



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

WASHINGTON, D.C. 20460

November 3, 2022

OFFICE OF MISSION SUPPORT

MEMORANDUM

SUBJECT: Exception from 40 CFR 35.3520(e)(1) for the Raw Water Intake Improvement Project for the City of Mayaguez, Puerto Rico

FROM: Kysha Holliday, Deputy Director
National Policy, Training and Compliance Division

TO: Jennifer L. McLain, Director
Office of Ground Water and Drinking Water

I am responding to your September 22, 2022 request for an exception from the prohibition of dams as eligible projects at 40 CFR 35.3520(e)(1) in implementing the Drinking Water State Revolving Fund (DWSRF) under the Safe Drinking Water Act (SDWA). This exception will allow the Commonwealth of Puerto Rico to use DWSRF funds for the City of Mayaguez's Raw Water Intake (RWI) Improvement Project. In addition to your exception request dated September 22, 2022, the Office of Ground Water and Drinking Water (OGWDW) also provided substantial rationale for this exception in the *Policy and Technical Evaluation in Response to Puerto Rico's Request for a Deviation for the City of Mayaguez's Raw Water Intake Improvement Project* (September 2022). For the reasons discussed below, I approve the exception.

BACKGROUND

OGWDW received a request from the Commonwealth of Puerto Rico for an exception from the prohibition of DWSRF financing of dams in regulations at 40 CFR 35.3520(e)(1) implementing the DWSRF under the SDWA. Puerto Rico is seeking this exception to use DWSRF funds to construct a new low head dam for the City of Mayaguez's RWI Improvement Project. This project will allow the City to relocate the Miradero Water Filtration Plant (MWFP) gravity intake structure upstream of the existing intake. The City will also construct a new low head dam to help divert water to the new intake.

The MWFP is located in the City of Mayaguez, Puerto Rico and serves a population of 62,583 inhabitants. Its primary source of water comes mainly from the Rio Anasco. The Rio Anasco has historically transported high concentrations of suspended solids, vegetative material, and bed load sediment (consisting primarily of sands), which has caused several operational problems at the raw water pump station. When these high sediment events happen, the plant has to go out of service. Most of the vegetative material that reaches the intake is removed by travelling screens located at the pump station, but the sand is conveyed to the raw water pumps abrading and damaging the pump impellers, mechanical seals, and other components. The sand also accumulates in the raw water pump station wet pits and flocculation tanks at the MWFP, stopping the plant operation and requiring constant cleanout and maintenance.

In addition to the historical problem of sediment entrainment, river migration has recently become a serious problem and a challenge for future water supply at this intake. Within the last ten years, the river contour has been changing its shape considerably in the areas upstream putting the water availability in jeopardy. The new low head dam is necessary to meet water flow demand and will divert water to the new river intake. It will be composed of a Coanda type screen that will minimize sediment entrainment. This project will also include riverbank slope protection measures as well as a new fish ladder to minimize environmental impacts due to fish migration. All of these situations deprive the City's residents of reliable access to safe drinking water, thereby impacting human health.

The project will help MWFP maintain a stable and reliable potable water supply that meets regulatory standards and will help the intake structure be more resilient to weather events in the future that cause a spike in sediment. The RWI Improvement Project will relocate the gravity intake structure just upstream from the existing one, with a new low head dam and an intake configuration that incorporates a series of components that will provide reliable and long-term operation. This new low head dam will divert water to the new lateral intake which is composed of a Coanda type screen that will minimize sediment entrainment. This type of screen maximizes the entrance of water while minimizing the entrance of sediment. The major benefits of the intake configuration are related to sediment management, which is one of the major problems affecting raw water intakes in Puerto Rico. This project will also include a riverbank slope protection measure, as well as a new fish ladder to minimize environmental impacts due to fish migration. The RWI Improvement Project proposes a completely new configuration for the raw water intake that will address these challenges better in the long term. It has also been designed for 30 years of continuous operation, according to Puerto Rico Aqueduct and Sewer Authority (PRASA) design requirements and will provide the most stable long-term intake configuration.

OGWDW supports Puerto Rico's exception request based on their technical analysis and the public health threat to the existing population in the City of Mayaguez. SDWA § 1452(b)(3)(A) states that DWSRF funding should prioritize "projects that address the most serious risk to human health." The RWI Improvement Project meets this criterion because it is needed for the City of Mayaguez to provide an adequate drinking water supply. Consistent with SDWA, the principal purpose of this project is to maintain public health protection through adequate drinking water supply for the existing population, not for growth from new development. Without DWSRF assistance, the City of Mayaguez would not be able to afford the project.

DISCUSSION

At the request of OGWDW, the Office of Grants and Debarment approved a class exception to 40 CFR 35.3520(e)(1) and (3) on June 21, 2021. New or relocated dams were not an eligible DWSRF project under this class exception; therefore, an individual exception from 40 CFR 35.3520(e)(1) is required for the City of Mayaguez's RWI Improvement Project.

ACTION

I have reviewed this request for an exception from 40 CFR 35.3520(e)(1) for the RWI Improvement Project. The project will allow the City of Mayaguez to reliably provide safe drinking water, thus decreasing public health risks to its existing residents. The project is consistent with the SDWA, and the exception is in the best interest of the Agency and the public. Therefore, as provided at 2 CFR 1500.4(b), I approve the exception from 40 CFR 35.3520(e)(1) to allow the Commonwealth of Puerto Rico to use DWSRF funds to finance the City of Mayaguez's RWI Improvement Project.

cc: Michael Osinski, Office of Grants and Debarment
Yu-Ting Guilaran, Office of Ground Water and Drinking Water
Anita Thompkins, Drinking Water Infrastructure Development Division
Cynthia Simbanin, Drinking Water Infrastructure Development Division
Howard Rubin, Water Finance Branch
Kiri Anderer, Water Infrastructure Technical Support Branch
John Towe, Water Infrastructure Technical Support Branch
Tracey Miller, Office of Water
Joanne Hogan, Office of General Counsel
Meghan Kelley, Office of General Counsel
Rudy O'Neal, Region 2 Grants Management Office
Sheri Jewhurst, Region 2 Grants Management Office