

CLIMATE CHANGE AND AGRICULTURE:

STATUS REPORT FOR THE USDA AGRICULTURE AIR QUALITY TASK FORCE (AAQTF)

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Issues to cover

- USDA Regional Climate Change Hubs
- Status of USDA Greenhouse Gas Inventory Methods for the Agriculture and Forest Sector
- Biomass feedstock greenhouse gas accounting



USDA Regional Climate Hubs



Vision: Agricultural production and natural resources maintained and strengthened under increasing climate variability and environmental change

Mission: To develop and deliver science-based, region-specific information and technologies to agricultural and natural resource managers that enable climate-smart decision-making and provide assistance to enable land managers to implement those decisions.



USDA Regional Climate Hubs will provide:

- **Technical & Program Support**
- **Assessments and Forecasts**
- **Outreach and Education**

Conceptual Framework for a USDA Regional Hub

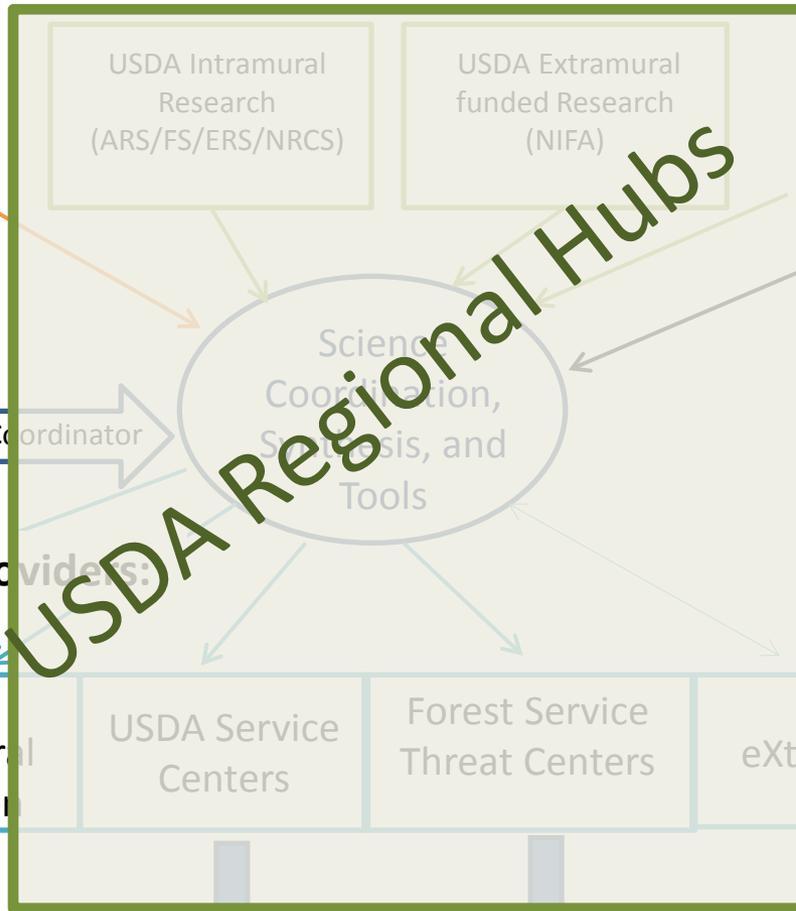
Science and Technology providers:

Federal Partners

NOAA RISA
USGS CSC
DOE
NASA
etc

Non-Federal Partners

Agricultural
Experiment
Stations
Many others



Links with other Hubs & National Coordinator

Technology Transfer providers:



Information and tools

Questions and feedback

Stakeholders and Stakeholder group: Farmers / Ranchers / Forest Managers / Tribes / States / Feds / LCCs / Others



USDA Climate Hub Regions



USDA Climate Hubs for Risk Adaptation and Mitigation to Climate Change

Forest Service Lead

Corvallis, OR

Pacific Northwest

Davis, CA

Southwest

ARS Lead

Fort Collins, CO

Northern Plains

ARS Lead

Ames, Iowa

Houghton MI

Midwest

Forest Service Lead

Durham, NH

Northeast

Forest Service Lead

Raleigh, NC

Southeast

ARS Lead

Las Cruces, NM

Southern Plains

ARS Lead

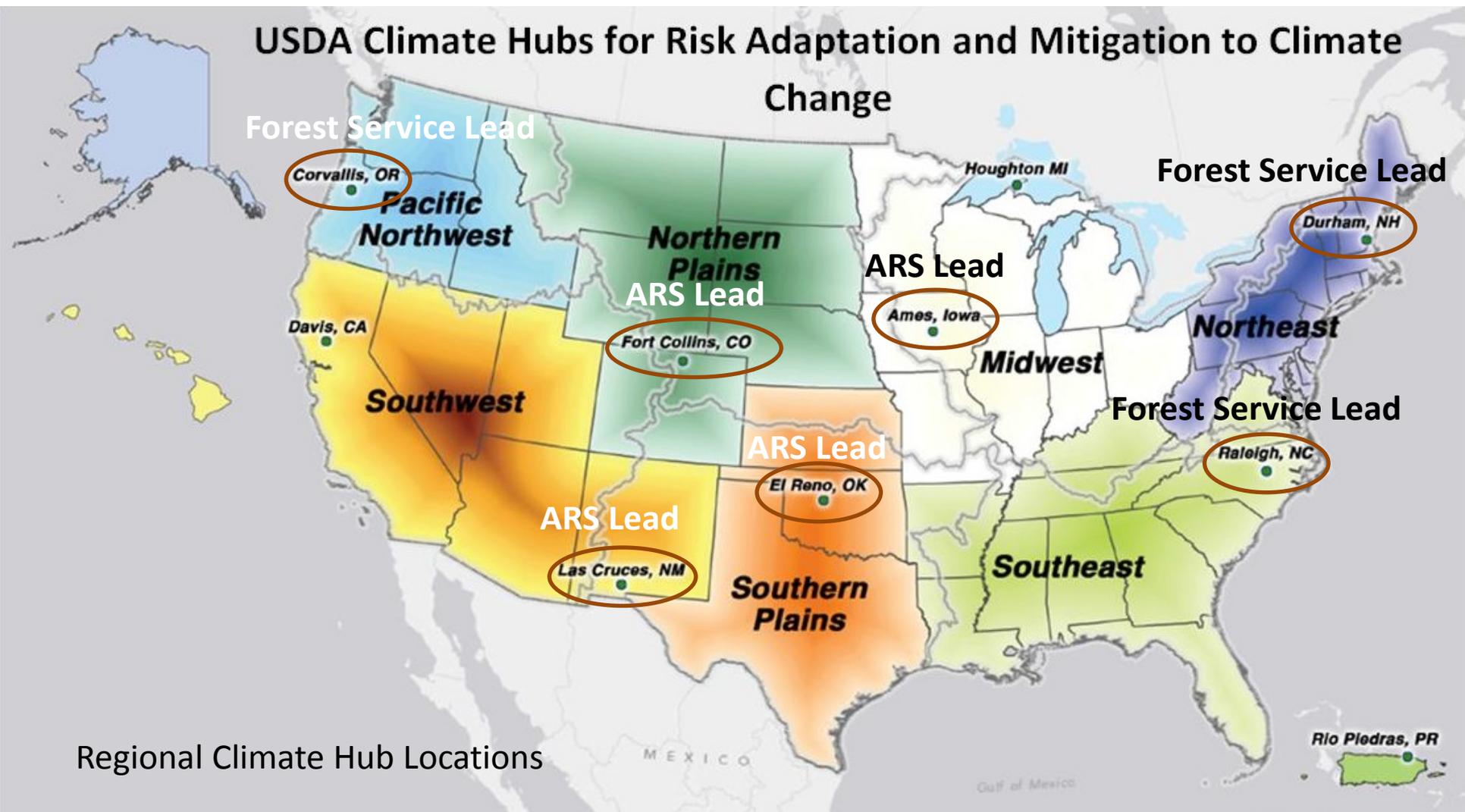
El Reno, OK

Rio Piedras, PR

Regional Climate Hub Locations

MEXICO

Gulf of Mexico

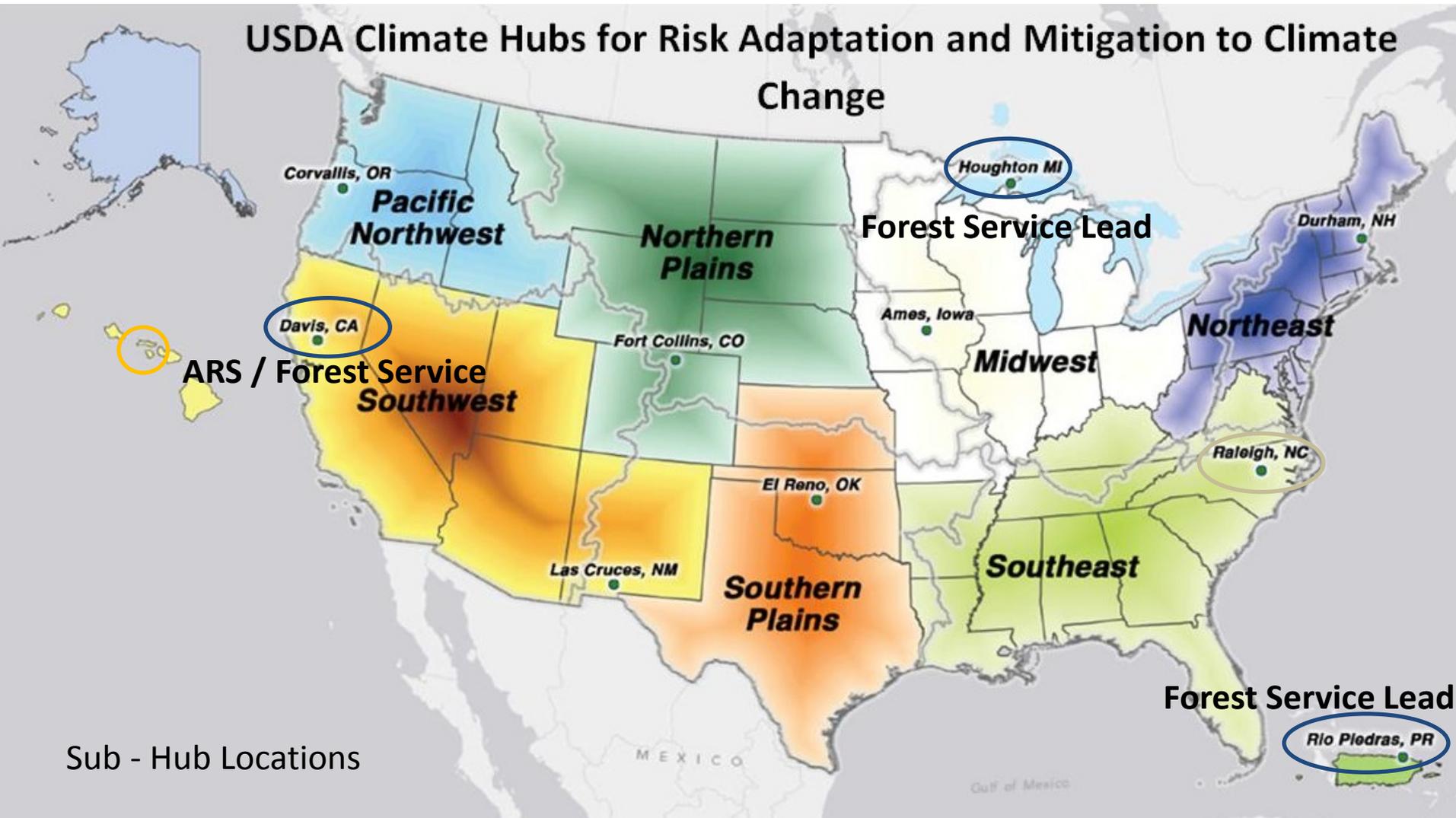




USDA Climate Hub Regions



USDA Climate Hubs for Risk Adaptation and Mitigation to Climate Change



Sub - Hub Locations



February-December 2014

- Assess regional vulnerabilities to ID most pressing issues
- Establish work plans
- Work with partners and stakeholders to access needs and capabilities
- Establish web presence



*Science-Based Methods
and Technical Guidelines for
Quantifying Greenhouse Gas Sources and Sinks in
the Forest and Agriculture Sectors*

In accordance with Section 2709 of the 2008 Farm Bill:

“The Secretary shall establish technical guidelines that outline science-based methods to measure the environmental services benefits from conservation and land management activities in order to facilitate the participation of farmers, ranchers, and forest landowners in emerging environmental services markets” with priority given to carbon (GHG) markets.

Goal: Create a standard set of GHG quantification methods and tools for landowners, USDA, and other stakeholders.

- Phase 1: Report outlining comprehensive science-based methods for entity-scale GHG estimation.
- Phase 2: Develop a user-friendly tool to provide land owners and managers with reliable and understandable estimates of GHG emissions and C sequestration.



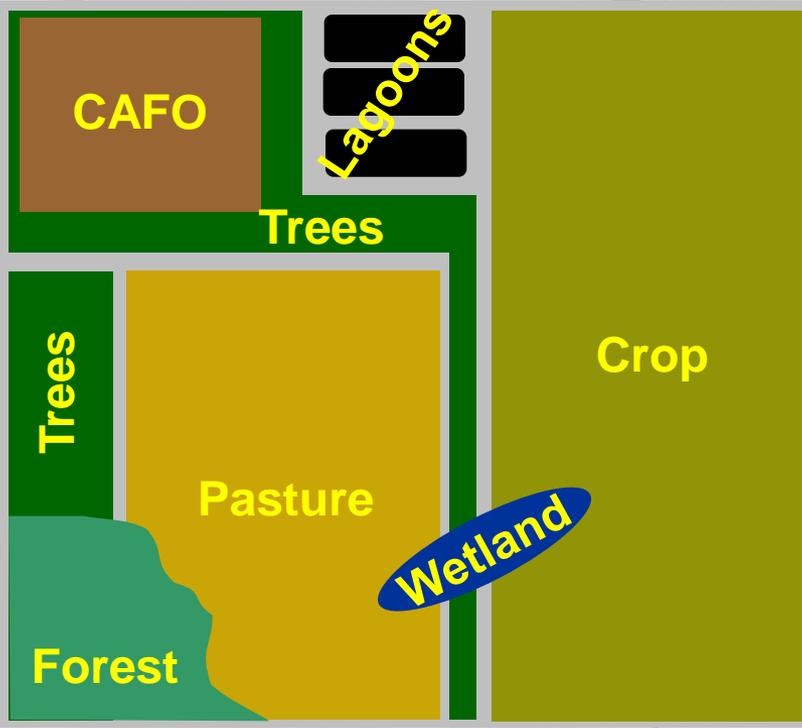
KEY CONSIDERATIONS

- 1. Transparency***
- 2. Consistency***
- 3. Comparability***
- 4. Completeness***
- 5. Accuracy***
- 6. Cost effectiveness***
- 7. Ease of use***

BALANCING ACT

- ✓ Maximize accuracy ... but maintain ease of use
- ✓ Complete ... but cost effective
- ✓ Stand alone ... but consistent and comparable
- ✓ Transparent ... but with scientific rigor ... and user-friendly

The entity - combining a landowner's crop, livestock and forestry activities into one seamless GHG estimate.





THE USDA GHG METHODS

The Methods Report is designed to be:

- A scientifically vetted means for USDA to provide local-scale, standardized and transparent estimation of GHG fluxes
- Consistent with the USDA and EPA national GHG inventories
- Aligned with NRCS's COMET Farm and other USDA GHG tools.
- Coordinated with water quality or other tools to assess environmental services benefits



WHAT IS NOT COVERED IN THE REPORT?

- Emissions related to on-farm energy use
- Indirect emissions due to the manufacture or transport of management inputs (ie fertilizer, pesticides, etc.)
- Policy-specific framework such as additionality and leakage



CURRENT STATUS

- Comments from the first inter-agency review have been addressed
- Expert review has been completed – over 900 technical comments from 30 reviewers
- Public comment has been received – about 400 comments from about 3 dozen submissions
- **The final draft has been submitted to the USDA editor for clearance:**
 - **Final edits and formatting**
 - **Assigning of a USDA Technical Report number**
 - **Printing and release (June/July 2014)**
- **Integration of the methods into COMET-Farm is underway**