

Battle at the Front Lines: Facing Sea Level Rise on Tybee Island



Photo by Sean Compton

Lesson for dealing with politically loaded issues:

- Don't debate causes – focus on objective effects (i.e. – avoid discussion of “global warming” and “carbon footprints.” Look to fact of sea level rise as recorded on Ft. Pulaski tide gauges.)
- Start with current manifestations of issue (i.e. – flooding already apparent on Tybee)
- Acknowledge range of uncertainty in data interpretations.
Prudence of planning in uncertain times

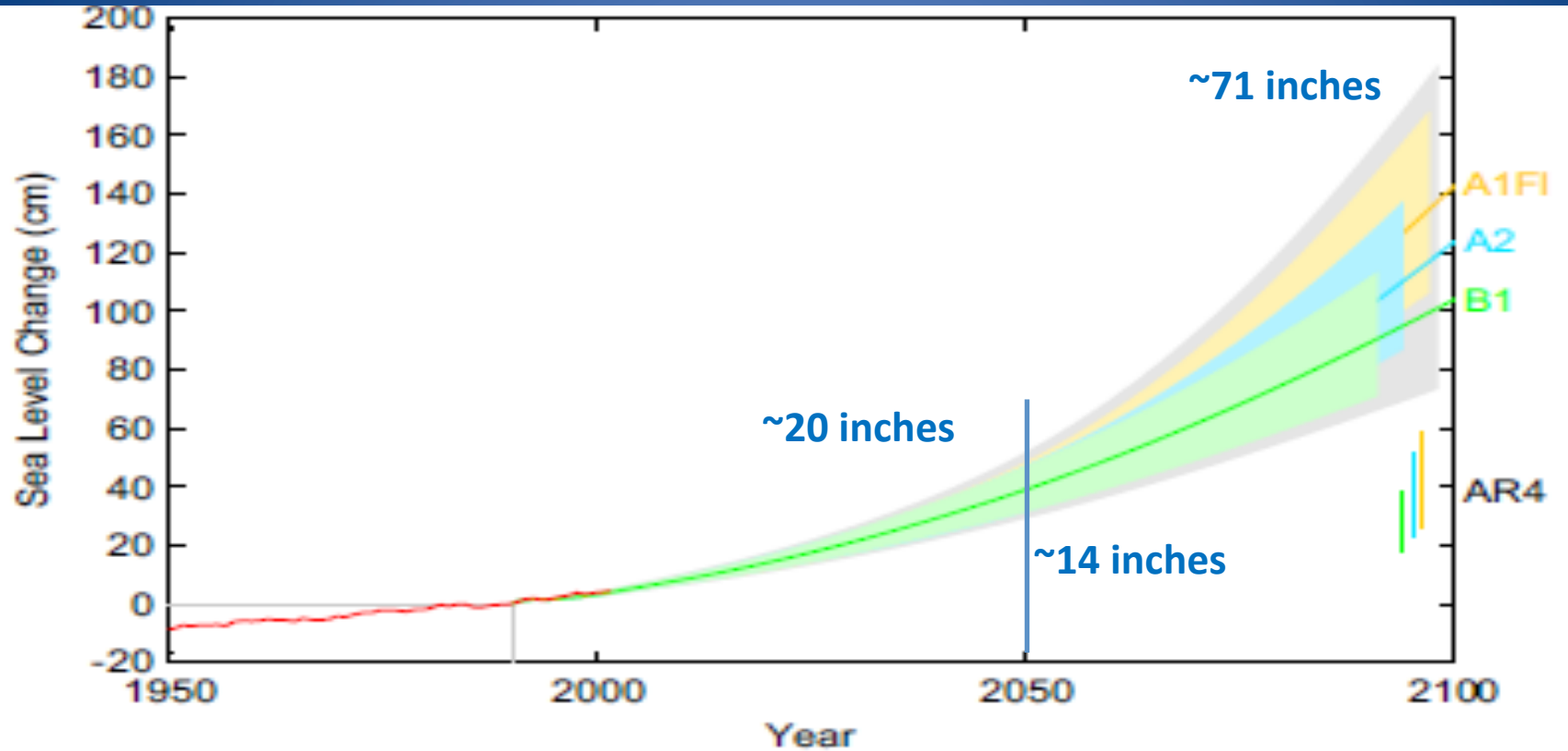
Concerns Identified in Public Forum at Tybee City Hall

- US 80 causeway to the island floods periodically during spring high tides
- Beach erosion
- Southwest part of island experiences periodic flooding during spring high tides
- City well pumps at ground level

Adaptation actions selected for benefit-cost consideration

- Raise US80 to 4 feet above current grade
Discussions opened with GA DOT and Chatham Co.
- Continue renourishing beaches to keep up with sea level rise
Deemed cost-effective – Grant funding being sought
- Upgrade drainage infrastructure in southwest island
Deemed cost-effective – Project underway
- Build 4 foot high sea wall in southwest island
NOT deemed cost effective – Alternatives, such as living shorelines, being explored
- Raise water well facilities above 100 year flood height
Deemed cost-effective - Project underway

Other recent projections give more cause for concern



Vermeer and Rahmstorf (2009)



Current sea level



1 foot rise



Current sea level



3 feet rise



Current sea level



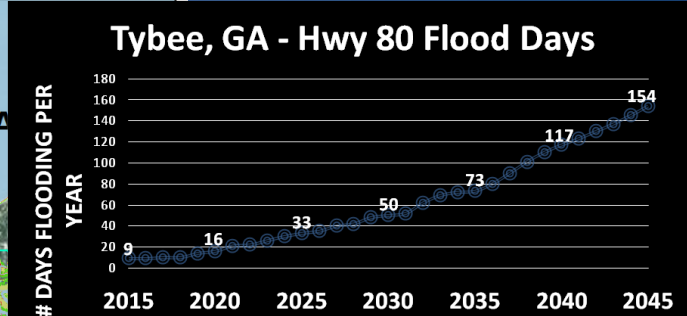
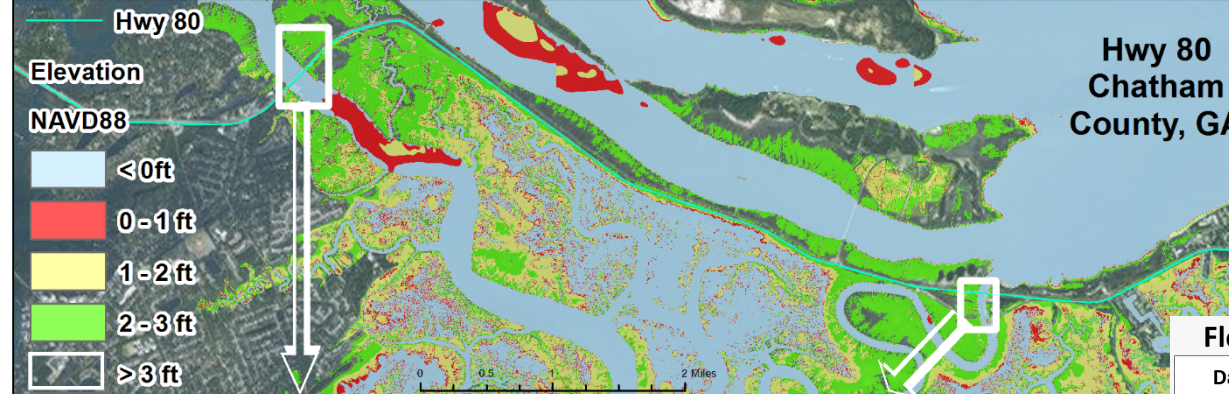
6 feet rise

Tybee Road with 9.5' High Tide



Hwy 80 10.27.2015 with 10.43' High Tide

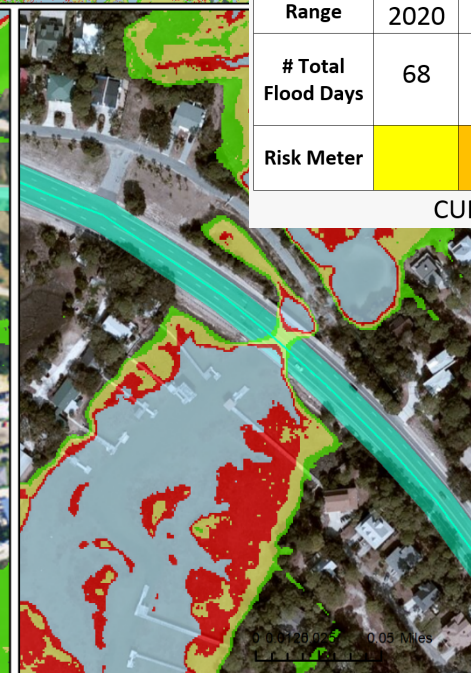




Flood Inundation Risk Score and Table (FIRST SCORE™)

Date Range	2016-2020	2021-2025	2026-2030	2031-2035	2036-2040	2041-2045
# Total Flood Days	68	132	215	328	498	689
Risk Meter						

CUMULATIVE FIRST SCORE™ = 1930



Hwy. 80
projected flood
days with 1-3
feet of sea level
rise

Second Street “Hot Spot”



Second Street “Hot Spot” Post-Renourishment





12/16/2014

Tybee Island “King Tides”

November 14-15, 2012





Living Shoreline: Erosion Control and Natural Stormwater Filtration



Tybee City Hall: Note post showing tide surge.



Ground level well house on Tybee Island

Raise well houses and well pump electronic components above the 100-year flood zone

Total estimated cost
~\$600,000



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Sign-up for free site assessments is open and will run through April 15, 2015.

Read through the Program Details, FAQs, and then Sign Up! See the tabs above.

Solarize Tybee aims to bring solar power to Tybee Island and Chatham County, Georgia by eliminating some of the complexity of selecting a qualified installer and by driving down costs through the power of bulk purchasing. This program offers competitive pricing in a tiered system. Prices decrease with increased participation. Once a site is judged suitable for solar and the customer decides to continue with the program, the customer will sign a contract and schedule installation directly with our selected installer, **Hannah Solar**.

Sponsored by the City of Tybee and the Tybee Community Resource Committee, Solarize Tybee is open to all residents, businesses, and governmental entities within Chatham County, Georgia provided the governing body in each jurisdiction does not object to having its citizens participate.

Questions or comments? Contact us at solarizetybee@gmail.com or find us on [Facebook](#)!



The City of Tybee and the Tybee Community Resource Committee acknowledges the assistance of the SunShot Solar Outreach Partnership (SolarOPs, <http://solaroutreach.org/>). SolarOPs is funded by the Department of Energy SunShot Initiative and is designed to help accelerate solar energy adoption on the local level by providing timely and actionable information to local governments. SolarOPs achieves its goals through a mix of educational workshops, research-based reports, online resources, and customized technical assistance.



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HANNAH SOLAR

Be A Solar Powerhouse.

MEANWHILE, AT TYBEE CITY HALL ...



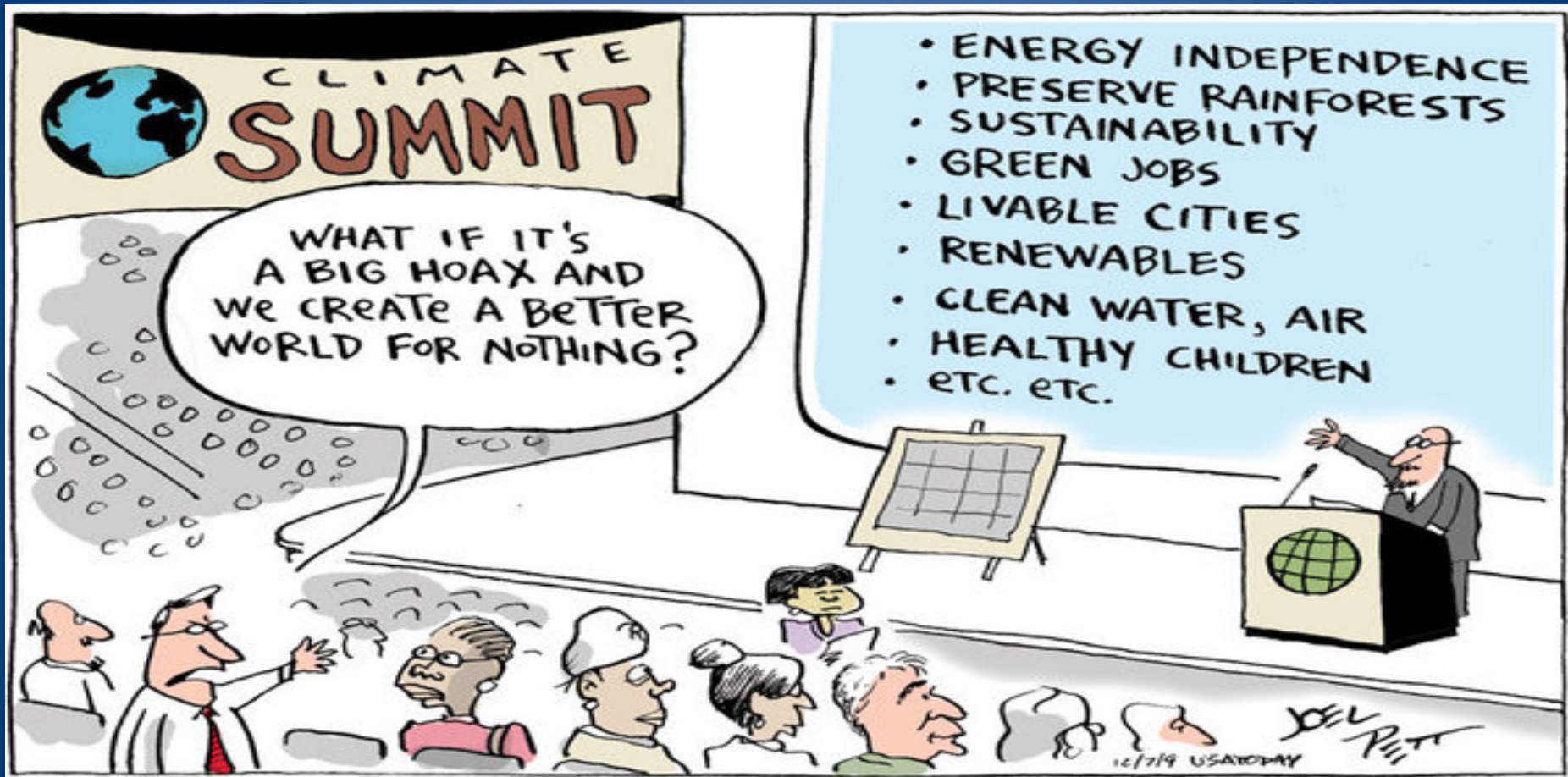
ARE YOU HERE WITH
THE FOLKS LOOKING
INTO FIVE-KILOWATT
PHOTOVOLTAIC
SYSTEMS FOR
THEIR TYBEE HOME
OR BUSINESS?

YEAH.
I GUESS YOU
COULD SAY
I'M A ... SITE
FOR SOLAR-
IZE.



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