United States Department of Agriculture
Natural Resources Conservation Service

USDA-NRCS Air Quality Activities

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AAQTF
Beltsville MD
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Outline

- Training
- Technology, Tools
- State and Regional Projects
- Other Projects/Collaboration
- Programs

AQAC Team Personnel

- AQAC Team:
  - Greg Johnson, Leader, Portland
  - Adam Chambers, Portland
  - Greg Zwicke, Ft. Collins

Air Quality and Atmospheric Change Training

- Air Quality and Animal Agriculture (online course) about to be released
  - Also to be posted on eXtension.org
- In-class training sessions
  - CA: North 2013; South 2014
- Webinars: 5 in past year and just started new series through 2014 with ARS on Livestock GRACEnet, etc.

AQAC Technology/Tools for NRCS

- COMET-Farm
- NAQSAT

COMET-Farm

www.comet-farm.com

- COMET-Farm released on June 5, 2013
- Announced by Secretary Vilsack at National Press Club as part of larger address on climate change and USDA
- Well-received by the user community
- Serving NRCS user groups as well as environmental market for GHGs
- Coordinating science and interface improvements with USDA CCPO, toward eventual COMET-USDA tool name

June 25, 2013 – President Obama – Major Climate Change Speech

MAINTAIN AGRICULTURAL PRODUCTIVITY

by delivering tailored, science-based knowledge to farmers, ranchers, and forest landowners to help them understand and prepare for the impacts of climate change.

PROVIDE TOOLS FOR CLIMATE RESILIENCE

including existing and newly developed climate preparedness tools and information that state, local, and private-sector leaders need to make smart decisions.

NAQSAT

- National Air Quality Site Assessment Tool
- Developed under 2 CIGs
- First version completed in 2011
- Second CIG scheduled for completion in late 2014
  - Exploring possible synergy between NAQSAT and Yakima dairy AQ tool

Integrating Air Quality into New NRCS Conservation Delivery

- NRCS continuing to work on new Conservation Desktop for employees
- Will also have farmer/rancher portal
- COMET and NAQSAT to be integrated into this new system
- Goal is to have NRCS planners significantly more in the field, working directly w/ producers
- Timeframe: About 2017

Some State-specific NRCS Air Quality Projects

- California:
  - Combustion System Improvement (SIP)
  - Dairy digester work
  - Mechanically-generated PM Tech Note

Some State-specific NRCS Air Quality Projects

- Wyoming: Feedlot windbreak design

- Colorado: RMNP Ag Subcommittee and livestock work

Some State-specific NRCS Air Quality Projects

- Pennsylvania:
  - Humic odor control amendments
  - Replacement of fossil fuels with renewable fuels (SVO, biomass scraps, etc.)

Some State-specific NRCS Air Quality Projects

- New Mexico: Giant Sacaton for wind erosion and dust control


- Idaho: Cover crops for wind erosion control

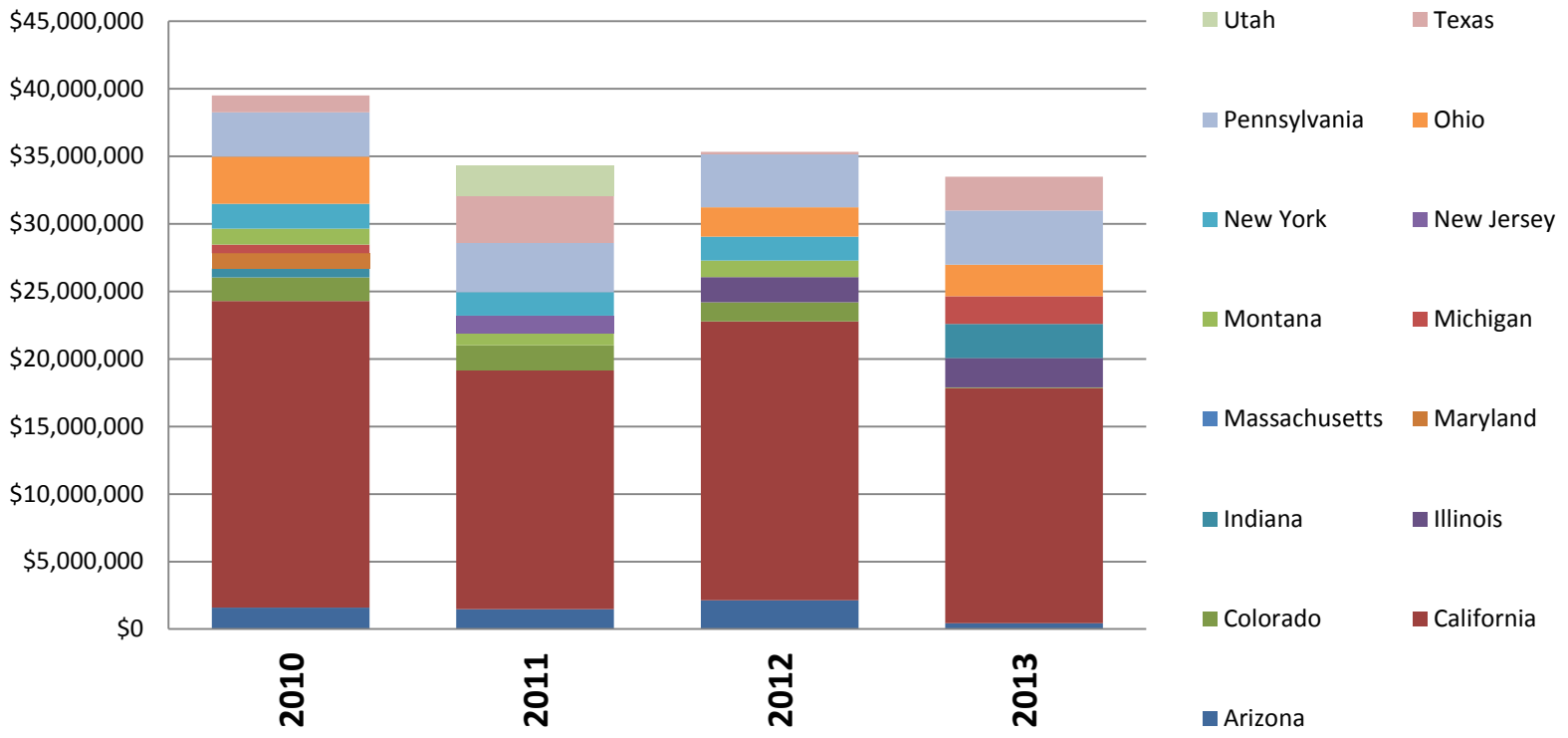

Other NRCS Air Quality Projects

- Released Ag AQ Conservation Measures Guide for Cropping Systems with EPA in 2012
- May do companion Guide on Livestock systems with EPA in 2014
- Continuing to finish up GHG CIGs (8); Success stories in several states (avoided grassland conversion; nutrient mgmt; rice mgmt)
  - NRCS anticipates a few voluntary agricultural carbon credit transactions over the next calendar year. Likely to include the sale of Arkansas-originations credits (from rice growers) into the California regulatory market.

Ag Air Quality Support in NRCS Programs

- Environmental Quality Incentives Program (EQIP)
  - Includes National Air Quality Initiative
- Conservation Stewardship Program (CSP)

Air Quality Initiative (AQI)



2013 Air Quality Initiative (AQI)

- $33.5 million to 9 states
- CA received nearly 50%--for heavy-duty mobile off-road ag engine replacements
- Under EQIP
- Primarily for PM and Ozone, and primarily in nonattainment counties

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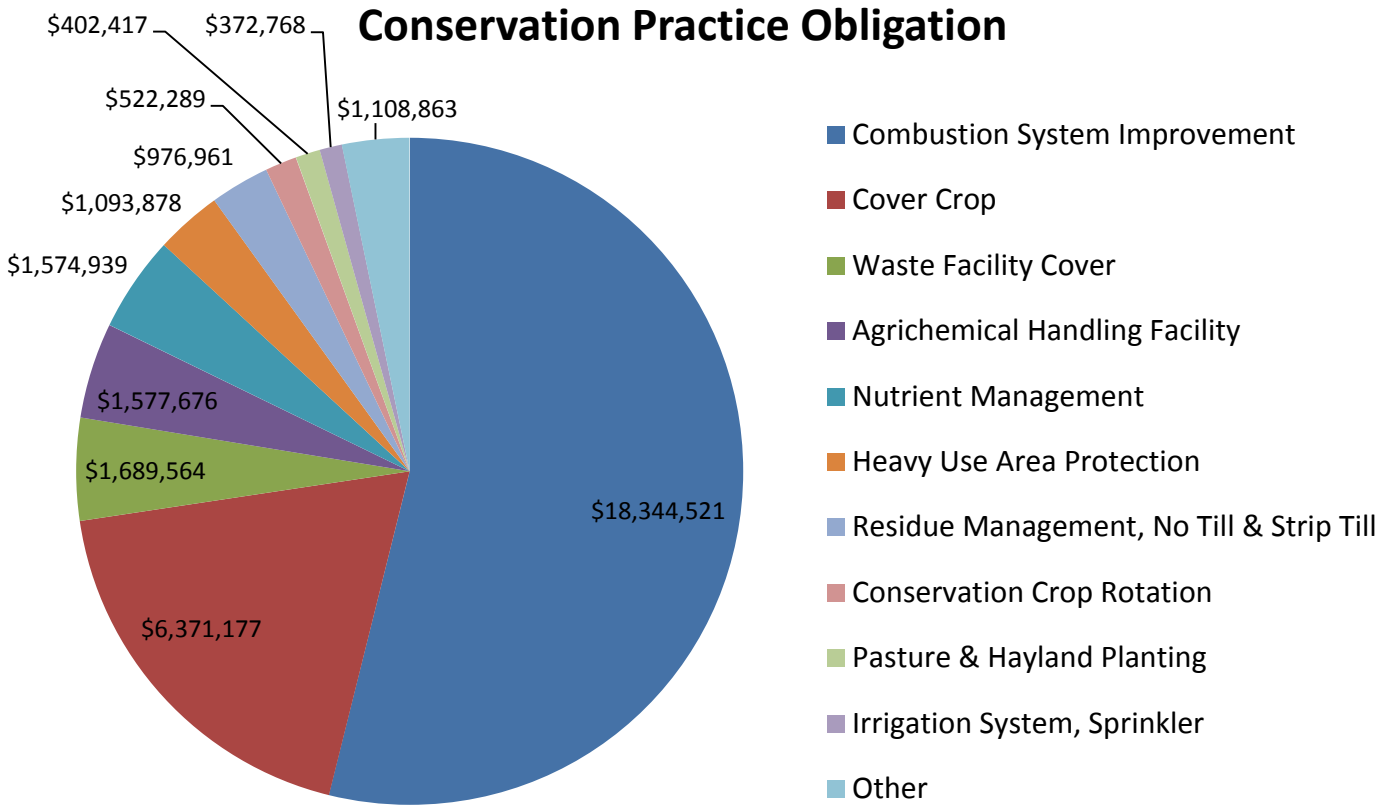
2013 Air Quality Initiative (AQI)



Example 2009-2012 AQI Results

- California 2009-2012
  - 1200 contracts implemented to date; 300 more in process
  - Over 2060 tons/yr NOx reduced
    - Represents 6.87 tons/day NOx (May-Oct. ozone season)
    - Equivalent to over 623,000 light-duty vehicles
    - Cost effectiveness: Approx. $2400 per weighted ton*
  - Leveraged with SJVAPCD Ag Engine replacements
    - 2011: Nearly 700 contracts; 480 tons/yr NOx
  - Seeking SJV SIP credibility for ARB farm equipment commitment for NOx reductions (5-10 tons/day)

**The average cost-effectiveness for reducing emissions from replacing mobile off-road agricultural equipment is calculated using criteria from the 2011 Carl Moyer Program Guidelines. This methodology is applied to a variety of incentive programs in California and helps provide uniform comparisons with other incentive programs in the state. Overall, the average cost-effectiveness of NRCS payments is $2,381 per weighted ton of emissions reductions, which is 14 percent of the current Carl Moyer cost-effectiveness threshold of $17,080 per weighted ton of emissions.*

Questions?

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