

---

# Methodology for Avoided Conversion of Grasslands and Shrublands

**Nicholas Martin**  
American Carbon  
Registry

**Randal Dell**  
Ducks Unlimited

***Stakeholder Consultation Webinar***  
***November 14, 2012***

# Outline

---

- Brief background on Winrock and ACR
  - *Nicholas Martin, Chief Technical Officer ACR*
- Key points of the ACoGS Methodology
  - *Randal Dell, Ducks Unlimited*
- Q&A
  - *Randal Dell, Ducks Unlimited; Joe Fargione, The Nature Conservancy; David Diaz, The Climate Trust; Benktesh Sharma, Terra Global Capital; Ashley Rood, Environmental Defense Fund*
- ACoGS Methodology is open for public comment through November 16, 2012
  - Webinar feedback will be incorporated along with written comments

# Webinar logistics

---

- To ask questions:
  - During presentation, type questions into '**Chat**' box near bottom of your webinar pane. Please include name and organization.
  - Or '**Raise Hand**' (in vertical bar at left of your webinar pane) to hold your place in line to ask a question verbally
  - As a participant, your microphone will be muted until the organizers un-mute you
- Q&A period at end: we will direct written questions to appropriate person, and call on anyone with hand raised
- All public and webinar comments will be addressed and posted with methodology
- Webinar will be recorded and posted shortly to [www.americancarbonregistry.org](http://www.americancarbonregistry.org)



# Winrock International Institute for Agricultural Development

*Non-profit organization that works in the U.S. and around the world to empower the disadvantaged, increase economic opportunity, and sustain natural resources*

- 1985 merger of Winrock Int'l Livestock Research & Training Center, International Ag Development Service, and Ag Development Council
- Rockefeller family tradition of agricultural research and extension, yield improvement, global food security
- Seeking ways to connect farmers and ranchers to new markets, enhance competitiveness, maintain/increase yields





# American Carbon Registry

- **First U.S. voluntary carbon registry**
  - 37.5 MMT CO<sub>2</sub>e verified carbon reductions since 1996
  - Non-profit organization
- **Registry roles:**
  - Develop and approve carbon protocols
  - Review and register projects
  - Oversee independent verification
  - Transparently track transactions and retirements
  - Support California compliance market, both as OPR and with new protocols
- 2011: 2.9 million ERTs sold, retired or contracted at average price of \$5.51/tCO<sub>2</sub>e (range \$1-14)
- Most widely used forest carbon standard in North America in 2011 (2012 *State of the Forest Carbon Market* report)



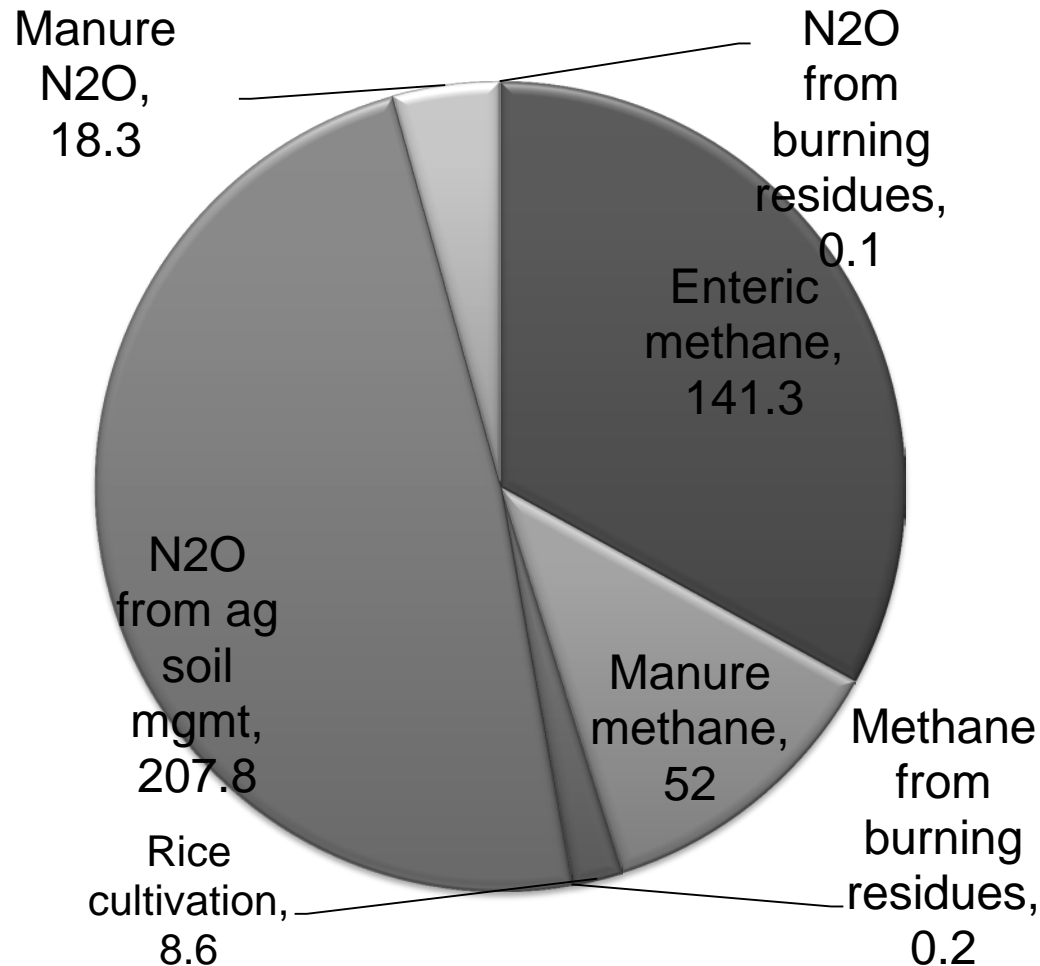


# ACR focus on agricultural GHG mitigation

---

- **Crop agriculture:**
  - N<sub>2</sub>O emission reductions through changes in fertilizer management
  - N<sub>2</sub>O emission reductions through fertilizer rate reduction
  - Voluntary emission reductions in CA and Midsouth rice
  - Afforestation/reforestation of degraded lands
- **Livestock and grazing lands:**
  - ARB Compliance Offset Protocol – Livestock Biogas
  - Grazing Land and Livestock Management modular methodology
  - BIGGS: Carbon Intensity of Fed Cattle, Dairy Carbon Intensity, Reduced Age at Harvest
  - Compost Additions to Grazed Rangelands
  - Panda Standard - Revegetation of Degraded Grasslands in China

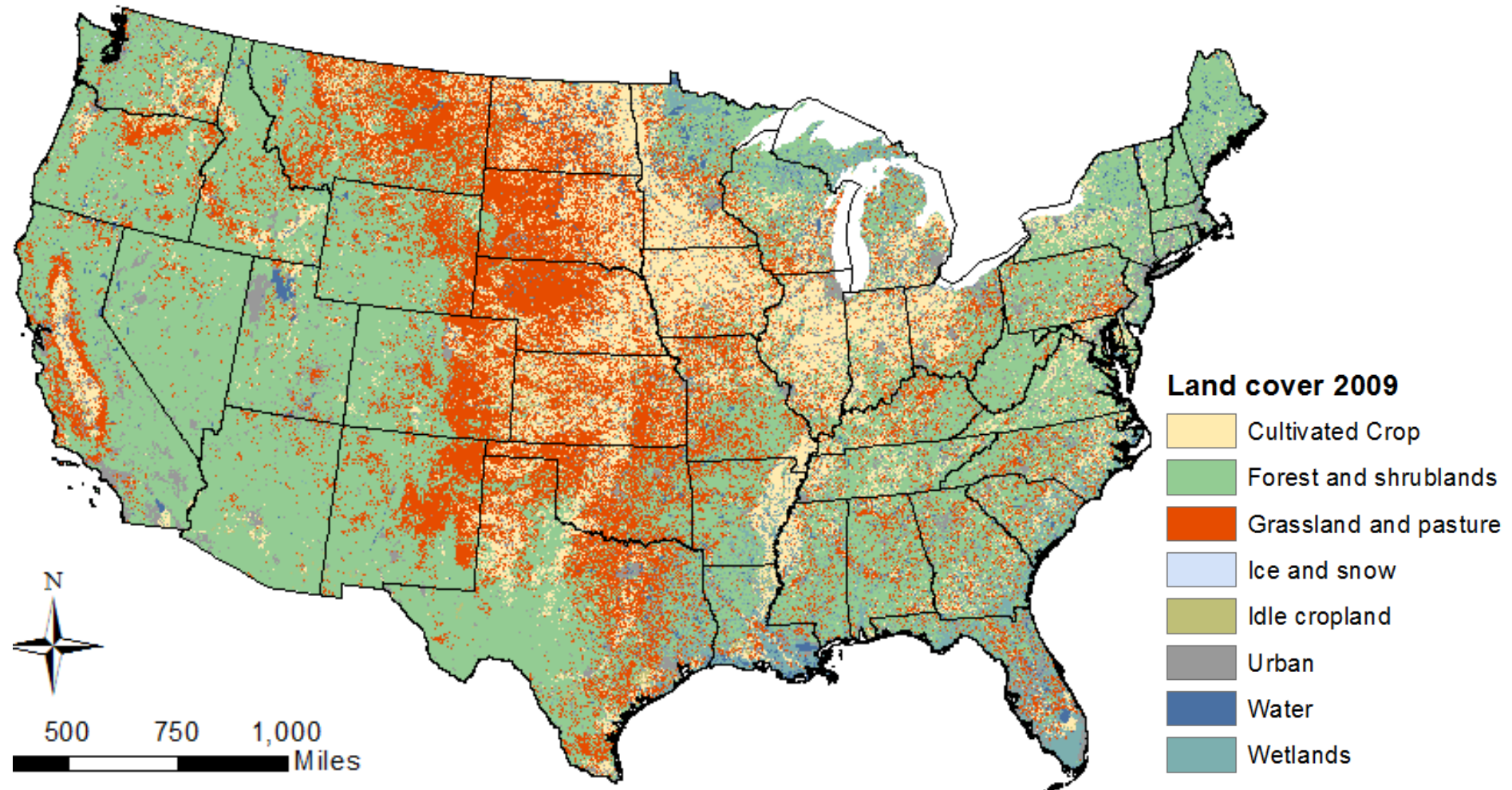
# Methane and N<sub>2</sub>O emissions from U.S. agriculture (MMT CO<sub>2</sub>e, 2010)



- Agriculture = 428 MMT CO<sub>2</sub>e or 6.3% of US GHG emissions
- Leading sources are N<sub>2</sub>O from fertilizer and methane from livestock



# U.S. pasture and grassland







# Grasslands in the U.S.

---

- Total grassland area 636 million acres
- Decrease of 3.9% since 1990
- Annual change in area 2005-10:
  - GG: 593,000 ac
  - GC: 35,000 ac
  - GF: 17,290 ac
  - GS: 11,000 ac
  - CG: 35,000 ac
- Grassland remaining grassland – annual net removal 8.3 MMTCO<sub>2</sub>e

Source: USEPA *Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990–2010*



# Why avoided conversion of grasslands?

---

- Large pool of sequestered carbon at increasing risk of loss
  - High commodity prices
  - Anticipated significant decreases in conservation program funding
  - Biofuels feedstock demand
- Important waterfowl and wildlife habitat, water quality co-benefits
- In combination with other forthcoming ACR methodologies, provides a mechanism to incentivize GHG reductions and positive environmental outcomes across the full range of livestock and grazing land management

# Methodology for Avoided Conversion of Grasslands and Shrublands to Crop Production

*American Carbon Registry*  
*November 14, 2012*

Randal Dell - Ducks Unlimited



The  
**ClimateTrust**<sup>®</sup>



**With Financial Support from**



**United States Department of Agriculture**  
Natural Resources Conservation Service



# Background

---



# Applicability Conditions

---

- The Project Area is located in the United States or Canada.
- Project Areas shall not include grasslands on organic soils or peatlands, or grasslands on non-forest wetlands.
- This methodology is only applicable to projects avoiding the complete conversion of grasslands or shrublands to cropland
- All Participant Fields in the Project Area are currently grassland or shrubland, have qualified as grassland or shrubland for at least 10 years prior to the Start Date



# Applicability Conditions- Management

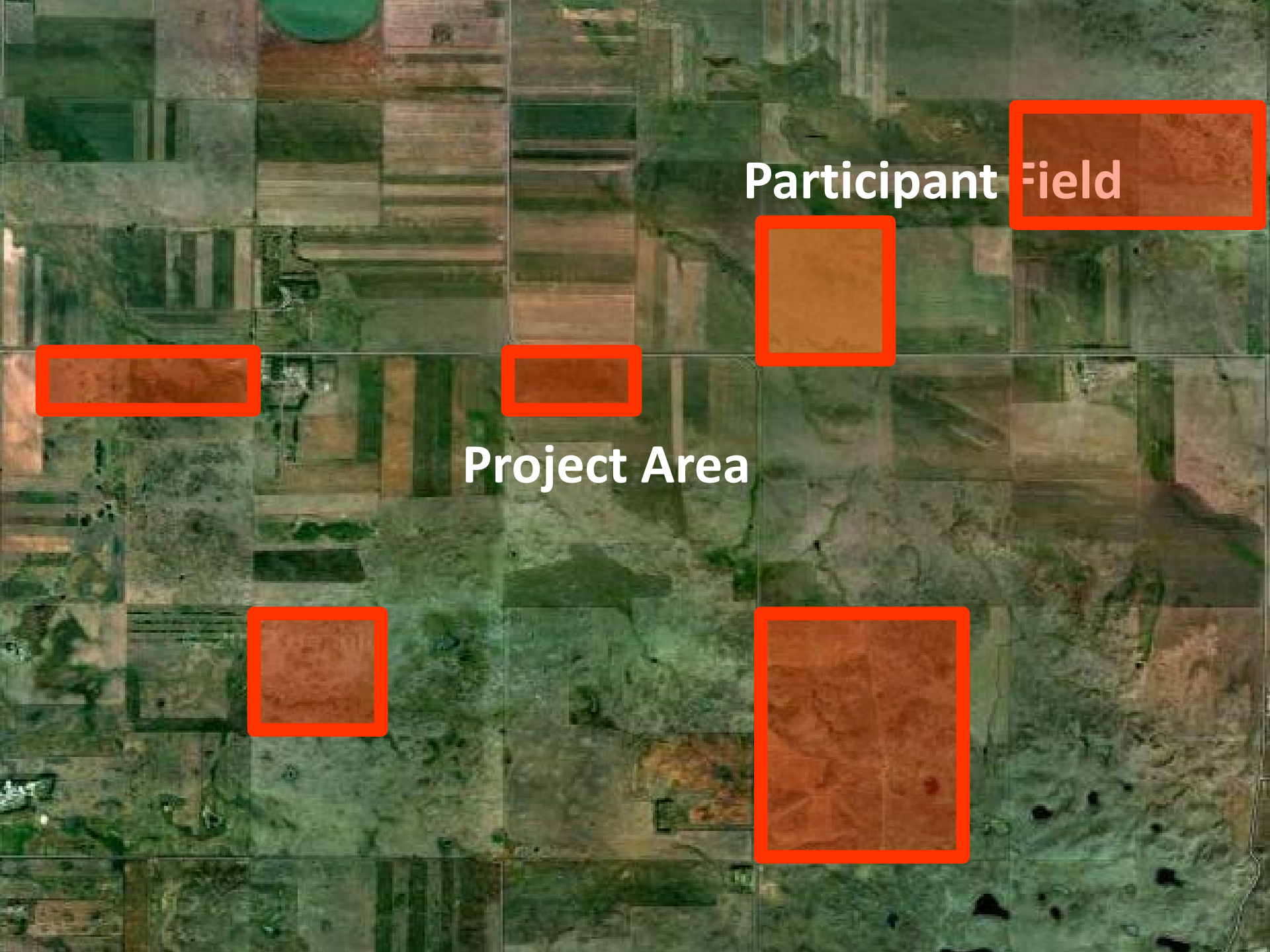
---

- Animal husbandry, prescribed burning or wildfires allowed so long as prescribed burning conforms to current best management practices in the Project Region
- Where livestock present- manure may not be managed, stored, or dispersed in liquid form. Livestock shall be primarily forage fed and not managed in a confined area, e.g., feedlot.
- In the project scenario, overgrazing, overstocking, or overuse of prescribed fires leading to the progressive loss of vegetative cover shall not occur, allowing carbon pools to remain at a steady state. Supplemental management practices that increase carbon stocks are allowable but not eligible for crediting unless quantified through a separate methodology.

# Boundaries

---

- Temporal
  - **Project Crediting Period**
  - **Project Term**
- Spatial
  - **Participant Field**: e.g. project activity, individual parcel
  - **Project Area**: collective of Participant Fields
  - **Project Region**: e.g. county, eco-region

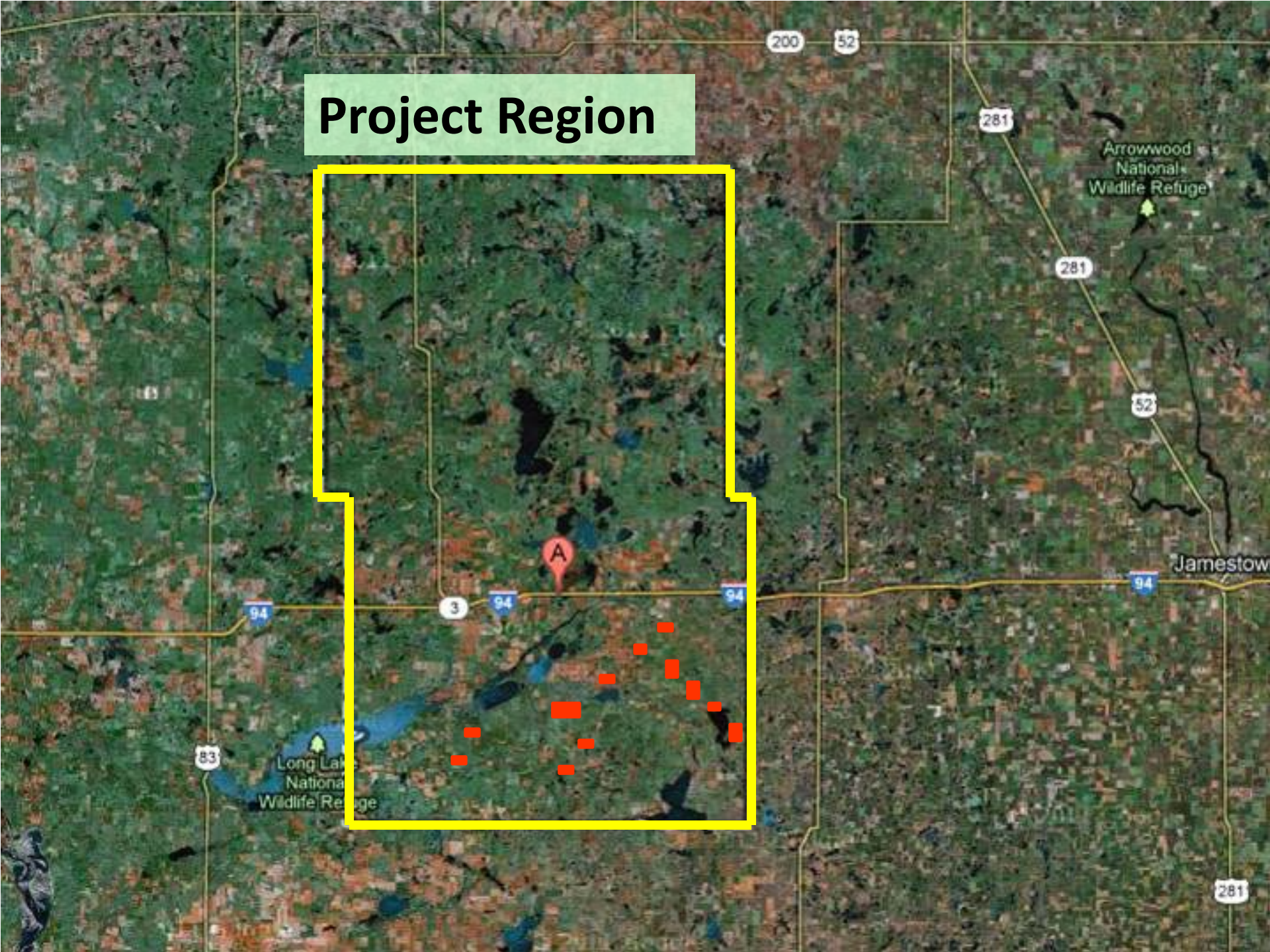


Participant Field

Project Area



# Project Region



# Agents of Conversion

---

- **Identified Agent**
  - New Breaking Request
  - OR two of the following: Signed affidavit, document history, or verifiable documentation
- **Unidentified Agent**
  - Financial Viability of Conversion
  - Demonstration of Historical Conversion
- **Determine Baseline**
  - Management Practices

# Additionality

---

- Regulatory Surplus
- Common Practice
  - Two Step Test
  - Identification of Essential Distinctions
- Financial Implementation Barrier
  - Appraisal Product
  - 40% threshold, 100% for full accounting



Carbon Pools	Included?
Above-ground woody biomass	Optional
Above-ground non-woody biomass	Optional
Litter	No
Below-ground biomass	Optional
Soil organic carbon	Yes
Dead wood	No
Wood products	No

Sources	Gas	Included?
Soil Management	CO <sub>2</sub>	No
	CH <sub>4</sub>	No
	N <sub>2</sub> O	Yes
Fossil fuel combustion	CO <sub>2</sub>	Optional
	CH <sub>4</sub>	No
	N <sub>2</sub> O	No
Biomass burning	CO <sub>2</sub>	No
	CH <sub>4</sub>	Yes
	N <sub>2</sub> O	Yes
Livestock emissions	CO <sub>2</sub>	No
	CH <sub>4</sub>	Yes
	N <sub>2</sub> O	No

# GHG Quantification

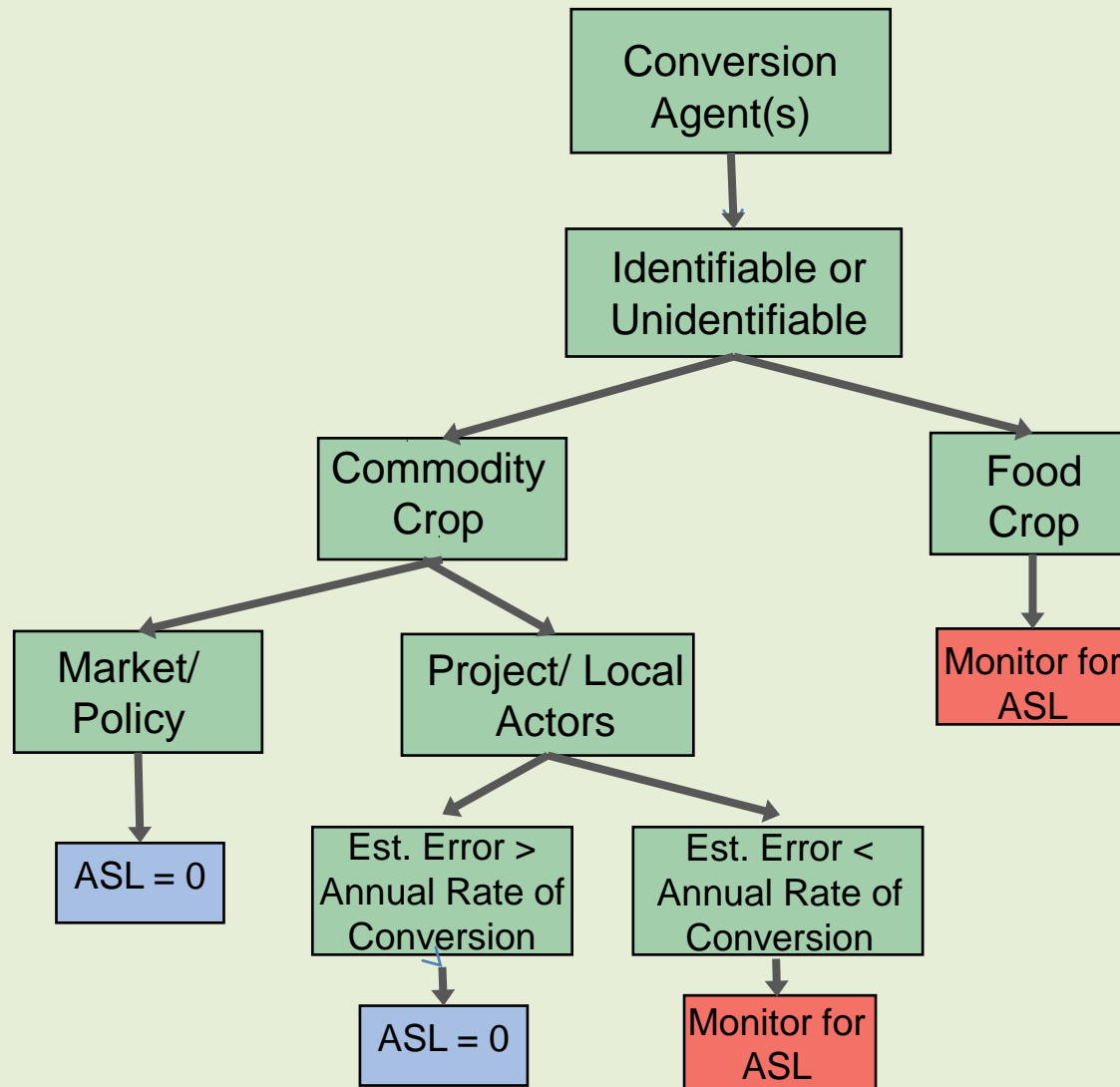
- Models, direct sampling, defaults, values from literature all allowable.



# Leakage

- Activity Shifting vs. Market Leakage
  - Expansion of commodity crop production driven by market forces.
  - Decision Tree to determine if Activity Shifting Leakage applicable
  - Default 20% Leakage Rate

# Leakage Decision Tree





# Questions?

---

## **Methodology Authors and Contributors:**

**Randal Dell**, Ducks Unlimited

**Joe Fargione**, The Nature Conservancy

**David Diaz**, The Climate Trust

**Benktesh Sharma**, Terra Global Capital

**Ashley Rood**, Environmental Defense Fund





# Further information

---

**Nicholas Martin**

Chief Technical Officer

American Carbon Registry

[nmartin@winrock.org](mailto:nmartin@winrock.org)

**Randal Dell**

Ducks Unlimited

[rdell@ducks.org](mailto:rdell@ducks.org)