

Historical & Projected Sea Level

Climate Indicators for Southwest Florida

8725110 Naples, Florida

3.21 +/- 0.43 mm/yr

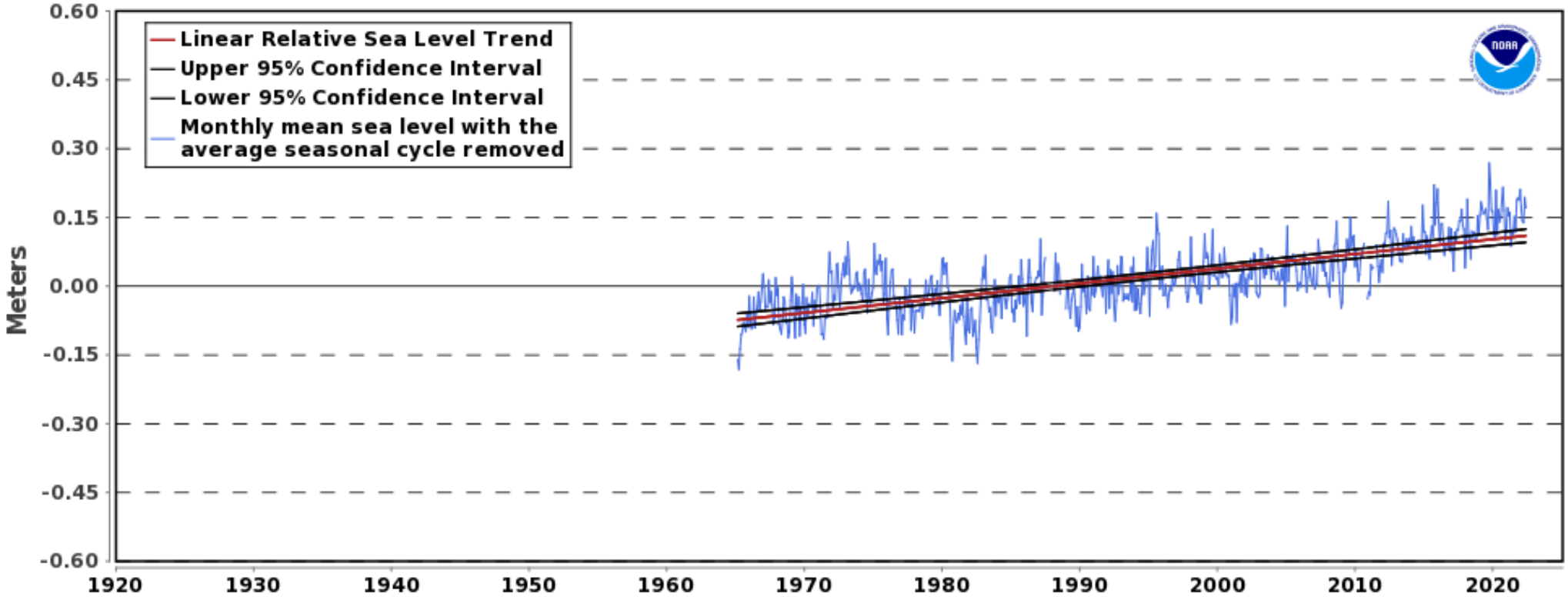


Figure 1. Relative sea level trend for Naples, Florida, recorded by NOAA tide gauge station 8725110. Data span from 1965-2022. The relative sea level rise is 3.21 millimeters/year with a 95% confidence interval of +/- 0.43 mm/yr based on monthly mean sea level data. Data from NOAA. <https://tidesandcurrents.noaa.gov/sltrends/>.

NOAA Gauge: Naples, FL

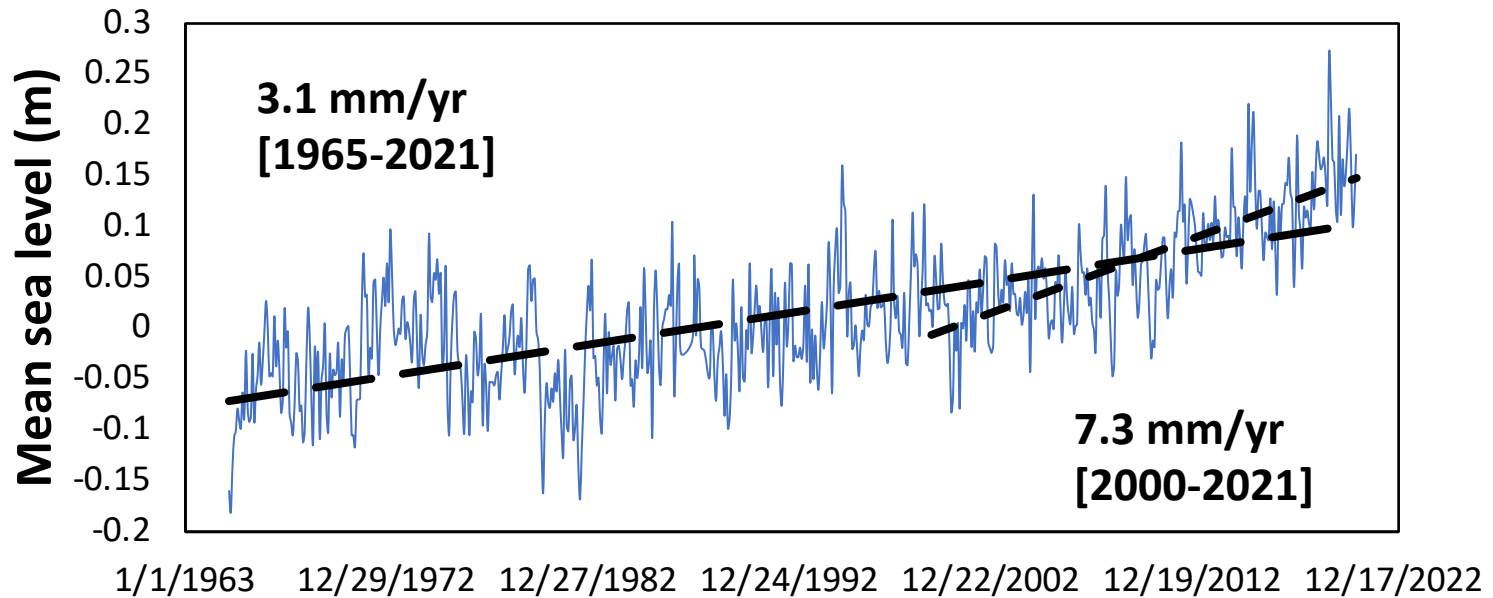


Figure 2. Relative sea level trend for Naples, Florida, recorded by NOAA tide gauge station 8725110. Data span from 1965-2021. Linear regression calculated for 2 temporal intervals (1965-2021 and 2000-2021) to show sea-level rise acceleration. Data from NOAA. <https://tidesandcurrents.noaa.gov/sltrends/>.

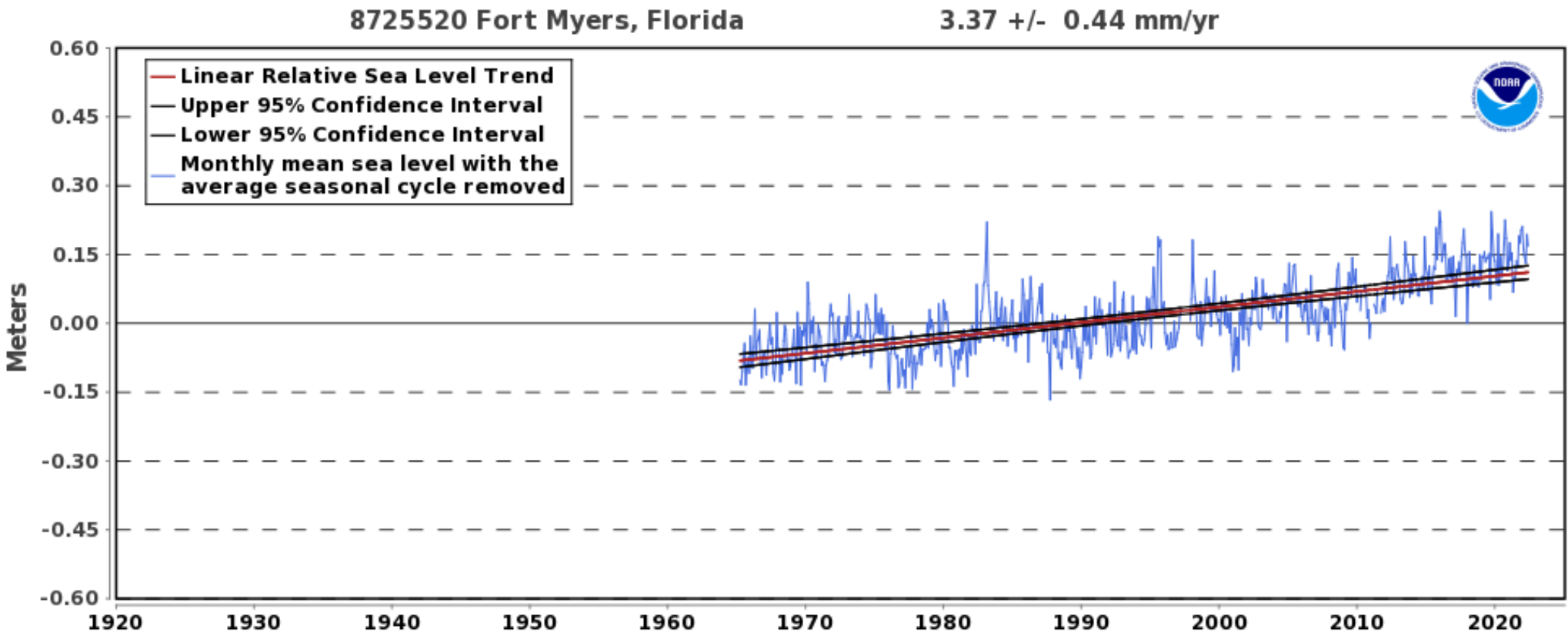


Figure 3. Relative sea level trend for Fort Myers, Florida, recorded by NOAA tide gauge station 8725520. Data span from 1965-2022. The relative sea level rise is 3.37 millimeters/year with a 95% confidence interval of +/- 0.44 mm/yr based on monthly mean sea level data. Data from NOAA. <https://tidesandcurrents.noaa.gov/sltrends/>.

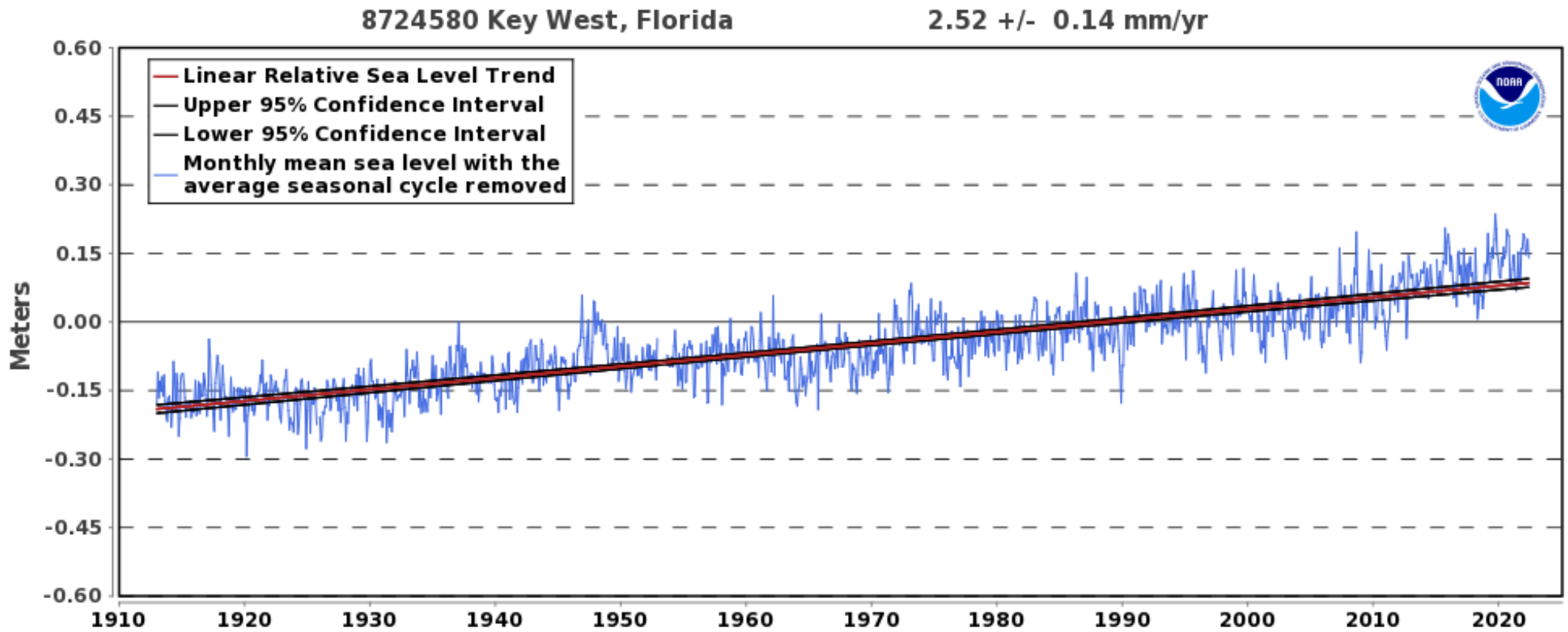


Figure 4. Relative sea level trend for Key West, Florida, recorded by NOAA tide gauge station 8724850. Data span from 1913-2022. The relative sea level rise is 2.52 millimeters/year with a 95% confidence interval of +/- 0.14 mm/yr based on monthly mean sea level data. Data from NOAA. <https://tidesandcurrents.noaa.gov/sltrends/>.

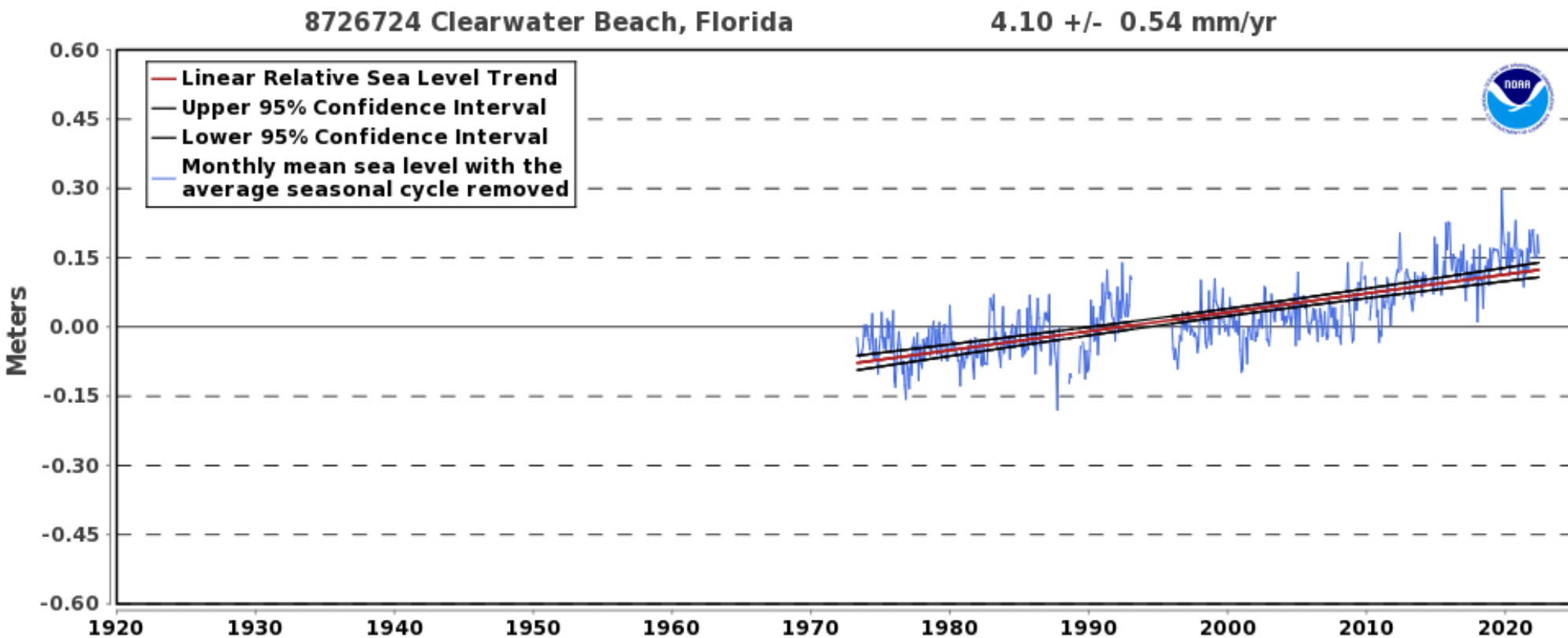


Figure 5. Relative sea level trend for Clearwater Beach, Florida, recorded by NOAA tide gauge station 8726724. Data span from 1973-2022. The relative sea level rise is 4.10 millimeters/year with a 95% confidence interval of +/- 0.54 mm/yr based on monthly mean sea level data. Data from NOAA. <https://tidesandcurrents.noaa.gov/sltrends/>.

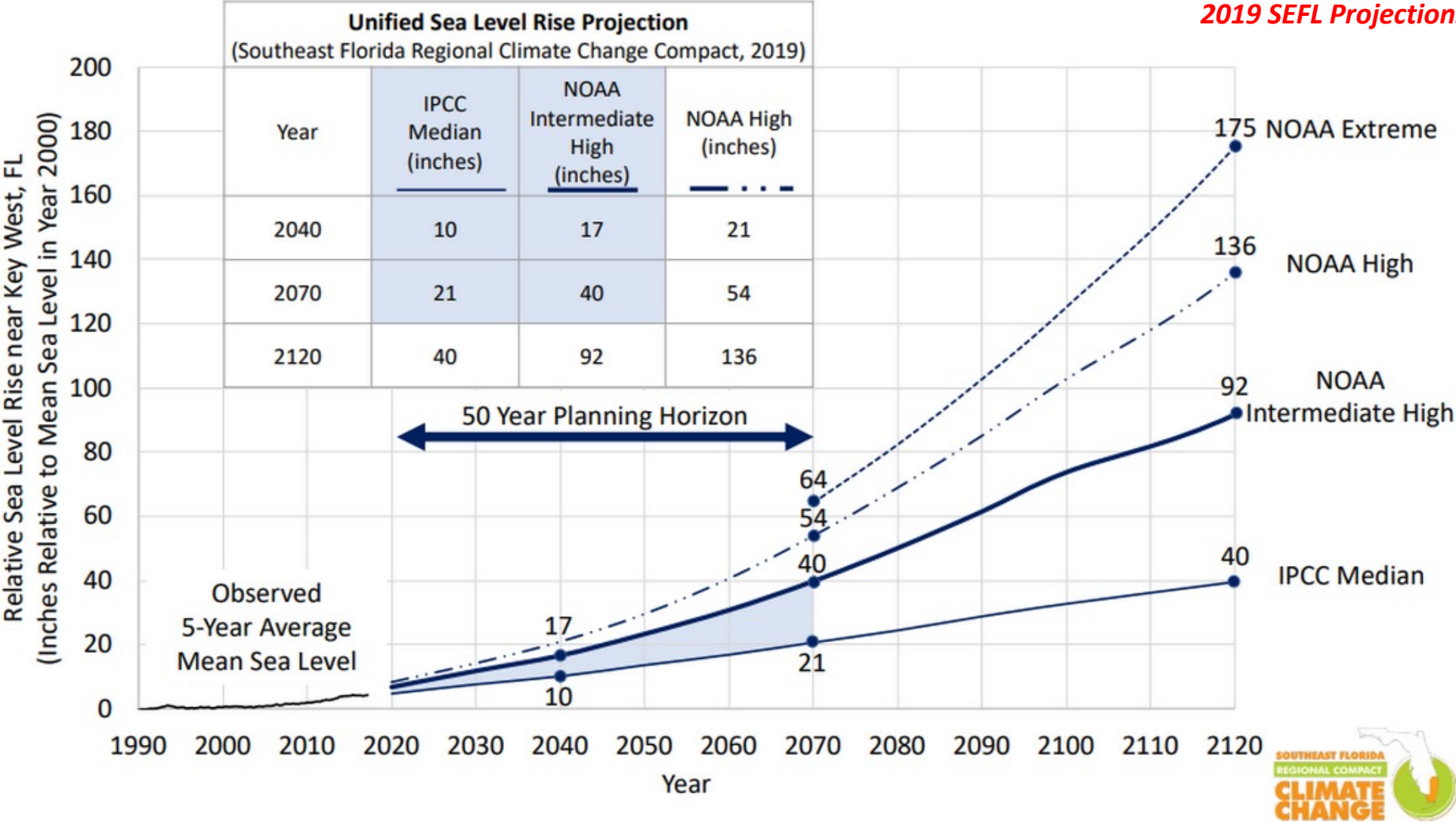


Figure 6. Sea-level curves and planning horizons (2040, 2070, 2120) adopted by the Southeast Florida Regional Climate Change Compact in 2019. NOAA 2017 extreme, high, and intermediate high and the IPCC median curves are shown.

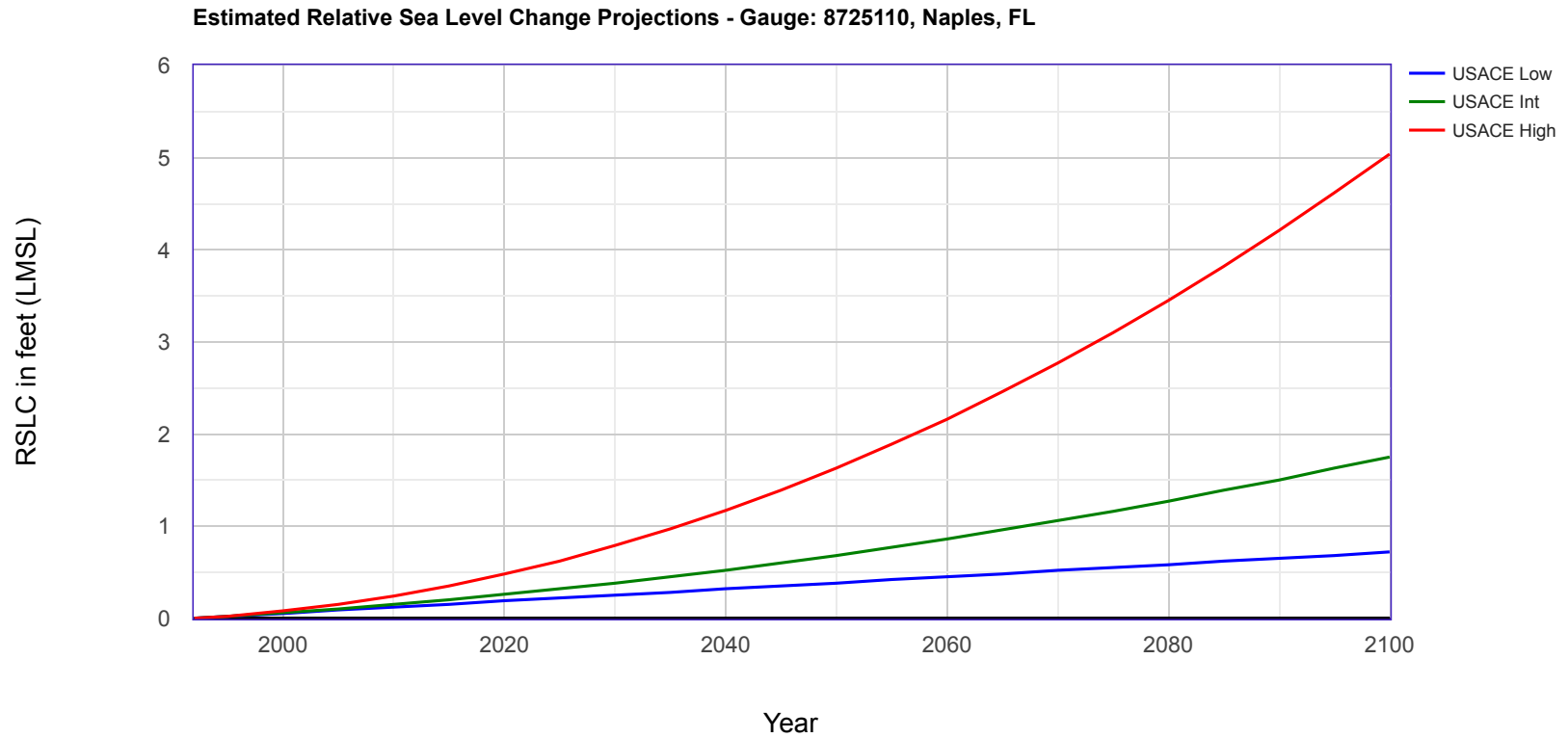


Figure 7. Sea-level rise projections for Naples tide gauge station 8725110 using the U.S. Army Corps of Engineers' (USACE) low, intermediate, and high projections. Data from: https://cwbi-app.sec.usace.army.mil/rccslc/slcc_calc.html.

SLR Scenarios

Based on NOAA's 2017 SLR Curves

Period	RSL (Regional Sea Level) - SLR (ft) ACUNE 3.0		
	Low	Medium	High
2030	0.39	0.72	1.15
2060	0.82	1.77	3.38
2100	1.28	3.77	8.36

Empirical data for Naples & Ft Myers show we're following between NOAA's Intermediate-High and High curves

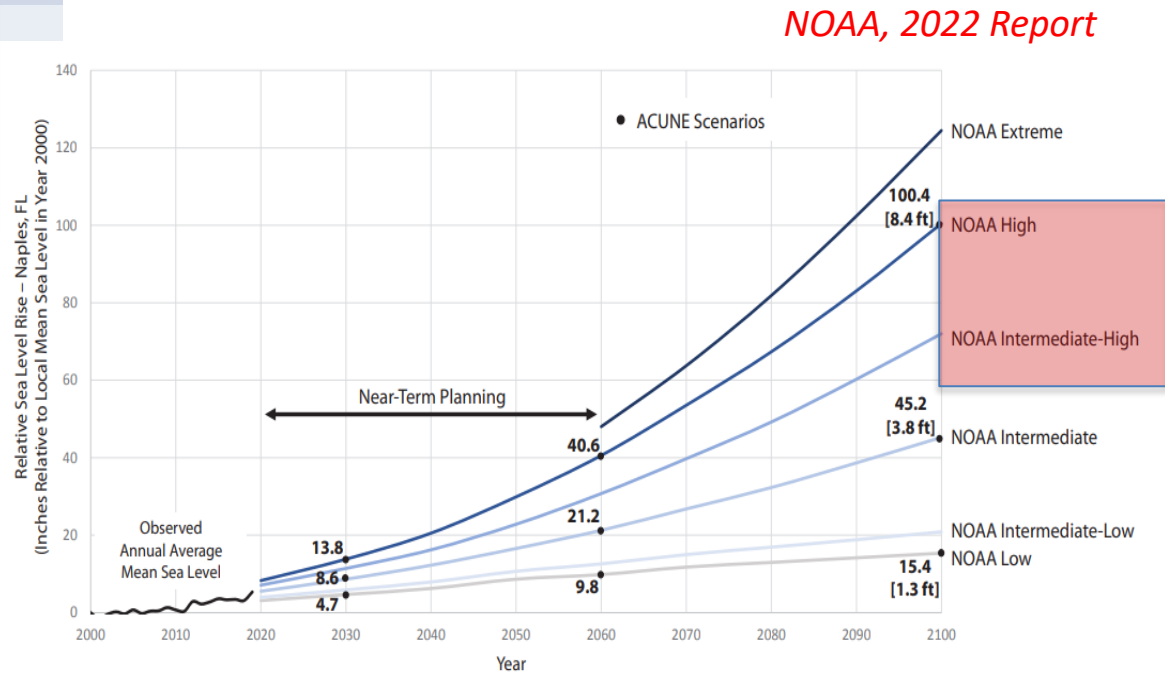


Figure 8. The NOAA (2017) sea-level curves (extreme, high, intermediate-high, intermediate, intermediate-low, and low), and the sea-level rise magnitudes (in table and bolded on curves) and planning horizons (2030, 2060, 2100) adopted by the ACUNE project for Collier County. The NOAA, 2022 report concluded sea-level rise empirical tide gauge data collected between 2000-2021 demonstrate SWFL is currently following the NOAA high or intermediate-high curves, corresponding with the high magnitudes used in ACUNE (highlighted in red).