Lead Efforts to Mitigate and Adapt to Climate Change, Drought, and Extreme Weather in Agriculture and Forestry

ACHIEVEMENTS: The national forests and grasslands have made significant progress in their implementation of the Forest Service's Climate Change Performance Scorecard, with 89 percent of national forests and grasslands in compliance with a climate change adaptation and mitigation strategy in FY 2015. Partnerships with diverse stakeholders helped the service finalize robust scientific reports on national forest carbon stocks, implement a greater number of adaptation projects on our national forests and grasslands as vulnerability assessments are completed, and assist Region/Station/Areas in developing one tribal flagship partnership in each Region. In addition, in FY 2015, USDA announced the Building Blocks for Climate Smart Agriculture and Forestry, a plan to help farmers, ranchers, and forest land owners respond to climate change. The framework consists of ten "building blocks" that span a range of technologies and practices to reduce greenhouse gas emissions, increase carbon storage, and generate clean renewable energy. The Climate Hubs, established in February 2014, continue to work closely with regional USDA agency and University partners to deliver science-based knowledge and practical information to farmers, ranchers and forest landowners to help them build resilience to climate change.

CHALLENGES: As USDA continues to build compliance with the scorecard dimensions/actions, maintaining resilient national forests and grasslands may become more challenging in the future as climate change effects become more pronounced. When deciding which adaptation action to apply to a particular resource, land managers will have to carefully evaluate the tradeoffs and limitations of available actions, and how they help us move forward with broader resiliency goals. The Building Blocks, which aim to reduce greenhouse gas emissions from agriculture and forestry, may face some limitations because carbon sequestration and changes in agricultural greenhouse gas emissions are not directly controlled through USDA actions. They are mediated by a variety of external factors, including crop prices and production and natural trends (e.g., forest aging).

Maximizing the efficiency of agricultural water use, improving the sustainable management of water resources and developing crops more resilient to drought are on-going challenges in achieving this objective.