



AUTORIDAD DE ACUEDUCTOS
Y ALCANTARILLADOS

AAA

GOBIERNO DE PUERTO RICO

FAASt WORKPLAN

Puerto Rico Aqueduct and Sewer Authority (PRASA)

Post-Fixed Cost Estimate Obligation Workplan

FEMA-4339-DR-PR

FEMA Accelerated Award Strategy (FAASt)

DISCLOSURE

The Puerto Rico Aqueduct and Sewer Authority (PRASA), as part of this Post-Fixed Cost Estimate Obligation Workplan under the FEMA Disaster Number 4339-DR, includes an infrastructure investment strategy for the selection of projects under the PRASA's sixteen asset categories. The estimated amount assigned to each category and/or project is exclusively for PRASA's budget purposes. The cost estimate included in each category and/or project necessarily does not represent the final cost of the project.



NOMENCLATURE

AMWA	Association of Metropolitan Water Agencies
ASTM	American Society of Testing and Materials
AWIA	America's Water Infrastructure Act of 2018
AWWA	American Water Works Association
AAA	Puerto Rico Aqueduct and Sewer Authority
B	PRASA Building (s)
BBA	2018 Bipartisan Budget Act
CIP	Capital Improvement Program
COR3	Central Office of Recovery, Reconstruction, and Resiliency
CWA	Clean Water Act
CDBG-DR	Community Development Block Grant Disaster Recovery
D	Dam (s)
DOH	Department of Health
D & T -WL	Distribution and Transmission Water Line (s)
EQB	Environmental Quality Board
FAASt	FEMA Accelerated Award Strategy
FEMA	Federal Emergency Management Agency
FY	Fiscal Year (PR Fiscal Year from July to June)
GIS	Geographical Information System
Government	Government of Puerto Rico
Governor	Governor of Puerto Rico
HUD	Department of Housing and Urban Development
ICC	International Building Code
KPIs	Key Performance Indicators
kWh	Kilowatt-Hours
MGD	Million Gallons per Day
NFPA	National Fire Protection Association
NPS	National Primary Standards
NSF	National Standards Foundation



OMB	Puerto Rico Office of Management and Budget
O&M	Operations and Maintenance
OO	Ocean Outfalls
PPTD	Projects Pending to be Determined
PR	Puerto Rico
PRASA	Puerto Rico Aqueduct and Sewer Authority
PRDH	Puerto Rico Department of Health
PREPA	Puerto Rico Electric Power Authority
PRIFA	Puerto Rico Infrastructure Finance Authority
PROMESA	Puerto Rico Oversight, Management, and Economic Stability Act
PSI	Pounds per Square Inch
PWSID	Potable Water System Identification
Regions	Operational Regions
R	Reservoirs
RD	Reservoirs Dredging
RFQ	Request for Qualification
RFP	Request for Proposal
RWI	Raw Water Intake
RWW	Raw Water Well (s)
SDWA	Safe Drinking Water Act
System	Authority's Public Water Supply and Wastewater System
SOP	Standard Operating Procedure
SOW	Scope of Work
STS	Sludge Treatment System
T	PRASA Telemetry System
TSL	Trunk Sewer Line (s)
US	United States of America
USDA	United States Department of Agriculture
USEPA	United States Environmental Protection Agency
WM	Water Meter (s)



WST	Water Storage Tank (s)
WTP	Water Treatment Plant (s)
WPS	Water Pump Station (s)
WWTP	Wastewater Treatment Plant (s)
WWPS	Wastewater Pump Station (s)

SYMBOLS

\$	Dollar
%	Percent
Q	Quarter



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Chapter 1 Executive Summary

The 2017 hurricane season caused unparalleled devastation in Puerto Rico. During September of that year, Puerto Rico experienced a Category five (5) and Category four (4) hurricane (Irma and María, respectively). Hurricane María was the most devastating natural disaster to hit the island since Hurricane San Felipe made landfall nine decades ago in 1928. Since that time, the population has expanded, from 1.5 million residents to a current population of 3.4 million.

Category five (5) Hurricane Irma, one of the strongest recorded storms in the Atlantic, affected Puerto Rico on September 6, 2017. Due to its passing through the northern part of the island, the Puerto Rico Aqueduct and Sewer Authority (PRASA) suffered damages to water treatment facilities and other structures. Over one million customers lost electric power, and over one-third of PRASA's customers lost drinking water service.

Just a few days later, on September 20, Puerto Rico felt the ruthless force of Category four (4) Hurricane Maria, the most massive disaster that the Island has endured, impacting all PRASA's infrastructure severely across the island. The flooding and loss of the electrical power system resulted in a shutdown on most of the island's water supply and wastewater treatment plants and pumping stations. Sewage water contaminated the streets, rivers, and sea, posing an immediate threat to the environment, public health, and safety. PRASA acted diligently to promptly restore the water and wastewater service using both internal and external resources.

For projects necessary to build back PRASA's System to pre-hurricane conditions and improve resiliency to potential future events, on January 5, 2021, the Federal Emergency Management Agency (FEMA) announced the obligated grant for PRASA for **\$4.2 Billion**. FEMA reserved the obligated funds to repair, improve or replace PRASA's infrastructure as per FEMA's Public Assistance Alternative Procedures, according to Section 428 of the Robert T. Stafford Disaster Relief and Emergency Assistance Act and in compliance with the US Congress 2018 Bipartisan Budget Act (BBA). PRASA requires to provide safe water and wastewater service and supply to the 1.2 million active clients through the following infrastructure:



- Fifty-one (51) Wastewater Treatment Plants (WWTP)
- One hundred and fourteen (114) Water Treatment Plants (WTP)
- PRASA buildings
- Eight (8) Dams
- Around three thousand eight hundred (3,800) ancillary facilities (1,560 Tanks; 1,977 Pump Stations; 249 Water Wells)
- Over 20,000 miles of potable water and wastewater collection pipes

As a requirement associated with this funding obligation, FEMA and the Central Office of Recovery, Reconstruction, and Resiliency (COR3) required PRASA to submit a work plan, called PRASA's FAASt Workplan, within 90 days of the funding obligation date. This plan would outline PRASA's proposed investments in Puerto Rico's water systems over the next ten years. Also, PRASA is required to update and resubmit this work plan to COR3 and FEMA every 90 days after the initial submission.

This FAASt Workplan provides an overview of PRASA's infrastructure investment strategy; the context for the selection of projects included in the plan; a prioritized list of these proposed infrastructure projects; the expected benefits, projected costs, key project milestones, the estimated time horizon for each project; and a brief overview of PRASA's approach to managing the execution of this program and the group of projects described herein.

This document addresses COR3 and FEMA's requirement to plan a list of projects for the obligated funds. Projects in this plan will include funding from the FEMA Accelerated Award Strategy (FAASt) and 404 hazard mitigation programs and HUD Community Development Block Grant Disaster Recovery (CDBG-DR) program.



1.1 The Investment Strategy Overview

Several investment focus areas based on work previously completed by PRASA and developed by PRASA's team and other stakeholders such as FEMA and COR3 guided PRASA's investment strategy for this FAASt Workplan.

PRASA leveraged the information in each area and performed an additional evaluation to guide the project's selection in this FAASt Workplan.

PRASA selected these five (5) focus areas to define the intent of the projects in this plan. Table 1-1 summarized the five (5) investment focus areas and a brief description of each one.

Table 1-1: List of Investment Focus Areas

Focus Areas	Brief Description
Public Health & Environmental Protection	Ensure to provide a safe and reliable supply of drinking water and treatment of wastewater, complying with federal environmental regulations to safeguard the population's health and the island's environment while guaranteeing an affordable service for all customers.
Codes and Industry Standards	Rehabilitate, improve, or restore the water system following Codes and Industry Standards, including the applicable PRASA design standards, contained in the <i>Reglamento de Normas de Diseño de la AAA</i> .
Reliability and System Resiliency	Ensure the required investment in necessary technology and infrastructure to restore the system, enhance resiliency, and establish an efficient and safe water system that provides customer reliability.
Hazard Mitigation	Ensure to provide long-term solutions that reduce the PRASA's infrastructure impact of future events and minimize disaster losses and system vulnerability.
Modernization and Maintenance	Modernize and maintain PRASA's infrastructure to optimize its operational efficiency, protect public health, safeguard the environment, and promote continued economic development.



1.2 Asset Categories and Prioritization Approach

To develop this plan, PRASA's team examined more than 1,400 possible projects. Focused on the five (5) investment focus areas mentioned above to set the safe, reliable, and efficient water and wastewater treatment services, PRASA list of projects has been updated as follows:

- Initial FAASSt Workplan submittal list, 136 projects.
- Second revision, list updated to 141 projects.
- Third revision, list of projects updated to 180.
- Fourth revision, list of projects increased to 196.
- Fifth and Six revisions, projects updated to 197.
- Seventh revision and Eighth revision, list of projects updated to 253.
- Ninth revision, list of projects updated to 265.
- Tenth revision, list of projects updated to 269.
- Eleven revision, list of projects reorganized to 192.
- Twelfth revision, list of projects updated to 251.
- Thirteenth revision, list of projects updated to 245.
- Fourteenth revision, list of projects corresponds to 245.
- Fifteenth Revision, list of projects updated to 240.
- Sixteenth Revision, list of projects remains in 240.
- Seventeenth Revision, list of projects remains 240.
- Eighteenth Revision list of projects updated to 242

The 242 projects in the plan are still organized into sixteen distinct asset categories, including the projects under 404 and 406 hazard mitigation and HUD Community Development Block Grant Disaster Recovery (CDBG-DR) programs. **The infrastructure projects cost in Puerto Rico has increased significantly. This situation is what PRASA is experiencing with the development of the FAASSt projects. The material price hikes, contractors, and skilled labor shortages due to the reconstruction needs throughout the island and increased lead times will result in a continuous increase of construction costs and more extended periods to complete FAASSt projects. The impact of increased construction costs will result in a reduced number of projects PRASA will be able to execute and may impede the proper reconstruction of the infrastructure required to continue providing an essential service to the people of Puerto**



Rico, as it is a safe drinking water service and proper treatment of the wastewater across the island.

Table 1-2 summarized the asset categories list.

Table 1-2: Asset Categories List

Asset Category	Brief Description
Water Treatment Plants (WTP)	114 WTP Islandwide, including the Raw Water Intakes (RWI). One (1) WTP was closed after Hurricane María.
Wastewater Treatment Plants (WWTP)	51 WWTP Islandwide
Wastewater Pump Stations (WWPS)	799 WWPS Islandwide
Water Pump Stations (WPS)	468 WPS Islandwide
Water Storage Tanks & Water Pump Stations (WST & WPS)	808 WPS Islandwide
Water Storage Tanks (WST)	997 WST Islandwide
Ocean Outfalls (OO)	12 Ocean Outfalls Island wide
Dams (D)	8 Dams Islandwide operated by PRASA
Reservoirs (R)	8 Reservoir Islandwide
Raw Water Wells (RWW)	269 Raw Water Wells Islandwide
Buildings (B)	91 PRASA Buildings Islandwide
Distribution and Transmission Water Lines (D & T -WL)	Estimated amount of 15,148 Miles of Water Lines Islandwide in diameters ranging from 1” to 84” and in a wide variety of materials.
Water Meters (WM)	872,596 each of Water Meters Islandwide part of the Distribution and Transmission Water Lines System.



Asset Category	Brief Description
Trunk Sewer Lines Islandwide (TSL)	Estimated amount of 5,994 Miles of Sewer Pipes Islandwide in diameters ranging from 4" to 90" and a wide variety of materials.
Telemetry (T)	Telemetry System along with PRASA Islandwide facilities: WTP, WWTP, WWPS, WPS, and Wells. Telemetry topic included in individual projects.
Projects Pending to be Determine (PPTD)	PRASA will evaluate other projects covered under the FAASSt funding obligation. PRASA will use this classification to integrate projects to be defined and/or cover contingencies of already approved projects and to cover the amount for projects type work completed.

PRASA's team identified the projects for inclusion in the FAASSt Workplan, prioritized the projects, and developed the estimated sequencing for FEMA submission, approval, and subsequent execution. Each project in the FAASSt Workplan includes a brief project description and cost estimate. PRASA's team also listed each project into one of the three-time horizons: near-term (i.e., 2021-2023), mid-term (i.e., 2024-2027), and long-term (i.e., 2028 and beyond). Four (4) major standard milestones were defined and standardized across all projects in the FAASSt Workplan. PRASA's team estimated the timing for each major milestone for each project.

The four (4) standardized major milestones are:

- Project expected to commence 30% architecture and engineering work.
- Project expected submission to COR3 and FEMA for review and approval.
- Project expected to commence construction/implementation.
- Project expected to commence FEMA and COR3 closeout activities.



PRASA assigned projects to a time horizon based on when the project's first major milestone starts. The prioritization methodology used the following criteria:

- Currently out of service or inoperative infrastructure
- Safety, environmental, and water quality standards requirements
- System operation needs and constraints
- Impacts to reliability performance, such as extreme droughts
- Severe storm hazard mitigation



1.3 Plan Overview

PRASA's FAASt Workplan includes approximately **\$4.2 Billion** in investment needed to rehabilitate and improve Puerto Rico's water and wastewater system, most of which qualifies for FEMA funding under its 428 and 404 hazard mitigation programs. The 404 current approved projects until this revision are the following:

- Project # 4339-0046- South Region Water Supply System Improvement (Bauta Tunnel)- Phase 1, Approved Amount \$ 26,416,007.71. Total Estimated Cost of the Project is \$245,406,750.22.
- Project # 4339-0019- Enrique Ortega Water Treatment Plant Raw Water Intake Power Generators Phase 1, Approved Amount \$661,523.70. Total Estimated Cost of the Project is \$ 28,645,725.14.
- Project # 4339-0020- Salinas Water Supply System Project Phase 1, Approved Amount \$2,740,874.20. Total Estimated Cost of the Project is \$ 44,138,250.01.
- Project -Valenciano Distribution System- Total Estimated Cost is \$414,550.525.79.

Also, PRASA will submit proposals for 406 funding with its applicable 428 proposals. FEMA's 406 programs are designed to provide funding to rebuild infrastructure exceeding industry standards to prevent damage from future disaster events, referred to as the "hardening" of assets. In alignment with COR3 and FEMA's process, PRASA will submit proposals for 406 funding with each of its applicable 428 project submittals. Currently, PRASA already received approval under the 406 funds for eight (10) projects under the workplan for a total amount of \$616,952,075.92



Table 1-3 summarized the plan by asset categories and funding source, deducting the amount of \$133.7 Million corresponding to insurances, as described in the approved FAASSt Project Number 144184, MAAA200 PRASA Islandwide.

Table 1-3: Plan Summary by Asset Categories and Funding Source List

Asset Category	FEMA 428(\$M)	FEMA 404 (\$M)	FEMA 406(\$M)	Estimated Total Cost
WTP	\$1,802.06	\$400.75	\$710.40	\$2,913.22
WWTP	\$919.01	\$0.00	\$1,580.72	\$2,499.72
WWPS	\$58.16	\$0.00	\$6.06	\$64.22
WPS	\$42.40	\$0.00	\$111.49	\$153.89
WST & WPS	\$8.37	\$0.00	\$0.00	\$8.37
WST	\$24.61	\$0.00	\$0.00	\$24.61
RWW	\$25.09	\$0.00	\$0.00	\$25.09
B	\$110.09	\$0.00	\$17.97	\$128.06
OO	\$100.00	\$0.00	\$85.00	\$185.00
D	\$7.18	\$0.00	\$4.03	\$11.21
R	\$130.35	\$162.00	\$97.62	\$389.97
D&T-WL	\$244.09	\$154.70	\$105.97	\$504.75
WM	\$217.17	\$0.00	\$578.04	\$795.21
TSL	\$356.78	\$0.00	\$17.10	\$373.88
T*	\$10.30	\$48.00	\$0.00	\$58.30
PPTD**	\$14.05	\$0.00	\$0.00	\$14.05
Sub-Total	\$4,069.70	\$765.45	\$3,314.41	\$8,149.55
Estimated amount to be submitted through 406 to be deducted from 428 (Natural Year 2024)				
Total	\$4,069.70	\$765.45	\$3,314.41	\$8,149.55

* 404 and 406 Funds- Approved and proposed

** Amount dedicated to obligated projects under work completed category

It is important to note that all cost estimates in this document are “class 5” estimates. A class 5 cost estimate is defined as an estimate with an accuracy range from 50% below to 100% above the actual final project cost and is prepared at an early stage in the project development



process. Leading industry practice is to revise estimates to become more accurate as engineering design progresses and project requirements are solidified.

In addition to the funding sources discussed above, PRASA will seek to leverage funds from Community Development Block Grant Disaster Recovery (CDBG-DR) for the 10% cost-share allocation.

Forecasted spend projections for each project are scoped to include all project activities from the point at which the project commences initial architectural and engineering work through the completion of project closeout activities. Several projects within the FAASt Workplan extend throughout the entire 10-year period.

Figure 1-1 and Figure 1-2, illustrates the projected cash flow for the next ten years and the cost-share allocation needs by the Fiscal Year (FY), which starts in July of each year and ends in June of the next year.

Figure 1-1: Projected Cash Flow and Cost-Share Allocation Needs by FY (\$ Million)

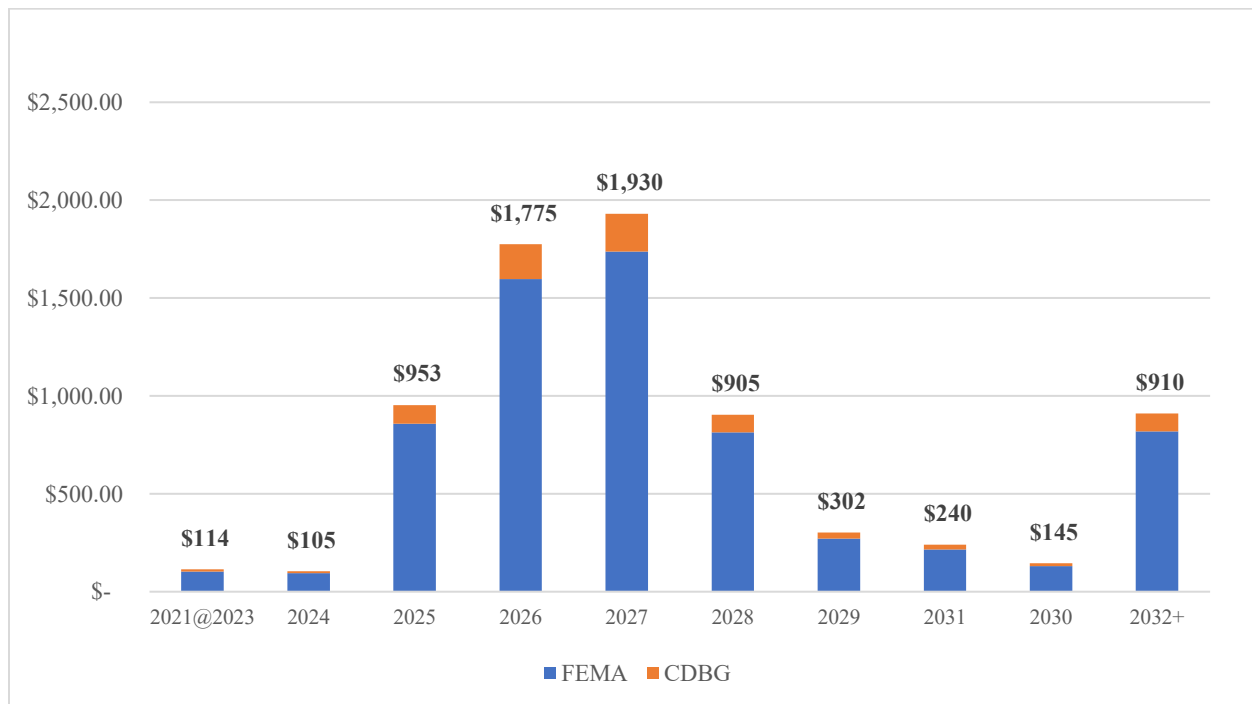
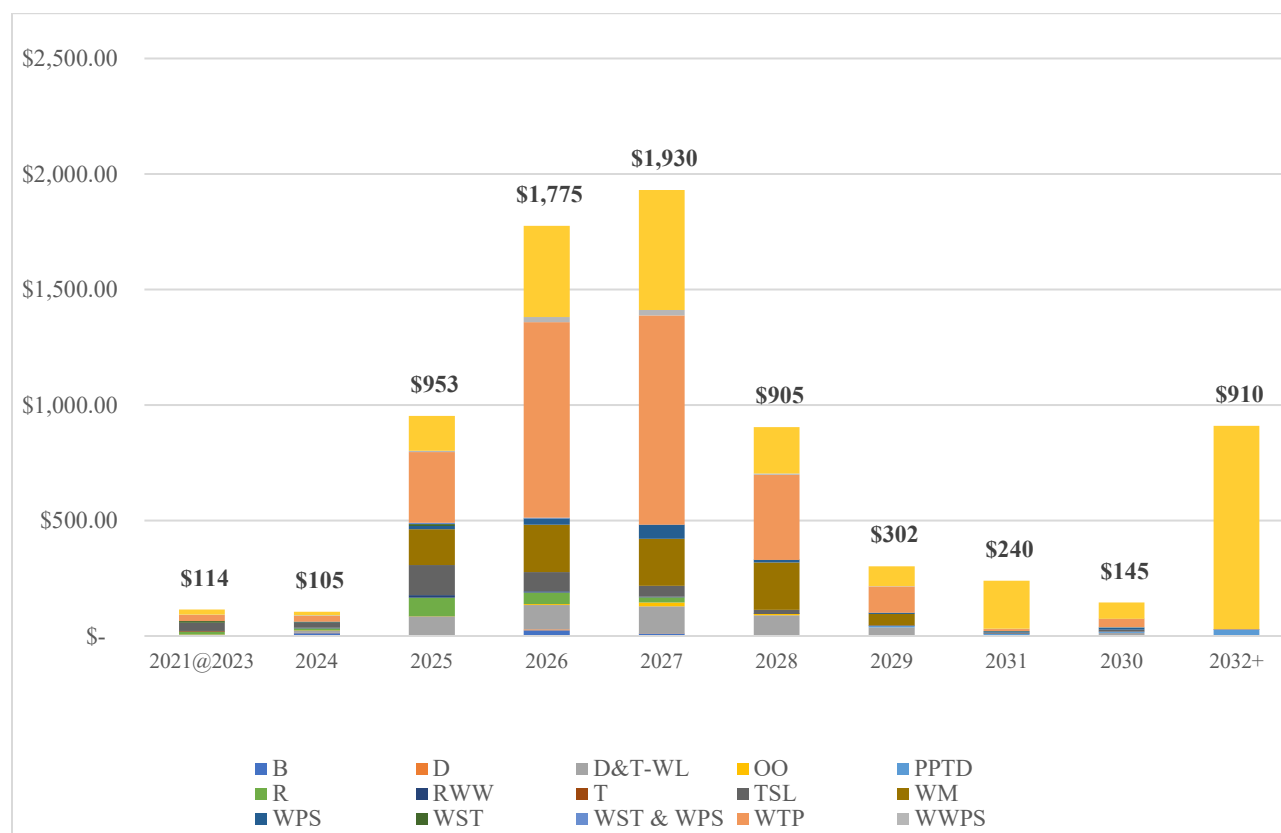


Figure 1-2: Projected Cash Flow by Asset Category by Fiscal Year (\$ Million)



As discussed above, 242 projects were identified in this revision, prioritized, and included in the FAASt Workplan - Seventeenth Revision -July 2025. Table 1-4 illustrates the distribution of these projects by asset category and when the projects are planned to begin the architectural and engineering (A & E) design phase on the horizon.

Table 1-4: Number of Projects to Start A & E Design Phase by Asset Category in the Time Horizon (Natural Years and Cumulative Total)

Asset Category	Near- Term (2021-2023) Projects/\$ (M)		Mid – Term (2024-2027) Projects/\$ (M)		Long – Term (2028-2030) Projects/\$ (M)		Total Projects/\$ (M)	
WTP	53	\$1,696.41	34	\$105.49	2	\$0.16	89	\$1,802.06
WWTP	17	\$822.43	18	\$83.81	6	\$12.77	41	\$919.01
WWPS	7	\$58.16	1	\$0.00	4	\$0.00	12	\$58.16
WPS	7	\$42.40	3	\$0.00	4	\$0.00	14	\$42.40
WST & WPS	1	\$8.37	0	\$0.00	1	\$0.00	2	\$8.37
WST	5	\$24.61	0	\$0.00	2	\$0.00	7	\$24.61
RWW	5	\$25.09	0	\$0.00	0	\$0.00	5	\$25.09
B	4	\$47.35	4	\$62.74	0	\$0.00	8	\$110.09
OO	1	\$100.00	0	\$0.00	0	\$0.00	1	\$100.00
D	1	\$7.18	1	\$0.00	0	\$0.00	2	\$7.18
R	3	\$130.35	3	\$0.00	0	\$0.00	6	\$130.35
D&T-WL	27	\$244.09	2	\$0.00	3	\$0.00	32	\$244.09
WM	1	\$4.12	2	\$213.05	0	\$0.00	3	\$217.17
TSL	14	\$356.78	0	\$0.00	3	\$0.00	17	\$356.78
T	0	\$0.00	2	\$10.30	0	\$0.00	2	\$10.30
PPTD	0	\$0.00	0	\$0.00	1	\$14.05	1	\$14.05
Total	146	\$3,567.32	70	\$475.39	26	\$26.98	242*	\$4,069.70**

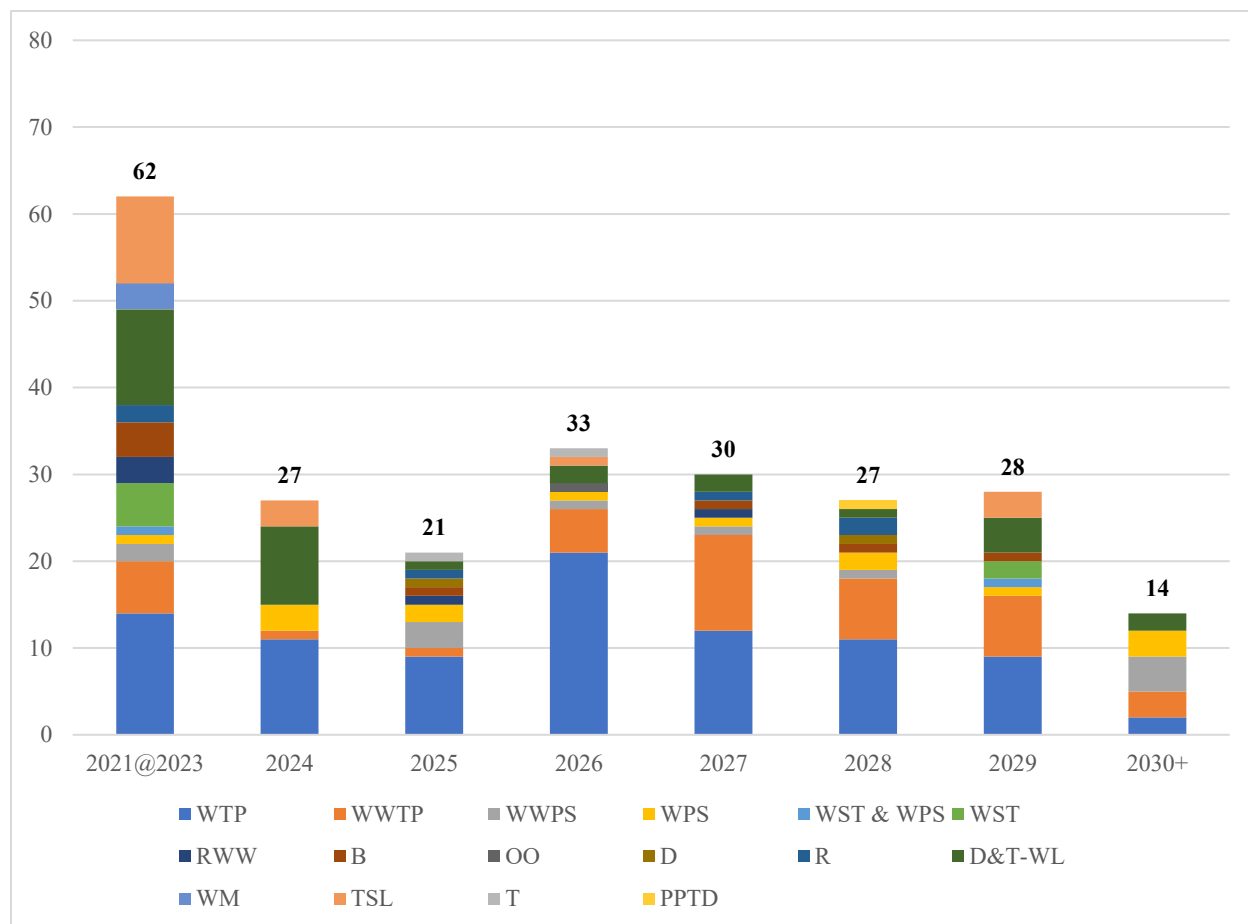
*Total of Projects, includes 404 and 406 projects.

** Total Amount, does not include 404 and 406 assigned and/or requested funds.



Figure 1-3 provides the estimated timeframe for project submission to FEMA for review and approval. The number of projects will likely change over time as PRASA collaborates with FEMA and COR3 to evaluate each project and optimize its project submission and evaluation strategy.

Figure 1-3: FEMA SOW Estimated Initial Submittal Timeline (Natural Years)



The following sections provide additional information about each of the priority categories, near-term, mid-term, and long term.



1.4 Near-Term Projects Profile (2021-2023)

There are 146 projects in the near-term priority category. These projects have already begun 30% architectural and engineering (A & E) design in 2021, 2022, and 2023 (natural years).

The cumulative investment on the projects started within the near term is **\$3.6 Billion**. Figure 1-4 illustrates the breakdown of cumulative investment by asset category for projects that begun during this period.

Figure 1-4: Total Estimated Cost by Asset Category for Near-Term Projects(\$M)

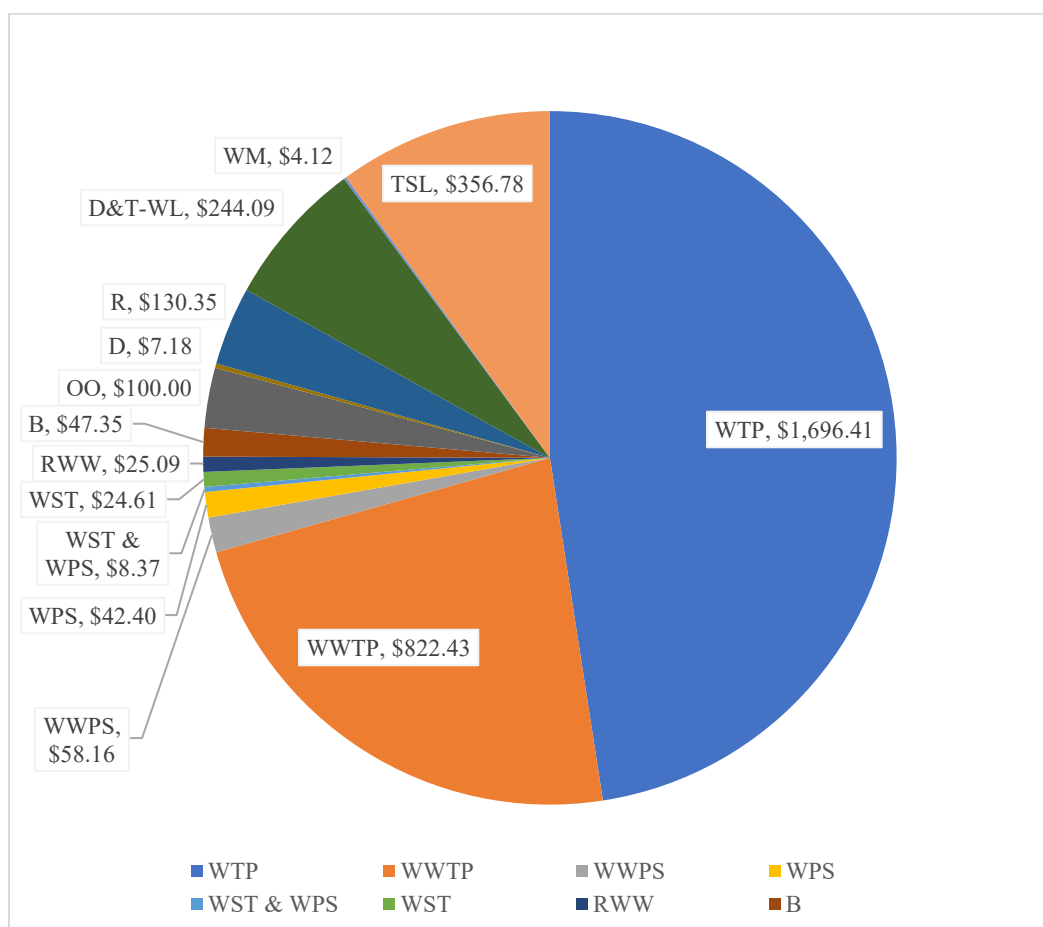


Table 1-5 provides a representative sample of notable projects slated to start during this period.

A high proportion of the FAASt Workplan projects have been sequenced in the near-term time horizon for several reasons:

- It is PRASA's objective to deliver results as quickly as possible.
- Some projects already have completed preliminary engineering and are ready to proceed into the 30% design phase.
- Some projects have a complex design, and the availability of designers with the necessary expertise is limited in Puerto Rico and these must be started in the near-term and completed within the later years of the plan.
- In many cases, environmental remediation, rights-of-way, permits, and approvals must be carried out before the actual project begins.

Table 1-5: Near-Term (2021-2023) Notable Projects

Asset Category	Project #	Description	A&E Start Quarter	SOW Submittal Quarter	Total Cost Estimate
WTP	CIP.2017005	Rehabilitation of Culebrinas WTP	2021-Q1	2021-Q1	\$110.10
WTP	CIP.2096007	Rehabilitation of Enrique Ortega WTP	2021-Q1	2021-Q1	\$159.24
WTP	CIP.2479001	Rehabilitation of Morovis Sur RWI	2021-Q1	2021-Q1	\$3.31
WWTP	CIP.3305001	Improvements to Guayama WWTP	2021-Q1	2021-Q1	\$97.84
B	CIP.3130001	PRASA Central Laboratory in Caguas P.R.	2021-Q1	2021-Q1	\$36.14
R	CIP.1019000	Carraizo Reservoir Dredging, Trujillo Alto	2021-Q1	2021-Q2	\$111.44
R	CIP.5376001	Repair of Geosynthetic Membranes in Lago Regulador in Isabela P.R.	2021-Q2	2021-Q2	\$25.82
WWPS	CIP.3445009	Design and Build La Sabana Las Piedras WWPS	2021-Q2	2021-Q2	\$0.65
WWTP	CIP.3365083	Rehabilitation of Humacao Waste Water Treatment Plant (WWTP) Sludge Treatment System (STS)	2021-Q2	2021-Q3	\$13.27
TSL	CIP.1169001	Rehabilitation of Los Angeles and Loiza Pueblo Trunk Sewers	2021-Q3	2021-Q3	\$11.76
TSL	CIP.2149001	Rehabilitation of Camuy Trunk Sewer Lines	2022-Q1	2021-Q3	\$77.11
TSL	CIP.4089000	Rehabilitation of Arroyo-Guayama Trunk Sewer Lines	2021-Q1	2021-Q4	\$23.02
WWTP	CIP.3135079	Rehabilitation of Blowers in Caguas WWTP	2021-Q1	2021-Q4	\$5.93



Asset Category	Project #	Description	A&E Start Quarter	SOW Submittal Quarter	Total Cost Estimate
TSL	CIP.4589003	Rehabilitation of Ponce Trunk Sewer System	2021-Q2	2021-Q4	\$21.35
TSL	CIP.2755055	Rehabilitation of Vega Baja Trunk Sewer Lines (TSL)	2021-Q3	2021-Q4	\$10.42
TSL	CIP.3139002	Rehabilitation of Caguas Trunk Sewer Lines	2021-Q3	2021-Q4	\$35.72
WM	CIP.6009002	Water Meters Pilot Project	2021-Q3	2021-Q4	\$4.12
TSL	CIP.5509001	Rehabilitation of Hormigueros and Mayaguez Trunk Sewer Lines	2022-Q1	2021-Q4	\$33.24
B	CIP.1660002	Rehabilitation of PRASA Main Building (Sede) Inspection Only, San Juan P.R.	2021-Q4	2021-Q4	\$0.48
WST	CIP.4009001	Rehabilitation of Tanks Phase 1-South Region	2021-Q1	2022-Q1	\$4.85
TSL	CIP.2095052	Rehabilitation of 42 IN Trunk Sewer Line from PR-684 to the South part of Barceloneta WWTP	2021-Q3	2022-Q1	\$50.17
WTP	CIP.2076042	Rehabilitation of Esperanza Arecibo WTP and RWI	2021-Q3	2022-Q1	\$20.76
WTP	CIP.2426100	Rehabilitation of Lares Nueva Espino WTP and RWI	2021-Q3	2022-Q1	\$29.20
WST	CIP.1009001	Rehabilitation of Tanks Phase 1- Metro Region	2021-Q4	2022-Q1	\$4.92
WST	CIP.3009001	Rehabilitation of Tanks Phase 1-East Region	2021-Q4	2022-Q1	\$4.70
WWPS	CIP.2039000	Rehabilitation of Guerrero 2 WWPS, Municipality of Aguadilla	2022-Q1	2022-Q1	\$5.85
B	CIP.3139000	New Central Laboratory Caguas-Equipment, Caguas P.R.	2021-Q1	2022-Q1	\$8.20
D&T-WL	CIP.2475022	Installation of Water Line at Río Utuado Bridge, Municipality of Utuado P.R.	2021-Q4	2022-Q1	\$0.98
WTP	CIP.2206107	Rehabilitation of Ciales Fronton WTP and RWI	2021-Q4	2022-Q2	\$47.33
WTP	CIP.2346015	Rehabilitation of Hatillo-Camuy WTP	2022-Q1	2022-Q2	\$59.15
WWTP	CIP.1165044	Rehabilitation of Carolina WWTP	2021-Q3	2022-Q3	\$97.24
TSL	CIP.2375002	Trunk Sewer Lines (TSL) Isabela - Aguada	2021-Q4	2022-Q3	\$42.55
WTP	CIP.2526006	Rehabilitation of Morovis Sur WTP	2021-Q4	2022-Q3	\$44.67
WTP	CIP.5379002	Guajataca Floating RWI	2022-Q1	2022-Q3	\$8.86
WTP	CIP.1709000	Enrique Ortega WTP- Raw Water Intake Power Generator (FEMA-404)	2021-Q2	2022-Q4	\$46.59
WST	CIP.2009001	Rehabilitation of Tanks Phase 1- North Region	2022-Q1	2022-Q4	\$6.01
WST	CIP.5009001	Rehabilitation of Tanks Phase 1-West Region	2022-Q1	2022-Q4	\$4.14



Asset Category	Project #	Description	A&E Start Quarter	SOW Submittal Quarter	Total Cost Estimate
RWW	CIP.3009106	Rehabilitation of Raw Water Wells Phase 1- East Region	2022-Q2	2022-Q4	\$2.83
WPS	CIP.2329004	Design and Build of Rehabilitation of Water Pump Station at Ciales Pozas	2022-Q3	2023-Q1	\$5.49
D&T-WL	CIP.4559002	Replacement of WL El Gato Ward, Orocovis, PR	2022-Q4	2023-Q1	\$2.85
D&T-WL	CIP.2709001	Design and Construction of 6" WL, El Tocon Sector, Quebrada Cruz Ward, Municipality of Toa Alta P.R.	2022-Q4	2023-Q1	\$1.82
D&T-WL	CIP.4589006	Rehabilitation of WL La Yuca Sector, Ponce, PR	2022-Q4	2023-Q1	\$2.59
WTP	CIP.2739001	Rehabilitation of Lago Viví RWI	2021-Q3	2023-Q2	\$7.24
RWW	CIP.4009106	Rehabilitation of Raw Water Well Phase 1- South Region	2022-Q1	2023-Q2	\$5.20
RWW	CIP.2009106	Rehabilitation of Raw Water Well Phase 1- North Region	2022-Q3	2023-Q2	\$9.36
WST & WPS	CIP.4009103	Rehabilitation of Water Pump Stations Tanks Phase 1- South Region	2022-Q3	2023-Q2	\$8.37
D&T-WL	CIP.2269001	Replacement of 4 IN Pipeline in Villa 2000 Community in Dorado P.R.	2022-Q4	2023-Q2	\$1.23
TSL	CIP.2709010	Improvements to the Teefrans TSL, Municipality of Arecibo	2022-Q1	2023-Q3	\$9.17
D&T-WL	CIP.2349003	Design and Build 16" WL, PR-119, Hatillo-Camuy	2022-Q4	2023-Q3	\$6.61
WWTP	CIP.5505028	Rehabilitation of Mayaguez WWTP	2021-Q2	2023-Q4	\$123.35
WTP	CIP.3156093	Rehabilitation of Río Grande El Yunque WTP	2022-Q1	2023-Q4	\$60.72
WTP	CIP.4776078	Rehabilitation of Jagueyes Villalba WTP	2022-Q1	2023-Q4	\$20.86
WWTP	CIP.3765002	Rehabilitation Vieques WWTP	2022-Q1	2023-Q4	\$60.97
WTP	CIP.2526007	Rehabilitation of Morovis Urbano WTP	2022-Q4	2023-Q4	\$11.50
D&T-WL	CIP.4589007	Rehabilitation of WL Sabanetas Sector, Ponce, PR .	2023-Q2	2023-Q4	\$6.22
D&T-WL	Several East Region (3-18-5019)	Replacement of Water Pipelines at East Region Phase 1 (CIP.3046007- Sumideros Ward, Aguas Buenas; CIP.3136015-Urb. Mirador, Caguas; CIP.3185018-Replacement of 4", Maton Arriba Ward, Calle Jorge Rochi, Cayey; CIP.3185019- PR-1 Km. 61, Maton C1Arriba Ward, Cayey; CIP.3279002- Damajagua Ward, Fajardo; CIP.3279003- PR-978,Ceiba;CIP.3279004-PR-976, Volatín Ward, Fajardo)	2023-Q2	2023-Q4	\$11.78



Asset Category	Project #	Description	A&E Start Quarter	SOW Submittal Quarter	Total Cost Estimate
D&T-WL	CIP.1019001	Rehabilitation of D&T-WL Bo. Sonadora, Renacer Sector and Mansiones, Municipality of Guaynabo	2023-Q2	2023-Q4	\$4.85
B	CIP.3188001	Rehabilitation of Cayey Operations Office, Cayey PR	2023-Q2	2023-Q4	\$2.55
D&T-WL	CIP.3139004	Extension to Water System Aguas Buenas Mulas Tizas, Aguas Buenas P.R.	2023-Q2	2023-Q4	\$5.99
D&T-WL	Several West Region (5-06-9000)	Replacement of Water Pipelines at West Region Phase 1 (CIP.5069000-Parcelas Aqlas Aquilino, Añasco; CIP. 5379000-Chevín Sector, Isabela; CIP.5509000-París Ward, Mayaguez ;CIP. 5579003-PR-412, Corea Sector, Rincón;CIP.5609002- Camino Blanco Black Eagle, Rincón ;CIP.5609004- PR-412, Rincón; CIP.5639000- Azucena and Parcela Lluveras, Sabana Grand;CIP.5685006- Villa Rita , San Sebastián)	2023-Q2	2023-Q4	\$20.24
TSL	CIP.2375003	Rehabilitation of Isabela TSL (Including Aguadilla WWPS Avenue and Fomento)	2022-Q1	2024-Q1	\$18.78
WTP	CIP.2246106	Rehabilitation of Corozal Negros RWI	2022-Q3	2024-Q1	\$7.65
D&T-WL	Several South Region (4-08-9001)	Replacement of Water Pipelines at South Region Phase 1 (CIP.4089001- Buena Vista Sector, Arroyo; CIP.4229003- PR-155 Sector Farallones, Coamo ; CIP.4229004- PR-150 Santa Catalina and San Ildefonso, Coamo; CIP.4319001- Indios Ward, Guayanilla; CIP.4399000- Collores Sector PR 512, Juana Diaz; CIP.4779001-RLimón Sector, Villalba; CIP.4779002- Chichón Sector, Villalba)	2023-Q2	2024-Q1	\$23.24
D&T-WL	CIP.7349002	Hatillo -New Distribution System Campo Alegre Ward, Sectors 10, Hatillo P.R.	2022-Q3	2024-Q1	\$10.29
WWTP	CIP.4495001	Rehabilitation or Elimination of Maunabo WWTP	2021-Q4	2024-Q2	\$54.14
WTP	CIP.5506044	Rehabilitation of Miradero Mayagüez RWI	2022-Q1	2024-Q2	\$50.36
WTP	CIP.1116008	Rehabilitation of Guaynabo Santa Rosa WI	2022-Q2	2024-Q2	\$61.75
WPS	CIP.3009103	Rehabilitation of Water Pump Stations Tanks Phase 1- East Region	2022-Q3	2024-Q2	\$9.60
WTP	CIP.3156094	Replacement of RWI at Mameyes River for the Yunque WTP	2022-Q3	2024-Q2	\$29.13



Asset Category	Project #	Description	A&E Start Quarter	SOW Submittal Quarter	Total Cost Estimate
WPS	CIP.1159000	Design and Build of Rehabilitation of Water Pump Station at La Central, Municipality of Canóvanas	2023-Q2	2024-Q2	\$3.67
D&T-WL	CIP.2265016	D&B Installation of 12 in Water Pipeline PR-691, Dorado, PR	2023-Q4	2024-Q2	\$10.44
D&T-WL	CIP.2526008	Improvements to the Water Distribution System in Morovis P.R.	2022-Q3	2024-Q2	\$37.13
D&T-WL	CIP.2346016	Replacement of 4" and 6" WL, Bayaney Ward, Municipality of Hatillo P.R.	2023-Q2	2024-Q2	\$7.22
D&T-WL	Several Metro Region (1-01-9003)	Replacement of Water Pipelines at Metro Region Phase 1 (CIP-1159001-Urb. Loiza Valley, Canóvanas; CIP-1169002-Urb. Villa Fontana, Carolina; CIP-1665120-Urb. Country Club, San Juan; ; CIP-1669101- Urb. Country Club, Carolina; CIP-1019003 Ave. Juan Ponce de Leon, Bo. Amelia)	2023-Q2	2024-Q2	\$17.50
D&T-WL	CIP.2709002	Design and Construction of 4" WL, Villa Esperanza Community, Municipality of Toa Alta, P.R.	2022-Q4	2024-Q2	\$3.55
D&T-WL	CIP.2265017	Design and Build for the Rehabilitation of the Distribution System of Vega Alta & Dorado Potable Water	2023-Q3	2024-Q2	\$4.57
D&T-WL	Several North Region (2-38-9001)	Replacement of Water Pipelines at North Region Phase 1(CIP-2071001 La Pica, El Peje and Sabana Hoyos, Vega Alta; CIP-2389001- Tetuan III , Jayuya; CIP-2479000 Sector Boquillas,Manatí.)	2023-Q2	2024-Q2	\$12.24
WTP	CIP.3186003	Rehabilitation of El Farallon WTP	2022-Q3	2024-Q3	\$37.18
WTP	CIP.5489001	Rehabilitation of Maricao Monte del Estado RWI	2022-Q3	2024-Q3	\$11.89
TSL	CIP.4299000	Rehabilitation of Barriada Esperanza Guanica Trunk Sewer System	2022-Q4	2024-Q3	\$8.80
WTP	CIP.4316007	Rehabilitation of Jaguas Pasto Guayanilla WTP	2021-Q4	2024-Q4	\$16.81
WTP	CIP.4646004	Raw Water Wells Closure/ Salinas WTP (FEMA-404)	2022-Q1	2024-Q4	\$47.89
WTP	CIP.2596004	Rehabilitation of Quebradillas WTP and RWI (Include 406 Project CIP-2595016)	2022-Q2	2024-Q4	\$81.28
WTP	CIP.3136012	Rehabilitation of Caguas Norte WTP	2022-Q3	2024-Q4	\$109.87
TSL	CIP.4649000	Replacement of TSL Santos Amadeo, Baldorioty & Miguel Casco Urban, Salinas	2023-Q1	2024-Q4	\$12.64
WTP	CIP.4576002	Rehabilitation of Peñuelas WTP	2023-Q3	2024-Q4	\$19.44



Asset Category	Project #	Description	A&E Start Quarter	SOW Submittal Quarter	Total Cost Estimate
WPS	CIP.4555016	D&B Rehabilitation San Miguel Water Pump Station Orocovis, PR (Emergency combined with Fiona)	2023-Q4	2024-Q4	\$1.96
WPS	CIP.2009103	Rehabilitation of Water Pump Stations Tanks Phase 1- North Region	2022-Q2	2025-Q1	\$9.88
WTP	CIP.2246116	Rehabilitation of Corozal Negros WTP	2023-Q1	2025-Q1	\$43.18
WWTP	CIP.3279001	Rehabilitation of Switchgear Fajardo WWTP	2023-Q3	2025-Q1	\$13.51
R	CIP.1009002	Carraizo Reservoir Sediment Control (Proposed 406)	2022-Q3	2025-Q2	\$86.71
WTP	CIP.2386057	Rehabilitation of RWI and RWPS of Jayuya WTP, Jayuya P.R.	2022-Q4	2025-Q3	\$11.30
WTP	CIP.3106106	Rehabilitation of Barranquitas Barrancas WTP and RWI, Barranquitas P.R.	2022-Q3	2025-Q3	\$15.00
WWPS	CIP.4009104	Rehabilitation of Wastewater Pump Stations Phase 1- South Region	2023-Q1	2025-Q3	\$11.42
WWPS	CIP.2009104	Rehabilitation of Wastewater Pump Stations Phase 1- North Region	2022-Q2	2025-Q3	\$8.84
WTP	CIP.1726043	Rehabilitation of Sergio Cuevas WTP, Trujillo Alto P.R.	2022-Q2	2025-Q3	\$112.59
WWPS	CIP.3009104	Rehabilitation of Wastewater Pump Stations Phase 1- East Region	2023-Q2	2025-Q3	\$8.10
D&T-WL	CIP.5609001	Installation of 12" Water Line on PR-115, Rincón P.R.	2023-Q3	2025-Q4	\$8.96
WTP	CIP.5486007	Rehabilitation of Maricao WTP, Maricao P.R.	2023-Q2	2025-Q4	\$12.00
WTP	CIP.2426099	Rehabilitation of Lares Indiera Alta WTP and RWI, Lares P.R.	2022-Q3	2025-Q4	\$6.50
WTP	CIP.3536006	Rehabilitation Naguabo Río Blanco WTP, Naguabo P.R.	2022-Q1	2025-Q4	\$66.51
RWW	CIP.5009106	Rehabilitation of Raw Water Well Phase 1- West Region	2022-Q3	2025-Q4	\$5.65
WPS	CIP.5009103	Rehabilitation of Water Pump Stations Tanks Phase 1- West Region	2023-Q1	2025-Q4	\$8.79
D&T-WL	CIP.2549000	Rehabilitation of Transmission and Distribution System at Naranjito, P.R.	2022-Q3	2026-Q1	\$57.39
D	CIP.7776071	Rehabilitation of Toa Vaca Dam, Villalba P.R.	2021-Q2	2025-Q4	\$7.18
WTP	CIP.4556009	Rehabilitation of Sanamuertos Orocovis WTP, Orocovis P.R.	2022-Q4	2025-Q4	\$20.93
WWPS	CIP.5009104	Rehabilitation of Wastewater Pump Stations Tanks Phase 1- West Region	2023-Q1	2026-Q1	\$10.92
WTP	CIP.3106105	Rehabilitation of Barranquitas La Boca WTP and RWI, Barranquitas P.R.	2023-Q2	2026-Q1	\$20.00
WWTP	CIP.4695042	Rehabilitation of Santa Isabel WWTP, Santa Isabel P.R.	2022-Q1	2026-Q1	\$75.95



Asset Category	Project #	Description	A&E Start Quarter	SOW Submittal Quarter	Total Cost Estimate
WTP	CIP.5486006	Rehabilitation of Monte del Estado Maricao WTP	2022-Q3	2026-Q2	\$17.46
WTP	CIP.1156004	Rehabilitation of Cubuy WTP and RWI, Municipality of Canóvanas	2023-Q1	2026-Q1	\$12.00
WTP	CIP.2386047	Rehabilitation of Jayuya Urbano WTP and RWI	2022-Q4	2026-Q1	\$38.46
WWTP	CIP.3139001	Rehabilitation of Caguas WWTP, Caguas P.R.	2022-Q1	2026-Q3	\$234.24
WTP	CIP.5506047	Rehabilitation of Miradero Mayaguez WTP	2022-Q3	2026-Q2	\$48.30
WTP	CIP.4776077	Elimination of Villalba Apeadero WTP and Aceituna WTP	2022-Q1	2026-Q1	\$21.11
WWTP	CIP.5415031	Rehabilitation of Lajas WWTP	2022-Q2	2026-Q2	\$15.81
WTP	CIP.5506046	Rehabilitation of Ponce de Leon Mayaguez WTP	2023-Q1	2026-Q3	\$35.00
WTP	CIP.1076003	Superacueductos Microgrid	2023-Q3	2026-Q2	\$97.57
WTP	CIP.2916002	Rehabilitation of Arecibo Superacueductos WTP (Santiago Vazquez WTP & RWI)	2022-Q2	2026-Q2	\$125.00
WTP	CIP.3405007	Valenciano Dam and RWI (404)	2023-Q3	2026-Q3	\$187.66
WWTP	CIP.3785018	Elimination of Yabucoa WWTP	2023-Q3	2027-Q3	\$37.43
TSL	CIP.5685000	Replacement of Trunk Sewer Lines (TSL) in San Sebastián	2022-Q4	2026-Q3	\$19.16
WPS	CIP.1009103	Rehabilitation of Water Pump Stations Tanks Phase 1- Metro Region	2023-Q1	2026-Q3	\$3.00
WTP	CIP.2386049	Redundancy of Jayuya Canalizo WTP and RWI	2022-Q4	2026-Q3	\$20.00
WTP	CIP.4046010	Rehabilitation of RWI Río Añasco and Desander	2021-Q1	2026-Q4	\$22.06
WTP	CIP.5036006	Rehabilitation Aguadilla Montaña WTP, Aguadilla P.R.	2023-Q2	2026-Q4	\$40.00
OO	CIP.5509105	Rehabilitation of Mayaguez Ocean Outfall	2023-Q1	2026-Q4	\$185.00
WTP	CIP.4796004	Rehabilitation of Yauco Río Prieto WTP, Yauco P.R.	2023-Q2	2026-Q4	\$20.40
WWTP	CIP.5375021	Elimination of WWTP Isabela	2021-Q2	2026-Q4	\$109.20
WTP	CIP.1016095	Rehabilitation of Guaynabo WTP, Guaynabo P.R.	2021-Q4	2026-Q4	\$90.00
WWPS	CIP.1665900	Rehabilitation of Martín Peña WWPS (Tokio), Municipality of San Juan	2023-Q2	2027-Q1	\$12.38
WTP	CIP.2736006	Rehabilitation of Utuado Mameyes WTP and RWI	2022-Q3	2027-Q1	\$11.43
WTP	CIP.2736005	Rehabilitation of Utuado Mameyes Limon (Arriba) WTP and RWI, Utuado P.R.	2022-Q3	2027-Q1	\$20.16



Asset Category	Project #	Description	A&E Start Quarter	SOW Submittal Quarter	Total Cost Estimate
RWW	CIP.1009106	Rehabilitation of Raw Water Well Phase 1- Metro Region	2022-Q1	2027-Q1	\$2.05
D&T-WL	CIP.1019002	Replacement of 2" Potable Water Pipe Sector Camino Los Bigios, Caimito, San Juan P.R.	2023-Q2	2028-Q1	\$0.60
WWTP	CIP.2475021	Rehabilitation of Barceloneta WWTP, Barceloneta P.R.	2022-Q3	2027-Q3	\$147.00
WTP	CIP.3405005	Valenciano WTP Expansion (404)	2023-Q3	2027-Q3	\$75.29
D&T-WL	CIP.2269000	Rehabilitación Siste. Distrib de Dorado/Vega Alta (Dorado Twist) Dorado, P.R.	2023-Q2	2027-Q4	\$1.47
D&T-WL	CIP.3405006	Valenciano Water Distribution System (404)	2023-Q3	2027-Q4	\$154.70
WWTP	CIP.5035001	Rehabilitation of Aguada WWTP	2022-Q2	2028-Q1	\$14.00
D&T-WL	CIP.2071000	Improvements to Arecibo Water Distribution System	2023-Q1	2029-Q1	\$0.00
WTP	CIP.4586070	Ponce Vieja/Nueva WTP	2021-Q1	2028-Q2	\$42.28
WTP	CIP.3366005	Rehabilitation of Humacao WTP	2023-Q2	2029-Q2	\$0.00
WWTP	CIP.2075073	Rehabilitation of Islote WWTP, Arecibo	2022-Q3	2028-Q2	\$100.46
D&T-WL	CIP.1019004	Replacement of WL Pipe, El Gato Sector at PR-834, Municipality of Guaynabo P.R.	2023-Q2	2029-Q1	\$0.94
WWTP	CIP.3236247	Rehabilitation of Comerío WWTP	2022-Q2	2029-Q1	\$0.00



1.5 Mid- Term Projects Profile (2024-2027)

The mid-term priority category comprises 69 projects that should begin 30% A & E design in 2024, 2025, 2026, and 2027 (natural years). The cumulative investment on the projects expected to begin A & E within this time horizon is **\$440.98 Million**. Figure 1-5 illustrates the breakdown of cumulative investment by asset category for projects commencing during this period.

Figure 1-5: Total Estimated Cost by Asset Category for Mid-Term Projects(\$M)

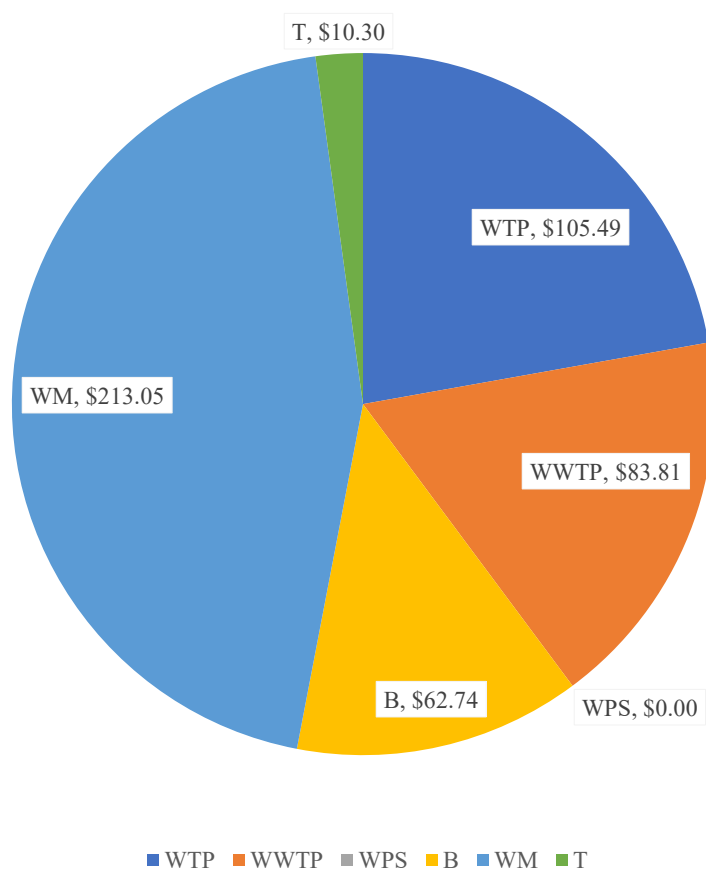


Table 1-6 provides a representative sample of notable projects slated to commence during this period.

Table 1-6: Mid-Term (2024-2027) Notable Projects

Asset Category	Project #	Description	A&E Start Quarter	SOW Submittal Quarter	Total Cost Estimate
WM	CIP.6009102	Water Meters Islandwide LS Project	2025-Q2	2021-Q4	\$786.33
WM	CIP.6000050	Rehabilitation of Remote Reading Meter Warehouse	2024-Q3	2021-Q4	\$4.76
T	CIP.6009012	Telemetry Islandwide Project	2024-Q4	2025-Q3	\$10.30
B	CIP.6005000	Stand-By Power Generators (Islandwide)	2024-Q4	2025-Q4	\$32.90
WTP	CIP.5485005	Rehabilitation of Orama Maricao RWI, Maricao P.R.	2024-Q1	2026-Q1	\$10.20
WTP	CIP.2425017	Rehabilitation of Raw Water Intake Lares Espino WTP Lares, PR	2024-Q2	2026-Q2	\$6.45
WTP	CIP.2555016	Raw Water Intake Sana Muertos Orocovis, PR	2024-Q2	2026-Q2	\$6.79
WTP	CIP.1076050	Rehabilitation of Superacuedictos Intake	2025-Q2	2026-Q2	\$90.00
WWTP	CIP.3195016	Cayey Regional WWTP Microgrid Cayey, PR	2024-Q2	2028-Q1	\$24.10
WTP	CIP.3276053	Rehabilitation of Fajardo WTP	2024-Q3	2028-Q1	\$11.51
WPS	CIP.5035017	Calero Reservoir Dam (Calero Raw Water PS) Microgrid Aguadilla, PR	2024-Q2	2028-Q1	\$32.96
WTP	CIP.4016012	Rehabilitation of Adjuntas Guilarte WTP	2024-Q1	2026-Q3	\$9.04
WTP	CIP.4797005	Rehabilitaion of RWI of Río Prieto WTP, Yauco, PR	2024-Q4	2027-Q1	\$10.65
WWTP	CIP.3755016	Vieques WWTP Microgrid Vieques, P.R.	2024-Q1	2026-Q2	\$20.39
WTP	CIP.3135018	Caguas Norte WTP Microgrid Caguas, PR	2024-Q2	2028-Q1	\$20.38
WWTP	CIP.3275017	Fajardo Regional WWTP Microgrid Fajardo	2024-Q2	2028-Q1	\$32.93
T	CIP.6002000	Green Dedicated Broadband Network for PRASA (CDBG-MIT)	2025-Q1	2026-Q3	\$48.00
WTP	CIP.5037006	Rehabilitation of RWI of Calero WTP, Aguadilla, PR	2025-Q1	2026-Q4	\$24.83
WWTP	CIP.3366001	Rehabilitation of Humacao WWTP	2024-Q3	2027-Q4	\$25.20



Asset Category	Project #	Description	A&E Start Quarter	SOW Submittal Quarter	Total Cost Estimate
WTP	CIP.3136013	Rehabilitation of Caguas Sur WTP	2026-Q1	2028-Q4	\$9.42
WWTP	CIP.2269002	Elimination of Several WWTP North Region	2025-Q2	2027-Q1	\$796.57
WTP	CIP.1705065	Rehabilitation of La Plata Dam RWI & Pump System, Toa Alta, PR	2025-Q1	2028-Q1	\$15.00
B	CIP.1669003	Rehabilitation of PRASA Main Building, San Juan P.R.	2024-Q1	2027-Q1	\$23.13
WTP	CIP.3275019	Fajardo WTP & Dam Microgrid Fajardo, PR	2024-Q2	2028-Q1	\$32.93
WTP	CIP.3679005	Rehabilitation of Nueva Bo. Espino WTP, San Lorenzo (CDBG-MIT)	2026-Q1	2027-Q1	\$43.32
WTP	CIP.3239005	Rehabilitation of Comerío WTP	2024-Q1	2027-Q1	\$18.36
WTP	CIP.3535016	Río Blanco WTP Microgrid Naguabo, PR	2024-Q2	2027-Q1	\$51.81
WWTP	CIP.5089000	Rehabilitation of Las Marías WWTP, Las Marias P.R.	2024-Q2	2027-Q1	\$15.00
WPS	CIP.1155017	Finca Rosso 1 Pump Station Microgrid Bayamón, PR	2024-Q2	2027-Q1	\$26.65
WTP	CIP.1325016	Guaynabo Water Treatment Plant-Microgrid, Guaynabo, PR	2024-Q1	2027-Q1	\$7.32
WWTP	CIP.4585018	Ponce Regional WWTP Microgrid Ponce, PR	2024-Q2	2027-Q1	\$26.63
WTP	CIP.2595016	Quebradillas WTP Microgrid Quebradillas, PR (Included in Project CIP-2-59-6004)	2024-Q2	2027-Q1	\$8.78
WWPS	CIP.4495016	Maunabo WWPS & Guardarraya WWPS Microgrid Maunabo, PR (Included in CIP- 4-49-5001)	2024-Q2	2028-Q1	\$6.06
WTP	CIP.5505017	Ponce de León WTP Microgrid Mayaguez, PR	2024-Q2	2028-Q1	\$3.35
R	CIP.4009000	Bauta Tunnel (FEMA 404/CDBG-MIT)	2024-Q2	2027-Q2	\$162.00
WWTP	CIP.4305016	Guayama Regional WWTP Microgrid Guayama, PR	2024-Q2	2028-Q2	\$32.93
WPS	CIP.5065016	Río Añasco Raw Water Pump Station Microgrid Añasco, PR	2024-Q2	2028-Q2	\$51.87
WTP	CIP.5375018	Isabela Urbana WTP Microgrid Isabela, PR	2024-Q2	2028-Q2	\$20.32
WTP	CIP.3615017	El Yunque WTP Microgrid Río Grande, PR	2024-Q2	2027-Q3	\$32.93
WTP	CIP.1715016	Sergio Cuevas WTP & Cupey PS Microgrid Trujillo Alto, PR	2024-Q2	2027-Q3	\$66.87



Asset Category	Project #	Description	A&E Start Quarter	SOW Submittal Quarter	Total Cost Estimate
WWTP	CIP.4685016	Santa Isabel WWTP Microgrid Santa Isabel, PR	2024-Q1	2028-Q4	\$20.32
WTP	CIP.5686045	Rehabilitation of San Sebastian WTP and RWI	2026-Q1	2028-Q4	\$187.66
WTP	CIP.5485016	Monte del Estado WTP Microgrid Maricao, PR	2024-Q1	2028-Q4	\$1.89
WWTP	CIP.1455017	Carolina Regional WWTP & Torrecillas WWTas WWTP Microgrid Loiza, PR	2024-Q2	2027-Q4	\$26.63
WWTP	CIP.5505016	Mayaguez WWTP & Mayaguez Sludge Compos Fmpos Facility Microgrid Mayaguez, PR	2024-Q1	2027-Q2	\$45.54
WWTP	CIP.3135019	Caguas WWTP Microgrid Caguas, PR	2024-Q2	2027-Q4	\$58.15
WTP	CIP.5035016	Río Culebrinas Raw Water Intake/Dam Microgrid Aguadilla, PR	2024-Q2	2027-Q4	\$58.21
WWTP	CIP.2095016	Barceloneta Regional WWTP Microgrid Barceloneta,PR	2024-Q2	2027-Q4	\$58.15
WTP	CIP.2386048	Redundancy of Jayuya La Pica WTP and RWI	2027-Q2	2028-Q4	\$6.67
B	CIP.3130004	New Central Laboratory Caguas-Phase II, Caguas P.R.	2027-Q1	2028-Q4	\$6.71
WWTP	CIP.3185033	Rehabilitation of Cayey WWTP	2026-Q1	2029-Q1	\$0.00
WWTP	CIP.4585096	Rehabilitation of Ponce WWTP	2026-Q3	2028-Q1	\$45.00
WTP	CIP.3106104	Rehabilitation of Barranquitas WTP and RWI	2025-Q1	2029-Q1	\$0.00
WTP	CIP.3186002	Rehabilitation of Cayey Urbana WTP	2025-Q1	2029-Q1	\$0.00
WTP	CIP.4016008	Rehabilitation of Adjuntas Olimpia WTP	2025-Q4	2029-Q1	\$0.00
D	CIP.1666090	Improvements to La Plata Dam-Installation of Anchors, San Juan P.R.	2027-Q1	2028-Q1	\$4.03
WWTP	CIP.3056002	Rehabilitation of Aibonito WWTP	2026-Q4	2029-Q1	\$0.00
WTP	CIP.1156005	Rehabilitation of Canóvanas Nueva WTP and RWI	2027-Q1	2029-Q1	\$0.00
WTP	CIP.3466005	Rehabilitation of Luquillo-Sabana WTP	2027-Q1	2029-Q1	\$0.00
D&T-WL	CIP.5067002	Improvements to Water System Community Del Hoyo de los Feos, Añasco P.R.	2027-Q1	2029-Q1	\$0.00
WTP	CIP.5636006	Rehabilitation of Sabana Grande WTP and RWI	2027-Q1	2029-Q1	\$0.00



Asset Category	Project #	Description	A&E Start Quarter	SOW Submittal Quarter	Total Cost Estimate
WWTP	CIP.3105032	Rehabilitation of Barranquitas WWTP	2027-Q1	2029-Q1	\$0.00
WWTP	CIP.2545006	Rehabilitation of Naranjito WWTP	2027-Q2	2029-Q1	\$0.00
WTP	CIP.5376006	Rehabilitation of Isabela Urbana WTP and RWI	2027-Q2	2029-Q1	\$0.00
R	CIP.5066000	Casey Reservoir, Añasco	2024-Q3	2028-Q3	\$2.00
R	CIP.1001001	Metropolitan Multi- Reservoir System	2027-Q3	2028-Q3	\$2.00
WTP	CIP.5656001	Rehabilitation of Caín Alto San Germán WTP and RWI	2027-Q3	2029-Q4	\$0.00
B	CIP.3135017	PRASA Central Laboratory, Caguas-Microgrid Caguas, PR	2024-Q2	2029-Q1	\$17.95
D&T-WL	CIP.TBD	Installation of Redundancy Raw Water Pipeline from Toa Vaca to Ponce Service Area	2025-Q4	2026-Q1	\$89.37
WTP	CIP.TBD	Protection Measure of Miradero Intake	2025-Q4	2025-Q4	\$11.00



1.6 Long-Term Projects Profile (2028 and beyond)

The long-term priority category comprises 26 projects that are expected to begin 30% A & E design in years 2028 and beyond.

The cumulative investment on the projects expected to begin A & E within this time horizon is **\$49.60 Million**.

Figure 1-6 illustrates the breakdown of cumulative investment by asset category for projects commencing during this period.

Figure 1-6: Total Estimated Cost by Asset Category for Long-Term Projects(\$M)

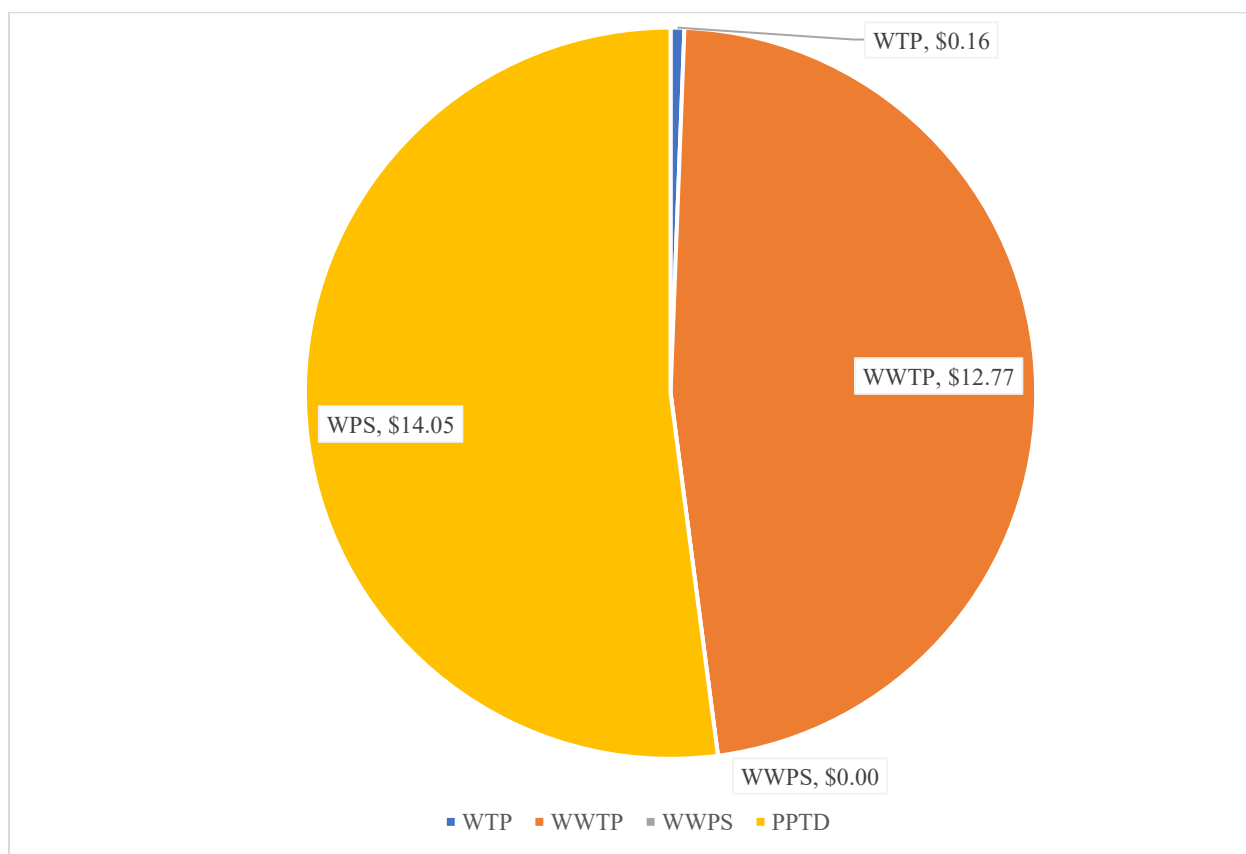


Table 1-7 provides a representative sample of notable projects slated to commence during this period.



Table 1 7: Long-Term (2028 and beyond) Notable Projects

Asset Category	Project #	Description	A&E Start Quarter	SOW Submittal Quarter	Total Cost Estimate
TSL	CIP.1705003	Rehabilitation of Urb. Levittown TS, Toa Baja	2028-Q2	2029-Q2	\$0.00
WST	CIP.3009101	Rehabilitation of Tanks Phase 2- East	2028-Q2	2029-Q2	\$0.00
TSL	CIP.1705002	Rehabilitation of Bo. Sabana Seca TS, Toa Baja	2028-Q2	2029-Q2	\$0.00
WST & WPS	CIP.2076044	MCC installation at EBTK Half a Million	2028-Q2	2029-Q3	\$0.00
D&T-WL	CIP.3136009	Improvements to the Water Supply System in Villa del Rey Ward in Caguas P.R.	2028-Q2	2029-Q3	\$0.00
WPS	CIP.4317001	Construction Sector Ballinó Guayanilla WPS	2028-Q2	2029-Q3	\$0.00
TSL	CIP.4576008	Rehabilitation of Wastewater Lines Urb. Alturas de Peñuelas	2028-Q2	2029-Q3	\$0.00
PPTD	CIP.6009008	Projects Pending to Defined LS Project	2028-Q1	2028-Q4	\$14.05
WST	CIP.4009101	Rehabilitation of Tanks Phase 2- South Region	2028-Q2	2029-Q4	\$0.00
WPS	CIP.3449002	Rehabilitation of WPS Represa La Sabana Cuesta Los Jobos	2028-Q2	2030-Q1	\$0.00
WPS	CIP.3789001	Rehabilitation of WPS Represa Central Roig	2028-Q2	2030-Q1	\$0.00
D&T-WL	CIP.5506042	Improvements to the Water Supply System in Mayaguez Mall	2028-Q2	2030-Q1	\$0.00
D&T-WL	CIP.5685001	EBAS Improvements Chinito Rondón	2028-Q2	2030-Q1	\$0.00
WWPS	CIP.7688000	Elimination of Los Alamos WWPS San Sebastian	2028-Q2	2030-Q1	\$0.00
WWTP	CIP.3135010	Caguas-Elimination of WWTP Borinquen, Laterales Villa Sauri y 5 EBAS (Villa Caliz)	2028-Q3	2029-Q1	\$18.11
WTP	CIP.4796005	Rehabilitation Yauco Rancheras WTP	2028-Q2	2030-Q1	\$0.00
WWTP	CIP.5685004	Rehabilitation of San Sebastián WWTP	2028-Q3	2029-Q2	\$12.75
WWTP	CIP.4315010	Elimination of Guayanilla WWTP, Guayanilla PR	2028-Q4	2027-Q2	\$22.14
WWTP	CIP.4555022	Rehabilitation of Orocovis WWTP	2028-Q1	2030-Q1	\$0.00
WWPS	CIP.1009104	Rehabilitation of Wastewater Pump Stations Tanks Phase 1- Metro Region	2028-Q2	2030-Q1	\$0.00



Asset Category	Project #	Description	A&E Start Quarter	SOW Submittal Quarter	Total Cost Estimate
WWTP	CIP.4795022	Rehabilitation of Yauco WWTP	2032-Q3	2033-Q1	\$12.77
WWTP	CIP.3136014	Elimination of WWTP Parcealas Borinquen Caguas , PR	2032-Q2	2033-Q1	\$6.09
WTP	CIP.2076041	Rehabilitation of Arecibo Urbano WTP (Superacueductos)	2032-Q3	2033-Q2	\$0.16
WPS	CIP.1669002	Rehabilitation of WPS of Puerto Nuevo and WL of 48", Municipality of San Juan	2043-Q2	2044-Q2	\$0.00
WWPS	CIP.4009204	Rehabilitation of Wastewater Pump Stations Tanks Phase 2- South Region	2045-Q1	2045-Q2	\$0.00
WWPS	CIP.3009204	Rehabilitation of WWPS Phase 2- East Region	2045-Q1	2046-Q1	\$0.00



1.7 Program Management

PRASA has implemented project management standards and controls in accord with leading practices. In 2020 PRASA issued an RFQ/RFP to secure engineering firms to serve as the Project Management Consortiums for efficient and timely execution of the CIP, including the projects under this plan. Currently, PRASA has onboarded all the Consortiums.

PRASA's Infrastructure Office, with the assistance of the Consortiums, will implement leading practices following these components: solid centralized governance of the group of projects; a standard, rigorous process from project initiation to closeout for all projects in the plan; a centralized system to provide a single source of truth for all projects (with particular focus on scope, schedule, and budget); and standardized project controls across PRASA.



Chapter 2 Introduction

The purpose of this document is to describe further the PRASA investment plan for the next ten years using the **\$4.2 Billion** funding obligated by FEMA under the Stafford Act, Section 428 Public Assistance (428) program, and BBA. The plan starts in 2021 and is projected to end in 2030.

This plan is being submitted to COR3 and FEMA to satisfy the requirement to present a plan within 90 days of the single fixed-cost grant obligation. This plan is considered a “living document.” It requires updates and resubmissions to COR3 and FEMA every 90 days after the initial submission. Consequently, we have discussed with FEMA and COR3 during plan development to gain the best possible understanding of their requirements for this plan and to meet those requirements.

PRASA's FAASSt Workplan is not subject to approval by COR3 or FEMA, nor does it secure the release of any obligated 428 funds. Instead, the plan serves as a working document to provide context for and support collaboration among PRASA, COR3, and FEMA in the process of developing and submitting individual projects for review, approval, and funds disbursement. Submission of this plan is an essential first step, followed by PRASA submitting individual project funding requests and beginning 30% design for 2021 projects. Now that the initial version of this plan has been completed and submitted, PRASA will begin requesting funding as soon as practicable.

This plan will include project funding from the FEMA 428 and 404 mitigation programs and HUD Community Development Block Grant Disaster Recovery (CDBG-DR) program.

This document will provide the requirements under their 428 work plan to COR3 and FEMA, such as:

- An overview of PRASA's infrastructure investment strategy to provide context for the selection of projects in the plan.
- A prioritized list of the infrastructure projects that contain the plan with brief descriptions and class 5 cost estimates.



- A section that shows the estimated timing of crucial project milestones by quarter for 2021-2023 and by year for 2024-2030.
- An overview of PRASA's instrumental management of infrastructure controls.

The projects identified in this plan and their associated schedule provide a framework for sketching the work and an expected sequence for its execution. However, ten years is a long-term planning horizon, and adjustments to this FAASt Workplan are expected as long as justified with results from studies, natural events, implementation or scheduling restrictions, or other influences.

This plan is based on the most current information available to PRASA and will be updated quarterly. With this submittal, PRASA intends to execute a set of defined, effective, multi-faceted projects to improve water and wastewater infrastructure in Puerto Rico.



Chapter 3 PRASA’s Infrastructure Investment Strategy

3.1 Context

The 2017 hurricane season caused unparalleled devastation in Puerto Rico. As a result, PRASA suffered damages to water treatment facilities and other structures across the Island. After facing the damages of the 2017 events, PRASA needs to continue working to permanently repair their infrastructure with the ongoing challenges of droughts, hurricanes, earthquakes, and COVID-19 pandemic. PRASA has one of the most complex systems when is compared to other U.S. jurisdictions. PRASA serves more than one million customers, which is an added challenge to any decisions regarding infrastructure design and development to provide or deliver resilient and less vulnerable water and wastewater system for Puerto Rico.

Indeed, resiliency for water projects comes with the challenge of how to measure their performance. Resiliency is a topic discussed for quite some time in the water industry, but there is no official consensus measuring resiliency. Meanwhile, PRASA is committed to continuing with the recovery efforts and ensuring that future infrastructure developments consider resiliency for the significant challenges that the Island faces.

After the events of 2017, several steps set the path to transforming Puerto Rico’s water system. Some of these steps include the development of PRASA’s Strategic Plan 2020-2025 and PRASA’s Certified Fiscal Plan(s).

These steps provide the foundation for this plan. Table 3-1 illustrates the six (6) foundational components of PRASA’s FAASt Workplan.

Table 3-1 Foundational Components of FAASt Workplan

Components	Description
PRASA’s Vision and Mission	Since its creation in 1945, PRASA is committed to providing excellence in all aspects of the operations, including drinking water production and distribution, wastewater collection and treatment, as well as system maintenance and customer satisfaction. The goal of providing quality and reliable services has not diminished over time and will



Components	Description
	continue for years to come. As stated on its mission statement, PRASA has the mindset “to provide high-quality, safe, reliable, and affordable water and wastewater services to the people of Puerto Rico, protecting their health and the environment.”
America Water Infrastructure Act of 2018	Establishes parameters to improve drinking water and water quality, infrastructure investments, enhance public health and quality of life, increase jobs, and bolster the economy, including assessing the PRASA's system vulnerability to several threats, including climate change and natural disasters.
Codes and Industry Standards	Rehabilitate, improve, and restore the water system following Codes and Industry Standards, including the applicable PRASA design standards, contained in the <i>Reglamento de Normas de Diseño de la AAA</i> .
PRASA's Strategic Plan 2021-2025	Provides a roadmap to meet expected water demand over a planning horizon through the future development with specific plans to improve the reliability of the water & water waste system, beginning with the core values responsible for supporting the mission and vision as well as shaping the organization's culture.
PRASA Certified Fiscal Plan(s)	Lays out the path for operational and financial sustainability of PRASA in order to enable the transformation of Puerto Rico's water and wastewater system.
FEMA's Damages Assessment Reports	Provides a description of the damages, related causes, location, and dimensions of the equipment and facilities damaged during the 2017 hurricanes and other catastrophic events.

3.2 Overview of Investment Strategy

PRASA leveraged the foundational components outlined in Table 3.1 and performed additional analysis to guide the project's selection in this FAASt Workplan.

To align and guide our work, we designated five (5) investment focus areas that summarize the intent of what our projects will collectively achieve. The investment focus areas are as follows in Table 3-2.



Table 3-2: Investment Focus Areas

Focus Area	Description
Public Health & Environmental Protection	Ensure to provide a high-quality water service while promoting water conservation and protecting the environment and health of Puerto Rico, following: • Safe Drinking Water Act (SDWA) • Environmental Protection Agency (USEPA) requirements • Puerto Rico Department of Health (PRDH) • Clean Water Act (CWA)
Codes and Industry Standards	Ensure compliance with applicable laws and regulations and alignment with consensus-based codes and standards. Examples include: • American Water Works Association (AWWA) • National Fire Protection Association (NFPA) • American Society of Testing and Materials (ASTM) • National Standards Foundation (NSF) • International Code Council (ICC) • <i>Reglamento de Normas de Diseño de la AAA</i>
Reliability and System Resiliency	Ensure the required investment in necessary technology and infrastructure to restore the system, enhance resiliency, and establish an efficient and safe water system that provides reliability for customers.
Hazard Mitigation	Ensure to provide long-term solutions that reduce the PRASA's infrastructure impact of future events and minimize disaster losses and the water system vulnerability.
Modernization and Maintenance	Modernize and maintain PRASA's infrastructure to optimize its operational efficiency, protect public health, safeguard the environment and promote continued economic development.



Chapter 4 PRASA's Prioritized Infrastructure Projects

4.1 Overview

This section of PRASA's FAASt Workplan categorizes each project in the plan as to priority. The three priority categories are near-term (2021-23 start), mid-term (2024-27 start), and long-term (2028 or later start).

We established several criteria and considerations to assign projects to categories. Project start, for this prioritization, was defined as when 30% of design work should begin. A & E work is PRASA's first standard milestone for projects in its infrastructure plan.

In this section, each priority category has a description of the type of infrastructure projects contained within it, a summary overview of the number and estimated costs of projects in the priority category broken down by asset type, and an overview of the estimated timing for submission of projects to COR3 and FEMA. Following these overviews are a series of tables containing the name, brief description, estimated COR3 and FEMA submission timing, and class 5 cost estimate for each project in the priority category.

Under direction from COR3 and FEMA, PRASA will update this plan every 90 days after the initial submission and will update project details and prioritization based on coordination with COR3 and FEMA, its internal findings, and feedback from other stakeholders.

4.2 Asset Category Descriptions

Table 4-1 outlines each asset category contained in this plan and characterizes the types of projects found within each category:



Table 4-1: List of Assets Descriptions

Asset Category	Description
WTP	114 WTP, with capacity ranges from 0.14 to 100 million gallons per day (MGD) with a median and average treatment capacity of 1.2 and 5.1 MGD. After Hurricane María one (1) WTP was closed. The WTP are classified by the type of treatment, with 1% using direct filtration, 92% dual filtration, and 7% membranes. These WTP and the RWI suffered widespread damages caused by flooding, wind, flood transported debris, wind-driven rain, wind-driven debris, falling trees, sediment accumulation, power interruption, and other damages caused by the hurricane. The damaged process components and equipment are necessary for these WTP's operation so the treated water may be distributed as potable water. Damaged process equipment includes (but is not limited to) pumps, screens, clarifiers, package plants, media filters, membrane systems, chlorination systems, UV disinfection, sludge thickeners, sludge filters, and sludge drying beds. Additionally, support (ancillary) items required to operate the WTP were damaged, including (but not limited to) instrumentation, telemetry, process control (SCADA), power (and backup power), piping, channels, valves, buildings, covers, roofs. Sitewide items that are part of the WTP but not associated with the process components or necessary to treat the water also suffered widespread damages. Damaged non-process items include (but are not limited to) fencing, lighting (interior and exterior), paint, HVAC system, furnishings, materials, various non-process equipment (e.g., for landscaping and housekeeping), and buildings not used for the protection of process equipment.
WWTP	51 facilities, with capacity ranges from 0.09 to 144 million gallons per day (MGD) with a median and average treatment capacity of 1.3 and 10.6 MGD. They are classified by the degree of treatment (primary, secondary, or tertiary) and the specific type of biological treatment used. For all 51 WWTP, 12% carry out only primary treatment, 70.5% carry out secondary treatment, and



Asset Category	Description
	17.5% tertiary treatment. For the 51 WWTP, 12% do not carry out biological treatment (primary treatment only), 59% use activated sludge, 14% use trickling filters, and 14% use biological nutrient removal. One WWTP uses rotating biological discs for biological treatment. These WWTPs suffered widespread damages caused by flooding, wind, flood transported debris, wind-driven rain, wind-driven debris, falling trees, sediment accumulation, power interruption, and other damages caused by the hurricane. The damaged process components and equipment are necessary for these WWTPs, so the treated wastewater may be discharged to surface waters. Damaged process equipment includes (but is not limited to) pumps, influent structures, screens, grit removal, primary clarifiers, activated sludge systems, oxidation ditches, package plants, trickling filters, secondary clarifiers, coarse media filters, chlorination/dichlorination systems, UV disinfection, sludge thickeners, anaerobic and aerobic digesters, sludge filters, and sludge drying beds. Additionally, support (ancillary) items required to operate the WWTP were damaged, including (but not limited to) instrumentation, telemetry, process control (SCADA), power (and backup power), piping, channels, valves, buildings, covers, and roofs. Sitewide items that are part of the WWTP but not associated with the process components or necessary to treat the wastewater also suffered widespread damages. Damaged non-process items include (but are not limited to) fencing, lighting, paint, HVAC system, furnishings, materials, various non-process equipment (e.g., for landscaping and housekeeping), and buildings not used for the protection of process equipment.
WWPS	799 WWPS, also called wastewater lift stations, are used to deliver wastewater collected in the trunk sewers from a lower to a higher elevation through a force main. The force main allows the wastewater to flow by gravity to the WWTP or another WWPS. The wastewater is usually stored in and



Asset Category	Description
	pumped from an underground storage pit called a wet well. These WWPS suffered widespread damages caused by flooding, wind, flood transported debris, wind-driven rain, wind-driven debris, falling trees, sediment accumulation, power interruption, and other damages caused by the hurricane. The damaged components and equipment are necessary for the operation of these WWPS that deliver wastewater to the WWTP. Damaged process equipment includes (but is not limited to) pumps, instrumentation, telemetry, process control, power (and backup power), piping, valves, buildings, covers, and roofs. Items that are part of the WWPSs but not associated with the process components or necessary to deliver the wastewater also suffered widespread damages include (but are not limited to) fencing, lighting, paint, HVAC system, various non-process equipment (e.g., for landscaping and housekeeping), and buildings not used specifically for the protection of process equipment.
WPS	468 WPS, used to deliver water to WST, WTP, and the drinking water distribution system. WPS is required when there is insufficient pressure to deliver the water by gravity alone. WPS can deliver raw untreated water to a WTP or treated potable water to the distribution system, including WST. These WPS suffered widespread damages caused by flooding, wind, flood transported debris, wind-driven rain, wind-driven debris, falling trees, sediment accumulation, power interruption, and other damages caused by the hurricane. The damaged components and equipment are necessary for the operation of these WPS used to deliver water. Damaged equipment includes (but is not limited to) pumps, motors, valves, piping, instrumentation, telemetry, process control, and power. Items that are part of the WPS facilities but not directly associated with the process components or necessary to deliver the water also suffered widespread damages including, (but not limited to) fencing, lighting, paint, HVAC system, various non-process equipment (e.g.,



Asset Category	Description
	for landscaping and housekeeping), and parts of the building not used specifically for the protection of process equipment.
WST & WPS	808 WST & WPS, used when both the water storage tank and the water pumping station are located together in a single site. These contain pumps and motors, valves, piping (both buried and above ground), instrumentation, telemetry, controls, power, and a protective building or enclosure. The water storage tank also requires a check valve to keeps water from flowing back into the treatment plant and overflow piping to protect the storage tank from being overfilled. These WST & WPS suffered widespread damages caused by flooding, wind, flood transported debris, wind-driven rain, wind-driven debris, falling trees, sediment accumulation, power interruption, and other damages caused by the hurricane. The damaged components and equipment are necessary for the operation of the WST & WPS that store and deliver treated potable water. Damaged equipment includes (but is not limited to) pumps, motors, valves, check-valves, piping, instrumentation, telemetry, process control, power, tank roofing membrane, roof tank access hatches, roof access ladders, and safety cages. Items that are part of the WST & WPS facilities but not directly associated with the process components or necessary to store and deliver the water also suffered widespread damages including, (but not limited to) fencing, lighting (interior and exterior), paint, HVAC system, various non-process equipment (e.g., for landscaping and housekeeping), and buildings or parts of the building not used for the protection of process equipment.
WST	997 WST is used to store treated potable water to use on-demand. The storage also provides extra capacity in case of a failure of the water treatment plant. The WST is usually elevated above the drinking water distribution system to provide sufficient pressure for distribution. The WST also requires a check valve to keep water from flowing back into the source and overflow piping to protect the WST from being overfilled. These WST suffered



Asset Category	Description
	widespread damages caused by flooding, wind, flood transported debris, wind-driven rain, wind-driven debris, falling trees, sediment accumulation, power interruption, and other damages caused by the hurricane. The damaged components and equipment are necessary for the operation of these WSTs used to store raw water. Damaged equipment includes (but is not limited to) check-valves, piping, instrumentation, telemetry, process control, power (and backup power), tank roofing membrane, roof tank access hatches, roof access ladders, and safety cages. Items that are part of the WST facilities but not directly associated with the process components or necessary to deliver the water also suffered widespread damages including, (but not limited to) fencing, lighting, paint, HVAC system, various non-process equipment (e.g., for landscaping and housekeeping), and buildings not used specifically for the protection of process equipment.
Ocean Outfalls (OO)	PRASA owns and operates twelve (12) Ocean Outfall Diffuser Systems. The up-stream treatment plants discharge treated effluent through a piping system terminating in a high-rate diffuser (herein system). The systems typically extend from ¼ mile to ¾ miles offshore and terminate with rate diffusers. The piping system is buried and has a rock protection layer. The diffusers vary from a straight line to a branched configuration (Tor V) with risers and ported outlets that are exposed. Ported outlets disperse the effluent at an average depth between 75 to 150 feet below low water sea level. Wave action and underwater currents developed from Hurricane-force winds (María) caused erosion and displacement of the facility (s).
Dams (D)	PRASA operates and maintains eight (8) major Dams throughout Puerto Rico. La Plata in the North Region, Carraízo and Las Curías in the Metro Region, Toa Vaca in the South Region, Cidra, Rio Blanco and Fajardo in the East Region and <i>Lago Regulador de Isabela</i> in the West Region. La Plata and Carraízo are concrete dams with gated controlled spillways. Cidra is a



Asset Category	Description
	concrete dam with an ungated overflow-type spillway. Toa Vaca is an earth/rock embankment dam with a gated controlled spillway. Las Curías, Rio Blanco and Fajardo are earth/rock embankment dams with ungated overflow-type spillway. For these facilities, the water source is a tributary. In the case of La Plata, Carraízo, Las Curías, Toa Vaca, and Cidra, rivers flow directly into the reservoirs. In the case of Rio Blanco and Fajardo there is an Intake Structure at the rivers that collects and supplies raw water to the reservoirs through a pipe. The primary purpose of all these reservoirs, formed by dams, is storing, and collecting raw water for its supply to Water Treatment Plants (except for Las Curías). Some of the damages on the Island Wide Dams were as follow: damages on Actuators, Antennas, Dam Alarms, Cameras, Controls, Doors, A/C Units, Electrical Components, Fencing, Floodgate Components, Floors, Geotextile for Embankment, Intake Components (Slide Gates), Lighting, Motors, Machine Elements, Pavement, Pumps, Reservoir Air Injection System, Riprap Armoring for Embankment, Roofs, Slope Failure (Erosion/Scouring), Valves, Walls, and Windows.
Reservoirs (R)	PRASA has eight main reservoirs across Puerto Rico and multiple other surface water storage facilities (lakes and basins). The reservoirs are created by impounding (capturing) surface water runoff with concrete or embankment dams. The current purpose of these facilities is to store water for its raw water supply to water treatment plants, providing potable water to the public. Due to the disaster event, heavy sedimentation impacted these four reservoirs: Toa Vaca, Cidra, Carraízo, and La Plata. Additionally, one (1) surface water storage facility (lake), <i>Lago Regulador de Isabela</i> has some scour damages due to María Hurricane. As part of PRASA's FAASt Workplan, the target is to remove sediments deposited in the assets and repair the facility lake -<i>Lago Regulador de Isabela</i>.



Asset Category	Description
Buildings (B)	PRASA manages 91 building facilities grouped by the function: Commercial, Operational, Laboratory, Administrative, Warehouse, and Maintenance. The facilities suffered widespread damages caused by wind-driven rain, wind-driven debris, flooding, flood transported debris, the impact from fallen trees, ground erosion, and other hurricane-related impacts. Damages include roof cover breakage, delamination, and in some instances, total loss of roofing systems which allowed continuous water infiltration. Hurricane conditions also caused the forceful removal of windows and doors, which further contributed to water infiltration and caused violent internal wind pressure, resulting in further structural damage. Water infiltration, structural failure, and invasive wind caused secondary damage to interior building components, such as lighting, furnishings, finish materials, equipment, heating, ventilation, air conditioning (HVAC) systems, electrical systems, fire alarm systems, suspended ceiling systems, and floor coverings. Sustained power loss, caused by island-wide electrical utilities' total failure, resulted in a lack of humidity control inside the buildings, which allowed mold to grow in gypsum board walls, ductwork, throughout building insulation, and other components. High winds, wind-driven rain, and windblown debris damaged paint, exterior wall fixtures, antennas, and other exterior elements. The extreme conditions also damaged exterior site components such as lighting poles, fences, gates, and the groundwork.
Raw Water Wells (RWW)	PRASA owns 269 Raw Water Wells, used to extract groundwater by submersible pumps that deliver the raw water to the surface through a pipe casing. The concrete sealing, which surrounds the metal pipe, and a concrete wellhead at the surface protect the well. The extracted raw water may require treatment before being used as drinking (potable) water. The completion of treatment requires either using on-site disinfection or at a WTP. The raw or disinfected water can be delivered to a Water Storage Tank (WST) or



Asset Category	Description
	delivered directly to a WTP. If the WTP is at a higher elevation, a Water Pumping Station (WPS) will deliver the raw water to the WTP. These Wells suffered widespread damages caused by flooding, wind, flood transported debris, wind-driven rain, wind-driven debris, falling trees, sediment accumulation, power interruption, and other damages caused by the hurricane. The damaged components and equipment are necessary for these Wells' operations that deliver raw water to the WTP or WST. Damaged process equipment includes (but is not limited to) pumps, instrumentation, chlorinators, telemetry, process control, power (and backup power), piping, valves, buildings, covers, and roofs. Items that are part of the Well facilities but not directly associated with the process components or necessary to deliver the water also suffered widespread damages including, (but not limited to) fencing, lighting, paint, HVAC system, various non-process equipment (e.g., for landscaping and housekeeping), and buildings not used specifically for the protection of process equipment.
Transmission and Distribution Water Lines (T&D-WL)	It consists of an estimated 15,148 miles of potable water lines and water distribution lines in diameters ranging from 1" to 84" and in a wide variety of materials. The water transmission lines are pipes, valves, air relief valves, and meters that deliver the raw, untreated water to the WTP. The Water Distribution Lines are a series of pipes, valves, air relief valves, fire hydrants, and water meters that deliver the treated potable water from the WTP to the consumers. These water lines suffered widespread damages caused by erosion, flooding, flood transported debris, wind-driven rain, wind-driven debris, falling and uprooted trees, sediment accumulation, power interruption, and other damages caused by the hurricane.
Water Meters (WM)	872,596 each of the WM are part of the Potable Water Lines Distribution. A water meter or hydrometer is a device that allows for counting the volume of water passing through it. It is often used in water supply conductions of



Asset Category	Description
	residential and industrial installations to make charges to users. These Water Meters suffered widespread damages to the strainers (filters), metering pistons, and non-return (backflow prevention) valves. The hurricane caused blockage and accumulation of debris and sediment by interruption of service, significant fluctuations in pressure, water hammer, backflow, and other damages. The damaged components and equipment are necessary for these Water Meters to accurately measure the flow of and allow passage of potable water delivered to the consumer.
Trunk Sewer Lines (TSL)	TSL's consist of an estimated 5,994 miles of sewer pipes in diameters ranging from 4' to 90" and in a wide variety of materials. The sewer system collects sewage and wastewater from households, commercial businesses, and industries and delivers the wastewater to a wastewater treatment plant (WWTP) through a series of pipes. Maintenance holes connect this series of pipes. These concrete sewer pipes suffered widespread damages caused by flooding, wind, flood transported debris, wind-driven rain, wind-driven debris, falling trees, sediment accumulation, power interruption, and other damages caused by the hurricane. The damaged components and equipment are necessary for the sewer system's operation that delivers wastewater to the WWTP. Damaged equipment includes (but is not limited to) pipes (gravity and pressure), maintenance holes, risers, covers, siphons, pipe supports, and eroded topsoil and roadways.
Telemetry (T)	Telemetry System along with PRASA facilities, WTP, WWTP, WWPS, WPS, WST, WST & WPS, and RWW Islandwide. The telemetry system, usually done by wireless communication, can also be done through other means such as telephone, computer networks, fiber optic link, among others. Ranging from motorsport, aviation, astrology, agriculture, the oil industry, medicine, and even biology, telemetry has various utilities. Telemetry aims to allow the mediation of physical or chemical magnitudes, know the state of processes



Asset Category	Description
	and systems, and remotely control the operation, correct errors, and send the information collected towards an information system for use and benefit. Telemetry helped identify widespread damages caused by hurricanes along the island.
Projects Pending to determine (PPTD)	PRASA is evaluating other projects covered under the FEMA 428-funding obligation to mitigate risks along with several facilities on the system. PRASA will evaluate other projects covered under the FAASt funding obligation. PRASA will use this classification to integrate projects to be defined and/or cover contingencies of already approved projects, and to cover the amount for projects type work completed..

4.3 Project Prioritization Approach

After identifying projects, PRASA prioritized them in groups based on safety, impact to the community, the relative complexity of the work, and regulatory requirements.

4.4 Near-Term Category Overview

The near-term priority category is composed of projects that have either already begun design (A &E) or are expected to do so in 2021-2023.

PRASA intends to pursue a significant proportion of its projects in the near-term for several reasons:

1. It is PRASA's objective to deliver results as quickly as possible.
2. Some projects already have preliminary engineering and are ready to proceed into the 30% design phase.
3. Some projects are substantial in scope and must be initiated in the near-term years.

In the following section, we provide this information on near-term priority projects; Table 4-2 explains this information.



Table 4-2: Provided Project Information

Section	Plan Information Provided
1. Description of projects	An overview of the projects in the priority category and the approach used to designate them, organized by asset type
2. Summary of projects	Number of projects by asset category and start year, along with total dollars by asset category
3. COR3 and FEMA submission timeline	Estimated timeline for SOW submittal to indicate the number of projects for each year and asset category
4. List of projects	Project name, a brief description, estimated submittal timing, estimated cost, and CIP # for each project included in the plan

4.4.1 Description of Near-Term Priority Projects

Near-term projects mainly consist of the rehabilitation of damages to PRASA assets incurred during the 2017 hurricanes. It includes all projects in the application submitted under the FEMA 428 program. PRASA's target is to rehabilitate and improve all these assets following industry standards without regard to pre-disaster conditions and restore components not damaged by the disaster when necessary to restore the facility function. The projects included in the mid-term priority are as described in Table 4-3 below.



4.4.2 Summary of Near-Term Priority Projects

The following table (Table 4-3) summarizes the near-term projects that PRASA initiated (A & E Phase) and the estimated cost by asset category:

Table 4-3: Summary of Near-Term Priority Projects (Natural Years and Cumulative Total)

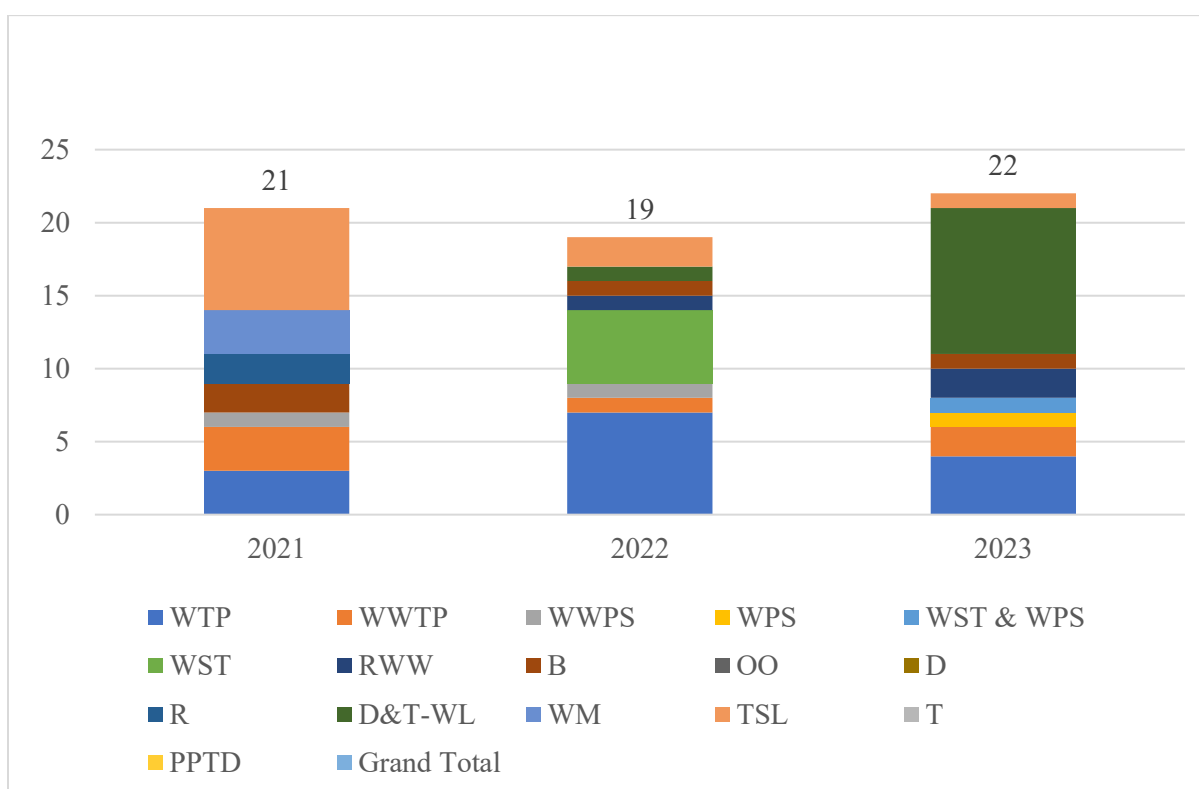
Asset Category	A&E Start 2021	A&E Start 2022	A&E Start 2023	Total Projects	Total Cost Estimate (Million)
WTP	13	28	12	53	\$1,696.41
WWTP	7	8	2	17	\$822.43
WWPS	1	2	4	7	\$58.16
WPS	0	3	4	7	\$42.40
WST & WPS	0	1	0	1	\$8.37
WST	3	2	0	5	\$24.61
RWW	0	5	0	5	\$25.09
B	3	0	1	4	\$47.35
OO	0	0	1	1	\$100.00
D	1	0	0	1	\$7.18
R	2	1	0	3	\$130.35
D&T-WL	1	9	17	27	\$244.09
WM	1	0	0	1	\$4.12
TSL	7	6	1	14	\$356.78
T	0	0	0	0	\$0.00
PPTD	0	0	0	0	\$0.00
Total	39	65	42	146	\$3,567.32



4.4.3 COR3 and FEMA Submissions Timeline

The following chart figure shows the timeline for the individual projects submitted to COR3 and FEMA for review and approval during the near-term period. The quantity does not include the SOW revisions, and/or adjustment according to Bid Process and/or Change Orders.

Figure 4-1: COR3 and FEMA Near-Term SOW Project Submissions by Quarter
(Natural Years)



4.4.4 List of Near-Term Priority Projects

Table A-1 of Appendix A includes the complete list of projects in the near-term priority category. In addition, the Appendix identifies projects by asset category, brief description,



estimated timing for submission to COR3 and FEMA for review and approval, a class 5 cost estimate, and PRASA's Construction Improvement Program number.

It is important to note that the cost estimate provided does not include potential hazard mitigation funding that may be available through FEMA's 406 Hazard Mitigation Program. PRASA intends to submit applications for 406 funding with its 428 projects, where applicable. These additional funds will be critical to reinforcing the new infrastructure to protect against damage from future disaster events.

All projects in the tables below are funded through FEMA's 428 programs unless otherwise noted. Also, HUD's CDBG-DR funds will support some of the infrastructure projects contained in this plan, but the allocation of the HUD funds are yet to be tied to specific projects, which will occur in a future update of this plan.

4.5 Mid-Term Category Overview

The mid-term priority category is composed of projects that have either already begun design (A & E) or are expected to do so in 2024-2027.

In the sections that follow, we provide this information on near-term priority projects. Table 4-4 enumerates this information.

Table 4-4: Project Information to be provided

Section	Plan Information Provided
1. Description of projects	An overview of the projects in the priority category and the approach used to designate them, organized by asset type
2. Summary of projects	Number of projects by asset category and start year, along with total dollars by asset category
3. COR3 and FEMA submission timeline	Estimated timeline for SOW submittal to indicate the number of projects for each year and asset category



Section	Plan Information Provided
4. List of projects	Project name, a brief description, estimated submittal timing, estimated cost, and CIP # for each project included in the plan



4.5.1 Description of Mid-Term Category Overview

Mid-term projects mainly consist of the rehabilitation of damages to PRASA assets incurred during the 2017 hurricanes. The application submitted under the FEMA 428 program, includes all projects. PRASA's target is to rehabilitate and improve all these assets following industry standards without regard to pre-disaster conditions, to restore components not damaged by the disaster, and when necessary to restore the facility function. The projects included in the mid-term priority are as described in Table 4-5 below.

4.5.2 Summary of Mid-Term Priority Projects

The following table (Table 4-5) summarizes the mid-term project volume and the cost estimate by asset category:

Table 4-5: Summary of Mid-Term Priority Projects (Natural Years and Cumulative Total)

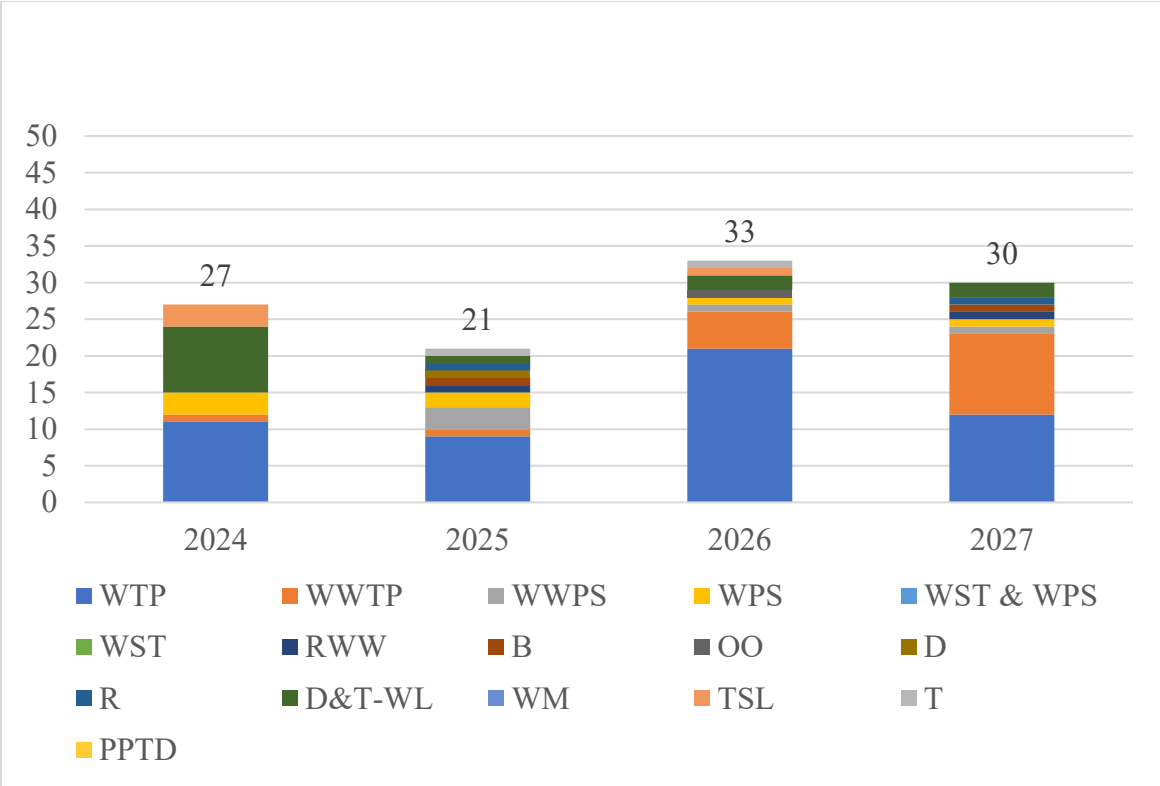
Asset Category	A&E Start 2024	A&E Start 2025	A&E Start 2026	A&E Start 2027	Total Projects	Total Cost Estimate (Million)
WTP	18	7	3	6	34	\$105.49
WWTP	12	1	3	2	18	\$83.81
WWPS	1	0	0	0	1	\$0.00
WPS	3	0	0	0	3	\$0.00
WST & WPS	0	0	0	0	0	\$0.00
WST	0	0	0	0	0	\$0.00
RWW	0	0	0	0	0	\$0.00
B	3	0	0	1	4	\$62.74
OO	0	0	0	0	0	\$0.00
D	0	0	0	1	1	\$0.00
R	2	0	0	1	3	\$0.00
D&T-WL	0	1	0	1	2	\$0.00
WM	1	1	0	0	2	\$213.05
TSL	0	0	0	0	0	\$0.00
T	1	1	0	0	2	\$10.30
PPTD	0	0	0	0	0	\$0.00
Total	41	11	6	12	70	\$475.39



4.5.3 Mid-Term COR3 and FEMA Submission Timeline

The following bar chart (Figure 4-2) shows the estimated timeline for submittal of individual projects to COR3 and FEMA for review and approval:

Figure 4-2:-COR3 and FEMA Mid-Term SOW Submissions by Quarter (Natural Years)



4.5.4 List of Mid-Term Priority Projects

Table A-2 of Appendix A of this document includes the complete list of projects in the mid-term priority category. In addition, the Appendix identifies projects by asset category, brief description, estimated timing for submission to COR3 and FEMA for review and



approval, a class 5 cost estimate, and PRASA's Construction Improvement Program number.

It is important to note that the cost estimate provided does not include potential hazard mitigation funding that may be available through FEMA's 406 Hazard Mitigation Program. PRASA intends to submit applications for 406 funding with each of its 428 projects, where applicable. These additional funds will be critical to reinforcing the new infrastructure to protect against damage from future disaster events.

All projects in the tables below are funded through FEMA's 428 programs unless otherwise noted. Also, HUD's CDBG-DR funds will support some of the infrastructure projects in this plan. However, the allocation of the HUD funds has not yet been tied to specific projects, resulting in a future update of this plan.

4.6 Long-Term Category Overview

The long-term priority category comprises projects that have already begun design (A & E) or will begin in 2028-2030+.

In the sections that follow, we provide this information on near-term priority projects. Table 4-6 enumerates the information presented.

Table 4-6: Provided Project Information

Section	Plan Information Provided
1. Description of projects	An overview of the projects in the priority category and the approach used to designate them, organized by asset type.
2. Summary of projects	Number of projects by asset category and start year, along with total dollars by asset category.
3. COR3 and FEMA submission timeline	Estimated timeline for submittal to indicate the number of projects for each year and asset category.



Section	Plan Information Provided
4. List of projects	Project name, a brief description, estimated submittal timing, estimated cost, and IRP reference section for each project included in the plan.

4.6.1 Description of Long-Term Category Overview

Long-term projects mainly consist of the rehabilitation of damages to PRASA assets incurred during the 2017 hurricanes. All projects are in the application submitted under the FEMA 428 program. PRASA's target is to rehabilitate and improve all these assets following industry standards without regard to pre-disaster conditions and restore components not damaged by the disaster when necessary to restore the facility function. The projects included in the long-term priority are as described in Table 4-7 below.



4.6.2 Summary of Long-Term Priority Projects

The following table (Table 4-7) summarizes the volume of the long-term projects planned to be initiated (A & E Phase) and the estimated cost per asset category:

Table 4-7: Summary of Long-Term Priority Projects (Natural Years and Cumulative Total)

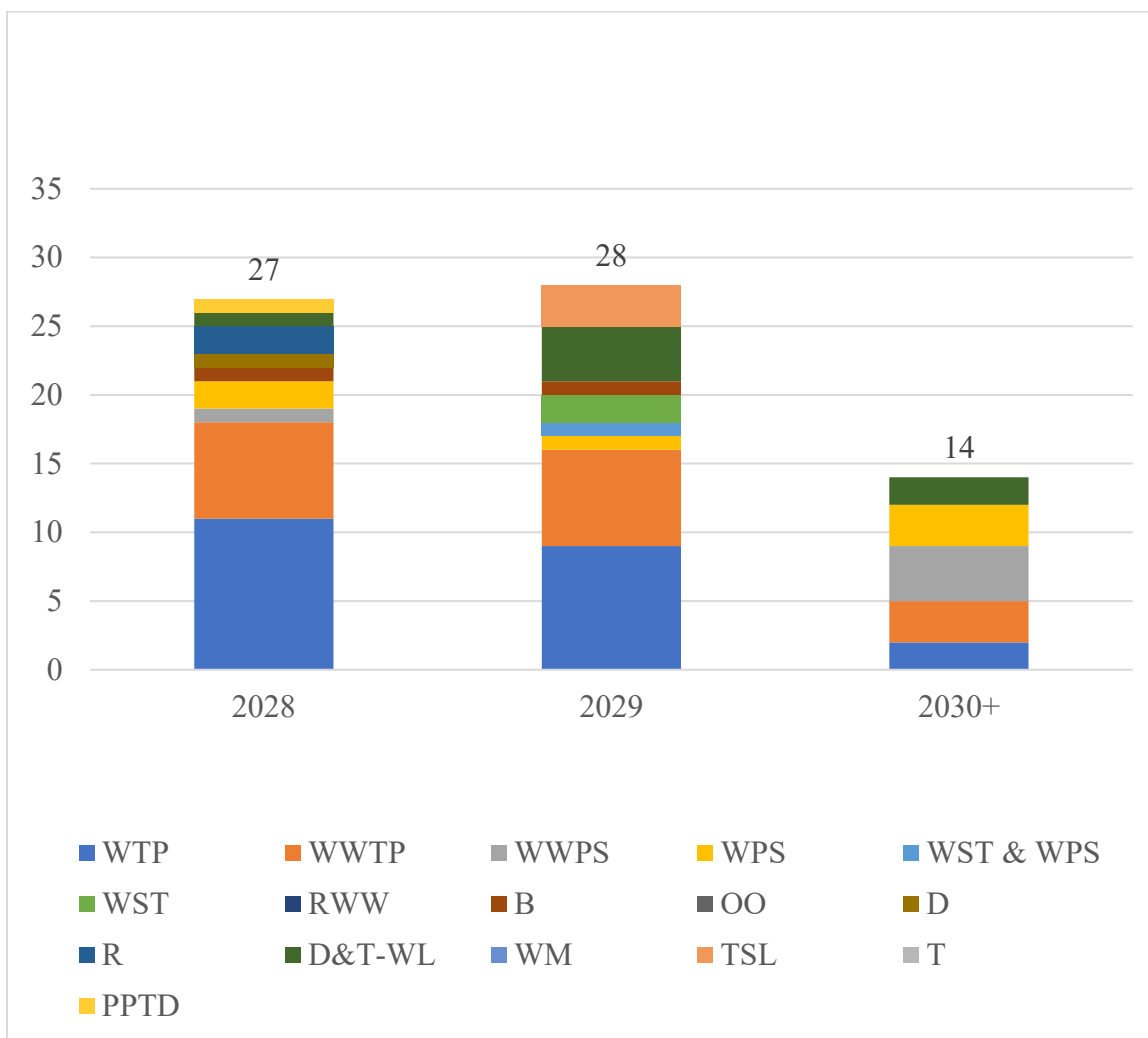
Asset Category	A&E Start 2028	A&E Start 2029	A&E Start 2030+	Total Projects	Total Cost Estimate (Million)
WTP	1	0	1	2	\$0.16
WWTP	4	0	2	6	\$12.77
WWPS	2	0	2	4	\$0.00
WPS	3	0	1	4	\$0.00
WST & WPS	1	0	0	1	\$0.00
WST	2	0	0	2	\$0.00
RWW	0	0	0	0	\$0.00
B	0	0	0	0	\$0.00
OO	0	0	0	0	\$0.00
D	0	0	0	0	\$0.00
R	0	0	0	0	\$0.00
D&T-WL	3	0	0	3	\$0.00
WM	0	0	0	0	\$0.00
TSL	3	0	0	3	\$0.00
T	0	0	0	0	\$0.00
PPTD	1	0	0	1	\$14.05
Total	20	0	6	26	\$26.98



4.6.3 Long- Term COR3 and FEMA Submission Timeline

The following bar chart (Figure 4-3) shows the estimated timeline for submittal of individual projects to COR3 and FEMA for review and approval:

Figure 4-3: COR3 and FEMA Long-Term SOW Submissions by Quarter (Natural Years)



4.6.4 List of Long-Term Priority Projects

Table A-3 of Appendix A of this document included the complete list of projects in the long-term priority category. PRASA identifies projects by asset category, brief description, estimated timing for submission to COR3 and FEMA for review and approval, a class 5 cost estimate, and PRASA's Construction Improvement Program number.

It is important to note that the cost estimate provided does not include potential hazard mitigation funding that may be available through FEMA's 406 Hazard Mitigation Program. PRASA intends to submit applications for 406 funding with each of its 428 projects, where applicable. These additional funds will be critical to reinforcing the new infrastructure to protect against damage from future disaster events.

All projects in the tables below are funded through FEMA's 428 programs unless otherwise noted. Also, HUD's CDBG-DR funds will support some of the infrastructure projects in this plan. However, the allocation of the HUD funds has not tied to specific projects, resulting in a future update of this plan.



Chapter 5 PRASA's Plan Schedule

5.1 Timing Assumptions

The estimation of project time regarding the identification and prioritization of projects relies on the best information available to PRASA at the time of plan development, primarily that project formulation, based on the FEMA Five Phase National Workflow, will occur expeditiously.

Recognizing that PRASA does not yet have all the necessary details to develop detailed plans for its infrastructure projects and have precision on timing, COR3 and FEMA have identified this plan as a “living document,” one that requires an update and resubmission every 90 days after initial submittal.

The estimated timing of projects in PRASA's FAASt Workplan will be impacted by many different factors including, but not limited to, regulatory requirements and stakeholder input, improved clarity on project requirements and approach, project review and permitting processes, the availability of both labor and material resources to execute on project design and construction tasks, and potential future disaster events impacting the island. It is expected that PRASA's FAASt Workplan, including estimated project timing, will require revision as part of these regular plan updates.

It is expected that increased clarity on project requirements and approach provided from current and future engineering studies and the completion of 30% design work will result in updates to project approach and milestone timing estimates. Also, collecting as built/record drawings, asset management planning, and document control requirements will impact the design work and the project approach.

Another set of milestone timing assumptions and potential drivers of milestone timing changes are around approval and permitting processes. These include uncertainty about the amount of time required from project submission to completion of review and receipt of approval from COR3 and FEMA. Specifically, the timing for environmental and remediation permits for each



project will depend on the type of project, location, and potential impacts on environmental/social receptors, including air, water, wetlands, natural resources, and cultural and historical resources.

Lastly, milestone timing estimates assume the required labor and materials needed to support the infrastructure plan will be available; however, shortages of either, even temporarily, may cause delays and necessitate adjustments to project milestone timing estimates.

5.2 Estimated Project Timing Assumptions

Each project has four major standardized milestones regarding timing:

- Begin 30% Architecture and Engineering Design (A & E)
- Submit Project to COR3 and FEMA for Review
- Begin Construction/Implementation
- Begin COR3 and FEMA Project Closeout

Appendix B shows the schedule, year by year, the work plan for major milestone initiation for the projects in the near-term, mid, and long-term periods.



Chapter 6 PRASA's Management Approach

The work needed to complete projects from their planning phase to completion requires both PRASA's internal personnel and external resources. To support PRASA in managing this plan and achieve a cost-effective way to carry out this plan, PRASA has onboard a Project Management Consortium (C). The Consortiums responsibility will be the efficient and timely execution of the CIP. All the projects included in this plan were added to PRASA's CIP.

PRASA, in coordination with the Consortiums, must establish metrics by project and monitor compliance and execution through a CIP tracking tool. Typically, the construction phase includes the highest potential for deviations in cost and time. To maintain control of these, PRASA keeps monthly track of two industry standard KPIs:

- Cost Performance Index (CPI): Measures the cost efficiency of resources committed to the project, evaluating whether the project will be completed on budget.
- Schedule Performance Index (SPI): Measures the relationship between the executed work versus the planned work, assessing whether the project will be completed on time.

The established metrics will allow for high-level monitoring of the project's execution.

PRASA Infrastructure Office, with the assistance of the Consortiums, will manage the FEMA funded projects under a governance structure that includes:

- Strong governance and oversight, by senior executives, of all projects
- Project justification is rigorous, documented, data-driven, standardized, and includes assessing costs, benefits, and alternative courses of action.
- Project authorization is grounded in a well-defined process with clear roles and responsibilities.
- Centralized approvals and oversight so that projects work together as a cohesive group of projects.



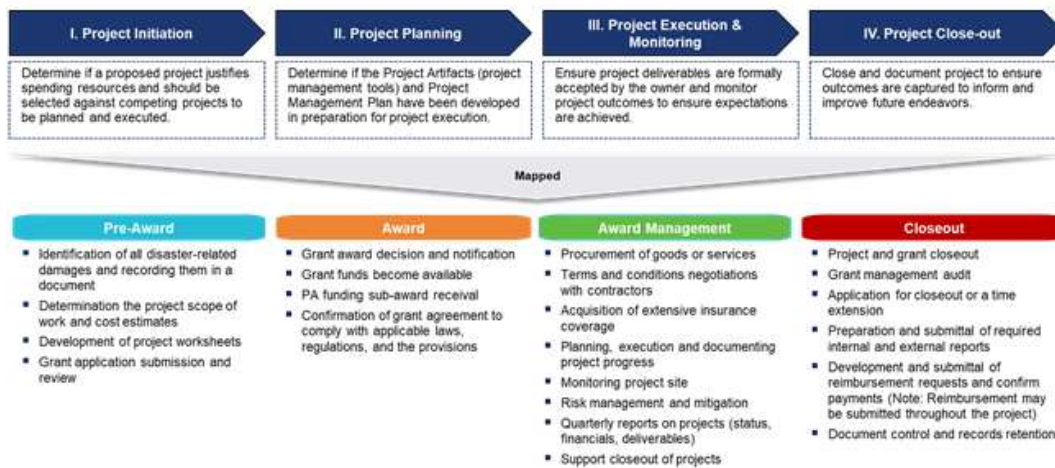
As defined by COR3, the federal grant lifecycle process (See Figure 6-1) is an end-to-end framework outlining the progression of phases and key requirements that PRASA must complete, obtain, manage, and close of Public Assistance funding sub-awards and projects.

Figure 6-1: COR3's Federal Grant Lifecycle



PRASA ensures a rigorous project management process that governs all projects with clear accountabilities, consistent standards based on leading practices for managing and governing all PRASA projects. The management process has four phases for a project (See Figure 6-2), each of which has defined deliverables and documentation required to enter the next phase. To ensure compliance with local and federal guidelines and regulations, PRASA has incorporated the key requirements and associated controls to manage FEMA funds within the project management process.

Figure 6-2: PRASA's Management Process to Federal Grant Lifecycle



PRASA has a Management Information System with functional architecture that provides various project management features to enable management to maintain visibility around projects in each stage of the project lifecycle from project initiation to project closeout.

PRASA has incorporated the following controls to ensure FEMA fund management guidelines are met:

- A set of quality management controls based on PRASA's quality management system.
- Plus, effective project management controls and execution procedures, including risk management, based on leading practices.
- The FEMA grant and fund management control process to ensure compliance.
- The preparation of dashboards, project reports, and monthly operating sequences.



Chapter 7 Appendix A

7.1 Appendix A: Table A.1- List of PRASA Projects FAASt Near-Term

Asset Category	Project	Description	A&E Start Quarter	SOW Submittal Quarter	Construction Start Quarter	SOW Close Out Submittal Quarter	Total Cost	Status
WST	CIP.1009001	Rehabilitation of Tanks Phase 1- Metro Region	2021-Q4	2022-Q1	2022-Q3	2022-Q3	\$4,915,734.34	Obligated
R	CIP.1009002	Carraizo Reservoir Sediment Control (Proposed 406)	2022-Q3	2025-Q2	2027-Q1	2027-Q1	\$86,710,414.84	SOW Submitted, Under National Workflow Process
WPS	CIP.1009103	Rehabilitation of Water Pump Stations Tanks Phase 1- Metro Region	2023-Q1	2026-Q3	2027-Q2	2027-Q2	\$3,000,000.00	Pending Scope & Cost Completion by Applicant
RWW	CIP.1009106	Rehabilitation of Raw Water Well Phase 1- Metro Region	2022-Q1	2027-Q1	2027-Q3	2027-Q3	\$2,048,047.47	Pending Scope & Cost Completion by Applicant
WTP	CIP.1016095	Rehabilitation of Guaynabo WTP, Guaynabo P.R.	2021-Q4	2026-Q4	2027-Q3	2027-Q3	\$90,000,000.00	Pending Scope & Cost Completion by Applicant
R	CIP.1019000	Carraizo Reservoir Dredging, Trujillo Alto	2021-Q1	2021-Q2	2023-Q1	2023-Q1	\$111,443,735.58	Obligated
D&T-WL	CIP.1019001	Rehabilitation of D&T-WL Bo. Sonadora, Renacer Sector and Mansiones, Municipality of Guaynabo	2023-Q2	2023-Q4	2024-Q4	2024-Q4	\$4,851,990.33	Obligated
D&T-WL	CIP.1019002	Replacement of 2" Potable Water Pipe Sector Camino Los Bigios, Caimito, San Juan P.R.	2023-Q2	2028-Q1	2028-Q4	2028-Q4	\$596,136.93	Pending Scope & Cost Completion by Applicant



Asset Category	Project	Description	A&E Start Quarter	SOW Submittal Quarter	Construction Start Quarter	SOW Close Out Submittal Quarter	Total Cost	Status
D&T-WL	CIP.1019004	Replacement of WL Pipe, El Gato Sector at PR-834, Municipality of Guaynabo P.R.	2023-Q2	2029-Q1	2030-Q1	2030-Q1	\$935,668.06	Pending Scope & Cost Completion by Applicant
WTP	CIP.1076003	Superacueductos Microgrid	2023-Q3	2026-Q2	2027-Q1	2027-Q1	\$97,569,268.26	Pending Scope & Cost Completion by Applicant
WTP	CIP.1116008	Rehabilitation of Guaynabo Santa Rosa WI	2022-Q2	2024-Q2	2026-Q4	2026-Q4	\$61,752,976.54	SOW Submitted, Under National Workflow Process
WTP	CIP.1156004	Rehabilitation of Cubuy WTP and RWI, Municipality of Canóvanas	2023-Q1	2026-Q1	2027-Q2	2027-Q2	\$12,000,000.00	Pending Scope & Cost Completion by Applicant
WPS	CIP.1159000	Design and Build of Rehabilitation of Water Pump Station at La Central, Municipality of Canóvanas	2023-Q2	2024-Q2	2024-Q4	2024-Q4	\$3,668,875.40	Obligated
WWTP	CIP.1165044	Rehabilitation of Carolina WWTP	2021-Q3	2022-Q3	2026-Q2	2026-Q2	\$97,244,214.15	SOW Submitted, Under National Workflow Process
TSL	CIP.1169001	Rehabilitation of Los Angeles and Loiza Pueblo Trunk Sewers	2021-Q3	2021-Q3	2022-Q2	2022-Q2	\$11,762,333.35	Obligated
B	CIP.1660002	Rehabilitation of PRASA Main Building (Sede) Inspection Only, San Juan P.R.	2021-Q4	2021-Q4	2022-Q2	2022-Q2	\$476,637.53	Obligated
WWPS	CIP.1665900	Rehabilitation of Martín Peña WWPS (Tokio), Municipality of San Juan	2023-Q2	2027-Q1	2028-Q1	2028-Q1	\$12,378,553.69	Pending Scope & Cost Completion by Applicant



Asset Category	Project	Description	A&E Start Quarter	SOW Submittal Quarter	Construction Start Quarter	SOW Close Out Submittal Quarter	Total Cost	Status
WTP	CIP.1709000	Enrique Ortega WTP- Raw Water Intake Power Generator (FEMA-404)	2021-Q2	2022-Q4	2025-Q4	2025-Q4	\$46,592,633.27	Other Funds not evaluated by FEMA PA, project on-going
WTP	CIP.1726043	Rehabilitation of Sergio Cuevas WTP, Trujillo Alto P.R.	2022-Q2	2025-Q3	2026-Q4	2026-Q4	\$112,594,805.81	SOW Submitted, Under National Workflow Process
WST	CIP.2009001	Rehabilitation of Tanks Phase 1- North Region	2022-Q1	2022-Q4	2023-Q1	2023-Q1	\$6,009,667.48	Obligated
WPS	CIP.2009103	Rehabilitation of Water Pump Stations Tanks Phase 1- North Region	2022-Q2	2025-Q1	2026-Q2	2026-Q2	\$9,879,043.86	SOW Submitted, Under National Workflow Process
WWPS	CIP.2009104	Rehabilitation of Wastewater Pump Stations Phase 1- North Region	2022-Q2	2025-Q3	2026-Q3	2026-Q3	\$8,840,395.87	Pending Scope & Cost Completion by Applicant
RWW	CIP.2009106	Rehabilitation of Raw Water Well Phase 1- North Region	2022-Q3	2023-Q2	2023-Q4	2023-Q4	\$9,362,001.75	Obligated
WTP	CIP.2017005	Rehabilitation of Culebrinas WTP	2021-Q1	2021-Q1	2024-Q2	2024-Q2	\$110,102,570.01	Obligated
WWPS	CIP.2039000	Rehabilitation of Guerrero 2 WWPS, Municipality of Aguadilla	2022-Q1	2022-Q1	2023-Q2	2023-Q2	\$5,854,742.99	Obligated
D&T-WL	CIP.2071000	Improvements to Arecibo Water Distribution System	2023-Q1	2029-Q1	2029-Q4	2029-Q4	\$0.00	See Note 1
WWTP	CIP.2075073	Rehabilitation of Islote WWTP, Arecibo	2022-Q3	2028-Q2	2029-Q1	2029-Q1	\$100,457,536.69	Pending Scope & Cost Completion by Applicant
WTP	CIP.2076042	Rehabilitation of Esperanza Arecibo WTP and RWI	2021-Q3	2022-Q1	2026-Q4	2026-Q4	\$20,755,274.49	Obligated



Asset Category	Project	Description	A&E Start Quarter	SOW Submittal Quarter	Construction Start Quarter	SOW Close Out Submittal Quarter	Total Cost	Status
TSL	CIP.2095052	Rehabilitation of 42 IN Trunk Sewer Line from PR-684 to the South part of Barceloneta WWTP	2021-Q3	2022-Q1	2023-Q1	2023-Q1	\$50,172,565.12	Obligated
WTP	CIP.2096007	Rehabilitation of Enrique Ortega WTP	2021-Q1	2021-Q1	2024-Q2	2024-Q2	\$159,237,817.22	Obligated
TSL	CIP.2149001	Rehabilitation of Camuy Trunk Sewer Lines	2022-Q1	2021-Q3	2023-Q4	2023-Q4	\$77,111,409.00	Obligated
WTP	CIP.2206107	Rehabilitation of Ciales Fronton WTP and RWI	2021-Q4	2022-Q2	2025-Q1	2025-Q1	\$47,330,239.43	Obligated
WTP	CIP.2246106	Rehabilitation of Corozal Negros RWI	2022-Q3	2024-Q1	2024-Q3	2024-Q3	\$7,646,237.38	Obligated
WTP	CIP.2246116	Rehabilitation of Corozal Negros WTP	2023-Q1	2025-Q1	2026-Q1	2026-Q1	\$43,184,972.12	SOW Submitted, Under National Workflow Process
D&T-WL	CIP.2265016	D&B Installation of 12 in Water Pipeline PR-691, Dorado, PR	2023-Q4	2024-Q2	2024-Q3	2024-Q3	\$10,438,149.17	Obligated
D&T-WL	CIP.2265017	Design and Build for the Rehabilitation of the Distribution System of Vega Alta & Dorado Potable Water	2023-Q3	2024-Q2	2024-Q3	2024-Q3	\$4,571,343.33	Obligated
D&T-WL	CIP.2269000	Rehabilitación Siste. Distrib de Dorado/Vega Alta (Dorado Twist) Dorado, P.R.	2023-Q2	2027-Q4	2028-Q3	2028-Q3	\$1,472,767.33	Pending Scope & Cost Completion by Applicant
D&T-WL	CIP.2269001	Replacement of 4 IN Pipeline in Villa 2000 Community in Dorado P.R.	2022-Q4	2023-Q2	2023-Q4	2023-Q4	\$1,229,334.07	Obligated
WPS	CIP.2329004	Design and Build of Rehabilitation of Water Pump Station at Ciales Pozas	2022-Q3	2023-Q1	2023-Q3	2023-Q3	\$5,493,072.80	Obligated



Asset Category	Project	Description	A&E Start Quarter	SOW Submittal Quarter	Construction Start Quarter	SOW Close Out Submittal Quarter	Total Cost	Status
WTP	CIP.2346015	Rehabilitation of Hatillo-Camuy WTP	2022-Q1	2022-Q2	2025-Q3	2025-Q3	\$59,151,650.34	Obligated
D&T-WL	CIP.2346016	Replacement of 4" and 6" WL, Bayaney Ward, Municipality of Hatillo P.R.	2023-Q2	2024-Q2	2024-Q4	2024-Q4	\$7,219,917.67	Obligated
D&T-WL	CIP.2349003	Design and Build 16" WL, PR-119, Hatillo-Camuy	2022-Q4	2023-Q3	2024-Q1	2024-Q1	\$6,606,114.97	Obligated
TSL	CIP.2375002	Trunk Sewer Lines (TSL) Isabela - Aguada	2021-Q4	2022-Q3	2023-Q2	2023-Q2	\$42,552,298.18	Obligated
TSL	CIP.2375003	Rehabilitation of Isabela TSL (Including Aguadilla WWPS Avenue and Fomento)	2022-Q1	2024-Q1	2024-Q3	2024-Q3	\$18,782,764.16	Obligated
WTP	CIP.2386047	Rehabilitation of Jayuya Urbano WTP and RWI	2022-Q4	2026-Q1	2027-Q1	2027-Q1	\$38,458,617.51	Pending Scope & Cost Completion by Applicant
WTP	CIP.2386049	Redundancy of Jayuya Canalizo WTP and RWI	2022-Q4	2026-Q3	2027-Q3	2027-Q3	\$20,000,000.01	Pending Scope & Cost Completion by Applicant
WTP	CIP.2386057	Rehabilitation of RWI and RWPS of Jayuya WTP, Jayuya P.R.	2022-Q4	2025-Q3	2026-Q1	2026-Q1	\$11,300,878.93	SOW Submitted, Under National Workflow Process
WTP	CIP.2426099	Rehabilitation of Lares Indiera Alta WTP and RWI, Lares P.R.	2022-Q3	2025-Q4	2026-Q4	2026-Q4	\$6,500,000.00	Pending Scope & Cost Completion by Applicant
WTP	CIP.2426100	Rehabilitation of Lares Nueva Espino WTP and RWI	2021-Q3	2022-Q1	2024-Q1	2024-Q1	\$29,199,091.57	Obligated
WWTP	CIP.2475021	Rehabilitation of Barceloneta WWTP, Barceloneta P.R.	2022-Q3	2027-Q3	2028-Q3	2028-Q3	\$147,000,000.00	Pending Scope & Cost Completion by Applicant



Asset Category	Project	Description	A&E Start Quarter	SOW Submittal Quarter	Construction Start Quarter	SOW Close Out Submittal Quarter	Total Cost	Status
D&T-WL	CIP.2475022	Installation of Water Line at Río Utuado Bridge, Municipality of Utuado P.R.	2021-Q4	2022-Q1	2022-Q4	2022-Q4	\$976,149.39	Obligated
WTP	CIP.2479001	Rehabilitation of Morovis Sur RWI	2021-Q1	2021-Q1	2021-Q4	2021-Q4	\$3,312,000.37	Obligated
WTP	CIP.2526006	Rehabilitation of Morovis Sur WTP	2021-Q4	2022-Q3	2024-Q1	2024-Q1	\$44,667,580.24	Obligated
WTP	CIP.2526007	Rehabilitation of Morovis Urbano WTP	2022-Q4	2023-Q4	2024-Q2	2024-Q2	\$11,500,748.70	Obligated
D&T-WL	CIP.2526008	Improvements to the Water Distribution System in Morovis P.R.	2022-Q3	2024-Q2	2024-Q4	2024-Q4	\$37,131,501.24	Obligated
D&T-WL	CIP.2549000	Rehabilitation of Transmission and Distribution System at Naranjito, P.R.	2022-Q3	2026-Q1	2028-Q3	2028-Q3	\$57,389,636.61	Pending Scope & Cost Completion by Applicant
WTP	CIP.2596004	Rehabilitation of Quebradillas WTP and RWI (Include 406 Project CIP-2595016)	2022-Q2	2024-Q4	2026-Q2	2026-Q2	\$81,276,059.99	Pending Scope & Cost Completion by Applicant
D&T-WL	CIP.2709001	Design and Construction of 6" WL, El Tocon Sector, Quebrada Cruz Ward, Municipality of Toa Alta P.R.	2022-Q4	2023-Q1	2023-Q3	2023-Q3	\$1,823,492.10	Obligated
D&T-WL	CIP.2709002	Design and Construction of 4" WL, Villa Esperanza Community, Municipality of Toa Alta, P.R.	2022-Q4	2024-Q2	2024-Q3	2024-Q3	\$3,548,525.38	Obligated
TSL	CIP.2709010	Improvements to the Teefrans TSL, Municipality of Arecibo	2022-Q1	2023-Q3	2024-Q1	2024-Q1	\$9,170,127.62	Obligated



Asset Category	Project	Description	A&E Start Quarter	SOW Submittal Quarter	Construction Start Quarter	SOW Close Out Submittal Quarter	Total Cost	Status
WTP	CIP.2736005	Rehabilitation of Utuado Mameyes Limon (Arriba) WTP and RWI, Utuado P.R.	2022-Q3	2027-Q1	2027-Q2	2027-Q2	\$20,159,120.17	Pending Scope & Cost Completion by Applicant
WTP	CIP.2736006	Rehabilitation of Utuado Mameyes WTP and RWI	2022-Q3	2027-Q1	2028-Q1	2028-Q1	\$11,427,268.38	Pending Scope & Cost Completion by Applicant
WTP	CIP.2739001	Rehabilitation of Lago Viví RWI	2021-Q3	2023-Q2	2025-Q1	2025-Q1	\$7,244,094.02	Obligated
TSL	CIP.2755055	Rehabilitation of Vega Baja Trunk Sewer Lines (TSL)	2021-Q3	2021-Q4	2023-Q2	2023-Q2	\$10,415,524.71	Obligated
WTP	CIP.2916002	Rehabilitation of Arecibo Superacueductos WTP (Santiago Vazquez WTP & RWI)	2022-Q2	2026-Q2	2026-Q4	2026-Q4	\$125,000,000.00	Pending Scope & Cost Completion by Applicant
WST	CIP.3009001	Rehabilitation of Tanks Phase 1- East Region	2021-Q4	2022-Q1	2023-Q2	2023-Q2	\$4,699,526.63	Obligated
WPS	CIP.3009103	Rehabilitation of Water Pump Stations Tanks Phase 1- East Region	2022-Q3	2024-Q2	2024-Q2	2024-Q2	\$9,599,772.81	Obligated
WWPS	CIP.3009104	Rehabilitation of Wastewater Pump Stations Phase 1- East Region	2023-Q2	2025-Q3	2026-Q2	2026-Q2	\$8,103,745.52	SOW Submitted, Under National Workflow Process
RWW	CIP.3009106	Rehabilitation of Raw Water Wells Phase 1- East Region	2022-Q2	2022-Q4	2023-Q3	2023-Q3	\$2,833,829.52	Obligated
WTP	CIP.3106105	Rehabilitation of Barranquitas La Boca WTP and RWI, Barranquitas P.R.	2023-Q2	2026-Q1	2026-Q2	2026-Q2	\$20,000,000.00	Pending Scope & Cost Completion by Applicant



Asset Category	Project	Description	A&E Start Quarter	SOW Submittal Quarter	Construction Start Quarter	SOW Close Out Submittal Quarter	Total Cost	Status
WTP	CIP.3106106	Rehabilitation of Barranquitas Barrancas WTP and RWI, Barranquitas P.R.	2022-Q3	2025-Q3	2026-Q4	2026-Q4	\$15,000,000.00	SOW Submitted, Under National Workflow Process
B	CIP.3130001	PRASA Central Laboratory in Caguas P.R.	2021-Q1	2021-Q1	2020-Q4	2020-Q4	\$36,143,276.51	Obligated
WWTP	CIP.3135079	Rehabilitation of Blowers in Caguas WWTP	2021-Q1	2021-Q4	2019-Q4	2019-Q4	\$5,933,487.32	Obligated
WTP	CIP.3136012	Rehabilitation of Caguas Norte WTP	2022-Q3	2024-Q4	2026-Q1	2026-Q1	\$109,871,885.89	Obligated
B	CIP.3139000	New Central Laboratory Caguas- Equipment, Caguas P.R.	2021-Q1	2022-Q1	2023-Q4	2023-Q4	\$8,200,369.34	Obligated
WWTP	CIP.3139001	Rehabilitation of Caguas WWTP, Caguas P.R.	2022-Q1	2026-Q3	2026-Q4	2026-Q4	\$234,243,095.86	Pending Scope & Cost Completion by Applicant
TSL	CIP.3139002	Rehabilitation of Caguas Trunk Sewer Lines	2021-Q3	2021-Q4	2023-Q2	2023-Q2	\$35,715,288.61	Obligated
D&T-WL	CIP.3139004	Extension to Water System Aguas Buenas Mulas Tizas, Aguas Buenas P.R.	2023-Q2	2023-Q4	2025-Q1	2025-Q1	\$5,989,000.00	Obligated
WTP	CIP.3156093	Rehabilitation of Río Grande El Yunque WTP	2022-Q1	2023-Q4	2026-Q2	2026-Q2	\$60,724,685.64	Obligated
WTP	CIP.3156094	Replacement of RWI at Mameyes River for the Yunque WTP	2022-Q3	2024-Q2	2026-Q1	2026-Q1	\$29,126,376.79	Obligated
WTP	CIP.3186003	Rehabilitation of El Farallon WTP	2022-Q3	2024-Q3	2026-Q1	2026-Q1	\$37,181,673.05	SOW Submitted, Under National Workflow Process
B	CIP.3188001	Rehabilitation of Cayey Operations Office, Cayey PR	2023-Q2	2023-Q4	2024-Q4	2024-Q4	\$2,546,317.88	Obligated



Asset Category	Project	Description	A&E Start Quarter	SOW Submittal Quarter	Construction Start Quarter	SOW Close Out Submittal Quarter	Total Cost	Status
WWTP	CIP.3236247	Rehabilitation of Comerío WWTP	2022-Q2	2029-Q1	2029-Q4	2029-Q4	\$0.00	See Note 1
WWTP	CIP.3279001	Rehabilitation of Switchgear Fajardo WWTP	2023-Q3	2025-Q1	2026-Q2	2026-Q2	\$13,505,945.51	SOW Submitted, Under National Workflow Process
WWTP	CIP.3305001	Improvements to Guayama WWTP	2021-Q1	2021-Q1	2022-Q3	2022-Q3	\$97,836,624.28	Obligated
WWTP	CIP.3365083	Rehabilitation of Humacao Waste Water Treatment Plant (WWTP) Sludge Treatment System (STS)	2021-Q2	2021-Q3	2022-Q2	2022-Q2	\$13,268,683.90	Obligated
WTP	CIP.3366005	Rehabilitation of Humacao WTP	2023-Q2	2029-Q2	2030-Q1	2030-Q1	\$0.00	See Note 1
WTP	CIP.3405005	Valenciano WTP Expansion (404)	2023-Q3	2027-Q3	2028-Q3	2028-Q3	\$75,292,675.58	Other Funds not evaluated by FEMA PA, project on-going
D&T-WL	CIP.3405006	Valenciano Water Distribution System (404)	2023-Q3	2027-Q4	2028-Q3	2028-Q3	\$154,695,184.90	Other Funds not evaluated by FEMA PA, project on-going
WTP	CIP.3405007	Valenciano Dam and RWI (404)	2023-Q3	2026-Q3	2027-Q1	2027-Q1	\$187,656,787.30	Other Funds not evaluated by FEMA PA, project on-going
WWPS	CIP.3445009	Design and Build La Sabana Las Piedras WWPS	2021-Q2	2021-Q2	2022-Q1	2022-Q1	\$645,565.93	Obligated
WTP	CIP.3536006	Rehabilitation Naguabo Río Blanco WTP, Naguabo P.R.	2022-Q1	2025-Q4	2026-Q3	2026-Q3	\$66,514,007.13	Pending Scope & Cost Completion by Applicant



Asset Category	Project	Description	A&E Start Quarter	SOW Submittal Quarter	Construction Start Quarter	SOW Close Out Submittal Quarter	Total Cost	Status
WWTP	CIP.3765002	Rehabilitation Vieques WWTP	2022-Q1	2023-Q4	2024-Q4	2024-Q4	\$60,970,385.09	Obligated
WWTP	CIP.3785018	Elimination of Yabucoa WWTP	2023-Q3	2027-Q3	2028-Q2	2028-Q2	\$37,433,088.56	Pending Scope & Cost Completion by Applicant
WST	CIP.4009001	Rehabilitation of Tanks Phase 1- South Region	2021-Q1	2022-Q1	2022-Q3	2022-Q3	\$4,846,362.89	Obligated
WST & WPS	CIP.4009103	Rehabilitation of Water Pump Stations Tanks Phase 1- South Region	2022-Q3	2023-Q2	2024-Q2	2024-Q2	\$8,372,853.95	Obligated
WWPS	CIP.4009104	Rehabilitation of Wastewater Pump Stations Phase 1- South Region	2023-Q1	2025-Q3	2026-Q2	2026-Q2	\$11,416,102.40	SOW Submitted, Under National Workflow Process
RWW	CIP.4009106	Rehabilitation of Raw Water Well Phase 1- South Region	2022-Q1	2023-Q2	2023-Q4	2023-Q4	\$5,196,351.81	Obligated
WTP	CIP.4046010	Rehabilitation of RWI Rio Añasco and Desander	2021-Q1	2026-Q4	2027-Q1	2027-Q1	\$22,058,651.64	Pending Scope & Cost Completion by Applicant
TSL	CIP.4089000	Rehabilitation of Arroyo-Guayama Trunk Sewer Lines	2021-Q1	2021-Q4	2022-Q3	2022-Q3	\$23,021,961.28	Obligated
TSL	CIP.4299000	Rehabilitation of Barriada Esperanza Guanica Trunk Sewer System	2022-Q4	2024-Q3	2026-Q2	2026-Q2	\$8,797,782.57	SOW Submitted, Under National Workflow Process
WTP	CIP.4316007	Rehabilitation of Jaguas Pasto Guayanilla WTP	2021-Q4	2024-Q4	2025-Q3	2025-Q3	\$16,810,156.08	SOW Submitted, Under National Workflow Process
WWTP	CIP.4495001	Rehabilitation or Elimination of Maunabo WWTP	2021-Q4	2024-Q2	2026-Q2	2026-Q2	\$54,137,758.87	SOW Submitted, Under National Workflow Process



Asset Category	Project	Description	A&E Start Quarter	SOW Submittal Quarter	Construction Start Quarter	SOW Close Out Submittal Quarter	Total Cost	Status
WPS	CIP.4555016	D&B Rehabilitation San Miguel Water Pump Station Orocovis, PR (Emergency combined with Fiona)	2023-Q4	2024-Q4	2023-Q4	2023-Q4	\$1,963,214.26	Obligated
WTP	CIP.4556009	Rehabilitation of Sanamuertos Orocovis WTP, Orocovis P.R.	2022-Q4	2025-Q4	2026-Q3	2026-Q3	\$20,928,599.62	Pending Scope & Cost Completion by Applicant
D&T-WL	CIP.4559002	Replacement of WL El Gato Ward, Orocovis, PR	2022-Q4	2023-Q1	2023-Q4	2023-Q4	\$2,854,382.90	Obligated
WTP	CIP.4576002	Rehabilitation of Peñuelas WTP	2023-Q3	2024-Q4	2026-Q1	2026-Q1	\$19,435,008.86	Obligated
WTP	CIP.4586070	Ponce Vieja/Nueva WTP	2021-Q1	2028-Q2	2029-Q1	2029-Q1	\$42,283,286.81	Pending Scope & Cost Completion by Applicant
TSL	CIP.4589003	Rehabilitation of Ponce Trunk Sewer System	2021-Q2	2021-Q4	2022-Q3	2022-Q3	\$21,346,114.08	Obligated
D&T-WL	CIP.4589006	Rehabilitation of WL La Yuca Sector, Ponce, PR	2022-Q4	2023-Q1	2023-Q3	2023-Q3	\$2,592,701.41	Obligated
D&T-WL	CIP.4589007	Rehabilitation of WL Sabanetas Sector, Ponce, PR .	2023-Q2	2023-Q4	2024-Q3	2024-Q3	\$6,218,304.79	Obligated
WTP	CIP.4646004	Raw Water Wells Closure/ Salinas WTP (FEMA-404)	2022-Q1	2024-Q4	2026-Q2	2026-Q2	\$47,889,281.68	Other Funds not evaluated by FEMA PA, project on-going
TSL	CIP.4649000	Replacement of TSL Santos Amadeo, Baldorioty & Miguel Casco Urban, Salinas	2023-Q1	2024-Q4	2026-Q1	2026-Q1	\$12,635,177.53	Obligated



Asset Category	Project	Description	A&E Start Quarter	SOW Submittal Quarter	Construction Start Quarter	SOW Close Out Submittal Quarter	Total Cost	Status
WWTP	CIP.4695042	Rehabilitation of Santa Isabel WWTP, Santa Isabel P.R.	2022-Q1	2026-Q1	2026-Q4	2026-Q4	\$75,947,967.93	Pending Scope & Cost Completion by Applicant
WTP	CIP.4776077	Elimination of Villalba Apeadero WTP and Aceituna WTP	2022-Q1	2026-Q1	2027-Q1	2027-Q1	\$21,106,334.92	Pending Scope & Cost Completion by Applicant
WTP	CIP.4776078	Rehabilitation of Jagueyes Villalba WTP	2022-Q1	2023-Q4	2026-Q1	2026-Q1	\$20,861,304.41	Obligated
WTP	CIP.4796004	Rehabilitation of Yauco Río Prieto WTP, Yauco P.R.	2023-Q2	2026-Q4	2027-Q3	2027-Q3	\$20,398,500.00	Pending Scope & Cost Completion by Applicant
WST	CIP.5009001	Rehabilitation of Tanks Phase 1- West Region	2022-Q1	2022-Q4	2023-Q1	2023-Q1	\$4,141,358.29	Obligated
WPS	CIP.5009103	Rehabilitation of Water Pump Stations Tanks Phase 1- West Region	2023-Q1	2025-Q4	2026-Q4	2026-Q4	\$8,794,205.77	Pending Scope & Cost Completion by Applicant
WWPS	CIP.5009104	Rehabilitation of Wastewater Pump Stations Tanks Phase 1- West Region	2023-Q1	2026-Q1	2027-Q1	2027-Q1	\$10,915,936.59	Pending Scope & Cost Completion by Applicant
RWW	CIP.5009106	Rehabilitation of Raw Water Well Phase 1- West Region	2022-Q3	2025-Q4	2026-Q4	2026-Q4	\$5,650,117.82	Pending Scope & Cost Completion by Applicant
WWTP	CIP.5035001	Rehabilitation of Aguada WWTP	2022-Q2	2028-Q1	2029-Q1	2029-Q1	\$14,000,000.00	Pending Scope & Cost Completion by Applicant
WTP	CIP.5036006	Rehabilitation Aguadilla Montaña WTP, Aguadilla P.R.	2023-Q2	2026-Q4	2027-Q3	2027-Q3	\$40,000,000.00	Pending Scope & Cost Completion by Applicant



Asset Category	Project	Description	A&E Start Quarter	SOW Submittal Quarter	Construction Start Quarter	SOW Close Out Submittal Quarter	Total Cost	Status
WWTP	CIP.5375021	Elimination of WWTP Isabela	2021-Q2	2026-Q4	2027-Q3	2027-Q3	\$109,198,381.22	Pending Scope & Cost Completion by Applicant
R	CIP.5376001	Repair of Geosynthetic Membranes in Lago Regulador in Isabela P.R.	2021-Q2	2021-Q2	2024-Q2	2024-Q2	\$25,818,832.43	Obligated
WTP	CIP.5379002	Guajataca Floating RWI	2022-Q1	2022-Q3	2023-Q3	2023-Q3	\$8,862,384.55	Obligated
WWTP	CIP.5415031	Rehabilitation of Lajas WWTP	2022-Q2	2026-Q2	2027-Q1	2027-Q1	\$15,808,765.45	Pending Scope & Cost Completion by Applicant
WTP	CIP.5486006	Rehabilitation of Monte del Estado Maricao WTP	2022-Q3	2026-Q2	2027-Q1	2027-Q1	\$17,458,238.51	Pending Scope & Cost Completion by Applicant
WTP	CIP.5486007	Rehabilitation of Maricao WTP, Maricao P.R.	2023-Q2	2025-Q4	2026-Q3	2026-Q3	\$12,000,000.00	Pending Scope & Cost Completion by Applicant
WTP	CIP.5489001	Rehabilitation of Maricao Monte del Estado RWI	2022-Q3	2024-Q3	2026-Q1	2026-Q1	\$11,892,337.83	SOW Submitted, Under National Workflow Process
WWTP	CIP.5505028	Rehabilitation of Mayaguez WWTP	2021-Q2	2023-Q4	2025-Q3	2025-Q3	\$123,345,661.01	Obligated
WTP	CIP.5506044	Rehabilitation of Miradero Mayagüez RWI	2022-Q1	2024-Q2	2026-Q2	2026-Q2	\$50,362,407.56	SOW Submitted, Under National Workflow Process
WTP	CIP.5506046	Rehabilitation of Ponce de Leon Mayaguez WTP	2023-Q1	2026-Q3	2027-Q2	2027-Q2	\$35,000,000.00	Pending Scope & Cost Completion by Applicant



Asset Category	Project	Description	A&E Start Quarter	SOW Submittal Quarter	Construction Start Quarter	SOW Close Out Submittal Quarter	Total Cost	Status
WTP	CIP.5506047	Rehabilitation of Miradero Mayaguez WTP	2022-Q3	2026-Q2	2027-Q1	2027-Q1	\$48,301,783.52	Pending Scope & Cost Completion by Applicant
TSL	CIP.5509001	Rehabilitation of Hormigueros and Mayaguez Trunk Sewer Lines	2022-Q1	2021-Q4	2023-Q4	2023-Q4	\$33,241,482.06	Obligated
OO	CIP.5509105	Rehabilitation of Mayaguez Ocean Outfall	2023-Q1	2026-Q4	2027-Q1	2027-Q1	\$185,000,000.00	Pending Scope & Cost Completion by Applicant
D&T-WL	CIP.5609001	Installation of 12" Water Line on PR-115, Rincón P.R.	2023-Q3	2025-Q4	2028-Q3	2028-Q3	\$8,955,192.02	Pending Scope & Cost Completion by Applicant
TSL	CIP.5685000	Replacement of Trunk Sewer Lines (TSL) in San Sebastián	2022-Q4	2026-Q3	2027-Q1	2027-Q1	\$19,157,736.74	Pending Scope & Cost Completion by Applicant
WM	CIP.6009002	Water Meters Pilot Project	2021-Q3	2021-Q4	2024-Q1	2024-Q1	\$4,116,665.68	Obligated
D&T-WL	CIP.7349002	Hatillo -New Distribution System Campo Alegre Ward, Sectors 10, Hatillo P.R.	2022-Q3	2024-Q1	2024-Q4	2024-Q4	\$10,286,276.04	Obligated
D	CIP.7776071	Rehabilitation of Toa Vaca Dam, Villalba P.R.	2021-Q2	2025-Q4	2025-Q4	2025-Q4	\$7,175,120.28	Pending Scope & Cost Completion by Applicant



Asset Category	Project	Description	A&E Start Quarter	SOW Submittal Quarter	Construction Start Quarter	SOW Close Out Submittal Quarter	Total Cost	Status
D&T-WL	Several East Region (3-18-5019)	Replacement of Water Pipelines at East Region Phase 1 (CIP.3046007- Sumideros Ward, Aguas Buenas; CIP.3136015-Urb. Mirador, Caguas; CIP.3185018- Replacement of 4", Maton Arriba Ward, Calle Jorge Rochi, Cayey; CIP.3185019- PR-1 Km. 61, Maton C1Arriba Ward, Cayey; CIP.3279002- Damajagua Ward, Fajardo; CIP.3279003- PR-978,Ceiba;CIP.3279004-PR-976, Volatín Ward, Fajardo)	2023-Q2	2023-Q4	2024-Q3	2024-Q3	\$11,775,308.13	Obligated
D&T-WL	Several Metro Region (1-01-9003)	Replacement of Water Pipelines at Metro Region Phase 1 (CIP-1159001-Urb. Loiza Valley, Canóvanas; CIP-1169002-Urb. Villa Fontana, Carolina; CIP-1665120-Urb. Country Club, San Juan; ; CIP-1669101- Urb. Country Club, Carolina; CIP-1019003 Ave. Juan Ponce de Leon, Bo. Amelia)	2023-Q2	2024-Q2	2024-Q4	2024-Q4	\$17,501,973.18	Obligated
D&T-WL	Several North Region (2-38-9001)	Replacement of Water Pipelines at North Region Phase 1(CIP-2071001 La Pica, El Peje and Sabana Hoyos, Vega Alta; CIP-2389001- Tetuan III , Jayuya; CIP-2479000 Sector Boquillas,Manatí.)	2023-Q2	2024-Q2	2024-Q4	2024-Q4	\$12,237,478.13	Obligated



Asset Category	Project	Description	A&E Start Quarter	SOW Submittal Quarter	Construction Start Quarter	SOW Close Out Submittal Quarter	Total Cost	Status
D&T-WL	Several South Region (4-08-9001)	Replacement of Water Pipelines at South Region Phase 1 (CIP.4089001- Buena Vista Sector, Arroyo; CIP.4229003- PR-155 Sector Farallones, Coamo ; CIP.4229004- PR-150 Santa Catalina and San Ildefonso, Coamo; CIP.4319001- Indios Ward, Guayanilla; CIP.4399000- Collores Sector PR 512, Juana Diaz; CIP.4779001-RLimón Sector, Villalba; CIP.4779002- Chichón Sector, Villalba)	2023-Q2	2024-Q1	2024-Q4	2024-Q4	\$23,244,291.77	Obligated
D&T-WL	Several West Region (5-06-9000)	Replacement of Water Pipelines at West Region Phase 1 (CIP.5069000-Parcelas Aqlas Aquilino, Añasco; CIP. 5379000-Chevín Sector, Isabela; CIP.5509000- París Ward, Mayaguez ;CIP. 5579003- PR-412, Corea Sector, Rincón;CIP.5609002- Camino Blanco Black Eagle, Rincón ;CIP.5609004- PR-412, Rincón; CIP.5639000- Azucena and Parcela Lluveras, Sabana Grand;CIP.5685006- Villa Rita , San Sebastián)	2023-Q2	2023-Q4	2024-Q3	2024-Q3	\$20,241,989.74	Obligated



Note 1:

PRASA is evaluating if the project can be performed through FEMA funds. The infrastructure projects cost in Puerto Rico has increased significantly. This situation is what PRASA is experiencing with the development of the FAASSt projects. The material price hikes, contractors, and skilled labor shortages due to the reconstruction needs throughout the island and increased lead times will result in a continuous increase of construction costs and more extended periods to complete FAASSt projects. The impact of increased construction costs will result in a reduced number of projects PRASA will be able to execute and may impede the proper reconstruction of the infrastructure required to continue providing an essential service to the people of Puerto Rico, as it is a safe drinking water service and proper treatment of the wastewater across the island.



7.2 Appendix A: Table A.2- List of PRASA Projects FAASt Mid-Term

Asset Category	Project	Description	A&E Start Quarter	SOW Submittal Quarter	Construction Start Quarter	SOW Close Out Submittal Quarter	Total Cost	Status
R	CIP.1001001	Metropolitan Multi- Reservoir System	2027-Q3	2028-Q3	2029-Q2	2029-Q2	\$2,000,000.00	Pending Scope & Cost Completion by Applicant
WTP	CIP.1076050	Rehabilitation of Superacuedictos Intake	2025-Q2	2026-Q2	2027-Q1	2027-Q1	\$90,000,000.00	Pending Scope & Cost Completion by Applicant
WPS	CIP.1155017	Finca Rosso 1 Pump Station Microgrid Bayamón, PR	2024-Q2	2027-Q1	2027-Q2	2027-Q2	\$26,654,499.65	Pending Scope & Cost Completion by Applicant
WTP	CIP.1156005	Rehabilitation of Canóvanas Nueva WTP and RWI	2027-Q1	2029-Q1	2029-Q4	2029-Q4	\$0.00	See Note 1
WTP	CIP.1325016	Guaynabo Water Treatment Plant-Microgrid, Guaynabo, PR	2024-Q1	2027-Q1	2027-Q2	2027-Q2	\$7,324,491.58	Pending Scope & Cost Completion by Applicant
WWTP	CIP.1455017	Carolina Regional WWTP & Torrecillas WWTPas WWTP Microgrid Loiza, PR	2024-Q2	2027-Q4	2028-Q3	2028-Q3	\$26,626,500.00	Pending Scope & Cost Completion by Applicant
D	CIP.1666090	Improvements to La Plata Dam-Installation of Anchors, San Juan P.R.	2027-Q1	2028-Q1	2028-Q2	2028-Q2	\$4,033,418.81	Pending Scope & Cost Completion by Applicant
B	CIP.1669003	Rehabilitation of PRASA Main Building, San Juan P.R.	2024-Q1	2027-Q1	2027-Q4	2027-Q4	\$23,133,539.74	Pending Scope & Cost Completion by Applicant
WTP	CIP.1705065	Rehabilitation of La Plata Dam RWI & Pump System, Toa Alta, PR	2025-Q1	2028-Q1	2028-Q4	2028-Q4	\$15,000,000.00	Pending Scope & Cost Completion by Applicant



Asset Category	Project	Description	A&E Start Quarter	SOW Submittal Quarter	Construction Start Quarter	SOW Close Out Submittal Quarter	Total Cost	Status
WTP	CIP.1715016	Sergio Cuevas WTP & Cupey PS Microgrid Trujillo Alto, PR	2024-Q2	2027-Q3	2028-Q3	2028-Q3	\$66,873,399.30	Pending Scope & Cost Completion by Applicant
WWTP	CIP.2095016	Barceloneta Regional WWTP Microgrid Barceloneta,PR	2024-Q2	2027-Q4	2028-Q3	2028-Q3	\$58,147,624.21	Pending Scope & Cost Completion by Applicant
WWTP	CIP.2269002	Elimination of Several WWTP North Region	2025-Q2	2027-Q1	2028-Q1	2028-Q1	\$796,567,061.23	Pending Scope & Cost Completion by Applicant
WTP	CIP.2386048	Redundancy of Jayuya La Pica WTP and RWI	2027-Q2	2028-Q4	2029-Q2	2029-Q2	\$6,665,220.42	Pending Scope & Cost Completion by Applicant
WTP	CIP.2425017	Rehabilitation of Raw Water Intake Lares Espino WTP Lares, PR	2024-Q2	2026-Q2	2027-Q1	2027-Q1	\$6,452,373.33	Pending Scope & Cost Completion by Applicant
WWTP	CIP.2545006	Rehabilitation of Naranjito WWTP	2027-Q2	2029-Q1	2029-Q4	2029-Q4	\$0.00	See Note 1
WTP	CIP.2555016	Raw Water Intake Sana Muertos Orocovis, PR	2024-Q2	2026-Q2	2027-Q1	2027-Q1	\$6,792,475.67	Pending Scope & Cost Completion by Applicant
WTP	CIP.2595016	Quebradillas WTP Microgrid Quebradillas, PR (Included in Project CIP-2-59-6004)	2024-Q2	2027-Q1	2027-Q2	2027-Q2	\$8,780,336.56	Pending Scope & Cost Completion by Applicant
WWTP	CIP.3056002	Rehabilitation of Aibonito WWTP	2026-Q4	2029-Q1	2029-Q4	2029-Q4	\$0.00	See Note 1
WWTP	CIP.3105032	Rehabilitation of Barranquitas WWTP	2027-Q1	2029-Q1	2029-Q4	2029-Q4	\$0.00	See Note 1
WTP	CIP.3106104	Rehabilitation of Barranquitas WTP and RWI	2025-Q1	2029-Q1	2029-Q4	2029-Q4	\$0.00	See Note 1



Asset Category	Project	Description	A&E Start Quarter	SOW Submittal Quarter	Construction Start Quarter	SOW Close Out Submittal Quarter	Total Cost	Status
B	CIP.3130004	New Central Laboratory Caguas- Phase II, Caguas P.R.	2027-Q1	2028-Q4	2029-Q2	2029-Q2	\$6,711,000.00	Pending Scope & Cost Completion by Applicant
B	CIP.3135017	PRASA Central Laboratory, Caguas-Microgrid Caguas, PR	2024-Q2	2029-Q1	2030-Q1	2030-Q1	\$17,953,584.77	Pending Scope & Cost Completion by Applicant
WTP	CIP.3135018	Caguas Norte WTP Microgrid Caguas, PR	2024-Q2	2028-Q1	2028-Q4	2028-Q4	\$20,383,274.74	Pending Scope & Cost Completion by Applicant
WWTP	CIP.3135019	Caguas WWTP Microgrid Caguas, PR	2024-Q2	2027-Q4	2028-Q3	2028-Q3	\$58,147,624.21	Pending Scope & Cost Completion by Applicant
WTP	CIP.3136013	Rehabilitation of Caguas Sur WTP	2026-Q1	2028-Q4	2029-Q2	2029-Q2	\$9,419,354.05	Pending Scope & Cost Completion by Applicant
WWTP	CIP.3185033	Rehabilitation of Cayey WWTP	2026-Q1	2029-Q1	2029-Q4	2029-Q4	\$0.00	See Note 1
WTP	CIP.3186002	Rehabilitation of Cayey Urbana WTP	2025-Q1	2029-Q1	2029-Q4	2029-Q4	\$0.00	See Note 1
WWTP	CIP.3195016	Cayey Regional WWTP Microgrid Cayey, PR	2024-Q2	2028-Q1	2028-Q4	2028-Q4	\$24,104,809.69	Pending Scope & Cost Completion by Applicant
WTP	CIP.3239005	Rehabilitation of Comerío WTP	2024-Q1	2027-Q1	2027-Q4	2027-Q4	\$18,364,035.73	Pending Scope & Cost Completion by Applicant
WWTP	CIP.3275017	Fajardo Regional WWTP Microgrid Fajardo	2024-Q2	2028-Q1	2028-Q4	2028-Q4	\$32,930,724.56	Pending Scope & Cost Completion by Applicant



Asset Category	Project	Description	A&E Start Quarter	SOW Submittal Quarter	Construction Start Quarter	SOW Close Out Submittal Quarter	Total Cost	Status
WTP	CIP.3275019	Fajardo WTP & Dam Microgrid Fajardo, PR	2024-Q2	2028-Q1	2028-Q4	2028-Q4	\$32,930,724.56	Pending Scope & Cost Completion by Applicant
WTP	CIP.3276053	Rehabilitation of Fajardo WTP	2024-Q3	2028-Q1	2028-Q4	2028-Q4	\$11,513,559.86	Pending Scope & Cost Completion by Applicant
WWTP	CIP.3366001	Rehabilitation of Humacao WWTP	2024-Q3	2027-Q4	2028-Q2	2028-Q2	\$25,200,000.00	Pending Scope & Cost Completion by Applicant
WTP	CIP.3466005	Rehabilitation of Luquillo-Sabana WTP	2027-Q1	2029-Q1	2029-Q4	2029-Q4	\$0.00	See Note 1
WTP	CIP.3535016	Río Blanco WTP Microgrid Naguabo, PR	2024-Q2	2027-Q1	2027-Q4	2027-Q4	\$51,812,399.30	Pending Scope & Cost Completion by Applicant
WTP	CIP.3615017	El Yunque WTP Microgrid Río Grande, PR	2024-Q2	2027-Q3	2028-Q2	2028-Q2	\$32,930,724.56	Pending Scope & Cost Completion by Applicant
WTP	CIP.3679005	Rehabilitation of Nueva Bo. Espino WTP, San Lorenzo (CDBG-MIT)	2026-Q1	2027-Q1	2028-Q1	2028-Q1	\$43,322,815.05	Other Funds not evaluated by FEMA PA, project on-going
WWTP	CIP.3755016	Vieques WWTP Microgrid Vieques, P.R.	2024-Q1	2026-Q2	2027-Q2	2027-Q2	\$20,392,159.19	Pending Scope & Cost Completion by Applicant
R	CIP.4009000	Bauta Tunnel (FEMA 404/CDBG-MIT)	2024-Q2	2027-Q2	2028-Q1	2028-Q1	\$162,000,233.05	Other Funds not evaluated by FEMA PA, project on-going



Asset Category	Project	Description	A&E Start Quarter	SOW Submittal Quarter	Construction Start Quarter	SOW Close Out Submittal Quarter	Total Cost	Status
WTP	CIP.4016008	Rehabilitation of Adjuntas Olimpia WTP	2025-Q4	2029-Q1	2029-Q4	2029-Q4	\$0.00	See Note 1
WTP	CIP.4016012	Rehabilitation of Adjuntas Guilarte WTP	2024-Q1	2026-Q3	2027-Q1	2027-Q1	\$9,044,687.36	Pending Scope & Cost Completion by Applicant
WWTP	CIP.4305016	Guayama Regional WWTP Microgrid Guayama, PR	2024-Q2	2028-Q2	2029-Q1	2029-Q1	\$32,930,724.56	Pending Scope & Cost Completion by Applicant
WWPS	CIP.4495016	Maunabo WWPS & Guardarraya WWPS Microgrid Maunabo, PR (Included in CIP- 4-49-5001)	2024-Q2	2028-Q1	2028-Q4	2028-Q4	\$6,064,313.26	Pending Scope & Cost Completion by Applicant
WWTP	CIP.4585018	Ponce Regional WWTP Microgrid Ponce, PR	2024-Q2	2027-Q1	2027-Q2	2027-Q2	\$26,626,499.65	Pending Scope & Cost Completion by Applicant
WWTP	CIP.4585096	Rehabilitation of Ponce WWTP	2026-Q3	2028-Q1	2028-Q3	2028-Q3	\$45,000,000.00	Pending Scope & Cost Completion by Applicant
WWTP	CIP.4685016	Santa Isabel WWTP Microgrid Santa Isabel, PR	2024-Q1	2028-Q4	2029-Q2	2029-Q2	\$20,322,274.74	Pending Scope & Cost Completion by Applicant
WTP	CIP.4797005	Rehabilitaion of RWI of Río Prieto WTP, Yauco, PR	2024-Q4	2027-Q1	2027-Q4	2027-Q4	\$10,654,166.67	Pending Scope & Cost Completion by Applicant
WTP	CIP.5035016	Río Culebrinas Raw Water Intake/Dam Microgrid Aguadilla, PR	2024-Q2	2027-Q4	2028-Q3	2028-Q3	\$58,208,624.21	Pending Scope & Cost Completion by Applicant



Asset Category	Project	Description	A&E Start Quarter	SOW Submittal Quarter	Construction Start Quarter	SOW Close Out Submittal Quarter	Total Cost	Status
WPS	CIP.5035017	Calero Reservoir Dam (Calero Raw Water PS) Microgrid Aguadilla, PR	2024-Q2	2028-Q1	2028-Q4	2028-Q4	\$32,960,724.56	Pending Scope & Cost Completion by Applicant
WTP	CIP.5037006	Rehabilitation of RWI of Calero WTP, Aguadilla, PR	2025-Q1	2026-Q4	2027-Q3	2027-Q3	\$24,833,564.58	Pending Scope & Cost Completion by Applicant
WPS	CIP.5065016	Río Añasco Raw Water Pump Station Microgrid Añasco, PR	2024-Q2	2028-Q2	2029-Q1	2029-Q1	\$51,873,399.30	Pending Scope & Cost Completion by Applicant
R	CIP.5066000	Casey Reservoir, Añasco	2024-Q3	2028-Q3	2029-Q2	2029-Q2	\$2,000,000.00	Pending Scope & Cost Completion by Applicant
D&T-WL	CIP.5067002	Improvements to Water System Community Del Hoyo de los Feos, Añasco P.R.	2027-Q1	2029-Q1	2029-Q4	2029-Q4	\$0.00	See Note 1
WWTP	CIP.5089000	Rehabilitation of Las Marías WWTP, Las Marias P.R.	2024-Q2	2027-Q1	2027-Q4	2027-Q4	\$15,000,000.00	Pending Scope & Cost Completion by Applicant
WTP	CIP.5375018	Isabela Urbana WTP Microgrid Isabela, PR	2024-Q2	2028-Q2	2029-Q1	2029-Q1	\$20,322,274.74	Pending Scope & Cost Completion by Applicant
WTP	CIP.5376006	Rehabilitation of Isabela Urbana WTP and RWI	2027-Q2	2029-Q1	2029-Q4	2029-Q4	\$0.00	See Note 1
WTP	CIP.5485005	Rehabilitation of Orama Maricao RWI, Maricao P.R.	2024-Q1	2026-Q1	2026-Q4	2026-Q4	\$10,204,158.25	Pending Scope & Cost Completion by Applicant
WTP	CIP.5485016	Monte del Estado WTP Microgrid Maricao, PR	2024-Q1	2028-Q4	2029-Q2	2029-Q2	\$1,892,778.32	Pending Scope & Cost Completion by Applicant



Asset Category	Project	Description	A&E Start Quarter	SOW Submittal Quarter	Construction Start Quarter	SOW Close Out Submittal Quarter	Total Cost	Status
WWTP	CIP.5505016	Mayaguez WWTP & Mayaguez Sludge Compos Fmpos Facility Microgrid Mayaguez, PR	2024-Q1	2027-Q2	2028-Q3	2028-Q3	\$45,538,174.39	Pending Scope & Cost Completion by Applicant
WTP	CIP.5505017	Ponce de León WTP Microgrid Mayaguez, PR	2024-Q2	2028-Q1	2028-Q4	2028-Q4	\$3,348,789.97	Pending Scope & Cost Completion by Applicant
WTP	CIP.5636006	Rehabilitation of Sabana Grande WTP and RWI	2027-Q1	2029-Q1	2029-Q4	2029-Q4	\$0.00	See Note 1
WTP	CIP.5656001	Rehabilitation of Caín Alto San Germán WTP and RWI	2027-Q3	2029-Q4	2030-Q3	2030-Q3	\$0.00	See Note 1
WTP	CIP.5686045	Rehabilitation of San Sebastian WTP and RWI	2026-Q1	2028-Q4	2029-Q2	2029-Q2	\$187,656,787.30	Pending Scope & Cost Completion by Applicant
WM	CIP.6000050	Rehabilitation of Remote Reading Meter Warehouse	2024-Q3	2021-Q4	2025-Q2	2025-Q2	\$4,758,648.00	Obligated
T	CIP.6002000	Green Dedicated Broadband Network for PRASA (CDBG-MIT)	2025-Q1	2026-Q3	2027-Q1	2027-Q1	\$48,000,000.00	Other Funds not evaluated by FEMA PA
B	CIP.6005000	Stand-By Power Generators (Islandwide)	2024-Q4	2025-Q4	2026-Q1	2026-Q1	\$32,895,600.00	Pending Scope & Cost Completion by Applicant
T	CIP.6009012	Telemetry Islandwide Project	2024-Q4	2025-Q3	2026-Q3	2026-Q3	\$10,298,582.00	SOW Submitted, Under National Workflow Process
WM	CIP.6009102	Water Meters Islandwide LS Project	2025-Q2	2021-Q4	2028-Q3	2028-Q3	\$786,332,317.63	Obligated



Asset Category	Project	Description	A&E Start Quarter	SOW Submittal Quarter	Construction Start Quarter	SOW Close Out Submittal Quarter	Total Cost	Status
D&T-WL	CIP.TBD	Installation of Redundancy Raw Water Pipeline from Toa Vaca to Ponce Service Area	2025-Q4	2026-Q1	2028-Q1	2028-Q1	\$89,366,100.00	Pending Scope & Cost Completion by Applicant
WTP	CIP.TBD	Protection Measure of Miradero Intake	2025-Q4	2025-Q4	2026-Q3	2026-Q3	\$11,000,000.00	Pending Scope & Cost Completion by Applicant

Note 1:

PRASA is evaluating if the project can be performed through FEMA funds. The infrastructure projects cost in Puerto Rico has increased significantly. This situation is what PRASA is experiencing with the development of the FAASt projects. The material price hikes, contractors, and skilled labor shortages due to the reconstruction needs throughout the island and increased lead times will result in a continuous increase of construction costs and more extended periods to complete FAASt projects. The impact of increased construction costs will result in a reduced number of projects PRASA will be able to execute and may impede the proper reconstruction of the infrastructure required to continue providing an essential service to the people of Puerto Rico, as it is a safe drinking water service and proper treatment of the wastewater across the island.



7.3 Appendix A: Table A.3- List of PRASA Projects FAASt Long-Term

Asset Category	Project	Description	A&E Start Quarter	SOW Submittal Quarter	Construction Start Quarter	SOW Close Out Submittal Quarter	Total Cost	Status
WWPS	CIP.1009104	Rehabilitation of Wastewater Pump Stations Tanks Phase 1- Metro Region	2028-Q2	2030-Q1	2030-Q4	2030-Q4	\$0.00	See Note 1
WPS	CIP.1669002	Rehabilitation of WPS of Puerto Nuevo and WL of 48", Municipality of San Juan	2043-Q2	2044-Q2	2044-Q4	2044-Q4	\$0.00	See Note 1
TSL	CIP.1705002	Rehabilitation of Bo. Sabana Seca TS, Toa Baja	2028-Q2	2029-Q2	2030-Q1	2030-Q1	\$0.00	See Note 1
TSL	CIP.1705003	Rehabilitation of Urb. Levittown TS, Toa Baja	2028-Q2	2029-Q2	2030-Q1	2030-Q1	\$0.00	See Note 1
WTP	CIP.2076041	Rehabilitation of Arecibo Urbano WTP (Superacueductos)	2032-Q3	2033-Q2	2034-Q1	2034-Q1	\$163,739.09	Pending Scope & Cost Completion by Applicant
WST & WPS	CIP.2076044	MCC installation at EBTk Half a Million	2028-Q2	2029-Q3	2030-Q2	2030-Q2	\$0.00	See Note 1
WST	CIP.3009101	Rehabilitation of Tanks Phase 2- East	2028-Q2	2029-Q2	2030-Q1	2030-Q1	\$0.00	See Note 1
WWPS	CIP.3009204	Rehabilitation of WWPS Phase 2- East Region	2045-Q1	2046-Q1	2046-Q4	2046-Q4	\$0.00	See Note 1
WWTP	CIP.3135010	Caguas-Elimination of WWTP Borinquen, Laterales Villa Sauri y 5 EBAS (Villa Caliz)	2028-Q3	2029-Q1	2029-Q4	2029-Q4	\$18,109,574.62	Pending Scope & Cost Completion by Applicant
D&T-WL	CIP.3136009	Improvements to the Water Supply System in Villa del Rey Ward in Caguas P.R.	2028-Q2	2029-Q3	2030-Q2	2030-Q2	\$0.00	See Note 1



Asset Category	Project	Description	A&E Start Quarter	SOW Submittal Quarter	Construction Start Quarter	SOW Close Out Submittal Quarter	Total Cost	Status
WWTP	CIP.3136014	Elimination of WWTP Parcealas Borinquen Caguas , PR	2032-Q2	2033-Q1	2033-Q3	2033-Q3	\$6,086,213.26	Pending Scope & Cost Completion by Applicant
WPS	CIP.3449002	Rehabilitation of WPS Represa La Sabana Cuesta Los Jobos	2028-Q2	2030-Q1	2030-Q4	2030-Q4	\$0.00	See Note 1
WPS	CIP.3789001	Rehabilitation of WPS Represa Central Roig	2028-Q2	2030-Q1	2030-Q4	2030-Q4	\$0.00	See Note 1
WST	CIP.4009101	Rehabilitation of Tanks Phase 2-South Region	2028-Q2	2029-Q4	2030-Q3	2030-Q3	\$0.00	See Note 1
WWPS	CIP.4009204	Rehabilitation of Wastewater Pump Stations Tanks Phase 2- South Region	2045-Q1	2045-Q2	2046-Q1	2046-Q1	\$0.00	See Note 1
WWTP	CIP.4315010	Elimination of Guayanilla WWTP, Guayanilla PR	2028-Q4	2027-Q2	2027-Q4	2027-Q4	\$22,140,096.91	Pending Scope & Cost Completion by Applicant
WPS	CIP.4317001	Construction Sector Ballinó Guayanilla WPS	2028-Q2	2029-Q3	2030-Q2	2030-Q2	\$0.00	See Note 1
WWTP	CIP.4555022	Rehabilitation of Orocovis WWTP	2028-Q1	2030-Q1	2030-Q4	2030-Q4	\$0.00	See Note 1
TSL	CIP.4576008	Rehabilitation of Wastewater Lines Urb. Alturas de Peñuelas	2028-Q2	2029-Q3	2030-Q2	2030-Q2	\$0.00	See Note 1
WWTP	CIP.4795022	Rehabilitation of Yauco WWTP	2032-Q3	2033-Q1	2033-Q3	2033-Q3	\$12,769,782.84	Pending Scope & Cost Completion by Applicant
WTP	CIP.4796005	Rehabilitation Yauco Rancheras WTP	2028-Q2	2030-Q1	2030-Q4	2030-Q4	\$0.00	See Note 1
D&T-WL	CIP.5506042	Improvements to the Water Supply System in Mayaguez Mall	2028-Q2	2030-Q1	2030-Q4	2030-Q4	\$0.00	See Note 1



Asset Category	Project	Description	A&E Start Quarter	SOW Submittal Quarter	Construction Start Quarter	SOW Close Out Submittal Quarter	Total Cost	Status
D&T-WL	CIP.5685001	EBAS Improvements Chinito Rondón	2028-Q2	2030-Q1	2030-Q4	2030-Q4	\$0.00	See Note 1
WWTP	CIP.5685004	Rehabilitation of San Sebastián WWTP	2028-Q3	2029-Q2	2029-Q4	2029-Q4	\$12,750,430.33	Pending Scope & Cost Completion by Applicant
PPTD	CIP.6009008	Projects Pending to Defined LS Project	2028-Q1	2028-Q4	2029-Q3	2029-Q3	\$14,051,002.66	Pending Scope & Cost Completion by Applicant
WWPS	CIP.7688000	Elimination of Los Alamos WWPS San Sebastian	2028-Q2	2030-Q1	2030-Q4	2030-Q4	\$0.00	See Note 1

Note 1:

PRASA is evaluating if the project can be performed through FEMA funds. The infrastructure projects cost in Puerto Rico has increased significantly. This situation is what PRASA is experiencing with the development of the FAASt projects. The material price hikes, contractors, and skilled labor shortages due to the reconstruction needs throughout the island and increased lead times will result in a continuous increase of construction costs and more extended periods to complete FAASt projects. The impact of increased construction costs will result in a reduced number of projects PRASA will be able to execute and may impede the proper reconstruction of the infrastructure required to continue providing an essential service to the people of Puerto Rico, as it is a safe drinking water service and proper treatment of the wastewater across the island.

