



Flood Mitigation: After Upgrading Existing Pumps with Opti's CMAC, Ormond Beach, Florida Shifts from Damage Costs to Savings

The Challenge

In 2009, an extreme weather event unleashed over 27 inches of rain on the Laurel Creek Watershed. The flooding inundated approximately 79 buildings and several critical roads. With the assistance of FEMA and coordination with various City departments, an upgrade project was undertaken to address not only the flooding issues but provide the ability to upgrade utilities within the area, enhance park elements, and bring the existing roadway up to current city standards.

The Solution

In an effort to further minimize the risk of flooding and to fully take advantage of the storage potential associated with the five interconnect lakes, the City implemented Opti's forecast based control solution. Opti software predicts stormwater runoff ahead of wet weather and uses that information to create extra storage capacity in the Central Park Lakes. In the 48 hours leading up to storms, Opti can command a pump station to release up to 70 acre-feet of water to prevent the Lakes from overflow into the surrounding neighborhood.

At a Glance

- \$7.8M in savings by upgrading existing pumps with Opti's automated forecast-based controls
- Flooding prevented at Central Park Lakes during Hurricane Irma (2017) and Dorian (2019)

“Making information available on demand allows us to make better decisions.”

Shawn Finley

Public Works Director,
City of Ormond Beach



ECONOMICAL

98% Savings

\$200k vs. \$8M in capital expenditures



RESILIENT

70 ac-ft Active Storage

Forecast-based pre-event drawdown volume



PEACE OF MIND

Hurricane-Ready

Keeping property, residents & emergency workers safe

Results

Over the course of 3 days in September 2017, **Hurricane Irma** dropped nearly 9 inches of rain over central and eastern Florida. During this period, the Central Park Lakes received 190 ac-ft of inflow.

With Opti's real-time continuous monitoring and adaptive control solution, the lakes were lowered in anticipation of this historic hurricane, protecting residents and property from flooding.



Historic flooding after the 2019 storm

Web Dashboard

Opti's web-based dashboard is a critical tool for the City's emergency management. Information, alarms, and forecast predictions make it easy for operators to understand and control the level of the Central Park Lakes without putting personnel in harm's way.

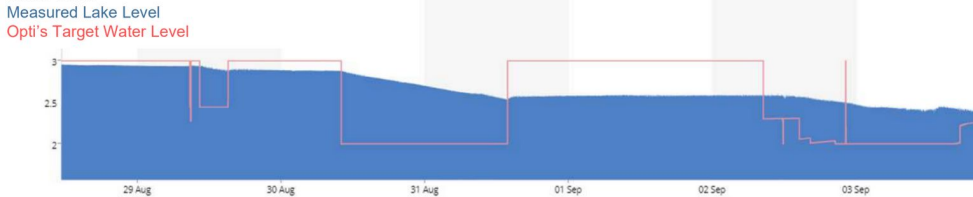
Crisis Response

In the days leading up to **Hurricane Dorian** in 2019, Opti engineers notified the City that one of the pumps at the Laurel Creek Pump Station had malfunctioned. City operators used the Opti dashboard to override the pump failure (in orange) and safely prevent an overflow during the storm.

Opti Operation Mode



Water Level



Powered by  Microsoft

About OptiRTC

Opti is the leading provider of digital adaptive stormwater control solutions. With over 300 deployments to date, Opti empowers customers and partners to address the impacts of climate change, aging infrastructure, urbanization, and water pollution, enabling them to secure the sustainability of our communities and natural resources. Opti's cloud-based platform optimizes stormwater asset performance through instant actionable insights to provide economic savings, resilient solutions, and peace of mind. With our commitment to innovation, we are driving a resilient and brighter future for all.



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