

SMRSA Climate Readiness

AEA Utility Management Conference

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SMRSA

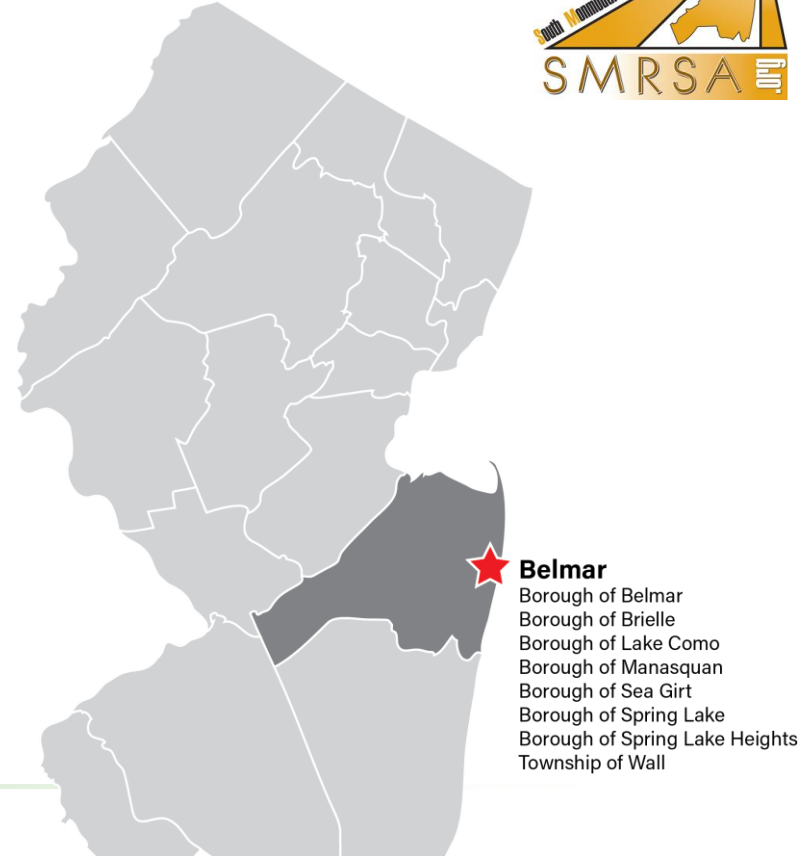
March, 2023

**CDM
Smith**



South Monmouth Regional Sewerage Authority

- Authority created in 1970
- 8 member municipalities
- 11 pumping stations
- 9.2 miles of force mains
- 9.1 mgd WWTP
- 2.2 mile ocean outfall



Climate Drives Projects

THREE MAJOR STORM EVENTS

2009 NOR'EASTER

\$1.8M

2011 HURRICANE IRENE

\$2.5M

2012 SUPER STORM SANDY

\$11.5M

SMRSA's Climate Challenges

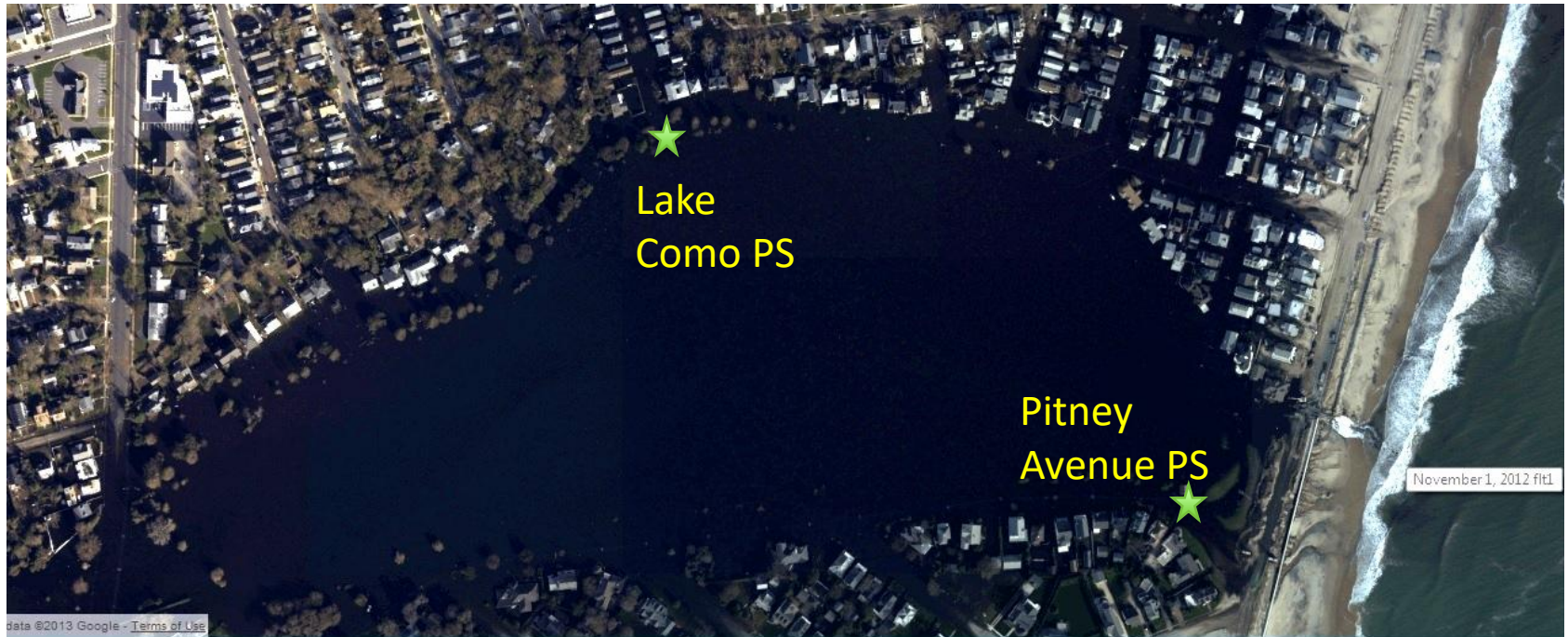
- Climate Challenges:
 - Flooding
 - Storm Surge
 - Sea Level Rise
 - Wind Damage
- Impacts to SMRSA:
 - Damage to infrastructure
 - Power outages
 - Temporary loss in service
 - Potential increase in service rates for customers



Super Storm Sandy Impacts



Super Storm Sandy



Lake Como: Relocate Pump Station

Project Highlights:

- Built new PS Building
- Extended Forcemain
- Rerouted Gravity Sewer
- Reconnect house connections



Lake Como Pump Station: Relocated



Adaptive Measures

- Constructed new building
- Extend force main and gravity sewer line

Cost: \$3.2 Million

Pitney Avenue Pump Station: Mobile Enclosure



AFTER



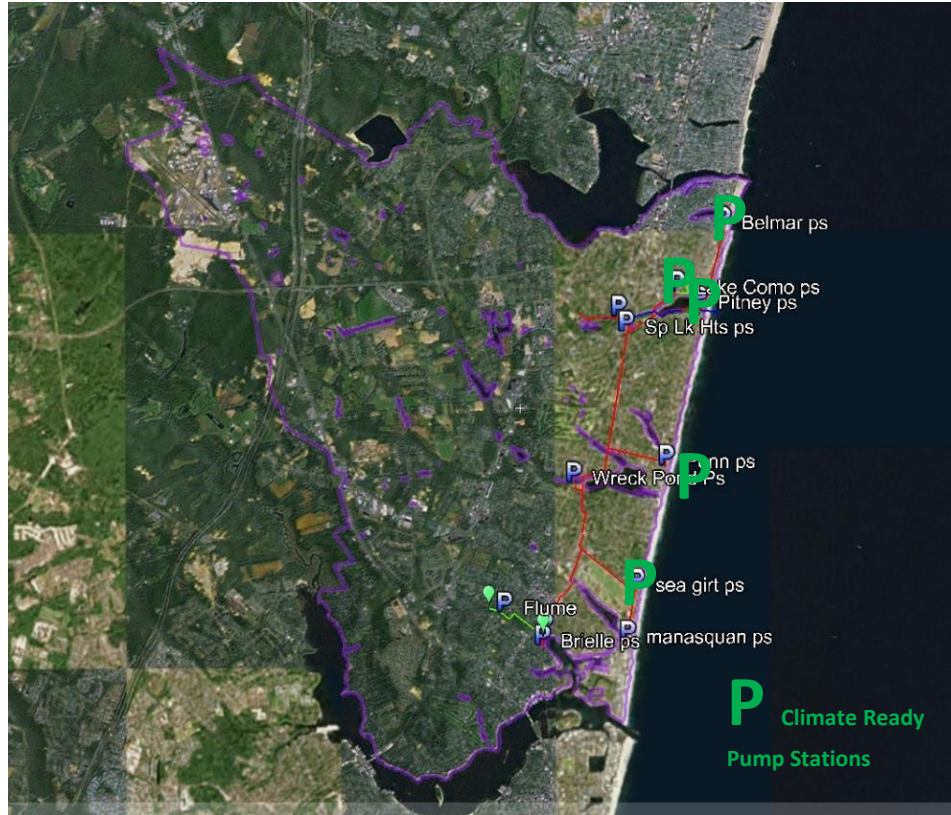
BEFORE

Adaptive Measures

- Mobile Pump Station
- All electrical equipment above 500 year flood elevation
- Submersible pumps

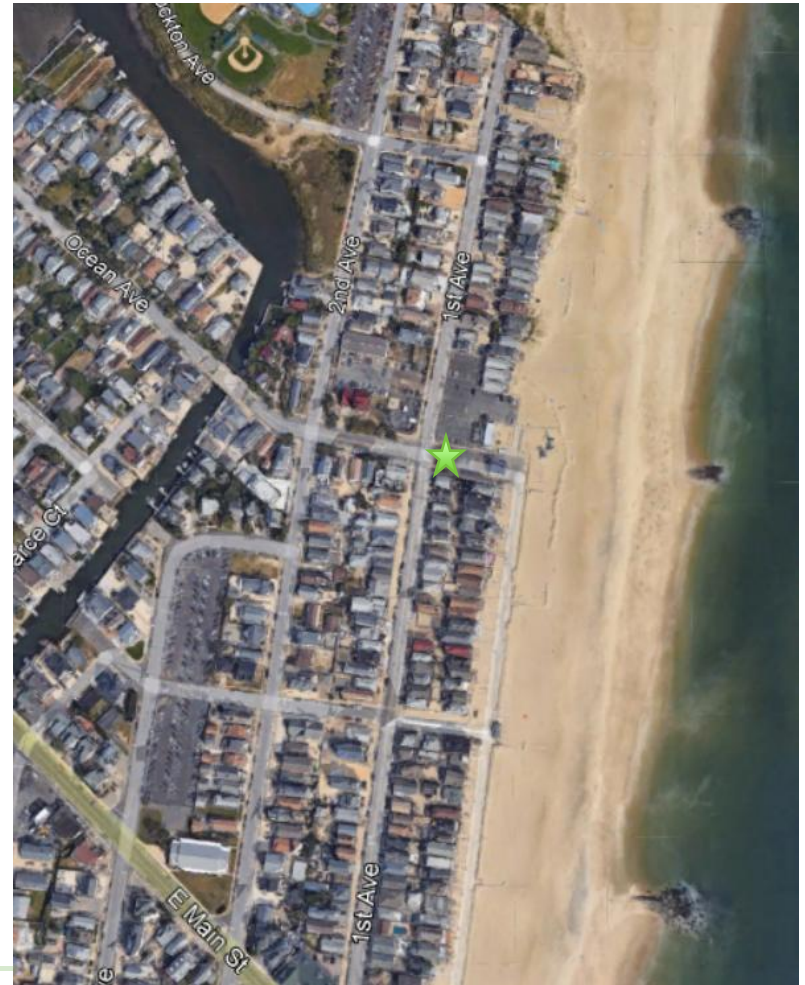
Cost: \$1.9 Million

What's Next: Protecting Manasquan PS



Manasquan Pump Station

150 Ocean Avenue, Manasquan, NJ



Manasquan Pump Station Location Map

Guidance: Planning for Sea Level Rise (SLR)

- NJ Flood Mapper
 - Planning Level Tool
- SLR Guidance Document from NJDEP
 - Scenario: 50% Chance of Exceedance of 3.3 ft SLR in 2100
- EPA CRWU Data & Tools

Measurement	Baseline	Warmer, Wetter, More Stormy, Higher Flow, Moderate SLR
Total Sea Level Rise (Feet)	0.00	3.30
Annual Average Number of days with tidal flooding (Days)	5	365

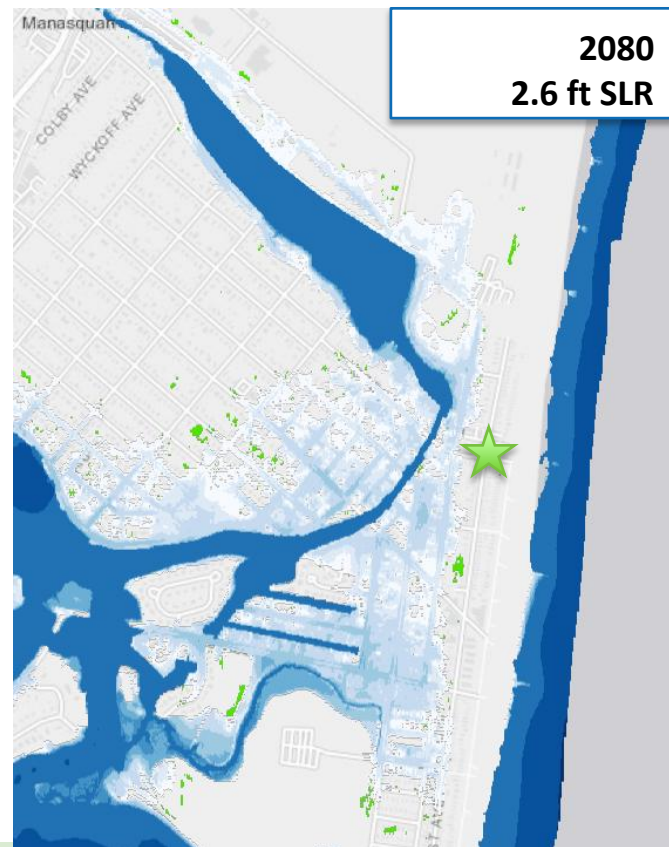
Excerpt from EPA CRWU Data



NJDEP Guidance

Future Climate Threats at Manasquan PS

- Sea Level Rise
- Back Bay Flooding
- Coastal Storm Surge
- Primary Concern: everyday Site Access due to SLR
- Biggest challenge will be coordination with Manasquan Boro et. al.



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Questions?

