CASE STUDY

Bronx, NYC

Opti by aliaxis

Arbor House affordable housing complex in the Bronx uses rainwater harvesting to provide produce to residents and the community

The Challenge

In New York City, NY, combined sewer overflows (CSOs) discharge untreated human and industrial waste, toxic materials, and debris into local waterways. Increased impervious area due to development has contributed to CSO and pushed developers to adopt sustainable practices such as rainwater harvesting and rooftop urban agriculture.

This project helps to alleviate CSO discharges to NYC's waterways and maximizes water reuse for urban agriculture at a rooftop greenhouse.

The Solution

The Arbor House complex contains two (2) cisterns which provide over 15,000 gallons of rainwater storage. Installed in 2017, the cisterns capture and store rainwater to provide irrigation for the rooftop greenhouse. These cisterns were implemented with Opti technology to control the timing of water discharges. Ahead of wet weather, the Opti system will draw down the cistern water level to ensure runoff is captured during the event. After storm events, runoff is retained in the cistern for reuse.

Blue Sea Development deployed Opti to maximize water reuse for urban agriculture

"Opti allows us to maximize stormwater capture, reuse for on-site irrigation, and minimize downstream CSOs"

Les Bluestone
Blue Sea Development

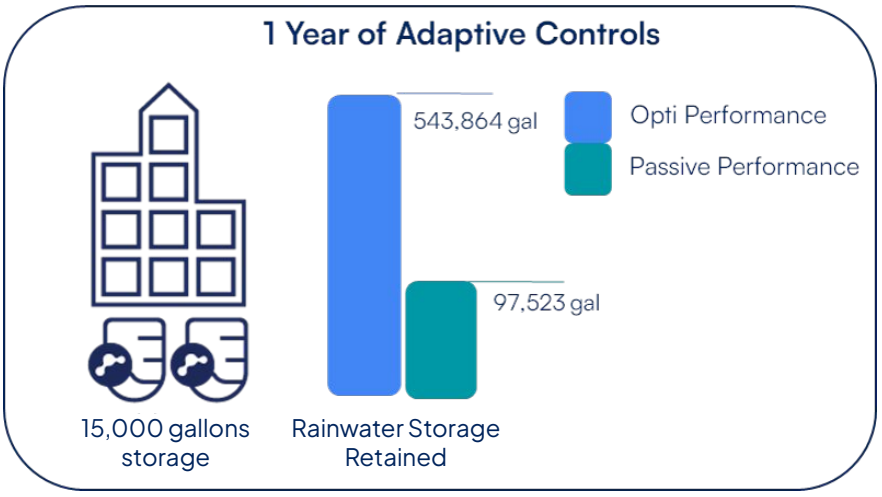
ECONOMICAL
87% Savings
$0.16 vs. $1.28 per gallon

RESILIENT
93% Flow Reduction
During wet weather

PEACE OF MIND
Compliance and Reuse
For food production

Results

Opti software controls an outlet valve installed one foot from the bottom of the cisterns. The objectives of this control are to reduce wet weather flows into the combined sewer system (CSS) and retain rainwater for reuse. Opti software ingests the National Weather Service forecast to predictively draw down cistern water and maximize storage capacity ahead of wet weather. Over the course of one year, Opti's active control system proved to be 4.6X more effective as compared with traditional passive management.



In one year, Opti retained over 500,000 gallons of stormwater, 36X the cistern volume and 5.5X the retention in the passive system

IAs rainwater is collected from the Arbor House rooftop, Opti maximizes storage capacity for reuse

Operation and Maintenance

Arbor House stakeholders have access to a web-based dashboard on the Opti platform, which displays performance statistics, historical data summaries, and enables remote control of the outflow valve. In addition to dashboard analysis, Opti helps with environmental compliance by preparing quarterly reports on the performance of the Arbor House rainwater harvesting system. These reports are sent to the Department of Environmental Protection, using data obtained from the Opti platform.

About OptiRTC

Opti ,an Aliaxis company, 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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