



# PRNOW SUMMIT





INFRASTRUCTURE

# PRASA's Infrastructure and its Capital Improvement Program

Puerto Rico Growth Summit

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**PRNOW**  
S U M M I T

June 2022





# PRASA'S - CAPITAL IMPROVEMENT PROGRAM

- The **Authority** is responsible for identifying the system's present and future needs to perform all the necessary works to be carried out in the short, medium and long term.
- To this end, a **Capital Improvement Program (CIP)** was created to **manage and execute the construction projects** according to the priorities established by the Executive President and Board of Directors.



# CAPITAL IMPROVEMENT PROGRAM – BACKGROUND



- 2011-2014** • The investment in capital improvements between fiscal years 2011 to 2014 was more than \$1,300 M.
  - The economic model of the CIP relied primarily by **issuing bonds**.
- 2015** • PRASA halts the Capital Improvement Program and had to terminate the construction of 18 projects due to lack of funding.
  - PRASA was unable to access the bond market.
  - Puerto Rico suffered one of the most severe droughts in the last 60 years.
- 2016** • PRASA only had funds for emergencies, pipe repairs, and a few small projects.





# CAPITAL IMPROVEMENT PROGRAM – BACKGROUND



- 2017** • **Hurricane María** affected PRASA's infrastructure
- 2018** • PRASA spent most of the year temporarily repairing facilities affected by Hurricane María.
  - PRASA, COR3 and FEMA agreed on a work plan.
- 2019** • PRASA **restructured the debt** and **regained access to federal funds**
  - The **CIP** reactivation was announced.
- 2020** • **Earthquakes** affected facilities in the southern area of Puerto Rico.
  - PRASA, COR3, and FEMA inspected PRASA facilities to document all damages.
  - PRASA obtained access to the **bond market**



# CAPITAL IMPROVEMENT PROGRAM – BACKGROUND



## 2021

- January 2021- FEMA announced the approval of **\$3.7 Billion** under the **FEMA's Accelerated Award Strategy (FAASt)**.
- April 2021- PRASA submitted the initial **FAASt Workplan** to COR3 and FEMA, **based on the CIP projects**. The workplan is required to be updated every 90 days. PRASA's FAASt Workplan outlined:
  - Proposed infrastructure investments for the next ten (10) years.
  - For the 10% cost-share allocation, PRASA will seek funds from the HUD Community Development Block Grant (CDBG) program.
- PRASA contracted Four (4) Consulting firms to provide project management for the CIP projects (Planning, Design, Bid and Construction).
- October 2021 - PRASA received the **First FAASt's Project Approval** under **Cat F** (Morovis Sur RWI), along with other 3 projects including the A&E.



# CAPITAL IMPROVEMENT PROGRAM – BACKGROUND



**2022**

- PRASA received FEMA's approval for the FAASt Project - **Water Meters** project- **\$330M**.
- **PRASA completed** the construction of the **Buena Vista Tank (FEMA's first Cat F project completed in PR)**.
- PRASA received FEMA's approval for **15 FAASt projects- \$841M** (including the A&E).



# PRASA'S RECONSTRUCTION PROCESS

October 30, 2017 - After Hurricane María, the Government of Puerto Rico chose to participate under FEMA's alternative procedures to subsidize large projects for Categories C-G of the Public Assistance (PA) Program, in accordance with the provisions of Section 428 of the "Stafford Law" for Permanent Works.





# PRASA'S RECONSTRUCTION PROCESS

## TRADITIONAL PA VS SECTION 428

### PA Program:

- FEMA's PA Program focuses on restoring damaged infrastructure to pre-disaster conditions. The PA Program provides grant funding to return the damaged facility to pre-disaster function and capacity.

### Section 428:

- FEMA includes funding for restoring the infrastructure to:
  - Codes, specifications, and/or industry standards;
  - Any applicable consensus-based codes, specification, and/or standard that the Applicant identifies for the facility; and/or
  - Any approved industry standard as applicable under the **Bipartisan Budget Act (BBA)**.



# PRASA'S RECONSTRUCTION PROCESS

## BIPARTISAN BUDGET ACT (BBA)

- Section 20601 of the **Bipartisan Budget Act of 2018 (BBA)** authorizes FEMA to provide assistance, pursuant to Section 428 of the “Stafford Act” for **critical services** as defined in Section 406.
- **BBA** allows FEMA to provide assistance to restore facilities or disaster-damaged infrastructure, specifically identified for **critical services to industry standards without regard to the pre-disaster condition**.
- **Historical opportunity**, to make all the necessary improvements to bring PRASA's Infrastructure to industry standards.
  - Money available and obligated for projects of great magnitude and complexity to be executed for a period of 10 years.



# PRASA'S RECONSTRUCTION PROCESS

## RISK MITIGATION PROGRAM (FEMA-404)

- **What is the Hazard Mitigation Grant Program (HMGP)?**

- Grant program to help communities implement hazard mitigation measures following a Presidential Declaration of Major Disaster.
- Key purpose is to **enact mitigation measures to** reduce the risk of loss of life and property from future disasters.
- Puerto Rico has a total of **\$3,000 million**
  - **\$600 Million for the water sector (water/sewerage)**

- **Important Data**

- Funds are limited/competition.
- Requires application preparation.
- Unaffected facilities are eligible, but a 25% match is required
  - PRASA projects will be subsidized by CDBG funds.
- Projects with completed work are not eligible.



# PRASA'S HAZARD MITIGATION PROJECTS (FEMA-404)

## Enrique Ortega Emergency Generators

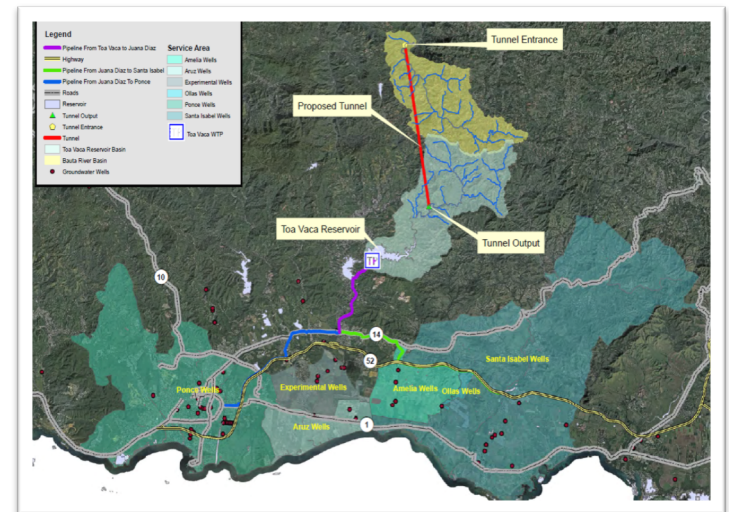
- ✓ To provide resiliency to the WTP.
  - ❑ Population served- 369,000.
  - ❑ Estimated Investment– **\$25 Million**
- ✓ Status - Phase I – Approved by FEMA:
  - ❑ Design
  - ❑ Geotechnical studies
  - ❑ Endorsements



# PRASA'S HAZARD MITIGATION PROJECTS (FEMA-404)

## Bauta Tunnel

- ✓ Transfer water from the Bauta River to the Toa Vaca reservoir through the construction of a Tunnel.
- ✓ Objective - Increase the safe yield of the Toa Vaca Reservoir from 16 MGD up to 29.9 MGD, assuring the supply of water for the south region of Puerto Rico.
  - ❑ Includes increasing capacity of Toa Vaca WTP.
  - ❑ Estimated Investment - **\$257 Million.**
  - ❑ Status –Phase 1 for Engineering and Design Approved





# PRASA'S HAZARD MITIGATION PROJECTS (FEMA-404)

## Salinas Water Treatment Plant (WTP)

- ✓ Purpose - Construction of a new WTP at Salinas with a capacity of 4 MGD.
- ✓ Will permanently substitute the water wells use.
- ✓ Water recharge to the South Aquifer System.
  - ❑ Estimated Investment– **\$32 Million**
  - ❑ Status- Phase 1 approved for Engineering and Design





# PRASA'S HAZARD MITIGATION PROJECTS (FEMA-404)

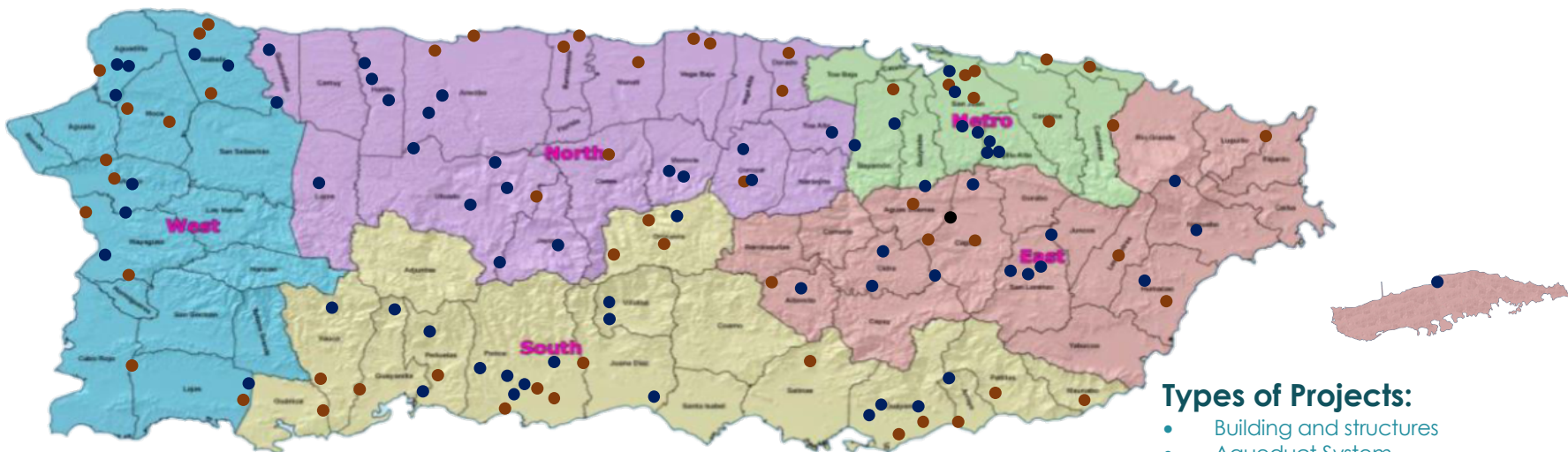
## Valenciano Reservoir – Improvement to the Central Region Reservior System as Water Treatment Plants (WTP)

- ✓ Construction of a reservoir of 13 Million M<sup>3</sup> capacity.
  - ❑ Includes increasing the Valenciano WTP capacity to 15 MGD.
  - ❑ Includes increasing the water distribution system.
- ✓ Improves and connects Las Piedras, Humacao, Juncos, Gurabo, San Lorenzo, and Caguas water systems, providing redundancy and an appropriate storage capacity.
  - ❑ Estimated Investment- **\$300 Million.**
  - ❑ Status- Under evaluation by COR3 and FEMA.





# CAPITAL IMPROVEMENT PROJECTS OVERVIEW



## Types of Projects:

- Building and structures
- Aqueduct System
- Water Treatment Plants
- Sewer Systems
- Wastewater Treatment Plants



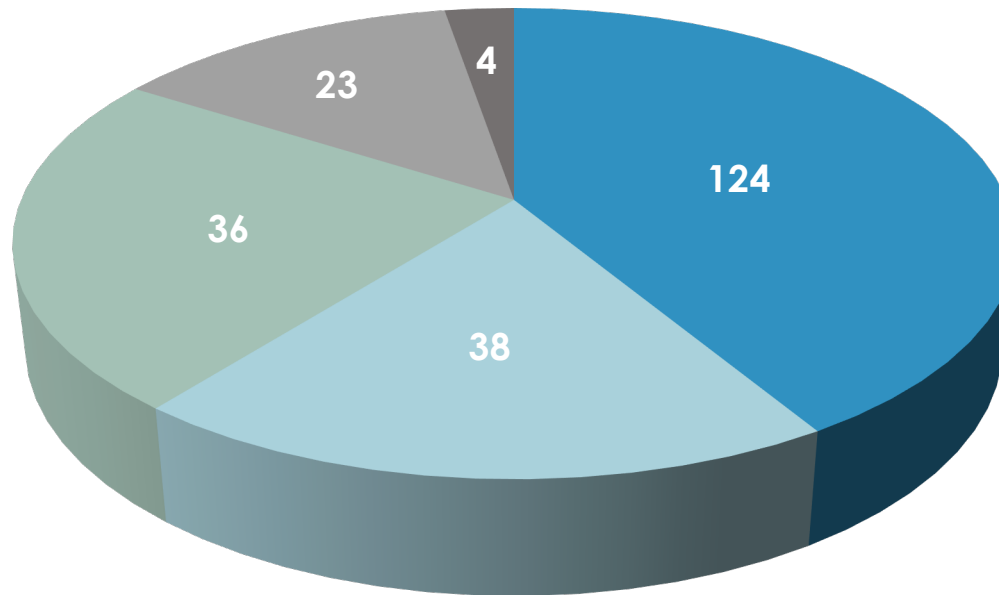
Total Program > 500 Projects > \$ 6,500 M  
Active Projects 225 Projects > \$ 2,852 M







# TOTAL CAPITAL IMPROVEMENT PROJECTS BY PHASES



**225**  
Projects



S U M M I T

■ Planning

■ Design

■ Bid

■ Construction

■ Completed



As of May 2022



# CAPITAL IMPROVEMENT PROJECTS

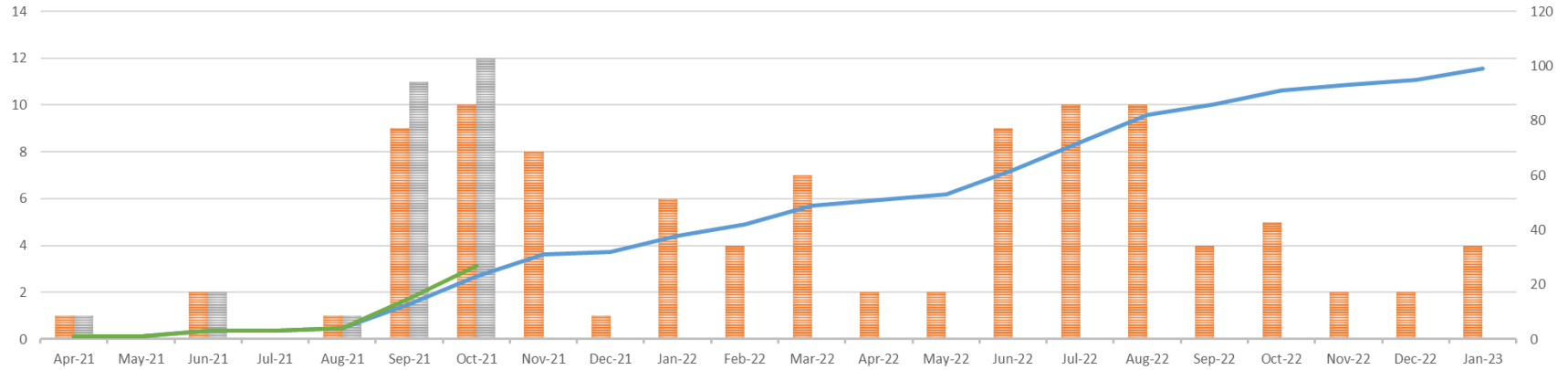
## NUMBER OF ACTIVE PROJECTS AND INVESTMENT COSTS

Project Stage	Number of projects and inversion costs		
Planning	124	\$1,628M	56%
Design	38	\$535M	19%
Bid	36	\$513	18%
Construction	23	\$214.0	7%
<b>Total</b>	<b>225*</b>	<b>\$2,890</b>	

Fund	Number of projects and inversion costs		
AAA	38	\$220	8 %
CWSRF	20	\$375.0	13%
DWSFR	14	\$146.0	5%
FEMA	140	\$1,995.0	69%
ARPA	11	\$137	4%
Enlance	2	\$17	1%
<b>Total</b>	<b>225*</b>	<b>\$2890</b>	



# CIP BID ANNOUNCEMENT 2022



	Apr-21	May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Nov-21	Dec-21	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23
R-Base	1	0	2	0	1	9	10	8	1	6	4	7	2	2	9	10	10	4	5	2	2	4
Actual	1	0	2	0	1	11	12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cummulative R-Base	1	1	3	3	4	13	23	31	32	38	42	49	51	53	62	72	82	86	91	93	95	99
Cummulative Actual	1	1	3	3	4	15	27															

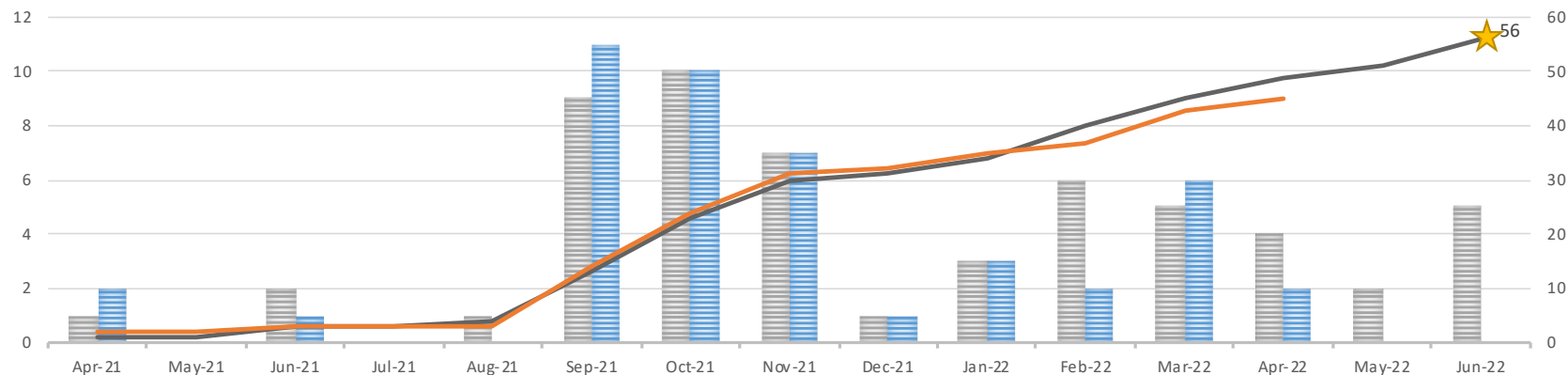
95 Bid Announcements scheduled up to December 22





# OVERALL PMC – ALL PRASA'S REGIONS

## PERFORMANCE METRIC – BID ANNOUNCEMENTS UP TO JUNE 22



	Apr-21	May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Nov-21	Dec-21	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22
R-Base	1	0	2	0	1	9	10	7	1	3	6	5	4	2	5
Actual	2	0	1	0	0	11	10	7	1	3	2	6	2	0	0
Cummulative R-Base	1	1	3	3	4	13	23	30	31	34	40	45	49	51	56
Cummulative Actual	2	2	3	3	3	14	24	31	32	35	37	43	45	51	56



# PRASA'S INFRASTRUCTURE RECONSTRUCTION

## CHALLENGES AND OPPORTUNITIES



### Resources

- Available market for competent professional individuals to meet CIP demand in a highly competitive environment.
- Available opportunities for Contractors with technical and financial capacity for large projects.
- Available market for design firms (complying with CIAPR).



### Execution

- Streamline interagency coordination to facilitate permitting processes.
- Balance escalating costs against budget constraints.
- Implement strategies to recover lost trust with the Contractors' community.
- Recognize markets' supply chain limitations and incorporate them into CIP schedules.
- Prioritize CIP's urgent needs within a pandemic environment.
- Effectively integrate CIP execution with PRASA Operations.



### Goals

- Achieve program cashflow expenditures goals.
- Optimize CIP bidding and project closeout durations.
- Achieve management efficiency for small construction projects.
- Uphold a robust safety culture across all CIP participants and communities.