GROUNDWATER MONITORING NETWORK

For Sea Level Rise Impacts

What is this Project?

In conjunction with the Vulnerability Assessment, this effort will focus on predicting impacts, specifically to critical infrastructure, of sea level rise by installing a monitoring network to accurately measure rates of change in current shallow groundwater elevation and water quality. The monitoring network proposed will contain up to 60 monitoring points. A professional licensed surveyor will survey each point. Monitoring will be scheduled/sequenced to represent the same atmospheric / geologic conditions each monitoring period to attempt to replicate these variables. All data (sea level, groundwater, water quality & creek level) will be compiled and summarized quarterly, building the data set. Daily rainfall along with any severe storm activity will also be summarized.

Why is this project needed?

As sea level rises, so does shallow groundwater. As groundwater approaches closer to land surface, water quality and critical infrastructure may become adversely impacted, such as the stability of foundations, water quality used for irrigation, function of buried utilities (communications, electric transmission, natural gas distribution), storm/water/sanitary sewer functions, and historic structures can become more at risk. Therefore, better prediction of these impacts by monitoring is needed to mitigate for these risks.

How is this project being funded?

The City of St. Augustine (COSA) has received a grant from the Florida Department of Environmental Protection (DEP) under the Resilient Florida Grant Program in the amount of $201,903.00. The City will contribute $15,197.00, for a total project cost of $217,100.00

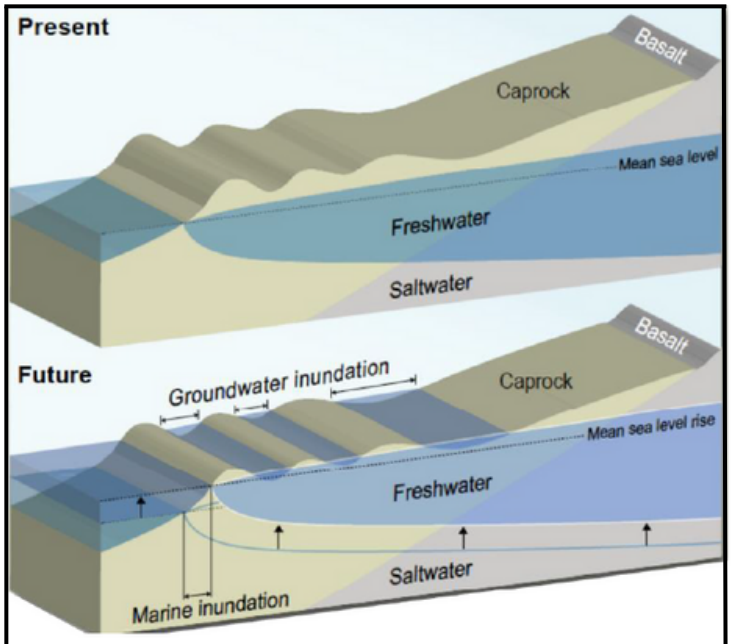

Figure 19. Conceptual diagram of groundwater inundation, obtained from Rotzoll and Fletcher (2012).

How will this project benefit the community?

The data collected from this project will be able to better predict and model groundwater impacts which has a significant impact on critical infrastructure. This includes the threat to the City's existing archaeological and historic buildings which are considered regionally significant assets. Having a better mechanism for predicting those impacts and risks will enable the City to identify mitigation strategies to address those risks. The groundwater monitoring network can be installed and monitoring to begin within the first year of the project. The data collected from that network would occur over the next 15-18 months and then the results from that effort will be summarized into a final report by the end of year 3.

City of St. Augustine | Public Works Department | 904.825.1040 | stormwater@CityStAug.com

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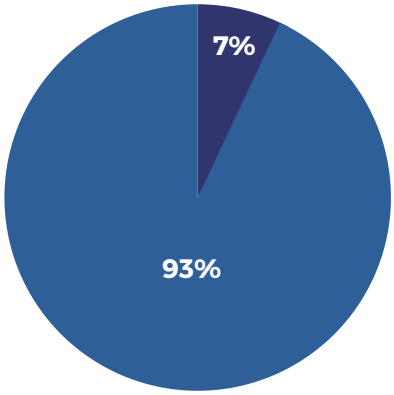
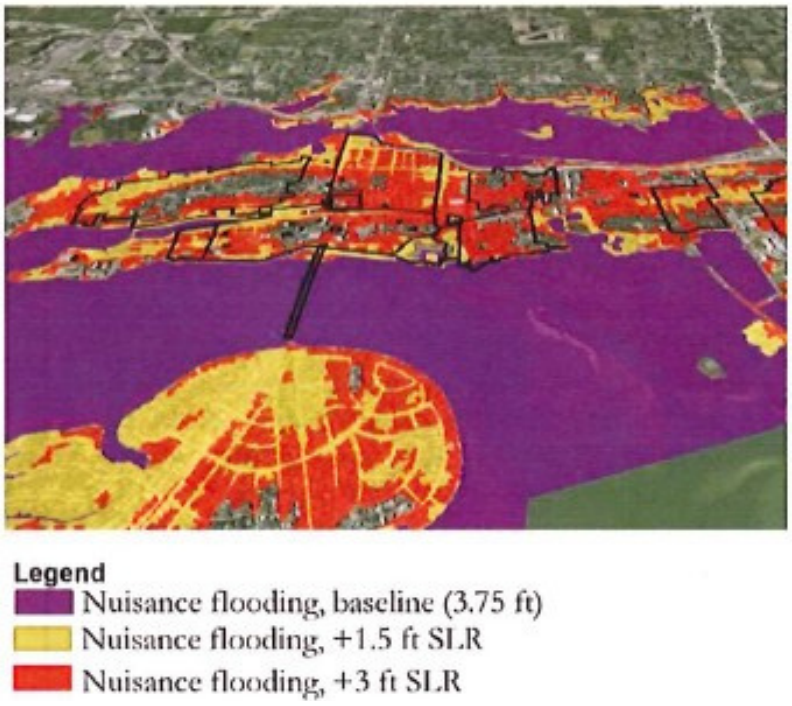
TOTAL CONSTRUCTION COST: $217,100.000

City of St. Augustine
$15,197.00



Resilient Florida Grant
$201,903.00



PROJECT SCHEDULE

YEAR	FDEP FISCAL YEAR (JULY 1 JUNE 30)	PROJECT PHASE	PROJECT STATUS	DEP GRANT REQUEST AMOUNT	FEDERAL SOURCED MATCH AMOUNT	OTHER SOURCED MATCH AMOUNT	CUMULATIVE TOTAL
1	FY 22-23	PHASE 1	MONITORING NETWORK INSTALLATION	$62,000	$0	$5,065	$67,065
2	FY 23-24	PHASE 2	MONITORING	$119,903	$0	$5,065	$124,968
3	FY 24-25	PHASE 3	MONITORING AND FINAL REPORTING	$20,000	$0	$5,065	$25,065
TOTAL	N/A	N/A	TOTAL FOR ALL PHASES	$201,903	$0	$15,197	$217,100

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