



CITY OF CORAL GABLES' COCOPLUM 1 PUMP STATION EARNS ENVISION BRONZE FOR SUSTAINABILITY

July 19, 2022 — The Cocoplum 1 Pump Station, owned by the City of Coral Gables, Florida, has earned an Envision Bronze award, recognizing stakeholder involvement and delivery of community benefits, climate resilience, and protection of the surrounding lands. The upgrades to the wastewater system in this project are the latest example of the infrastructure owner's commitment to sustainability: the City of Coral Gables has more than 20 public works officials who are Envision Sustainability Professionals (credentialed professionals trained in the use of the Envision sustainable infrastructure framework and rating system), and it has also pledged to use Envision on other city infrastructure projects.



About the Project

The Cocoplum 1 Pump Station is one of 35 wastewater pump stations in the city's wastewater conveyance system. Prior to this upgrade project, Cocoplum 1 Pump Station received wastewater flows from two upstream pump stations and its own gravity collection basin, then sent flow downstream to Pump Station D, where it was discharged into the manifolded force main. Wastewater from that point was eventually conveyed to Miami-Dade Water and Sewer Department at Pay Meter #3 for treatment.

The city performed various mechanical, electrical, and structural upgrades to Cocoplum 1 Pump Station to proactively upgrade the wastewater system to better handle peak flows and improve overall system reliability.

The upgrades include replacing the force main and upsizing the capacity of the station pumps, eliminating the need for Pump Station D to repump Cocoplum 1 station flows and improving system reliability. The project also widens an existing bike path along the force main route on Cocoplum Road and installs a sidewalk between Cocoplum Road and Sinsonte Avenue in response to a request from the local Homeowners Association (HOA). Design elements to improve the resilience of the Pump Station include the installation of a backup emergency generator, the use of more durable materials, and the elevation of critical equipment to avoid damage from flooding and sea level rise.

“This is a great Utilities Division accomplishment, but the results will benefit everyone,” explains Jose Saucedo, Senior Project Manager at City of Coral Gables. “We’re very happy for this achievement.”

“A few years ago, we started training our staff on use of Envision and requesting that our contractors and consultants also obtain the credential,” indicates Jorge Acevedo, Utilities and ROW Division Chief at the City of Coral Gables. “Today, we are very proud of this accomplishment as a result of the team effort and leadership.”

VERIFIED SUSTAINABILITY ACHIEVEMENTS

Improving overall community quality of life.

A reliable and properly functioning wastewater system is crucial for maintaining community quality of life. The Cocoplum 1 Pump Station was placed under initial moratorium by the Miami-Dade County Department of Environmental Resources Management because it exceeded the maximum allowable runtime hours. Pump station upgrades were necessary to accommodate higher anticipated flows, reduce runtime hours, and improve overall station reliability. More than 150 homes in the basin, and another 100 properties in collection basins that are re-pumped by this station, rely on Cocoplum 1 Pump Station to function optimally.

“Public works projects provide excellent opportunities to address a range of community needs,” explains Melissa Peneycad, ISI Managing Director. “And this project is no exception. In addition to implementing the necessary upgrades to resolve the initial moratorium and keep the pump station functioning now and well into the future, the project team has also incorporated other elements to improve community livability, such as improving an existing bike lane used by residents, installing a new sidewalk, and ensuring the traditional aesthetic character of the community is preserved by this project.”

Involving stakeholders.

This project provides an excellent example of proactive and inclusive stakeholder engagement leading to meaningful design changes. In addition to stakeholders within the City of Coral Gables and Miami-Dade County, the project team also involved the Cocoplum HOA because the homeowners and residents in the area are most directly affected by the project.

Key issues raised by the HOA and other project stakeholders included pump station flooding, disturbances during construction, pump station operations and maintenance, and the inclusion of infrastructure improvements beyond the pump station itself. Each of these issues were addressed by this project. Some station equipment was elevated, while some was designed to be submersible to ensure that flooding and sea level rise will not impact operations. In addition to the new sidewalk and the improved bike path, measures were also put in place to minimize disturbances during the construction phase of the project.

Avoiding natural world impacts.

This project team took care not to have adverse impacts on the natural world. For example:

- No greenfield areas (previously undeveloped land) were disturbed by this project; this project is located entirely within a greyfield.
- Most of the landscaping involved restoring existing plants and adding a few locally appropriate and noninvasive plants around the pump station. No pesticides or fertilizers were or are being used on the project.
- All soils disturbed along the force main route and at the pump station site were restored as part of this project.

Increasing project resilience.

The potential increase in frequency and severity of extreme weather events and other climate-related risks were thoroughly examined by the project's leadership and measures were put in place to deal with the natural hazards that are likely to occur over its 50-year design life. For example, the pump station is equipped with an emergency power generator capable of providing power in the event of a utility power outage and is designed to withstand hurricane-force winds, and critical equipment was elevated (or designed to be submerged) to address flooding and sea level rise.

“Congratulations to the City of Coral Gables and its project partners, including Hazen and Sawyer who led the Envision submission, for earning an Envision Bronze award for sustainable infrastructure,” says Melissa Peneycad. “Everyone involved in this project deserves to be commended for their leadership in sustainability.”



Hazen

PROJECT DETAILS AT-A-GLANCE

Envision-verified Project:	Cocoplum 1 Pump Stations Force Main Upgrades
Location:	Coral Gables, Florida
Envision Rating:	Bronze
Owner:	City of Coral Gables
Project Delivery:	Design Bid Build
Lead Envision Firm:	Hazen and Sawyer
Project partners:	Miami-Dade County, Hazen and Sawyer, David Mancini & Sons, Inc.
Award Date:	July 19, 2022
Project Phase:	Completed - operational
For more information:	Please visit the project website: https://www.coralgables.com/pumpstations

Additional Photos:

