

Aggregation in Practice: Learning from the Chicago Climate Exchange and Looking Ahead to California

EPRI Greenhouse Gas Emissions Offsets Workshop #12
March 15, 2012

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Chicago, IL





About Delta

- The Delta Institute is a 501(c)(3) nonprofit organization dedicated to building a Great Lakes regional economy that is job rich, inclusive and environmentally sustainable.
- We are a center of innovation creating market opportunities through four levers of change:
 - Creating **social enterprises** that are models of sustainable business
 - Providing **solutions for business** and industry
 - Designing **systems innovations** and advocating for **policy changes**
 - Defining **value for natural systems** and resources



Carbon Program Origin

In 2005, the Illinois Environmental Protection Agency asked Delta to assist in figuring out how to link agricultural producers to the carbon market.



\$20,000 grant enabled us to create the Illinois Conservation and Climate Initiative by forming an innovative partnership with the State of Illinois, several federal agencies, SWCDs, and a wide-ranging advisory committee. The initial focus was conservation tillage.

Delta worked to broaden understanding of the agricultural system, identify key organizations to help with implementation, and understand the greenhouse gas market.

From the outset, aggregation and county-level involvement were considered essential to program success.



Program Structure

- Advisory committee was formed, consisting of government agencies, academics, professional and trade organizations, and NGOs.
- Regular meetings held to create a system to enroll qualifying projects and identify the necessary organizations for program implementation.

Outreach and Education:

State Agencies, Conservation Districts, Advisory Committee Members.

Enrollment:

Conservation Districts and Delta Institute

Aggregation, Trading and Payments:

Delta Institute

Verification:

Conservation Districts (Soil Only)

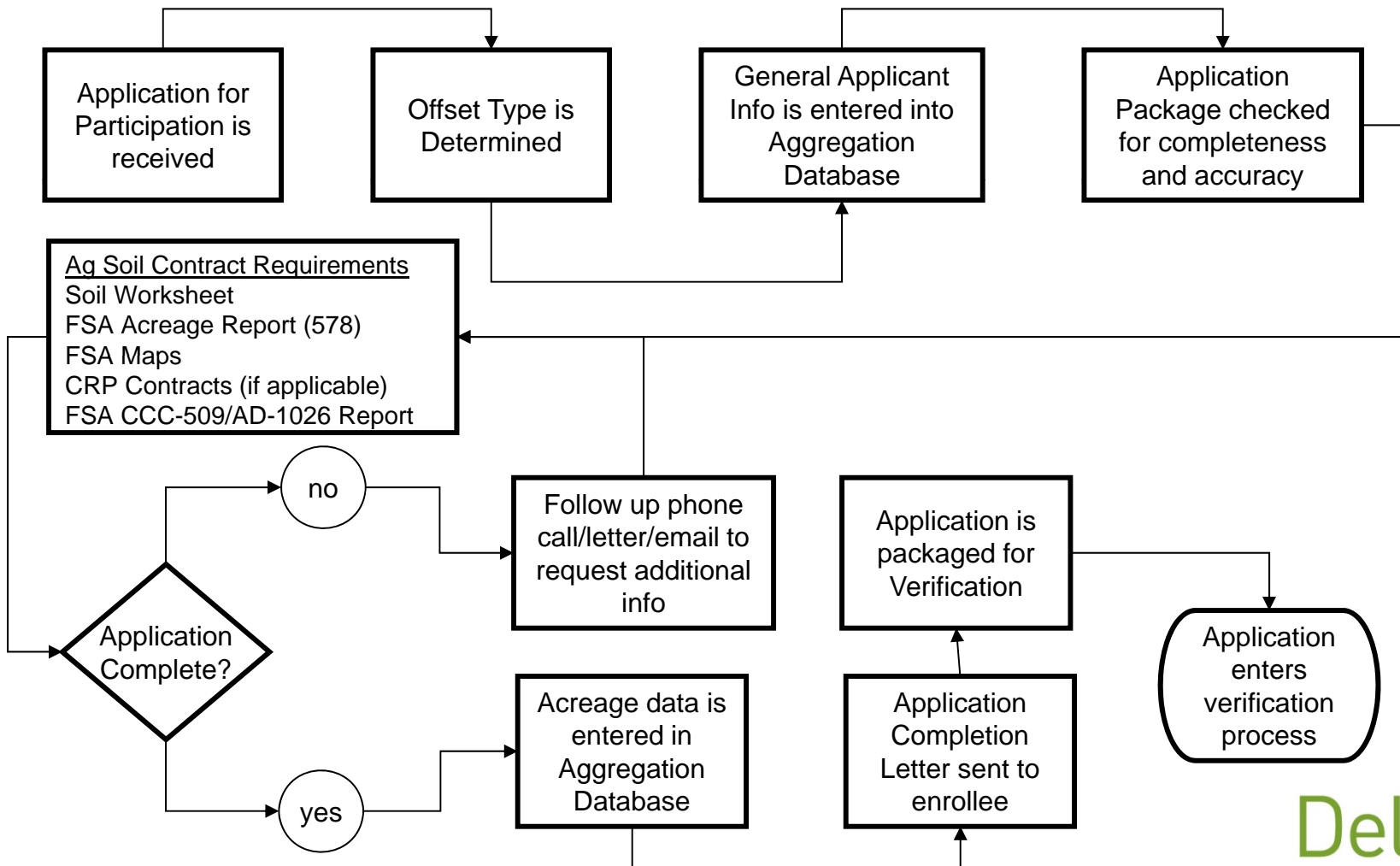
Advisory Committee Members:

- Delta Institute
- Illinois Environmental Protection Agency
- Illinois Department of Natural Resources
- Illinois Department of Agriculture
- Association of Illinois Soil and Water Conservation Districts
- SWCD Employee Work Group
- USDA-IL Natural Resources Conservation Service
- USDA-IL Farm Service Agency
- Illinois Association of Resource Conservation & Development Areas
- University of Illinois
- University of Illinois Extension
- Illinois Association of Professional Farm Managers & Rural Appraisers
- Illinois Farm Bureau
- The Nature Conservancy
- Illinois Soybean Association
- Illinois Corn Growers Association
- Illinois Forestry Development Council
- Illinois Beef Association
- Illinois Pork Producers Association



Aggregation Administration

- Efficient data management is critical to enabling low-cost aggregation
- Delta structured a formal internal system to review enrollments
- Delta created a database system with spreadsheet outputs to track key aspects of offset projects





2006-2010 Enrollment

Acreage Submitted **392,904**

Grass Plantings 49,888

No-Till/Strip-Till 171,498

Afforestation 24,955

Managed Forests 146,564

Contracts Submitted **1,385**

Soil 806

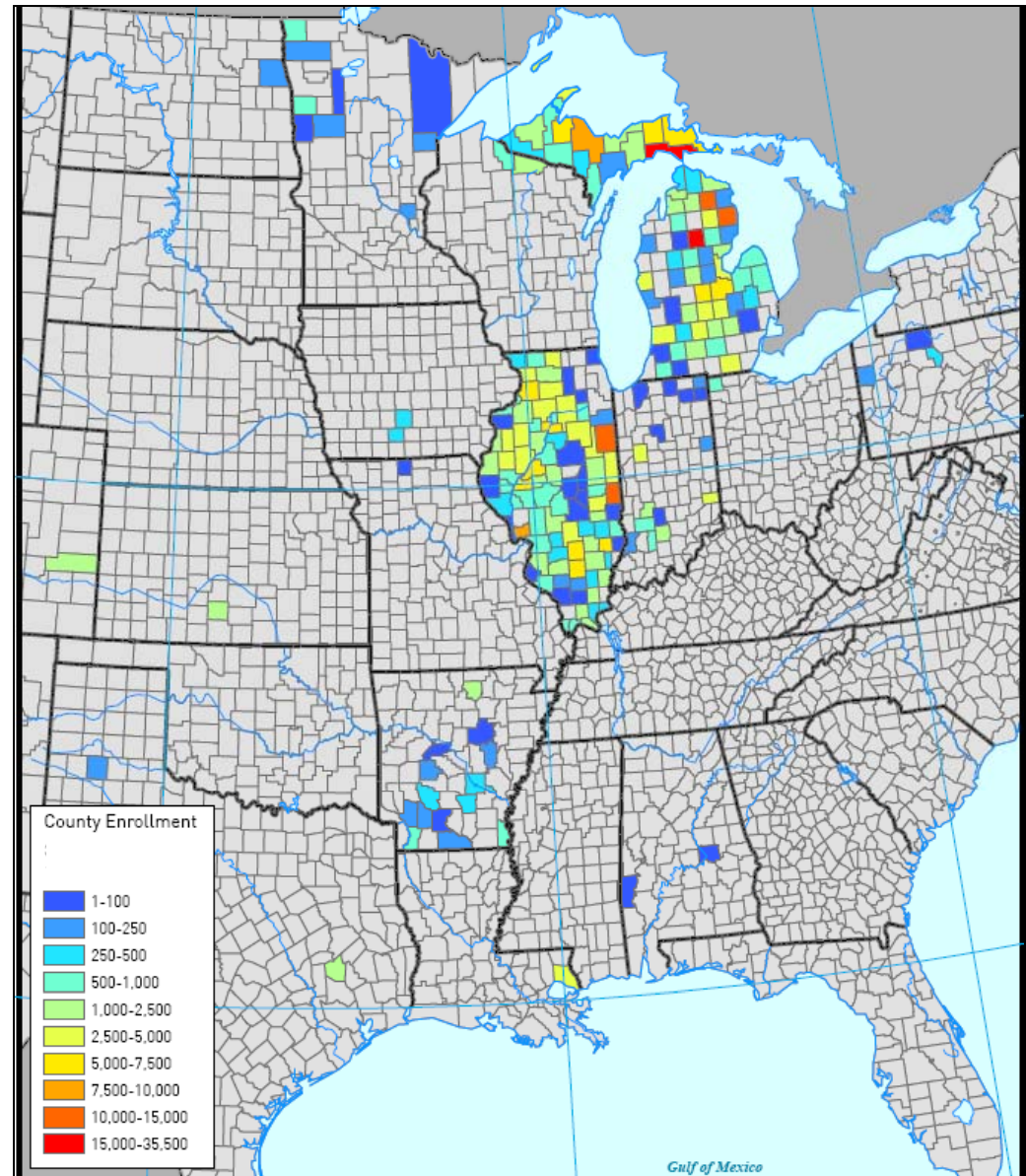
Grass Plantings 500

No-Till/Strip-Till 126

Grass & Tillage 180

Afforestation 425

Managed Forests 154



CCX Program Results

- Traded over 650,000 tons of carbon, roughly 1/3 ag soil and 2/3 forest
- Over \$2 million in revenue returned to enrollees
- Verified 12 ag soil & forestry project pools
- Over \$200,000 in revenue to Delta subsidiary through an 8-10% fee to administer the program and support mission of 501(c)(3) parent
- Developed and piloted CCX Sustainably Managed Forests Protocol
- Adapted CCX Energy Efficiency and Ozone-Depleting Substance Destruction Protocols for aggregation
- Replicated Illinois state partnership in Michigan and enrolled projects in 16 other states



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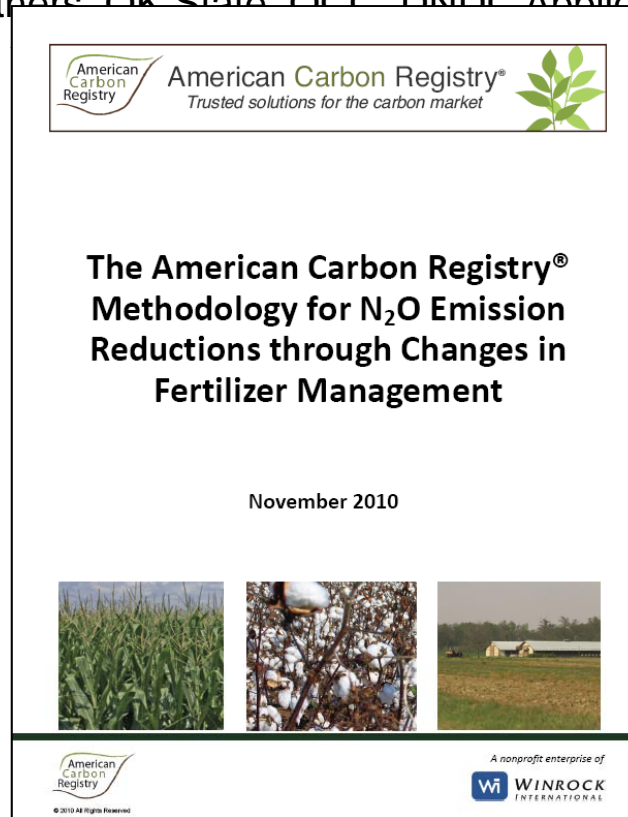


Lessons Learned

- Aggregation works best where a physical presence is possible
- Up-front, predominantly internal financing did not pay off, but is by far the most flexible business model
- Aggregators should avoid taking essentially all contract risk
- Keep the documentation process as electronic as possible
- Holding internal costs low allows for extended market involvement
- Creating scenarios for market/policy environment helps, but do not overlook project type/protocol/registry risk
- Land tenure can be a wild card for verification and permanence
- Nonprofit 501(c)(3) structure is ideal for attracting partners and pursuing funding to improve future efforts based on experience

Current Efforts

- Studying farmer attitudes with University of Chicago behavioral economists and developing policy recommendations (supported by ERS Economics of Markets for Agricultural GHGs Program)
- Piloting ACR's nutrient management protocol, improving biogeochemical model usability, and exploring CAR/ARB/VCS programs (supported by three-year NRCS Conservation Innovation Grant)
 - Partnering with National Wildlife Federation, American Farmland Trust, CTIC, ACR, EKO Asset Management Partners, OK State, OCC, DNDC Applications, Research and Training LLC



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The Future of Aggregation?



COMET™ FARM whole farm and ranch carbon and greenhouse gas accounting and reporting

Home Tool News

(Sign in or Register)

Step 1 Activities Step 2 Field Management Step 3 Report

Parcel Locations → Historic Management Pre-2000 → Current Management 2000-Present → Future Management Scenarios for 10 year period

Zoom to your parcels, then use one of the 'Add Parcel' buttons to define each parcel location. Each parcel must have a unique management history. When finished, click the button to the right.

I am done defining parcels >>

The screenshot displays the COMET FARM web application interface. On the left, there is a navigation sidebar with sections for Navigation, Parcel Management (including Add Parcel by point, Add Parcel by polygon, Modify Parcel, and Delete Parcel), Soil Info, Get Soil Information, Export Soil Information, and Help. The main area shows an aerial map with a cyan-colored parcel labeled 'Test (3 acres)'. A 'Soil Attributes' dialog box is open over the parcel, displaying the following information:

Soil Attributes	
Map Unit:	silt loam
Texture:	silt loam
Sand/Silt/Clay Fractions:	9 / 67 / 24
Bulk Density:	1.22 g/cm3
Hydric:	No

At the bottom of the dialog box is a 'Close' button. The map also shows a 'Google' logo in the bottom left and a URL 'cometfarm.nrel.colostate.edu/dev/FieldLocation#' in the bottom right.

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Recommendations

- Improve coordination between federal/state-sponsored research and aggregators
 - In ag, focus on COMET-FARM and the Nutrient Tracking Tool
- Base performance standards and quantification approaches on readily accessible data/tools
- Involve government in outreach, coordination and administration
 - NRCS, FSA, Forest Service, Extension system
- National network of NRCS-accredited Technical Service Providers could be ideal ag & forestry verifiers
- Consider range of payment types before locking on to offsets, and attempt to pursue at least one simultaneously as a hedge
- Understanding the motivations and preferences of credit suppliers should inform project and protocol structure

Contact Us



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