

Which installations might make the top 10 most vulnerable to climate-related events required by the FY18 NDAA?

**Answer:**

We are seeing extreme weather events, droughts and sea level rise. Superstorm Sandy caused \$50 million in damage at Naval Weapons Station Earle. More recently, Hurricane Irma severely impacted Naval Air Station Key West in 2017 and Hurricane Florence caused \$3.6 billion in damage at Camp Lejeune in 2018. Wildfires in 2018 forced the evacuation of Naval Air Station Point Mugu, and burned approximately 1,200 acres at Camp Pendleton.

Droughts can have broad implications for base infrastructure, impair testing activities, increase the number of black flag day prohibitions for testing and training, and contribute to heat-related illnesses.

Naval Station Norfolk is experiencing sea level rise averaging 4.6mm per year, with a 5.1mm increase in 2017. Sea level rise, land subsidence, and changing ocean currents have resulted in more frequent nuisance flooding and increased vulnerability to coastal storms.

The ten most vulnerable Marine Corps installations (in no particular order) are:

- Marine Corps Base Camp Pendleton, CA
- Marine Corps Base Camp Lejeune, NC
- Marine Corps Base Camp Butler, Okinawa, Japan
- Marine Corps Base Hawaii, HI
- Marine Corps Recruit Depot Parris Island, SC
- Marine Corps Support Facility Blount Island, FL
- Marine Corps Air Station Beaufort, SC
- Marine Corps Base Quantico, VA
- Marine Corps Reserve Forces, New Orleans, LA
- Marine Corps Recruit Depot San Diego, CA

The sixteen\* most vulnerable Navy installations (in no particular order) are:

- Naval Air Station Key West, FL
- Naval Submarine Base Kings Bay, GA
- Naval Base Guam, Guam
- Joint Base Pearl Harbor Hickam, HI
- Wahiawa Annex, HI
- Naval Magazine Indian Island, WA
- Naval Base Coronado, CA
- Naval Base San Diego, CA
- Joint Base Anacostia Bolling, DC
- Washington Navy Yard, DC
- Andersen Air Force Base, Guam
- Naval Support Facility Indian Head, MD

- Naval Air Station Oceana, VA
- Naval Air Station Norfolk, VA
- Naval Support Activity Hampton Roads, VA
- Naval Support Activity Hampton Roads – Northwest Annex, VA/NC

\*Sixteen installations are listed to include those similarly impacted by current and potential future climate events.