

## NOAA Product Highlight: Alaska and Hawai'i Regional Resources

While they have very differing climates, both Alaska and Hawai'i have been affected by our changing climate. According to the [third National Climate Assessment](#), Alaska has warmed twice as fast as the rest of the United States, leading to receding sea ice, shrinking glaciers, thawing permafrost, and changing ocean temperatures and chemistry. Additionally, Hawai'i is being affected by changes to marine ecosystems, decreasing freshwater availability, increased stress on native plants and animals, and rising sea levels causing threats to lives, livelihoods, and cultures.

In particular, warming in Alaska has led to a longer season for plant growth and has subsequently begun to change the area's ecosystem landscape. Non-native and exotic plant species are spreading and changing the suitability of land for certain plants and wildlife. Additionally, as more human-caused pollutants are released from thawing permafrost, Arctic plants and animals are facing new diseases.

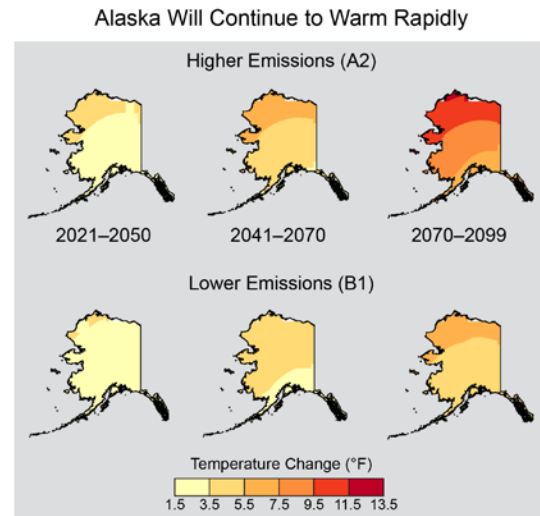
Native plant species in Hawai'i are also highly vulnerable to the impacts of climate change. Some invasive species that benefit from higher concentrations of carbon dioxide will have a competitive edge over native species. In fact, the Haleakalā silversword, which is only found in Hawai'i, has already declined dramatically over the past 20 years due to the effects of climate change. Overall, increasing temperatures and reduced precipitation in some parts of the state will stress native plants and increase the risk of extinction.

More information on climate change impacts in these regions is available in the National Climate Assessment's [Alaska](#) and [Hawai'i and the U.S. Affiliated Pacific Islands](#) chapters.

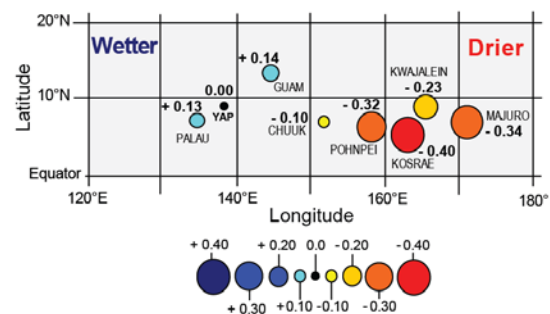
### NOAA's Regional Resources

NOAA has a wide range of resources that can help public gardens in the Alaska and Hawai'i respond to and mitigate the effects of climate change in these regions.

- [U.S. Climate Resiliency Toolkit](#)  
The U.S. Climate Resilience Toolkit provides scientific tools, information, and expertise to help people manage their climate-related risks and opportunities, and improve their resilience to extreme events. The site offers a variety of information including a five-step process for



Observed Changes in Annual Rainfall in the Western North Pacific



becoming more resilient to climate-related hazards, real-world case studies, a catalog of freely available tools, federally developed training courses, and explanations of how climate variability and change can impact particular regions.

- [Alaska Regional Climate Services Director](#)

NOAA's Alaska Regional Climate Services Director provides the data, tools, and information that help private and public sector constituents in Alaska reduce their risk and improve their resiliency to the impacts of climate variability and change.

- [Pacific Regional Climate Services Director](#)

NOAA's Pacific Regional Climate Services Director provides the data, tools, and information that help private and public sector constituents in Pacific reduce their risk and improve their resiliency to the impacts of climate variability and change. Pacific region resources are available for Hawai'i and the U.S. Pacific Islands.

- [National Weather Service Alaska Region Headquarters](#)

The National Weather Service Alaska Region Headquarters provides weather, hydrologic, and climate forecasts as well as volcanic ash and tsunami warnings for the state of Alaska and its surrounding waters.

- [National Weather Service Pacific Region Headquarters](#)

The National Weather Service Pacific Region Headquarters administers several programs and facilities throughout a large expanse of the Pacific, including the Islands of Hawai'i, Guam and the Northern Mariana Islands, the Federated States of Micronesia, the Republic of the Marshall Islands, the Republic of Palau, and south to American Samoa.

- [American Association of State Climatologists](#)

The American Association of State Climatologists is a professional scientific organization that provides climate services for 47 states across the nation through integration of data quality control, communication among sectors, and coordinated referral of customer inquiries.