



DEPARTMENT OF
HOUSING



CDBG-MIT

**HAZARD MITIGATION GRANT PROGRAM SET-
ASIDE (HMGP-MIT)**

OPERATIONS AND MAINTENANCE (O&M)

PRELIMINARY PLAN FORM

HMGP-MIT APPLICATION – O&M PRELIMINARY PLAN

Section V.A.(2)(a)(10) of Federal Register Vol. 84, No. 169 (August 30, 2019), 84 FR 45838, 45848 requires grantees to plan for long-term operation and maintenance (**O&M**) of infrastructure and public facility projects funded with CDBG-MIT funds and include in its Action Plan a description of how it will fund long term operation and maintenance of CDBG-MIT projects.¹ Additionally, the grantee must describe any State or local resources that have been identified for the operation and maintenance costs of projects assisted with CDBG-MIT funds. Applicant must exclude O&M Costs from the total estimated project cost.

This document compiles information required for the Puerto Rico Department of Housing (**PRDOH**) to determine preliminary compliance with U.S. Department of Housing and Urban Development (**HUD**) requirements related to the O&M of the proposed project under the Application. Compliance with the O&M requirements affects the project's eligibility under CDBG-MIT. Also, PRDOH will require the Applicant to submit a complete and compliant O&M Plan, which will require PRDOH approval before committing CDBG-MIT funds to the project.

Requirements for the O&M are based on the current CDBG-MIT Operations and Maintenance Plan Guide.

Filing Instructions:

Applicants must complete all sections of this Form to the best of their knowledge to be considered for the CDBG-MIT Hazard Mitigation Grants Program Set-Aside (HMGP-MIT). This Form will serve to document basic O&M information required to determine compliance with this CDBG-MIT eligibility criteria.

If additional space is necessary, the Applicant may submit an attachment with the required information. Please specify the attachment in which the information is being included in the field for the section.

APPLICANT INFORMATION

ENTITY NAME | Puerto Rico Electric Power Authority

UNIQUE ENTITY ID (UEI) | EHNKJMN3LNZ7

PROJECT INFORMATION

PROJECT NAME | Patillas Dam Seismic Retrofit

MUNICIPALITY | Patillas

¹ The CDBG-MIT Action Plan is available in the PRDOH website in English and Spanish at <https://cdbg-dr.pr.gov/en/cdbg-mit/> and <https://cdbg-dr.pr.gov/cdbg-mit/>.

OPERATION AND MAINTENANCE REQUIREMENTS DURING APPLICATION

PRELIMINARY ESTIMATE OF USEFUL LIFE AND COSTS ASSOCIATED WITH O&M ACTIVITIES.

- Describe a preliminary estimate of the useful life of the project and O&M costs associated to the project using project-specific industry standard practices.

Patillas Dam is an earth embankment dam built for the Puerto Rico Irrigation Service in 1913 and is still in operation today. In 2012, the Dams had several capital improvements including the refurbishment of all major spillway components.

The Puerto Rico Electric Power Authority is the owner and operator of the Dam which forms part of PREPAs South Coast Irrigation District, East section.

The proposed retrofit will extend the useful life of the DAM for at least 100 years. PREPA currently has in place an operation and maintenance plan tied to an annual operational budget of \$5 million dollars. Annual budget considers O&M cost for Patillas Dam, Melania Dam and Carite Dam for which an estimated \$1M are attributed to Patillas Dam specifically. Refer below for details.

The operations and maintenance activities for an earth embankment dam includes periodic inspections of the dike, weed and grass control with chemical and mechanical methods. Also, inspection of the electrical and mechanical components with their replacements when needed. As part of the maintenance and operations after any atmospheric event a rigorous inspection is made to verify the stability of the embankment.

PROPOSED RESPONSIBLE ENTITIES

- Describe the proposed entity(-ies) responsible of the O&M activities.
- Describe the entity's current capacity for carrying out similar O&M activities (related to their staffing, funds, management structure, etc.).

The South Coast Irrigation District was created in 1913, which includes the Patillas Canal, Guamani Canal, Carite, Patillas and Melania reservoirs. There are 3 Irrigation Districts in Puerto Rico, for which the administration of all 3 have been executed by the Puerto Rico Electric Power Authority, previously known as the Puerto Rico Water Resources Authority, since 1941. It is, therefore, that PREPA not only has operated the Patillas Dams since its inception in 1913, but it is also responsible for the operation and maintenance of 20 Dams out of the 37 Dams in Puerto Rico for over 100 years.

The operational budget for each district is assigned by law and is appropriated from water revenues derived from non-agricultural purposes and a Budget amount assigned by the Puerto Rico Electric Power Authority.

The South Cost Irrigation district staffs over 40 resources including supervisors, engineers and administration staff that operate and maintain all water assets within the area. This operational structure has been in place and operation since 1913 when the dam was built for the Puerto Rico Irrigation Service.

PROFORMA (PROJECTION OR FORECAST) OF BUDGET AND REVENUE

- Describe the projected sources of revenue and other sources of funding that are expected to support the O&M activities for the useful life of the project.
- In the case of Covered Projects², the budget calculations must provide detail at the individual O&M task level and schedule over the useful service life of the project.

Annual Operation and Maintenance Cost - Patillas Dam	
Chemical Weed Control	3,737.92
Mechanical Weed Control	25,759.94
Dam Operator Salary (Includes Benefits)	77,788.40
Maintenance (Paint and Grease Mechanical Features)	2,945.00
Reservoir Maintenance	2,466.17
Instrument Reading	11,820.00
Dam Instrument and Controls Monitoring	3,300.00
Bathymetrics and Reservoir Analysis	115,500.00
Capital Projects	125,000.00
Power Generator Maintenance	1,385.00
Dam Safety Unit Costs	18,000.00
USGS Instrumentation Costs	127,470.00
Dam Consultant Costs	350,000.00
Diving Inspection Costs	70,000.00
Total Costs for Operation and Maintenance	935,172.40

The table above provides line item descriptions of the Operation and Maintenance cost for a single fiscal year. The expected cost projected over the life extension of the dam is \$93,517,200. As discussed in the Operation and Maintenance section of the document the Revenue Budget for the South Coast Irrigation District is assigned by law and is composed of the water sales for non-agricultural purposes and a Budget amount assigned by the Puerto Rico Electric Power Authority.

² Notice 84 FR 45838 defines a Covered Project as an infrastructure project having a total project cost of \$100 million or more, with at least \$50 million of CDBG funds (regardless of source (CDBG-DR, CDBG-National Disaster Resilience (NDR), CDBG-MIT, or CDBG)). According to HUD, an "infrastructure project," as it relates to Covered Projects, is an activity or group of related activities that develop the physical assets that are designed to provide or support services to the general public in the following sectors: surface transportation, including roadways, bridges, railroads, and transit; aviation; ports, including navigational channels; water resources projects; energy production and generation, including from fossil, renewable, nuclear, and hydro sources; electricity transmission; broadband; pipelines; stormwater and sewer infrastructure; drinking water infrastructure; and other sectors as may be determined by the Federal Permitting Improvement Steering Council. Infrastructure projects that meet the definition of a Covered Project must be included in the action plan or a substantial action plan amendment. 24 C.F.R. §58.32 (a)

O&M REQUIREMENTS DURING APPLICATION – ONLY REQUIRED FOR COVERED PROJECTS

O&M TASKS

- Based on the project's level of completeness, describe the O&M tasks required over the useful life of the project. Description of the O&M tasks should contain as much detail as possible based on the level of project completion.

The operations and maintenance activities for an earth embankment dam include but is not limited to periodic inspections of the dike, weed and grass control with chemical and mechanical methods. Also, an inspection of the electrical and mechanical components with their replacements when needed. As part of the maintenance and operations after any atmospheric event, a rigorous inspection is made to verify the stability of the embankment. Surveying to verify displacements. Diving inspections and any other activities or studies are needed to warrant the stability and performance of the reservoir. It is important to mention that the proposed retrofit alternative is based on a retrofitted earth embankment allowing for the current maintenance activities to be implemented after the new Project is finished.

FUNDING SOURCES FOR O&M ACTIVITIES

- Describe, if applicable, any borrowing authority, retargeting of existing financial resources, proposed changes to tax policy or practices required, or any State or local resources identified to pay or provide the O&M costs and resources.

None noted.

Applicant Certifications

Check	
<input checked="" type="checkbox"/>	I hereby understand that the Operations and Maintenance Plan is a HUD National Objective compliance aspect and understand that failure to comply could result in a potential re-payment of CDBG-MIT funds to PRDOH. I also understand that not meeting this National Objective may affect my eligibility to receive CDBG-MIT funds for the proposed project.
<input checked="" type="checkbox"/>	I hereby understand that specific requirements and elements are required for the Operations and Maintenance Plan, and I am familiarized with those requirements as defined under Appendix A of the CDBG-MIT Operations and Maintenance Guide.
<input checked="" type="checkbox"/>	I hereby understand that completion of the application or this Form does not guarantee my eligibility for this Program. Further, I understand that participation in HMGP-MIT is voluntary and that I may withdraw at any time. I also understand that if I choose to withdraw from participating in the Program, federal law states that I must return any funds CDBG-MIT disbursed to me.

My signature below indicates that I have read, understood, and agree to all statements in this Form. I affirm that all information provided in this Form is true and accurate to the best of my knowledge. I agree to hold harmless PRDOH and the CDBG-MIT Hazard Mitigation Grant Program, its employees, agents, and assignees from liability for any damages that may arise as a result of my participation in the CDBG-MIT Hazard Mitigation Grant Program.

X 
Ezequiel Nieves Ayala

Primary Applicant Signature

12/15/2022

Date

Warning: Any person who knowingly makes a false claim or statement to HUD may be subject to civil or criminal penalties under 18 U.S.C. §287, §1001 and 31 U.S.C. §3729.