

# Climate Action Reserve

## Orientation for Verifiers

**July 24, 2008**  
**2:00-5:00PM**

# WELCOME

**Robyn Camp**

**Vice President of Programs**

**California Registry**

# Overview

- **Overview of the Climate Action Reserve**
- **Overview of Verification Process**
- **Overview of Accreditation Requirements for Project Accounting**
- **General requirements for project accounting**
- **Sector-specific requirements:**
  - Landfills
  - Livestock manure management
  - Forests
  - New sectors
- **Demonstration: Climate Action Reserve software**

# Accreditation for Project Verification

- Verifiers must be accredited to ISO 14065 to verify projects for the Climate Action Reserve.
  - ANSI now administering; screen for CCAR requirements
  - Likely future cross-recognition for ISO 14065 accreditation by other IAF partners (e.g., UKAS, SCC)
- California Registry does not intend to issue any new verification accreditations
  - Projects
  - Entity, including specific sectors
- As of **June 1, 2009**, only those accredited by either ANSI or CARB will be eligible to perform verifications under the California Registry.

# Climate Action Reserve

- Software Live! as of May 12, 2008
- 2 forest projects verified to date by California Registry accredited verifiers
  - Van Eck Forest
  - Garcia River Forest
- Both are conservation-based forest management
  - Verification team: SGS + SCS
  - Together > 200,000 mtCO<sub>2</sub>e (cumulative 2004-2006)
  - Cal-FIRE oversight
- Additional forest/landfill/livestock projects in pipeline

# Overview of Climate Action Reserve

**Joel Levin**  
**Vice President of Business Development**  
**California Registry**

# What is the Climate Action Reserve?

- Background on CCAR
- New CCAR program to register and track carbon reduction projects throughout the U.S.
- Climate Action Reserve
  - Will be established as its own name, but co-branded with CCAR
- Intended to be the premier place to register U.S. voluntary carbon reduction projects

# Why is CCAR doing this?

- Current status of voluntary carbon market
  - Bad press, skeptical public
- Key concerns
  - Projects aren't real or additional
  - Projects create other social or environmental problems
  - Credits are being double counted or sold
- CCAR reputation for high-quality accounting standards can address these concerns
- CCAR goal: To be the recognized “seal of approval” for market participants



# Current Project Protocols

- Protocols developed in an open, public, transparent process
- Protocols developed for specific project typologies
  - Conservation Management Forestry
  - Avoided Deforestation
  - Reforestation
  - Urban Forestry: Next Month
  - Livestock
  - Landfills

# Protocols Planned for Development: Next 18 Months

- Bus rapid transit
- N<sub>2</sub>O reduction in acid plants
- Tidal wetland restoration
- Blended cement production
- Methane avoidance from composting
- Truck stop electrification
- Boiler efficiency
- Bus fleet upgrades
- Soil sequestration-crops
- Soil sequestration-rangeland

# Project Listing

- Project submittal form, submitted through the system
- CCAR approves general outline of project
- Similar to validation
- Once listed, project is visible on CCAR website
- Can be done before or after project activities start

# Verification

- Developer selects a verifier
- Verifier submits conflict of interest form
- Developer hires verifier
  - Verifier reviews project against the appropriate protocol
  - Verifier makes determination about how many tons of reduction (or sequestration) has taken place
- Project documents and verifier's opinion are submitted to CCAR

# Accredited Verifiers

- Det Norske Veritas   
- Eastern Research Group  
- E. H. Pechan and Associates 
- First Environment  
- NSF-ISR   
- Ryerson, Master and Associates  
- SCS Engineers 
- SGS Climate Change Program  

# Crediting Reductions

- Developer opens an account on the Reserve
  - Web-based banking software
- When CCAR accepts the project documents and verifier's opinion, it credits the project developer's account with the appropriate number of CRTs (carbon reduction tons, pronounced "carrots")
  - Project documents are visible to the public
- Each CRT has a unique serial number for tracking
  - Includes embedded information about the project, project type, vintage, and location

# Trading

- Developer contracts to sell CRTs with an interested buyer
  - Financial transaction is outside of the system
  - Buyer must have an account on the system
- Developer instructs the system to transfer the CRTs into the buyer's account
- Buyer can hold them, retire them or trade them to someone else

# Why do people buy?

- Voluntary Market
  - Pre-regulation
  - Retail sales
  - Voluntary commitments
- Mandatory Market
  - Compliance
  - Trading/speculation



# Why register with the Reserve?

## What is the value to project developers?

- Larger market and more demand for project reductions
- Why?
  - CCAR reputation for integrity in carbon accounting
  - Strong support by State of California and environmental organizations
  - Strong commitment to public transparency in all stages of project (protocols, project documents, retirements, etc.)
  - Potential for use in mandatory market
  - Link to VCS

# Projects

- 2 forestry projects currently registered
  - Over 200,000 CRTs issued
- 4 livestock methane projects submitted
- ~25 are under development for existing protocols (that we are aware of)

# Contact Information

Joel Levin

California Climate Action Registry

213-891-6927

[jlevin@climateresistry.org](mailto:jlevin@climateresistry.org)

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

# Overview of Verification Process

**Sarah Stanner-Cranston**

**Program Manager  
California Registry**

# CA Registry Responsibilities for Verification



- Evaluate COI
- “Train the trainers”
- Provide protocol clarifications, updates, interpretation in consultation with State
- Conduct Project & Verification Report review
- Develop additional verification protocols

# CARB Verification Update

- CEC has transitioned its oversight to CARB
- New COI forms reflect this change
- California Registry's ***Policy and Process for Determining Potential for Conflicts of Interest Between Registry Members and Verifiers*** outlines thresholds and criteria

# CA Registry Advisors

- Board of Directors, Technical Workgroups, Stakeholders
- State Agencies:
  - Air Resources Board (CARB)
    - Approve verifiers and oversee verification activities
  - Department of Forestry (Cal-Fire)
    - SB 812: Develop guidance for reporting GHG emission reduction projects
    - Helped to approve forest verifiers and oversee forest verification activities
  - Other agencies, as appropriate (IWMB, CDFA, etc.)

# Conflict of Interest (COI)

- What is a COI?
  - Situation where a verifier may be unable to provide an objective review of a participant's data
- Evaluation of potential for COI
  - Case-by-case assessment
  - Recent or current financial relationships?
  - Has verifier provided consulting on GHGs?
- COI review promotes integrity of reported emissions



# COI Continued...

- Must complete self evaluation and submit to California Registry prior to any individual verification engagement
- Must complete case specific COI Assessment Form and submit to the California Registry 10 days prior to commencing verification activities (e.g. site visits, interviews, etc.).

# COI & Registry Notification

- Must provide the California a copy of the verification schedule **at least 15 days** before the commencement of work
- California Registry/ARB needs the opportunity to decide if it will observe verification activities.
- Notification can be submitted with COI Assessment Form if timing allows, but recognizes COI Assessment Forms may be submitted at the stage of contract negotiation or tender.

# Accreditation Process

- Firms seeking accreditation status as a project verifier need to be ANSI approved under ISO 14065

**AND**

- Meet program-specific requirements defined by the California Registry in relation to its project protocols.

# Project Verifiers

- This year: rely on currently approved verifiers
- CCAR streamlining accreditation processes
- ANSI screening ADDITIONALLY for:
  - Sector specific qualifications
  - Experience with project accounting
  - Forests: Unique, require CA RPF team member
- Goal: National/North American-wide accreditation

# Accreditation Process

- Can be accredited for a simple scope, but won't mean they are accredited for projects!!
- Must be WITNESSED for that sector if they want to be project accredited
- There is a possibility no projects will be available within the 1 year timeline, if so:
  - Oversight Committee will consider extending witnessing deadline
- Applicants must demonstrate both understanding AND experience within the specific sector applied accredited under

# Landfill Accreditation

- Verification bodies must demonstrate:
  - KNOWLEDGE of:
    - Landfill Operations, Landfill Gas Capture and Control Equipment and Operations
    - Capture, Destruction, and Monitoring of Methane Gas
    - Relevant state/local/federal regulations governing landfill operations
  - EXPERIENCE with:
    - Landfill Operations Work (i.e. previous verification/validation, project design document preparation, environmental compliance documentation preparation, etc.)

# Livestock Accreditation

- Verification bodies must demonstrate
  - KNOWLEDGE of:
    - Confined Animal Feeding Operations
    - Biodigester Equipment and Operations
    - Capture, Destruction, and Monitoring of Methane Gas
    - Relevant state/local/federal regulations governing livestock operations
  - EXPERIENCE with:
    - Livestock Operations Work (i.e. previous verification/validation, design document preparation, air/water compliance documentation preparation, etc.)

# Forest Accreditation

- Verification bodies must demonstrate
  - KNOWLEDGE of:
    - Forest Inventories
    - Forest Growth and Yield Projections
  - EXPERIENCE with:
    - Preparing and Maintaining Forest Inventories, Modeling Growth and Yield Projections

## AND:

- at least one CA Registered Professional Forester (RPF) with a minimum of 5 years of experience on its staff **OR** on the staff of a partner organization



# Protocols Used for Project Verification

- *Use both GRP, GVP, Project Protocols AND Project Verification Protocols*
- GVP is a companion document to GRP
- *Verifier's* guidance for assessing compliance with CA Registry reporting requirements
  - Companion document to each reporting protocol
  - Outlines verification process and verification activities
  - Useful reference for participants
- Organic documents
  - Available at [www.climateregistry.org/PROTOCOLS](http://www.climateregistry.org/PROTOCOLS)
  - Draft form released on our website pending NDA finalization

# Project Verification

- Project developer or responsible party's GHG assertion
- Principles or requirements in relation to the specific project protocol to be verified against
- GHG project plan or documentation
- Processes for identifying, selecting & justifying baselines

# Project Verification cont.

- Operational & control procedures to be implemented by the project developer or responsible party to ensure quality, integrity & security
- Principles & requirements to be met by project protocols in relation to materiality thresholds or performance targets
- Evidence of any changes as a result of any previous verifications
- Reports with statements of emissions reductions or removals related to the GHG assertion

# Project Verification cont.

- Develop a verification plan based on size & complexity of project
- Assessment of preliminary findings for potential errors & omissions, weakness in controls, GHG information management systems
- Sample plan using risk-based assessment to determine materiality issues, GHG quantification methodologies, access to and relevancy of external emissions factors

# Reporting & Control Risks

- **Incompleteness:** Exclusion of significant sources, incorrectly defined boundaries, leakage effects
- **Inaccuracy:** Double counting, significant manual transfer of key data, inappropriate use of emission factors
- **Inconsistency:** Not documenting methodological changes in reduction or removal calculations
- **Data Management & Control Weaknesses:** No internal review processes, insufficient data, no calibration and maintenance of key processes

# Uncertainty

- **Baseline Uncertainty:** Assumptions used in the development of baseline scenarios, particularly with projections (i.e. performance of baseline technology)
- **Data Uncertainty:** Technical uncertainties associated with determination & measurement of parameters to estimate GHG emissions reduction or removals (e.g. output, efficiency of plant/networks, emission factors)
- Should be conservative estimates – but reasonable for both!

# Verification Principles

- **Relevance:** Ensure that projects reflect the GHG emissions reductions or removals of the entity and include information in accordance with the program rules for defining reporting boundaries and sources.
- **Completeness:** include and identify any emission reductions that may have occurred
- **Consistency:** application of measurement and calculation methodologies so that performance within entity can be compared from year to year & all participants using the same protocols to enable inter-entity comparisons
- **Accuracy:** less than 5% measurement and reporting error (for some instances – Forest projects 10-15%)
- **Transparency:** calculations laid out in a manner that is clear and repeatable

# Reporting Deadlines

- Project verification occurs annually
- Reporting deadline for project developers is August 31<sup>st</sup> in the year following the reduction year
- Verification deadline is December 31<sup>st</sup>



# LANDFILL PROTOCOL

**Derek Markolf**  
**Senior Policy Manager**  
**California Registry**

# Protocol Development Workgroup

- CARB
- CIWMB
- Bay Area AQMD
- Californians Against Waste
- Covanta Energy
- CRRC
- EcoSecurities
- Environmental Defense
- ERM
- LACSD
- NSWMA
- NorCal Waste
- Rural Counties – ESJPA
- Sacramento County
- SCS Engineers
- SWANA
- US EPA
- Veolia
- Waste Connections
- Waste Management

# Project Protocol Components

- Define the GHG reduction project
- Determine eligibility (e.g., “additionality”)
- Establish the accounting boundary
- Calculate GHG reductions
  - Baseline emissions
  - Project emissions
- Provide monitoring guidance
- Verify project performance
- Register GHG reductions

# The Landfill GHG Reduction Project Defined



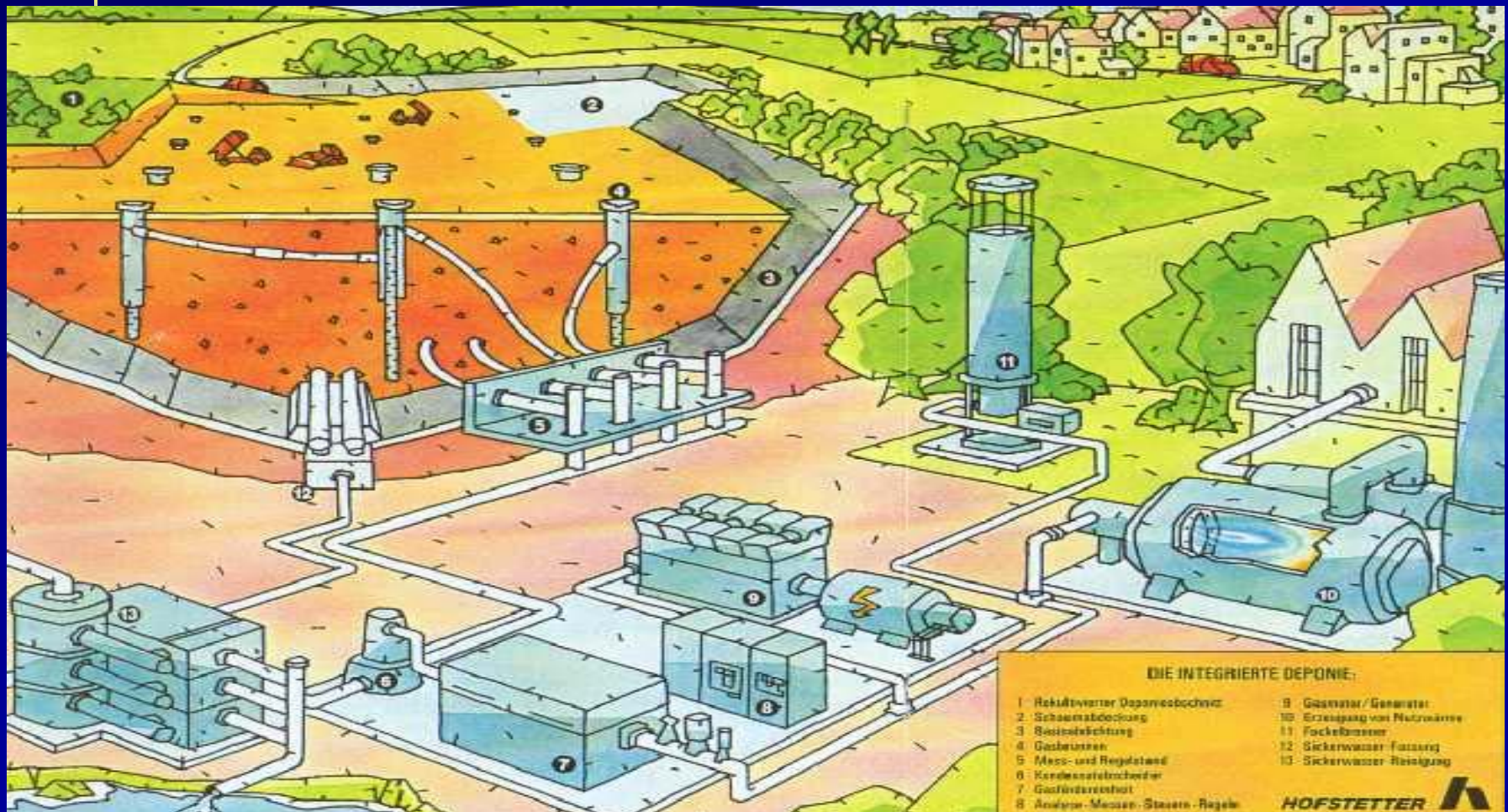
The voluntary installation of a landfill gas control system for capturing and combusting methane gas that would have otherwise been emitted to the atmosphere as fugitive emissions from the landfill surface

# LFG Control System

- Wells, pipes, blowers, caps and other technologies that enable or enhance the collection of landfill gas and convey it to a combustion technology.
- Combustion of the LFG by:
  - flaring it
  - combusting it in an engine or boiler to generate energy
  - or purifying & injecting it into natural gas pipelines



# LFG Control System



# LFG Well Head



# Determining Eligibility

- Eligibility in five steps:
  - Step 1: Performance threshold assessment
    - Assessment of the market penetration of technology to determine if BAU?
  - Step 2: Regulatory test
    - Is it required by law?
    - Narrows pool of eligible landfills to landfills of small – medium size



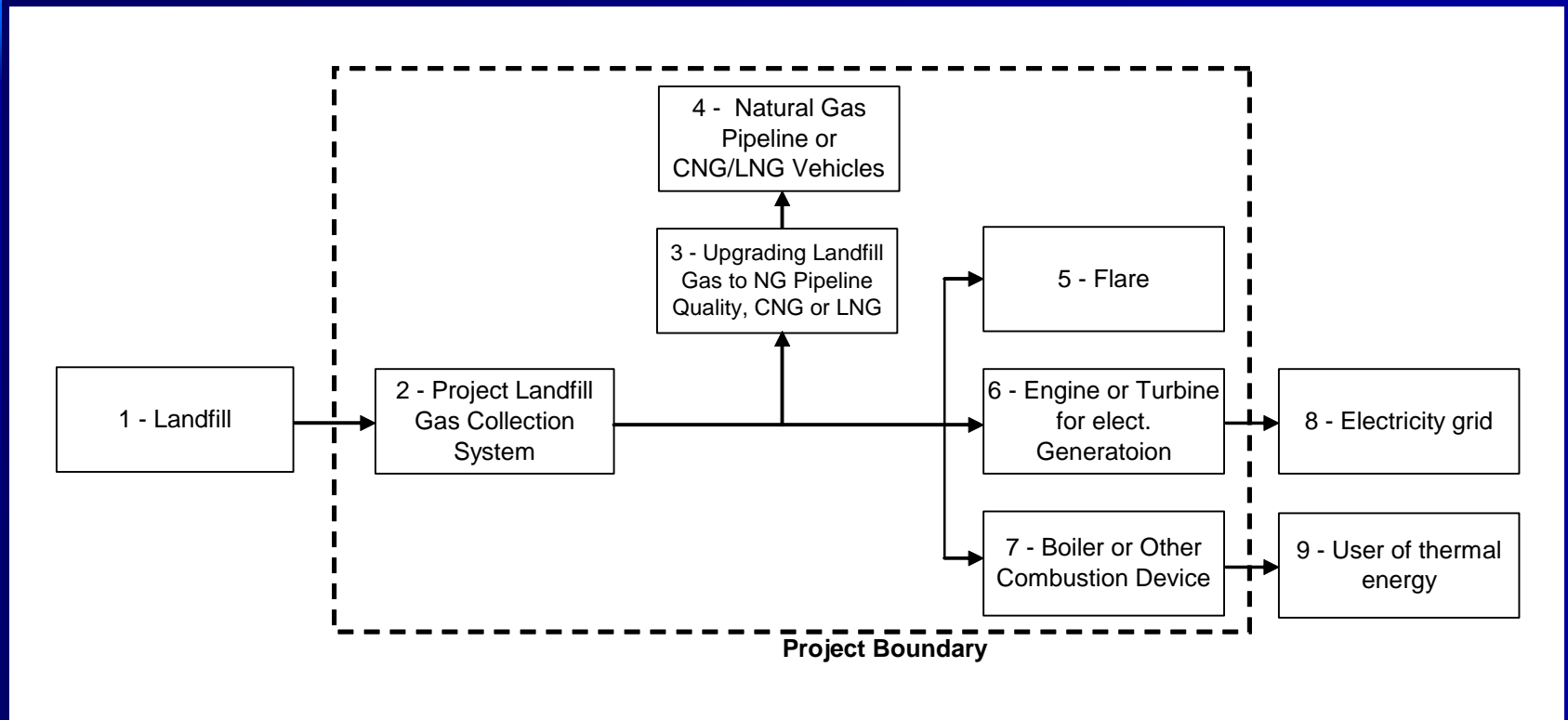
# Eligibility Continued

- Step 3: Project Start Date
  - Projects starting operation after Jan 1, 2001
- Step 4: Project Location
  - Must be based in the United States
- Step 5: Regulatory Compliance
  - Project activity must comply with all air & water quality regulations

# Project Life

- 10 Year Project Life irrespective of changes in performance standard
  - If new regulations are enacted requiring a LFG control system at project location:
    - Emission reductions can be reported to the Registry up until the date that the landfill gas control system is required to be operational by regulation

# Project Accounting Boundary



# Calculating Emission Reductions

- Baseline scenario = all uncontrolled methane emissions are released to the atmosphere.
- No widely accepted method exists for determining the total amount of uncontrolled landfill gas emissions to the atmosphere from landfills.

# Calculating Emission Reductions, cont.

- Project GHG emissions reductions equal:
  - Total amount of methane collected from the landfill, metered and combusted by the project landfill gas control system, minus
    - Methane oxidized by soil in baseline scenario
    - Effective radius of influence adjustment
      - Only for additional projects at facility where collection system already in place.
    - Discount factor for use of handheld CH<sub>4</sub> analyzer
    - Carbon dioxide and methane from fossil fuel combustion
    - Indirect carbon dioxide from grid electricity use

# Protocol Details

## ■ Monitoring Plan

- Direct measurement

- Continuous rate of LFG flow

- Methane concentration of LFG sent to the combustion device

- Continuous or hand-held measurement allowed

## ■ Third Party Verification

- Annual verification by a Registry approved entity

- Verifiers must meet sector specific requirements and complete the Registry's landfill project training session

# Sector-Specific Requirements for Verifier Accreditation

- Knowledge and experience with GHG emission reduction project accounting (i.e. additionality, baseline emissions, project emissions, leakage, permanence, etc.)
- Knowledge and experience with the capture, destruction, and monitoring of methane gas resulting from landfill operation
- Knowledge of relevant local, state, and federal regulations governing landfill operations

# Contact Information

Derek Markolf

Senior Policy Manager

California Climate Action Registry

[derek@climateresistry.org](mailto:derek@climateresistry.org)



# LIVESTOCK PROTOCOL

**Syd Partridge**  
**Policy Associate**  
**California Registry**

# The Protocol Workgroup

- CA Air Resources Board
- CA Department of Food and Agriculture
- California Farm Bureau
- Western United Dairymen
- U.S. EPA
- The Center for Energy Efficiency and Renewable Technology
- Environmental Defense
- UC Davis
- Applied Geosolutions
- AgCert
- The Dolphin Group
- Inland Empire Utility Agency
- Manitoba Agriculture, Food and Rural Initiatives
- Sustainable Conservation

# The GHG Reduction Project Defined

- Voluntary installation of a biogas control system
  - Captures and controls methane that would have otherwise been generated and emitted to the atmosphere through uncontrolled, anaerobic manure treatment and/or storage.

# Biogas Control System

- A manure treatment system (digester) that enhances manure breakdown through controlled anaerobic digestion
- Captures methane biogas, and
- Controls the biogas by:
  - Flaring
  - Combustion in an engine or boiler (to create electricity or thermal energy)
  - Purification and injection into natural gas pipelines or use as CNG/LNG vehicle fuel
  - Electrochemical destruction in a fuel cell\*

# Determining Eligibility

(i.e. additionality)

- Eligibility in five steps:
  - Step 1: Performance threshold assessment
    - Top-down: performance standard
    - Assessment of the market penetration of BCS technology to determine if BAU?
      - Voluntary installation of BCS is beyond BAU
  - Step 2: Regulatory screen
    - Is it required by law?
  - Step 3: System started operation after Jan 1, 2001

# Eligibility Continued

- Step 4: Project Location
  - Must be based in the United States
- Step 5: Regulatory Compliance
  - Project activity must meet all air & water quality regulations
- 10 Year Project Life irrespective of changes in performance standard or regulation.

# Project Accounting Boundary

**All CH<sub>4</sub>, CO<sub>2</sub> emitted from:**

- **Waste Production**

- Animal housing and confinement – freestall barns, corrals, milking parlor, etc.

- **Waste Treatment and Storage**

- Waste treatment lagoons, storage ponds, compost piles, dry stacks, solid separators, etc;
- Includes the biogas control system and its effluent/overflow pond under project conditions.

- **Waste Disposal**

- (On-site and off-site land application, bedding, off-site transport)

- **Un-Combusted Biogas** (Under project conditions)

**N<sub>2</sub>O not included in boundary due to uncertainty in Emission Factors**

# Calculating Emission Reductions

- Emission Reductions =  
(Baseline Emissions - Project Emissions)
- The Registry has developed an excel-based calculation tool to assist with project reporting.
- Beta-version of tool ready for use.
  - Has been reviewed by project developers, CARB, and US EPA. Feedback from first-time users is *much* appreciated.



# Data Requirements

Site specific data requirements for calculations:

- Livestock Population by Category
- Monthly Average Temperature
- Baseline Manure Handling Data (what waste went to what storage/treatment system)
- BCS Collection and Combustion efficiency
- Biogas Flow, Temp, Pressure
- CH<sub>4</sub> Content
- Non-BCS waste handling data
- CO<sub>2</sub> from stationary and mobile combustion

# More Details

## ■ Monitoring Plan

- Direct measurement
  - Continuous rate of biogas flow
  - Methane concentration of biogas to the combustion devices, on a quarterly basis
- Semi-annual metering equipment calibration

## ■ Third Party Verification

- Annual verification by a Registry approved entity
  - Registry will require verifiers of emission reduction projects to have ANSI accreditation starting June 2009
  - Additionally, Verifiers must meet project specific requirements and complete the Registry's project-specific training session.

# Sector-Specific Requirements for Verifier Accreditation

- Knowledge and experience with GHG emission reduction project accounting (i.e. additionality, baseline emissions, project emissions, leakage, permanence, etc.)
- Knowledge of confined animal feeding operations
- Knowledge of biodigester equipment and operations
- Knowledge of the capture, destruction, and monitoring of methane gas resulting from biodigester operation
- Knowledge of relevant local, state, and federal regulations governing livestock operations

# Contact Information

Project Protocols can be found at:

[http://www.climateregistry.org/tools/protocols/  
project-protocols.html](http://www.climateregistry.org/tools/protocols/project-protocols.html)

Syd Partridge  
Policy Associate  
[syd@climateregistry.org](mailto:syd@climateregistry.org)

California Climate Action Registry  
523 W. 6th St. Suite 428  
Los Angeles, CA 90014  
213-891-1444

# FOREST PROTOCOLS

**Robyn Camp**  
**Vice President, Programs**  
**California Registry**

# Overview

- Forest Entity
  - Biological (Forest protocols)
  - Non-biological (GRP)
- Forest Projects
  - Reforestation
  - Conservation (avoided deforestation)
  - Conservation-based management

# Forest Sector Protocol

- Forest entity:
  - Legal entity or individual who owns > 100 acres of commercial/non-commercial trees
- Purpose:
  - Track changes in entity carbon stocks and any related CO<sub>2</sub> emissions (i.e., biological)
- Geographic boundaries:
  - CA (certified) or US (not certified)

# Forest Sector Protocol (cont'd)

- Entity Baseline (Optional)
  - 2 components: characterization & quantification
  - Use simulation models for baseline projections
- Quantification requires complete inventory of carbon pools
  - Required and optional carbon pools
  - Minimum confidence standards
  - Guidance and standards for sampling methodology
  - Provide model equations for biomass calculations
- Stock change accounting
  - Declines in carbon stocks quantified as GHG emissions



# Forest Entity Reporting Process



## Year 1:

- Establish entity boundaries, baselines and reporting responsibility
- Collect and estimate C inventory
- Verify biological C stocks + CO<sub>2</sub> emissions

## Year 2+:

- Report entity C stocks
- Verify non-biological emissions
- Verify biological C stocks + CO<sub>2</sub> emissions at regular intervals

# Characterizing a Baseline

- FSP Section V (pages 17-20)
- Optional but *strongly* encouraged
  - Must be updated when:
    - Structural change
    - Shift in sources
    - Catastrophic event
    - Improved measurement
    - Inaccurate assumptions
    - Changes in management practices

# Reporting Requirements

## ■ Required Pools (verified)

- Tree biomass
- Standing dead biomass
- Lying dead biomass

## ■ Optional Pools (not verified)

- Herbaceous understory and shrubs
- Soil
- Litter and duff
- Wood products

# Quantifying Stocks & Biological Emissions

## Required:

1. Develop inventory methodology and sample plots
  - Table 1.1 Minimum Required Sampling Criteria
2. Estimate C in live trees from sample plots
  - Table 2.1 Equations for Tree Species Biomass Estimates
3. Estimate C in standing dead biomass
4. Estimate C of lying dead wood

# Quantifying Stocks & Biological Emissions (*cont'd*)

## Optional:

5. Estimate C in wood products
6. Estimate C in shrubs and herbaceous understory from sample plots
  - Appendix E (aboveground biomass for some forests)
7. Estimate C in litter and duff
8. Estimate C in soil

## Required:

9. Sum C pools
10. Use models to estimate & forecast C stocks (baseline & annual reporting)

# Use of Models

- Models identified in protocols are pre-approved

CACTOS

CRYPTOS

FCS

SPS

VFP

FREIGHTS

CRYPTOS Emulator

# Use of Models (cont'd)

- Other models acceptable if:
  1. Open, rigorous peer-review process
  2. Parameterized for specific conditions
  3. Use consistent with intended scope
  4. Assumptions and variables clearly documented
  5. Sensitivity analysis
  6. Periodically reviewed

# Forest Project Protocol

- Forest Project:
  - A planned set of activities that removes, reduces, or prevents CO<sub>2</sub> emissions in the atmosphere by conserving and/or increasing on-site forest carbon stocks
  - Eligible for verification by Registry as GHG reductions
  - CA only
  
- Threshold requirements (per SB 812)
  - Permanent easement
  - Native species
  - Natural forest management
  - Regulatory additionality



# Forest Project Baselines

- Project baseline (required)
  - What would have happened in absence of project
  - Approaches prescribed by Project Protocol
  - Vary by project type
  - Projection over time
  
- Baseline elements
  - Characterization (qualitative)
  - Quantification: same process as entity level but has higher confidence requirements and sliding – scale deduction based on confidence
  - Model equations provided by Registry for biomass calculations

# Project Baseline Characterization



## ■ Reforestation:

- Out of forest cover (i.e.  $<10\%$  tree canopy cover) for past ten years
- Expected future practices on land based on practices (or lack thereof) of previous ten years

## ■ Conservation-based forest management:

- CA Forest Practice Rules

## ■ Conservation:

- Immediate site specific threat or
- Land use conversion trends (state data)



# Additionality

- Project activity must exceed baseline (i.e., what would have happened otherwise), including mandatory legal requirements
- Must characterize & quantify project activity





# Permanence

- Permanence (i.e., duration):
  - Perpetual easement dedicates land to permanent forest use (i.e. secures land base) and secures “additional” activities
  - Annual reporting to Registry verifies duration of GHG reductions (i.e., storage of additional carbon)

# Leakage

- Leakage:
  - Activity-shifting (on-site): assessment/quantification required
  - Activity-shifting (off-site): assessment required
    - Registry to continue effort re: quantitative approach
  - Market leakage assessment/quantification strongly encouraged
    - Registry to continue effort re: quantitative approach

# Updates in Progress

- Applicability outside of CA
- Public Lands
- Urban Forestry Protocol (expected August 2008)

# NEW SECTORS

- Will work with ANSI to define any specific requirements
- Relatively rapid roll-out of project methodologies anticipated

# Industry & Project Protocols

## General Reporting Protocol

- Based on GHG Protocol
- Version 3.0 (March 2008)

## Entity Protocols

- Cement
- Electric power generation, transmission & distribution
- Forests (biological emissions)
- In Development:
  - Natural Gas T&D (May 2008)
  - Oil & Gas E&P
  - Wastewater
  - Local Governments

## Project Protocols

- Forest
  - Forest management projects
  - Reforestation
  - Conservation (avoided deforestation)
- Livestock (Manure management)
- Landfills (CH<sub>4</sub> capture & destruction)
- In Development:
  - Urban Forestry (Out for public comment)
  - Recycling/Waste Diversion
  - Nat Gas O&M improvements
  - Boiler efficiency
  - Codigestion of biodigestion
  - Truck-stop electrification

Available at [www.climateregistry.org/PROTOCOLS](http://www.climateregistry.org/PROTOCOLS)



# Reserve Online Software

- The Reserve online software is up and running!
- *You will need to open a Reserve account in order to conduct Reserve project verifications.*
- Accounts are free to approved verifiers.
- Once complete, you will receive a confirmation e-mail. Complete the actions requested in the confirmation e-mail.

# Reserve Online Software

- Sign the Terms of Use (available for download off the Account Registration page) and send to The Reserve via e-mail, fax, or mail (e-mail is preferred).
- *Note that The Reserve will not be able to approve your account until the properly executed Terms of Use is received.*
- Once your account has been approved, you, your clients, and The Reserve, will be able to manage the reporting and verification of your clients' projects through the online software.

Account Setup ? X

[Change Profile](#)  
[Invoices](#)

Account Management ? X

[View/Edit/Add Logins](#)

Reports ? X

[Event Log](#)  
[Accounts](#)  
[CRTs](#)  
[Invoices](#)  
[CRTs Transfer History](#)  
[Public Reserve Account Holder Directory](#)

Public Reports ? X

[Participating Companies](#)  
[Projects](#)  
[Project CRTs Issued](#)  
[Search Serial Numbers](#)  
[Accounts Disclosed to Public](#)  
[Retired CRTs](#)

Manage Projects

Project ID	Project Name	Project Status	Project Phase	Next Step	Verifier	Emissions Data	Documents	Number
CAR399	<a href="#">Lompico Conservation Project</a>	Registered	Registered, CRTs Released	Annual COI Renewal	Verifiably Verified	<a href="#">View/Update</a>	<a href="#">View/Upload</a>	8

[Submit New Project](#)

View, Transfer, and Retire CRTs

Account Balances

CRTs	View/Transfer CRTs
Primary Account	0
Active Accounts	0
Retirement Accounts	0
Total CRTs	0

Open Accounts

				Total Account 3
Account ID	Account Name	Account Name/Alias2	Account Type	View/Transfer CRTs
393	<a href="#">2007 CRTs for BAAQMD</a>		Active Accounts	0
389	<a href="#">2008 CRTs - Robyn</a>		Active Accounts	0
390	<a href="#">Default</a>		Retirement Accounts	0

[Create New Account](#) | [View/Edit Accounts](#)

Incoming CRT Transfers

CRTs			
From	Quantity of CRTs	Status	Confirm

# Discussions & QA