



GOVERNMENT OF
**PUERTO
RICO**



Puerto Rico
Aqueduct and
Sewer Authority

FAAS_t WORKPLAN

Puerto Rico Aqueduct and Sewer Authority (PRASA)

Post-Fixed Cost Estimate Obligation Workplan

FEMA-4339-DR-PR

FEMA Accelerated Award Strategy (FAAS_t)

Fourth Revision- April 2022

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 waters 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 included as part of the initial FAASt Workplan submittal a list of 136 projects. For the second revision PRASA updated the list of projects to 141. For the third revision the list of projects was updated to 180, and for this revision the list of projects increased to 196.



The 196 projects in the plan are still organized into sixteen distinct asset categories. PRASA based the plan's asset categories on the categorization approach used to reach the FAASt funding obligation. 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.
Projects Pending to be Determine (PPTD)	PRASA will evaluate other projects covered under the FAASSt funding obligation. The projects are going to be determined in the near future.

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 FAASSt 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. Currently, FEMA has under evaluation several projects submitted by PRASA under the 404 funds. Projects will be incorporated as part of the plan as soon as FEMA approves them.

The estimate includes only the cost associated with FEMA 428 funds and FEMA 404 funds, therefore excludes infrastructure hardening work that is eligible for funding through FEMA's 406 Public Assistance Mitigation (406) program.

PRASA will submit proposals for 406 funding with its applicable 428 proposals. This approach will ensure the integrity of the process given the differing requirements of each funding source.

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.

As described above, and in alignment with COR3 and FEMA's process, PRASA will submit proposals for 406 funding with each of its applicable 428 project submittals. These hardening proposals will add costs not included in this plan. However, the additional cost is expected to be offset by funding through FEMA's 406 programs. **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	\$1,055.18	\$0.0	TBD	\$1,055.18
WWTP	\$624.58	\$0.0	TBD	\$624.58
WWPS	\$117.48	\$0.0	TBD	\$117.48
WPS	\$54.62	\$0.0	TBD	\$54.62
WST & WPS	\$46.73	\$0.0	TBD	\$46.73
WST	\$69.47	\$0.0	TBD	\$69.47
RWW	\$12.61	\$0.0	TBD	\$12.61
B	\$56.37	\$0.0	TBD	\$56.37
OO	\$192.52	\$0.0	TBD	\$192.52
D	\$28.11	\$0.0	TBD	\$28.11
R	\$280.04	\$0.0	TBD	\$280.04
D&T-WL	\$418.40	\$0.0	TBD	\$418.40
WM	\$300.00	\$0.0	TBD	\$300.00
TSL	\$778.01	\$0.0	TBD	\$778.01
T	\$5.00	\$0.0	TBD	\$5.00
PPTD	\$29.50	\$0.0	TBD	\$29.50
Total	\$4,069	\$0.0	TBD	\$4,069

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.

Forecast 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 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)

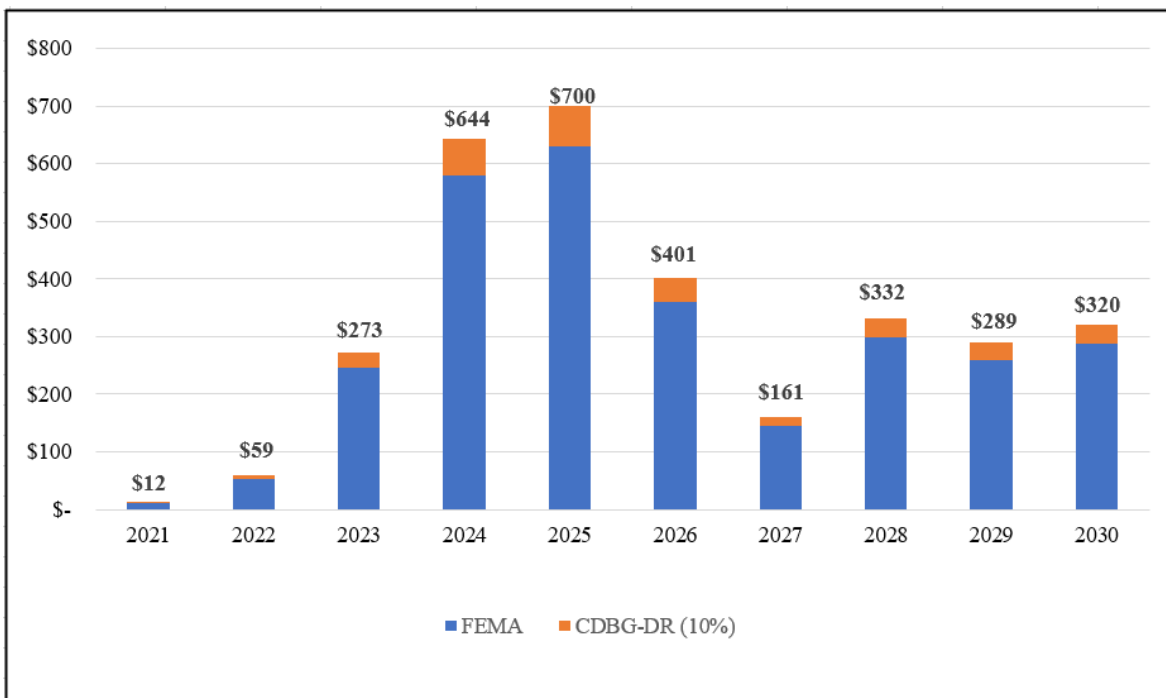
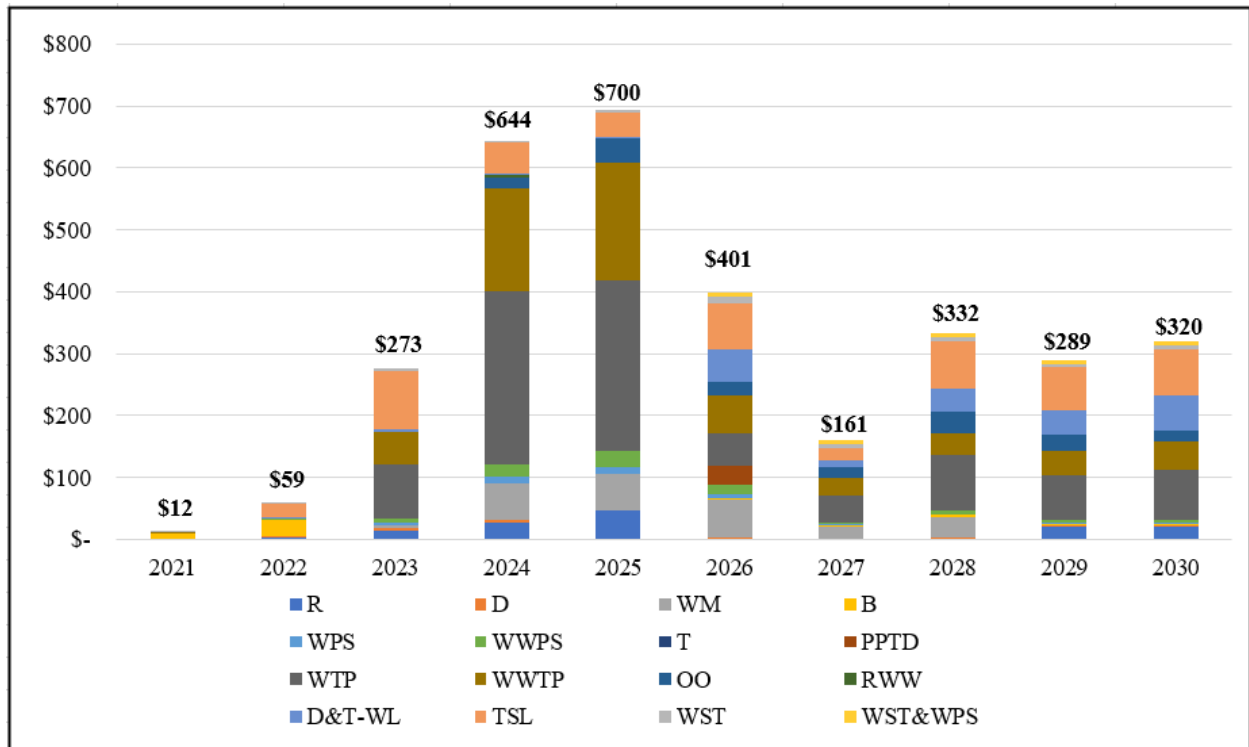


Figure 1-2: Projected Cash Flow by Asset Category by Fiscal Year (\$ Million)



As discussed above, 196 projects were identified (Fourth Revision), prioritized, and included in the FAASt Workplan (Fourth Revision- April 2022). Table 1-4 illustrates the distribution of these projects by asset category and when the projects are planning to begin the architectural and engineering (A & E) design phase on the horizon.



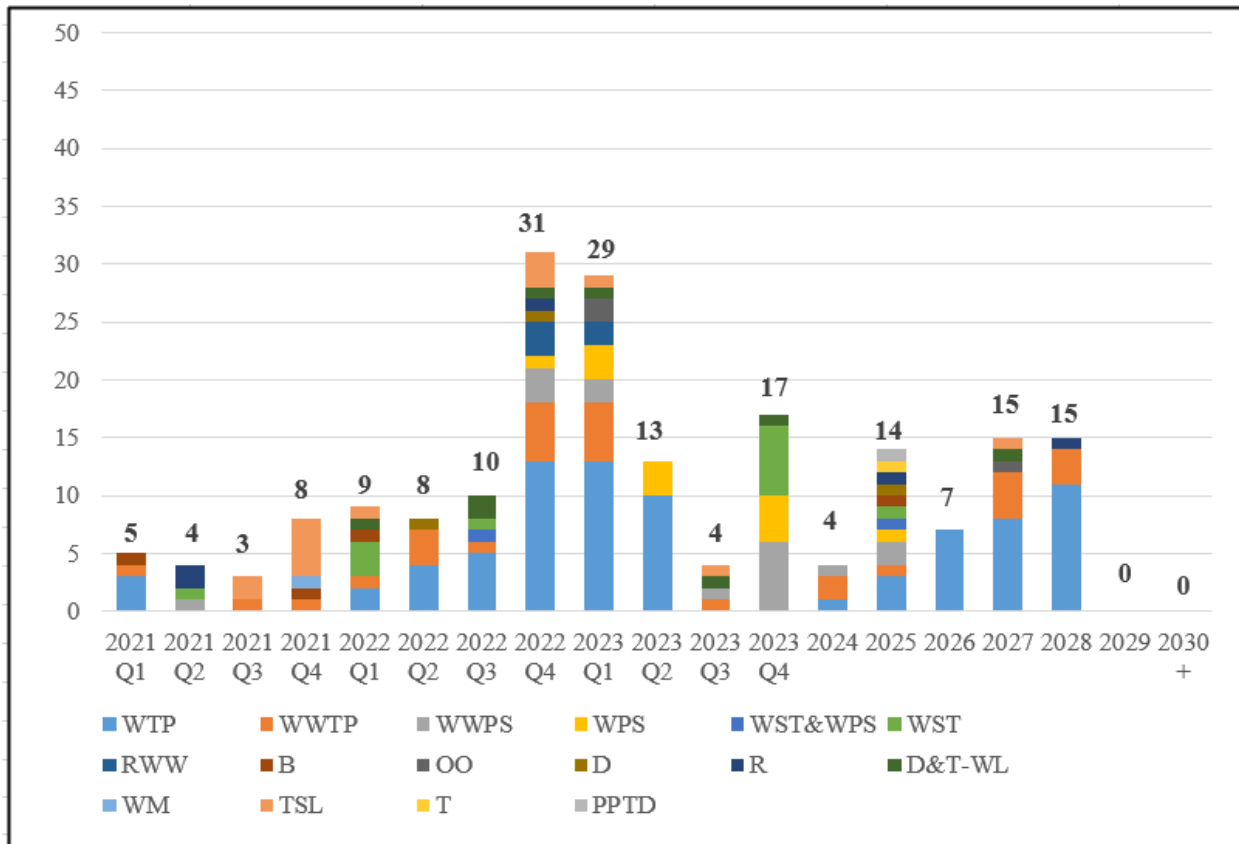
Table 1-4: Number of Projects to Start A & E Design Phase by Asset Category in the Time Horizon (Natural Years and Cumulative Total)

Asset Category	Near- Term (2021-2023)		Mid - Term (2024-2027)		Long - Term (2028-2030)		Total	
	Projects	\$ (M)	Projects	\$ (M)	Projects	\$ (M)	Projects	\$ (M)
WTP	50	\$774.77	19	\$182.01	11	\$98.40	80	\$1,055.18
WWTP	19	\$459.23	7	\$135.54	3	\$29.81	29	\$624.58
WWPS	13	\$84.61	3	\$32.87	0	\$0.00	16	\$117.48
WPS	11	\$43.01	1	\$11.61	0	\$0.00	12	\$54.62
WST & WPS	1	\$0.43	1	\$46.30	0	\$0.00	2	\$46.73
WST	11	\$24.47	1	\$45.00	0	\$0.00	12	\$69.47
RWW	5	\$12.61	0	\$0.00	0	\$0.00	5	\$12.61
B	3	\$36.37	1	\$20.00	0	\$0.00	4	\$56.37
OO	2	\$66.52	1	\$126.00	0	\$0.00	3	\$192.52
D	2	\$8.11	1	\$20.00	0	\$0.00	3	\$28.11
R	3	\$89.04	1	\$41.00	1	\$150.00	5	\$280.04
D&T-WL	7	\$18.40	1	\$400.00	0	\$0.00	8	\$418.40
WM	1	\$300.00	0	\$0.00	0	\$0.00	1	\$300.00
TSL	13	\$258.01	1	\$520.00	0	\$0.00	14	\$778.01
T	0	\$0.00	1	\$5.00	0	\$0.00	1	\$5.00
PPTD	0	\$0.00	1	\$29.90	0	\$0.00	1	\$29.50
TOTAL	141	\$2,176	40	\$1,615	15	\$278.2	196	\$4,069



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 141 projects in the near-term priority category. These projects either have already begun 30% architectural and engineering (A & E) design or are expected to do so in 2021, 2022, and 2023 (natural years).

The cumulative investment on the projects expected to begin A & E within this time horizon is **\$2.1 Billion**. Figure 1-4 illustrates the breakdown of cumulative investment by asset category for projects commencing during this period.

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

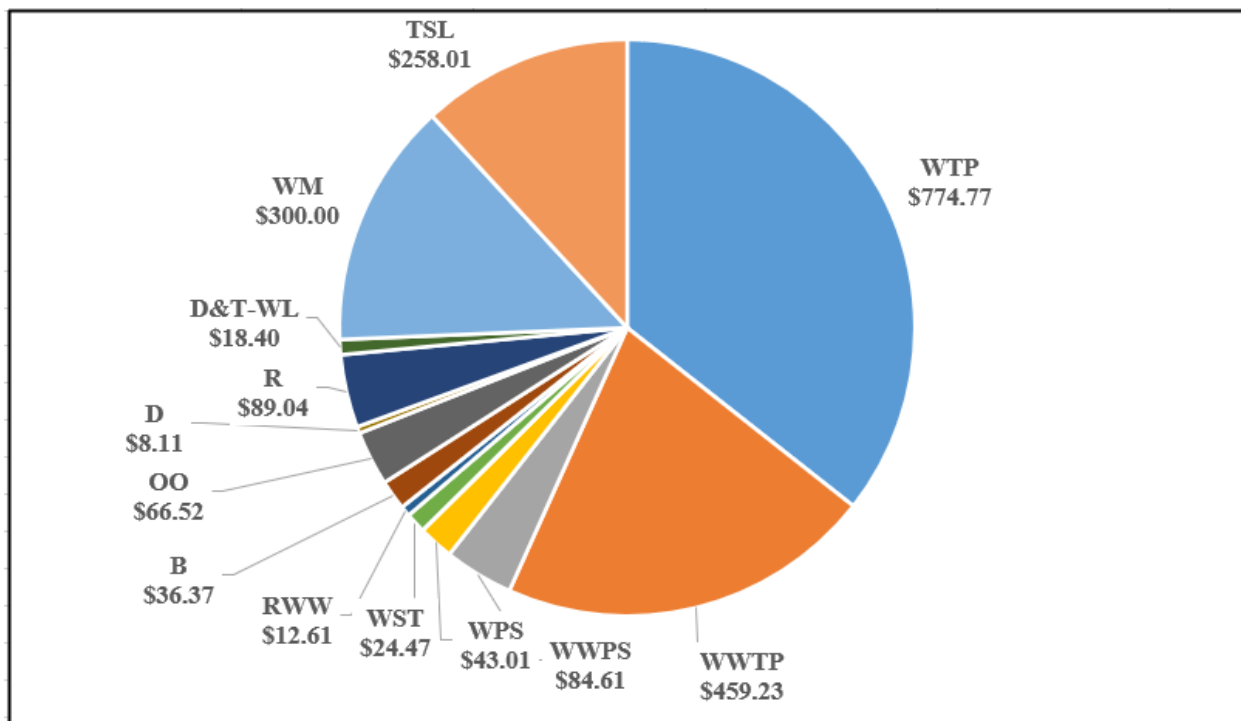


Table 1-5 provides a representative sample of notable projects slated to start during this period.

A high proportion of the FAASSt 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	Initial SOW Submittal Quarter	Total Cost Estimate (\$M)
B	CIP.3130001	PRASA Central Laboratory in Caguas (FAAST)	2021 - Q1	2021 – Q1	\$28.09
B	CIP.3139000	Equipment for New PRASA Central Laboratory in Caguas (FAAST)	2021 - Q1	2022 – Q1	\$8.00
WTP	CIP.2479001	Rehabilitation and Improvements to the Morovis Sur RWI (FAAST)	2021 - Q1	2021 – Q1	\$1.59
WWTP	CIP.3305001	Improvements to Guayama WWTP (FAAST)	2021 - Q1	2021 – Q1	\$74.20
WTP	CIP.2096007	Rehabilitation of Enrique Ortega WTP Toa Alta (FAAST-25)	2021 - Q1	2021 – Q1	\$85.87
TSL	CIP.4089000	Rehabilitation of Arroyo-Guayama Trunk Sewer Lines (FAAST)	2021 - Q1	2021 – Q4	\$21.31
WST	CIP.3360002	Design and Construction Buena Vista Tank (FAAST)	2021 - Q2	2021 – Q2	\$0.43
WTP	CIP.2017005	Rehabilitation of Culebrinas WTP Aguadilla FEMA (FAAST-25)	2021 - Q2	2021 – Q1	\$49.17
WWTP	CIP.3365083	Rehabilitation of Humacao Waste Water Treatment Plant (WWTP) Sludge Treatment System (STS)	2021 - Q2	2021 - Q3	\$11.70
D	CIP.7776071	Rehabilitation of Toa Vaca Dam (FAAST)	2021 - Q2	2022 - Q2	\$3.88
WWPS	CIP.3445009	Design and Build -Rehabilitation of La Sabana Las Piedras WWPS	2021 - Q3	2021 – Q2	\$0.65
R	CIP.5376001	Repair of Geosynthetic Membranes in Lago Regulador in Isabela	2021 - Q3	2021 – Q2	\$9.72
TSL	CIP.1169001	Rehabilitation of Los Angeles and Loíza Pueblo Trunk Sewers (FAAST)	2021 - Q3	2021 – Q3	\$8.62
R	CIP.1019000	Dragado Lago Loíza (Carraízo) FAAST	2021 - Q3	2021 – Q2	\$73.80
WM	CIP.6009002	Water Meters Islandwide LS Project (FAAST)	2021 - Q3	2021 - Q4	\$300.00
WWTP	CIP.3135079	Rehabilitation of Blowers in Caguas WWTP (FAAST)	2021 - Q4	2022 – Q4	\$4.79
B	CIP.1660002	Rehabilitation of PRASA Main Building in Hato Rey	2021 - Q4	2021 – Q4	\$0.28
WST	CIP.1009001	Rehabilitation of Water Storage Tanks - Metro Region Phase 1 (FAAST)	2021 - Q4	2022 - Q1	\$3.46
TSL	CIP.3139002	Rehabilitation of Caguas Trunk Sewer Lines (FAAST)	2021 - Q4	2021 – Q4	\$34.98



Asset Category	Project	Description	A &E Start Quarter	Initial SOW Submittal Quarter	Total Cost Estimate (\$M)
TSL	CIP.4589003	Rehabilitation of Ponce Trunk Sewer System (FAAST)	2021 - Q4	2021 – Q4	\$16.80
WWTP	CIP.5505028	Rehabilitation of Mayaguez WWTP (FAAST-25)	2021 - Q4	2022 – Q2	\$55.47
TSL	CIP.5509001	Rehabilitation of Hormigueros and Mayaguez Trunk Sewer Lines (FAAST)	2021 - Q4	2021 – Q4	\$25.88
WWTP	CIP.1165044	Rehabilitation of Carolina WWTP FEMA (FAAST-25)	2021 - Q4	2022 - Q2	\$23.03
TSL	CIP.2755055	Rehabilitation of Vega Baja Trunk Sewer Lines (TSL)	2021 - Q4	2021 – Q4	\$9.66
WST	CIP.3009001	Rehabilitation of Water Storage Tanks(WST) -East Region Phase 1 (FAAST)	2021 - Q4	2022 - Q1	\$3.40
WST	CIP.4009001	Rehabilitation of Water Storage Tanks - South Region Phase 1 (FAAST)	2021 - Q4	2022 - Q1	\$2.70
TSL	CIP.2095052	Rehabilitation of 42 IN Trunk Sewer Line from PR-684 to the South part of Barceloneta WWTP	2021 - Q4	2022 - Q1	\$39.96
WWTP	CIP.5035001	Rehabilitation of Aguada WWTP (FAAST-25)	2022 - Q4	2022 - Q4	\$23.55
D&T-WL	CIP.2475022	Installation of Permanent WL Rio Utuado Bridge (FAAST)	2022 - Q1	2022 - Q1	\$0.65
WTP	CIP.5379002	Design and Build Guajataca WTP Floating Raw Water Pumping Station Project	2022 - Q1	2022 - Q2	\$3.04
WTP	CIP.2076042	Rehabilitation of Esperanza WTP and WI , Arecibo(FAAST)	2022 - Q1	2022 – Q1	\$12.40
WTP	CIP.2386049	Rehabilitation of Canalizo WTP and WI , Jayuya (FAAST)	2022 - Q1	2022 - Q2	\$7.03
WTP	CIP.2426100	Rehabilitation of Lares Nueva Espino WTP and WI, Lares(FAAST)	2022 - Q1	2022 – Q1	\$12.25
WTP	CIP.2526006	Rehabilitation of Morovis Sur WTP (FAAST-25)	2022 - Q1	2022 - Q2	\$8.70
WTP	CIP.4316007	Rehabilitation of Jaguas Pasto WTP, Guayanilla (FAAST-25)	2022 - Q1	2022 - Q2	\$6.95
WWTP	CIP.2075073	Rehabilitation of Islote WWTP, Arecibo (FAAST)	2022 - Q1	2022 – Q1	\$31.28
D&T-WL	CIP.2526008	Improvements to the Water Distribution System in Morovis (FAAST)	2022 - Q2	2022 - Q3	\$5.73



Asset Category	Project	Description	A &E Start Quarter	Initial SOW Submittal Quarter	Total Cost Estimate (\$M)
WWTP	CIP.4695042	Rehabilitation of Santa Isabel WWTP (FAAST)	2022 - Q2	2022 - Q3	\$14.91
WTP	CIP.2739001	Rehabilitation of WI Lago Vivi Utuado(FAAST)	2022 - Q2	2022 - Q3	\$3.90
WTP	CIP.4646004	WTP Salinas (Wells Closure) (FAAST-25)	2022 - Q2	2022 - Q3	\$24.01
WTP	CIP.2206107	Rehabilitation of Frontón WTP and WI, Ciales (FAAST)	2022 - Q2	2023 - Q2	\$28.63
WTP	CIP.3156093	Rehabilitation of El Yunque WTP , Rio Grande (FAAST-25)	2022 - Q2	2022 - Q3	\$13.32
D&T-WL	CIP.2549000	Rehabilitation of Transmission and Distribution System at Naranjito (FAAST)	2022 - Q2	2022 - Q3	\$6.72
WWTP	CIP.4555022	Rehabilitation of Orocovis WWTP (FAAST-25)	2022 - Q2	2022 - Q2	\$10.95
WST	CIP.5009001	Rehabilitation of Water Storage Tanks - West Region Phase 1 (FAAST)	2022 - Q2	2022 - Q3	\$0.79
WST & WPS	CIP.2009104	Installation of MCC at WPS Medio Millón Tank in Arecibo	2022 - Q2	2022 - Q3	\$0.43
D&T-WL	CIP.2479000	Design and Build 8"Pipe Bo. Boquillas Manatí (FAAST)	2022 - Q3	2022 - Q4	\$2.17
TSL	CIP.2149001	Rehabilitation of Camuy Trunk Sewer Lines (FAAST)	2021 - Q3	2022 - Q4	\$35.38
TSL	CIP.429900	Rehabilitation of Barriada Esperanza Guánica Trunk Sewer System	2022 - Q3	2022 - Q4	\$5.83
WTP	CIP.1016095	Rehabilitation of Guaynabo WTP (FAAST-25)	2022 - Q3	2022 - Q4	\$44.78
WTP	CIP.1116008	Rehabilitation of Guaynabo Santa Rosa WI (FAAST-25)	2022 - Q3	2022 - Q4	\$15.05
WTP	CIP.3156094	New Raw Water Intake for El Yunque WTP(Mameyes)Río Grande(FAAST)	2022 - Q3	2022 - Q4	\$11.97
WTP	CIP.2246106	Rehabilitation of Negros WTP and WI, Corozal (FAAST-25)	2022 - Q3	2022 - Q4	\$9.52
WWTP	CIP.3139001	Improvements to Caguas WWTP (FAAST-25)	2022 - Q3	2022 - Q4	\$25.88
D	CIP.1666090	Improvements to La Plata Dam - Installation of Anchorage System	2022 - Q3	2022 - Q4	\$4.23
R	CIP.1019002	Sediments Control Carraízo Reservoir(FAAST)	2022 - Q3	2022 - Q4	\$5.52
WTP	CIP.3366005	Rehabilitation of Humacao WTP (FAAST-25)	2022 - Q3	2022 - Q4	\$9.97



Asset Category	Project	Description	A &E Start Quarter	Initial SOW Submittal Quarter	Total Cost Estimate (\$M)
WWTP	CIP.4585096	Rehabilitation of Ponce WWTP (FAAST-25)	2022 - Q3	2022 - Q4	\$24.11
WTP	CIP.2596004	Rehabilitation of Quebradillas WTP and WI (FAAST-25)	2022 - Q3	2022 - Q4	\$8.62
WTP	CIP.2346015	Rehabilitation of Hatillo-Camuy WTP(FAAST)	2022 - Q3	2022 - Q3	\$9.48
WWPS	CIP.2039000	Rehabilitation of Guerrero 2 WWPS, Aguadilla (FAAST)	2022 - Q3	2022 - Q4	\$1.12
WWPS	CIP.1665900	Rehabilitation of Martin Peña(Tokio) WWPS San Juan	2022 - Q3	2022 - Q4	\$4.23
WWTP	CIP.4495001	Rehabilitation or Elimination of Maunabo WWTP (FAAST-25)	2022 - Q3	2022 - Q4	\$12.61
WPS	CIP.4317001	Construction of Sector Ballinó Guayanilla WPS(FAAST)	2022 - Q3	2022 - Q4	\$0.49
WTP	CIP.2426099	Rehabilitation of Indiera Alta WTP and WI , Lares(FAAST)	2022 - Q3	2022 - Q4	\$7.13
WTP	CIP.2916002	Rehabilitation of Superacueductos WTP, Arecibo (FAAST-25)	2022 - Q3	2022 - Q4	\$13.23
WWTP	CIP.3765002	Rehabilitation Vieques WWTP (FAAST)	2022 - Q3	2022 - Q4	\$35.53
WTP	CIP.3536006	Rehabilitation of Río Blanco WTP, Naguabo (FAAST-25)	2022 - Q3	2022 - Q3	\$19.72
TSL	CIP.2375002	Trunk Sewer Lines (TSL) Isabela - Aguada (FAAST)	2022 - Q3	2022 - Q4	\$30.92
TSL	CIP.2709010	Rehabilitation of Arecibo Trunk Sewer Lines (TSL) (FAAST)	2022 - Q3	2022 - Q4	\$0.89
WTP	CIP.4576002	Rehabilitation of Peñuelas WTP (FAAST)	2022 - Q3	2022 - Q4	\$12.14
WTP	CIP.4776078	Rehabilitation of Jagueyes-Villalba WTP (FAAST)	2022 - Q3	2022 - Q4	\$10.13
RWW	CIP.1009106	Rehabilitation of RWW -Metro Region Phase 1(FAAST)	2022 - Q3	2022 - Q4	\$1.96
RWW	CIP.4009106	Rehabilitation of RWW -South Region Phase 1(FAAST)	2022 - Q3	2022 - Q4	\$2.08
RWW	CIP.5009106	Rehabilitation of RWW -West Region Phase 1(FAAST)	2022 - Q3	2022 - Q4	\$4.81
WWPS	CIP.1009104	Rehabilitation of WWPS Metro Region Phase 1 (FAAST)	2022 - Q3	2022 - Q4	\$7.99



Asset Category	Project	Description	A &E Start Quarter	Initial SOW Submittal Quarter	Total Cost Estimate (\$M)
D&T-WL	CIP.3136009	Improvements to the Water Supply System in Villa del Rey Ward in Caguas(FAAST)	2022 - Q4	2023 - Q1	\$0.52
WTP	CIP.5506047	Rehabilitation of Miradero Mayaguez WTP (FAAST-25)	2022 - Q4	2022 - Q4	\$21.66
WTP	CIP.5596001	Rehabilitation of Guajataca Quebradillas WTP and WI (FAAST)	2022 - Q4	2023 - Q1	\$21.82
WWTP	CIP.5415031	Rehabilitation of Lajas WWTP (FAAST)	2022 - Q4	2023 - Q1	\$13.57
WTP	CIP.5506044	Rehabilitation of Miradero Mayaguez RWI (FAAST-25)	2022 - Q4	2023 - Q1	\$57.24
WTP	CIP.2736007	Rehabilitation of Santa Isabel Utuado WTP and WI (FAAST-25)	2022 - Q4	2023 - Q1	\$11.29
WTP	CIP.1726043	Rehabilitation of Sergio Cuevas WTP Trujillo Alto (FAAST-25)	2022 - Q4	2023 - Q1	\$21.95
WTP	CIP.2736006	Rehabilitation of Mameyes Utuado WTP and WI (FAAST)	2022 - Q4	2023 - Q1	\$9.95
WTP	CIP.2526007	Rehabilitation of Morovis Urbano WTP (FAAST)	2022 - Q4	2023 - Q1	\$11.32
WTP	CIP.3186003	Rehabilitation of Farallon WTP, Cayey (FAAST)	2022 - Q4	2023 - Q1	\$6.86
OO	CIP.2149105	Rehabilitation of Ocean Outfalls-Camuy (FAAST)	2022 - Q4	2023 - Q1	\$37.95
OO	CIP.5509105	Rehabilitation of Ocean Outfalls-Mayaguez (FAAST)	2022 - Q4	2023 - Q1	\$28.57
WWTP	CIP.2475021	Rehabilitation of Barceloneta WWTP (FAAST-25)	2022 - Q4	2023 - Q1	\$31.56
WPS	CIP.1009103	Rehabilitation of Water Pump Stations (WPS) Metro Region Phase 1 (FAAST)	2022 - Q4	2023 - Q1	\$3.73
WPS	CIP.2009103	Rehabilitation of Water Pump Stations (WPS) North Region Phase 1 (FAAST)	2022 - Q4	2023 - Q1	\$3.74
RWW	CIP.2009106	Rehabilitation of RWW -North Region Phase 1(FAAST)	2022 - Q4	2023 - Q1	\$1.79
RWW	CIP.3009106	Rehabilitation of RWW -East Region Phase 1(FAAST)	2022 - Q4	2023 - Q1	\$1.97
WPS	CIP.5009103	Rehabilitation of Water Pump Stations (WPS) West Region Phase 1 (FAAST)	2022 - Q4	2023 - Q1	\$3.77



Asset Category	Project	Description	A &E Start Quarter	Initial SOW Submittal Quarter	Total Cost Estimate (\$M)
WWPS	CIP.2009104	Rehabilitation of WWPS North Region Phase 1 (FAAST)	2022 - Q4	2023 - Q1	\$8.01
WWPS	CIP.5009104	Rehabilitation of WWPS West Region Phase 1 (FAAST)	2022 - Q4	2023 - Q1	\$8.05
WTP	CIP.4776077	Rehabilitation of Apeadero Villalba WTP (FAAST-25)	2022 - Q4	2023 - Q1	\$11.29
TSL	CIP.5685000	Replacement of Trunk Sewer Lines (TSL) in San Sebastián (FAAST)	2022 - Q4	2023 - Q1	\$26.41
WWTP	CIP.3185033	Rehabilitation of Cayey WWTP (FAAST-25)	2022 - Q4	2023 - Q1	\$23.23
WWTP	CIP.3236247	Rehabilitation of Comerío WWTP (FAAST)	2022 - Q4	2023 - Q1	\$14.68
WTP	CIP.3786003	Rehabilitation of Guayabota WTP and WI, Yabucoa (FAAST)	2022 - Q4	2023 - Q1	\$7.07
WTP	CIP.3106106	Rehabilitation of Barrancas WTP and WI, Barranquitas (FAAST)	2022 - Q4	2022 - Q4	\$9.29
WTP	CIP.2736005	Rehabilitation of Mameyes Limón, Utuado (Arriba) WTP and WI (FAAST)	2022 - Q4	2023 - Q1	\$7.05
WTP	CIP.4556009	Rehabilitation of Sanamuertos Orocovis WTP(FAAST)	2022 - Q4	2023 - Q1	\$9.89
WTP	CIP.3106105	Rehabilitation of La Boca WTP and WI, Barranquitas (FAAST)	2022 - Q4	2022 - Q4	\$7.75
WWTP	CIP.3045036	Rehabilitation of Aguas Buenas WWTP (FAAST)	2022 - Q4	2023 - Q1	\$13.54
WTP	CIP.3136012	Rehabilitation of Caguas Norte WTP (FAAST)	2022 - Q4	2023 - Q1	\$17.60
WTP	CIP.3336045	Rehabilitation of Gurabo WTP (FAAST)	2022 - Q4	2023 - Q1	\$9.92
WPS	CIP.1669002	Rehabilitation of Puerto Nuevo WPS and Water Potable Line of 48"(FAAST)	2023 - Q1	2023 - Q2	\$9.94
WTP	CIP.5486007	Rehabilitation of Maricao WTP(FAAST)	2023 - Q1	2023 - Q2	\$9.47
WTP	CIP.5486006	Rehabilitation of Monte del Estado Maricao WTP (FAAST)	2023 - Q1	2023 - Q2	\$6.36
WTP	CIP.5489001	Rehabilitation of Monte del Estado Maricao WI (FAAST)	2023 - Q1	2023 - Q2	\$7.75
WTP	CIP.4796004	Rehabilitation of Río Prieto WTP (FAAST)	2023 - Q1	2023 - Q2	\$20.30



Asset Category	Project	Description	A &E Start Quarter	Initial SOW Submittal Quarter	Total Cost Estimate (\$M)
WTP	CIP.5036006	Rehabilitation of Aguadilla Montaña WTP (FAAST)	2023 - Q1	2023 - Q2	\$25.95
WPS	CIP.3009103	Rehabilitation of Water Pump Stations (WPS) East Region Phase 1 (FAAST)	2023 - Q1	2023 - Q2	\$3.76
WPS	CIP.4009103	Rehabilitation of Water Pump Stations (WPS) South Region Phase 1 (FAAST)	2023 - Q1	2023 - Q2	\$3.76
WTP	CIP.5506046	Rehabilitation of Ponce de León Mayaguez WTP (FAAST-25)	2023 - Q1	2023 - Q2	\$6.36
WTP	CIP.4576004	Rehabilitation of Malpaso Peñuelas WTP (FAAST)	2023 - Q1	2023 - Q2	\$10.00
WTP	CIP.1156004	Rehabilitation of Cubuy WTP and WI, Canovanas (FAAST)	2023 - Q1	2023 - Q2	\$10.93
WTP	CIP.4016012	Rehabilitation of Guilarte WTP, Adjuntas (FAAST)	2023 - Q1	2023 - Q2	\$7.09
D&T-WL	CIP.5067002	Improvements to the Aqueduct System Community El Hoyo de Los Feos in Añasco	2023 - Q2	2023 - Q3	\$0.86
TSL	CIP.1669002	Relocation of Los Corozos 42"Trunk Sewer in San Juan	2023 - Q2	2023 - Q3	\$1.37
WWPS	CIP.3009104	Rehabilitation of WWPS East Region Phase 1 (FAAST)	2023 - Q2	2023 - Q3	\$8.03
WWTP	CIP.3785018	Rehabilitation of Yabucoa WWTP (FAAST)	2023 - Q2	2023 - Q3	\$14.63
D&T-WL	CIP.5506042	Improvements to the Water Supply System in Mayaguez Mall(FAAST)	2023 - Q3	2023 - Q4	\$1.74
WST	CIP.2009001	Rehabilitation of Water Storage Tanks - North Region Phase 1 (FAAST)	2023 - Q3	2023 - Q4	\$0.81
WWPS	CIP.4009104	Rehabilitation of WWPS South Region Phase 1 (FAAST)	2023 - Q3	2023 - Q4	\$8.03
WST	CIP.1009101	Rehabilitation of Water Storage Tanks - Metro Region Phase 2 (FAAST)	2023 - Q3	2023 - Q4	\$1.97
WPS	CIP.1009203	Rehabilitation of Water Pump Stations (WPS) Metro Region Phase 2 (FAAST)	2023 - Q3	2023 - Q4	\$3.40
WST	CIP.2009101	Rehabilitation of Water Storage Tanks - North Region Phase 2 (FAAST)	2023 - Q3	2023 - Q4	\$2.07
WPS	CIP.2009203	Rehabilitation of Water Pump Stations (WPS) North Region Phase 2 (FAAST)	2023 - Q3	2023 - Q4	\$3.61



Asset Category	Project	Description	A &E Start Quarter	Initial SOW Submittal Quarter	Total Cost Estimate (\$M)
WST	CIP.3009101	Rehabilitation of Water Storage Tanks (WST) -East Region Phase 2 (FAAST)	2023 - Q3	2023 - Q4	\$1.69
WST	CIP.4009101	Rehabilitation of Water Storage Tanks - South Region Phase 2 (FAAST)	2023 - Q3	2023 - Q4	\$1.97
WPS	CIP.4009203	Rehabilitation of Water Pump Stations (WPS) South Region Phase 2 (FAAST)	2023 - Q3	2023 - Q4	\$3.40
WST	CIP.5009101	Rehabilitation of Water Storage Tanks - West Region Phase 2 (FAAST)	2023 - Q3	2023 - Q4	\$5.17
WPS	CIP.5009203	Rehabilitation of Water Pump Stations (WPS) West Region Phase 2 (FAAST)	2023 - Q3	2023 - Q4	\$3.40
WWPS	CIP.1009204	Rehabilitation of WWPS Metro Region Phase 2 (FAAST)	2023 - Q3	2023 - Q4	\$7.30
WWPS	CIP.2009204	Rehabilitation of WWPS North Region Phase 2 (FAAST)	2023 - Q3	2023 - Q4	\$7.83
WWPS	CIP.3009204	Rehabilitation of WWPS East Region Phase 2 (FAAST)	2023 - Q3	2023 - Q4	\$8.03
WWPS	CIP.4009204	Rehabilitation of WWPS South Region Phase 2 (FAAST)	2023 - Q3	2023 - Q4	\$7.30
WWPS	CIP.5009204	Rehabilitation of WWPS West Region Phase 2 (FAAST)	2023 - Q4	2023 - Q4	\$8.05
WWTP	CIP.1665115	Rehabilitation of Puerto Nuevo WWTP, San Juan (FAAST)	2024 - Q2	2024 - Q3	\$35.41
WWPS	CIP.7688000	Elimination of Los Alamos WWPS San Sebastian	2024 - Q3	2024 - Q4	\$0.95
WTP	CIP.6009016	Rehabilitation to PRASA WTP Islandwide LS Project (FAST)	2024 - Q3	2024 - Q3	\$30.00
WWTP	CIP.6009017	Rehabilitation to PRASA WWTP Islandwide LS Project (FAST)	2024 - Q3	2024 - Q3	\$30.00
WWPS	CIP.5685001	Rehabilitation of Chinito Rondon WWPS San Sebastian	2024 - Q4	2025 - Q1	\$0.92
WST	CIP.6009001	Water Storage Tanks Islandwide (FAAST)	2025 - Q1	2025 - Q2	\$45.00
WPS	CIP.6009003	Rehabilitation of WPS Islandwide LS Project (FAAST)	2025 - Q1	2025 - Q2	\$11.61
WWPS	CIP.6009004	Rehabilitation of WWPS Islandwide LS Project (FAAST)	2025 - Q1	2025 - Q2	\$31.00



Asset Category	Project	Description	A &E Start Quarter	Initial SOW Submittal Quarter	Total Cost Estimate (\$M)
B	CIP.6009007	Buildings Islandwide LS Project (FAAST)	2025 - Q1	2025 - Q2	\$20.00
PPTD	CIP.6009008	Projects Pending to Defined LS Project (FAAST)	2025 - Q1	2025 - Q2	\$29.90
WST & WPS	CIP.6009013	WST & WPS Islandwide LS Project (FAAST)	2025 - Q1	2025 - Q2	\$46.30
R	CIP.6009010	Reservoir Dredging Islandwide LS Project	2025 - Q1	2025 - Q2	\$41.00
D	CIP.6009011	Dams Islandwide LS Project (FAAST)	2025 - Q1	2025 - Q2	\$20.00
T	CIP.6009012	Telemetry Islandwide LS Project (FAAST)	2025 - Q1	2025 - Q2	\$5.00
WTP	CIP.2736008	Rehabilitation of Roncador WTP and WI, Utuado (FAAST)	2025 - Q1	2025 - Q2	\$7.26
WWTP	CIP.4315010	Rehabilitation to Guayanilla WWTP (FAAST)	2025 - Q3	2025 - Q4	\$23.39
WTP	CIP.3106104	Rehabilitation of Barranquitas WTP and WI (FAAST)	2025 - Q3	2025 - Q4	\$7.74
WTP	CIP.3186002	Rehabilitation of Cayey Urbana WTP (FAAST)	2025 - Q3	2025 - Q4	\$11.92
OO	CIP.6009005	Rehabilitation of Ocean Outfalls Islandwide LS Project (FAAST)	2027 - Q1	2027 - Q2	\$126.00
TSL	CIP.6009014	Trunk Sewer Lines (TSL) Islandwide LS Project (FAAST)	2027 - Q1	2027 - Q2	\$520.00
D&T-WL	CIP.6009015	T & D -WL Islandwide LS Project (FAAST)	2027 - Q1	2027 - Q2	\$400.00
R	CIP.4009000	Bauta Tunnel (FAAST)	2028 - Q3	2028 - Q4	\$150.00
WTP	CIP.1616001	Rehabilitation of Guzmán Arriba WTP and WI, Rio Grande (FAAST)	2028 - Q4	2029 - Q1	\$7.14



1.5 Mid- Term Projects Profile (2024-2027)

The mid-term priority category comprises 40 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 **\$1.6 Billion**. 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)

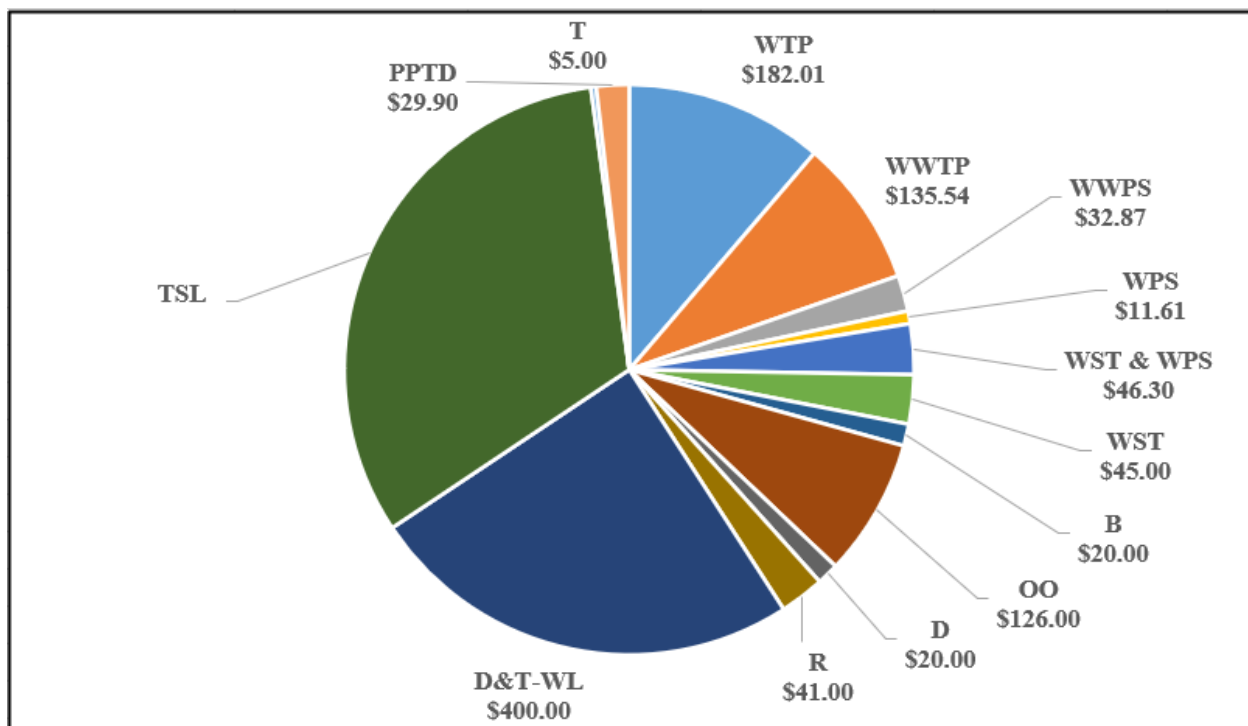


Table 1-6 provides a representative sample of notable projects slated to commence during this period.



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

Asset Category	Project	Description	A &E Start Quarter	Initial SOW Submittal Quarter	Total Cost Estimate (\$M)
WWTP	CIP.1665115	Rehabilitation of Puerto Nuevo WWTP, San Juan (FAAST)	2024 - Q2	2024 - Q3	\$35.41
WWPS	CIP.7688000	Elimination of Los Alamos WWPS San Sebastian	2024 - Q3	2024 - Q4	\$0.95
WTP	CIP.6009016	Rehabilitation to PRASA WTP Islandwide LS Project (FAST)	2024 - Q3	2024 - Q3	\$30.00
WWTP	CIP.6009017	Rehabilitation to PRASA WWTP Islandwide LS Project (FAST)	2024 - Q3	2024 - Q3	\$30.00
WWPS	CIP.5685001	Rehabilitation of Chinito Rondon WWPS San Sebastian	2024 - Q4	2025 - Q1	\$0.92
WST	CIP.6009001	Water Storage Tanks Islandwide (FAAST)	2025 - Q1	2025 - Q2	\$45.00
WPS	CIP.6009003	Rehabilitation of WPS Islandwide LS Project (FAAST)	2025 - Q1	2025 - Q2	\$11.61
WWPS	CIP.6009004	Rehabilitation of WWPS Islandwide LS Project (FAAST)	2025 - Q1	2025 - Q2	\$31.00
B	CIP.6009007	Buildings Islandwide LS Project (FAAST)	2025 - Q1	2025 - Q2	\$20.00
PPTD	CIP.6009008	Projects Pending to Defined LS Project (FAAST)	2025 - Q1	2025 - Q2	\$29.90
WST & WPS	CIP.6009013	WST & WPS Islandwide LS Project (FAAST)	2025 - Q1	2025 - Q2	\$46.30
R	CIP.6009010	Reservoir Dredging Islandwide LS Project	2025 - Q1	2025 - Q2	\$41.00
D	CIP.6009011	Dams Islandwide LS Project (FAAST)	2025 - Q1	2025 - Q2	\$20.00
T	CIP.6009012	Telemetry Islandwide LS Project (FAAST)	2025 - Q1	2025 - Q2	\$5.00
WTP	CIP.2736008	Rehabilitation of Roncador WTP and WI, Utuado (FAAST)	2025 - Q1	2025 - Q2	\$7.26
WWTP	CIP.4315010	Rehabilitation to Guayanilla WWTP (FAAST)	2025 - Q3	2025 - Q4	\$23.39
WTP	CIP.3106104	Rehabilitation of Barranquitas WTP and WI (FAAST)	2025 - Q3	2025 - Q4	\$7.74
WTP	CIP.3186002	Rehabilitation of Cayey Urbana WTP (FAAST)	2025 - Q3	2025 - Q4	\$11.92



Asset Category	Project	Description	A &E Start Quarter	Initial SOW Submittal Quarter	Total Cost Estimate (\$M)
WTP	CIP.3136013	Rehabilitation of Caguas Sur WTP(FAAST)	2026 - Q1	2026 - Q2	\$9.94
WTP	CIP.2076043	Rehabilitation of Río Arriba WTP Arecibo (FAAST)	2026 - Q2	2026 - Q3	\$5.01
WTP	CIP.4016008	Rehabilitation of Olimpia - Adjuntas WTP(FAAST)	2026 - Q2	2026 - Q3	\$9.22
WTP	CIP.4586084	Rehabilitation of Guaraguao Ponce WTP (FAAST)	2026 - Q2	2026 - Q3	\$9.89
WTP	CIP.4796005	Rehabilitation of Rancheras Yauco WTP (FAAST)	2026 - Q2	2026 - Q3	\$7.03
WTP	CIP.5686045	Rehabilitation of San Sebastián WTP and WI (FAAST)	2026 - Q3	2026 - Q4	\$8.97
WTP	CIP.3536007	Rehabilitation of El Duque WTP, Naguabo (FAAST)	2026 - Q3	2026 - Q4	\$7.02
OO	CIP.6009005	Rehabilitation of Ocean Outfalls Islandwide LS Project (FAAST)	2027 - Q1	2027 - Q2	\$126.00
TSL	CIP.6009014	Trunk Sewer Lines (TSL) Islandwide LS Project (FAAST)	2027 - Q1	2027 - Q2	\$520.00
D&T-WL	CIP.6009015	T & D -WL Islandwide LS Project (FAAST)	2027 - Q1	2027 - Q2	\$400.00
WTP	CIP.3186004	Rehabilitation of Culebras Alto WTP, Cayey (FAAST)	2027 - Q1	2027 - Q2	\$7.04
WWTP	CIP.3056002	Rehabilitation of Aibonito WWTP (FAAST)	2027 - Q1	2027 - Q2	\$12.68
WTP	CIP.2386048	Rehabilitation of La Pica WTP and WI , Jayuya (FAAST)	2027 - Q2	2027 - Q3	\$7.03
WTP	CIP.1156005	Rehabilitation of Canóvanas Nueva WTP and WI (FAAST)	2027 - Q2	2027 - Q3	\$13.72
WTP	CIP.3466005	Rehabilitation of Luquillo-Sabana WTP (FAAST)	2027 - Q2	2027 - Q3	\$11.92
WTP	CIP.2206106	Rehabilitation of Jaguas Pesas WTP and WI, Ciales (FAAST)	2027 - Q2	2027 - Q3	\$7.06
WTP	CIP.5636006	Rehabilitation of Sabana Grande WTP and WI (FAAST)	2027 - Q2	2027 - Q3	\$6.53
WTP	CIP.5656001	Rehabilitation of Caín Alto San German WTP and WI (FAAST)	2027 - Q2	2027 - Q3	\$6.54
WWTP	CIP.3105032	Rehabilitation of Barranquitas WWTP (FAAST)	2027 - Q3	2027 - Q4	\$9.94



Asset Category	Project	Description	A &E Start Quarter	Initial SOW Submittal Quarter	Total Cost Estimate (\$M)
WWTP	CIP.2545006	Rehabilitation of Naranjito WWTP (FAAST)	2027 - Q3	2027 - Q4	\$10.57
WTP	CIP.5376006	Rehabilitation of Isabela Urbana WTP and WI (FAAST)	2027 - Q3	2027 - Q4	\$8.19
WWTP	CIP.5685004	Rehabilitation of San Sebastián WWTP (FAAST)	2027 - Q3	2027 - Q4	\$13.55



1.6 Long-Term Projects Profile (2028 and beyond)

The long-term priority category comprises 15 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 **\$278.2 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)

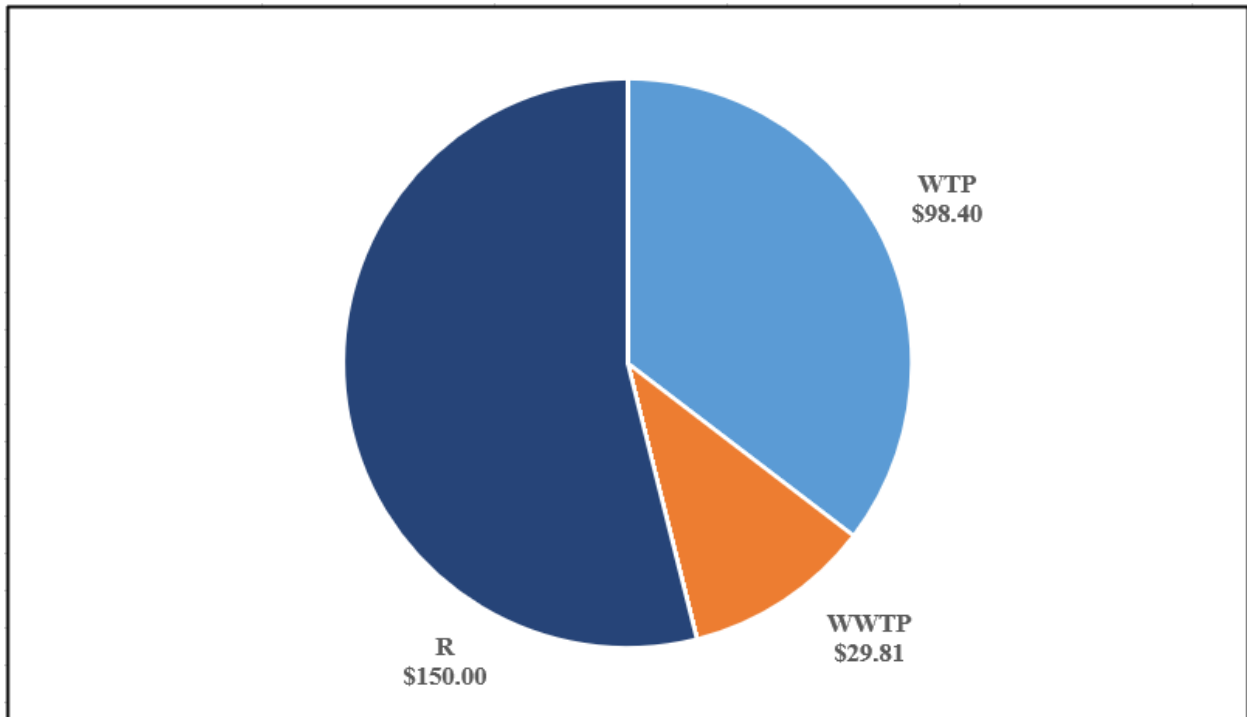


Table 1-7 provides a representative sample of notable projects slated to commence during this period.



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

Asset Category	Project	Description	A &E Start Quarter	Initial SOW Submittal Quarter	Total Cost Estimate (\$M)
WTP	CIP.3046005	Rehabilitation of Aguas Buenas WTP (FAAST)	2028 - Q1	2028 - Q2	\$7.74
WTP	CIP.3216066	Rehabilitation of Cidra Urbano WTP (FAAST)	2028 - Q1	2028 - Q2	\$9.94
WTP	CIP.3786004	Rehabilitation of Yabucoa WTP (FAAST)	2028 - Q1	2028 - Q2	\$7.03
WTP	CIP.2246107	Rehabilitation of Corozal Urbana WTP (FAAST)	2028 - Q2	2028 - Q3	\$7.06
WTP	CIP.2386047	Rehabilitation of Jayuya Urbano WTP and WI (FAAST)	2028 - Q2	2028 - Q3	\$10.13
WTP	CIP.2426101	Rehabilitation of Lares WTP and WI (FAAST)	2028 - Q2	2028 - Q3	\$9.89
WWTP	CIP.2745019	Rehabilitation of Vega Alta WWTP (FAAST)	2028 - Q2	2028 - Q3	\$9.91
WTP	CIP.2076041	Rehabilitation of Arecibo Urbano WTP (FAAST)	2028 - Q2	2028 - Q3	\$9.91
R	CIP.4009000	Bauta Tunnel (FAAST)	2028 - Q3	2028 - Q4	\$150.00
WWTP	CIP.3136014	Rehabilitation of Parcelas Borinquen Caguas WWTP (FAAST)	2028 - Q3	2028 - Q4	\$6.41
WTP	CIP.1116011	Improvements to LT2 WTP Barrio Nuevo or Elimination , Bayamon (FAAST)	2028 - Q3	2028 - Q4	\$7.50
WWTP	CIP.4795022	Rehabilitation of Yauco WWTP (FAAST)	2028 - Q3	2028 - Q4	\$13.49
WTP	CIP.3536002	Improvements to LT2 WTP Cubuy Este - Maizales, Naguabo (FAAST)	2028 - Q3	2028 - Q4	\$9.90
WTP	CIP.1616001	Rehabilitation of Guzmán Arriba WTP and WI, Rio Grande (FAAST)	2028 - Q4	2029 - Q1	\$7.14
WTP	CIP.3276053	Rehabilitation of Fajardo WTP(FAAST)	2028 - Q4	2029 - Q1	\$12.15



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 FAASt 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 the 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 the current 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



Components	Description
	goal of providing quality and reliable services has not diminished over time and will 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	<p>Ensure to provide a high-quality water service while promoting water conservation and protecting the environment and health of Puerto Rico, following:</p> <ul style="list-style-type: none"> • Safe Drinking Water Act (SDWA) • Environmental Protection Agency (USEPA) requirements • Puerto Rico Department of Health (PRDH) • Clean Water Act (CWA)
Codes and Industry Standards	<p>Ensure compliance with applicable laws and regulations and alignment with consensus-based codes and standards. Examples include:</p> <ul style="list-style-type: none"> • 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	<p>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.</p>
Hazard Mitigation	<p>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.</p>
Modernization and Maintenance	<p>Modernize and maintain PRASA’s infrastructure to optimize its operational efficiency, protect public health, safeguard the environment and promote continued economic development.</p>



Chapter 4 PRASA's Prioritized Infrastructure Projects

4.1 Overview

This section of PRASA's FAASSt 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
<p>WTP</p>	<p>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.</p>
<p>WWTP</p>	<p>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</p>



Asset Category	Description
	<p>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.</p>
<p>WWPS</p>	<p>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</p>



Asset Category	Description
	<p>to the WWTP or another WWPS. The wastewater is usually stored in and 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.</p>
<p>WPS</p>	<p>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</p>



Asset Category	Description
	<p>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 parts of the building not used specifically for the protection of process equipment.</p>
<p>WST & WPS</p>	<p>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.</p>
<p>WST</p>	<p>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</p>



Asset Category	Description
	<p>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 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.</p>
<p>Ocean Outfalls (OO)</p>	<p>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).</p>



Asset Category	Description
<p>Dams (D)</p>	<p>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 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.</p>
<p>Reservoirs (R)</p>	<p>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</p>



Asset Category	Description
	<p>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 FAASSt Workplan, the target is to remove sediments deposited in the assets and repair the facility lake -<i>Lago Regulador de Isabela</i>.</p>
<p>Buildings (B)</p>	<p>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.</p>



Asset Category	Description
<p>Raw Water Wells (RWW)</p>	<p>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 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.</p>
<p>Transmission and Distribution Water Lines (T&D-WL)</p>	<p>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,</p>



Asset Category	Description
	<p>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.</p>
<p>Water Meters (WM)</p>	<p>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 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.</p>
<p>Trunk Sewer Lines (TSL)</p>	<p>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</p>



Asset Category	Description
	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 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 determine the projects in the near future.

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 near-term priority are as follow:

WTP & WWTP

Near-term WTP & WWTP projects mainly consist of the rehabilitation of damages incurred during the 2017 hurricanes at numerous facilities. Due to these facilities' size and complexity, each facility will constitute one (1) project for this plan.

PRASA's WTP consist of 113 assets located Islandwide, including the RWI (after Hurricane Maria, one (1) WTP was closed). PRASA reported that each of the 114 WTP suffered some form of disaster damage, classified as follows: minor (6% of all 114 WTP), moderate (59%), or severe (35%). As part of this plan, PRASA includes eighty (80) WTP to be rehabilitated. As part of the near-term period (Third Revision), PRASA proposes to start fifty (50) WTP projects.

PRASA WWTP consists of 51 assets along the island. PRASA reported that each one of the facilities suffered some disaster damage: minor (23%), moderate (53%), or severe (24%). As part of this plan, PRASA includes twenty-nine (29) WWTP to be rehabilitated. As part of the near-term period, PRASA is proposing to start nineteen (19) WWTP projects

WWPS, WPS, WST&WPS, WST and RWW

PRASA's WWPS consists of 799 facilities throughout the island. Part of this plan is considering that at least 40% of the facilities suffered moderate or severe damages, which results in at least 320 WWPS needing rehabilitation and improvement. As part of this workplan revision, PRASA has identified sixteen (16) projects in this category. One (1) project is identified as Rehabilitation to PRASA WWPS Islandwide LS Project (FAASt). This project may be divided in the future into several projects by PRASA's regions, in which each project may contain several WWPS facilities. For this plan, PRASA is scheduling to start thirteen (13) projects identified in this category (WWPS) as part of a near-term period between the years 2021 to 2023.



PRASA's WPS consists of 468 facilities. Part of this plan considers that at least 20% of the facilities suffered moderate or severe damages, which will result in at least 94 WPS needing rehabilitation and improvement. As part of this workplan revision, PRASA has identified twelve (12) projects in this category; one of these projects is named Rehabilitation to PRASA WPS Islandwide LS Project (FAAST). This project may be divided soon into several projects by PRASA's regions, and each project may contain several WPS facilities. For this plan, PRASA is scheduling to start eleven (11) WWPS projects in the near-term period.

PRASA's WST consists of 997 storage tanks located Islandwide. Part of this plan considers that at least 30% of the facilities suffered moderate or severe damages that will result in at least 300 WST needing rehabilitation or improvement. As part of this workplan revision, PRASA has identified twelve (12) projects in this category. One (1) of the projects is identified as the Rehabilitation to PRASA WST Islandwide LS Project (FAAST), which may be divided soon into several projects. As part of this plan, PRASA is scheduling to start eleven (11) projects under this category (WST) as part of the near-term period.

PRASA's WST & WPS consists of 808 assets located throughout the island. Part of this plan considers that at least 20% of the facilities suffered moderate or severe damages, which will result in at least 162 WST & WPS needing rehabilitation or improvement. In this revision , PRASA has identified two (2) projects in this category, one named Rehabilitation to PRASA WST & WPS Islandwide LS Project (FAAST). This project may be divided soon into several projects by PRASA's regions, and each project may contain several WST & WPS. As part of this revision, PRASA is scheduling to start one (1) project under this category as part of the near-term period.

PRASA's RWW consists of 269 Wells located throughout PRASA's five regionals.. As part of this workplan revision, PRASA has identified five (5) projects in this category. For this plan, PRASA is scheduling to start the RWW projects in the near-term period.



Ocean Outfalls (OO)

PRASA's Ocean Outfalls consists of 12 assets, and part of this plan PRASA's target is to rehabilitate and improve all these assets following industry standards without regard to pre-disaster conditions and to restore components not damaged by the disaster, when necessary to restore the facility function. Currently, PRASA has identified three (3) projects in this category. One (1) of the projects in this category is named Rehabilitation to PRASA OO Islandwide LS Project (FAAST), which may be divided in the future into several projects. Due to the size and complexity of these facilities, each facility may constitute one project. PRASA plans to start two (2) of the three (3) projects in this category as part of the near-term period.

Dams(D)

PRASA operates and maintains eight (8) major Dams throughout Puerto Rico. Part of this plan is to rehabilitate and improve all these assets following industry standards without regard to pre-disaster condition, to restore components not damaged by the disaster, and when necessary to restore the facility function. Preliminary, PRASA has identified three (3) projects under this asset. One (1) of the projects is identified as Rehabilitation to Dams Islandwide LS Project (FAASt), which may be divided soon into several projects. Due to the size and complexity of these facilities, each facility may constitute one project. PRASA plans to start two (2) of the three (3) projects under this category as part of the near-term period.

Reservoirs (R)

PRASA has eight (8) main reservoirs throughout Puerto Rico. As part of this plan, PRASA's target is to remove sediments deposited in the assets to extend the useful life of the facilities following industry standards without regard to pre-disaster conditions. Currently, PRASA has five (5) projects under this asset. One (1) of the projects is identified as Reservoir Dredging Islandwide LS Project, which may be divided soon into several projects. Carraízo Reservoir Dredging was originally included as part of this LS Project; however, currently is



included as a separate project. As part of the near-term period, PRASA is planning to start the three (3) projects, including Carraízo Reservoir Dredging

Buildings (B)

PRASA manages a total of 91 building facilities throughout five (5) regional sectors on the island. Building facilities are grouped by the function of the building: Commercial, Operational, Laboratory, Administrative, Warehouse, and Maintenance. PRASA has claimed 41 building facilities, while 56 sites are not included in the asset group of the damage inventory. PRASA leases eight (8) of the 41 claimed building facilities, and of such leased facilities, PRASA will only claim building contents. Preliminary, PRASA has identified four (4) projects under this asset. One (1) of the projects is identified as PRASA Buildings Islandwide LS Project (FAAST), which may be divided in the near future into several projects per PRASA's regions, and each project may contain several building facilities. PRASA plans to start three (3) of the four (4) projects under this category as part of the near-term period.

Distribution and Transmission Water Lines (D&T-WL)

PRASA has Distribution and Transmission water lines along all the island. PRASA intends to rehabilitate and improve these assets damaged by the hurricanes following industry standards. Also, to rehabilitate or improve components not damaged, when necessary, to restore the facility function. Currently, PRASA has identified eight (8) projects under this asset. One (1) of the projects is identified as PRASA T & D -WL Islandwide LS Project (FAAST), which may be divided soon into several projects. As part of the near-term period, PRASA plans to start seven (7) projects under this category.

Water Meters (WM)

PRASA has Distribution and Transmission water lines along all the island, and as part of this system are included the WM. PRASA's target is rehabilitation and improvement of 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. Preliminary, PRASA has identified under this category one (1) project named PRASA WM Islandwide LS Project (FAAST). As part of the near-term period, PRASA plans to start the project under this category.

Trunk Sewer Lines (TSL)

PRASA has sewer lines along all the island. PRASA intends to rehabilitate and improve these assets damaged by the hurricanes following industry standards. Also, to rehabilitate or improve components not damaged, and when necessary, to restore the facility function. Currently, PRASA has identified fourteen (14) projects under this category. One (1) of the projects is identified as PRASA TSL Islandwide LS Project (FAAST), which may be divided soon into several projects. As part of the near-term period, PRASA plans to start thirteen (13) projects under this category.

Telemetry (T)

Telemetry System is along with PRASA facilities, WTP, WWTP, WWPS, WPS, WST, WST & WPS, and RWW Islandwide. PRASA intends to rehabilitate and improve these assets. Preliminary, PRASA has identified one (1) project under this asset. This project is named PRASA Telemetry Islandwide LS Project (FAAST), which may be divided soon into several projects. For this plan, PRASA is scheduling to start the Telemetry (T) projects between the years 2024 and 2027.

Projects Pending to be Defined (PPTD)

PRASA evaluates other projects under the MAAA200 PRASA Island Wide FAASt Project. In the near future, PRASA will identify those projects. Preliminary, PRASA plans to start those projects after 2025.



4.4.2 Summary of Near-Term Priority Projects

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

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

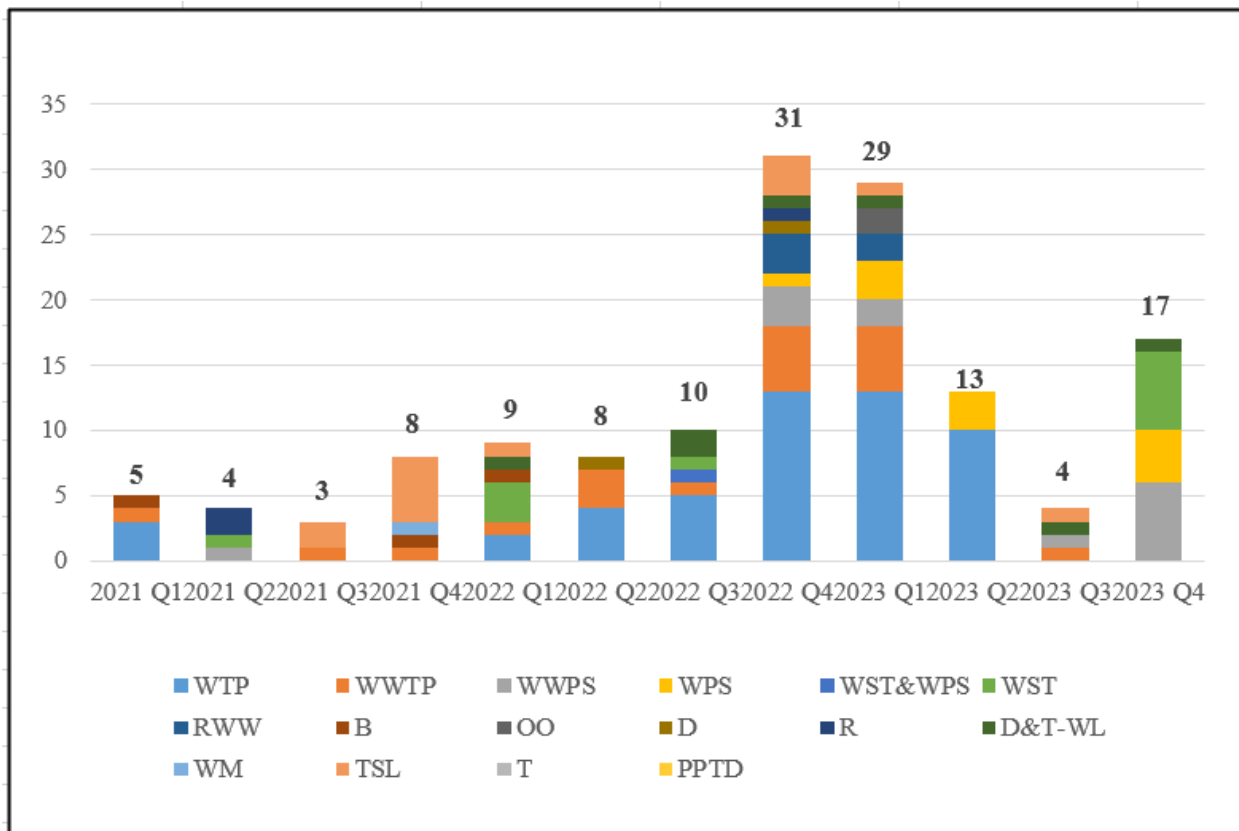
Asset Category	A & E Start 2021	A & E Start 2022	A & E Start 2023	Total Projects	Total Cost Estimates (Million)
WTP	3	38	9	50	\$774.77
WWTP	6	12	1	19	\$459.23
WWPS	1	5	7	13	\$84.61
WPS	0	4	7	11	\$43.01
WST & WST	0	1	0	1	\$0.43
WST	4	1	6	11	\$24.47
RWW	0	5	0	5	\$12.61
B	3	0	0	3	\$36.37
OO	0	2	0	2	\$66.52
D	1	1	0	2	\$8.11
R	2	1	0	3	\$89.04
D&T-WL	0	5	2	7	\$18.40
WM	1	0	0	1	\$300.00
TSL	7	5	1	13	\$258.01
T	0	0	0	0	\$0.00
PPTD	0	0	0	0	\$0.00
Total	29	69	19	117	\$2,176



4.4.3 COR3 and FEMA Submissions Timeline

The following chart figure shows the estimated timeline for the submittal of individual projects to COR3 and FEMA for review and approval.

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
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 follow:

WTP & WWTP

As the summary of the mid-term period, PRASA is planning to start A & E for the following projects for WTP and WWTP:

- WTP- 19 Projects.
- WWTP- 7 Projects.

WWPS, WPS, WST&WPS, WST and RWW

As the summary of the mid-term period, PRASA is planning to start A & E for the following projects for WWPS, WPS, WST&WPS, WST and RWW:

- WWPS- 3 (3) Projects.
- WPS- One (1) Project.
- WST&WPS- One (1) Project.
- WST- One (1) Project
- RWW- For this workplan revision, PRASA is scheduling to start the RWW projects in the near-term period.

Mid-term WWPS, WPS, WST&WPS, WST, and RWW mainly consist of the rehabilitation of damages incurred during the 2017 hurricanes at numerous facilities.



Ocean Outfalls (OO)

As part of this plan, PRASA is programming to start one (1) project as part of the mid-term period.

Dams (D)

As part of the mid-term projects period, PRASA plans to start one (1) project under this category, named PRASA Dams Islandwide LS Project (FAAST), which may be divided in the future into several projects.

Reservoirs (R)

As part of the mid-term projects period, PRASA is programming to start one (1) project under this category.

Buildings (B)

As part of the mid-term projects period, PRASA is programming to start one (1) project under this category.

Distribution and Transmission Water Lines (D&T-WL)

As part of the mid-term projects period, PRASA is programming to start one (1) project under this category, named PRASA D&T-WL Islandwide LS Project (FAAST), which may be divided in the future into several projects.



Water Meters (WM)

PRASA is programming to start projects under these assets as part of the near-term period.

Trunk Sewer Lines (TSL)

As part of the mid-term projects period, PRASA is programming to start one (1) project under this category, named PRASA TSL Islandwide LS Project (FAAST), which may be divided in the future into several projects.

Telemetry (T)

Telemetry System is along with PRASA facilities, WTP, WWTP, WWPS, WPS, WST, WST & WPS, and RWW Islandwide. PRASA intends to rehabilitate and improve these assets. Preliminary, PRASA has identified one (1) project under this category, named PRASA Telemetry Islandwide LS Project (FAAST), which may divide this LS project into several projects. For this plan, PRASA is planning to start the telemetry projects in the mid-term period.

Projects Pending to be Defined (PPTD)

PRASA is evaluating other projects under FAASt Project # 144184, MAAA200 Island Wide. In the near future, PRASA will identify those projects. Preliminary, PRASA is planning to start these projects under the mid-term period.



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)

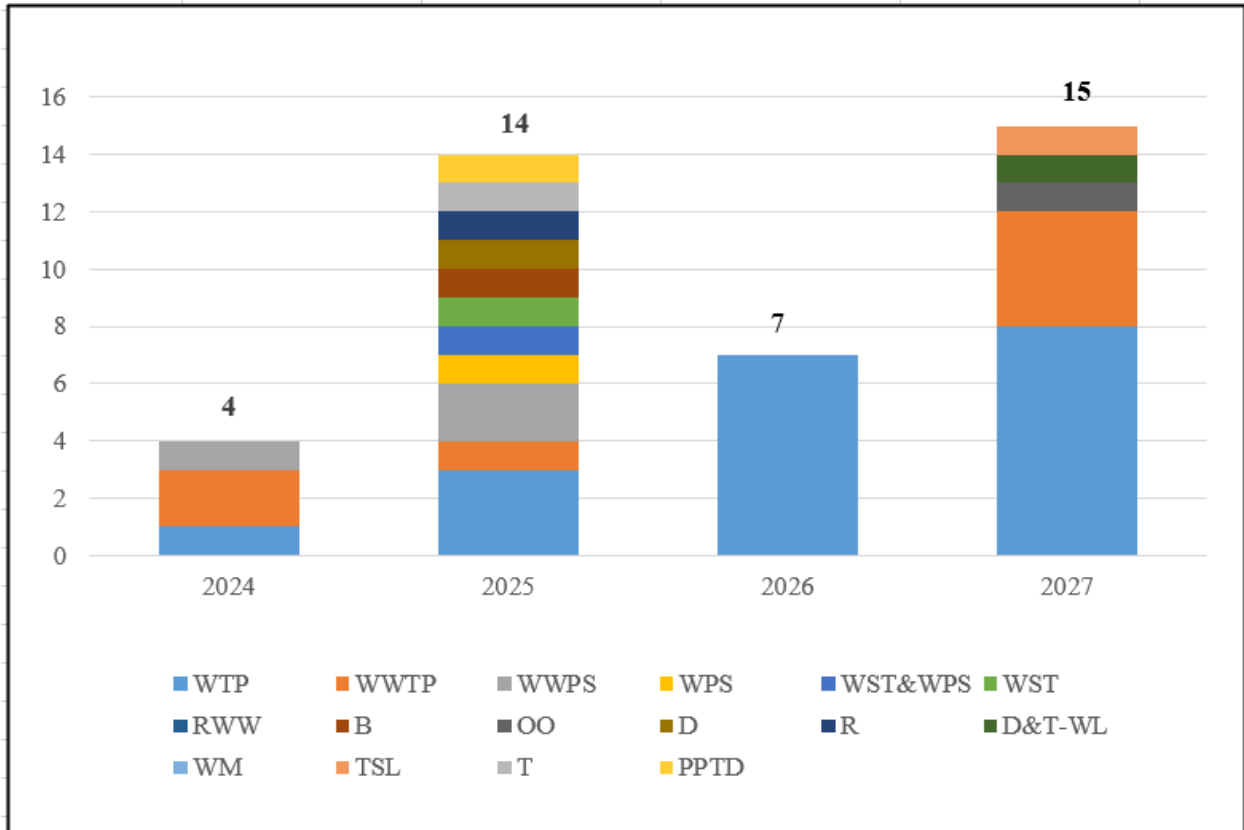
Asset Category	A & E Start 2024	A & E Start 2025	A & E Start 2026	A & E Start 2027	Total of Projects	Total Cost Estimates
WTP	1	3	7	8	19	\$182.01
WWTP	2	1	0	4	7	\$135.54
WWPS	2	1	0	0	3	\$32.87
WPS	0	1	0	0	1	\$11.61
WST &	0	1	0	0	1	\$46.30
WST	0	1	0	0	1	\$45.00
RWW	0	0	0	0	0	\$0.00
B	0	1	0	0	1	\$20.00
OO	0	0	0	1	1	\$126.00
D	0	1	0	0	1	\$20.00
R	0	1	0	0	1	\$41.00
D&T-WL	0	0	0	1	1	\$400.00
WM	0	0	0	0	0	\$0.00
TSL	0	0	0	1	1	\$520.00
T	0	1	0	0	1	\$5.00
PPTD	0	1	0	0	1	\$29.90
Total	5	13	7	15	40	\$1,615



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 Near-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.
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 period are as follow:



WTP & WWTP

As the summary of the long-term period, PRASA is planning to start A & E for the following projects for WTP and WWTP:

- WTP- 11 Projects.
- WWTP-3 Projects.

WWPS, WPS, WST&WPS, WST and RWW

As part of this plan, PRASA is planning to start all the projects related to WWPS, WPS, WST, WST&WPS, and RWW as part of the near-term and mid-term periods.

Ocean Outfalls (OO)

As part of this plan, PRASA plans to start all the projects related to Ocean Outfall as part of the near-term and mid-term periods.

Dams(D)

As part of this plan, PRASA plans to start all the projects related to Dams as part of the near-term and mid-term periods.

Reservoirs (R)

As part of this plan, PRASA plans to one (1) projects related to reservoirs as part of the long period.

Buildings(B)

As part of this plan, PRASA plans to start the projects related to this asset as part of the near-term and mid-term periods.



Distribution and Transmission Water Lines (D&T-WL)

PRASA is planning to start the projects related to this asset as part of the near-term and mid-term periods.

Water Meters (WM)

PRASA is planning to start the projects related to this asset as part of the near-term period.

Trunk Sewer Lines (TSL)

PRASA plans to start the projects related to this asset as part of the near-term and mid-term periods.

Telemetry (T)

PRASA plans to start the projects related to this asset as part of the mid-term period.

Projects Pending to be Defined (PPTD)

The PRASA plan is to define all the projects by the mid-term period and start the A & E before 2025.



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)

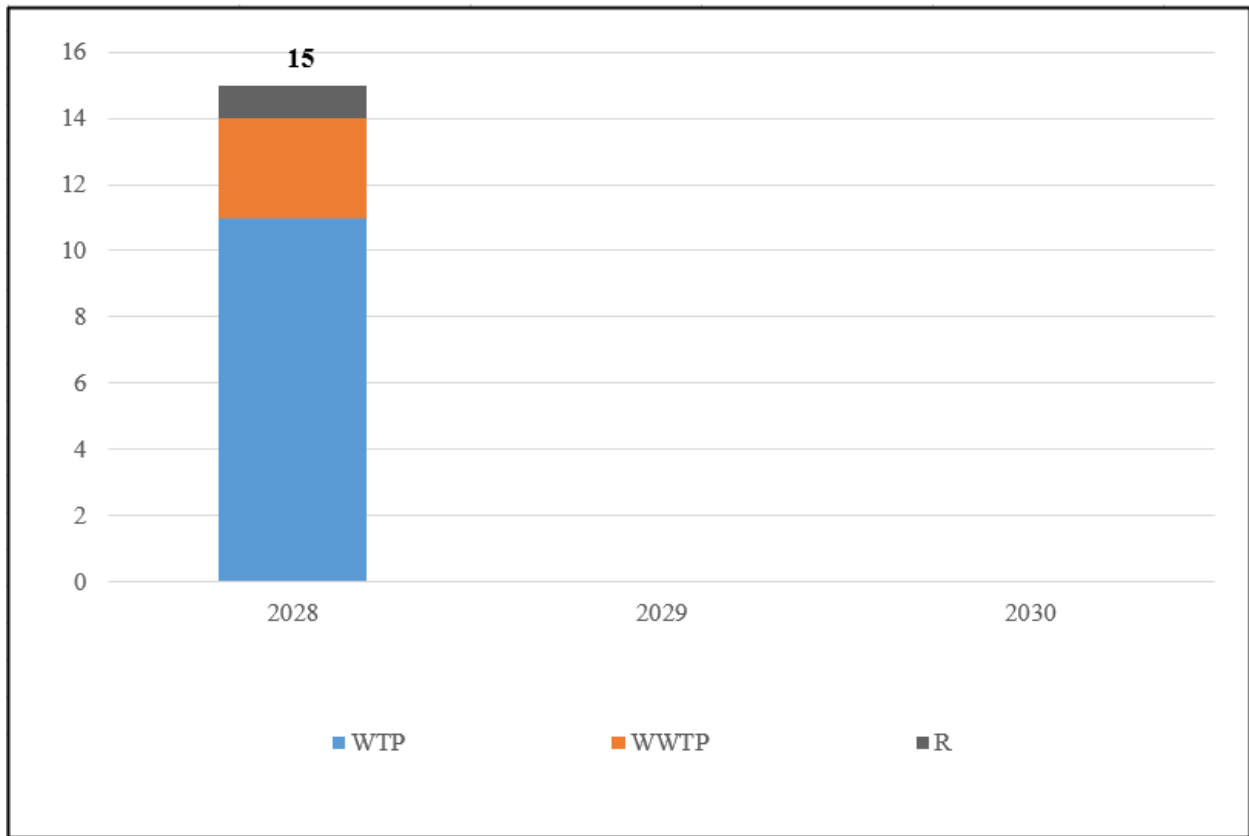
Asset Category	A & E Start 2028	A & E Start 2029	A & E Start 2030	Total of Projects	Total Cost Estimates
WTP	11	0	0	11	\$98.40
WWTP	3	0	0	3	\$29.81
WWPS	0	0	0	0	\$0.00
WPS	0	0	0	0	\$0.00
WST & WPS	0	0	0	0	\$0.00
WST	0	0	0	0	\$0.00
RWW	0	0	0	0	\$0.00
B	0	0	0	0	\$0.00
OO	0	0	0	0	\$0.00
D	0	0	0	0	\$0.00
R	1	0	0	1	\$150.00
D&T-WL	0	0	0	0	\$0.00
WM	0	0	0	0	\$0.00
TSL	0	0	0	0	\$0.00
T	0	0	0	0	\$0.00
PPTD	0	0	0	0	\$0.00
Total	15	0	0	15	\$278.2



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.



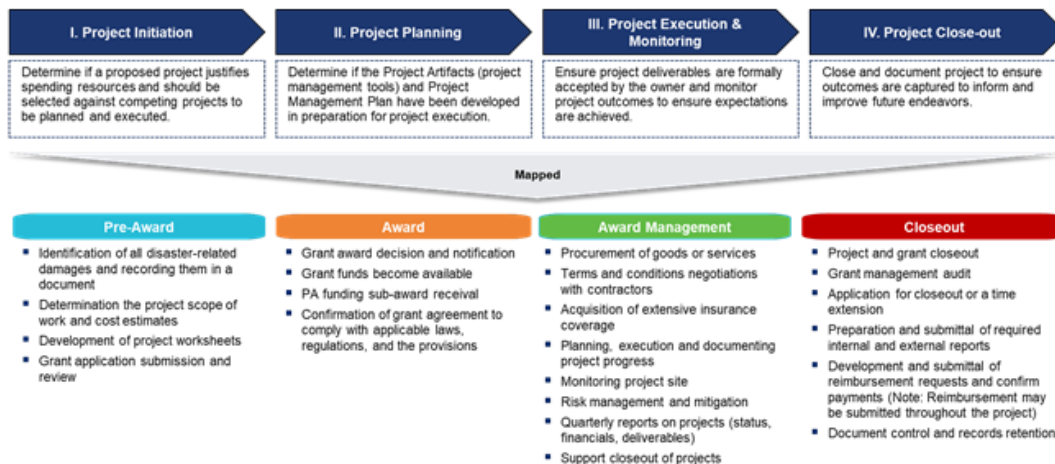
As defined by COR3, the federal grant lifecycle process (See Figure 6-1) is an end-to-end framework outlining the progression of phases and key requirements that PRASA must complete, obtain, manage, and close of Public Assistance funding sub-awards and projects.

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	Initial SOW Submittal Quarter	Construction Start Quarter	SOW Close Out Submittal Quarter	Total Cost Estimate
B	CIP.3130001	PRASA Central Laboratory in Caguas (FAASt)	2021 - Q1	2021 - Q1	2020 - Q3	2022 - Q1	28,094,198.53
B	CIP.3139000	Equipment for New PRASA Central Laboratory in Caguas (FAASt)	2021 - Q1	2022 - Q1	2022 - Q3	2023 - Q2	8,000,000.00
WTP	CIP.2479001	Rehabilitation and Improvements to the Morovis Sur RWI (FAASt)	2021 - Q1	2021 - Q1	2021 - Q4	2022 - Q2	1,593,954.10
WWTP	CIP.3305001	Improvements to Guayama WWTP (FAASt)	2021 - Q1	2021 - Q1	2022 - Q3	2025 - Q1	74,201,504.19
WTP	CIP.2096007	Rehabilitation of Enrique Ortega WTP Toa Alta (FAASt-25)	2021 - Q1	2021 - Q1	2022 - Q4	2025 - Q2	85,866,022.28
TSL	CIP.4089000	Rehabilitation of Arroyo-Guayama Trunk Sewer Lines (FAASt)	2021 - Q1	2021 - Q4	2022 - Q2	2024 - Q4	21,310,145.00
WST	CIP.3360002	Design and Construction Buena Vista Tank (FAASt)	2021 - Q2	2021 - Q2	2020 - Q4	2022 - Q1	429,800.00
WTP	CIP.2017005	Rehabilitation of Culebrinas WTP Aguadilla FEMA (FAASt-25)	2021 - Q2	2021 - Q1	2023 - Q1	2025 - Q2	49,169,980.51



Asset Category	Project	Description	A &E Start Quarter	Initial SOW Submittal Quarter	Construction Start Quarter	SOW Close Out Submittal Quarter	Total Cost Estimate
WWTP	CIP.3365083	Rehabilitation of Humacao Wastewater Treatment Plant (WWTP) Sludge Treatment System (STS)	2021 - Q2	2021 - Q3	2022 - Q2	2024 - Q1	11,703,465.90
D	CIP.7776071	Rehabilitation of Toa Vaca Dam (FAAST)	2021 - Q2	2022 - Q2	2023 - Q1	2024 - Q3	3,879,967.16
WWPS	CIP.3445009	Design and Build -Rehabilitation of La Sabana Las Piedras WWPS	2021 - Q3	2021 - Q2	2021 - Q4	2022 - Q3	652,204.00
R	CIP.5376001	Repair of Geosynthetic Membranes in Lago Regulador in Isabela	2021 - Q3	2021 - Q2	2022 - Q4	2023 - Q4	9,718,135.26
TSL	CIP.1169001	Rehabilitation of Los Angeles and Loíza Pueblo Trunk Sewers (FAAST)	2021 - Q3	2021 - Q3	2022 - Q2	2023 - Q3	8,619,255.00
R	CIP.1019000	Dragado Lago Loíza (Carraízo) FAAST	2021 - Q3	2021 - Q2	2022 - Q3	2025 - Q4	73,804,524.61
WM	CIP.6009002	Water Meters Islandwide LS Project (FAAST)	2021 - Q3	2021 - Q4	2023 - Q2	2028 - Q2	300,000,000.00
WWTP	CIP.3135079	Rehabilitation of Blowers in Caguas WWTP (FAAST)	2021 - Q4	2021 - Q4	2019 - Q4	2021 - Q2	4,786,904.55
B	CIP.1660002	Rehabilitation of PRASA Main Building in Hato Rey	2021 - Q4	2021 - Q4	2022 - Q2	2023 - Q3	276,236.00
WST	CIP.1009001	Rehabilitation of Water Storage Tanks -Metro Region Phase 1 (FAAST)	2021 - Q4	2022 - Q1	2022 - Q3	2023 - Q4	3,462,928.95
TSL	CIP.3139002	Rehabilitation of Caguas Trunk Sewer Lines (FAAST)	2021 - Q4	2021 - Q4	2023 - Q1	2025 - Q1	34,980,363.00



Asset Category	Project	Description	A &E Start Quarter	Initial SOW Submittal Quarter	Construction Start Quarter	SOW Close Out Submittal Quarter	Total Cost Estimate
TSL	CIP.4589003	Rehabilitation of Ponce Trunk Sewer System (FAAST)	2021 - Q4	2021 - Q4	2022 - Q2	2025 - Q1	16,797,177.00
WWTP	CIP.5505028	Rehabilitation of Mayaguez WWTP (FAAST-25)	2021 - Q4	2022 - Q2	2023 - Q3	2026 - Q1	55,471,239.30
TSL	CIP.5509001	Rehabilitation of Hormigueros and Mayaguez Trunk Sewer Lines (FAAST)	2021 - Q4	2021 - Q4	2022 - Q4	2024 - Q3	25,884,277.00
WWTP	CIP.1165044	Rehabilitation of Carolina WWTP FEMA (FAAST-25)	2021 - Q4	2022 - Q2	2023 - Q1	2025 - Q4	23,032,340.55
TSL	CIP.2755055	Rehabilitation of Vega Baja Trunk Sewer Lines (TSL)	2021 - Q4	2021 - Q4	2022 - Q2	2024 - Q1	9,664,177.08
WST	CIP.3009001	Rehabilitation of Water Storage Tanks (WST) -East Region Phase 1 (FAAST)	2021 - Q4	2022 - Q1	2022 - Q2	2023 - Q3	3,396,923.00
WST	CIP.4009001	Rehabilitation of Water Storage Tanks -South Region Phase 1 (FAAST)	2021 - Q4	2022 - Q1	2022 - Q3	2023 - Q4	2,702,885.40
TSL	CIP.2095052	Rehabilitation of 42 IN Trunk Sewer Line from PR-684 to the South part of Barceloneta WWTP	2021 - Q4	2022 - Q1	2022 - Q4	2024 - Q2	39,956,038.00
WWTP	CIP.5035001	Rehabilitation of Aguada WWTP (FAAST-25)	2022 - Q4	2022 - Q4	2024 - Q1	2026 - Q4	23,548,890.00
D&T-WL	CIP.2475022	Installation of Permanent WL Rio Utuado Bridge (FAAST)	2022 - Q1	2022 - Q1	2022 - Q3	2023 - Q2	653,530.78
WTP	CIP.5379002	Design and Build Guajataca WTP Floating Raw Water Pumping Station Project	2022 - Q1	2022 - Q2	2023 - Q1	2024 - Q2	3,040,793.00



Asset Category	Project	Description	A &E Start Quarter	Initial SOW Submittal Quarter	Construction Start Quarter	SOW Close Out Submittal Quarter	Total Cost Estimate
WTP	CIP.2076042	Rehabilitation of Esperanza WTP and WI, Arecibo(FAAST)	2022 - Q1	2022 - Q1	2023 - Q2	2025 - Q1	12,395,217.00
WTP	CIP.2386049	Rehabilitation of Canalizo WTP and WI, Jayuya (FAAST)	2022 - Q1	2022 - Q2	2023 - Q1	2024 - Q4	7,030,614.00
WTP	CIP.2426100	Rehabilitation of Lares Nueva Espino WTP and WI, Lares (FAAST)	2022 - Q1	2022 - Q1	2023 - Q2	2024 - Q3	12,245,917.52
WTP	CIP.2526006	Rehabilitation of Morovis Sur WTP (FAAST-25)	2022 - Q1	2022 - Q2	2023 - Q1	2025 - Q2	8,701,049.73
WTP	CIP.4316007	Rehabilitation of Jaguas Pasto WTP, Guayanilla (FAAST-25)	2022 - Q1	2022 - Q2	2023 - Q1	2024 - Q4	6,948,860.00
WWTP	CIP.2075073	Rehabilitation of Islote WWTP, Arecibo (FAAST)	2022 - Q1	2022 - Q1	2023 - Q3	2025 - Q2	31,284,049.00
D&T-WL	CIP.2526008	Improvements to the Water Distribution System in Morovis (FAAST)	2022 - Q2	2022 - Q3	2023 - Q1	2024 - Q2	5,733,335.35
WWTP	CIP.4695042	Rehabilitation of Santa Isabel WWTP (FAAST)	2022 - Q2	2022 - Q3	2023 - Q3	2025 - Q1	14,905,107.31
WTP	CIP.2739001	Rehabilitation of WI Lago Vivi Utuado (FAAST)	2022 - Q2	2022 - Q3	2023 - Q2	2024 - Q4	3,897,518.32
WTP	CIP.4646004	WTP Salinas (Wells Closure) (FAAST-25)	2022 - Q2	2022 - Q3	2023 - Q3	2026 - Q1	24,011,013.00
WTP	CIP.2206107	Rehabilitation of Frontón WTP and WI, Ciales (FAAST)	2022 - Q2	2023 - Q2	2023 - Q2	2025 - Q3	28,630,577.00
WTP	CIP.3156093	Rehabilitation of El Yunque WTP, Rio Grande (FAAST-25)	2022 - Q2	2022 - Q3	2023 - Q3	2025 - Q4	13,317,525.14



Asset Category	Project	Description	A &E Start Quarter	Initial SOW Submittal Quarter	Construction Start Quarter	SOW Close Out Submittal Quarter	Total Cost Estimate
D&T-WL	CIP.2549000	Rehabilitation of Transmission and Distribution System at Naranjito (FAAST)	2022 - Q2	2022 - Q3	2023 - Q1	2024 - Q4	6,720,948.00
WWTP	CIP.4555022	Rehabilitation of Orocovis WWTP (FAAST-25)	2022 - Q2	2022 - Q2	2023 - Q1	2024 - Q4	10,951,686.03
WST	CIP.5009001	Rehabilitation of Water Storage Tanks -West Region Phase 1 (FAAST)	2022 - Q2	2022 - Q3	2022 - Q4	2023 - Q3	794,295.00
WST & WPS	CIP.2009104	Installation of MCC at WPS Medio Millon Tank in Arecibo	2022 - Q2	2022 - Q3	2022 - Q4	2023 - Q3	429,800.00
D&T-WL	CIP.2479000	Design and Build 8"Pipe Bo. Boquillas Manatí (FAAST)	2022 - Q3	2022 - Q4	2023 - Q1	2023 - Q4	2,167,638.36
TSL	CIP.2149001	Rehabilitation of Camuy Trunk Sewer Lines (FAAST)	2021 - Q3	2021 - Q3	2023 - Q1	2024 - Q4	35,375,182.06
TSL	CIP.429900	Rehabilitation of Barriada Esperanza Guánica Trunk Sewer System	2022 - Q3	2022 - Q4	2023 - Q2	2024 - Q3	5,826,982.73
WTP	CIP.1016095	Rehabilitation of Guaynabo WTP (FAAST-25)	2022 - Q3	2022 - Q4	2024 - Q1	2026 - Q3	44,784,489.48
WTP	CIP.1116008	Rehabilitation of Guaynabo Santa Rosa WI (FAAST-25)	2022 - Q3	2022 - Q4	2023 - Q3	2024 - Q4	15,045,690.08
WTP	CIP.3156094	New Raw Water Intake for El Yunque WTP(Mameyes)Río Grande (FAAST)	2022 - Q3	2022 - Q4	2023 - Q3	2025 - Q4	11,966,142.03
WTP	CIP.2246106	Rehabilitation of Negros WTP and WI, Corozal (FAAST-25)	2022 - Q3	2022 - Q4	2023 - Q4	2026 - Q1	9,517,703.23
WWTP	CIP.3139001	Improvements to Caguas WWTP (FAAST-25)	2022 - Q3	2022 - Q4	2023 - Q4	2025 - Q4	25,878,849.00



Asset Category	Project	Description	A &E Start Quarter	Initial SOW Submittal Quarter	Construction Start Quarter	SOW Close Out Submittal Quarter	Total Cost Estimate
D	CIP.1666090	Improvements to La Plata Dam - Installation of Anchorage System	2022 - Q3	2022 - Q4	2023 - Q3	2025 - Q1	4,232,346.85
R	CIP.1019002	Sediments Control Carraízo Reservoir (FAAST)	2022 - Q3	2022 - Q4	2023 - Q3	2024 - Q4	5,519,490.77
WTP	CIP.3366005	Rehabilitation of Humacao WTP (FAAST-25)	2022 - Q3	2022 - Q4	2023 - Q3	2025 - Q2	9,965,930.00
WWTP	CIP.4585096	Rehabilitation of Ponce WWTP (FAAST-25)	2022 - Q3	2022 - Q4	2023 - Q4	2026 - Q3	24,106,142.00
WTP	CIP.2596004	Rehabilitation of Quebradillas WTP and WI (FAAST-25)	2022 - Q3	2022 - Q4	2023 - Q4	2025 - Q2	8,621,050.00
WTP	CIP.2346015	Rehabilitation of Hatillo-Camuy WTP(FAAST)	2022 - Q3	2022 - Q3	2023 - Q3	2025 - Q2	9,477,186.31
WWPS	CIP.2039000	Rehabilitation of Guerrero 2 WWPS, Aguadilla (FAAST)	2022 - Q3	2022 - Q4	2023 - Q3	2025 - Q1	1,124,880.00
WWPS	CIP.1665900	Rehabilitation of Martin Peña (Tokio) WWPS San Juan	2022 - Q3	2022 - Q4	2023 - Q3	2025 - Q1	4,225,579.12
WWTP	CIP.4495001	Rehabilitation or Elimination of Maunabo WWTP (FAAST-25)	2022 - Q3	2022 - Q4	2023 - Q4	2025 - Q2	12,614,542.77
WPS	CIP.4317001	Construction of Sector Ballinó Guayanilla WPS(FAAST)	2022 - Q3	2022 - Q4	2023 - Q1	2024 - Q1	490,741.00
WTP	CIP.2426099	Rehabilitation of Indiera Alta WTP and WI, Lares(FAAST)	2022 - Q3	2022 - Q4	2023 - Q4	2025 - Q3	7,126,614.00
WTP	CIP.2916002	Rehabilitation of Superacueductos WTP, Arecibo (FAAST-25)	2022 - Q3	2022 - Q4	2023 - Q4	2026 - Q3	13,234,898.74



Asset Category	Project	Description	A &E Start Quarter	Initial SOW Submittal Quarter	Construction Start Quarter	SOW Close Out Submittal Quarter	Total Cost Estimate
WWTP	CIP.3765002	Rehabilitation Vieques WWTP (FAAST)	2022 - Q3	2022 - Q4	2023 - Q4	2026 - Q2	35,528,324.00
WTP	CIP.3536006	Rehabilitation of Río Blanco WTP, Naguabo (FAAST-25)	2022 - Q3	2022 - Q3	2023 - Q3	2025 - Q3	19,719,207.00
TSL	CIP.2375002	Trunk Sewer Lines (TSL) Isabela - Aguada (FAAST)	2022 - Q3	2022 - Q4	2023 - Q1	2025 - Q2	30,923,503.00
TSL	CIP.2709010	Rehabilitation of Arecibo Trunk Sewer Lines (TSL) (FAAST)	2022 - Q3	2022 - Q4	2023 - Q2	2023 - Q4	893,135.00
WTP	CIP.4576002	Rehabilitation of Peñuelas WTP (FAAST)	2022 - Q3	2022 - Q4	2023 - Q3	2025 - Q4	12,142,953.86
WTP	CIP.4776078	Rehabilitation of Jagueyes-Villalba WTP (FAAST)	2022 - Q3	2022 - Q4	2023 - Q3	2025 - Q3	10,126,459.00
RWW	CIP.1009106	Rehabilitation of RWW -Metro Region Phase 1(FAAST)	2022 - Q3	2022 - Q4	2023 - Q1	2025 - Q2	1,958,466.00
RWW	CIP.4009106	Rehabilitation of RWW -South Region Phase 1(FAAST)	2022 - Q3	2022 - Q4	2023 - Q1	2025 - Q2	2,079,311.65
RWW	CIP.5009106	Rehabilitation of RWW -West Region Phase 1(FAAST)	2022 - Q3	2022 - Q4	2023 - Q1	2024 - Q3	4,810,801.00
WWPS	CIP.1009104	Rehabilitation of WWPS Metro Region Phase 1 (FAAST)	2022 - Q3	2022 - Q4	2023 - Q1	2025 - Q2	7,988,961.58
D&T-WL	CIP.3136009	Improvements to the Water Supply System in Villa del Rey Ward in Caguas (FAAST)	2022 - Q4	2023 - Q1	2023 - Q2	2024 - Q1	520,422.08
WTP	CIP.5506047	Rehabilitation of Miradero Mayaguez WTP (FAAST-25)	2022 - Q4	2022 - Q4	2023 - Q4	2025 - Q3	21,658,674.00
WTP	CIP.5596001	Rehabilitation of Guajataca Quebradillas WTP and WI (FAAST)	2022 - Q4	2023 - Q1	2024 - Q2	2026 - Q2	21,820,874.00



Asset Category	Project	Description	A &E Start Quarter	Initial SOW Submittal Quarter	Construction Start Quarter	SOW Close Out Submittal Quarter	Total Cost Estimate
WWTP	CIP.5415031	Rehabilitation of Lajas WWTP (FAAST)	2022 - Q4	2023 - Q1	2024 - Q1	2026 - Q2	13,565,238.00
WTP	CIP.5506044	Rehabilitation of Miradero Mayaguez RWI (FAAST-25)	2022 - Q4	2023 - Q1	2023 - Q4	2023 - Q1	57,243,098.43
WTP	CIP.2736007	Rehabilitation of Santa Isabel Utuado WTP and WI (FAAST-25)	2022 - Q4	2023 - Q1	2023 - Q4	2025 - Q3	11,290,837.00
WTP	CIP.1726043	Rehabilitation of Sergio Cuevas WTP Trujillo Alto (FAAST-25)	2022 - Q4	2023 - Q1	2024 - Q1	2026 - Q2	21,953,222.00
WTP	CIP.2736006	Rehabilitation of Mameyes Utuado WTP and WI (FAAST)	2022 - Q4	2023 - Q1	2023 - Q4	2025 - Q3	9,949,992.00
WTP	CIP.2526007	Rehabilitation of Morovis Urbano WTP (FAAST)	2022 - Q4	2023 - Q1	2023 - Q4	2025 - Q3	11,320,637.00
WTP	CIP.3186003	Rehabilitation of Farallon WTP, Cayey (FAAST)	2022 - Q4	2023 - Q1	2023 - Q4	2025 - Q1	6,861,635.00
OO	CIP.2149105	Rehabilitation of Ocean Outfalls- Camuy (FAAST)	2022 - Q4	2023 - Q1	2023 - Q4	2026 - Q1	37,953,614.00
OO	CIP.5509105	Rehabilitation of Ocean Outfalls- Mayaguez (FAAST)	2022 - Q4	2023 - Q1	2024 - Q1	2026 - Q2	28,567,699.00
WWTP	CIP.2475021	Rehabilitation of Barceloneta WWTP (FAAST-25)	2022 - Q4	2023 - Q1	2024 - Q1	2026 - Q4	31,564,876.00
WPS	CIP.1009103	Rehabilitation of Water Pump Stations (WPS) Metro Region Phase 1 (FAAST)	2022 - Q4	2023 - Q1	2023 - Q4	2026 - Q1	3,727,989.97
WPS	CIP.2009103	Rehabilitation of Water Pump Stations (WPS) North Region Phase 1 (FAAST)	2022 - Q4	2023 - Q1	2024 - Q1	2026 - Q2	3,742,989.00



Asset Category	Project	Description	A &E Start Quarter	Initial SOW Submittal Quarter	Construction Start Quarter	SOW Close Out Submittal Quarter	Total Cost Estimate
RWW	CIP.2009106	Rehabilitation of RWW -North Region Phase 1(FAAST)	2022 - Q4	2023 - Q1	2023 - Q2	2024 - Q3	1,794,344.00
RWW	CIP.3009106	Rehabilitation of RWW -East Region Phase 1(FAAST)	2022 - Q4	2023 - Q1	2023 - Q2	2025 - Q3	1,968,466.00
WPS	CIP.5009103	Rehabilitation of Water Pump Stations (WPS) West Region Phase 1 (FAAST)	2022 - Q4	2023 - Q1	2024 - Q1	2026 - Q2	3,772,989.00
WWPS	CIP.2009104	Rehabilitation of WWPS North Region Phase 1 (FAAST)	2022 - Q4	2023 - Q1	2024 - Q1	2026 - Q2	8,008,691.00
WWPS	CIP.5009104	Rehabilitation of WWPS West Region Phase 1 (FAAST)	2022 - Q4	2023 - Q1	2024 - Q1	2026 - Q2	8,048,691.00
WTP	CIP.4776077	Rehabilitation of Apeadero Villalba WTP (FAAST-25)	2022 - Q4	2023 - Q1	2024 - Q1	2025 - Q3	11,290,837.37
TSL	CIP.5685000	Replacement of Trunk Sewer Lines (TSL) in San Sebastián (FAAST)	2022 - Q4	2023 - Q1	2024 - Q2	2026 - Q3	26,406,171.00
WWTP	CIP.3185033	Rehabilitation of Cayey WWTP (FAAST-25)	2022 - Q4	2023 - Q1	2024 - Q2	2026 - Q2	23,234,319.00
WWTP	CIP.3236247	Rehabilitation of Comerío WWTP (FAAST)	2022 - Q4	2023 - Q1	2024 - Q1	2025 - Q4	14,684,616.00
WTP	CIP.3786003	Rehabilitation of Guayabota WTP and WI, Yabucoa (FAAST)	2022 - Q4	2023 - Q1	2023 - Q4	2025 - Q3	7,071,802.00
WTP	CIP.3106106	Rehabilitation of Barrancas WTP and WI, Barranquitas (FAAST)	2022 - Q4	2022 - Q4	2023 - Q4	2025 - Q2	9,292,903.00
WTP	CIP.2736005	Rehabilitation of Mameyes Limón, Utuado (Arriba) WTP and WI (FAAST)	2022 - Q4	2023 - Q1	2023 - Q4	2025 - Q3	7,051,802.00



Asset Category	Project	Description	A &E Start Quarter	Initial SOW Submittal Quarter	Construction Start Quarter	SOW Close Out Submittal Quarter	Total Cost Estimate
WTP	CIP.4556009	Rehabilitation of Sanamuertos Orocovis WTP(FAAST)	2022 - Q4	2023 - Q1	2023 - Q4	2025 - Q3	9,891,659.05
WTP	CIP.3106105	Rehabilitation of La Boca WTP and WI, Barranquitas (FAAST)	2022 - Q4	2022 - Q4	2023 - Q4	2025 - Q2	7,752,891.00
WWTP	CIP.3045036	Rehabilitation of Aguas Buenas WWTP (FAAST)	2022 - Q4	2023 - Q1	2024 - Q1	2026 - Q2	13,540,238.00
WTP	CIP.3136012	Rehabilitation of Caguas Norte WTP (FAAST)	2022 - Q4	2023 - Q1	2024 - Q2	2025 - Q4	17,601,139.00
WTP	CIP.3336045	Rehabilitation of Gurabo WTP (FAAST)	2022 - Q4	2023 - Q1	2023 - Q4	2025 - Q3	9,924,992.00
WPS	CIP.1669002	Rehabilitation of Puerto Nuevo WPS and Water Potable Line of 48"(FAAST)	2023 - Q1	2023 - Q2	2024 - Q1	2026 - Q2	9,939,757.00
WTP	CIP.5486007	Rehabilitation of Maricao WTP(FAAST)	2023 - Q1	2023 - Q2	2024 - Q1	2026 - Q2	9,467,703.00
WTP	CIP.5486006	Rehabilitation of Monte del Estado Maricao WTP (FAAST)	2023 - Q1	2023 - Q2	2024 - Q1	2025 - Q4	6,361,379.00
WTP	CIP.5489001	Rehabilitation of Monte del Estado Maricao WI (FAAST)	2023 - Q1	2023 - Q2	2024 - Q1	2025 - Q4	7,752,224.00
WTP	CIP.4796004	Rehabilitation of Río Prieto WTP (FAAST)	2023 - Q1	2023 - Q2	2024 - Q1	2026 - Q2	20,301,628.00
WTP	CIP.5036006	Rehabilitation of Aguadilla Montaña WTP (FAAST)	2023 - Q1	2023 - Q2	2024 - Q2	2026 - Q3	25,946,009.00
WPS	CIP.3009103	Rehabilitation of Water Pump Stations (WPS) East Region Phase 1 (FAAST)	2023 - Q1	2023 - Q2	2024 - Q1	2026 - Q2	3,757,989.00



Asset Category	Project	Description	A &E Start Quarter	Initial SOW Submittal Quarter	Construction Start Quarter	SOW Close Out Submittal Quarter	Total Cost Estimate
WPS	CIP.4009103	Rehabilitation of Water Pump Stations (WPS) South Region Phase 1 (FAAST)	2023 - Q1	2023 - Q2	2024 - Q2	2026 - Q3	3,757,989.97
WTP	CIP.5506046	Rehabilitation of Ponce de León Mayaguez WTP (FAAST-25)	2023 - Q1	2023 - Q2	2024 - Q1	2025 - Q4	6,361,379.00
WTP	CIP.4576004	Rehabilitation of Malpaso Peñuelas WTP (FAAST)	2023 - Q1	2023 - Q2	2024 - Q2	2026 - Q1	9,999,992.00
WTP	CIP.1156004	Rehabilitation of Cubuy WTP and WI, Canovanas (FAAST)	2023 - Q1	2023 - Q2	2024 - Q2	2026 - Q3	10,933,548.21
WTP	CIP.4016012	Rehabilitation of Guilarte WTP, Adjuntas (FAAST)	2023 - Q1	2023 - Q2	2024 - Q3	2026 - Q2	7,091,802.00
D&T-WL	CIP.5067002	Improvements to the Aqueduct System Community El Hoyo de Los Feos in Añasco	2023 - Q2	2023 - Q3	2024 - Q2	2025 - Q3	861,288.69
TSL	CIP.1669002	Relocation of Los Corozos 42"Trunk Sewer in San Juan	2023 - Q2	2023 - Q3	2024 - Q2	2025 - Q1	1,373,872.08
WWPS	CIP.3009104	Rehabilitation of WWPS East Region Phase 1 (FAAST)	2023 - Q2	2023 - Q3	2024 - Q3	2026 - Q3	8,028,691.00
WWTP	CIP.3785018	Rehabilitation of Yabucoa WWTP (FAAST)	2023 - Q2	2023 - Q3	2024 - Q2	2026 - Q1	14,634,616.00
D&T-WL	CIP.5506042	Improvements to the Water Supply System in Mayaguez Mall(FAAST)	2023 - Q3	2023 - Q4	2024 - Q3	2026 - Q1	1,742,742.77
WST	CIP.2009001	Rehabilitation of Water Storage Tanks -North Region Phase 1 (FAAST)	2023 - Q3	2023 - Q4	2024 - Q1	2026 - Q2	813,281.01
WWPS	CIP.4009104	Rehabilitation of WWPS South Region Phase 1 (FAAST)	2023 - Q3	2023 - Q4	2024 - Q3	2026 - Q4	8,028,691.00



Asset Category	Project	Description	A &E Start Quarter	Initial SOW Submittal Quarter	Construction Start Quarter	SOW Close Out Submittal Quarter	Total Cost Estimate
WST	CIP.1009101	Rehabilitation of Water Storage Tanks -Metro Region Phase 2 (FAAST)	2023 - Q3	2023 - Q4	2024 - Q1	2026 - Q2	1,968,466.67
WPS	CIP.1009203	Rehabilitation of Water Pump Stations (WPS) Metro Region Phase 2 (FAAST)	2023 - Q3	2023 - Q4	2024 - Q1	2026 - Q2	3,401,800.00
WST	CIP.2009101	Rehabilitation of Water Storage Tanks -North Region Phase 2 (FAAST)	2023 - Q3	2023 - Q4	2024 - Q1	2026 - Q2	2,070,978.32
WPS	CIP.2009203	Rehabilitation of Water Pump Stations (WPS) North Region Phase 2 (FAAST)	2023 - Q3	2023 - Q4	2024 - Q1	2026 - Q2	3,610,989.97
WST	CIP.3009101	Rehabilitation of Water Storage Tanks (WST) -East Region Phase 2 (FAAST)	2023 - Q3	2023 - Q4	2024 - Q1	2025 - Q2	1,693,500.00
WST	CIP.4009101	Rehabilitation of Water Storage Tanks -South Region Phase 2 (FAAST)	2023 - Q3	2023 - Q4	2024 - Q1	2026 - Q2	1,968,466.67
WPS	CIP.4009203	Rehabilitation of Water Pump Stations (WPS) South Region Phase 2 (FAAST)	2023 - Q3	2023 - Q4	2024 - Q1	2026 - Q2	3,401,800.00
WST	CIP.5009101	Rehabilitation of Water Storage Tanks -West Region Phase 2 (FAAST)	2023 - Q3	2023 - Q4	2024 - Q1	2026 - Q2	5,167,688.00
WPS	CIP.5009203	Rehabilitation of Water Pump Stations (WPS) West Region Phase 2 (FAAST)	2023 - Q3	2023 - Q4	2025 - Q1	2027 - Q1	3,401,800.00
WWPS	CIP.1009204	Rehabilitation of WWPS Metro Region Phase 2 (FAAST)	2023 - Q3	2023 - Q4	2024 - Q1	2026 - Q2	7,295,133.33



Asset Category	Project	Description	A &E Start Quarter	Initial SOW Submittal Quarter	Construction Start Quarter	SOW Close Out Submittal Quarter	Total Cost Estimate
WWPS	CIP.2009204	Rehabilitation of WWPS North Region Phase 2 (FAAST)	2023 - Q3	2023 - Q4	2024 - Q1	2026 - Q2	7,832,691.58
WWPS	CIP.3009204	Rehabilitation of WWPS East Region Phase 2 (FAAST)	2023 - Q3	2023 - Q4	2024 - Q4	2027 - Q1	8,028,691.00
WWPS	CIP.4009204	Rehabilitation of WWPS South Region Phase 2 (FAAST)	2023 - Q3	2023 - Q4	2024 - Q1	2026 - Q2	7,295,133.33
WWPS	CIP.5009204	Rehabilitation of WWPS West Region Phase 2 (FAAST)	2023 - Q4	2023 - Q4	2025 - Q1	2027 - Q2	8,048,691.00



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

Asset Category	Project	Description	A &E Start Quarter	Initial SOW Submittal Quarter	Construction Start Quarter	SOW Close Out Submittal Quarter	Total Cost Estimate
WWTP	CIP.1665115	Rehabilitation of Puerto Nuevo WWTP, San Juan (FAAST)	2024 - Q2	2024 - Q3	2025 - Q2	2028 - Q1	35,408,337.56
WWPS	CIP.7688000	Elimination of Los Alamos WWPS San Sebastian	2024 - Q3	2024 - Q4	2025 - Q3	2026 - Q3	952,186.30
WTP	CIP.6009016	Rehabilitation to PRASA WTP Islandwide LS Project (FAST)	2024 - Q3	2024 - Q3	2025 - Q3	2032 - Q2	30,000,000.00
WWTP	CIP.6009017	Rehabilitation to PRASA WWTP Islandwide LS Project (FAST)	2024 - Q3	2024 - Q3	2025 - Q3	2032 - Q2	30,000,000.00
WWPS	CIP.5685001	Rehabilitation of Chinito Rondon WWPS San Sebastian	2024 - Q4	2025 - Q1	2025 - Q4	2026 - Q2	920,581.17
WST	CIP.6009001	Water Storage Tanks Islandwide (FAAST)	2025 - Q1	2025 - Q2	2025 - Q3	2032 - Q2	45,000,000.00
WPS	CIP.6009003	Rehabilitation of WPS Islandwide LS Project (FAAST)	2025 - Q1	2025 - Q2	2025 - Q3	2032 - Q2	11,610,000.00
WWPS	CIP.6009004	Rehabilitation of WWPS Islandwide LS Project (FAAST)	2025 - Q1	2025 - Q2	2025 - Q3	2032 - Q2	31,000,000.00
B	CIP.6009007	Buildings Islandwide LS Project (FAAST)	2025 - Q1	2025 - Q2	2025 - Q3	2032 - Q2	20,000,000.00
PPTD	CIP.6009008	Projects Pending to Defined LS Project (FAAST)	2025 - Q1	2025 - Q2	2025 - Q3	2032 - Q2	29,900,000.00
WST & WPS	CIP.6009013	WST & WPS Islandwide LS Project (FAAST)	2025 - Q1	2025 - Q2	2025 - Q3	3032 - Q2	46,300,000.00



Asset Category	Project	Description	A &E Start Quarter	Initial SOW Submittal Quarter	Construction Start Quarter	SOW Close Out Submittal Quarter	Total Cost Estimate
R	CIP.6009010	Reservoir Dredging Islandwide LS Project	2025 - Q1	2025 - Q2	2025 - Q3	2032 - Q3	41,000,000.00
D	CIP.6009011	Dams Islandwide LS Project (FAAST)	2025 - Q1	2025 - Q2	2025 - Q3	2032 - Q2	20,000,000.00
T	CIP.6009012	Telemetry Islandwide LS Project (FAAST)	2025 - Q1	2025 - Q2	2025 - Q3	2032 - Q2	5,000,000.00
WTP	CIP.2736008	Rehabilitation of Roncador WTP and WI, Utuado (FAAST)	2025 - Q1	2025 - Q2	2026 - Q2	2027 - Q4	7,257,642.42
WWTP	CIP.4315010	Rehabilitation to Guayanilla WWTP (FAAST)	2025 - Q3	2025 - Q4	2026 - Q3	2028 - Q2	23,387,233.00
WTP	CIP.3106104	Rehabilitation of Barranquitas WTP and WI (FAAST)	2025 - Q3	2025 - Q4	2026 - Q3	2028 - Q1	7,741,753.25
WTP	CIP.3186002	Rehabilitation of Cayey Urbana WTP (FAAST)	2025 - Q3	2025 - Q4	2026 - Q3	2028 - Q2	11,918,552.53
WTP	CIP.3136013	Rehabilitation of Caguas Sur WTP(FAAST)	2026 - Q1	2026 - Q2	2027 - Q2	2028 - Q4	9,939,354.05
WTP	CIP.2076043	Rehabilitation of Río Arriba WTP Arecibo (FAAST)	2026 - Q2	2026 - Q3	2027 - Q2	2028 - Q4	5,006,006.61
WTP	CIP.4016008	Rehabilitation of Olimpia - Adjuntas WTP(FAAST)	2026 - Q2	2026 - Q3	2027 - Q2	2029 - Q1	9,221,236.56
WTP	CIP.4586084	Rehabilitation of Guaraguao Ponce WTP (FAAST)	2026 - Q2	2026 - Q3	2027 - Q2	2029 - Q1	9,892,237.05
WTP	CIP.4796005	Rehabilitation of Rancheras Yauco WTP (FAAST)	2026 - Q2	2026 - Q3	2027 - Q2	2029 - Q1	7,028,195.75
WTP	CIP.5686045	Rehabilitation of San Sebastián WTP and WI (FAAST)	2026 - Q3	2026 - Q4	2027 - Q3	2029 - Q2	8,972,685.60
WTP	CIP.3536007	Rehabilitation of El Duque WTP, Naguabo (FAAST)	2026 - Q3	2026 - Q4	2027 - Q3	2029 - Q2	7,024,080.42



Asset Category	Project	Description	A &E Start Quarter	Initial SOW Submittal Quarter	Construction Start Quarter	SOW Close Out Submittal Quarter	Total Cost Estimate
OO	CIP.6009005	Rehabilitation of Ocean Outfalls Islandwide LS Project (FAAST)	2027 - Q1	2027 - Q2	2027 - Q3	2034 - Q2	126,000,000.00
TSL	CIP.6009014	Trunk Sewer Lines (TSL) Islandwide LS Project (FAAST)	2027 - Q1	2027 - Q2	2027 - Q3	2034 - Q2	520,000,000.00
D&T-WL	CIP.6009015	T & D -WL Islandwide LS Project (FAAST)	2027 - Q1	2027 - Q2	2027 - Q3	2034 - Q2	400,000,000.00
WTP	CIP.3186004	Rehabilitation of Culebras Alto WTP, Cayey (FAAST)	2027 - Q1	2027 - Q2	2028 - Q1	2029 - Q4	7,038,213.75
WWTP	CIP.3056002	Rehabilitation of Aibonito WWTP (FAAST)	2027 - Q1	2027 - Q2	2028 - Q1	2029 - Q4	12,677,298.02
WTP	CIP.2386048	Rehabilitation of La Pica WTP and WI , Jayuya (FAAST)	2027 - Q2	2027 - Q3	2028 - Q2	2029 - Q4	7,025,220.42
WTP	CIP.1156005	Rehabilitation of Canóvanas Nueva WTP and WI (FAAST)	2027 - Q2	2027 - Q3	2028 - Q2	3031 - Q1	13,716,377.84
WTP	CIP.3466005	Rehabilitation of Luquillo-Sabana WTP (FAAST)	2027 - Q2	2027 - Q3	2028 - Q2	2030 - Q1	11,918,141.53
WTP	CIP.2206106	Rehabilitation of Jaguas Pesas WTP and WI, Ciales (FAAST)	2027 - Q2	2027 - Q3	2028 - Q2	2030 - Q1	7,059,428.42
WTP	CIP.5636006	Rehabilitation of Sabana Grande WTP and WI (FAAST)	2027 - Q2	2027 - Q3	2028 - Q2	2030 - Q1	6,528,314.33
WTP	CIP.5656001	Rehabilitation of Caín Alto San German WTP and WI (FAAST)	2027 - Q2	2027 - Q3	2028 - Q2	2030 - Q1	6,536,866.33
WWTP	CIP.3105032	Rehabilitation of Barranquitas WWTP (FAAST)	2027 - Q3	2027 - Q4	2028 - Q3	3030 - Q1	9,939,677.05
WWTP	CIP.2545006	Rehabilitation of Naranjito WWTP (FAAST)	2027 - Q3	2027 - Q4	2028 - Q3	2030 - Q4	10,573,475.60



Asset Category	Project	Description	A &E Start Quarter	Initial SOW Submittal Quarter	Construction Start Quarter	SOW Close Out Submittal Quarter	Total Cost Estimate
WTP	CIP.5376006	Rehabilitation of Isabela Urbana WTP and WI (FAAST)	2027 - Q3	2027 - Q4	2028 - Q3	2030 - Q4	8,186,473.00
WWTP	CIP.5685004	Rehabilitation of San Sebastián WWTP (FAAST)	2027 - Q3	2027 - Q4	2028 - Q4	2030 - Q3	13,550,430.33



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

Asset Category	Project	Description	A &E Start Quarter	Initial SOW Submittal Quarter	Construction Start Quarter	SOW Close Out Submittal Quarter	Total Cost Estimate
WTP	CIP.3046005	Rehabilitation of Aguas Buenas WTP (FAASt)	2028 - Q1	2028 - Q2	2029 - Q1	2030 - Q4	7,742,617.25
WTP	CIP.3216066	Rehabilitation of Cidra Urbano WTP (FAASt)	2028 - Q1	2028 - Q2	2029 - Q1	2030 - Q4	9,942,672.05
WTP	CIP.3786004	Rehabilitation of Yabucoa WTP (FAASt)	2028 - Q1	2028 - Q2	2029 - Q1	2030 - Q4	7,033,431.75
WTP	CIP.2246107	Rehabilitation of Corozal Urbana WTP (FAASt)	2028 - Q2	2028 - Q3	2029 - Q2	2030 - Q4	7,055,128.42
WTP	CIP.2386047	Rehabilitation of Jayuya Urbano WTP and WI (FAASt)	2028 - Q2	2028 - Q3	2029 - Q2	2031 - Q3	10,129,576.72
WTP	CIP.2426101	Rehabilitation of Lares WTP and WI (FAASt)	2028 - Q2	2028 - Q3	2029 - Q2	2031 - Q1	9,889,741.39
WWTP	CIP.2745019	Rehabilitation of Vega Alta WWTP (FAASt)	2028 - Q2	2028 - Q3	2029 - Q2	2031 - Q1	9,914,757.05
WTP	CIP.2076041	Rehabilitation of Arecibo Urbano WTP (FAASt)	2028 - Q2	2028 - Q3	2029 - Q3	2031 - Q1	9,910,912.05
R	CIP.4009000	Bauta Tunnel (FAASt)	2028 - Q3	2028 - Q4	2029 - Q4	3035 - Q1	150,000,000.00
WWTP	CIP.3136014	Rehabilitation of Parcelas Borinquen Caguas WWTP (FAASt)	2028 - Q3	2028 - Q4	2029 - Q3	2031 - Q1	6,406,213.26
WTP	CIP.1116011	Improvements to LT2 WTP Barrio Nuevo or Elimination , Bayamon (FAASt)	2028 - Q3	2028 - Q4	2029 - Q3	2030 - Q4	7,502,058.25



Asset Category	Project	Description	A &E Start Quarter	Initial SOW Submittal Quarter	Construction Start Quarter	SOW Close Out Submittal Quarter	Total Cost Estimate
WWTP	CIP.4795022	Rehabilitation of Yauco WWTP (FAAST)	2028 - Q3	2028 - Q4	2029 - Q3	2031 - Q4	13,489,782.84
WTP	CIP.3536002	Improvements to LT2 WTP Cubuy Este - Maizales, Naguabo (FAAST)	2028 - Q3	2028 - Q4	2029 - Q3	2031 - Q2	9,904,159.05
WTP	CIP.1616001	Rehabilitation of Guzmán Arriba WTP and WI, Rio Grande (FAAST)	2028 - Q4	2029 - Q1	2029 - Q4	2031 - Q3	7,137,564.22
WTP	CIP.3276053	Rehabilitation of Fajardo WTP(FAAST)	2028 - Q4	2029 - Q1	2029 - Q4	2032 - Q1	12,153,559.86



Chapter 8 Appendix B

8.1 Appendix B: FAASt Plan Projects Schedule



ID	Task Mode	Task Name	Duration	Start	Finish	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	
						H1	H2	H1	H2	H1	H2	H1	H2	H1	H2	H1	H2	H1	H2	H1	H2	H1	H2
1		PRASA FAASt Plan-Fourth Revision April 2022	4101 days	Thu 6/27/19	Wed 3/14/35	[Gantt bar spanning from 2019 H1 to 2035 H2]																	
2		2019	676 days	Thu 6/27/19	Thu 1/27/22	[Gantt bar from 2019 H1 to 2022 H1]																	
3		WWTP	419 days	Sun 10/20/19	Wed 5/26/21	[Gantt bar from 2019 H2 to 2021 H1]																	
4		CIP.3135079 - Rehabilitation of Blowers in Caguas WWTP (FAAST)	419 days	Sun 10/20/19	Wed 5/26/21	[Gantt bar from 2019 H2 to 2021 H1]																	
5		B	676 days	Thu 6/27/19	Thu 1/27/22	[Gantt bar from 2019 H1 to 2022 H1]																	
6		CIP.3130001 - PRASA Central Laboratory in Caguas (FAAST)	676 days	Thu 6/27/19	Thu 1/27/22	[Gantt bar from 2019 H1 to 2022 H1]																	
7		2020	663 days	Thu 2/6/20	Mon 8/22/22	[Gantt bar from 2020 H1 to 2022 H2]																	
8		WST	545 days	Thu 2/6/20	Wed 3/9/22	[Gantt bar from 2020 H1 to 2022 H1]																	
9		CIP.3360002 - Design and Construction Buena Vista Tank (FAAST)	545 days	Thu 2/6/20	Wed 3/9/22	[Gantt bar from 2020 H1 to 2022 H1]																	
10		WWPS	468 days	Thu 11/5/20	Mon 8/22/22	[Gantt bar from 2020 H2 to 2022 H2]																	
11		CIP.3445009 - Design and Build -Rehabilitation of La Sabana Las Piedras WWPS	468 days	Thu 11/5/20	Mon 8/22/22	[Gantt bar from 2020 H2 to 2022 H2]																	
12		2021	1921 days	Wed 2/3/21	Tue 6/13/28	[Gantt bar from 2021 H1 to 2028 H2]																	
13		WTP	1108 days	Wed 3/17/21	Sat 6/14/25	[Gantt bar from 2021 H1 to 2025 H2]																	
14		CIP.2017005 - Rehabilitation of Culebrinas WTP Aguadilla FEMA (FAAST-25)	1048 days	Thu 4/1/21	Sat 4/5/25	[Gantt bar from 2021 H1 to 2025 H1]																	
15		CIP.2096007 - Rehabilitation of Enrique Ortega WTP Toa Alta (FAAST-25)	1109 days	Wed 3/17/21	Sat 6/14/25	[Gantt bar from 2021 H1 to 2025 H2]																	
16		CIP.2479001 - Rehabilitation and Improvements to the Morovis Sur RWI (FAAST)	314 days	Wed 3/17/21	Mon 5/30/22	[Gantt bar from 2021 H1 to 2022 H1]																	
17		WWTP	1247 days	Wed 2/3/21	Thu 11/13/25	[Gantt bar from 2021 H1 to 2025 H2]																	
18		CIP.1165044 - Rehabilitation of Carolina WWTP FEMA (FAAST-25) .	1054 days	Mon 11/1/21	Thu 11/13/25	[Gantt bar from 2021 H2 to 2025 H2]																	
19		CIP.3305001 - Improvements to Guayama WWTP (FAAST)	1066 days	Wed 2/3/21	Wed 3/5/25	[Gantt bar from 2021 H1 to 2025 H1]																	
20		CIP.3365083 - Rehabilitation of Humacao Waste Water Treatment Plant (WWTP) Sludge Treatment System (STS)	735 days	Thu 5/20/21	Wed 3/13/24	[Gantt bar from 2021 H2 to 2024 H1]																	
21		CIP.5505028 - Rehabilitation of Mayaguez WWTP (FAAST-25)	1266 days	Wed 12/1/21	Wed 10/7/26	[Gantt bar from 2021 H2 to 2026 H1]																	
22		WST	515 days	Sat 11/20/21	Sat 11/11/23	[Gantt bar from 2021 H2 to 2023 H1]																	
23		CIP.1009001 - Rehabilitation of Water Storage Tanks -Metro Region Phase 1 (FAAST)	488 days	Sat 11/20/21	Tue 10/3/23	[Gantt bar from 2021 H2 to 2023 H1]																	
24		CIP.3009001 - Rehabilitation of Water Storage Tanks(WST) -East Region Phase 1 (FAAST)	441 days	Sun 11/28/21	Fri 8/4/23	[Gantt bar from 2021 H2 to 2023 H1]																	
25		CIP.4009001 - Rehabilitation of Water Storage Tanks -South Region Phase 1 (FAAST)	512 days	Sun 11/28/21	Sat 11/11/23	[Gantt bar from 2021 H2 to 2023 H1]																	
26		TSL	1059 days	Fri 3/5/21	Wed 3/26/25	[Gantt bar from 2021 H1 to 2025 H2]																	
27		CIP.1169001 - Rehabilitation of Los Angeles and Loiza Pueblo Trunk Sewers (FAAST)	510 days	Thu 9/16/21	Wed 8/30/23	[Gantt bar from 2021 H2 to 2023 H1]																	
28		CIP.2095052 - Rehabilitation of 42 IN Trunk Sewer Line from PR-684 to the South part of Barceloneta WWTP	665 days	Tue 11/30/21	Mon 6/17/24	[Gantt bar from 2021 H2 to 2024 H1]																	
29		CIP.2149001 - Rehabilitation of Camuy Trunk Sewer Lines (FAAST)	820 days	Tue 8/31/21	Sat 10/19/24	[Gantt bar from 2021 H2 to 2024 H1]																	
30		CIP.2755055 - Rehabilitation of Vega Baja Trunk Sewer Lines (TSL) .	590 days	Mon 11/1/21	Fri 2/2/24	[Gantt bar from 2021 H2 to 2024 H1]																	
31		CIP.3139002 - Rehabilitation of Caguas Trunk Sewer Lines (FAAST)	890 days	Thu 10/28/21	Wed 3/26/25	[Gantt bar from 2021 H2 to 2025 H1]																	
32		CIP.4089000 - Rehabilitation of Arroyo-Guayama Trunk Sewer Lines (FAAST)	997 days	Fri 3/5/21	Sat 12/28/24	[Gantt bar from 2021 H1 to 2025 H2]																	
33		CIP.4589003 - Rehabilitation of Ponce Trunk Sewer System (FAAST)	843 days	Thu 10/28/21	Sun 1/19/25	[Gantt bar from 2021 H2 to 2025 H1]																	
34		CIP.5509001 - Rehabilitation of Hormigueros and Mayaguez Trunk Sewer Lines (FAAST)	703 days	Thu 10/28/21	Sun 7/7/24	[Gantt bar from 2021 H2 to 2024 H1]																	
35		D	807 days	Mon 6/14/21	Tue 7/16/24	[Gantt bar from 2021 H2 to 2024 H1]																	
36		CIP.7776071 - Rehabilitation of Toa Vaca Dam (FAAST)	807 days	Mon 6/14/21	Tue 7/16/24	[Gantt bar from 2021 H2 to 2024 H1]																	
37		R	1082 days	Thu 8/26/21	Sun 10/19/25	[Gantt bar from 2021 H2 to 2025 H2]																	
38		CIP.5376001 - Repair of Geosynthetic Membranes in Lago Regulador in Isabela	591 days	Thu 9/16/21	Thu 12/21/23	[Gantt bar from 2021 H2 to 2023 H2]																	
39		CIP.1019000 - Dragado Lago Loiza (Carraizo) FAAST	1083 days	Thu 8/26/21	Sun 10/19/25	[Gantt bar from 2021 H2 to 2025 H2]																	
40		B	665 days	Tue 3/2/21	Mon 9/18/23	[Gantt bar from 2021 H1 to 2023 H2]																	

Project: Schedule April 2022 FA
Date: Tue 4/5/22

Task		Summary		Inactive Milestone		Duration-only		Start-only		External Milestone		Manual Progress	
Split		Project Summary		Inactive Summary		Manual Summary Rollup		Finish-only		Deadline			
Milestone		Inactive Task		Manual Task		Manual Summary		External Tasks		Progress			

ID	Task Mode	Task Name	Duration	Start	Finish	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	
						H1	H2	H1	H2	H1	H2	H1	H2	H1	H2	H1	H2	H1	H2	H1	H2	H1	H2
41	🚀	CIP.1660002 - Rehabilitation of PRASA Main Building in Hato Rey	497 days	Sat 10/23/21	Mon 9/18/23																		
42	🚀	CIP.3139000 - Equipment for New PRASA Central Laboratory in Caguas (FAAST)	609 days	Tue 3/2/21	Fri 6/30/23																		
43	🚀	D&T-WL	410 days	Sun 10/10/21	Thu 5/4/23																		
44	🚀	CIP.2475022 - Installation of Permanent WL Rio Utuado Bridge (FAAST)	410 days	Sun 10/10/21	Thu 5/4/23																		
45	🚀	WM	1769 days	Fri 9/3/21	Tue 6/13/28																		
46	🚀	CIP.6009002 - Water Meters Islandwide LS Project (FAAST)	1769 days	Fri 9/3/21	Tue 6/13/28																		
47	🚀	2022	1229 days	Tue 2/1/22	Fri 10/16/26																		
48	🚀	WTP	1202 days	Tue 2/1/22	Wed 9/9/26																		
49	🚀	CIP.1016095 - Rehabilitation of Guaynabo WTP and WI Santa Rosa (FAAST-25)	1050 days	Thu 9/1/22	Wed 9/9/26																		
50	🚀	CIP.1116008 - Rehabilitation of Guaynabo WI Santa Rosa (FAAST-25)	1050 days	Thu 9/1/22	Wed 9/9/26																		
51	🚀	CIP.1726043 - Rehabilitation of Sergio Cuevas WTP Trujillo Alto (FAAST-25)	951 days	Sat 10/8/22	Fri 5/29/26																		
52	🚀	CIP.2076042 - Rehabilitation of Esperanza WTP and WI , Arecibo(FAAST)	772 days	Tue 3/1/22	Wed 2/12/25																		
53	🚀	CIP.2206107 - Rehabilitation of Frontón WTP and WI, Ciales (FAAST)	864 days	Fri 4/1/22	Wed 7/23/25																		
54	🚀	CIP.2246106 - Rehabilitation of Negros WTP and WI, Corozal (FAAST-25)	871 days	Fri 9/2/22	Fri 1/2/26																		
55	🚀	CIP.2346015 - Rehabilitation of Hatillo-Camuy WTP(FAAST)	845 days	Fri 7/1/22	Thu 9/25/25																		
56	🚀	CIP.2386049 - Rehabilitation of Canalizo WTP and WI , Jayuya (FAAST)	713 days	Tue 2/1/22	Thu 10/24/24																		
57	🚀	CIP.2426099 - Rehabilitation of Indiera Alta WTP and WI , Lares(FAAST)	684 days	Thu 12/1/22	Tue 7/15/25																		
58	🚀	CIP.2426100 - Rehabilitation of Lares Nueva Espino WTP and WI, Lares(FAAST)	655 days	Tue 3/1/22	Sat 8/31/24																		
59	🚀	CIP.2526006 - Rehabilitation of Morovis Sur WTP (FAAST-25)	829 days	Wed 3/2/22	Sun 5/4/25																		
60	🚀	CIP.2526007 - Rehabilitation of Morovis Urbano WTP (FAAST)	715 days	Sat 10/29/22	Thu 7/24/25																		
61	🚀	CIP.2596004 - Rehabilitation of Quebradillas WTP and WI (FAAST-25)	736 days	Thu 9/1/22	Thu 6/26/25																		
62	🚀	CIP.2736006 - Rehabilitation of Mameyes Utuado WTP and WI (FAAST)	736 days	Thu 11/3/22	Thu 8/28/25																		
63	🚀	CIP.2916002 - Rehabilitation of Superacueductos WTP, Arecibo (FAAST-25)	1037 days	Sun 7/31/22	Sun 7/19/26																		
64	🚀	CIP.3156094 - New Raw Water Intake for El Yunque WTP , Rio Grande (FAAST-25)	830 days	Sun 7/31/22	Thu 10/2/25																		
65	🚀	CIP.3156093 - Rehabilitation of El Yunque WTP and WI, Rio Grande (FAAST-25)	872 days	Thu 6/16/22	Fri 10/17/25																		
66	🚀	CIP.3186003 - Rehabilitation of Farallon WTP, Cayey (FAAST)	589 days	Thu 12/1/22	Tue 3/4/25																		
67	🚀	CIP.3366005 - Rehabilitation of Humacao WTP (FAAST-25)	737 days	Sat 7/16/22	Sat 5/10/25																		
68	🚀	CIP.3536006 - Rehabilitation of Río Blanco WTP, Naguabo (FAAST-25)	842 days	Fri 7/1/22	Mon 9/22/25																		
69	🚀	CIP.4316007 - Rehabilitation of Jaguas Pasto WTP, Guayanilla (FAAST-25)	694 days	Sat 3/19/22	Wed 11/13/24																		
70	🚀	CIP.4576002 - Rehabilitation of Peñuelas WTP (FAAST)	843 days	Sat 7/30/22	Tue 10/21/25																		
71	🚀	CIP.4646004 - WTP Salinas (Wells Closure) (FAAST-25)	1029 days	Sat 4/16/22	Wed 3/25/26																		
72	🚀	CIP.4776078 - Rehabilitation of Jagueyes-Villalba WTP (FAAST)	828 days	Fri 7/29/22	Tue 9/30/25																		
73	🚀	CIP.5379002 - Design and Build Guajataca WTP Floating Raw Water Pumping Station Project	539 days	Sat 4/16/22	Wed 5/8/24																		
74	🚀	CIP.2736007 - Rehabilitation of Santa Isabel Utuado WTP and WI (FAAST-25)	738 days	Tue 11/1/22	Thu 8/28/25																		
75	🚀	CIP.5506044 - Rehabilitation of Miradero Mayaguez WTP and RWI (FAAST-25)	751 days	Sat 10/1/22	Fri 8/15/25																		
76	🚀	CIP.5506047 - Rehabilitation of Miradero Mayaguez WI (FAAST-25)	865 days	Tue 11/1/22	Sun 2/22/26																		
77	🚀	CIP.5596001 - Rehabilitation of Guajataca Quebradillas WTP and WI (FAAST)	706 days	Fri 12/2/22	Fri 8/15/25																		
78	🚀	CIP.2739001 - Rehabilitation of WI Lago Vivi Utuado (FAAST)	694 days	Sun 5/1/22	Wed 12/25/24																		

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Task	Summary	Inactive Milestone	Duration-only	Start-only	External Milestone	Manual Progress
Split	Project Summary	Inactive Summary	Manual Summary Rollup	Finish-only	Deadline	
Milestone	Inactive Task	Manual Task	Manual Summary	External Tasks	Progress	

ID	Task Mode	Task Name	Duration	Start	Finish	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	
						H1	H2	H1	H2	H1	H2	H1	H2	H1	H2	H1	H2	H1	H2	H1	H2	H1	H2
79	🔗	CIP.3366005 - Rehabilitation of Humacao WTP(FAAST-25)	737 days	Sat 7/16/22	Sat 5/10/25					■													
80	🔗	CIP.4776077 - Rehabilitation of Apeadero Villalba WTP (FAAST-25)	714 days	Wed 12/28/22	Mon 9/22/25					■													
81	🔗	CIP.3786003 - Rehabilitation of Guayabota WTP and WI, Yabucoa (FAAST)	714 days	Thu 12/1/22	Tue 8/26/25					■													
82	🔗	CIP.3106106 - Rehabilitation of Barrancas WTP and WI, Barranquitas (FAAST)	715 days	Sat 10/1/22	Thu 6/26/25					■													
83	🔗	CIP.2736005 - Rehabilitation of Mameyes Limón, Utuado (Arriba) WTP and WI (FAAST)	763 days	Thu 12/8/22	Mon 11/10/25					■													
84	🔗	CIP.4556009 - Rehabilitation of Sanamuertos Orocovis WTP(FAAST)	708 days	Tue 11/1/22	Thu 7/17/25					■													
85	🔗	CIP.3106105 - Rehabilitation of La Boca WTP and WI, Barranquitas (FAAST)	715 days	Sat 10/1/22	Thu 6/26/25					■													
86	🔗	CIP.3136012 - Rehabilitation of Caguas Norte WTP (FAAST)	793 days	Thu 12/1/22	Sun 12/14/25					■													
87	🔗	CIP.3336045 - Rehabilitation of Gurabo WTP (FAAST)	714 days	Thu 12/1/22	Tue 8/26/25					■													
88	🔗	WWTP	1205 days	Sat 3/5/22	Fri 10/16/26					■													
89	🔗	CIP.2075073 - Rehabilitation of Islote WWTP, Arecibo (FAAST)	826 days	Sat 3/5/22	Fri 5/2/25					■													
90	🔗	CIP.2475021 - Rehabilitation of Barceloneta WWTP (FAAST-25)	1051 days	Sat 10/8/22	Fri 10/16/26					■													
91	🔗	CIP.3139001 - Improvements to Caguas WWTP (FAAST-25)	886 days	Mon 8/1/22	Mon 12/22/25					■													
92	🔗	CIP.3765002 - Rehabilitation Vieques WWTP (FAAST) . .	1092 days	Mon 8/1/22	Tue 10/6/26					■													
93	🔗	CIP.4495001 - Rehabilitation or Elimination of Maunabo WWTP (FAAST-25)	738 days	Thu 9/1/22	Sun 6/29/25					■													
94	🔗	CIP.4555022 - Rehabilitation of Orocovis WWTP (FAAST-25)	671 days	Fri 4/1/22	Fri 10/25/24					■													
95	🔗	CIP.4585096 - Rehabilitation of Ponce WWTP (FAAST-25)	1008 days	Mon 8/29/22	Wed 7/8/26					■													
96	🔗	CIP.5035001 - Rehabilitation of Aguada WWTP (FAAST-25)	1051 days	Sat 10/1/22	Fri 10/9/26					■													
97	🔗	CIP.5415031 - Rehabilitation of Lajas WWTP (FAAST)	914 days	Thu 12/1/22	Tue 6/2/26					■													
98	🔗	CIP.4695042 - Rehabilitation of Santa Isabel WWTP (FAAST)	711 days	Wed 6/29/22	Wed 3/19/25					■													
99	🔗	CIP.3185033 - Rehabilitation of Cayey WWTP (FAAST)	928 days	Thu 12/1/22	Mon 6/22/26					■													
100	🔗	CIP.3236247 - Rehabilitation of Comerío WWTP (FAAST)	772 days	Tue 11/1/22	Wed 10/15/25					■													
101	🔗	CIP.3045036 - Rehabilitation of Aguas Buenas WWTP (FAAST)	872 days	Thu 12/1/22	Fri 4/3/26					■													
102	🔗	WPS	940 days	Tue 8/30/22	Mon 4/6/26					■													
103	🔗	CIP.1009103 - Rehabilitation of Water Pump Stations (WPS) Metro Region Phase 1 (FAAST)	850 days	Wed 11/2/22	Tue 2/3/26					■													
104	🔗	CIP.2009103 - Rehabilitation of Water Pump Stations (WPS) North Region Phase 1 (FAAST)	872 days	Sun 12/4/22	Mon 4/6/26					■													
105	🔗	CIP.5009103 - Rehabilitation of Water Pump Stations (WPS) West Region Phase 1 (FAAST)	829 days	Thu 12/1/22	Tue 2/3/26					■													
106	🔗	CIP.4317001 - Construction of Sector Balino Guayanilla WPS	330 days	Tue 8/30/22	Sat 12/2/23					■													
107	🔗	WWPS	1009 days	Sun 8/21/22	Thu 7/2/26					■													
108	🔗	CIP.1009104 - Rehabilitation of WWPS Metro Region Phase 1 (FAAST)	707 days	Sun 8/28/22	Sat 5/10/25					■													
109	🔗	CIP.2009104 - Rehabilitation of WWPS North Region Phase 1 (FAAST)	872 days	Thu 12/1/22	Fri 4/3/26					■													
110	🔗	CIP.2039000 - Rehabilitation of Guerrero 2 WWPS, Aguadilla (FAAST)	626 days	Fri 9/2/22	Fri 1/24/25					■													
111	🔗	CIP.5009104 - Rehabilitation of WWPS West Region Phase 1 (FAAST)	958 days	Tue 11/1/22	Thu 7/2/26					■													
112	🔗	CIP.1665900 - Rehabilitation of Martin Peña(Tokio) WWPS San Juan ST)	652 days	Sun 8/21/22	Sat 2/15/25					■													
113	🔗	WST	329 days	Thu 6/2/22	Tue 9/5/23					■													
114	🔗	CIP.5009001 - Rehabilitation of Water Storage Tanks -West Region Phase 1 (FAAST)	329 days	Thu 6/2/22	Tue 9/5/23					■													
115	🔗	D	622 days	Thu 9/1/22	Fri 1/17/25					■													
116	🔗	CIP.1666090 - Improvements to La Plata Dam -Installation of Anchorage System	622 days	Thu 9/1/22	Fri 1/17/25					■													
117	🔗	D&T-WL	680 days	Sat 4/2/22	Sat 11/9/24					■													
118	🔗	CIP.2549000 - Rehabilitation of Transmission and Distribution System at Naranjito (FAAST)	682 days	Sat 4/2/22	Sat 11/9/24					■													
119	🔗	CIP.247900 - Desing and Build 8"Pipe Bo. Boquillas Manati (FAAST)	331 days	Sun 7/31/22	Fri 11/3/23					■													

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Task	 Summary	 Inactive Milestone	 Duration-only	 Start-only	 External Milestone
Split	 Project Summary	 Inactive Summary	 Manual Summary Rollup	 Finish-only	 Deadline
Milestone	 Inactive Task	 Manual Task	 Manual Summary	 External Tasks	 Progress

ID	Task Mode	Task Name	Duration	Start	Finish	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	
						H1	H2	H1	H2	H1	H2	H1	H2	H1	H2	H1	H2	H1	H2	H1	H2	H1	H2
120	▶	CIP.3136009- Improvements to the Water Supply System in Villa del Rey Ward in Caguas(FAAST)	309 days	Wed 11/30/22	Sat 2/3/24					■													
121	▶	CIP.2526008 - Improvements to the Water Supply System in Morovis(FAAST)	526 days	Sat 5/14/22	Fri 5/17/24					■	■												
122	⏸	OO	886 days	Thu 12/1/22	Thu 4/23/26					─	─	─	─										
123	▶	CIP.2149105 - Rehabilitation of Ocean Outfalls- Camuy (FAAST) .	843 days	Sat 12/3/22	Tue 2/24/26					■	■	■	■										
124	▶	CIP.5509105 - Rehabilitation of Ocean Outfalls- Mayaguez (FAAST) .	886 days	Thu 12/1/22	Thu 4/23/26					■	■	■	■										
125	⏸	R	614 days	Sat 7/30/22	Thu 12/5/24					─	─	─	─										
126	▶	CIP.1019002- Sediments Control Carraizo Reservoir (FAAST)	615 days	Sat 7/30/22	Thu 12/5/24					■	■	■	■										
127	⏸	RWW	744 days	Wed 8/31/22	Mon 7/7/25					─	─	─	─										
128	▶	CIP.1009106 - Rehabilitation of RWW -Metro Region Phase 1(FAAST)	701 days	Fri 9/30/22	Fri 6/6/25					■	■	■	■										
129	▶	CIP.2009106 - Rehabilitation of RWW -North Region Phase 1(FAAST)	440 days	Thu 12/1/22	Wed 8/7/24					■	■												
130	▶	CIP.3009106 - Rehabilitation of RWW -East Region Phase 1(FAAST)	702 days	Fri 10/28/22	Mon 7/7/25					■	■	■	■										
131	▶	CIP.4009106 - Rehabilitation of RWW -South Region Phase 1(FAAST)	701 days	Wed 8/31/22	Wed 5/7/25					■	■	■	■										
132	▶	CIP.5009106 - Rehabilitation of RWW -West Region Phase 1(FAAST)	481 days	Wed 9/28/22	Wed 7/31/24					■	■	■	■										
133	▶	TSL	1038 days	Tue 7/12/22	Thu 7/2/26					─	─	─	─										
134	▶	CIP.2375002 - Trunk Sewer Lines (TSL) Isabela - Aguada (FAAST)	715 days	Tue 7/12/22	Mon 4/7/25					■	■	■	■										
135	▶	CIP.2709010 - Rehabilitation of Arecibo Trunk Sewer Lines (TSL) (FAAST) .	363 days	Mon 8/1/22	Wed 12/20/23					■	■	■											
136	▶	CIP.429900 - Rehabilitation of Barriada Esperanza Guanica Trunk Sewer System	504 days	Fri 9/2/22	Wed 8/7/24					■	■	■	■										
137	▶	CIP.5685000 - Rplacement of Trunk Sewer Lines (TSL) in San Sebastian	936 days	Thu 12/1/22	Thu 7/2/26					■	■	■	■										
138	⏸	WST&WPS	307 days	Thu 6/30/22	Sun 9/3/23					─	─												
139	▶	CIP.2009104 - Installation of MCC at WPS Medio Millon Tank in Arecibo	308 days	Thu 6/30/22	Sun 9/3/23					■	■												
140	⏸	2023	1110 days	Sun 1/1/23	Thu 4/1/27					─	─	─	─										
141	⏸	WTP	950 days	Sun 1/1/23	Sat 8/22/26					─	─	─	─										
142	▶	CIP.5506046 - Rehabilitation of Ponce de León Mayaguez WTP (FAAST-25)	736 days	Mon 1/2/23	Sun 10/26/25					■	■	■	■										
143	▶	CIP.5486006 - Rehabilitation of Monte del Estado Maricao WTP and WI (FAAST)	737 days	Sun 1/1/23	Sun 10/26/25					■	■	■	■										
144	▶	CIP.5486007 - Rehabilitation of Maricao WTP(FAAST)	872 days	Sun 1/1/23	Mon 5/4/26					■	■	■	■										
145	▶	CIP.5489001 - Rehabilitation of Monte del Estado Maricao WTP and WI (FAAST)	739 days	Wed 2/1/23	Mon 12/1/25					■	■	■	■										
146	▶	CIP.4796004 - Rehabilitation of Río Prieto WTP (FAAST)	865 days	Sat 1/28/23	Thu 5/21/26					■	■	■	■										
147	▶	CIP.5036006 - Rehabilitation of Aguadilla Montaña WTP (FAAST)	930 days	Tue 1/31/23	Sat 8/22/26					■	■	■	■										
148	▶	CIP.4576004 - Rehabilitation of Malpaso Peñuelas WTP (FAAST)	758 days	Tue 2/28/23	Thu 1/22/26					■	■	■	■										
149	▶	CIP.1156004 - Rehabilitation of Cubuy WTP and WI, Canovanas (FAAST)	915 days	Sat 1/7/23	Thu 7/9/26					■	■	■	■										
150	▶	CIP.4016012 - Rehabilitation of Guilarte WTP, Adjuntas (FAAST)	800 days	Thu 3/9/23	Wed 4/1/26					■	■	■	■										
151	⏸	WWTP	394 days	Fri 5/30/25	Wed 12/2/26								─	─									
152	▶	CIP.3785018 - Rehabilitation of Yabucoa WWTP (FAAST)	394 days	Fri 5/30/25	Wed 12/2/26								■	■									
153	⏸	WPS	1107 days	Sun 1/1/23	Mon 3/29/27					─	─	─	─										
154	▶	CIP.1009203 - Rehabilitation of Water Pump Stations (WPS) Metro Region Phase 2 (FAAST)	701 days	Thu 9/28/23	Thu 6/4/26					■	■	■	■										
155	▶	CIP.2009203 - Rehabilitation of Water Pump Stations (WPS) North Region Phase 2 (FAAST)	683 days	Thu 9/28/23	Mon 5/11/26					■	■	■	■										
156	▶	CIP.4009203 - Rehabilitation of Water Pump Stations (WPS) South Region Phase 2 (FAAST)	701 days	Thu 9/28/23	Thu 6/4/26					■	■	■	■										
157	▶	CIP.5009203 - Rehabilitation of Water Pump Stations (WPS) West Region Phase 2 (FAAST)	914 days	Thu 9/28/23	Mon 3/29/27					■	■	■	■										
158	▶	CIP.1669002 - Rehabilitaton of Puerto Nuevo WPS and Water Potable Line of 48"(FAAST) .	894 days	Sun 1/1/23	Wed 6/3/26					■	■	■	■										

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Task ■ Summary ─ Inactive Milestone ◆ Duration-only ■ Start-only ┌ External Milestone ◆ Manual Progress ━
Split ⋯ Project Summary ─ Inactive Summary ┃ Manual Summary Rollup ■ Finish-only ┐ Deadline ↓
Milestone ◆ Inactive Task ━ Manual Task ■ Manual Summary ─ External Tasks ━ Progress ━

ID	Task Mode	Task Name	Duration	Start	Finish	2019		2020		2021		2022		2023		2024		2025		2026		2027		2028		2029		2030		2031		2032		2033		2034		2035	
						H1	H2	H1	H2	H1	H2	H1	H2	H1	H2	H1	H2	H1	H2	H1	H2	H1	H2	H1	H2	H1	H2	H1	H2	H1	H2	H1	H2	H1	H2	H1	H2		
198		WPS	1955 days	Thu 1/2/25	Tue 6/29/32																																		
199		CIP.6009003 - Rehabilitation of WPS Islandwide LS Project (FAAST)	1955 days	Thu 1/2/25	Tue 6/29/32																																		
200		WWPS	1955 days	Thu 1/2/25	Tue 6/29/32																																		
201		CIP.6009004 - Rehabilitation of WWPS Islandwide LS Project (FAAST)	1955 days	Thu 1/2/25	Tue 6/29/32																																		
202		WST	1955 days	Thu 1/2/25	Tue 6/29/32																																		
203		CIP.6009001 - Water Storage Tanks Islandwide (FAAST)	1955 days	Thu 1/2/25	Tue 6/29/32																																		
204		WST&WPS	1955 days	Thu 1/2/25	Tue 6/29/32																																		
205		CIP.6009013 - WST & WPS Islandwide LS Project (FAAST)	1955 days	Thu 1/2/25	Tue 6/29/32																																		
206		B	1955 days	Thu 1/2/25	Tue 6/29/32																																		
207		CIP.6009007 - Buildings Islandwide LS Project (FAAST)	1955 days	Thu 1/2/25	Tue 6/29/32																																		
208		D	1955 days	Thu 1/2/25	Tue 6/29/32																																		
209		CIP.6009011 - Dams Islandwide LS Project (FAAST)	1955 days	Thu 1/2/25	Tue 6/29/32																																		
210		R	1977 days	Thu 1/2/25	Thu 7/29/32																																		
211		CIP.6009010 - Reservoir Dredging Islandwide LS Project	1977 days	Thu 1/2/25	Thu 7/29/32																																		
212		T	1955 days	Thu 1/2/25	Tue 6/29/32																																		
213		CIP.6009012 - Telemetry Islandwide LS Project (FAAST)	1955 days	Thu 1/2/25	Tue 6/29/32																																		
214		PPTD	1955 days	Thu 1/2/25	Tue 6/29/32																																		
215		CIP.6009008 - Projects Pending to Defined LS Project (FAAST)	1955 days	Thu 1/2/25	Tue 6/29/32																																		
216		2026	807 days	Fri 3/27/26	Fri 4/27/29																																		
217		WTP	807 days	Fri 3/27/26	Fri 4/27/29																																		
218		CIP.2076043 - Rehabilitation of Río Arriba WTP Arecibo (FAAST)	708 days	Thu 4/16/26	Fri 12/29/28																																		
219		CIP.3136013 - Rehabilitation of Caguas Sur WTP(FAAST)	707 days	Fri 3/27/26	Fri 12/8/28																																		
220		CIP.3536007 - Rehabilitation of El Duque WTP, Naguabo (FAAST)	707 days	Fri 8/14/26	Fri 4/27/29																																		
221		CIP.4016008 - Rehabilitation of Olimpia - Adjuntas WTP(FAAST)	703 days	Sun 4/26/26	Mon 1/1/29																																		
222		CIP.4586084 - Rehabilitation of Guaragao Ponce WTP (FAAST)	707 days	Sat 5/16/26	Fri 1/26/29																																		
223		CIP.4796005 - Rehabilitation of Rancheras Yauco WTP (FAAST)	708 days	Tue 5/26/26	Wed 2/7/29																																		
224		CIP.5686045 - Rehabilitation of San Sebastián WTP and WI (FAAST)	707 days	Sat 7/25/26	Fri 4/6/29																																		
225		2027	1955 days	Sat 1/2/27	Thu 6/29/34																																		
226		WTP	1019 days	Wed 2/24/27	Sat 1/18/31																																		
227		CIP.1156005 - Rehabilitation of Canóvanas Nueva WTP and WI (FAAST)	966 days	Mon 5/10/27	Sat 1/18/31																																		
228		CIP.2206106 - Rehabilitation of Jaguas Pesas WTP and WI, Ciales (FAAST)	708 days	Wed 6/9/27	Fri 2/22/30																																		
229		CIP.2386048 - Rehabilitation of La Pica WTP and WI, Jayuya (FAAST)	708 days	Thu 4/15/27	Sat 12/29/29																																		
230		CIP.3186004 - Rehabilitation of Culebras Alto WTP, Cayey (FAAST)	708 days	Wed 2/24/27	Thu 11/8/29																																		
231		CIP.3466005 - Rehabilitation of Luquillo-Sabana WTP (FAAST)	707 days	Fri 6/4/27	Sun 2/17/30																																		
232		CIP.5376006 - Rehabilitation of Isabela Urbana WTP and WI (FAAST)	843 days	Thu 9/2/27	Sun 11/24/30																																		
233		CIP.5636006 - Rehabilitation of Sabana Grande WTP and WI (FAAST)	708 days	Mon 6/14/27	Wed 2/27/30																																		
234		CIP.5656001 - Rehabilitation of Caín Alto San German WTP and WI (FAAST)	707 days	Sat 6/19/27	Mon 3/4/30																																		
235		WWTP	944 days	Sun 3/21/27	Wed 10/30/30																																		
236		CIP.2545006 - Rehabilitation of Naranjito WWTP (FAAST)	839 days	Fri 8/13/27	Wed 10/30/30																																		
237		CIP.3056002 - Rehabilitation of Aibonito WWTP (FAAST)	708 days	Sun 3/21/27	Tue 12/4/29																																		
238		CIP.3105032 - Rehabilitation of Barranquitas WWTP (FAAST)	708 days	Wed 7/14/27	Fri 3/29/30																																		
239		CIP.5685004 - Rehabilitation of San Sebastián WWTP (FAAST)	722 days	Mon 9/27/27	Tue 7/2/30																																		
240		OO	1955 days	Sat 1/2/27	Thu 6/29/34																																		
241		CIP.6009005 - Rehabilitation of Ocean Outfalls Islandwide LS Project (FAAST)	1956 days	Sat 1/2/27	Thu 6/29/34																																		
242		TSL	1955 days	Sat 1/2/27	Thu 6/29/34																																		
243		CIP.6009014 - Trunk Sewer Lines (TSL) Islandwide LS Project (FAAST)	1956 days	Sat 1/2/27	Thu 6/29/34																																		
244		D&T-WL	1955 days	Sat 1/2/27	Thu 6/29/34																																		

Project: Schedule April 2022 FA Date: Tue 4/5/22

Task		Summary		Inactive Milestone		Duration-only		Start-only		External Milestone		Manual Progress	
Split		Project Summary		Inactive Summary		Manual Summary Rollup		Finish-only		Deadline			
Milestone		Inactive Task		Manual Task		Manual Summary		External Tasks		Progress			

ID	Task Mode	Task Name	Duration	Start	Finish	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	
						H1	H2	H1	H2	H1	H2	H1	H2	H1	H2	H1	H2	H1	H2	H1	H2	H1	H2
245		CIP.6009015 - T & D -WL Islandwide LS Project (FAAST)	1956 days	Sat 1/2/27	Thu 6/29/34																		
246		2028	1847 days	Tue 2/15/28	Wed 3/14/35																		
247		WTP	1022 days	Tue 2/15/28	Wed 1/14/32																		
248		CIP.1116011 - Improvements to LT2 WTP Barrio Nuevo or Elimination , Bayamon (FAAST)	583 days	Wed 7/26/28	Fri 10/18/30																		
249		CIP.1616001 - Rehabilitation of Guzmán Arriba WTP and WI, Rio Grande (FAAST)	716 days	Mon 10/30/28	Sat 7/26/31																		
250		CIP.2076041 - Rehabilitation of Arecibo Urbano WTP (FAAST)	707 days	Sat 6/24/28	Mon 3/10/31																		
251		CIP.2246107 - Rehabilitation of Corozal Urbana WTP (FAAST)	708 days	Wed 4/5/28	Fri 12/20/30																		
252		CIP.2386047 - Rehabilitation of Jayuya Urbano WTP and WI (FAAST)	844 days	Tue 4/25/28	Fri 7/18/31																		
253		CIP.2426101 - Rehabilitation of Lares WTP and WI (FAAST)	708 days	Mon 5/15/28	Wed 1/29/31																		
254		CIP.3046005 - Rehabilitation of Aguas Buenas WTP (FAAST)	708 days	Tue 2/15/28	Thu 10/31/30																		
255		CIP.3216066 - Rehabilitation of Cidra Urbano WTP (FAAST)	703 days	Fri 2/25/28	Tue 11/5/30																		
256		CIP.3276053 - Rehabilitation of Fajardo WTP(FAAST)	844 days	Sun 10/22/28	Wed 1/14/32																		
257		CIP.3536002 - Improvements to LT2 WTP Cubuy Este - Maizales, Naguabo (FAAST)	709 days	Wed 8/23/28	Sat 5/10/31																		
258		CIP.3786004 - Rehabilitation of Yabucoa WTP (FAAST)	708 days	Thu 3/16/28	Sat 11/30/30																		
259		WWTP	887 days	Sun 6/4/28	Sun 10/26/31																		
260		CIP.2745019 - Rehabilitation of Vega Alta WWTP (FAAST)	708 days	Sun 6/4/28	Tue 2/18/31																		
261		CIP.3136014 - Rehabilitation of Parcelas Borinquen Caguas WWTP (FAAST)	707 days	Fri 7/14/28	Sun 3/30/31																		
262		CIP.4795022 - Rehabilitation of Yauco WWTP (FAAST)	843 days	Thu 8/3/28	Sun 10/26/31																		
263		R	1733 days	Mon 7/24/28	Wed 3/14/35																		
264		CIP.4009000 - Bauta Tunnel (FAAST)	1733 days	Mon 7/24/28	Wed 3/14/35																		

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	Milestone		Inactive Task		Manual Task		Manual Summary		External Tasks		Progress			