Climate Ready Tampa Bay

Gulf Beaches Rotary Club | November 8, 2022

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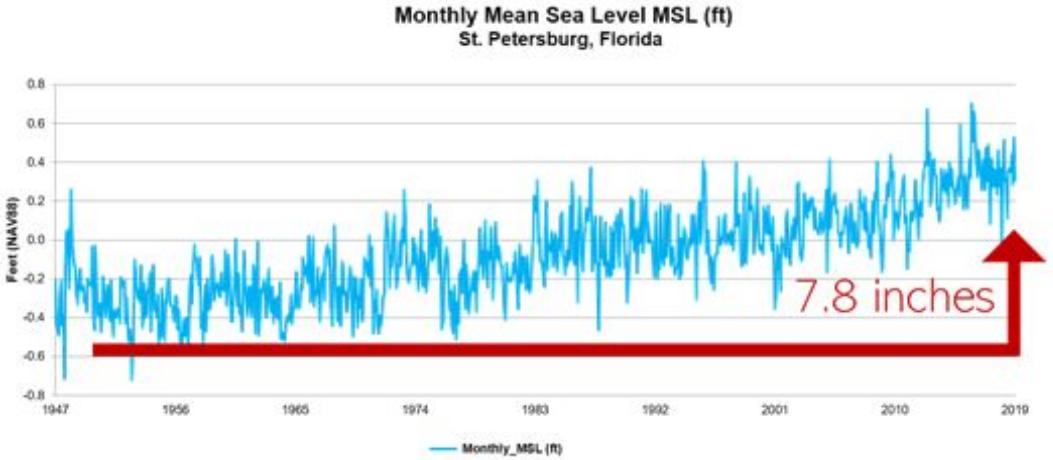
TAMPA BAY CSAP

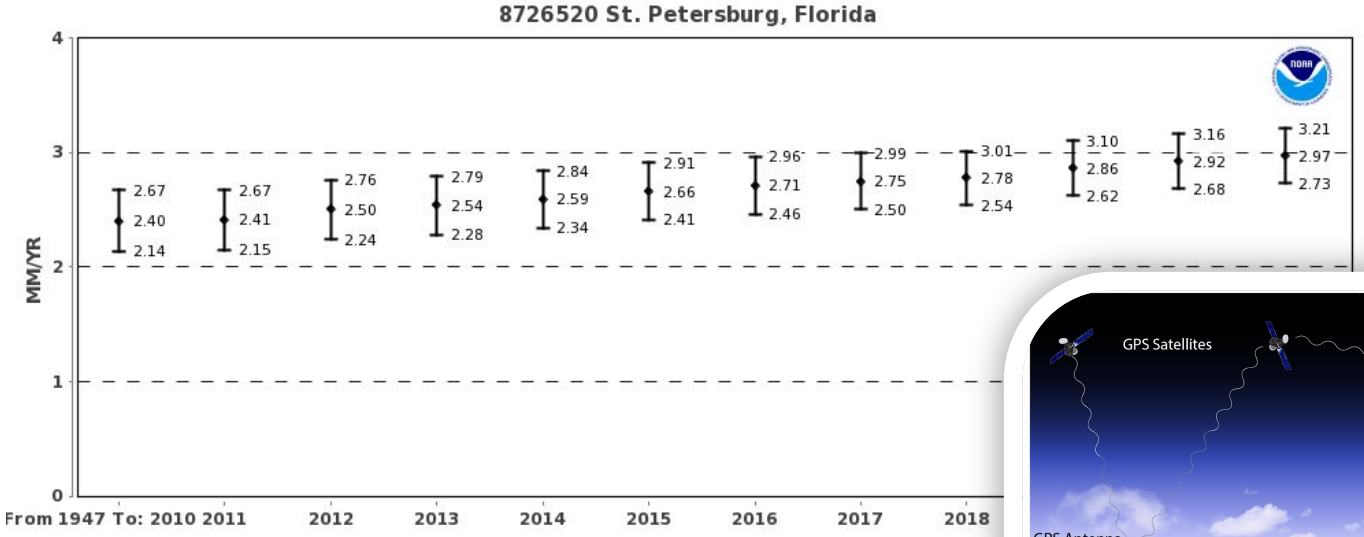
TBEP
TAMPA BAY ESTUARY PROGRAM
PARTNERSHIP FOR A HEALTHY BAY

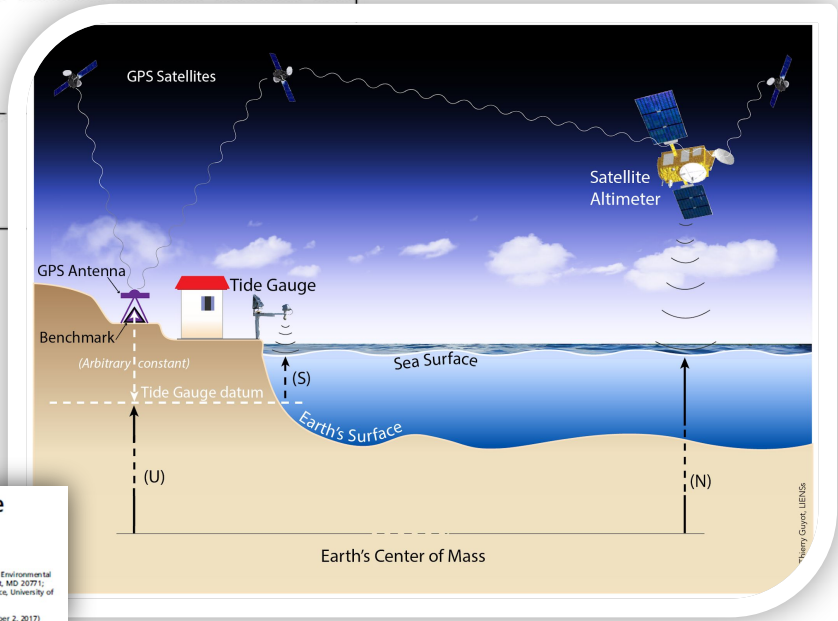
Measured Sea Level Already Rising



Source: https://tidesandcurrents.noaa.gov/stationhome.html?id=8726520

Observed Rate of Rise Accelerating





Climate-change–driven accelerated sea-level rise detected in the altimeter era

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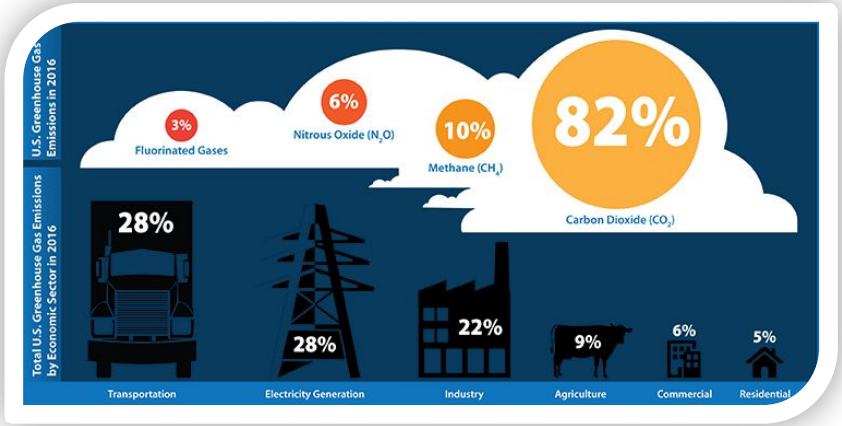
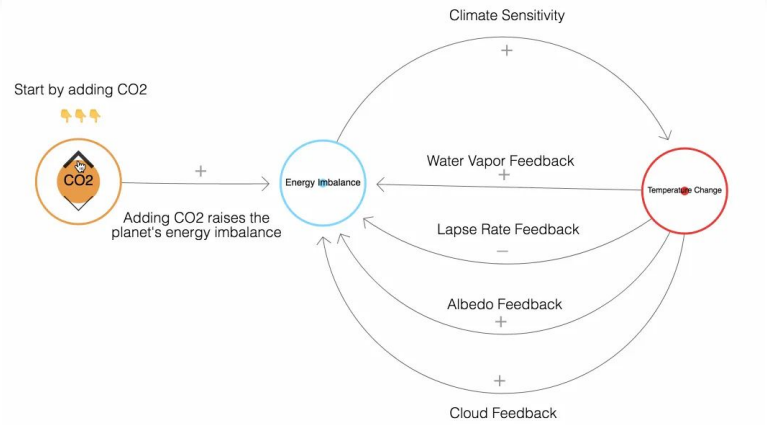
Edited by Anny Cazenave, Centre National d'Etudes Spatiales, Toulouse, France, and approved January 9, 2018 (received for review October 2, 2017)

Human Behavior and Feedback Loops Driving Uncertainty

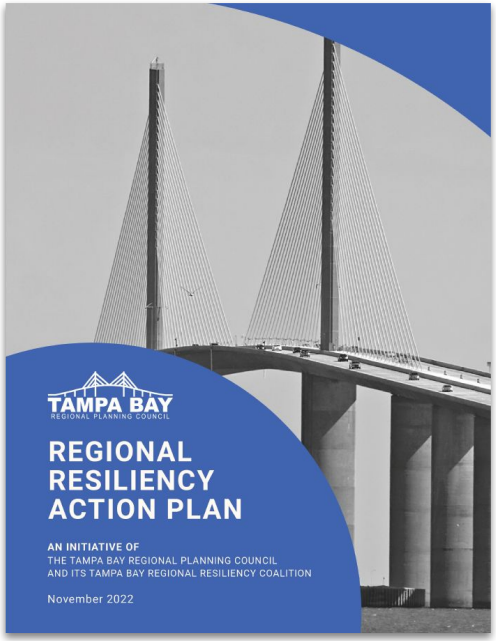




Year	NOAA Int-Low (feet)	NOAA Intermediate (feet)	NOAA High (feet)
2000[3]	0	0	0
2030	0.56	0.79	1.25
2040	0.72	1.08	1.77
2050	0.95	1.44	2.56
2060	1.15	1.87	3.48
2070	1.35	2.33	4.56
2080	1.54	2.82	5.71
2090	1.71	3.38	7.05
2100	1.90	3.90	8.50

Table 1. Sea Level Change Relative to the Year 2000 for St. Petersburg, Florida in Feet Above Local Mean Sea Level (LMSL)

Adaptation is Necessary *(...but not sufficient)*



TAMPA BAY
REGIONAL RESILIENCY COALITION

For every $1 spent on adaptation, $2.27 in benefits are realized.

Seawall Replacement: As the first line of defense against storm surge, seawalls protect assets on land through their ability to prevent erosion. Seawalls require replacement after they have served their lifespan, typically 40 to 50 years, and would result in the replacement of a new seawall in front of the old wall.

Seawall Raising: As new land use ordinances come to light, the raising of a seawall cap will be required to combat rising sea levels.

living shorelines

+

Berm Construction: Berms are raised and rounded soil barriers that separate one area from another. New berms would be required to protect impacted development inland of soft/natural shorelines. **Berm Raising:** The purpose of raising a berm is to add enhanced protection to an area as sea levels rise.

Beach Nourishment: Considered a soft engineering practice, beach nourishment is the practice of replenishing beaches through the addition of sand or sediment that naturally enhances the beach's ability to mitigate erosion, and provides a healthy and aesthetically pleasing environment.

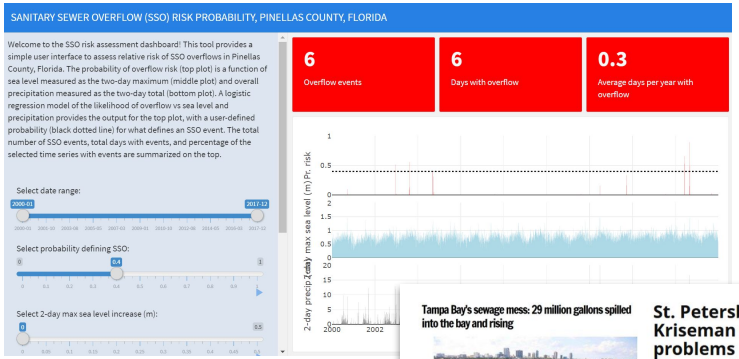
Elevate Structures: This permanent solution raises structures and other assets above flood levels, ensuring that it has a raised finish floor elevation. This may result in reductions to flood insurance costs through the National Flood Insurance Program (NFIP).

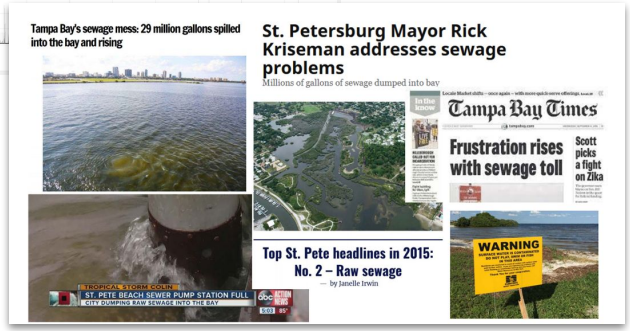
Floodproof Structures: Wet and dry floodproofing are modifications of existing or new buildings that prevent water from entering a specific area. It usually needs to be designed to include a temporary system that allows property or building access during normal conditions.

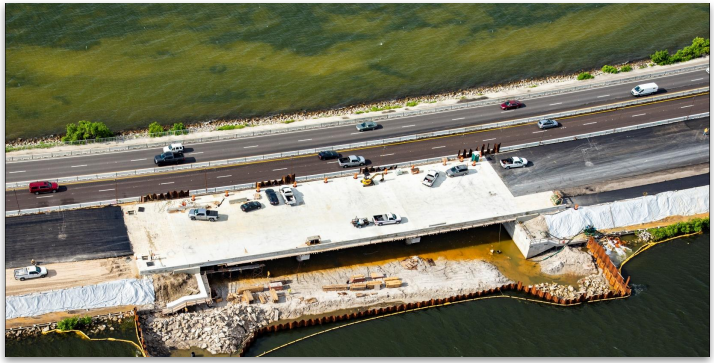
Source: https://issuu.com/tampabaypartnership/docs/making_the_economic_case_for_resilience_in_tampa_b

Invest in Public Infrastructure

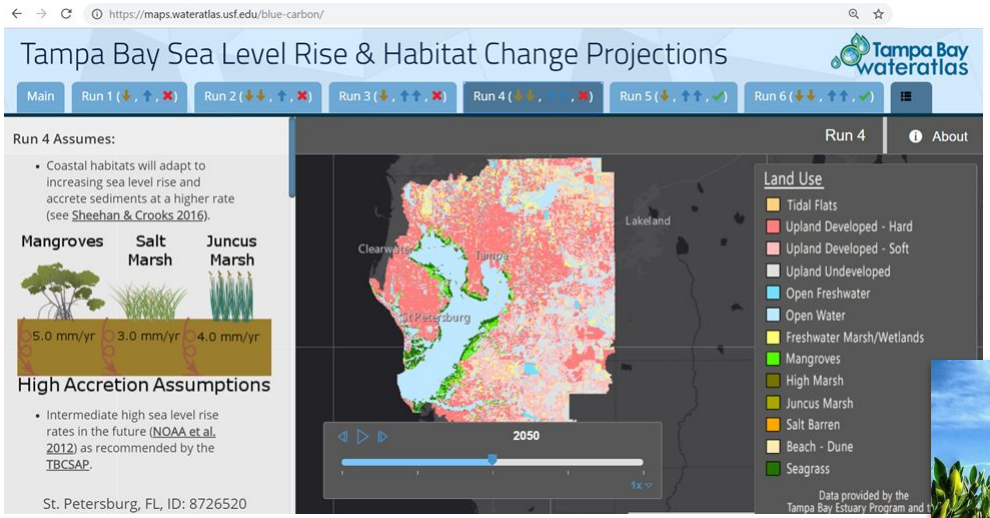
- Wastewater Capacity & Treatment
- Causeway Modifications
- Enhanced Flood Protection



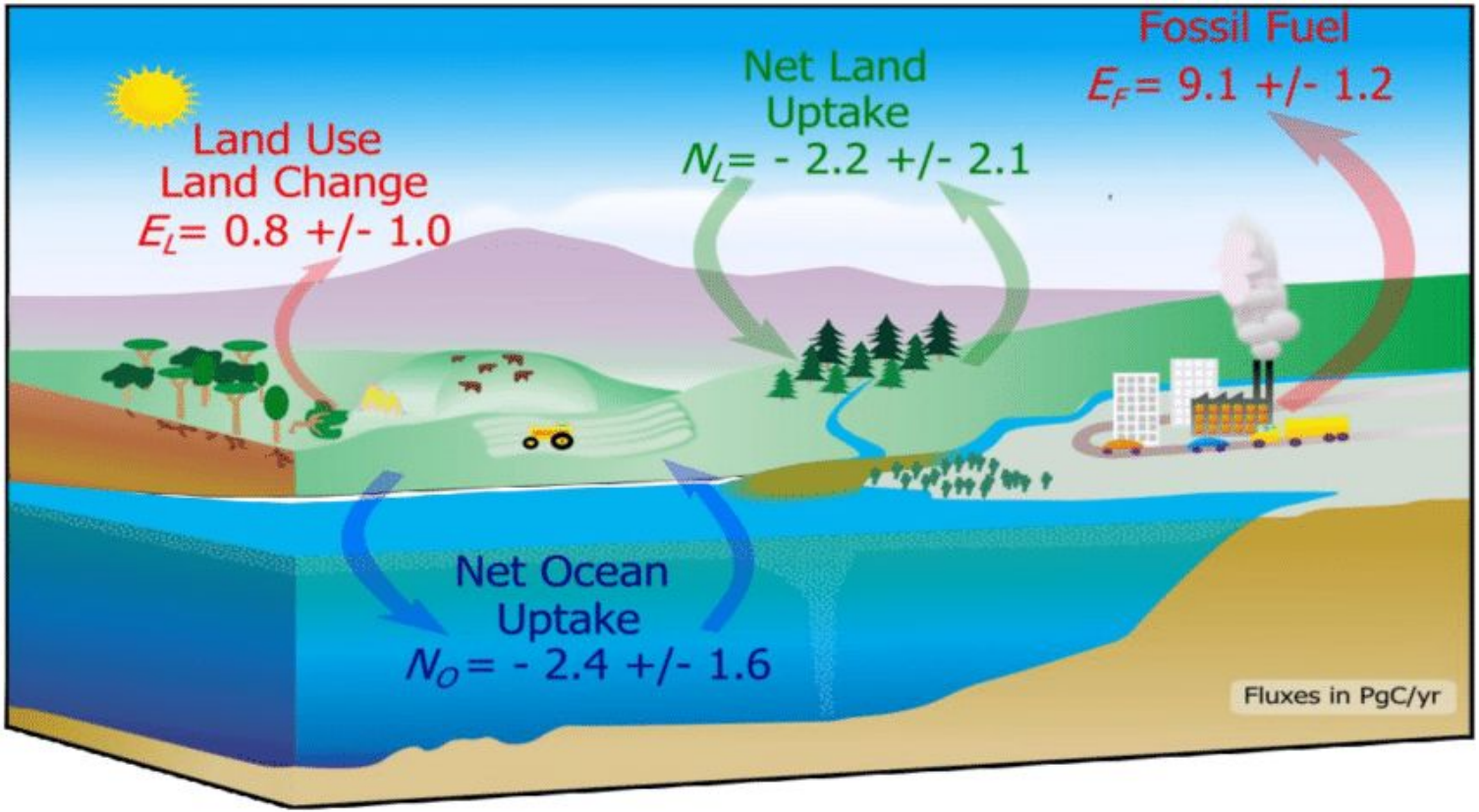




Nature Protects Us | Needs Protection



Sinks and Sources, Ignore GHG Emissions At Our Peril



Reference: https://www.ipcc.ch/srccl/

Word of Mouth Matters!

PNAS

Discussing global warming leads to greater acceptance of climate science

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Edited by Anthony J. Bebbington, University of Melbourne, Parkville, VIC, Australia, and Clark University, Worcester, MA, and approved June 21, 2019 (received for review April 16, 2019)

Climate change is an urgent global issue, with demands for personal, collective, and governmental action. Although a large body of research has investigated the influence of communication on public engagement with climate change, few studies have investigated the role of interpersonal discussion. Here we use panel data with 2 time points to investigate the role of climate conversations in shaping beliefs and feelings about global warming. We find evidence of reciprocal causality. That is, discussing global warming with

Next, we investigate the possibility of reciprocal causation. That is, are people who perceive higher scientific agreement more likely to discuss climate change with friends and family, which reinforces their own beliefs and worry about climate change?

YALE PROGRAM ON Climate Change Communication

- Contact Amanda Moore (MooreA@nwf.org), National Wildlife Federation to schedule a screening

Let’s Discuss…