

Preventing Flooding with Cloud Technology



“The infrastructure we have today is capable of much more than we realize,” states Shively. “By understanding and improving the system that already exists, we can adapt best management practices and begin to utilize existing assets to the maximum extent possible, UEA to the MEP.”

— City of Kansas City, MO



The evolution in stormwater management

Traditional Grey Infrastructure



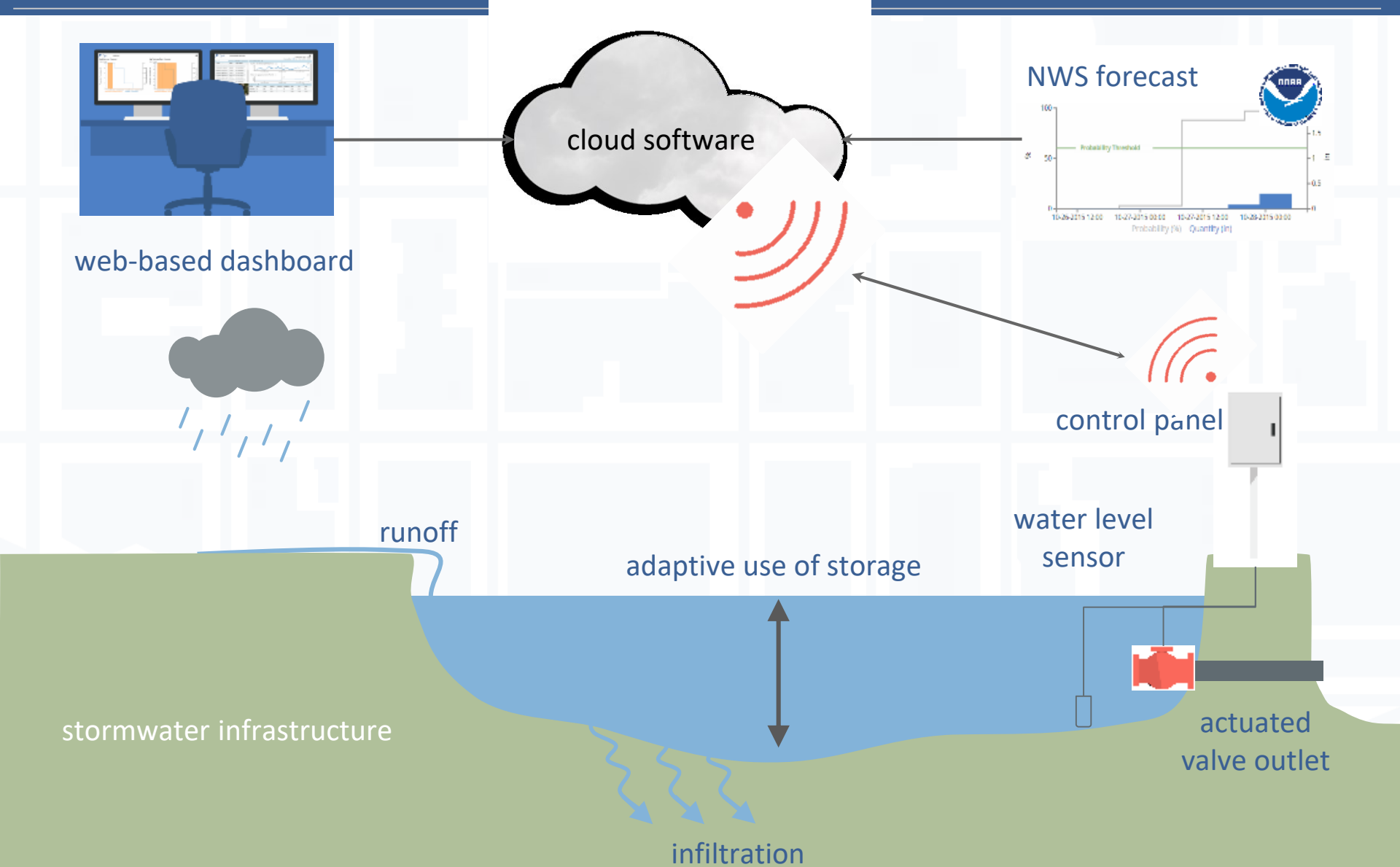
Conventional Green Infrastructure



Intelligent Green Infrastructure



Continuous Monitoring & Adaptive Control (CMAC)



Field view of typical hardware components





What is the status of my stormwater infrastructure?

What needs to be done in preparation of the event?

What resources do we need for emergency operations?

Leverage existing stormwater assets and infrastructure



Maximizing storage before Hurricane Irma

Central Park Lakes

System Control
VFD Pumps

Opti Operation Mode
Current State: Automatic Control

Automatic Control
 Manual Control

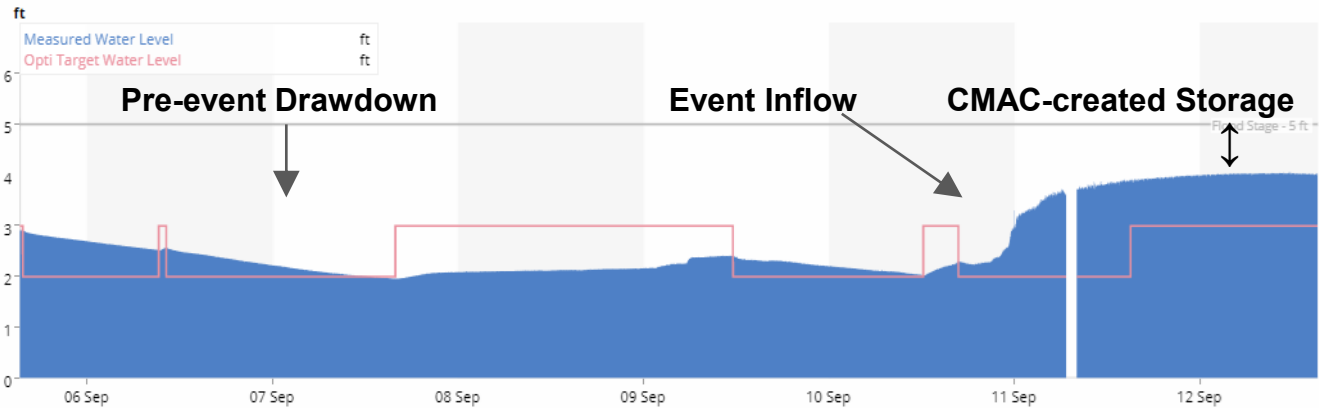
[Change](#)

Manual Pump Setpoint
Current State: 36% Open
Not available for control.

Storm Status

Water Level in Storage

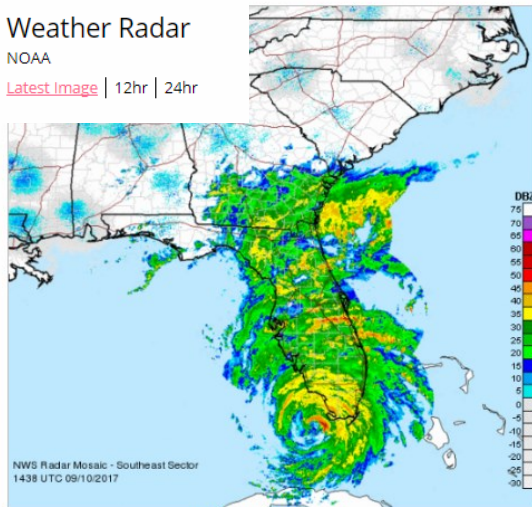
12hr | 24hr | 48hr | [1wk](#)



Weather Radar

NOAA

[Latest Image](#) | 12hr | 24hr



Summary Statistics

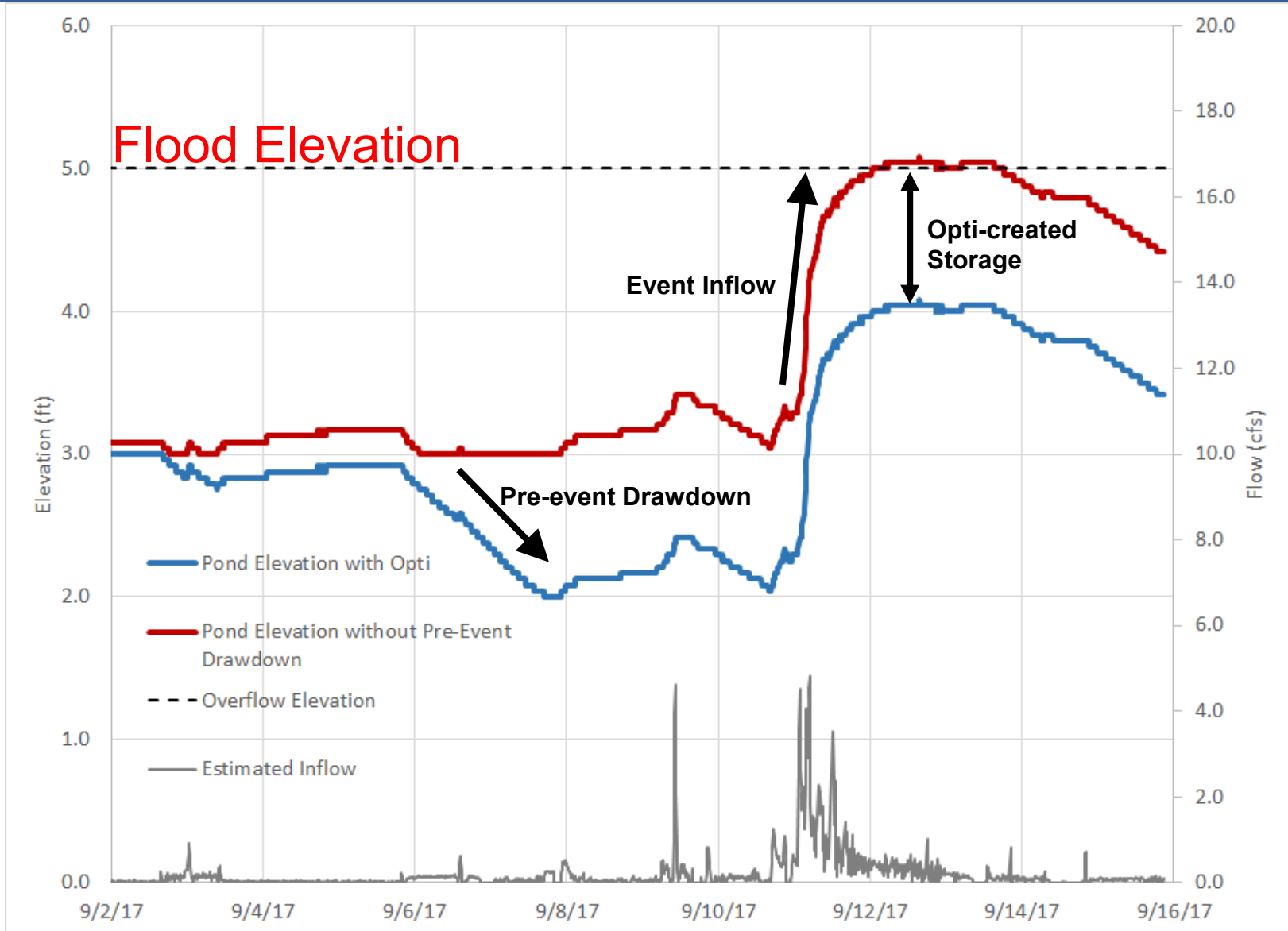
Total Precipitation (NOAA)

8.4 in

Total Estimated Inflow
(Sept. 6 – Sept. 14, 2017)

13.5 MM ft³ or 300 ac-ft.

Pre-event drawdown prevented flooding



Case Study: Chicago

Smart Green Infrastructure Monitoring



Mayors Explore Data-Driven Sustainability Solutions with Opti, City Digital Partners

Mayor of London Sadiq Khan tours green technology pilots in Chicago with Mayor Rahm Emanuel



Monitoring platform and Public API



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Sustainable Green Infrastructure Monitoring

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Sensors Environment & Sustainable Development

Results from City-installed sensors measuring water runoff from streets and sidewalks. These data can be used to measure the impact of sustainable green infrastructure on flooding. These sensors also capture weather data...

[More](#)

Updated
August 28, 2017

Data Provided by
City of Chicago

Featured Content Using this Data

[Smart Green Infrastructure Monitoring](#)

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Further information on the SGIM project.

About this Dataset



Coordinated urban watershed



Guilderland

Westmere

Colonie

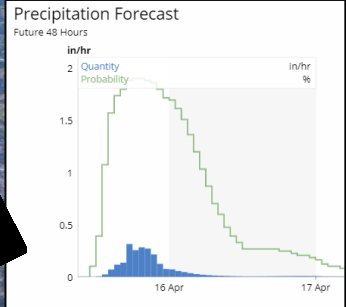
Rousesville

Albany

Albany

Downtown

Rensselaer



Thank you

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