



USDA Climate Hubs Quarterly Report

Fall 2019

PURPOSE

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 **Midwest Climate Hub** partnered with Solutions for the Land, Iowa State University and other ag partners in the state to host a meeting on Iowa Smart Agriculture. Through the Iowa Smart Agriculture Initiative, agricultural, business, academic, government and conservation leaders are examining ways to keep Iowa agriculture profitable while providing nutritious food, clean energy, and ecosystem services such as water filtration and carbon sequestration. Dr. Dennis Todey also gave a presentation entitled, “What is agriculture and climate science telling us?” for approximately 60 attendees.



Saltwater intrusion impacted agriculture field in Hyde County, North Carolina

The **Caribbean Climate Hub** held 2 workshops on “Milling Techniques for Maximum Log Utilization” directed towards sawmill owners and operators, and representatives from public agencies interested in wood market opportunities in Puerto Rico. The techniques shared will build the capacity and knowledge necessary to implement practices that increase the resiliency of farmers and foresters to hurricanes. Improved practices can reduce the costs of vegetative debris management, recover costs of hurricane-downed trees by adding value through forest product development, and foster a sustainable industry by linking forest product development and reforestation planning efforts.

The **California Climate Hub** participated in the California Resource Conservation Districts (RCDs) annual meeting, giving a presentation highlighting the mission and activities of the Hub and its partnerships with USDA agencies to support climate awareness and climate-informed decision making among natural resource managers. The presentation was well attended and an informal show-of-hands survey of participants indicated interest in future partnerships with regional conservation districts to develop outreach efforts. Opportunities like these serve a critical role in ensuring that entities like RCDs across the state are aware of the Hub's mission and capacities and builds relationships for future collaboration.

The **Northeast Climate Hub** created a new lesson on climate's impact to fire and smoke as part of the RX-410 Smoke Management Techniques course for prescribed fire managers/burn bosses. The 90-minute lesson was piloted to 35 students at Camp Edwards Massachusetts Military Reservation in November 2019. Lesson materials are available for future integration into course materials.



Midwest Climate Hub Fellow, Erica Kistner-Thomas speaking at the Entomological Society of America's 2019 Annual Meeting, Nov 17th, 2019.

The **Southwest Climate Hub** hosted an Adapted Trees Workshop in Durango, CO. This workshop brought together 40 state and federal managers and academics to learn about how to use the Adaptation Workbook to adapt Durango's urban trees to climate change impacts. Important outcomes include changing Durango's tree planting guide to account for warmer temperatures, drought, and extreme weather events; and a plan to test seeds that will perform better under a changed climate.

The **Northern Forests Climate Hub (NFCH)** and Northern Institute of Applied Climate Science (NIACS) hosted 14 workshops attended in-person by >600 people, including workshops for the U.S. Climate Alliance, state forest action plans, field tours, pre-conference trainings, and adaptation planning and practices trainings. Participants and co-hosts represented national forests, tribal communities, states, environmental NGOs, professional societies, universities, and other USDA Climate Hubs. The workshops were designed to strengthen partnerships and increase visibility of climate change resources available at the Hub, and took place in CO, CT, DE, MA, MI, MN, NH, NY, OR, PA, RI, VA, and WI.

The **Southeast Climate Hub** hosted an Experts Salinity Workshop in Goldsboro, NC to discuss the current state of knowledge on saltwater intrusion, its impacts, and adaptation options. The workshop brought together forty researchers and professional experts from the private and public sectors from Virginia, North Carolina and South Carolina to share their research and knowledge about saltwater issues. Discussions from this workshop will be used to structure additional workshops with stakeholders and to create practical guidance for land managers to address saltwater related issues on their property.

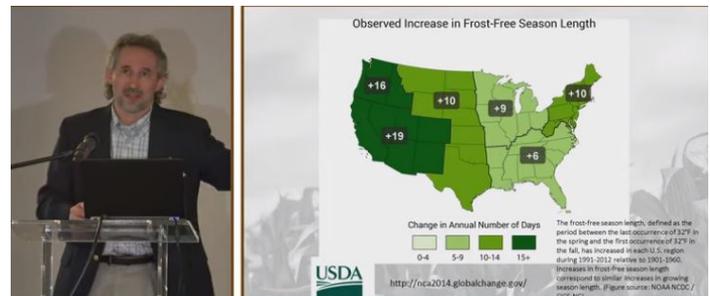
The **Northwest Climate Hub** provided planning and coordination of the October 2019 Northwest Climate Conference. This conference provides the Northwest region the opportunity to learn from and connect with a diverse community of experts fostering climate resilience. The event brought together about 450 practitioners, scientists, tribal communities, and decision-makers to share knowledge, ideas, and best practices related to climate change science, impacts, and adaptation in the Pacific Northwest. Topics included drought, wildfire, extreme events, coastal flooding, human and ecosystem health, and resiliency planning. The hub sponsored presentations on carbon accounting methodologies, economic impacts of west side fire suppression efforts, and the Pacific Northwest Tribal Climate Change Project.



Participants at the Southeast Climate Hub salinity workshop

The **Southern Plains Climate Hub (SPCH)** co-hosted (along with the City of Austin, Northern Plains Climate Hub, and NIACS) the second of two workshops intended to develop a vulnerability analysis and adaptation options for Austin's urban forest. The workshop brought together forest managers from the city and surrounding areas to develop adaptation plans using a previously developed vulnerability assessment and the NIACS Forest Adaptation Workbook. The workshop will lead to increased awareness of the potential threats to the forest as a result of climate change, as well as an increased awareness of the many options and pathways available to land managers to adapt their practices and the forest to climate change impacts.

The **Northern Plains Climate Hub (NPCH)** published an article entitled "Managing for the middle: rancher care ethics under uncertainty on Western Great Plains rangelands" in *Agriculture and Human Values*. This peer-reviewed paper describes how ranchers make decisions under complex and uncertain conditions, including drought. Dr. Wilmer, the Northern Plains Hub Fellow, also coauthored a second article, "Landscape of North American rangeland social science: systematic map" in *Rangeland Ecology & Management*. This article challenges rangeland researchers to consider a broader diversity of stakeholders and draw from multiple social science disciplines. Both articles involved collaborations with USDA Agricultural Research Service and Colorado State University.



Midwest Climate Hub Director Dennis Todey speaks at *Iowa Smart Agriculture*