

US military bases at risk from sea level rise: study

27 July 2016, by Kerry Sheridan



USS Independence arrives at Mole Pier at Naval Air Station Key West in Key West, Florida in 2010

US military bases along the Atlantic Ocean and Gulf of Mexico will be increasingly vulnerable to floods and power-packed storms as the planet warms, researchers said Wednesday.

The report by the Union of Concerned Scientists spanned 18 military bases, and found that many risk losing land and strategic assets in the coming decades due to sea level rise.

"By 2050, most of these sites will see more than 10 times the number of floods they experience today," said lead analyst Kristy Dahl, UCS consulting scientist and report co-author.

"In 2070, all but a few are projected to see flooding once or twice every day. Shockingly, these aren't even the worst-case scenarios."

The analysis was based on two different projections of sea level rise and how it may affect US bases from Florida to Maine.

The first, "intermediate" assessment "assumes a moderate rate of [ice sheet](#) melt that increases over time and projects an ultimate rise of 3.7 feet (1.13 meters) above 2012 levels, globally, by the end of this century," said the report.

The other scenario, assumed a "more rapid ice sheet loss and projects an ultimate rise of 6.3 feet (1.9 meters) above 2012 levels" across the planet by the year 2100.

Scientists say [global sea level](#) has already risen about eight inches (20 centimeters) since 1880, and that the US East and Gulf Coasts are seeing some of the fastest rates of [sea level](#) rise, in part because the land there is also sinking.

Even though US military bases have been built out of reach of high tides, this means that as oceans swell, flooding will become more common and storm surges more devastating to bases, which are home to strategic training and testing grounds, infrastructure and housing, the study said.

Land loss

When it comes to land loss due to daily floods, the most severely affected installations are expected to be Naval Air Station Key West in Florida, Joint Base Langley-Eustis and NAS Oceana Dam Neck in Virginia, and Marine Corps Recruit Depot (MCRD) on Parris Island in South Carolina, said the report.

"These military installations lose between 75 and 95 percent of their land area, including utilized land and developed areas, by the end of the century in the highest scenario."

By the year 2100, "nearly half of the sites studied lose 25 percent or more of their land area to the sea in the intermediate scenario and lose 50 percent or more in the highest scenario," said the report.

Many of the bases should anticipate more severe storms, to the extent that a Category One storm today would be felt as if it were a Category Two storm in 80 percent of the bases study by the end of this century.

Some bases are already working to adapt to [sea level rise](#).

For instance, Langley Air Force Base in Virginia has installed floodwater pumps and built a shoreline seawall to protect some of its buildings.

"The Pentagon knows it has a problem, and some bases are already making an effort to reduce their exposure," said Erika Spanger-Siegfried, lead author of the report and senior analyst in the Climate and Energy program at UCS.

"But there's a big gap between what's being done and what's needed.

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