



USDA Climate Hubs Quarterly Report

Fall 2020

The Climate Hubs reduce climate related risks to agriculture, forestry, and rural communities by working with and through USDA agencies and partners. The hubs develop and deliver science-driven strategies and tools so that USDA programs, advisors, and land managers can make informed decisions to manage risk.



The **Southern Plains Hub** co-led two prescribed burn workshops in Ames and Kellyville, Oklahoma. The workshops improved the ability of 50 landowners and other stakeholders to successfully use prescribed fire as a method of protecting their land from wildfires.

<https://www.climatehubs.usda.gov/hubs/southern-plains>

Agricultural losses from a single hurricane can exceed one billion dollars, and the risk from hurricane impacts is projected to increase. Southern farmers, ranchers, and foresters need to minimize their risk and recovery time if they are to remain profitable, but available guidance is scattered across states and commodities, and often incomplete. To address this threat, and allow producers to remain resilient and productive, the **USDA Southeast Climate Hub** developed 10 more commodity guides, for a total of 22 commodity guides, to help producers prepare for and recover from hurricane events.



<https://www.climatehubs.usda.gov/hubs/southeast>

Rising water temperatures, increasingly heavy rains, ocean acidification, extreme events, and sea level rise are impacting northeast aquaculture. These on-water farms are vulnerable to climate change as the organisms are exposed to the fluctuations in both the ocean and the air. Young shellfish are especially at risk from introduced bacteria, viruses, and shifts in temperature and salinity. The industry is aware of these changes and is working to modify production, storage, sales, and shipping practices. The **USDA Northeast Climate Hub** worked with University of Connecticut and partners to develop a factsheet highlighting the impacts and adaptations in Connecticut.



<https://www.climatehubs.usda.gov/hubs/northeast>



Long-range planning efforts are common on USFS National Forests (NF), but some topics such as assisted tree migration and climate change necessitate additional expertise. The **Northern Forests Climate Hub and NIACS** have provided climate adaptation expertise while collaborating with USFS NFs to integrate climate change into programs and plans. The NFCH convened a workshop on the Wayne NF to examine the impacts of climate change in support of the forest plan revision process, supported NEPA interdisciplinary teams on the Chequamegon-Nicolet NF to help consider the impacts of climate on a vegetation project, and continued to co-lead a pilot planning effort for assisted migration on the Superior NF.

<https://www.climatehubs.usda.gov/hubs/northern-forests>



The COVID-19 pandemic has significantly disrupted the US beef supply chain and triggered a bottleneck at processing plants. Many ranchers are unable to sell their ready-for-slaughter cattle, causing financial hardship and simultaneously, a shortage of beef for consumers. In response to requests from local producers, the SW Sustainable Beef CAP, the **Southwest Hub** and NMSU Extension partnered to provide information to local producers about options for selling beef direct to consumers from their ranch. The team also contributed 2 podcasts to the SW Hub/ SW CASC podcast series and created a map of grass-fed beef producers in the southwest. <https://www.climatehubs.usda.gov/index.php/hubs/southwest>



Land use decisions that consider climate can be aided by geographic data. Numerous datasets with helpful information are available for the archipelago of Puerto Rico. However, these datasets were not easily accessible to farmers and land managers. To provide easy data access, the **Caribbean Climate Hub** developed the Farm Planning Tool, a free online decision-support tool that gives users instant access to detailed information on land and climate characteristics for an area of interest. The Farm Planning Tool includes data developed by USDA, NOAA, FEMA, NRCS, USGS and the Puerto Rico Department of Natural and Environmental Resources in a user-friendly, bilingual platform.
<https://www.climatehubs.usda.gov/hubs/caribbean>



The state of Wyoming experienced widespread drought in 2020, for the first time since 2013. An inclusive process was needed to gather impacts and conditions from across the state. The **Northern Plains Climate Hub** formed a Wyoming Conditions Monitoring Team (WCMT) and created a weekly form for University of Wyoming Extension field staff to submit on-the-ground condition reports in an objective and consistent manner. Over 40 reports have been submitted from the field through this new communication channel. These reports help inform the WCMT's discussions and draft recommendations to the U.S. Drought Monitor.
<https://www.climatehubs.usda.gov/hubs/northern-plains>



The **California Climate Hub** partnered with Full Belly Farm in Yolo County, CA to demonstrate how the climate adaptation framework can be used to support climate change adaptation and resiliency. The case study provides a demonstration of how the climate change adaptation framework can be used to walk farm managers through a five-step process to identify operational goals and climate stressors, evaluate adaptation opportunities and practices to support adaptation, and monitor and evaluate adaptation efforts to support climate adaptive management in the long term.

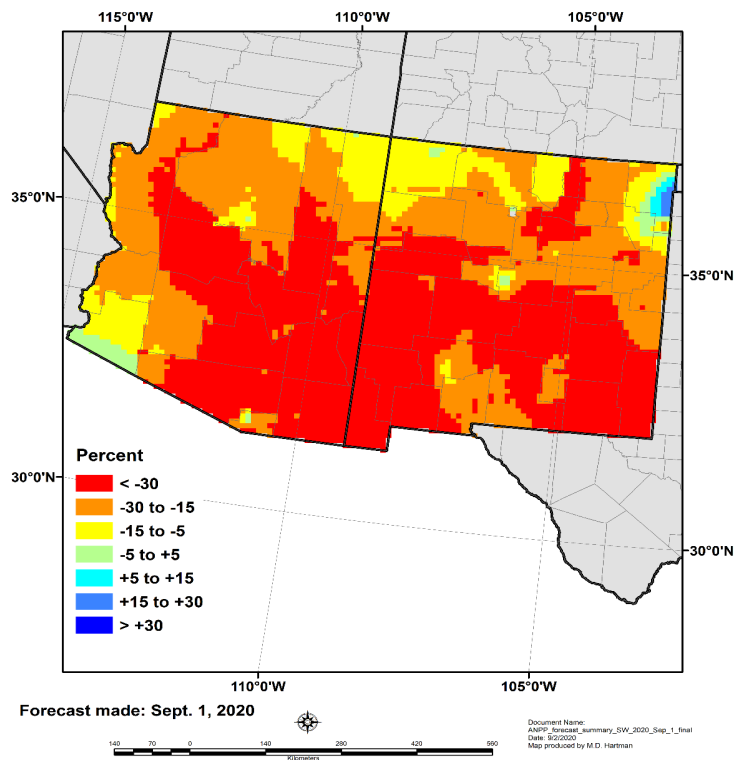


<https://www.climatehubs.usda.gov/index.php/hubs/california>

Iowa and large parts of the Corn Belt experienced extreme drought during the summer of 2020. The **Midwest Climate Hub** helped support predicting, monitoring and responding to the drought conditions and impacts in the region. Activities included a drought webinar series with Iowa State Extension, sharing weekly updates with Iowa partners, collaborating with the Midwest and Northern Plains NIDIS on drought conditions and statements and conducting over 40 media interviews on current and upcoming conditions.
<https://www.climatehubs.usda.gov/hubs/midwest>



Percent difference in predicted 2020 Summer (June-September) ANPP compared to 1984-2019 mean ANPP Final Summer Forecast



Beaver-related stream restoration is a low-cost, nature-based restoration approach that can restore habitat, improve water availability, reduce erosion, and support climate change adaptation. However, little is known about the human dimensions related to this restoration practice on western rangelands. Therefore, this study, led by the **Northwest Climate Hub**, examined six restoration projects and found social factors important to the success of projects, which include ranchers who perceive the benefits to outweigh the drawbacks; education and assistance to help landowners adopt nonlethal mitigation techniques for nuisance beavers; compatible grazing practices; and a regulatory environment that enables experimentation and adaptive management.

<https://www.climatehubs.usda.gov/hubs/northwest>