 meters across that runs along the eastern border of the BIA. At the time of the inspection, the channel was choked with floating vegetation composed of mainly of water hyacinth (see photos 6 & 7). An access road starts at the existing pump house and parallels the channel to the south. There is an auto junkyard across the channel that is connected to the BIA via a small steel bridge. Bank vegetation is virtually non existent along the BIA side, however there is some vegetation along the eastern banks which include coco palm (*Cocos nucifera*), tulip trees, almond, and some small patches of black and white mangrove. Project drawings show that the upper part of the channel from the pump house to Kennedy Avenue will be placed in a box culvert.

As stated in the Draft EA, one of the project impacts will be the increased use of the BIA, since it will no longer be prone to flooding. An estimated one acre of mangrove and 7.5 acres of transitional wetlands are expected to be impacted. It is not clear if these impacts are related to the permanent works or if impacts occurring during construction are also being taken into account. As stated above, the Service believes that the mangroves to be isolated between the levee and the BIA should also be taken into consideration in the calculation of project impacts since these will be isolated and under heavy developmental pressure as a result of the levee construction. Their inclusion in the mitigation will also assure that proper mitigation for these wetlands will occur vs some piecemeal mitigation proposal for future BIA expansion.

After a review of the area plans and drawings enclosed in the documentation provided, the Service believes that there is ample opportunity to mitigate on site. The western section of the levee will occupy lands previously filled. Parts of this area can be restored and enhanced (see photo 8).

### **Recommendations:**

The Service continues to recommend that the levee be placed adjacent to the southern border of the BIA. Although this would increase wetland impacts those wetlands are the same ones that will be isolated and subject to impacts with the proposed design. A mitigation plan which is still not selected, should be developed as soon as possible. Mitigation should be integrated with the existing Puerto Nuevo Project.

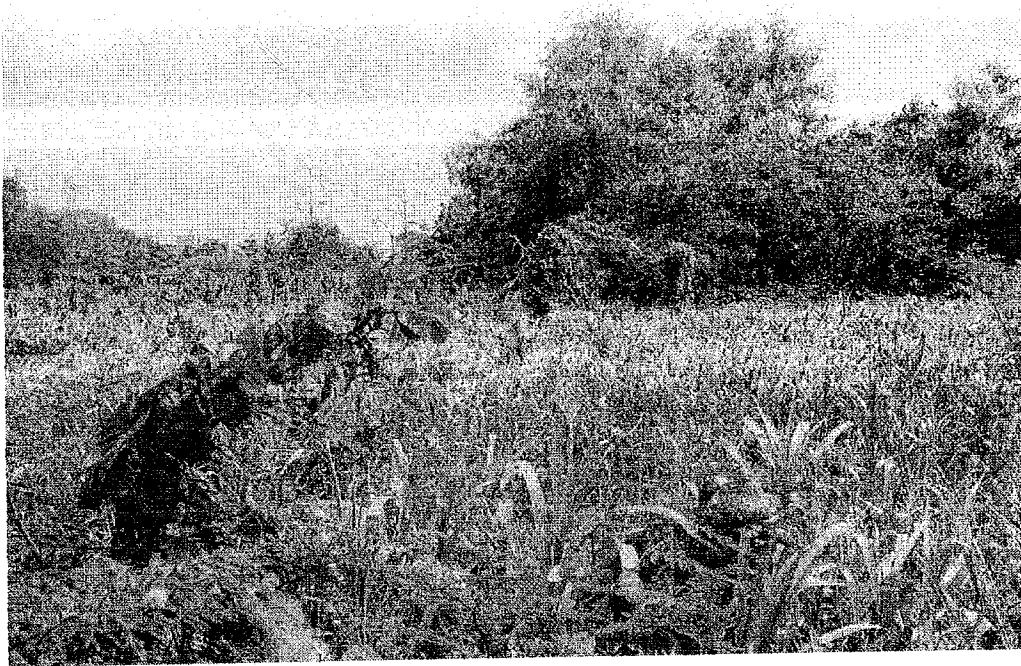


Photo 1. Eastern levee route near Bechara Canal, tall vegetation at the right is the mangrove wetland to be isolated by the levee.

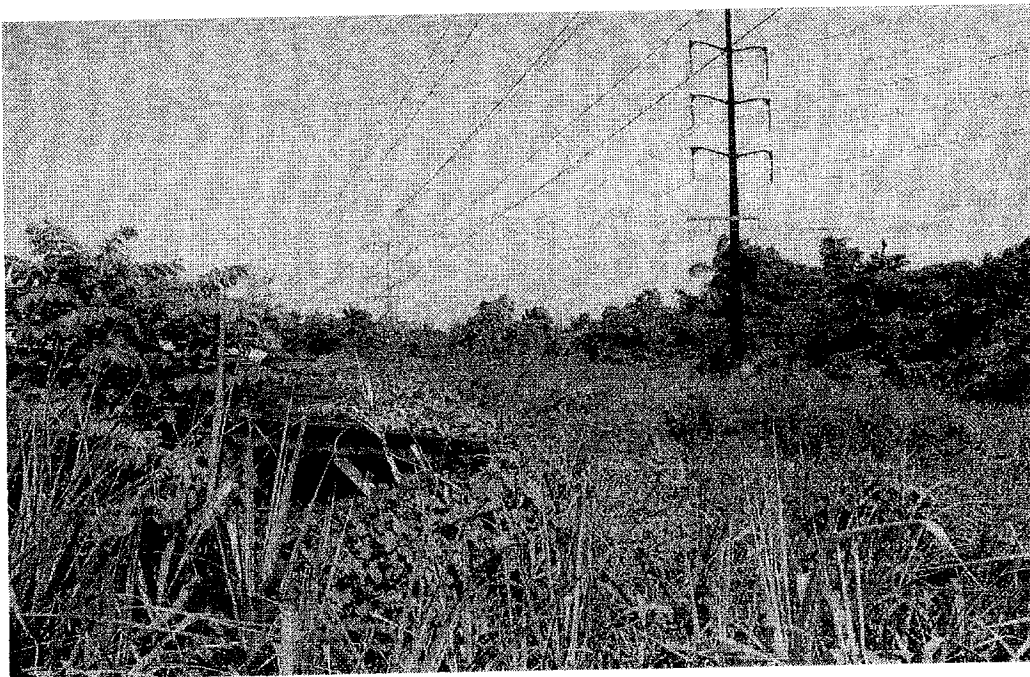
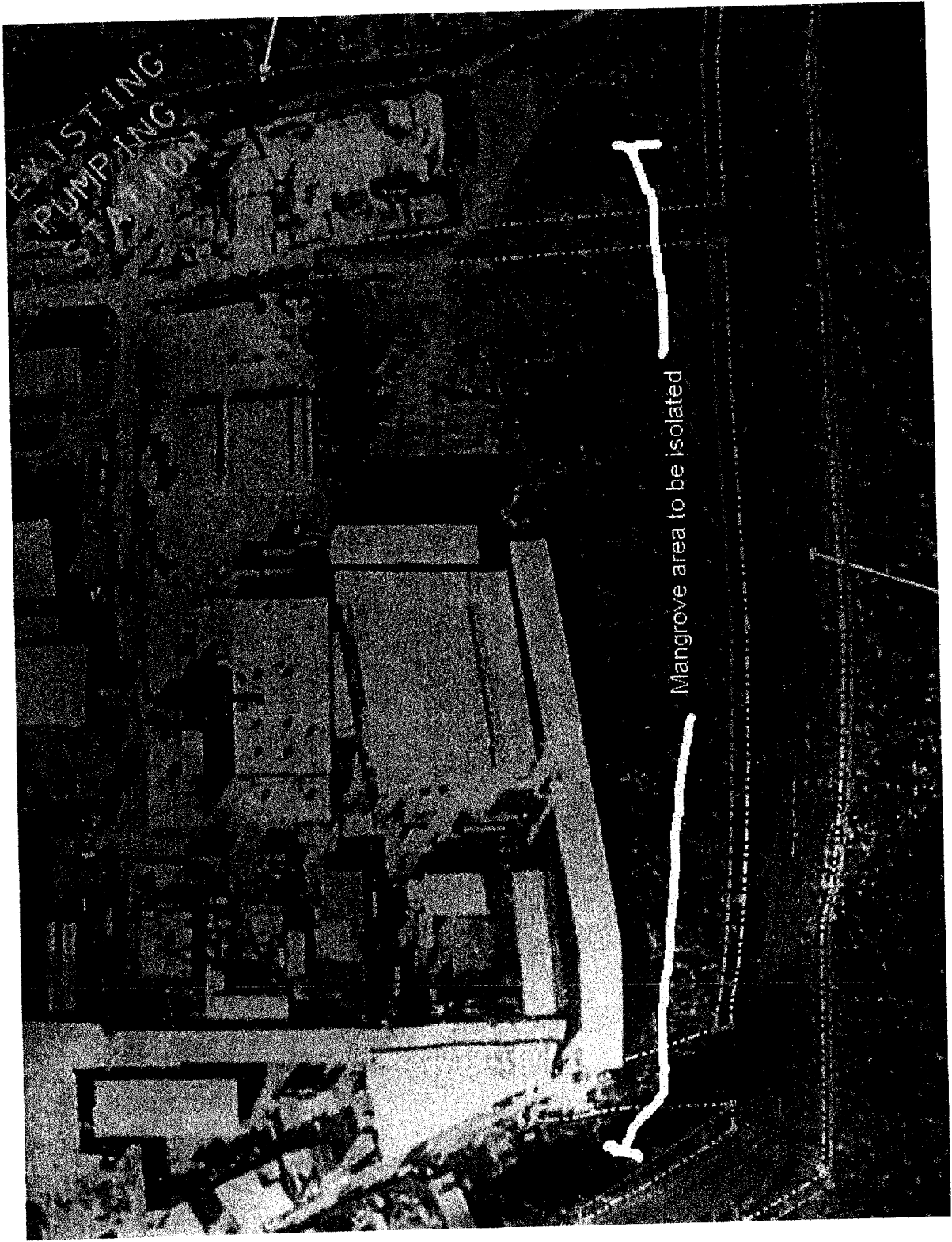


Photo 2. Western levee route. Vegetation is mostly herbaceous wetland species and cattails.



Photo 3. Project Plans showing Margarita Levee and mangrove to be isolated between the proposed levee and the Bechara Industrial Area



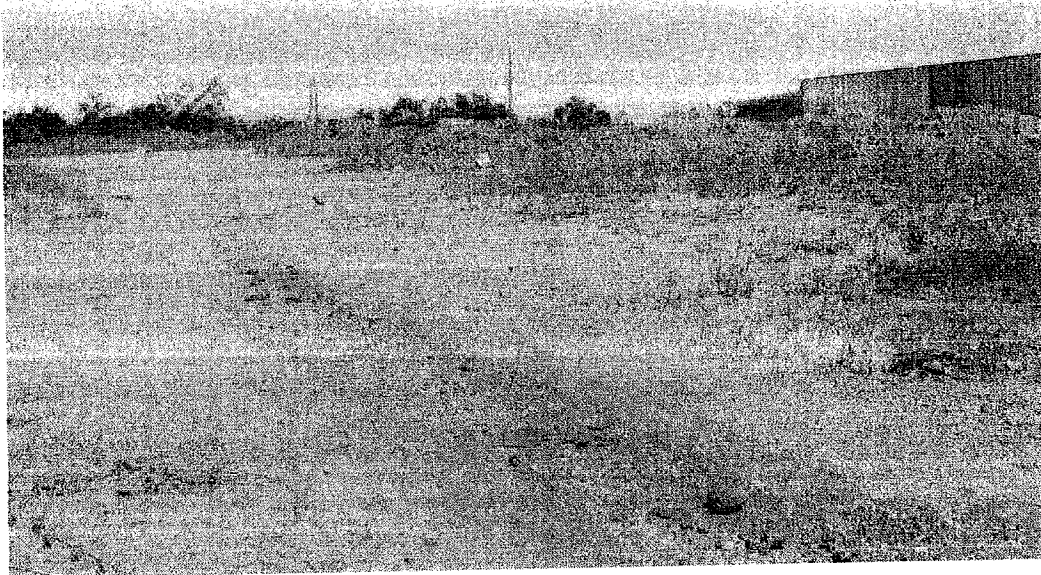


Photo 4. Fill placed by Maderas 3C to expand their industrial lot. Levee access ramp will be located through this fill.

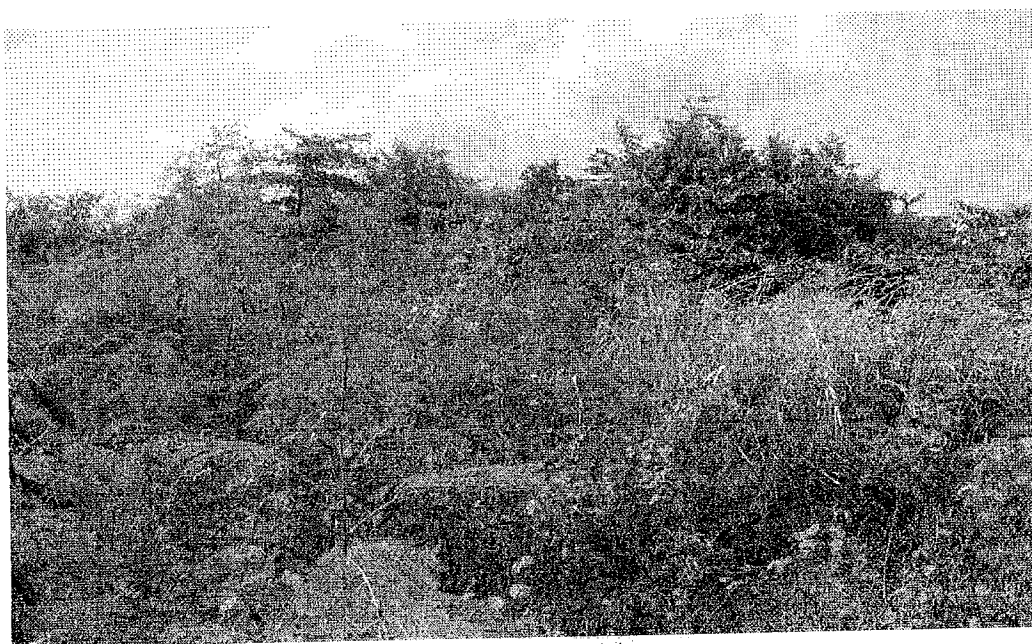


Photo 5. Thicket formed by upland vegetation near CSX fence line. Almond trees can be seen in background.

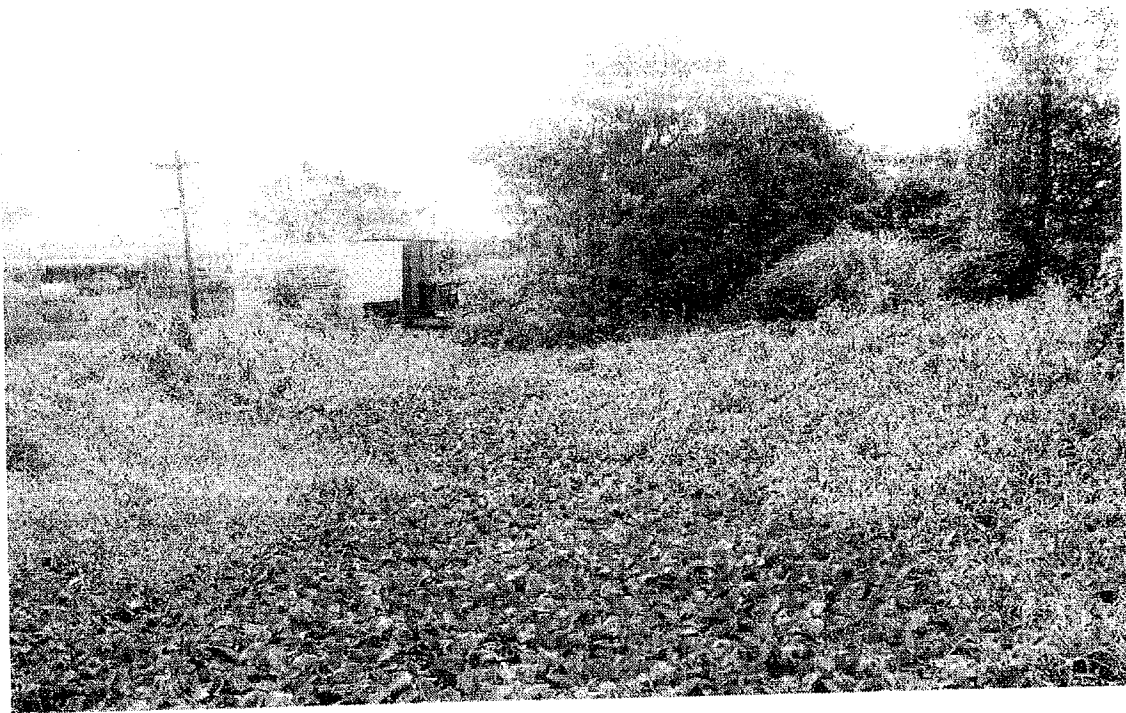


Photo 6. Bechara Channel north. Structure at left is the existing pump house. Note how canal is choked with vegetation.

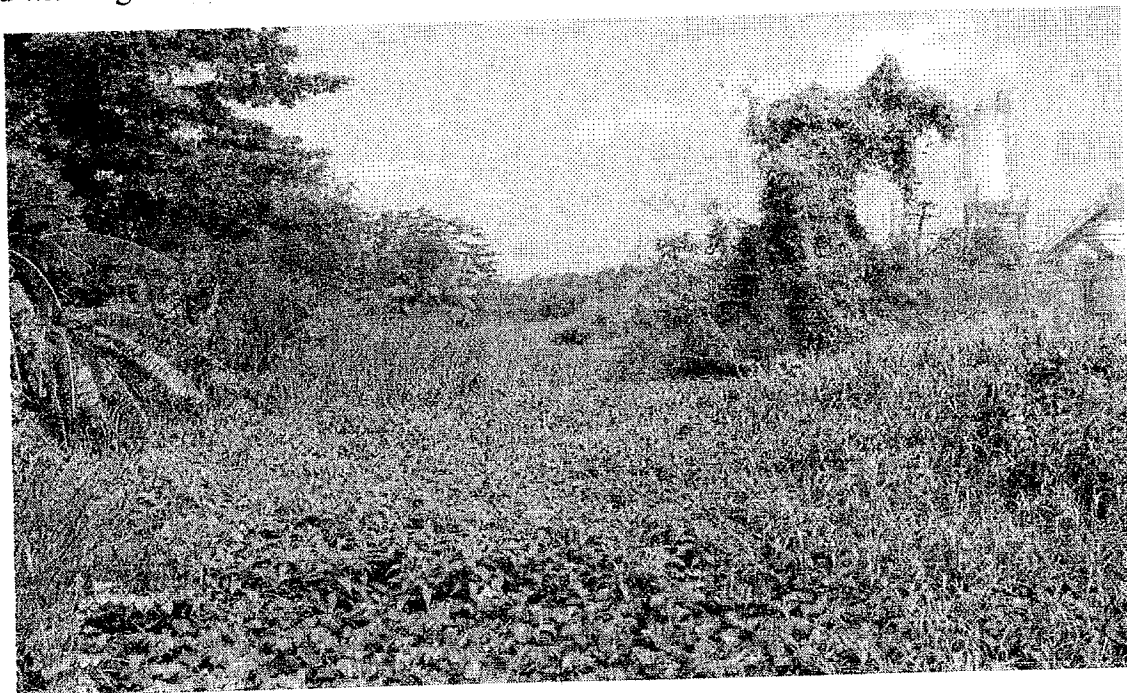
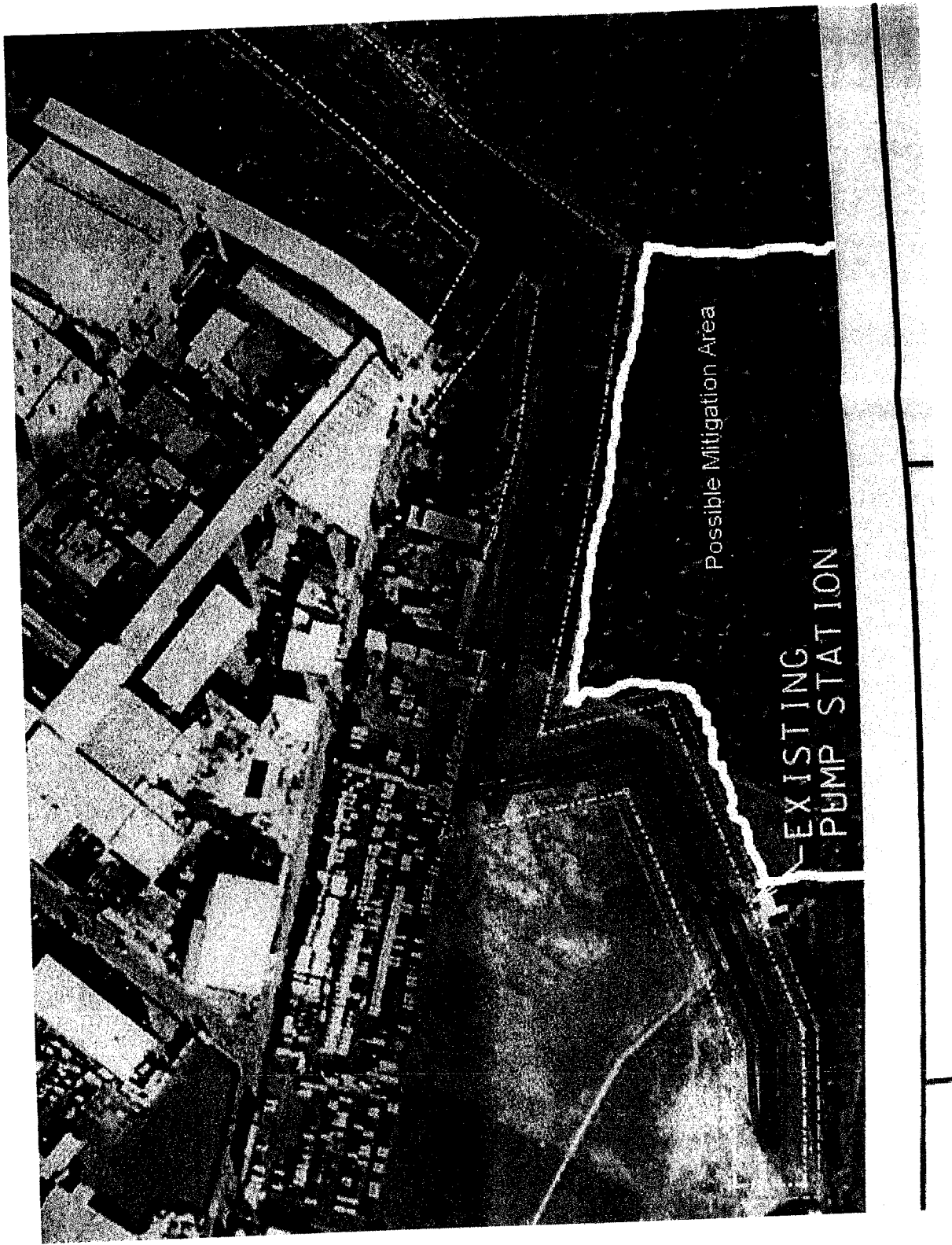


Photo 7. Bechara Channel south.

Photo 8. Area south of the Margarita Levee which could be used as a compensatory mitigation site.





# United States Department of the Interior

## FISH AND WILDLIFE SERVICE

Boqueron Field Office  
P.O. Box 491  
Boqueron, Puerto Rico 00622

November 12, 1999



Mr. James C. Duck  
Chief, Planning Division  
US Army Corps of Engineers  
PO Box 4970  
Jacksonville, Florida 32232

Re: Supplemental EIS Rio Puerto Nuevo

Dear Mr. Duck:

This is in reply to your request for comments concerning the adjustment to the existing flood control plan to include the Bechara Industrial Area. The Corps is considering several options to be carried out in an existing mitigation area that was to be preserved in perpetuity. This area known as the Rupert Armstrong Farm was supposed to be preserved in perpetuity as mitigation for the New Center for San Juan project. Utilization of this property in spite of it being a mitigation wetlands, will result in additional losses of its wetlands functions and values.

The Bechara area already has a proposed flood control project which was designed by the firm of Nazario & Associates. Our office was involved in the coordination of this plan during its design phase, to assure that adjacent wetlands would not be adversely impacted. We recommended that some of the wetlands be used for flood water storage areas as part of a possible enhancement measure. A permit for Phase I of the project was issued by the Corps (1996-03058 LP-DD) and Work on this project has already started. The proposed plan is not consistent with the previously proposed and permitted project and will impact more wetlands than the Nazario plan. The preferred alternative, Option 2, will not only directly impact 12.6 acres of wetlands, but the proposed inflow ditch will effectively drain the remaining mangroves in the port area. At least 8 acres are comprised of basin mangrove wetlands part of which are being proposed as the preferred disposal site. The Service has repeatedly recommended denial of permit applications by PR Ports Authority and PR Industrial Development Company for filling of mangrove in this area.

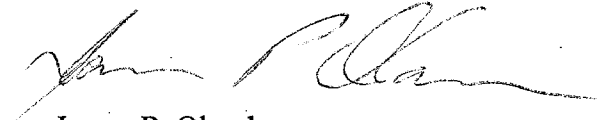
We believe all the options presented are designed to rely too much on structural features through wetlands. The proposed options will also facilitate the development of wetlands within the port area either through direct filling or drainage. The options do not offer any additional mitigation for a flood control project whose cumulative impacts have been expanding since its inception and where mitigation has not kept abreast of the additional impacts.

Based on the above we recommend the following:

- 1) The Corps should reconcile its proposed plan with existing flood control plans.
- 2) All levees should be placed adjacent to the existing Bechara Industrial Park, not way from it. The proposed levee alignment will isolate wetlands and subject them to development. This is already occurring in some areas in anticipation of the flood control work.
- 3) Alternative spoil disposal sites such as the San Juan land fill should be explored.
- 4) Beneficial use of dredge spoil should also be considered within San Juan Bay.
- 5) An updated mitigation plan for the entire project should be developed, incorporating all the changes that have occurred over time. The current mitigation plan has become confusing with all the changes that have been made to the project.

Thank you for the opportunity to comment on this action, if you have any questions please contact Felix Lopez of my staff at 787-857297 ext. 26.

Sincerely,



James P. Oland  
Field Supervisor

fhl

cc:

DNER, San Juan

COE, Planning, San Juan

COE, Regulatory, San Juan

EPA, New York

EPA, San Juan

CZM, Washington, DC

NMFS, Miami

EQB, Scientific Assessment Division

ARPE, San Juan

PRPB, San Juan

USFS, San Juan



AUG 20 2001

Planning Division  
Environmental Branch

Ms. Susan Silander  
Acting Field Supervisor  
Attn: Mr. Felix Lopez  
U.S. Fish and Wildlife Service Boqueron Field Office  
P.O. Box 491  
Boqueron, Puerto Rico 00622

Dear Ms. Silander:

This letter is in reference to the Draft Coordination Act Report (CAR) dated July 10, 2001, sent by your agency for the Bechara Industrial Area (BIA). This was written in accordance with Section 2(b) of the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 USC 661).

You stated concerns for the approximately 1-acre area of mangrove, which exists between the actual BIA development area and the existing Puerto Rico Electric Power Authority (PREPA) maintenance easement. Your concerns were in regard to that area south of the BIA and north of the PREPA maintenance easement, becoming devoid of the tidal influence of the periodic overflowing of the Margarita Creek Channel. Your agency's Draft CAR recommended relocation of the levee from the current location of the easement of the PREPA to a location immediately adjacent and to the south of BIA. The reason that you point this out is your fear that the area between BIA and the PREPA easement, designated Parcels 10-C2 and 10-C3, would be left without hydrologic irrigation and would be subject to invasive encroachment. You further stated that the language of the conservation easement placed on Armstrong Parcels specifically allowed work, which was related to the work of the U.S. Army Corps of Engineers (USACE) in the Puerto Nuevo River.

The USACE has considered your recommendations. These will not be incorporated into the planned work for the following reasons:

1. All and any activity throughout the Armstrong Parcels is prohibited by the conservation easement's covenants found in pages 5 and 6 of the document (copy enclosed). The specific exception for the mitigation area, allowing work there incident to the Puerto Nuevo River work, specifically refers to Parcel 10-C1, which is the one to the south of the PREPA easement. It does not refer to your area of concern, Parcels 10-C2 and 10-C3, which lie to the north of the PREPA easement. Parcels 10-C2 and 10-C3 would still receive hydrological input from the overflowing of the adjoining Puerto Nuevo River, as well as from runoff water from the adjoining BIA, which is set at a higher elevation. The functionality of those wetlands in Parcels 10-C2 and 10-C3 would be maintained even if water flow from the south were to be completely cut off by repair of any existing breaches in the 4-foot high, existing PREPA maintenance easement.

2. The USACE is specifically mandated not to impact wetlands whenever this can be avoided.

Thank you for your input. On July 10, 2001, you requested a copy of the mitigation plan for this work. We will send you a copy of the mitigation plan as soon as it's developed.

Sincerely,

James C. Duck  
Chief, Planning Division

Enclosures

bcc: CESAJ-DP-I (Gonzalez)  
CESAJ-DS

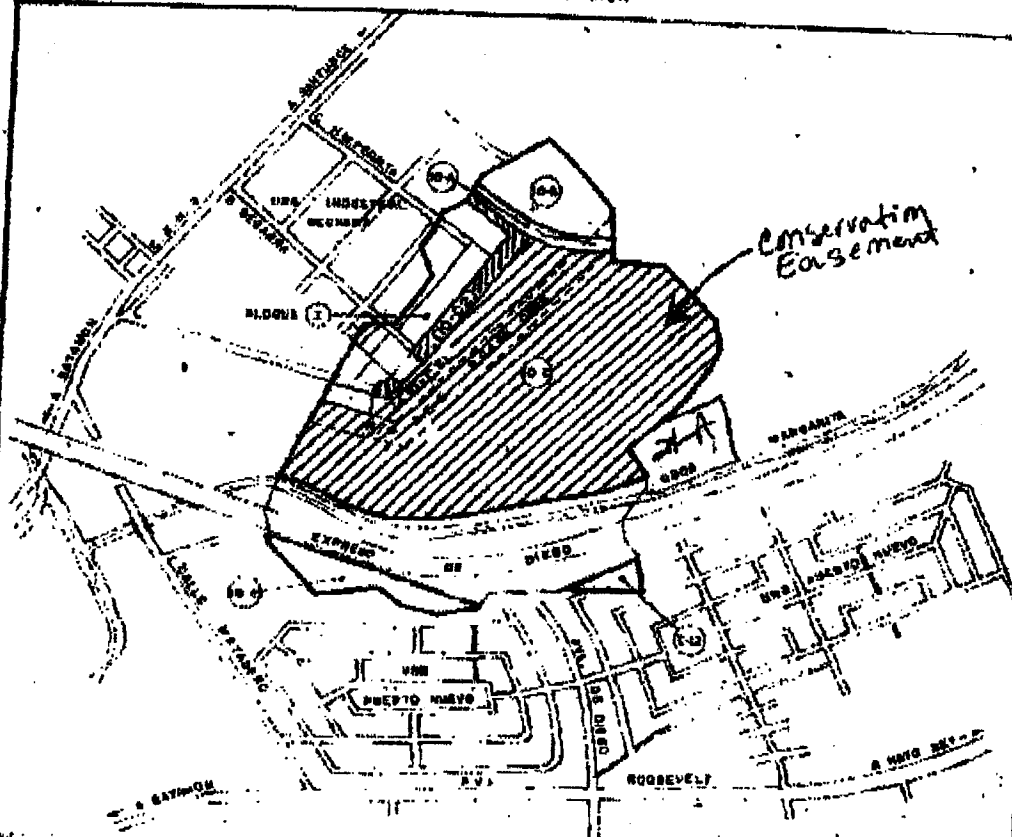
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USACE-REAL ESTATE SN

8092897976 P.02

NUM. DE FINCA 76-34  
 NUM. DE ZONIFICACION 2 SUSCEPTIBLES A INUNDACIONES ZONA  
 NUM. DE CODIFICACION 562-000-004-60

ADMINISTRACION DE TERRENOS  
 PLANO DE SITUACION



TERRENOS ADQUIRIDOS DE

FAMILIA RUPERT AMBYNONG

100.3477 COAS.

PLANO DE UTILIZACION:

100 CUERPO DE INGENIEROS PARA RESERVA 71.4590 COAS. (NO VENTA)  
 10-02 FERRETERIA MADERA 3C INC 2.8104 COAS. VENDIDO  
 10-02 " " " 0.2581 " VENDIDO

NOTA

MOQUE (I) - DEFI. PREDIO I-I AL I-II (VER PLANO DE MEDICION)



MUNICIPIO. RIO PIEDRAS	ADQUISICION Y VENTA	PLANOS DE REFERENCIA	ESCALA: 1 : 10,000
BARRIO: GOBERNADOR PINERO	USO	SB-AM-75	HOJA NUM 1 DE 1
FECHA: AGOSTO 21, 1991	REMANENTE		USACE NUM. 62

OPTIONAL FORM 96 (7-90)  
 FAX TRANSMITTAL

To: Steve Timmer  
 Dept. Agency  
 From: Barbara Miller  
 Phone #  
 Fax #  
 X 9442  
 NSN 7540-01-317-7388 5059-101  
 GENERAL SERVICES ADMINISTRATION

SEP-17-1997 13:57

8092897976

TOTAL P.02  
 P.02

Conrad 2A

NUMBER NINE

-DEED OF SEGREGATION AND DEDICATION

--OF PARCEL TO NATURAL RESERVE

---In the Municipality of San Juan, Commonwealth  
of Puerto Rico on Sixth (6) day of September-----  
Nineteen Nighty (September 6, 1990),-----

-BEFORE ME

-JOSE ELADIO FIGUEROA GONZALEZ-

Attorney-at-Law and Notary Public in and for the  
Commonwealth of Puerto Rico, with residence in the  
Municipality of San Juan, and an office in the  
Municipality of San Juan, Puerto Rico.-----

**-APPEAR**

---OF THE ONLY PART: THE PUERTO RICO LAND-----  
ADMINISTRATION, an instrumentality of the-----  
Commonwealth of Puerto Rico created by Act Number  
Thirteen (13) of May sixteen (16), nineteen hun-  
dred and seventy-two as amended, represented he-  
rein by its Executive Director, Mister Pedro ----  
Hernández Purcell, of legal age, married executive  
and resident of San Juan, Puerto Rico. (This----  
party will hereinafter referred to as "the-----  
Administration"). The Social Security of this----  
part is sixty nine dash zero sixty six dash zero  
one hundred three (69-066-0103).-----

---I the Notary Attest that I am personally -----  
acquainted with the appearing party, who assures  
me that they have, and in my judgement they do---  
have, the legal capacity to execute this deed,---  
whereupon freely and of their own will and accord  
they,-----



OPTIONAL FORM 58 (7-60) **TO: New Contract 8 pages**  
**FAX TRANSMITTAL**  
 To: Andy Turner From: Miguelin  
 Dept./Agency: REnt Phone: \_\_\_\_\_  
**TO: Del no. 9 of September & Delictos**  
 NEW 7540, P.L. 858 **NEW SERVICES ADMINISTRATION**  
**of P.L. 85** **made to following**

2

## STATE

---FIRST: The appearing party is the owner in fee simple (pleno dominio) of certain parcels of land described in the Spanish language as follows:---

PARCELA "10-A":

"URBANA: Parcela de terreno localizada en el barrio Monacillos del término municipal de San Juan, con una cabida de dos punto tres mil ochocientos cuarenta y cinco (2.3845) cuerdas, equivalentes a noventa y tres (93) áreas y setenta y uno punto nueve mil seiscientos noventa y ocho (71.9698) centiáreas, nueve mil trescientos setenta y uno punto nueve mil seiscientos noventa y ocho (9.371.9698) metros cuadrados, en linderos: por el Norte y Sur, con terrenos de la Administración de Terrenos; por el Este y Oeste, con terrenos del Municipio de San Juan".

PARCELA "10-B":

"URBANA: Parcela de terreno localizada en el barrio Monacillos del término municipal de San Juan, con una cabida de ocho punto mil cuatrocientas ochenta y siete (8.1487) cuerdas, equivalentes a cero tres (03) hectáreas, veinte (20) áreas y veintisiete punto siete mil quinientos sesenta y nueve (27.7569) centiáreas, treinta y dos mil cero veintisiete punto siete mil quinientos sesenta y nueve (32.027.7569) metros cuadrados, en linderos: por el Norte, Este y Oeste, con terrenos del Municipio de San Juan y por el Sur, con terrenos de la Administración de Terrenos".

PARCELA "10-C":

"URBANA: Parcela de terreno localizada en el barrio Monacillos del término municipal de San Juan, con una cabida de setenta y cinco punto cuatro mil seiscientos sesenta y seis (75.4666) cuerdas, equivalentes a veintinueve (29) hectáreas, sesenta y seis (66) áreas y trece punto siete mil ciento dieciocho (13.7118) centiáreas, doscientos noventa y seis mil seiscientos trece punto siete mil ciento dieciocho (296.613.7118) metros cuadrados, en linderos: por el Norte, con la Calle J.A. Erndt, Gulf Trading Co., Tropical Produce, Inc., Yuyo Carrasquillo, Empresas Arturo Díaz, Administración de Terrenos y el Municipio de San Juan; por el Sur, con el Expro de Diego, el Municipio de San Juan y Empresas Arturo Díaz; por el Este, con el Municipio de San Juan y por el Oeste, con Américo Estrada Rivera, Tropical Produce, Inc., Yuyo Carrasquillo, Empresas Arturo Díaz y el Municipio de San Juan".



3

PARCELA "10-E":

"URBANA: Parcela de terreno localizada en el barrio monacillos del término municipal de San Juan, con una cabida de cinco punto mil setecientos diecinueve (5.1719) cuerdas, equivalentes a cero dos (02) hectáreas, cero tres (03) áreas y veintisiete punto seis mil cuarenta y seis (27.6046) centiáreas, veinte mil trescientos veintisiete punto seis mil cuarenta y seis (20,327.6046) metros cuadrados, en lindes: por el Norte con el Expreso de Diego; por el Sur, con Puerto Nuevo Realty y Solareas de Puerto Nuevo Norte; por el Este con el Expreso De Diego y por el Oeste con Puerto Nuevo Realty".

## -----TITLE AND ENCUMBRANCES-----

---Title is recorded in the name of The-----  
Administration at Page Two Hundred Forty Three (43)  
of Volume Six Hundred Sixty Eight (668) of -----  
Monacillos Registry of Property of San Juan,-----  
Property Number Twenty One Thousand Seven Hundred  
Twenty Six (21,726).-----

---The above described property is free of liens--  
and encumbrances.-----

## -----SEGREGATION-----

---Pursuant to a resolution of the Puerto Rico  
Planning Board the Puerto Rico Land Administration  
hereby segregate from Parcel "10-C" of the above  
described property a parcel of land described in  
spanish language as follows:-----

## ---PARCELA "10-C1"

---"URBANA: Parcela de terreno localizada en el barrio Monacillos del término municipal de San Juan, con una cabida de ochenta y uno punto cuatro mil quinientos noventa (71.4590) cuerdas, equivalentes a veintiocho (28) hectáreas, cero ocho (08) áreas y sesenta y dos punto tres mil setecientos veintinueve (62.3729) centiáreas, doscientos ochenta mil ochocientos sesenta y dos punto tres mil setecientos veintinueve (280,862.3729) metros cuadrados, y en lindes: por el Norte, con terrenos de la Administración de Terrenos (Parcelas "10-C-2, "10-C-3" y "10-C-4") y con terrenos propiedad Tropical Product, Inc., y con el Río Puerto Nuevo (Predio "10-A"); por el Sur, con terrenos de la Autoridad de Carreteras (Expreso de Diego) y con terrenos del Municipio de San Juan; por el Este, con los terrenos del Municipio de San Juan y por el Oeste, con terrenos propiedad de Emérito Estrada Rivera (Auto Izuso de Puerto Rico".



(\*)

4

A través de dicha parcela discurre en dirección---  
Norte-Suroeste y Este-Oeste una servidumbre de pa-  
so de ciento cincuenta (150) pies de ancho inscri-  
pta a favor de la Autoridad de Energía Eléctrica---  
para el mantenimiento y conservación de las líneas  
eléctricas existentes.

The Administration establishes that after the se-  
gregation of Parcel "10-C-1" from Parcel "10-C"  
the remanent of the Property is as follows:-----

---Parcels "10-A", "10-B" and "10-C" area the same  
and the remandnt of Parcel "10-C" is as follows:

PARCELA "10-C2"

"URBANA: Parcela de terreno localizada en el ba-  
rrio Monacillos del término municipal de San Juan,  
con una cabida de dos punto ocho mil ciento cuatro  
(2.8104) cuerdas, equivalentes a once mil cero  
cuarenta y seis punto mil novecientos tres  
(11,046.1903) metros cuadrados, en linderos: por el  
Norte y Este, con terrenos de la Administración de  
Terrenos; por el Oeste, con las Empresas Arturo  
Díaz, Yuyo Carrasquillo, y la Calle Segarra y por  
el Sur, con la Empresa Tropical Produce, Inc."

PARCELA "10-C3":

"URBANA: Parcela de terreno localizada en el ba-  
rrio Monacillos del término municipal de San Juan,  
con una cabida de cero punto dos mil seiscientos  
ochenta y dos (0.2682) cuerda, equivalente a mil  
cero cincuenta y cuatro punto mil cuatrocientos  
once (1,054.1411) metros cuadrados, en linderos:  
por el Norte con la Empresa Tropical Produce,  
Inc.; por el Sur y este con la Administración de  
Terrenos y por el Oeste con Gulf Trading Company y  
la Calle J.A. Erndt".-----

PARCELA "10-C4"

"URBANA: Parcela de terreno localizada en el ba-  
rrio Monacillos del término municipal de San Juan,  
con una cabida de cero punto nueve mil doscientos  
ochenta y nueve (0.9289) de cuerda, equivalente a  
tres mil seiscientos cincuenta y uno punto cero  
cero setenta y cinco (3,651.0075) metros cuadra-  
dos, en linderos: por el Norte, con la Calle J.A.  
Erndt; por el Sur y Este con la Administración de  
Terrenos y por el Oeste con Américo Estrada Rivera  
(Isuza de Puerto Rico)".-----



5

---The map Number Fifty Nine Dash M Eighty Seven-  
(R) (59-M-87 (R)) dated August Twenty Nine (29)  
Nineteen Ninety of Puerto Rico Land  
Administration shows the corresponding physical  
locations of Parcel "10-C1"-----

**A. DESCRIPTION OF THE CONSERVATION EASEMENT AREA:**

---The Administration is entering into an agree-  
ment with the Corps of Engineers of the Department  
of Army of the United States of America -----  
(hereinafter referred to as the Corps of-----  
Engineers) to be able to develop the New Center of  
San Juan. As a partial fulfillment of this-----  
agreement, the Administration hereby dedicates the  
Parcel "10-C-1" to a natural reserve for preser-  
vation purposes in perpetuity.-----

---The Administration by this deed creates-----  
conservation easements in perpetuity on the above-  
parcels to guarantee the preservation of a total--  
of these natural areas will be properly registered  
in the Registry of Property of Puerto Rico.-----

**B. COVENANTS BY THE LAND ADMINISTRATION:**

1. No dwellings, buildings, or any -----  
other structures shall be built within the-----  
easement area and the vegetation or hidrology---  
of the described easement area will not be ----  
altered in any way or by any means including: One  
(1) cutting or mowing; two (2) cultivation: Three  
(3) grazing: Four (4) haversting wood products;  
Five (5) burning; Six (6) placing of refuse, ---  
sewage, or other debris; or Seven (7) draining,--  
dredging, channeling, filling, discing, pumping,  
diking, impounding, and any related activities--  
which in any way could alter, modify change or---  
disturb the easement area identified as-----L



X





Parcel "10-C1", except that can be used as part of--  
 the development of the Rio Puerto Nuevo Flood--  
 Control project, maintenance of the electric--  
 lines located at the property and for the--  
 construction of the future Puerto Nuevo Avenue in  
 area of approximately five point four (5.4) cuerdas  
 as shown in the map number Fifty Nine Dash M ----  
 Eighty Seven (R) (59-M-87-(R) dated August Twenty  
 Nine (29) Nineteen Ninety (1990) of Puerto Rico  
 Land Administration.-----

C. GENERAL PROVISIONS:-----

1. The agreed upon purposes of this-----  
 reservation are the preservation of the wetland---  
 areas existing as of the date of this covenant as--  
 well as the protection of plant and animal habitat  
 and populations.-----

2. This easement reservation does not -----  
 authorize public entry upon or use of the land,  
 except as above mentioned.-----

3. This easement shall be binding on the----  
 Puerto Rico Land Administration and its successors  
 of assigns.-----

----- RESTRICTIVE COVENANT-----

-----The Administration considering an agreement--  
 with the Corps of Engineers of the Department of--  
 the Army of the United States of America-----  
 (Hereinafter referred to as Corps of Engineers)---  
 establishes as a partial fulfillment of said----  
 agreement, a restrictive covenant upon said-----  
 properties declaring the same natural reserve and  
 stating that said properties will be maintained in  
 these natural and pristine unchanged condition in  
 perpetuity. No manmade alteration of said -----  
 properties, will be permitted that in any way may



7

affect, alter, change, diminish, destroy the-----  
 natural condition of the property, except as above-  
 mentioned.-----

-----The Corp of Engineers, in consideration of--  
 the restrictive covenant upon said parcel to a -  
 natural reserve and as partial mitigation of-----  
 environmental damage caused by the placement of--  
 fill material and development on wetlands in ----  
 properties of the New San Juan Center, will accept  
 this conservation easement for work carried out--  
 as shown on permit Eight Hundred Seventy One PM-  
 dash Twenty Thousand Nine Hundred Thirteen-----  
 (871PM-20913) in the New San Juan Center-----  
 described as follows:-----

-----"Area of land comprised with the following-  
 limits: On the North by the Martin Peña-  
 Channel, on the South by the northern-----  
 abuttal-----  
 of plots located at the North of O'Neill-  
 Street,-----  
 the same O'Neill Street, and in the-----  
 section-----  
 of comprised between Muñoz Rivera Avenue--  
 and-----  
 Uruguay Street, Franklin Delano Roosevelt-  
 Avenue-----  
 and its prolongation; on the East by-----  
 Uruguay-----  
 Street from the prolongation of Franklin--  
 Delano-----  
 Roosevelt Avenue up to Quisqueña Street--  
 and-----  
 Martin Peña Channel; on the West by César-  
 González Avenue-----  
 The Administration represents and warrants-----

that it will not propose or develop any project  
 nor will it transfer; cede, relay, mortgage, sell  
 nor in any way cause the destruction, diminishment,  
 alteration, or affectation of this covenant upon  
 the Parcel "10-C1". Notice shall be incorporated  
 into the corresponding Registry of Property.---

---SECOND: For purpose of the Registry of the---  
 Property only the Administration assign the fol-  
 lowing value to the Parcel "10-C1".-----



EIGHT MILLION FOUR HUNDRED THIRTY THOUSAND SEVEN  
HUNDRED DOLLARS (\$8,430,700).-----

---I, the Notary, made to the appearing party the  
necessary legal warning concerning the execution-  
of this Deed and they were fully advised by me---  
thereon. I advised the appearing party of their-  
right to read this Deed by themselves, which they  
did, and to have witnesses present at its execu-  
tion, which they waived.-----

----After having read this Deed, the appearing---  
party fully ratified and confirmed the statements  
contained therein as the true and exact embodiment  
of their stipulation, terms, and conditions.-----  
Where upon, they signed their initial on the mar-  
gin of each and every page of this Deed and signed  
it before me. I, the Notary, ATTEST AND GIVE-----  
FAITH.-----

FIRMADO: PEDRO HERNANDEZ FURCELL \_\_\_\_\_

FIRMADO, SIGNADO, SELLADO Y RUBRICADO: \_\_\_\_\_

JOSE ELADIO FIGUEROA GONZALEZ \_\_\_\_\_

Esta copia al igual que su original consta de ocho (8) folios.

En cada una de las páginas del original de esta es-  
critura aparecen estampados los iniciales de los otorgan-  
tes, el sello y la rúbrica del Notario.

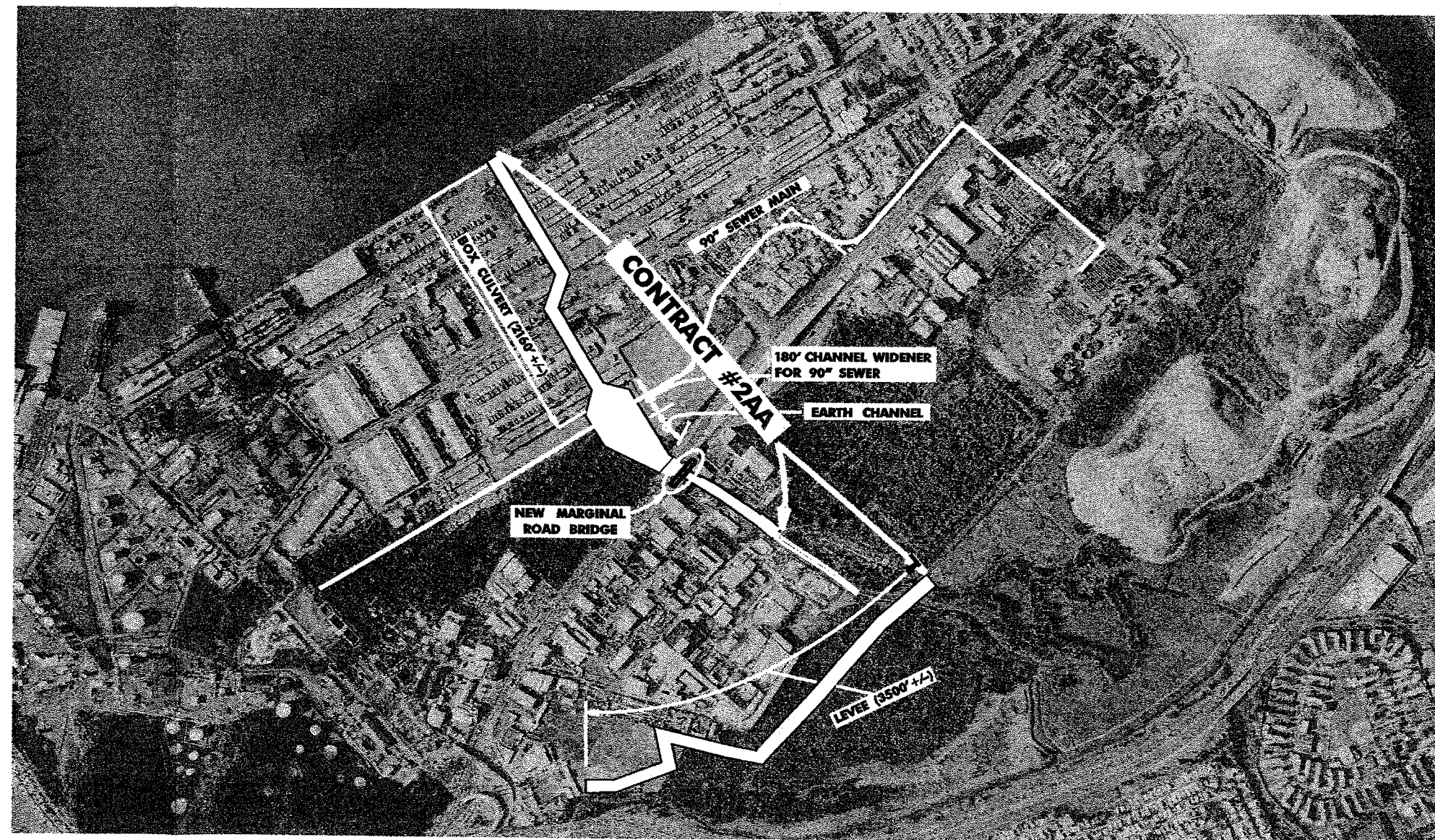
Hay adheridos y cancelados los sellos de Impuesto Nota-  
rial del Colegio de Abogados. Esta Copia no cancelón-  
dase sellos de Rentas Internas por estar este documento  
exento del pago de Derechos.

ES PRIMERA COPIA CERTIFICADA que concuerda  
fórm y fielmente con su original, que bajo el número la-  
terea obra en mi protocolo corriente de instrumentos pú-  
blicos, al que me remito. En fe de ello y a petición de par-  
te interesada, expido copia con la cual buja mi firma, sig-  
no, rúbrica y sello, en San Juan, Puerto Rico el mismo día,  
mes y año de su otorgamiento.

(Notario Público)



X



## " RECOMMENDED PLAN – OVERALL VIEW "

**US Army Corps  
of Engineers  
Jacksonville District**

DEPARTMENT OF THE ARMY  
JACKSONVILLE DISTRICT, COMPS OF ENGINEERS  
SECTIONALIS BOSTON

[illegible]

**PLATE 6**  
**OVERALL VIEW**

**DRAWING NO.**

**PLATE 6 OF 8**







## United States Department of the Interior

### FISH AND WILDLIFE SERVICE

Boqueron Field Office  
Carr. 301, KM 5.1, Bo. Corozo  
P.O. Box 491  
Boqueron, PR 00622



January 17, 2002

*Planning Section*

U.S. ARMY  
CORPS OF ENGINEERS  
ANTILLES OFFICE  
RECEIVED  
02 JAN 22 PM 3:17

Ms. Norma I. Alvira Ruiz  
Director, Land Use Planning  
Puerto Rico Planning Board  
PO Box 41119  
San Juan, PR 00940-1119

Re: CZ-2001-0620-144, US Army Corps of  
Engineers, Bechara Flood Control

Dear Ms. Alvira:

This is to follow up the January 16, 2002, meeting with Planning Board, the US Army Corps of Engineers, DNER and other concerned agencies, to discuss the above Coastal Zone Consistency Certificate. At that meeting the Corps once again stated that moving the proposed levee against the Bechara Industrial Area (BIA) is not feasible and that the mangrove to remain between the BIA and the levee is part of the Nuevo Centro de San Juan mitigation and protected by a conservation easement. This additional work is being added to the Corps Puerto Nuevo Flood Control project at the request of the Commonwealth Government. The Service expressed its concern that although the mangrove area may not be impacted by the levee, it will become isolated on three sides by the BIA and the Corps project. The Service believes that although the mangrove may remain it will be degraded by lack of adequate hydrology and drainage.

During the meeting the Corps agreed to review the overall mitigation plan for the Rio Puerto Nuevo Flood Control project and seek additional mitigation opportunities. The Service agrees with this and had recommended that the mangroves associated with the BIA be included in the Corps mitigation calculations in our previous correspondence with the Corps. Revision of the mitigation plan should be carried out as soon as possible with input from both Federal and Commonwealth resource agencies.

Therefore, if the Corps agrees to revise the mitigation plan for the entire project area to assure that proper compensatory mitigation is carried out for wetland impacts the Service would not have any objections to the issuance of a CZM certificate for this action.

Thank you for the opportunity to comment on this action, if you have any questions please do not hesitate to contact our office.

Sincerely,

A handwritten signature in black ink, appearing to read 'Félix López', with a long horizontal stroke extending to the right.

Félix López  
Acting Field Supervisor

cc:

DNER, San Juan

COE, Planning, San Juan ✓

COE, Planning, Jacksonville

SJBE, San Juan

## **ATTACHMENT D**

### **PUBLIC AND AGENCY COORDINATION AND COMMENT**



#### **Attachment D. Coordination, early scoping, and comments received.**

The BIA recommended plan was developed as a result of interagency coordination during construction of the Rio Puerto Nuevo Flood Control Project, Contracts 1 and 2, while the Municipality of San Juan was preparing for closure of the San Juan landfill, the Puerto Rico Public Works Department (Highways Authority) was preparing to reorganize intersections along Kennedy Avenue, and the Ports Authority was trying to reorganize the Puerto Nuevo wharf and landside facilities. Several interagency meetings were held in 1998 and 1999 in San Juan, with the Deputy District Engineer for the Antilles acting as host, and with attendance of major Commonwealth, Municipal and federal "players" in infrastructure projects in the area. It was at these meetings that the recommended plan was explored, refined and eventually selected. Federal resource agencies also participated in some of these meetings. Therefore, formal scoping, beginning with publication of a Federal Register Notice of Intent, was to some extent repetitious for concerned agencies in Puerto Rico.

Formal scoping began on September 9, 1999, with the publication of a Notice of Intent to prepare a Draft Supplement to the Final Environmental Impact Statement in the Federal Register (Vol. 64, No. 174). A scoping letter was also sent directly to agencies and individuals on the Puerto Rico projects mailing list, beginning on October 6, 1999. Scoping comments were received from the following agencies: U.S. Environmental Protection Agency (EPA), Department of Commerce, National Marine Fisheries Service (NMFS), Department of the Interior, U.S. Fish and Wildlife Service (FWS); Puerto Rico Electric Power Authority (owner of the power lines), Puerto Rico Department of Agriculture and Puerto Rico Department of Natural Resources. The scoping letter, Federal Register notices, and agency comments are reproduced on the following pages. The second Federal Register Notice was published when, after modifying the project to avoid disposal of excavated material on the mangrove wetland, and after considering general comments from EPA, FWS and NOAA related to the overall scope of the project and level of flood control inapplicable to the BIA segment, no other major controversial items remained to warrant a new Supplement to the original Final Environmental Impact Statement.



**COMMONWEALTH OF PUERTO RICO**  
Office of the Governor

September 24, 2001

Mr. James C. Duck  
Chief, Planning Division  
Jacksonville District Corps of Engineers  
P.O. Box 4970  
Jacksonville, FL 32232-0019

**SHPO 10-13-88-08 REDESIGNED FLOOD DAMAGE REDUCTION PROJECT IN  
THE BECHARA INDUSTRIAL AREA, SAN JUAN, PUERTO RICO**

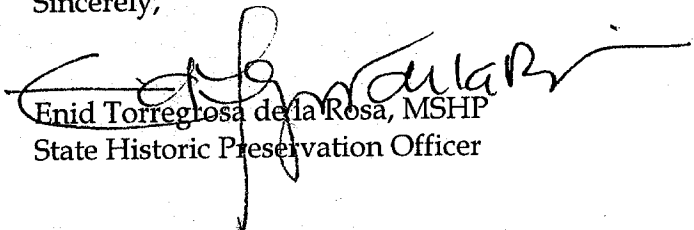
Dear Mr. Duck:

Our Office has received and reviewed the above referenced project in accordance with Section 106 of the *National Historic Preservation Act of 1966* (Public Law 102-575) as amended in 1992 and 36 *CFR Part 800: Protection of Historic Properties* from the Advisory Council on Historic Preservation. The State Historic Preservation Officer (SHPO) is to advise and assist federal agencies when identifying historic properties, assessing effects upon them, and considering alternatives to avoid or reduce the project's effects on them.

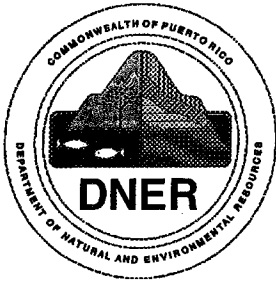
Our records support your finding that **no historic properties** are located within the project's area of potential effects.

If you have any questions concerning our comments, please do not hesitate to contact us. Please note that should the Agency discover other historic properties at any point during project implementation, you should notify the SHPO immediately. We appreciate your interest in the rescue and preservation of our national historical heritage and we reiterate our commitment to assist you in this endeavor.

Sincerely,

  
Enid Torregrosa de la Rosa, MSHP  
State Historic Preservation Officer

ETD/MB



COMMONWEALTH OF PUERTO RICO  
DEPARTMENT OF NATURAL AND ENVIRONMENTAL RESOURCES

05 SEP 2001

Mr. James C. Duck, Chief  
Planning Division  
Corps of Engineers  
Jacksonville District  
PO Box 4970  
Jacksonville, FL 32232-0019

**Draft EIS  
FONSI  
Flood Control Measures for Bechara Industrial Area  
Río Puerto Nuevo Flood Control Project  
San Juan, Guaynabo, Puerto Rico  
C-792-686**

Dear Mr. Duck:

We have reviewed the above-referenced document and agree with the proposed Gravity Drainage. (Option two) The impact upon wetlands will most certainly be balanced by the huge socio-economical benefits generated by río Puerto Nuevo project when completed.

We agree in principle to the proposed mitigation of wetland impacts in the Rupert Armstrong Parcel, nevertheless a detailed Mitigation Plan should be submitted as soon as possible.

If we can be of further help, please call us.

Cordially,

Carlos M. Padín, Ph. D.  
Secretary

CMP/CRT/JATM/ipf/erp

**Flood Control Measures for Bechara Industrial Area  
Wetlands Mitigation  
Design and Plan  
Scope of Work**

**1.0 Background –**

1.1 The measures for flood control in the Bechara Kennedy area transversed by the Puerto Nuevo River consist of a box culvert and a levee to protect the Bechara Industrial Area against the flooding of the hydrologically associated Margarita Creek. The location is the municipality of Guaynabo, Puerto Rico.

1.2 The work is a Federal Flood Control project authorized under Section 205 of the Flood Control Act of 1948, as amended. Public coordination of the project via an Environmental Assessment and Finding of No Significant Impact (FONSI), in February 2001, committed the project sponsors to in-kind replacement of the lost parcel by creation of similar wetlands. This work will result in impacts to approximately 8.5 acres of wetlands (1 acre of mangrove wetlands and 7.5 acres of disturbed freshwater wetlands under the existing electrical power company's right-of-way), which have an overall value of 2.75 functional units (equivalent to approximately 5 acres of newly created mangrove wetlands adjacent to a tidal water body).

1.3 The mitigation site, known as the Parcelas Rupert Armstrong, is surrounded by industrial development except as it is bordered on the East by the Puerto Nuevo River and on the South by Margarita Creek. The government desires to investigate the suitability of these lands for the creation of 5 acres of mangrove swamp wetlands and obtain a complete planting, tending and monitoring plan for the wetlands creation.

**2.0 General Overview of Required Environmental Services**

Contractor will utilize a qualified wetlands restoration specialist with experience establishing mangrove wetlands in Puerto Rico or elsewhere in the Caribbean. The contractor will evaluate the potential site shown on the attached map for suitability for the creation of a mangrove swamp. Basic requirements are: hydrology characteristic of freshwater or low salinity brackish seasonal coastal marsh, with proper land gradient and drainage. Hydrology should include regular alternation of wet-season shallow flooding and dry-season emergence (up to 16" water above soil surface after heavy rains, followed by gradual drainage, with frequent soil saturation); average soil salinity below 5 parts per thousand (ppt); soils suitable for mangrove wetlands establishment. Contractor will conduct field investigations and measure the following parameters: soil salinity, general ground elevation relative to adjacent open water; soil characteristics (texture, color, pH, interstitial salinity, nutrient status); and grading

required prior to planting, if any. These investigations will include **eight (8) sampling, and testing at each site** and the development of a site recommendations and a viable soil preparation and planting plan for the site with the highest potential for success. Sites requiring extensive grading or earth-movement to obtain suitable grade are to be presumed not suitable. Suitability for successful planting of red mangrove (*Rhizophora mangle*) or white mangrove (*Laguncularia racemosa*) will be determined by the contractor. The contractor will develop a complete mitigation plan and construction cost estimate for the swamp creation including short- and long term monitoring; and provide a list of the local permits required.

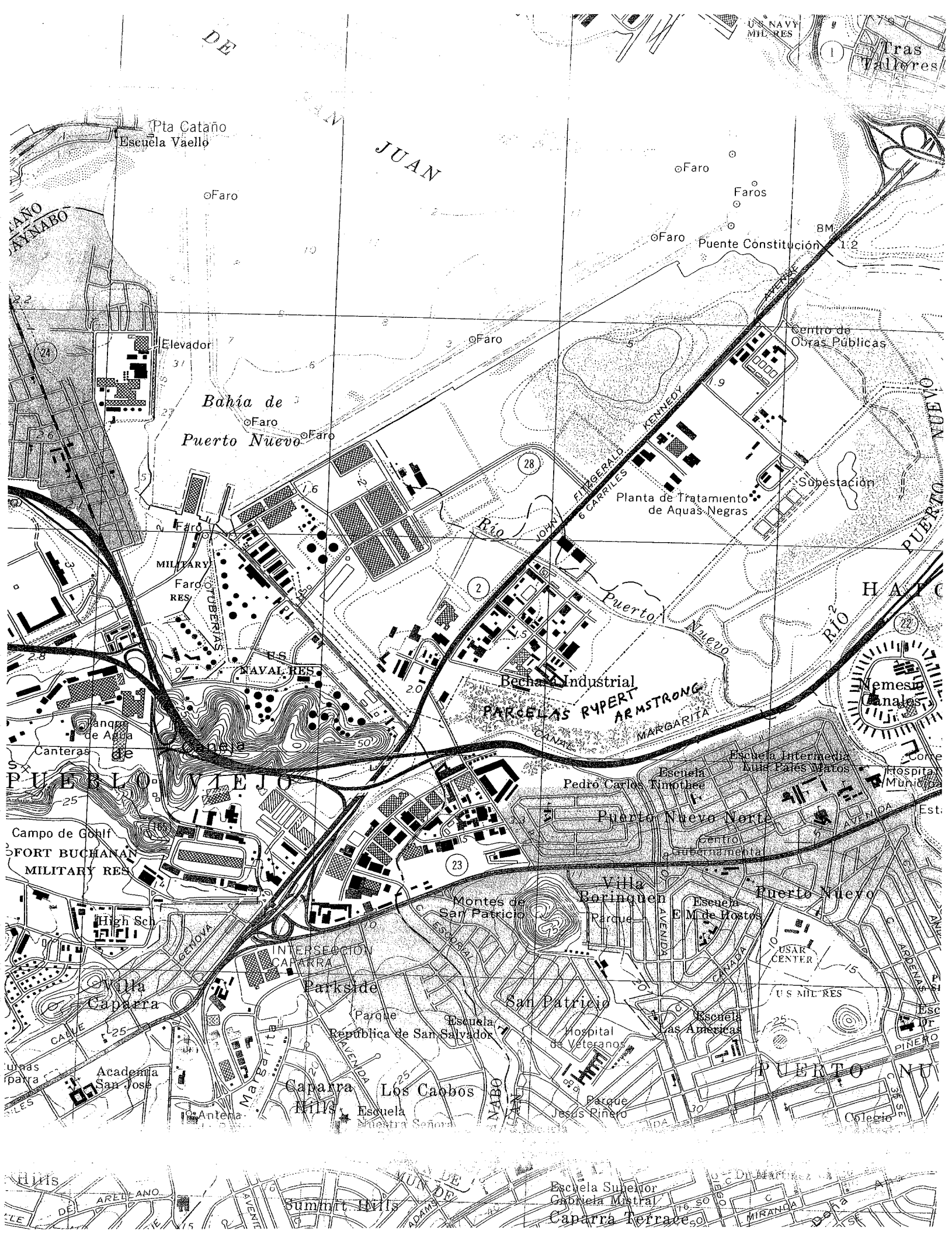
### **3. Deliverables and schedule:**

**3.1 Coordination Meeting:** Upon receipt of notice to proceed, Contractor shall request and attend a meeting at Jacksonville District with the Project Manager and Environmental Branch representative, in order to obtain additional project information and arrange joint field investigations. During this meeting the USACE will assign coordination responsibilities and contact persons to assure smooth coordination with DNER counterparts. Contractor shall inform the government of travel plans to Puerto Rico, so that the Government can help coordinate with representatives of the DNER Water and Mineral Resources Bureau, Refuges and Sanctuaries program and Natural Heritage Program to meet with the contractor and accompany him to the field, if desired. The initial meeting must be held within 15 days of receipt of NTP.

- 3.2 Field investigations. Within 15 days of the meeting cited above, or within 30 days of receipt of NTP, the Contractor shall begin field investigations. Prior to commencing fieldwork, contractor must contact persons in the Antilles Planning Section, USACE, and DNER to arrange for full access to the site and allow DNER to accompany contractor as desired. If the fieldwork start is anticipated to be delayed because of un-availability of DNER personnel, an extension for later fieldwork start must be requested of and authorized by the Contracting Officer.
- 3.3 Field investigations must be completed within 60 days after the initial meeting, or 75 days after receipt of the NTP, unless an extension of time is requested by the contractor and granted by the Contracting Officer.
- 3.4 The Contractor shall provide an executive summary within 10 working days of completion of fieldwork. This summary shall contain a list and maps of the sites visited, a summary of observations made, and preliminary recommendations. The government will review and comment on this report within 10 days of receipt.
- 3.5 A Draft report summarizing all fieldwork and recommendations shall be provided the government within 30 days after completion of fieldwork. This report shall contain all the required information about site characteristics, supported by figures, photographs, and data collected, along with contractor recommendations regarding site selection, and a draft wetlands creation plan

for the site. The wetlands creation plan shall be submitted as part of the Draft Report, to include the following:

- 3.5.1 Site description (map, photos)
  - 3.5.2 Recommended planting plan (soil preparation, species, size, spacing).
  - 3.5.3 Recommended items of local sponsor cooperation, if any.
  - 3.5.4 List of permits required, including EQB (CES), DNER (if any, especially collection).
  - 3.5.5 Construction Cost Estimate including Back-up data on material and suppliers. Minimum is three quotes
  - 3.5.6 Time estimates for actual restoration work, including soil prep, nursery work and field establishment
  - 3.5.7 Recommended monitoring criteria for successful establishment.
  - 3.5.8 Other environmental concerns.
  - 3.5.9 Permanent Survey Baseline to be used to establish Mitigations limits for construction.
- 3.6 Government staff will review the Draft Report within 10 working days of receipt, and comments/revisions will be provided to the contractor. Comments and revisions must be incorporated into the Draft to produce a final report. The Final Report will be due 20 days after receipt of government comments and revisions.



MAR-30-1999 17:43

EPA REGION 2

212.637.3891

P. 02/04/1999



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 2

200 BROADWAY

NEW YORK, NY 10007-1868

MAR 30 1999

Major Edward G. Pruett  
Acting Chief, Planning Division  
U.S. Army Corps of Engineers-Jacksonville District  
P.O. Box 4970  
Jacksonville, FL 32232-0019

Dear Major Pruett:

This letter is in response to your January 15 letters requesting a two year extension of the authorization for use of the San Juan Ocean Dredged Material Disposal Site (ODMDS) for disposal of sediment dredged from the San Juan Harbor Federal Navigation Project and a three year extension for disposal of sediment dredged from the Rio Puerto Nuevo Flood Control Project.

Our staffs discussed the extensions at a meeting in San Juan on February 25, 1999. By this letter we extend the authorization to ocean dispose of project material from areas scheduled for dredging under Phase I of the San Juan Harbor Federal Navigation Project (FNP) at the San Juan ODMDS until December 31, 1999. Areas authorized under Phase I of the San Juan FNP include Graving Dock and Puerto Nuevo Channels, the Sabana Approach and the Puerto Nuevo Turning Basin (see Attachment A). In addition, all ocean disposal associated with dredging of Graving Dock Channel and the Puerto Nuevo Turning Basin must be completed by May 31, 1999. Additional testing and evaluation is required for all areas scheduled to be dredged in Phase II of the San Juan Harbor FNP prior to receiving concurrence for ocean disposal of the project material. This required testing was described by Region 2 and agreed to by your staff at the February 25<sup>th</sup> meeting and will include toxicity and bioaccumulation testing.

The authorization to ocean dispose of project material from Contract 1 and portions of Contract 2A of the Rio Puerto Nuevo Flood Control Project is hereby extended until March 31, 2002. This extension of authorization for ocean placement includes project areas between Stations 60+73 and 88+26 and M0+00 to M51+00 but excludes those sediments of the Margarita Tributary that were previously determined to be unsuitable for ocean placement. These unsuitable sediments are located between Stations M22+00 and M37+00 (Please note that your letter incorrectly identifies them as being located between Stations M22+00 and M35+00). In addition, your staff indicated that dredging has been completed in areas bayward of Station 60+73 except for those sediments located immediately adjacent to the Kennedy Ave. Bridge (Stations 16+50 to 19+25). Therefore, ocean placement of any sediments bayward of Station 60+73, apart from those sediments located adjacent to the bridge, is also specifically excluded from this extension. Our staffs are currently collaborating to expedite the required testing and evaluation for ocean placement of sediments proposed that were not covered in this extension. Our staffs are also

*file*  
1) San Juan Harbor  
Ocean Disposal  
2) Rio Puerto Nuevo  
Ocean Disposal



working together to finalize the Site Monitoring and Management Plan for the San Juan Channel and regional implementation manuals for the testing and evaluation of dredged material proposed for aquatic disposal.

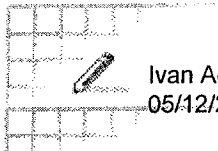
If you have any questions regarding this correspondence, please do not hesitate to contact Mark Reiss of my staff. His number is (212) 637-3799.

Sincerely,



Raymond Basso  
Division of Environmental Planning and Protection

Attachments: 1



Ivan Acosta

05/12/2000 09:32 AM

To: James J McAdams/CESAJ/SAJ02@CESAJ, Esteban Jimenez/CESAJ/SAJ02@CESAJ, Robert J Newman/CESAJ/SAJ02@CESAJ

cc:

Subject: Bechara NPDES

You all, spoke with Mr Jose Rivera, EPA Caribbean Office Rep. about the proposed work in the Bechara drainage (old Puerto Nuevo River alignment). He indicated, since is an existing drainage and done by the Federal goverment that we were exempt.

Does the project área involves more than 5 acres?????

Thanks, Ivan



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 2  
290 BROADWAY  
NEW YORK, NY 10007-1866

MAR 23 2001

Mr. James C. Duck  
Chief, Planning Division  
Jacksonville District  
U.S. Army Corps of Engineers  
P.O. Box 4970  
Jacksonville, Florida 32232-0019

Dear Mr. Duck:

The Environmental Protection Agency (EPA) has reviewed the proposed finding of no significant impact and draft environmental assessment (FNSI) for the Bechara Industrial Area (BIA) segment of the Rio Puerto Nuevo Flood Control Project, San Juan, Puerto Rico.

The EA evaluated the environmental impacts of three alternatives to the original "base" plan for the project, which would have required constructing the Margarita levee and a large pumping station, widening and deepening the Bechara Channel, and constructing a connector canal. The Margarita levee itself would have occupied a wetlands footprint of 17.2 acres. Based on our review, we offer the following comments:

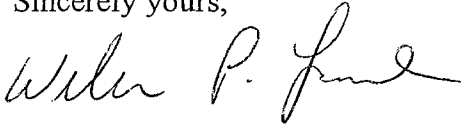
The proposed plan (Alternative 2 - Box Culvert Under Port) significantly reduces the project's wetlands impacts. By shortening the levee and revising its location, only approximately 7.5 acres of lesser quality wetlands will be affected. Furthermore, the EA indicates that mitigation for this loss will be provided by creating an appropriate amount of wetlands off-site. However, a specific mitigation plan was not included in the document. We would like an opportunity to review and comment on the proposed mitigation plan once it is developed.


In EPA's November 4, 1999 comment letter, a copy of which is included in Attachment D of the EA, EPA recommended that the Corps consider the feasibility of constructing floodwalls instead of the proposed levee in wetland areas. This would serve to further reduce adverse impacts since floodwalls typically have narrower footprints. We reiterate that comment. In a related note, both the EA (on page 11) and the Section 404 evaluation both indicate that a recently filled area comprising about 2 acres will be part of the western portion of the Margarita Levee, but do not provide any further information.. What is known about who filled this area and for what purpose? Is it an authorized activity?

Provided that the above comments are satisfactorily addressed, we do not anticipate that implementation of the preferred alternative will result in significant adverse impacts to the environment. Accordingly, EPA would have no objection to its implementation.

Thank you for the opportunity to comment. Should you have any questions concerning this letter, please contact William P. Lawler, P.E., of my staff at (212) 637-3728.

Sincerely yours,

A handwritten signature in cursive script, appearing to read "William P. Lawler".

 Grace Musumeci, Chief  
Environmental Review Section  
Strategic Planning and Multi-Media Programs Branch



**UNITED STATES DEPARTMENT OF COMMERCE**  
**National Oceanic and Atmospheric Administration**  
NATIONAL MARINE FISHERIES SERVICE

Southeast Regional Office  
9721 Executive Center Drive North  
St. Petersburg, Florida 33702

March 24, 2001

Mr. James C. Duck  
Chief, Planning Division  
Corps of Engineers, Jacksonville District  
P.O. Box 4970  
Jacksonville, Florida 32232-0019

Dear Mr. Duck:

The National Marine Fisheries Service (NMFS) has reviewed the Draft Environmental Assessment (DEA) dated February 2001, prepared for the Bechara segment of the Rio Puerto Nuevo Flood Control Project off San Juan Bay in San Juan and Guaynabo, Puerto Rico, and provided to us by your letter dated February 22, 2001. In previous coordination on this project, the NMFS provided comments by letter dated December 9, 1999, regarding the Corps of Engineers intent to prepare a Supplement to the Final Environmental Impact Statement.

Based on our review, the DEA adequately addresses impacts to living marine resources and Essential Fish Habitat (EFH). In regard to the recommended plan to provide flood control and to provide mitigation for impacts, the NMFS does not have any EFH Conservation Recommendations to offer and we have no objections to the proposed project. This satisfies the consultation procedures outlined in 50 CFR Section 600.920, of the regulation to implement the EFH provisions of the Magnuson-Stevens Fishery Conservation and Management Act.

We appreciate the opportunity to provide these comments. If you have any questions, please contact Mark Thompson at 850/234-5061.

Sincerely,

Andreas Mager, Jr.  
Assistant Regional Administrator  
Habitat Conservation Division

cc:  
CFMC  
FWS,PR  
F/SER4





March 12, 2001

Ms. Barbara B. Cintrón  
U. S. Army Corp of Engineers  
Planning Division  
P. O. Box 4970  
Jacksonville, Florida 32232-0019

**DRAFT ENVIRONMENTAL ASSESSMENT FLOOD CONTROL FEATURES  
BECHARA INDUSTRIAL, AREA RIO PUERTO NUEVO**

Dear Ms. Cintrón:

The referenced document is a proposal for the construction of an open channel and underground box culvert gravity drainage to the Bechara Sector. The document was evaluated by Puerto Rico Ports Authority (PRPA), and is evident, the adverse environmental impact to the area by the loss of 7.5 mangrove acres. Therefore so the PRPA requires the delivery of:

1. A copy of the Mitigation Plan submitted to the applicable agencies.
2. The proposed alternatives to be presented to PRPA for the property that belongs to this public corporation in the open channel section.
3. The Work Plan including the proposed date schedule for the project. This will allow the PRPA to make arrangements with the affected tenants during construction phase.

If you need additional information related to this project, please contact me at (787) 729-8804 or Ms. Milagros Rodríguez, our Environmental Advisor of my staff at (787) 729-8506.

Cordially,

Miguel A. Pereira, Esq.  
Executive Director

MP/MR/clc

c Eng. Virgilio J. Acevedo  
Assistant Executive Director  
In Engineering

Mr. Edwin Rodríguez  
Chief, Maritime Bureau



*March 21, 2001*

*Department of the Army  
Jacksonville District Corps of Engineer  
P.O. Box 4970  
Jacksonville, Florida 32232-0019*

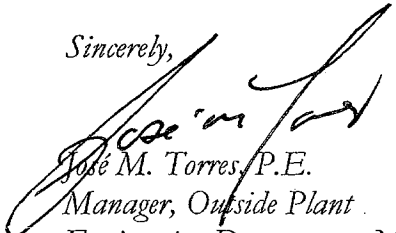
***Att: Planning Division Environmental Branch***

*As per your request, we have reviewed the Environmental Assessment for the Bechara segment of the Rio Puerto Nuevo Flood Control Project and we have no further comments or objections to it.*

*We have a preliminary design project for the relocation of our aerial telephone plant to be affected with the construction of a box culvert based on the Contract 2AA Plans received last November 2000 from URS Group, Inc. We would appreciate to know if there are any design changes related to the Contract 2AA plans and / or the proposed construction dates.*

*For additional information regarding this matter, you may call Eng. Awilda Rodriguez at (787) 749-2219.*

*Sincerely,*

  
*José M. Torres, P.E.  
Manager, Outside Plant  
Engineering Department, Metro*

*ar*



COMMONWEALTH OF PUERTO RICO  
OFFICE OF THE GOVERNOR  
PUERTO RICO PLANNING BOARD

Minillas Governmental Center, North Bldg.  
De Diego Ave, Stop 22  
P. O. Box 41119, San Juan, P. R. 00940 - 1119

March 15, 2001

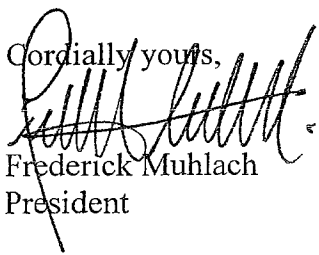
James C. Duck  
Chief, Planning Division  
Department of the Army  
Jacksonville District Corps of Engineers  
P.O. Box 4970  
Jacksonville, Florida 32232-0019

Dear Mr. Duck:

We have evaluated the Draft Environmental Assessment prepared for the Bechara (Contact 2AA) segment of the Río Puerto Nuevo Flood Control Project in San Juan and Guaynabo. The recommended plan under that contract, consists of a drainage canal inside Bechara Industrial Area (BIA) that extends from the Bechara Industrial Park, located south of Kennedy Avenue, to San Juan Bay. This project will provide gravity drainage to the BIA and will protect from floods of the upper Quebrada Margarita drainage.

The proposed action would provide drainage for the 100 year flood, therefore this represent a great economic impact in the BIA, decreasing the risk of damage to building structures and contents and intensifying the land uses in the sector. This is in agreement with the Objectives and Public Policies of the Land Use Plan of Puerto Rico.

Cordially yours,



Frederick Muhlach  
President

RM/mla



PUERTO RICO ELECTRIC POWER AUTHORITY

SAN JUAN, PUERTO RICO

Cable Address  
PREPA



PO Box 364267  
San Juan, Puerto Rico 00936-42

March 23, 2001

Mr. Jack C. Duck, Chief Planning Division  
U.S. Army Corps of Engineers  
P.O. Box 4970  
Jacksonville, Florida 32232-0019

Dear Mr. Duck:

**RE: Draft Environmental Assessment  
Flood Control Features for Bechara Industrial Area  
Rio Puerto Nuevo Flood Control Project  
San Juan / Guaynabo, Puerto Rico**

We refer to your letter in which the Puerto Rico Electric Power Authority (PREPA) is requested to submit its comments in regard to the above referenced project. The project's new levee alignment would run along one of our power line's right of way.

The description of the proposed changes shows that there may be power lines which might be affected by the project. Although the overall project was evaluated previously, it is PREPA's policy to issue project evaluations which are effective for only one year. Since this project was evaluated sometime ago by PREPA, we request you contact Eng. Roberto Torres, Acting Superintendent of Distribution Engineering, at (787) 772-6503 for a new evaluation.

We have no issues of environmental significance to comment upon for the referenced project. If you have any questions, please contact us at (787) 289-4969.

Cordially,

Héctor M. Alejandro  
Acting Director, Planning  
and Environmental Protection

SCOPE OF WORK  
FISH AND WILDLIFE COORDINATION  
ACT REPORT, RIO PUERTO PROJECT, BECHARA INDUSTRIAL AREA  
SAN JUAN PUERTO RICO, PUERTO RICO

1.0. Project: Río Puerto Nuevo, Bechara Industrial Area Segment, flood control project.

2.0. Authorization: This design modification is being undertaken under the authority of the Water Resources Development Act of 1986, which authorized the Río Puerto Nuevo Project.

3.0. Project Area and Objectives: Refer to the map and enclosed draft of the EA text for project area location. The objective is to reduce flooding, flood damage to properties and risk to life and limb caused by overflow of the Río Puerto Nuevo in the area around Kennedy Avenue and Bechara park (the Bechara Industrial Area) in San Juan, Puerto Rico.

4.0 Work Required of the U.S. Fish and Wildlife Service (FWS):

(a). Perform field reconnaissance and literature review necessary to identify significant fish and wildlife resources and habitats within the impact area (culvert, channel clean-out and Margarita levee ROW) of the Bechara segment, with emphasis on existing forested wetlands, wildlife and/or endangered species habitats and populations. Describe potential for project impacts on the fish resource, fish habitat, wildlife and wildlife habitat under all alternatives presented and develop suggestions for fish and wildlife conservation measures. Please keep in mind that the Bechara Canal is not now in direct contact with tide at any point, when you make your observations. The natural gradient of the old river bed is to the north; thus, northern sectors of Bechara Canal cannot now drain to the south.

(b). Prepare a Report in compliance with the Fish and Wildlife Coordination Act regulations and guidance; this report will be submitted to the Corps of Engineers (CE) and included in the environmental documentation prepared for the project.

4.1. Reports:

(a) A Draft Coordination Act Report will be furnished. The Draft CAR will focus on describing the probable impacts of alternative plans on fish and wildlife and habitat resources, and on developing mitigation alternatives, if appropriate. All mitigation alternatives must be justified in relation to the resource or resources likely to be impacted by the project. After review and revision, this report will be integrated into the NEPA documentation prepared and coordinated for the BIA segment. The Final CAR will respond to and incorporate changes, if any, resulting from internal review of the draft environmental document, and will be prepared after the CE supplies comments on the draft document and draft CAR to the Service.

**4.2. Content of the Report:** At a minimum, the draft CAR should contain the following material:

- Identification of significant FWS resources, their attributes, past and present trends and projected future. Sources of information other than direct observation should be properly referenced. We welcome consultation with and input from FWS contacts in the academic and Commonwealth research and management agencies.

- An inference of the future conditions of the fish and wildlife resources of the project area under with- and without- project conditions, including a comparative analysis of alternative flood control plans. The inferred future conditions should be based on observed or inferred trends in habitats and populations;

- Identification of potential impacts, management and mitigation opportunities during project design, construction and operation;

- Development of recommendations for incorporation of fish and wildlife conservation measures into the project. If specific fish and wildlife habitat mitigation measures are recommended, they should be justified in proportion to the magnitude of expected habitat damage and the present value of the habitat that is likely to be impacted.

**4.3. Coordination.** The Fish and Wildlife Service will consult and coordinate with the Department of Natural Resources and other appropriate agencies. It will notify the Corps of Engineers (CE) of proposed meetings with other agencies, including time and place, so that representatives from the CE can attend.

**4.4.** As part of this coordination, FWS will furnish CE with copies of all correspondence pertaining to the studies, and a summary of concerns arising during coordination, in the Draft CAR.

## **5.0 Work Required of U.S. Army Corps of Engineers (USACE).**

**5.1** USACE will provide a project location map, description of alternatives and the recommended plan, as well as scoping replies received from DNER, EPA, and NOAA. It will also provide copies of any other technical reports on the area. Other pertinent plans and maps will be supplied as available in the Jacksonville District, Corps of Engineers, to facilitate the study.

**5.2** USACE will provide additional information on project plans and specifications as appropriate and available. It will continue to coordinate with FWS to maintain Service biologists updated with regard to plan alternatives/ proposed features. It will review the Draft CAR and return to FWS with agency comments in a timely fashion to permit incorporation of a Final CAR in the CE Report circulated for review.

The undersigned FWS and USACE representatives have reviewed and approved this document, and agree to adhere to this document's requirements and obligations.

*for Kenneth R. Opper*  
Hanley K. Smith, Chief  
Environmental Branch  
Jacksonville District  
U.S. Army Corps of Engineers

*James P. Oland*  
James P. Oland, Chief  
Caribbean Field Office  
U.S. Fish and Wildlife Service  
Boquerón, Puerto Rico

# San Juan Bay Estuary Program



February 8, 2001

Mr. Esteban Jimenez  
Planning Division  
U.S. Army Corps of Engineers  
400 West Bay Street  
Jacksonville, Florida  
32232-0019

Dear Mr. Jimenez:

As requested, here is information regarding endangered species in the Puerto Nuevo River area near the proposed dredging site. Two west Indian Manatees has been observed recently in the proximity of the area to be dredged. Sightings of this species were informed in February, 1999 to the USACE in Puerto Rico. (see attached letter). On the other hand there are no critical plant species near the proposed dump site.

If you have any questions please contact me at 787-725-8162.

Sincerely,

Mario Tacher  
Marine Biologist, SJBEP

MTR/mtr

San Juan Bay

Estuary Program

San Juan, P.R.

00901-3299

Tel. (787) 725-8162

San Juan Bay Estuary Program

# San Juan Bay Estuary Program



February 15, 2001

Eng. José Rosado  
Chief, Antilles Construction Office  
U.S. Army Corps of Engineers  
400 Fernández Juncos  
San Juan P.R. 00901-3299

Dear Mr. Rosado:

With this letter, I will like to notify the U.S. Army Corps of Engineers that at least two West Indian Manatees (*Trichechus manatus*) has been observed in the vicinity of the Puerto Nuevo River. Different sources have reported to us the presence of two manatees near the waters that border the San Juan Municipal Landfill, specifically near the barge used for the operations of the second phase of the Puerto Nuevo River dredging project. Our office has addressed the presence of manatees in this area in the past to former Chief of Antilles Construction Office, Yamil Castillo, in February 1999 (see attached letter).

Our main concern is that one or more of these manatees could be harm during the USACE dredging operations. Any security measures taken would strongly contribute to the overall recovery of this species. This action would also address and support the San Juan Bay Comprehensive and Management Plan.

If you have any questions concerning this matter, please call me at (787) 725 8162.

Sincerely,

Mario Tacher  
Marine Biologist, SJBEF

MTR/mtr

C: USFWS  
CSN  
CESJ-PD-ES

# San Juan Bay Estuary Program



March 23 1999

Yamil Castillo  
Chief Antilles Construction Section  
U.S. Army CORPS of Engineers  
400 Fernández Juncos  
San Juan Puerto Rico  
00901-3299

Dear Mr. Castillo:

With this letter, I will like to notify the U.S. Army CORPS of Engineers that a West Indian Manatee (*Trichechus manatus*) has been observed in the vicinity of the Puerto Nuevo River. A significant number of people have reported the presence of a six to ten feet Manatee near the waters that border the San Juan Municipal Landfill for at least the last two months. Furthermore, a fisherman that frequents the area informed our staff that he has seen an adult manatee with its calf in the same area.

The Puerto Nuevo River is part of the San Juan Bay Estuary System (SJBES), concerning our program directly. As you are aware, the West Indian Manatee is an endangered species protected by State and Federal laws. Our main concern is that the USACE has dredging activities scheduled within this area during summer of 1999 and awareness of this situation should be established.

If you have any questions concerning this matter, please call me at (787) 725 8162.

Sincerely,

Mario Tacher  
Marine Biologist

MTR/mtr

cc USFWS  
CSN

400 Fern. Juncos Ave.  
San Juan, P.R.  
00901-3299  
Tel. (787) 725-8162

AUG 20 2001

Planning Division  
Environmental Branch

Mr. Ronald Borsellino  
Division of Environmental Planning and Protection  
U.S. Environmental Protection Agency  
Region II  
25<sup>th</sup> Floor, 290 Broadway  
New York, New York 10007

Dear Mr. Borsellino:

This letter is in reference to the EPA concurrence for use of the San Juan Ocean Dredged Material Disposal Site (ODMDS) for disposal of dredged material for the Rio Puerto Nuevo Project. Although no changes have occurred to affect the October 1999 Evaluation, we have had to partially terminate the excavation of Margarita Channel because of problems encountered in connecting the newly constructed San Jose Sewer Siphon. The elevation of the existing siphon is too high to allow barges to transit the channel and carry excavated material to the ODMDS. Therefore dredging of the approximately 1.8 million cubic yards of dredged material to construct the Margarita Channel is being delayed. The present authorization to dispose of the material at the ocean disposal site expires March 31, 2002 and we are requesting for it to be extended for a period of two years until March 31, 2004.

We have turned over the newly completed sewer siphon to our sponsor, the Department of Natural and Environmental Resources and the Puerto Rico Aqueduct and Sewer Authority. They are currently developing a plan to test and connect the new sewer siphon and demolish the existing siphon within the next 12 to 18 months. Once the existing siphon has been removed, it will take approximately 18 months to re-advertise and complete the remaining Margarita Channel work. Therefore by March 2004 requested extension deadline all Margarita trapezoidal channel dredging operations should be completed.

Based on the analysis of the previous evaluation of the dredged material from the defined project area, it was determined that the material proposed for ocean disposal for Rio Puerto Nuevo project with the exception of the Margarita Tributary channel between 22+00 and station 37+00, is suitable for ocean disposal in accordance with the MPRSA in the San Juan ODMDS. The material located between station 22+00 and station 37+00 of the Margarita Tributary channel was found to be unsuitable for ocean Disposal and shall be disposed in an upland disposal site.



We request that you complete your review and provide a letter of concurrence for extension of the requested ocean disposal of the material specified in the enclosed 103 evaluation within 30 days of your receipt of this letter.

Additional information regarding this request may be obtained from Mr. Ivan Acosta at 904-232-1693 or Mr. Glenn R. Schuster at 904-232-3691.

Sincerely,





James C. Duck  
Chief, Planning Division

Enclosure

Copy Furnished:

Mr Mark Reiss, U.S. Environmental Protection Agency, Region II,  
Division of Environmental Planning and Protection, 24<sup>th</sup> Floor,  
290 Broadway, New York, New York 10007-166

bcc:  
CESAJ-DP-I (Gonzalez\Newman)

  
Acosta\CESAJ-PD-EP\1693\als 4-12-01  
  
Schuster\CESAJ-PD-E  
  
Gonzalez\Newman\CESAJ-DP-I  
  
Duck\CESAJ-PD

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