

# Climate Action Reserve and Agriculture Protocol Development



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# Background on the Climate Action Reserve



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- Chartered by California state legislation in 2001
  - Mission is to encourage early actions to reduce emissions and to have such emissions reductions recognized
    - Initially focused on emission reporting and reductions by member organizations in California
    - Now a North American program focused on emission reduction projects generating offsets
- Balances business, government, academic, and environmental interests



# What We Do

- Develop High Quality Standards
  - Convene stakeholders and lead development of standardized protocols for carbon offset projects
- Manage Independent Third Party Verification
  - Training and oversight of independent verification bodies
- Operate a Transparent Registry System
  - Maintain registry of approved projects
  - Issue and track serialized credits generated by projects



# Protocol Development Goals

- Develop a standardized approach for quantifying, monitoring and verifying GHG reductions
  - Research industry trends in adoption of GHG reducing practices
  - Set criteria and reference points based on industry trends
  - Provide specific tools for quantifying emissions
  - Detailed and specific monitoring requirements
  - Train verifiers with a consistent set of protocol-specific standards
- Maintain consistency with or improve upon existing methodologies
- Balance accuracy, conservativeness, and practicality



# Existing Protocols

- Forestry
  - Improved Forest Management
  - Reforestation
  - Avoided Conversion
- Urban forestry
- Landfill gas capture (US & Mexico)
- Livestock methane capture (US & Mexico)
- Organic waste digestion
- Organic waste composting
- Coal mine methane
- Nitric acid production
- Ozone depleting substances (US & Article 5 sources)

# Reserve's Agriculture Program Goals



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- Promote voluntary GHG mitigation in agriculture
- Expand farmer's access to the carbon market
- Demonstrate credible, high quality, and high value offsets from agricultural practices

# Agriculture Program Activities



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Publish Issue Paper: <i>Soil Carbon Sequestration with Biochar</i>	July 2010
Update Livestock Protocol to Version 3.0	Sept. 29 2010
Publish Issue Briefs on Policy Options for Agriculture Protocol Development	October 1, 2010
Scoping Meetings for Three New Protocols	October 6, 2010 October 19, 2010 October 27, 2010
Launch development of two agriculture protocols	November 2010
Launch development of third agriculture protocol	April 2011
Three new agriculture protocols ready for use	March 2012

# Possible New Agriculture Protocols



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- Soil Carbon Management
  - Carbon sequestration in soil resulting from a change to continuous no-till practices, may also include changes in cover crops and crop rotations
- Nutrient Management
  - Nitrous oxide reductions from changes in the rate, type, timing, and/or placement of fertilizer application
- Rice Cultivation
  - Methane reductions from changes in water management, e.g., winter flooding, mid-season draining, and/or drill-seeding





# Key Issues

- Practical and accurate estimation of GHG reductions
- Data available for performance standards
- Risk of reversals in cropland management protocol
- Avoiding yield impacts
- Start date policy and early action
- Interrelationship among practices
- Regional variation in opportunity
- Need for flexibility



# Further Solutions to Explore

- Approaches to ensuring permanence that work for agriculture
- Developing aggregation guidelines/requirements
- Conservativeness
- Regional approaches
  - California is unique: leading producer of specialty crops, with diversity of crop rotations and management systems, mostly irrigated
  - Rice is produced in 3 regions spanning seven states
  - Available methodologies may apply to specific regions or cropping system
- Modularizing protocols where relevant



# Issue Briefs

- Options for Quantifying GHG Reductions
- Options for Determining Additionality
- Options for Addressing Permanence

<http://www.climateactionreserve.org/how/protocols/in-progress/agriculture/>

# Contact Information



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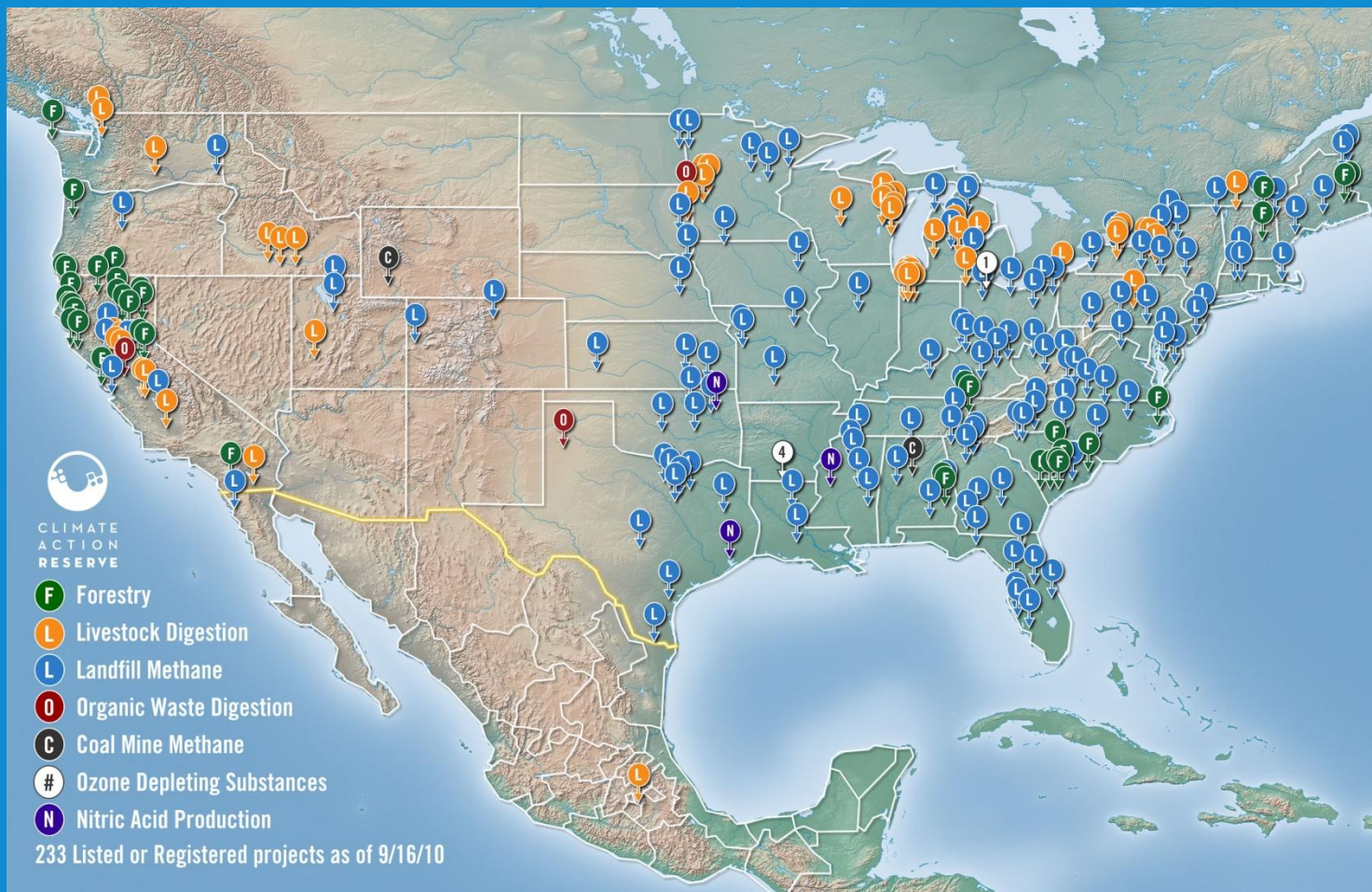
[www.climateactionreserve.org](http://www.climateactionreserve.org)

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# Listed and Registered Projects



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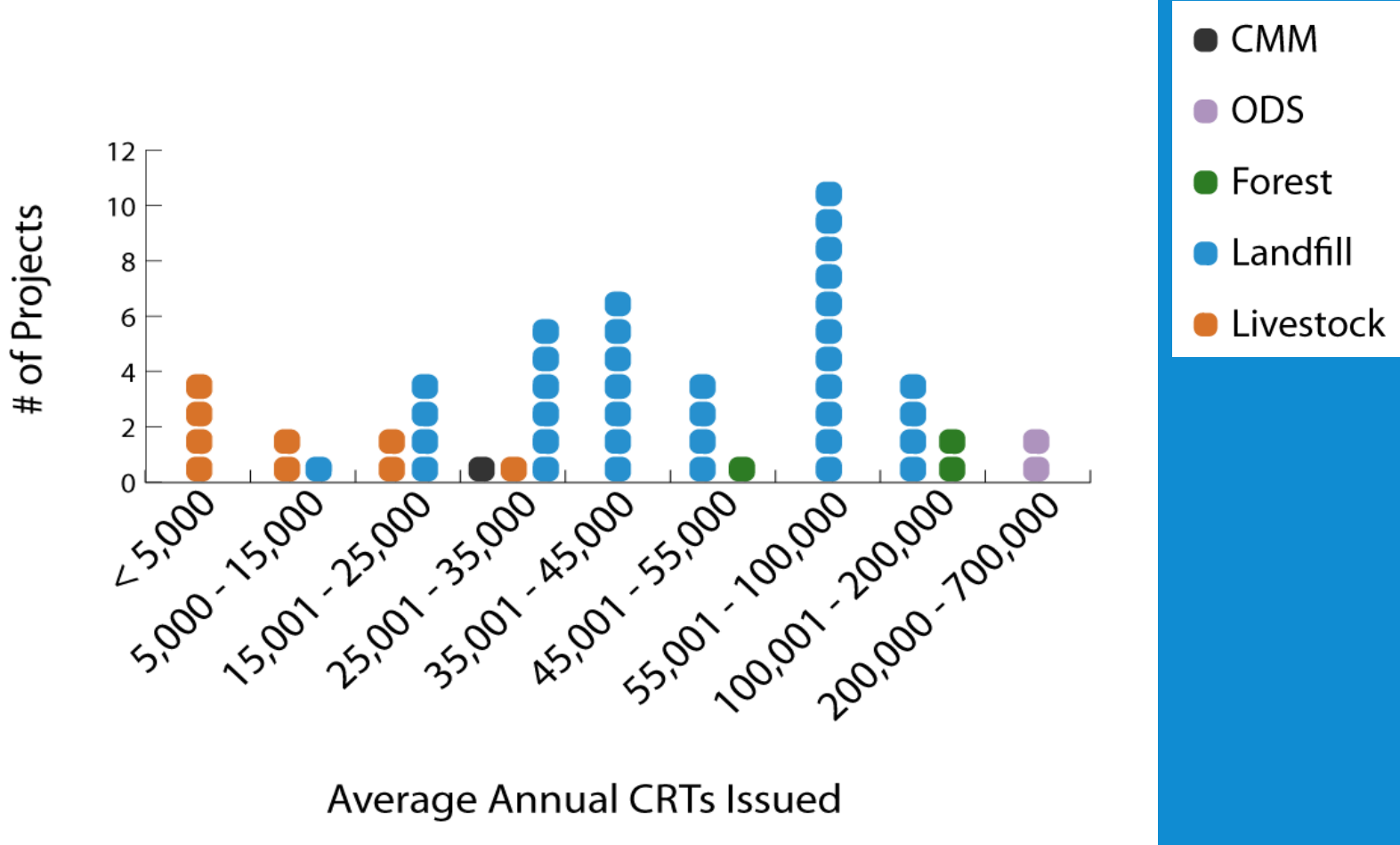
# Reserve Stats

- Over **7 million CRTs** registered
  - CRT = “Climate Reserve Ton” = 1 metric ton
- **365 Projects** in the system
  - Projects listed: **171**
  - Projects registered: **62**
  - New projects (not shown on map): **132**

# Project Sizes



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# Protocol Development Process

1. Internal research and scoping
2. Public scoping meeting(s)
3. Multi-stakeholder workgroup formation
4. The Reserve drafts a preliminary protocol
5. Draft protocol considered by workgroup
  - Provides technical expertise and practitioner experience
  - Period meetings and individual consultation when needed
6. Revised draft protocol released for public comment
7. Public workshop(s)
8. Final version adoption by Reserve board in public session