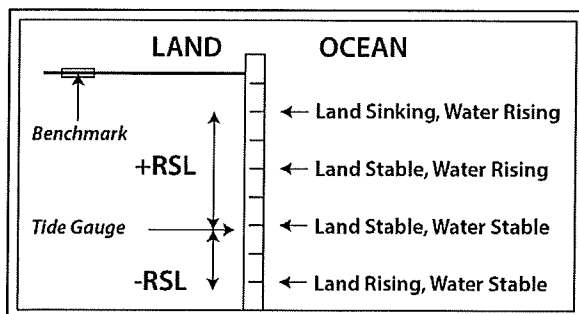


Florida Sea Level FACTSHEET

Definitions:

- Global (eustatic) sea level is determined by the volume of water in the ocean.
- A tide gauge is a water level measuring instrument attached to a structure such as a pier.
- Mean sea level (MSL) is the average of the 8760 hourly heights at a tide gauge for a calendar year.
- Relative sea level (RSL) is the relationship between the MSL water surface and the juxtaposed survey benchmarks on land.



Florida RSL has averaged 0.71 ± 0.10 feet/century (4-5 inches in the last 50 years), and is steadily rising.

RSL at a given site depends on seven interacting variables:

- Vertical Land Motion
- Glacial but not Sea Ice Melt
- Thermohaline Expansion
- Coastal Currents
- Atmospheric Pressure
- Prevailing Winds
- Tides and Tidal Currents

Florida vertical land motion is measured by permanent Global Positioning System receivers, and in general is -0.02 ± 0.15 feet/century.

Florida land motion can vary from site to site, which affects RSL.

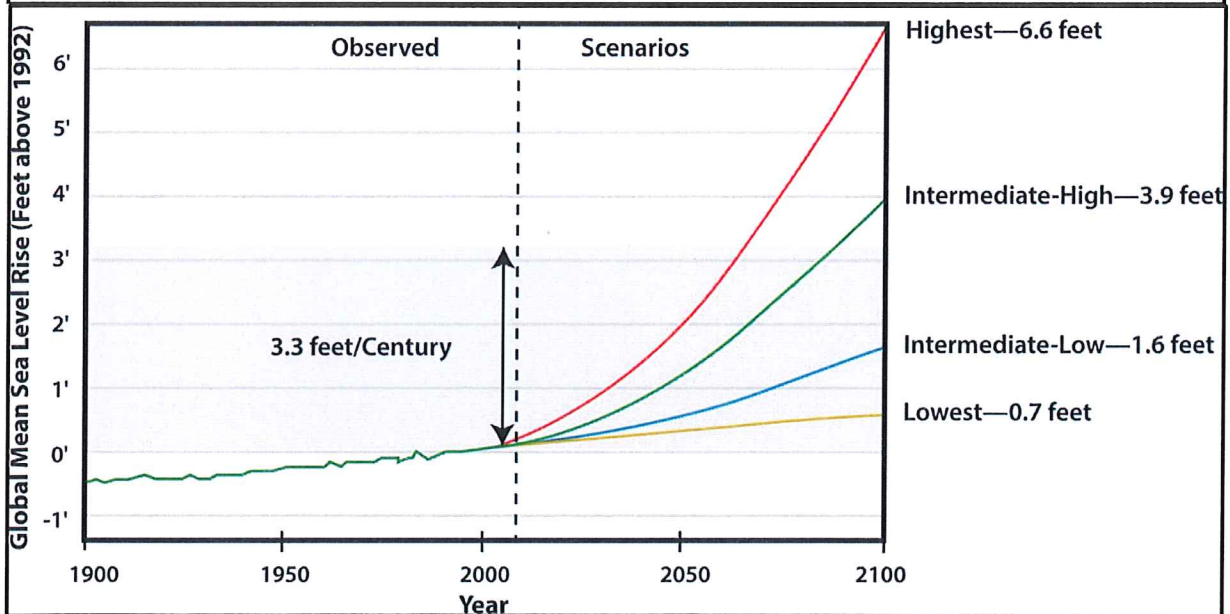
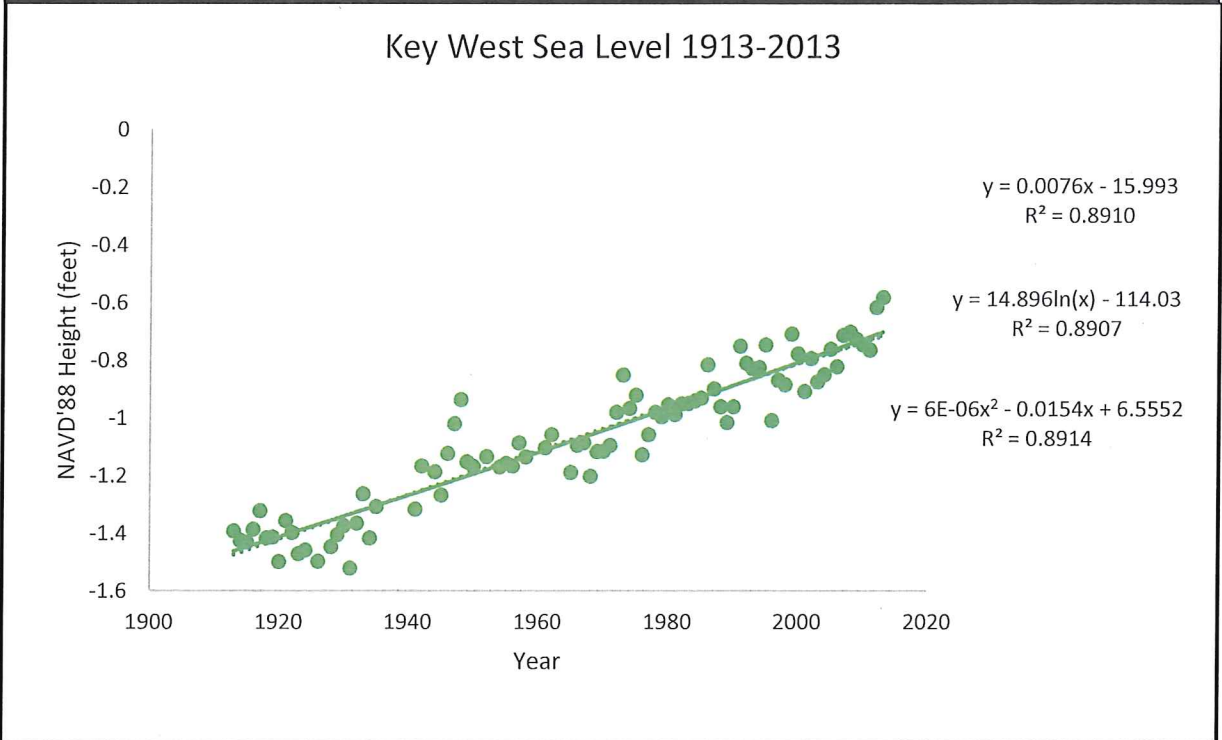
Glacial melt accounts for about 0.56 feet/century of global sea level rise.

Thermal expansion accounts for about 0.29 feet/century of global SLR.

Florida coastal currents increase local RSL by less than 0.01 feet/century.

Atmospheric pressure change over Florida adds 0.03 feet/century to RSL.

	Longitude (°W)	Latitude (°N)	Trend (feet/century)	SE (feet/century)	Epoch	N (years)
Cedar Key	83.03	29.14	0.53	±0.06	1939-2012	61
Fernandina Beach	81.46	30.67	0.65	±0.04	1898-2012	94
Key West	81.81	24.56	0.74	±0.03	1913-2013	100
Mayport	81.43	30.39	0.77	±0.06	1929-2000	71
Miami, Merged	80.16	25.73	0.77	±0.04	1932-2013	74
Pensacola	87.21	30.40	0.71	±0.05	1924-2012	85
St. Petersburg	82.63	27.76	0.82	±0.05	1947-2012	66
MEAN ± SD			0.71±0.10			



References:

Maul, G.A., and D.M. Martin. Merged Miami Sea Level. *Marine Geodesy*, 38(3): 277-280, 2015.
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