

## **Rising Seas: Impending Impacts of Florida's Coastlines**

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We have entered a time of irreversible global warming caused by increasing atmospheric levels of human-produced greenhouse gasses. Atmospheric warming is now both warming the oceans and has initiated rapid melting of portions of the Greenland Ice Sheet and the Arctic pack ice. In the short term, this warming and ice melt is irreversible and is already initiating dramatic changes in climate and sea level. The rate of global sea level rise increased nearly ten fold last century and is currently at 30 cm (1 ft)/century. Of most serious concern to Florida, is an anticipated further rise of sea level this century of at least 1-2 meters (3.2 to 6.5 feet). This will leave nearly all of our sandy barrier islands overwhelmed and uninhabitable, force abandonment and relocation of significant portions of our coastal cities and ports, result in very significant loss of coastal wetland and preserved low-land habitats, and effect toxic releases to the marine environment from many low waste disposal and contaminated land sites.

It is imperative that coastal communities and counties urgently and thoroughly evaluate the elevations, risk and hazards of present and anticipated development and infrastructure; re-evaluate future policies on development, and objectively look at the necessary timing and feasibility of landward relocation at higher elevations. For much of coastal Florida, the high porosity and permeability of the sand and limestone substrate make levee defenses against rising sea level unworkable. Continuing to ignore the impending impacts of rising sea level will result in increasingly expensive and catastrophic impacts on communities and citizens later in the century.