

Stormwater and Climate Change: Understanding our Challenges

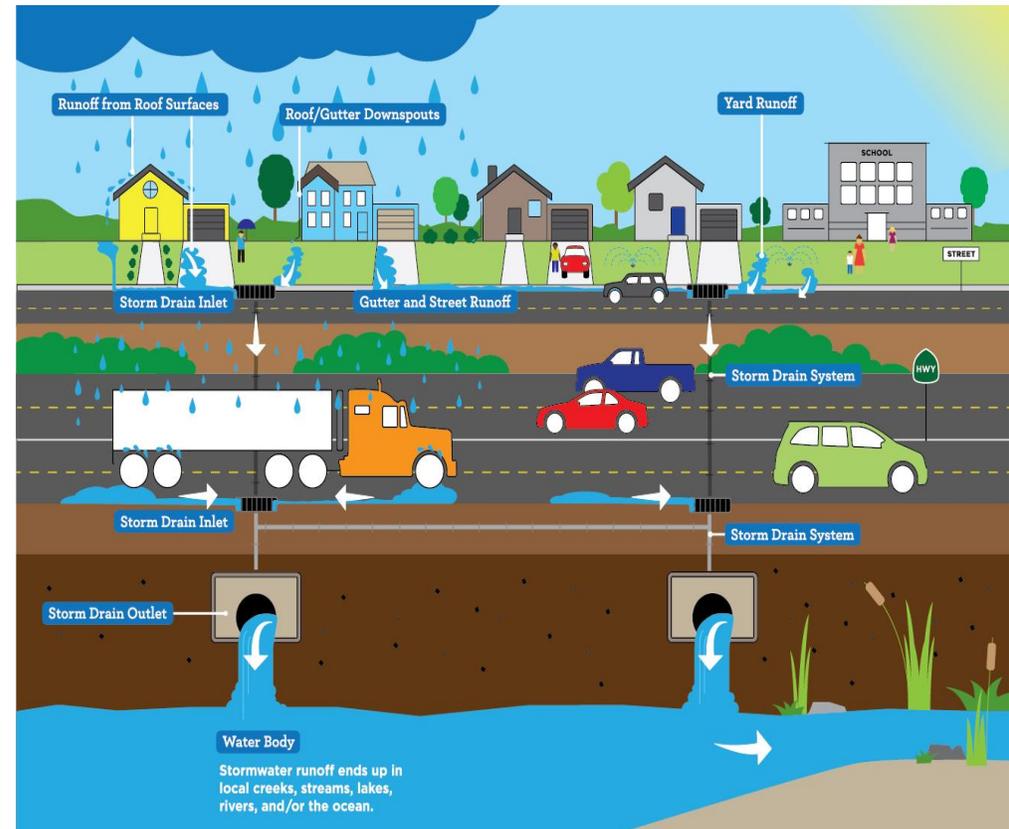
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Pinellas County Environmental Management



Overview

- Stormwater systems generally
- How climate change impacts our stormwater system
- Community impacts
- What can we do about it?

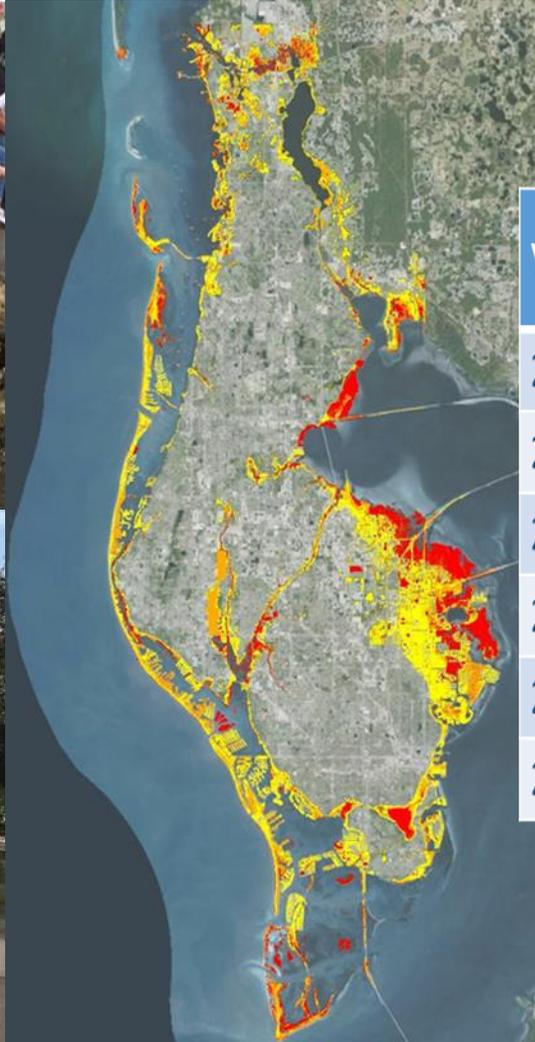


Stormwater Systems

- Stormwater systems may be simple, a drainage ditch that discharges to a stream.
- Stormwater systems may be a complex series of inlets, pipes, ponds, pumping systems, and outfalls.
- The purpose of a stormwater system is to convey water away from developed areas.
- After 1985, water quality treatment was also required.
- Public stormwater systems are regulated under the Clean Water Act's National Pollutant Discharge Elimination System program.



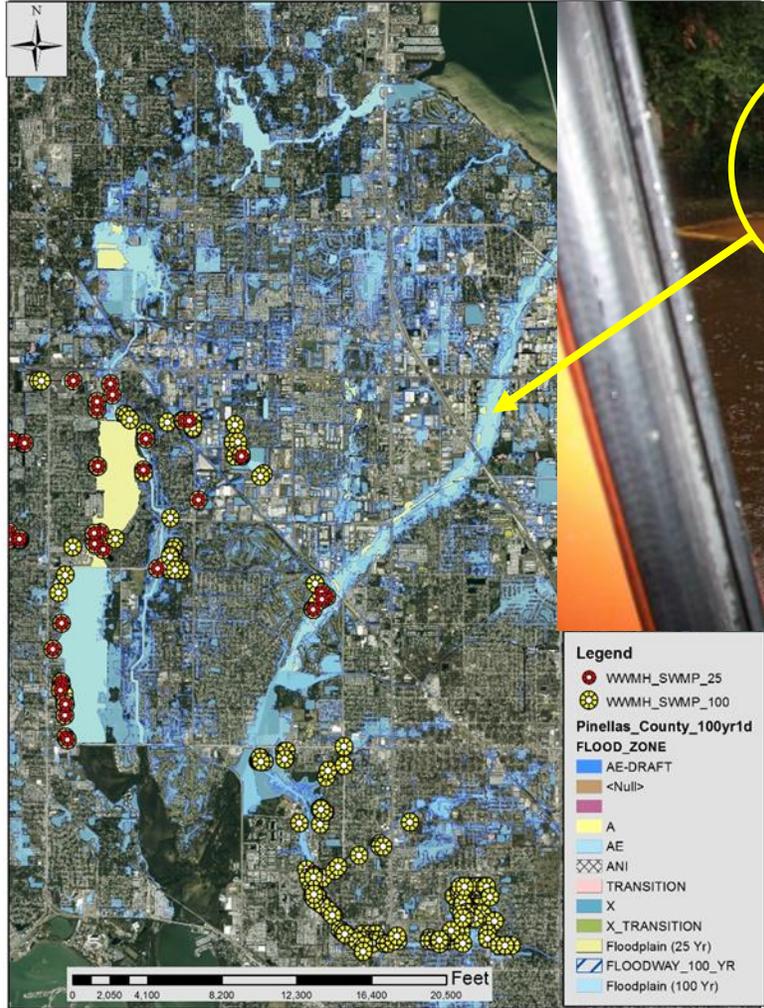
Stormwater and Sea Level Rise



YEAR	NOAA LOW (FT)	NOAA INT LOW (FT)	NOAA INT HIGH (FT)	NOAA HIGH (FT)
2025	0.28	0.38	0.60	0.84
2035	0.37	0.53	0.90	1.31
2050	0.50	0.80	1.46	2.22
2065	0.63	1.10	2.15	3.35
2075	0.71	1.33	2.68	4.23
2100	0.93	1.97	4.26	6.89



Stormwater and Rainfall Patterns



NOAA ATLAS 14 POINT PRECIPITATION FREQUENCY ESTIMATES: FL

Data description
 Data type: Precipitation depth Units: English Time series type: Partial duration

Select location

1) Manually:

a) By location (decimal degrees, use "-" for S and W): Latitude: Longitude: Submit

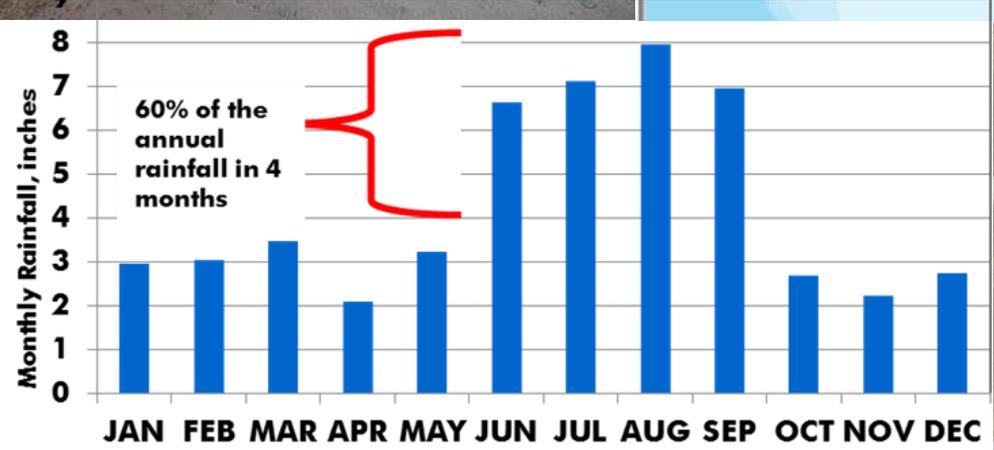
b) By station (list of FL stations): ST PETERSBURG (08-7886)

c) By address Search

2) Use map (if ESRI interactive map is not loading, try adding the host: <https://js.arcgis.com/> to the firewall, or contact us at hdsc.questions@noaa.gov):

Location information:
 Name: Saint Petersburg, Florida, USA*
 Station name: ST PETERSBURG
 Site ID: 08-7886
 Latitude: 27.7631°
 Longitude: -82.6272°
 Elevation: 8 ft

Seasonal Rainfall Pattern

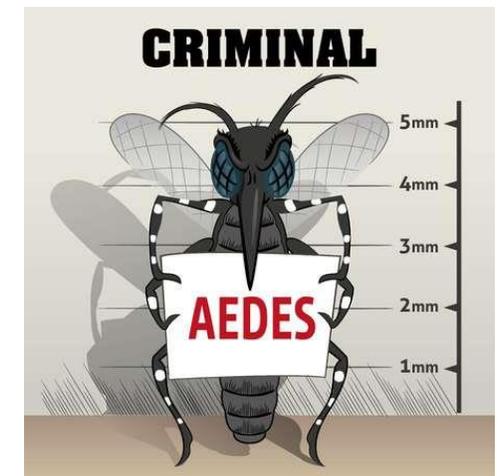
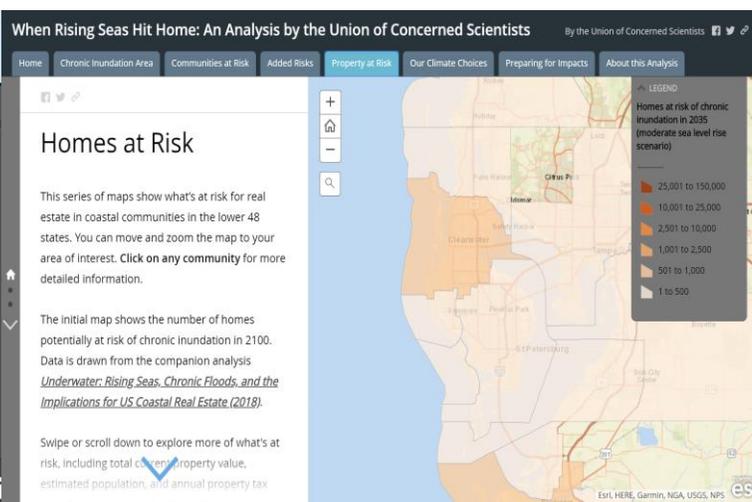
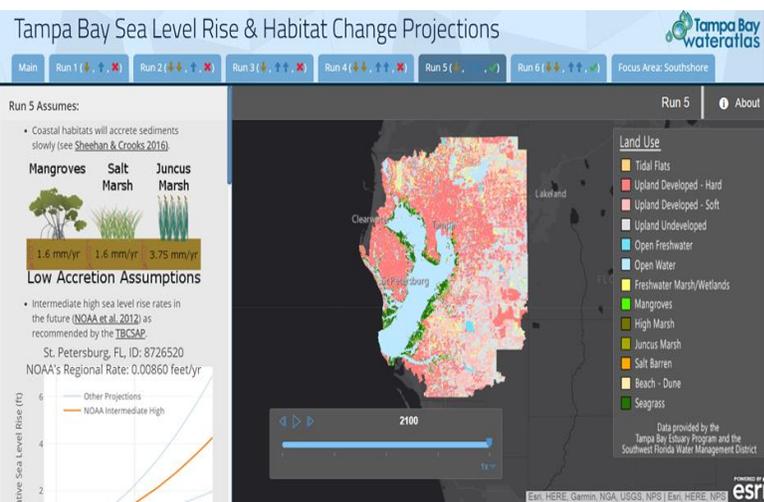


Community Impacts

- Infrastructure
- Access to homes, schools, employment centers
- Economic
- Social
- Environmental

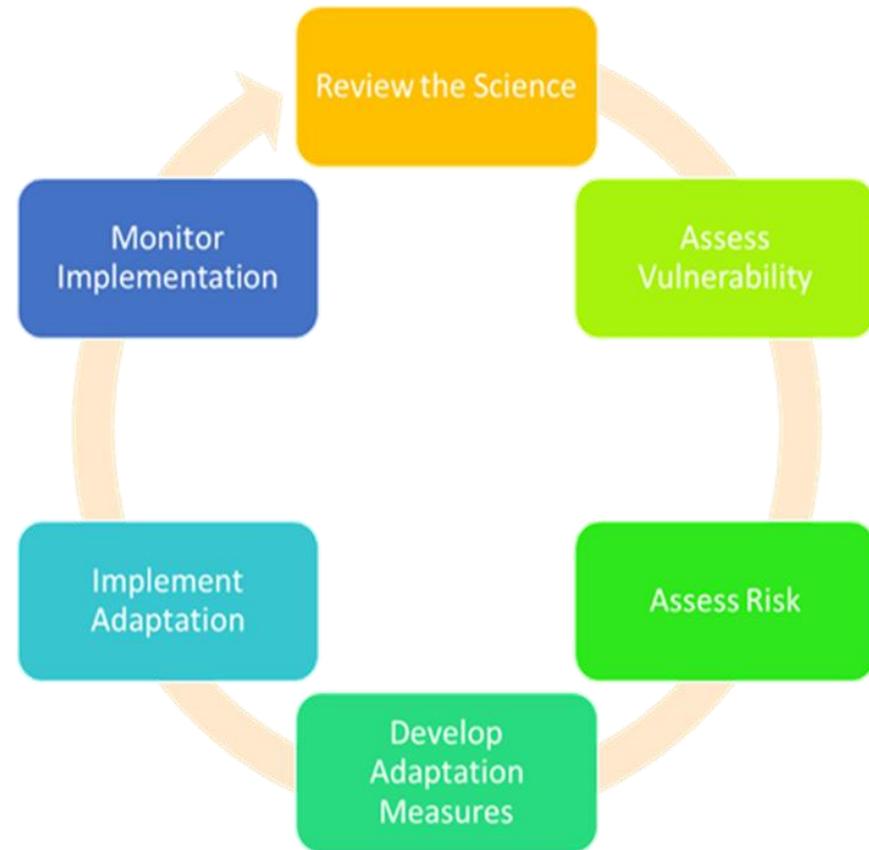
- Public Health

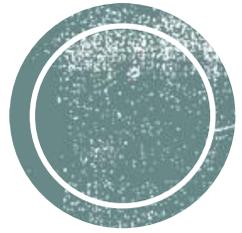
- *Aedes aegypti*, “the yellow fever mosquito.”
 - Can spread dengue fever, chikungunya, Zika, Mayaro and yellow fever viruses, and other disease agents.
 - Thrives in urban areas.
 - Container breeder, depends on standing water for breeding.
- Bacteria and viruses



What Can We Do?

- Become informed, listen, and share your story, encourage others to share theirs.
- Be responsive not reactive.
-  Fund and implement effective asset management programs especially maintenance.
- Responsible regulations.
- Plan for and design resilient communities and public infrastructure.





Questions

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<https://www.facebook.com/PinellasEnviroNews>