

On March 9 and 10, 2022, the Puerto Rico Water Resources and Environmental Research Institute (PRWRERI) participated in the Puerto Rico Watershed Symposium at the University of Puerto Rico - Mayagüez. The goal was to present several topics that would help with the implementation of action management that would improve watershed health and reduce risks to humans.



Figure 1. Field visit in the Río Grande of Añasco Basins.

On the first day of the symposium, a field visit was made to the Río Grande de Añasco Basin (see Figure 1). The first place visited was the Ajies dam (see Figure 2), where a rehabilitation project was proposed by the director of the Caribbean area of *Natural Resources Conservation Service* (NRCS), Mr. Luis A. Cruz Arroyo, and an engineer from the Caribbean area of NRCS, Ing. Yilia Baucage Bou. This was built in 1984 with the purpose of preventing significant/ dangerous flooding in the communities and industries of the Añasco Valley. In 2017, during Hurricane Maria, the dam served its purpose, but suffered damage (see Figure 3). In addition to repairing damage to the dam, the NRCS rehabilitation project is intended to bring the dam up to current code, extend its usage period, and reduce risk to life and property in the watershed. Professor Eric W. Harmsen spoke about his project *Enhancing Resilience of Island Communities* (ERIC), focused on modeling as well as analyzing the impacts of flooding on

electrical and water infrastructure in the western basins of Puerto Rico. His research resulted in a significant impact on the foundation of the poles that are part of the electrical network.



Figure 2. Water accumulated by the Ajíes dam.



Figure 3. Slopes in the Ajíes dam.

The Ovejas Bridge, which crosses Río Grande of Añasco, was the second place visited where the impact of watershed management could be noted (see Figure 4). The director of the Department of Civil Engineering and Surveying, Dr. Ismael Pagán, spoke about the need to implement green and gray infrastructure for water resource management. Many of the nearby communities were built before specific codes towards water resource management were implemented, leaving them vulnerable to significant flooding during extreme events. With this in mind, the director of the PRWRERI spoke about the importance of the Río Grande of Añasco and how it has been key to several investigations carried out by the PRWRERI as it has served to study and understand the hydrology of Puerto Rico.



Figure 4. The Río Grande de Añasco seen from the Ovejas Bridge.

In the third visit location, the water intake of the *Autoridad de Acueductos y Alcantarillados* presented their intake/ processing of water and current problems. A project is currently underway to improve the water reach.

The field visit was very successful. It was possible to understand the impact of good water resource management for nature and the surrounding communities.