aqua pura
sustainable water corporation

October 14, 2016

Puerto Rico Task Force
via email: prtaskforce@mail.house.gov

Ladies and Gentlemen:

This letter transmits a proposal for two projects related to water supply in Puerto Rico that will immediately create up to 6,000 much-needed jobs. The projects will improve the reliability of potable water service and greatly reduce water utility operational costs. We also present a reality-based financing mechanism. The projects comprise two potable water systems in east-central Puerto Rico that (for many decades) have been part of the local water company's (PRASA) capital improvement program. The work is herein referred to as the East-Central Regional Aqueduct of Puerto Rico. Our vision includes completion of the existing designs, with construction, financing, operation and maintenance of the Beatriz and Valenciano reservoirs, including the filtration plant and the distribution systems. We herewith briefly explain the structure of our proposal for construction of the dams and associated systems. What we propose could be called FDBOT : finance, design, build, operate and transfer.

Two attachments describe the project. We had previously presented this idea to PRASA. However, near the end of 2011 PRASA decided to construct Valenciano reservoir in two phases, also postponing design and construction of Beatriz Dam. The first phase of construction at Valenciano envisioned construction of the first stage of a water filtration plant to be financed from their own Capital Improvements program. Phase Two would have consisted of construction of the dam, completion of the water filtration plant and the distribution system (the pipelines). At the same time, Beatriz Dam was postponed in the hope that various system upgrades could increase water supply. Since that time, the severe drought in 2015 has (one again) emphasized the need for both Valenciano and Beatriz dams. Unfortunately, we are now some distance away from a solution.

A farsighted development policy will assure rapid implementation of solutions while assuring adherence to sound business principles. Government can aid in formulation of the policy decisions, but implementations and execution must come from the private sector. This thought is amply confirmed by all the past history that has led Puerto Rico to its current fiscal incoherence. A reliable water system is needed to create jobs and foster the conditions needed for economic growth. Reliability requires infrastructure, which can be (should be) financed only if there exist sound repayment guarantees. Congress should study and work with the private sector in Puerto Rico to identify equitable federal funding programs for water projects, thus enhancing the viability of these solutions. Renewable energy generation from small hydropower and floating solar panel farms for these two projects must also be considered.

The solution brings a strong local participation component. It envisions development of the necessary infrastructure to deliver a service package to be financed by a Water Storage and Tolling Agreement to collect, store and filter PRASA's water. We would design the system components, with work products put to bids in several packages. We would perform project management and operate the facilities. Pursuant to the terms of an Agreement to be negotiated, the operator would be compensated for the services to be delivered, including the infrastructure development. Payment would be based on a cost per cubic meter and guaranteed by PRASA, after securing approval of existing bondholders. The cost per cubic meter could include a fixed component and a variable component, both of which would be adjusted from time to time to account for inflationary factors. Initial payment by PRASA would commence three to four years after completion of the facilities. Construction of a stable and reliable water system will enhance economic development and help assure repayment to current bondholders.

The intent should be to negotiate an agreement that will facilitate a minimum investment grade rating on our funding requirements, which could be achieved with reasonable cooperation from the bondholders and PRASA, if a private-investment mindset is achieved. All system components would be let out to public bid or RFP, and both the water company and the developer would benefit from lower costs obtained through the process by adjustment of the agreed unit price.

This proposal is convenient for several reasons. The financing structure is innovative and allows for speed in execution (design and construction). Commencement of construction could start almost immediately. Permits are already

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issued at Valenciano and any necessary updates could be performed using the Critical Project designation and permitting process established by Title V of PROMESA. At Beatriz, land has already been set aside and a fast track design could assure construction within a year. Our vision of these endeavors is structured to increase local participation by splitting one large project into many small projects. Local contractors will be able to bid. It is likely that local firms will be much more competitive than other larger firms. Bigger non-local companies surely prefer a larger more-complicated project, a structure that tends to reduce local participation or, at the very least, assures that local firms will be subordinate to non-local firms. Under such a structure, the potential profits for local firms are much smaller, so that the amounts injected into the local economy are significantly reduced.

When we first presented this project to PRASA, interest among the investment community was significant. While Puerto Rico's credit situation has significantly deteriorated since then, we believe that involvement by the Federal government, exemplified by this Puerto Rico Task Force, indicates a level of commitment to create jobs that will create interest among important investors.

The main point to consider in this letter is our vision of professional services that include design and financing, project management and operation of system components, all by private industry. This vision is based on a sound business model, a proposal that is reasonable for all parties. We need work, we have the necessary experience and we can achieve this project, which will greatly benefit our community.

We appreciate your attention to our proposal and we urge you to contact us with any additional comments, questions or observations. We are certainly available for any meetings or presentations if the Task Force is interested in exploring these ideas.

Sincerely yours,

Alan R. Crumley, PE
President

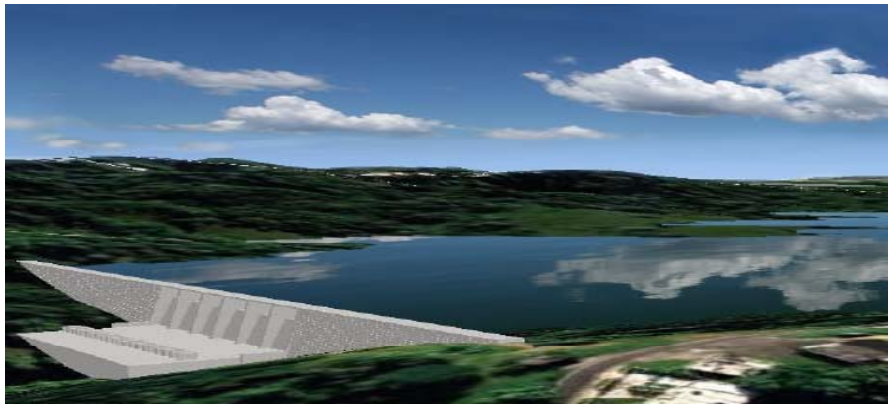
Puerto Rico East-Central Aqueduct Initiative
Fact Sheet, two dams at Beatríz and Valenciano
Prepared by **Aqua Pura Sustainable Water Corporation**, October 14, 2016

Project	**Beatríz**	**Valenciano**
Location, type of dam	Caguas, off-stream dam	Juncos, on river dam
Construction Material	Compacted earth dam – firm design, 1.1 million cubic meters	Roller compacted concrete (RCC) – pending verification of material availability and suitability, 175,000 cubic meters of concrete
Firm yield, million gallons / day	14 MDG	15 MGD
Water filtration plant capacity	21 MGD	21 MGD
Reservoir volume, cubic meters	8.0 million	12.7 million
Dimensions, height and length	H=36m, L=470m	H=30m, L=308m
Date possible start of construction, completion date	Start October to November, 2017, end 2020-2021	Material availability phase was started May 2011 but not completed. Filtration plant phase 1 started but stopped in 2014. Design is at 80% and must be completed.
Construction cost, 2011, million $	$232m	$206m, see below
Jobs created (direct, then TOTAL of direct, indirect, induced)	1,590 direct, total 3,498	1,200 direct, total 2,688
Permitting	Preliminary EIS submitted. Comments received, no major hurdles expected for final EIS, particularly in view of decision to use tunnel intake.	Final EIS approved
Project particulars	Tunnel 3.3 km, minor pipeline costs, possible small hydro 5 mW, floating solar 10 mW	Includes 71.5 kilometers of pipelines, with 7 pump stations, 8 tanks, floating solar panels 10-15 mW
Comments	Project designed to 30% stage. Construction will occur in single phase. Offstream design at Beatríz reduces siltation that will occur at Valenciano.	Project planned in stages. First stage was begun to determine viability of material for RCC. Project stopped due to lack of funds and material viability is still undetermined. Other viable options are earth or rock dams, or a gravity concrete dam (preliminary designs and old final design available). Cost could range from $200m to $250m.

ECRA Initiative
Puerto Rico East Central Regional Aqueduct

Beatriz and Valenciano Water Supply Systems

Beatriz Reservoir



Valenciano Reservoir

A Proposal by Aqua Pura Sustainable Water Corporation

for

Puerto Task Force

Updated October 14, 2016

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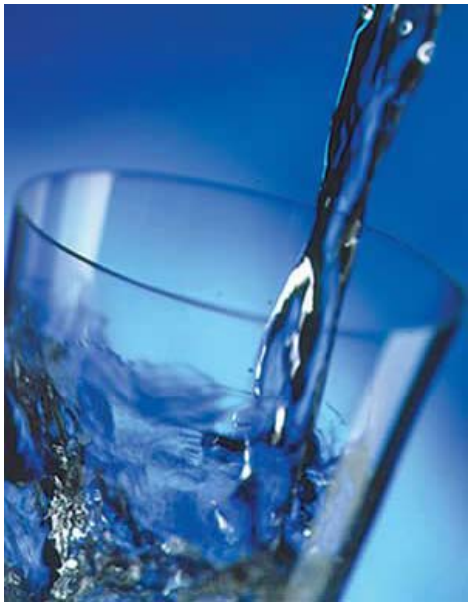
Aqua Pura Mission Summary



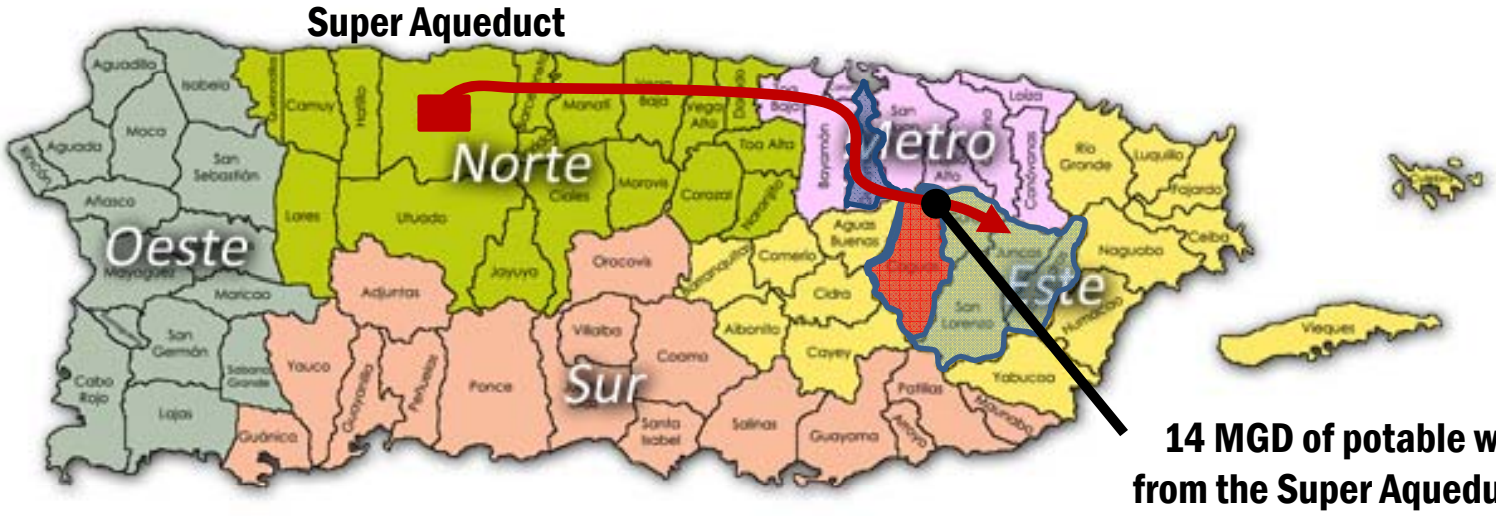
- **Aqua Pura Sustainable Water Corporation (APSWC) is a special purpose development company. It includes –**
  - GEOCONSULT/Alan R. Crumley PE,
  - Torres-Rosa Consulting Engineers/Pully A. Torres PE,
  - InterGroup/Architectural/Mario Corsino AIA.
- **Our Financial Advisor is VAB Advisors/Frank Vasquez.**
- **APSWC proposes to develop the Beatriz and Valenciano potable water systems, including construction, financing, operation, and maintenance.**
  - These projects have long been in PRASA's Capital Improvement Program but were postponed due to lack of financing.
  - APSWC proposes to initiate the process with a detailed Letter of Intent with PRASA.
  - These facilities will process up to 42 MGD.

The estimated economic impact includes the creation of more than 6,000 jobs, with total investment surpassing $600 million.

Current Situation

Trans-Region Water Supply

About 14 MGD are diverted from Guaynabo South to Caguas, Gurabo and Juncos from the North Coast Super Aqueduct to balance shortage of water in that part of the PRASA EAST region.



14 MGD of potable water from the Super Aqueduct are pumped daily across Guaynabo to Caguas, Gurabo and Juncos.

Actual Situation

PRASA Capital Improvements Program developed the Transmission and Distribution system to deliver potable water from the Metro Area To Guaynabo south, and part of the PRASA EAST region (Caguas, Gurabo and Juncos). Picture shows the Piedras Blancas tank in Guaynabo.

SISTEMA DE TRANSMISION Y DISTRIBUCION GUAYNABO-CAGUAS-GURABO-JUNCOS

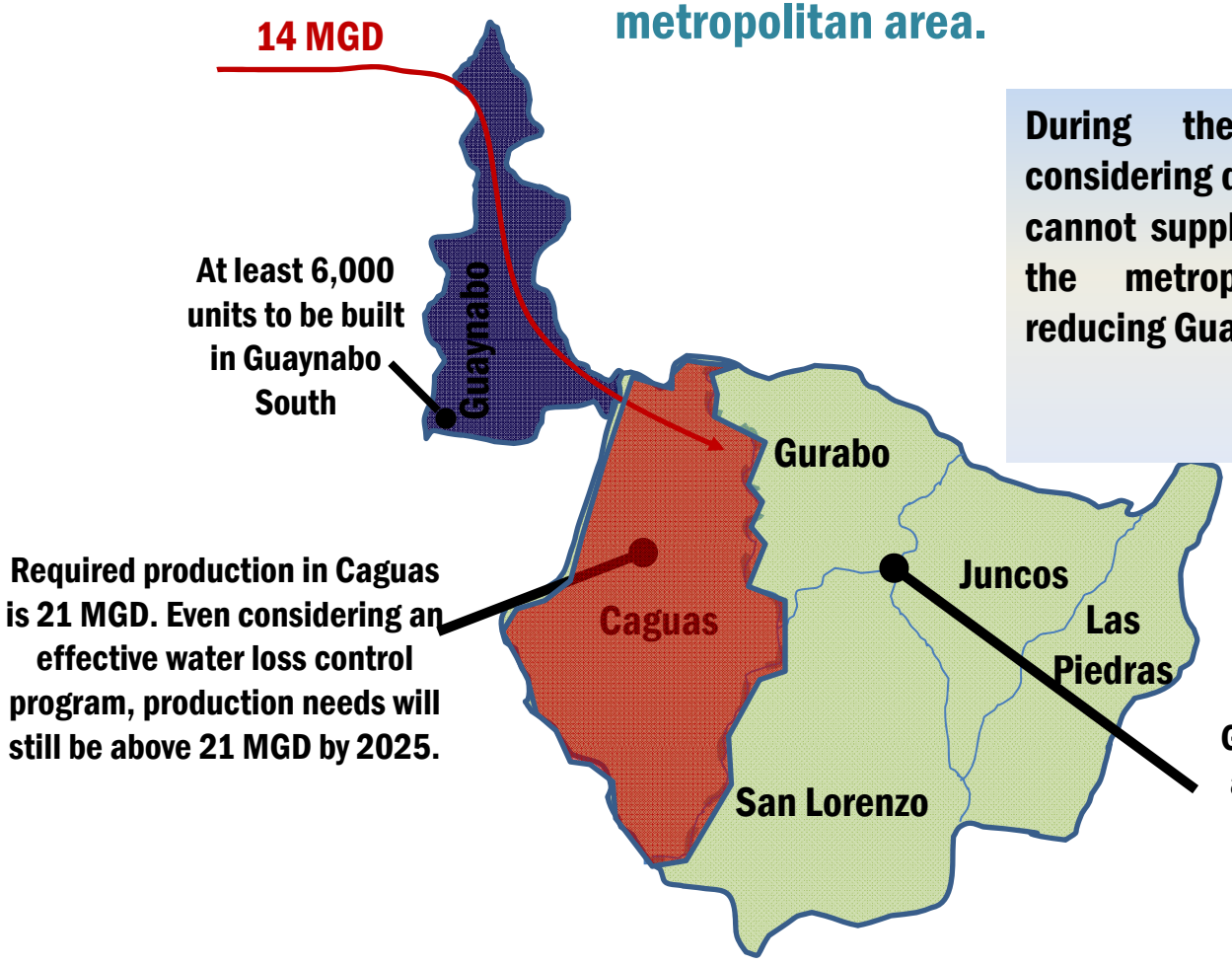
- **Municipios** - Guaynabo, Caguas, Gurabo y Juncos
- **Regiones** - Metro y Este
- **Inversión** - $99,000,000
- **Etapa** - Construcción

DESCRIPCION

Este proyecto se desarrolla para atender la necesidad de capacidad y satisfacer las demandas generadas como consecuencia del crecimiento poblacional, industrial y socio-económico de estos municipios. El mismo consiste en mejoras a tres estaciones de bomba, expansión de 2 MGD a la PF Gurabo, construcción de dos tanques de reserva de agua y la instalación de 32 Km de tubería de varios diámetros.

Actual Situation

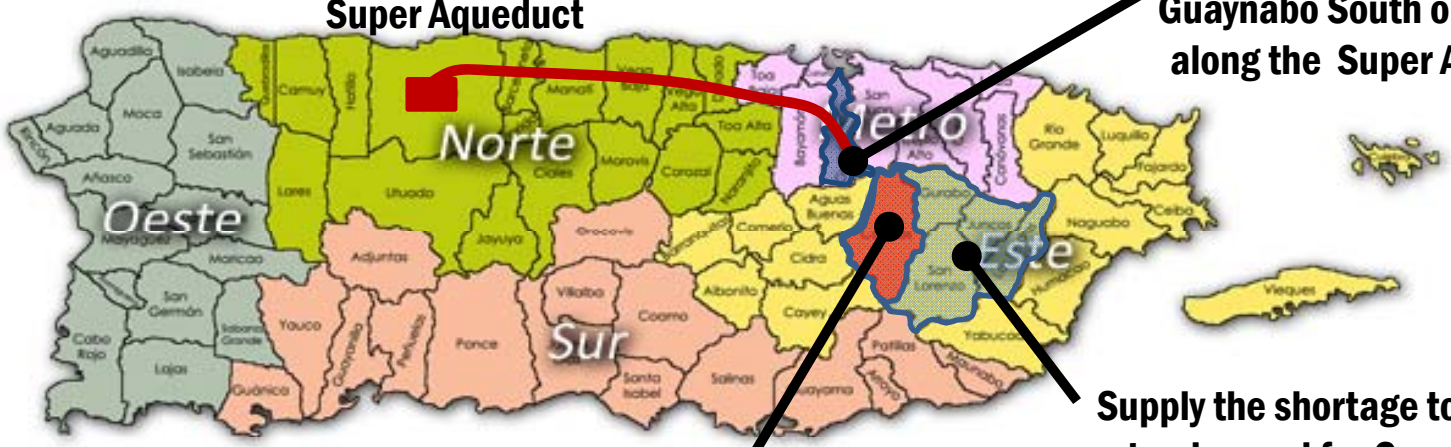
The actual water demand for the 5 towns of PRASA EAST region is above 45 MGD. To meet the demand in the region, it is required to divert about 14 MGD daily from the metropolitan area.



During the dry season (not considering drought periods), PRASA cannot supply the EAST region from the metropolitan area without reducing Guaynabo's water supply.

ECRA Initiative
East Central Regional Aqueduct

Aqua Pura is proposing the East Central Regional Aqueduct (ECRA) Initiative. ECRA initiative consists of completing the Beatriz and Valenciano projects. Both have been in PRASA's Capital Improvement Program for many years.



Super Aqueduct

14 MGD released for use in Guaynabo South or any other area along the Super Aqueduct route

Supply Caguas potable water demand with the Beatriz Project

Supply the shortage to meet potable water demand for Gurabo, Juncos, Las Piedras and San Lorenzo with the Valenciano Project

The Valenciano Reservoir

The Valenciano Project includes construction of an on-stream reservoir and a new water filtration plant with a capacity to filter 21MGD. It is expected that the project will be capable of supplying this amount of water 80% of the time while, for the rest of the time, it will produce 15 MGD.

The Valenciano Project as part PRASA-CIP

The Valenciano Project is part of PRASA's Capital Improvement Program. The design of the water filtration plant is complete. The final design of the dam depends on the materials investigation. The foundation mapping and materials investigation (first construction stage) was contracted for $4.2 MM and started but was stopped due to lack of funds. Construction of the water filtration plant was awarded but also stopped.

EMBALSE VALENCIANO Y PLANTA DE FILTRACION

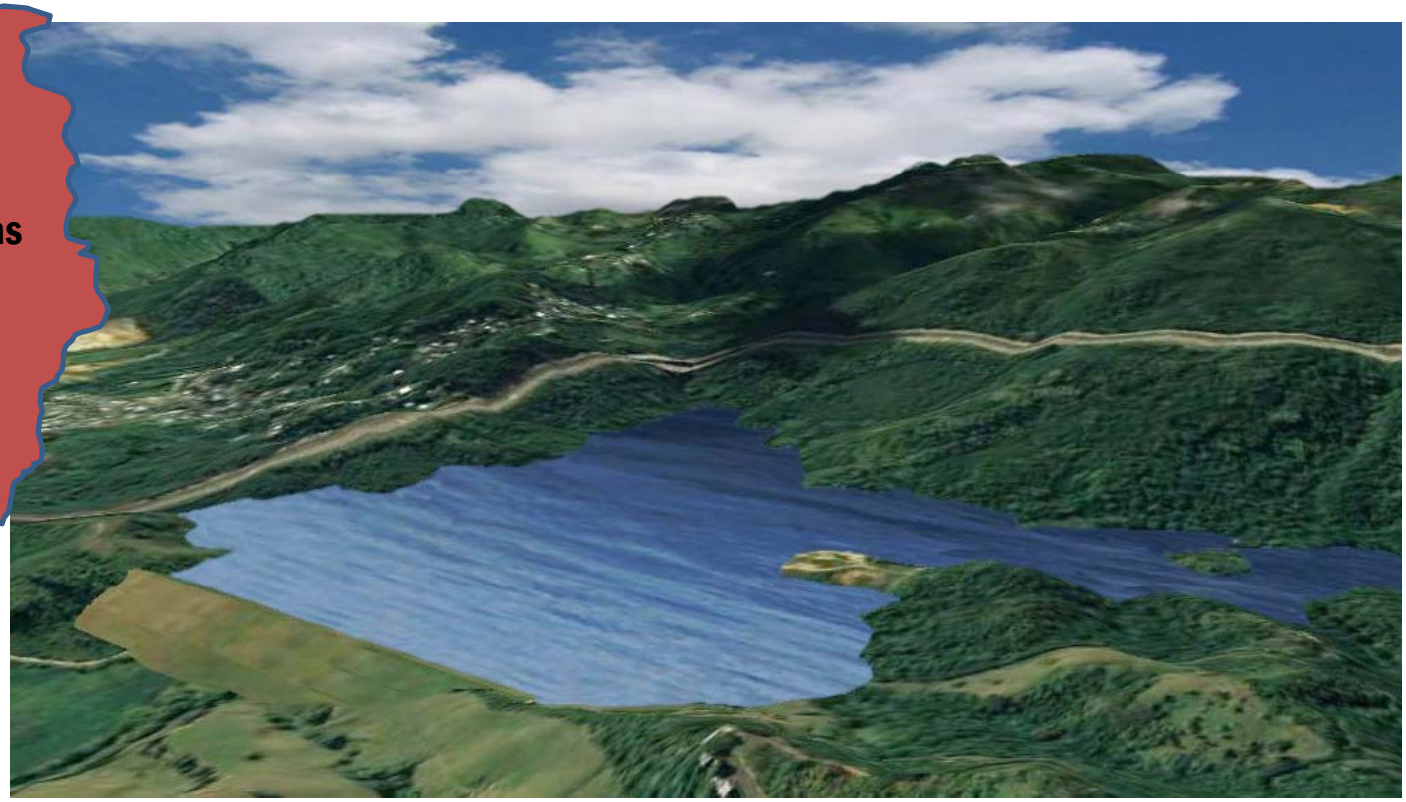
- **Etapa** - Diseño
- **Acceda Consulta de Ubicación**

DESCRIPCION

El proyecto representará una nueva fuente de abasto de agua para la Región Este al proveer un rendimiento de 18 MGD al sistema. El Embalse Valenciano mejorará la confiabilidad del sistema de agua potable y promoverá el desarrollo económico de la región. Este proyecto beneficiará a los municipios de Las Piedras, Juncos, Gurabo, San Lorenzo y Caguas.

The Beatriz Reservoir in Caguas

The Beatriz Project consists of the construction of an off-stream reservoir and a new water filtration plant with a capacity to filter 21MGD. It is expected that the project will be capable of supplying this amount of water 80% of the time while for the rest of the time it will produce 14 MGD.

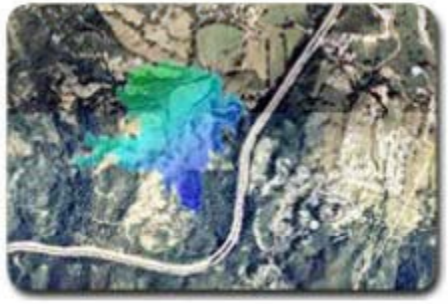


The Beatriz Project as Part of the PRASA-CIP

The Beatriz Project is part of PRASA's Capital Improvement Program. The design of the dam is at 30% design level. The JCA (Puerto Rico EQB) has recommended issuance of the final EIS with minor comments.

EMBALSE BEATRIZ Y NUEVA PLANTA DE FILTRACION

- **Municipio** - Caguas
- **Etapa** - Planificación



DESCRIPCION

El proyecto se convertirá en la principal fuente de abasto de agua para el Municipio de Caguas. El embalse tendrá un rendimiento seguro de 13.8 MGD mediante el influjo de una toma existente en la Quebrada Las Quebradillas y una nueva toma en el Río Turabo. Se contempla la construcción de una nueva Planta de Filtración y tanques de almacenamiento los cuales estarán localizados cercanos al embalse.

ECRA Fact Sheet

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APSWC proposes to complete the development of the ECRA which is composed of two reservoirs and water filtration plants that were deferred.

Salient bases

1. PRASA agrees to utilize the reservoir over a 50 year time frame with minimum throughput/usage requirements.

2. PRASA will be responsible for land acquisition at the Beatriz Reservoir, utilizing a specialist agent, and will be reimbursed by APSWC upon completion of permitting. (Valenciano land has already been acquired by PRASA.)

3. The Commonwealth will aid and facilitate permitting.

4. APSWC will develop, finance, operate, and maintain the project (both reservoirs and water filtration plants).

ECRA Immediate Economic Impact

Schedule		
	Beatriz	Valenciano
Construction Begins	July-Sept 2011	May-June 2011
Construction Ends	End 2014	2014-2015

Investment and Jobs	
Total Investment	Jobs
$ 600,000,000	6,000+

Detailed Job Creation (from each EIS)		
Job Type	Beatriz	Valenciano
Direct	1,590	1,200
Indirect	795	600
Induced	1,113	888
TOTAL	3,498	2,688

Summary

1. APSWC proposes the East-Central Regional Aqueduct Initiative, which will provide a solution to the need for water using environmentally-friendly solutions. In addition, 14 MGD will then be available for use in the north coast area, e.g., Guaynabo Sur, where more than 6,000 new units are waiting to be built.

2. APSWC will provide private financing for the project with local, US and international investors.

3. The ECRA will create over 6,000 jobs with the expected investment of $600,000,000.

4. The Commonwealth will appoint an intra-governmental group to facilitate permitting.

5. APSWC proposes to initiate the process with a detailed Letter of Intent with PRASA

Development and Management Team

Aqua Pura Sustainable Water Corporation Development Team

Alan R. Crumley, Managing Partner, GeoConsult: Civil and electrical consulting engineer in geotechnical engineering, specializing in foundation design, excavation and dewatering design, hydrogeology, dams and energy recovery systems, landfills and waste management. He has worked on the Rio Blanco Offstream Dam, the Fajardo Offstream Dam, the SuperAqueduct, numerous treatment plants throughout the island and the Tren Urbano, among other projects. Designer of the 75 MW Santa Isabel Wind Farm (2011-2012)

Pully A. Torres Ortiz, Partner & Senior Engineer, Torres-Rosa Consulting Engineers: Engineer Torres is co-founder of Torres-Rosa Consulting Engineers and has substantial experience in Design, Supervision and Project Management for a variety of heavy water-infrastructure projects including river intakes, pipelines, pump stations and reservoirs. He has worked on the design of both the Rio Blanco and the Fajardo Off-stream Reservoirs and has been the engineer of record during the construction of both reservoirs (2000-2010). Engineer Torres has also been in charge of the preparation of more than 40 hydrologic-hydraulic studies in Puerto Rico, including the Dos Bocas Reservoir and the SuperAqueduct.

Mario Corsino: Mario Corsino is the founder of Intergroup and an architect with 30 years of experience in a wide range of design including buildings, sports and recreational complexes, territorial, city and area planning, road and bridge engineering, urban design and green architecture. Some of his projects include the Guaynabo Medical Mall, Mayaguez Port & Commercial Development, the Breakwater at Isla de Cabras, and the Cataño Waterfront Master Plan. Architect Corsino has vast experience in Planning, and has been in charge of the preparation of the land use plans for several Municipalities in Puerto Rico.

VAB Advisors

Frank Vasquez, Senior Managing Director, VAB Advisors: Mr. Vasquez has more than 25 years of experience in Public and Corporate Finance. He has advised and assisted clients in executing bond and equity transactions, privatizations, and public private partnerships in excess of $20 billion. He has served as financial advisor to a wide range of successful initiatives including the Puerto Rico SuperAqueduct, the AES Puerto Rico coal fired power plant, Puerto Rico's only LNG terminal and Puerto Rico's only LNG power plant, and to the PREPA Net optical fiber initiative, etc. Mr. Vasquez is also the Senior Managing Director of VAB Financial, LLC a registered FINRA/SEC broker-dealer and the local partner of the Bank of Montreal Capital Markets.