

# AGRICULTURAL SOIL CREDIT STANDARD

## (Draft for Review Only)

### INTRODUCTION

The following Agricultural Soil Credit Standard is an agriculture-based, industry-supported standard for the creation of carbon credits that can be marketed in a commodity trading system. Credits are achieved through the sequestration of carbon in the soil when specific agronomic practices are used and from the reduction of emissions by judicious use of energy, fuel and fertilizer applications in crop, grassland, and rangeland management.

### Background

The Kyoto Agreement set up a "cap-and-trade" system in which Green House Gas (GHG) emissions are required to be reduced and then "capped" within a set period of time. When the reductions cannot be met, emitters are allowed to purchase GHG equivalents (credits) through a commodity "trade" system. The net result should be a steadily declining amount of GHG in the environment. GHG credits must meet the following requirements in order to be considered fungible commodities eligible for trade:

- **Real:** measurable and quantifiable
- **Verified:** by an independent party
- **Additional:** project activities shall go beyond business as usual
- **Exclusive:** credits are counted and sold only once
- **Eligible:** type of projects or country of origin may be restricted
- **Permanent:** reductions shall have duration over a specified amount of time

Agriculture related credits were not included in the Kyoto Agreement and at present only a few governments regulate them. The US has an active, voluntary, unregulated commodity market for agricultural carbon credits, but the value of a carbon credit (1 metric ton of carbon) is very low compared to carbon credits from other sources offered in a regulated market. The reason can be traced to the lack of Federal oversight and the various perceptions regarding how the criteria listed above are met by agricultural credits.

The intent of the industry is to write a standard based on sound science and internationally recognized quality management systems that can meet the criteria for acceptance in a regulated market. It is hoped that the standard will become the basis of legislation for agricultural carbon credits and will receive oversight by a Federal Agency.

### Standard Writing Process

In December 2007, representatives of Novecta, a consulting company owned by the Iowa and Illinois Corn Growers Associations, began a discovery process by meeting with the officials of the Chicago Climate Exchange, the US commodity market for agricultural carbon credits. The purpose of this meeting was to discuss the existing market operation and determine whether it would be possible to write the desired standard. A decision was made to proceed with the discovery process by doing more research of worldwide markets and the existing US market.

Novecta representatives interviewed, either directly or by telephone conference, a representative cross section of stakeholders in the carbon credit market during May and June 2008. Aggregators, verifiers, scientists, agricultural companies, and other interested persons unanimously supported the idea of a carbon credit standard for the industry. Novecta representatives made it clear during these discussions that its role was to facilitate the industry standard and that funding would come from small stipends offered by a large number of stakeholders. The intention was to insure that no person or organization had a controlling interest in the standard and that the standard would reflect industry concerns and benefits.

A group of 18 persons, many of whom had been interviewed in the discovery process, met on August 25-26, 2008 at Novecta headquarters in Des Moines, Iowa, for the first formal meeting of the Agricultural Carbon Standard Committee (Committee). The product developed by the Committee was the scope of the standard:

*Write a soil credit standard to account for the net change in primary greenhouse gases in the soil or resulting from changes to the soil interfaces including on-farm fuel use associated with production practices.*

Forestry and fuel used for marketing agricultural products were excluded from the scope because forestry is not comparable to crop production and fuel used for marketing would fall into a different category of credits. The inclusion of methane gas was considered and rejected for the same reasons.

Subcommittees were formed based on the criteria for carbon credit validity including: Permanence/Duration Subcommittee, Verification Subcommittee, and Quantification and Eligibility Subcommittee. The decision also was made that a specific model or quantification system would not be viable because of changing technologies and additional scientific research. Instead, a method for accepting measurement and quantification should be devised. Finally, the subcommittees were provided with a draft version of the standard which was loosely based on the National Organic Program (NOP) Regulations. The NOP was selected as an example because of its production management requirements and verification systems.

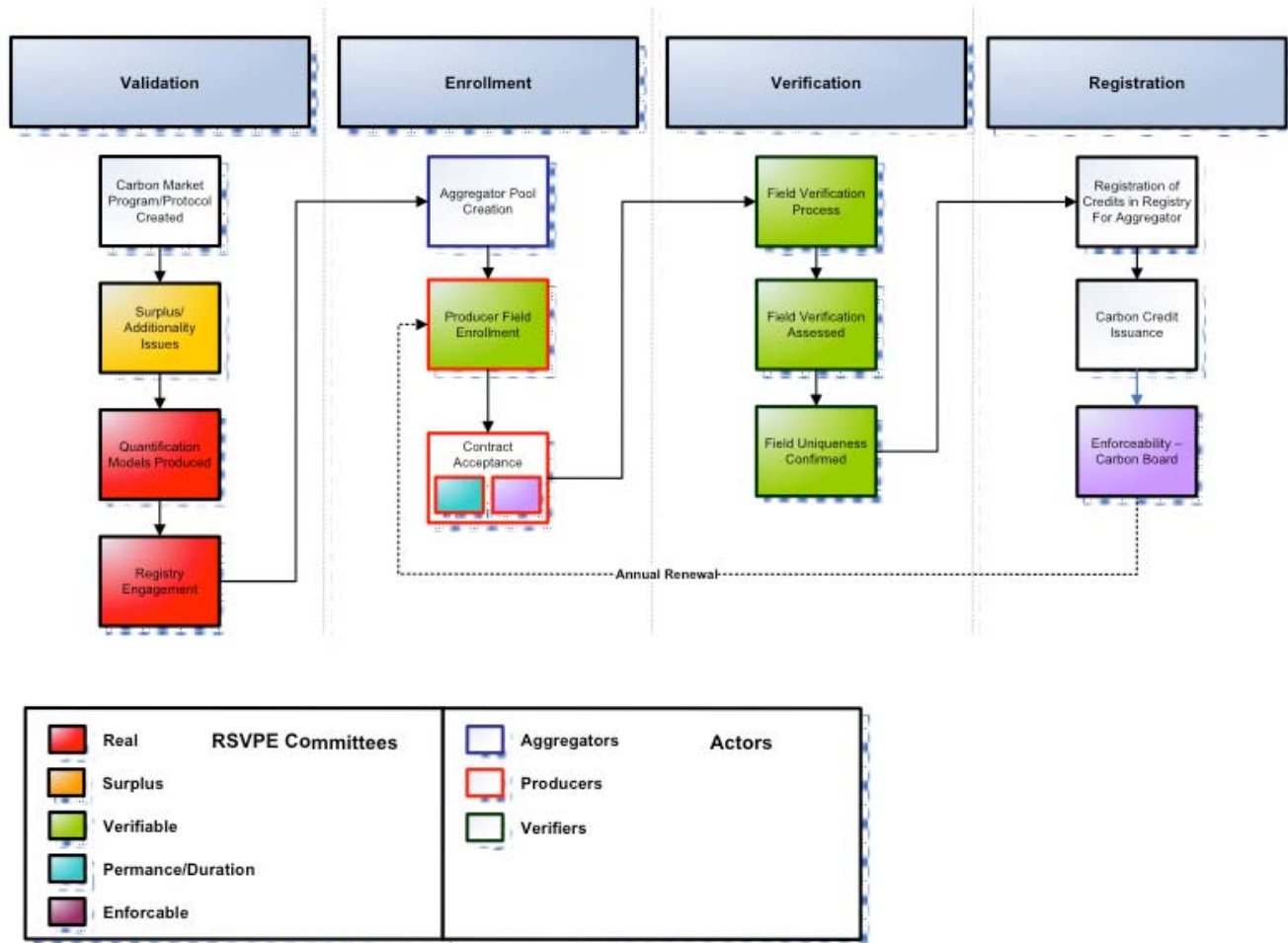
The Committee met a second time on October 26 - 27, 2008 in St. Louis, Missouri, to continue discussions. The meeting began with presentations by three scientists who have researched carbon sequestration in the soil. This information was very helpful in the subsequent discussion provided by the subcommittees. From the information gathered, a new draft which more closely addressed the industry's concerns was produced for discussion during the third meeting held again in St. Louis on January 26 - 27, 2009.

During the third meeting, the Committee was introduced to new, agricultural-based, definitions of **additionality** and **permanence**, two criteria which are critical to fungible carbon credits. New definitions were considered critically important because crop production cannot be directly compared to existing industrial carbon sequestering or mitigation projects. Typically, industrial credit projects are very stable and have specific points of measurement. Changes in carbon emissions or mitigation of emissions can be measured at a specific site over an agreed upon period of time, supporting the existing definitions of additionality and permanence. Agriculture does not fit well into the current model because production occurs in annual cycles influenced by seasonal activities and varying weather patterns. Soil types, irrigation, use of fertilizer, natural disasters, and individual producer situations contribute to the variability of agriculture.

At this time, the Committee agrees that **additionality** for agriculture results from a cropping cycle that is either planted directly or is naturally occurring as in rangeland. If there is more carbon in the soil at the end of a crop cycle than there was in the beginning of the cycle, then "additionality" has occurred. This definition is supported by existing science, which also supports the concept that agricultural carbon becomes more stable over a period of time as it migrates to greater soil depths. Additionality also occurs when it can be demonstrated that steps have been taken to mitigate Green House Gas emissions by reducing emissions from standard agricultural practice such as the application of fertilizers or the use specific of farm equipment. Stated more precisely; **additionality** results from the ongoing augmentation and maintenance of existing soil carbon stocks as well as from avoided emissions.

For the most part, the Committee agrees that **permanence** is a function of the farm aggregate collectively using credit practices of avoided emissions and carbon sequestration rather than the function of an individual producer. Variable conditions may cause an individual to temporarily change credit practices; however, not all farmers make the same changes each year. As an aggregate there is a **collective persistence** of carbon credits. Discussions with Committee members continue on this definition and more work will be done to substantiate the claim that when the effects of large groups of producers are measured collectively, credit practices increase each year.

The Committee also reached conclusions on Eligibility, Verification, Exclusivity, and Measurement and Quantification which are reflected in the Standard which follows. The following chart was developed to help understand the carbon credit life-cycle.



## Next Steps in Standard Development

It is the desire of the Committee that this Standard be reviewed by a group of stakeholders and interested parties. Based on those comments, the Standard will be revised and circulated broadly for public comment. The public comment will be reviewed and appropriate changes will be made to the Standard.

## The Existing System

Stakeholders in the current system include:

- Producers, whose agricultural practices retain carbon and reduce emissions;
- Aggregators, who register and enter into contracts with producers for the sale of carbon credits, place the credits on the market, and pay producers for the credits that are sold;
- Verifiers, who work on behalf of aggregators to ensure that the land and practices exist as described by producers;

- The carbon commodity market, which performs the exchange on behalf of producers and aggregators;
- Emitters, who purchase the credits on the commodity exchange market;
- Conservationists and other citizens who are concerned about the effects of GHG in the environment; and
- Public or private entities interested in the environmentally sustainable agricultural production.

Evaluation of carbon credits in the current market against the fungibility test:

- **Real: measurable and quantifiable**

Currently there are quantification protocols for determining changes in selected agricultural carbon emissions or sequestration. Developers of such protocols include the Chicago Climate Exchange (CCX), for soil carbon from conservation tillage, grass plantings, rangeland management, and the Intergovernmental Panel on Climate Change for nitrous oxide emissions from fertilizer. These quantification models are used for carbon credit determinations in current commodity trading.

- **Verified: by an independent party**

Verifiers are approved by the relevant credit registering entities including CCX, Clean Development Mechanism (CDM), Voluntary Carbon Standard, and others. Verifiers intending to use the protocols of the CCX must be registered with the CCX. Oversight of CCX verifiers includes monitoring by the CCX of promotional material for accurate portrayal of CCX rules and annual financial audit requirements. Aggregators hire verifiers from a group of registry-approved companies that compete for business based on cost and services provided.

- **Additional: project shall go beyond business as usual**

The model used in the current market addresses additionality issues through incorporation of specific criteria into the specific carbon protocol which is verified by verifiers.

- **Exclusive: credits shall be counted and sold only once**

Currently, there is no national database that can ensure that credits are registered only once. Each aggregator maintains a database of information, but there is no formal mechanism for comparing registration information contained in their databases.

- **Eligible: type of projects or country of origin may be restricted**

Currently, agricultural carbon is not included within the European Trading System or approved CDM methodologies. The carbon trading system in Alberta, Canada recognizes a number of agricultural carbon methodologies in their credit program, but the activities are restricted to the Province of Alberta.

- **Permanent: reductions shall have duration over a specified amount of time**

Currently, the soil carbon contracts of the CCX run for a minimum of 5 years. The contracts require full accountability for any reversal within the contract period and maintain specified levels of reserve credits during the contract period. Reversals beyond the contract period are not specifically addressed by CCX, but an implicit reserve of 20 percent is taken from all credits through the discounted crediting rate. Various other registries use specified terms of duration to address the permanence requirement. Strict accounting for permanence beyond the contract period is not addressed.

## The Proposed System

The stakeholders would remain the same with the following addition:

- The Agricultural Carbon Board would become a separate entity with additional responsibilities as described in Part F of the standard.

Evaluation of carbon credits using the fungibility test:

- **Real: measurable and quantifiable**

Specific practices and models for Measurement and Quantification will be approved through the criteria set in the standard.

- **Verified: by an independent party**

Aggregators and Verifiers will be approved by an entity such as an ISO Registrar or an organization approved under the USDA Guide 65 Program. Oversight will be provided through an annual quality audit. Aggregators and or project owners will continue to hire verifiers from a group of approved service providers.

- **Additional: project shall go beyond business as usual**

Additionality will be defined on the basis of a crop year and results from the ongoing augmentation and maintenance of existing soil carbon stocks as well as from avoided emissions.

- **Exclusive: credits shall be counted and sold only once**

The newly founded Agricultural Carbon Board will maintain a database of agricultural carbon credits based on location of the land geo-referenced by latitude and longitude in which carbon is sequestered and emissions are reduced.

- **Eligible: type of projects or country of origin may be restricted**

With oversight provided by an independent third-party or a Federal Agency, agricultural projects meeting the criteria for fungibility could be recognized in an International market. Individual eligibility of agricultural projects is described in the Standard.

- **Permanent: reductions should have a required minimum defined duration and not be readily reversible / temporary**

Permanence will be redefined suitable to agriculture. The concept of collective persistence will ensure duration over time. Soil carbon reserve pools (implicit and/or explicit) would serve as a risk buffer to provide insurance of adequate credits should a Project Owner fail to produce agreed upon quantities.

## **Standard Outline**

### **Part A - Definitions**

- 100 - The meaning of words.
- 101 - Acronyms
- 102 - Terms defined

### **Part B - What is covered in this standard**

- 200 – Creation of soil-based credits.
- 201 – Administration and Implementation.
- 202 - Conditions for carbon credits for sale or trade.
- 203 – Existing contractual agreements.
- 204 - Exemptions

### **Part C - Quantifying Carbon Credits and Validation of Quantification Methods**

- 300 - General
- 301 - Quantification of credits
- 302 - Validation of quantification methods.

### **Part D - Management Practices.**

- 400 - General
- 401 - Eligibility
- 402 - New projects
- 403 - Retroactive sequestration
- 404 - Management plan
- 405 - Credit and reduction practices
- 406 - Changes in practices

### **Part E - Project owners, verifiers, and aggregators**

- 500 - Project owner responsibilities
- 501 - Verifier Qualifications
- 502 - Verification system requirements
- 503 - Verifier Quality Management System Requirements
- 504 - Aggregator Qualifications
- 505 - Aggregation System Requirements
- 506 - Aggregator Quality Management System Requirements

### **Part F - Agricultural Carbon Board**

- 600 - General
- 601 - Creation and Maintenance of the Agricultural Carbon Board
- 602 - Board Activities
- 603 - Conducting Board Activities
- 604 - Board Leadership
- 605 - Board Member Responsibilities
- 606 - Review of the Board

## **Resources**

ISO 9001:2008 - *Requirements*

ISO Guide 65 - *General requirements for bodies operating product certification systems*

7 CFR Part 205, the National Organic Program

Documents published by the Chicago Climate Exchange

Voluntary Carbon Standard

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## Part A - Definitions

### Sec. 100 Meaning of words.

For the purpose of the standards in this subpart, words in the singular form shall be deemed to impart the plural and vice versa, as the case may deem.

### Sec. 101 Acronyms.

CCX	Chicago Climate Exchange
CDM	Clean Development Mechanism
CO <sub>2</sub> -e	Carbon Dioxide equivalent
GHG	Greenhouse Gas
ISO	International Organization for Standardization
NRCS	Natural Resource Conservation Service of the USDA
USDA	United States Department of Agriculture

### Sec. 102 Terms defined.

*Additionality.* The ongoing augmentation and maintenance of existing soil carbon stocks as well as from avoided emissions. GHG project activities shall result in carbon benefits additional to those that would have taken place in the absence of the activity and that are not already required by law or regulation. Environmental or emissions additionality refers to the carbon accounting procedures whereby projects must demonstrate real, measurable, and long-term results in reducing or preventing carbon emissions that would not have occurred in the absence of sequestration activities.

*Aggregator.* An individual or organization that meets the requirements of this standard and that serves as an administrative representative, on behalf of Project Owners, of individually owned or multiple GHG projects.

*Agricultural land management.* Methods used to decrease GHG emissions (including increasing carbon stocks in soils and biomass) through land use conversions and improved management activities for cropland, grassland, rangeland management and cropland, grassland, and rangeland systems.

*Baseline or Business as Usual.* The scenario that represents the sum of the changes in carbon stocks and where significant, GHG emissions, that would occur in the absence of the project conversion activity. The baseline or business as usual would represent a time prior to or at the beginning of a project.

*Biomass.* Above ground, all living plant parts above the soil; including the stem, branches, leaves, and seeds and other reproductive parts. Below ground, all living plant parts including live roots. Fine roots of less than (suggested) 2mm diameter are sometimes excluded because these often cannot be distinguished empirically from soil organic matter or litter.

*Buffer or Soil Carbon Reserve Pool.* Buffers or reserves provide a self-insurance mechanism whereby a credit reserve is maintained in order to replace unforeseen losses in carbon stock. An account into which each offset project is required to place a specified percentage of the carbon credits it earns.

*Explicit reserves.* A percentage temporary reduction to an agreed upon sequestration rate within a protocol, designed to create a reserve pool of credits that will not be received until the end of a contract period. This methodology creates an "escrow account" of credits within a contract pool or an individual project.

*Implicit reserves.* A percentage reduction applied to a quantification methodology that creates a permanent buffer by reducing the amount of credits eligible to be registered.

*Buffer credits.* Buffer credits refer to the carbon credits held in the buffer, which are credits that cannot be traded or sold until specified terms of duration have been met.

*Carbon credits.* A verified greenhouse gas emission reduction expressed as one ton of carbon dioxide equivalent (CO<sub>2</sub>e). The net carbon benefits that a project generates after accounting for leakage and implicit reserves. The number of verified credits issued to a project is equal to the total carbon credits generated. The number of credits that shall be withheld as a buffer reserve will be deducted from the verified credits and held by the buffer reserve administrator.

*Carbon dioxide equivalent (CO<sub>2</sub>e).* One metric ton of carbon dioxide, or its equivalent, in other greenhouse gases as determined by multiplying a metric ton of greenhouse gas times its global warming potential coefficient.

*Carbon Offset.* A carbon offset is a financial instrument representing a reduction in greenhouse gas emissions. Carbon offsets are measured in metric tons of carbon dioxide-equivalent (CO<sub>2</sub>e). A carbon offset serves as a counterbalance or compensation for greenhouse gas emissions.

*Carbon pools or Pooled Projects.* These represent multiple projects that are represented for sale or trade by a single aggregator.

*Carbon Sequestration.* Sequestration is the removal of carbon dioxide from the atmosphere and retention in a terrestrial system (soils) or in a geologic formation. A carbon sink.

*Carbon Stock.* Carbon stock defines a quantity of carbon stored in soils or biomass, expressed in metric tons of carbon dioxide equivalent.

*Carbon Storage.* The term defines retention of carbon in biomass, in soils, or in geologic formations.

*Contract.* A written agreement between a project owner and an aggregator in which project owners promise to abide by the terms and conditions of the carbon credit registry under which the carbon credit will be created and the terms of operation of the carbon aggregator.

*Contract period.* The contract period is the time for which the net greenhouse gas removals are verified and certified. The contract period is the same as the life of the project.

*Cropland.* Cropland is considered to be arable and tillable land that has a crop production history.

*Direct emissions.* Greenhouse gas emissions released on-site as a result of fuel combustion of fossil fuels, calculated emissions from the use of nitrogen fertilizers, fugitive emissions of fossil fuels or nitrogen fertilizers that result from spills or equipment leakage.

*Duration.* In reference to an offset project, the time period for which the project exists, or is intended to exist, as a fungible entity.

*Enrollment.* Enrollment is the initial step by a producer to participate in an offset project.

*Exchange.* An exchange is a market where raw or primary products are traded. These raw commodities are bought and sold in standardized contracts on a regulated commodity exchange.

*Fungible.* Fully exchangeable or tradeable and is recognized as sufficient to satisfy the emission reduction requirements of regulated and voluntary markets.

*Grassland.* Managed rangelands and pasture that is not considered as cropland, where the primary land use is grazing, hay, or ensilage removal. May also include grass-dominated systems managed for conservation purposes.

*Greenhouse Gas (GHG).* A greenhouse gas refers to any gaseous compound that absorbs infra-red radiation in the atmosphere and contributes towards the warming of the atmosphere.

*Land Owner.* The individual or organization that owns the land upon which carbon is sequestered or emissions are reduced.

*Leakage.* Net changes of greenhouse gas emissions that occur outside the project boundary which are directly attributable to the activities of the offset project.

*Methodology.* Step-by-step explanations of how emissions reductions or removals are to be estimated following scientific good practice; to be applied conservatively, transparently and thoroughly. A monitoring methodology refers to the method used for the collection and archiving of all relevant data. A baseline methodology refers to the method used to establish the baseline scenario.

*Monitoring methodology.* Data collection and verification activities that ensure the ongoing effectiveness of a project in creating emission reductions or removals during the defined contract period.

*Net Emissions Reductions.* Net emissions reductions define the greenhouse gas removals by the project activity minus the baseline scenario and leakage.

*Nitrification Inhibitor.* A substance which inhibits the biological oxidation of ammoniacal nitrogen to nitrate nitrogen.

*Non-permanence Risk Analysis.* Describes an analysis process by which a risk assessment is conducted, and subsequently verified independently by a qualified entity. A risk rating can then be awarded which determines the size of the buffer. The impermanence risk analysis evaluates four types of risk factors: project risk, economic risk, regulatory and social risk, and natural disturbance risk.

*Offset Project.* A registered project that produces carbon offsets equivalent to the amount by which the project reduces, sequesters or avoids greenhouse gas emissions.

*Permanence.* Permanence – relating to the longevity of terrestrial carbon stocks. A unique feature of the carbon stock managed in project activities is the potential for reversal of mitigated greenhouse gas when exposed to risk factors. The risk buffer approach may be used in order to insure against the risk of impermanence.

*Project boundaries.* Project boundaries describe the spatial or methodological confines of the project activity. Refers to the geographical implementation area, the types of greenhouse gas sources and sinks considered, and the carbon pools considered.

*Project.* An action, land parcel, or location that causes a reduction in greenhouse gas emissions or causes an increase in carbon storage in the soil. A project can encompass multiple locations, or land parcels, provided such multiple sites are subject to functionally similar activities.

*Project Owner or Producer.* The entity that is the legal owner of offsets produced by a registered project. A project owner may represent one or more ultimate owners of carbon offsets produced by one or more projects.

*Rangeland.* Land suitable or used for livestock grazing.

*Registration.* The process of filing an offset project with a trading exchange which includes an eligibility statement, verification, and attestation that the legal title to project components belongs to the project owner, and is not registered for this use in another project.

*Sequestration.* Sequestration is the process of increasing the carbon content of a carbon pool other than the atmosphere. There are various opportunities to remove atmospheric CO<sub>2</sub> either through biological processes (e.g., the growth of plants and trees), or geological processes (e.g., storage of CO<sub>2</sub> in underground reservoirs), or soil amendments (e.g., the incorporation of biochar [if approved]).

*Slow release fertilizer.* A fertilizer that is not readily soluble, but releases its nutrients slowly over a period of time to better synchronize nutrient availability with plant demands. For purposes of this standard, refers to nitrogen fertilizers only.

*Tillage.* The application of one or more mechanical processes to the soil profile that result in substantial loosening, stirring, mixing and/or aeration of the soil particles in preparing the field for planting.

*Conservation tillage.* Includes practices defined in the Natural Resources Conservation Service National Handbook of Conservation Practices. These practices usually result in the disturbance of less than 30 percent of the soil surface. These practices are:

- a) No-till/Strip-till - Managing the amount, orientation, and distribution of crop and other plant residue on the surface year-round while growing crops in narrow slots or tilled or residue-free strips in soil previously untilled by full width inversion implements; and
- b) Ridge-till - Managing the amount, orientation, and distribution of crop and other plant residue on the soil surface year-round while growing crops on preformed ridges alternated with furrows protected by crop residue.
- c) Continuous no-till – The sequential production of crops on the same field in accordance to the definition of no-till as contained in the NRCS National Handbook of Conservation Practices. (Note: continuous no-till is not described per se in the NRCS handbook).

*Urease Inhibitor.* A substance which inhibits hydrolytic action on urea by the urease enzyme; when applied to soils the effect of the urease inhibitor is less urea nitrogen lost by ammonia volatilization.

*Validation.* Validation would include the processes of determining that the criteria for quantification and verification methodologies have met science-based criteria established by the Agricultural Carbon Board. Validation typically involves peer-review by accredited scientists (including university, governmental, and private).

*Verifiable.* Verifiable would be meeting the requirements of science-based criteria that are measurable or identifiable.

*Verification Objectives.* To conduct actions necessary to confirm to the purchaser(s) of offset project that land enrolled in an exchange market meets the requirements of the exchange program.

*Verification.* Verification is the act of reviewing documents, inspecting land, and taking other steps necessary to confirm that enrollments meet the requirements of the carbon credit exchange.

*Verifier.* An individual or entity that has been accredited by the USDA and approved by the Agricultural Carbon Board as meeting the criteria of this standard and that meets the experience and financial criteria established by an exchange and is thereby granted the authority to verify offset projects enrolled in an exchange.

## **Part B - What is covered in this standard.**

### **Sec. 200 Creation of soil-based credits.**

A project or portion of a project shall reduce the impact of greenhouse gas by generating carbon credits through one or more of the following methods:

- (a) Sequestering carbon that has been measured, counted, and validated according to the requirements covered in Part C, Quantification and Validation of Carbon Credits;
- (b) Reducing of greenhouse gas emissions by avoidance, modification, or substitution practices;
- (c) Adopting other recognized technologies that enhance carbon sequestration in the soil or reduce the emission of greenhouse gas into the environment;
- (d) Being managed according to the requirements of Part D, Management Practices; and
- (e) Meeting all other applicable requirements of this standard.

### **Sec. 201 Administration and Implementation.**

- (a) Each project, verifier, and aggregator shall meet the requirements of Part E, Project Owners, Verifiers, and Aggregators, as applicable.
- (b) Inspection of Projects shall be performed by an accredited verifier under the direction of an aggregators or the Exchange.
- (c) The Agriculture Carbon Board (Board) shall meet the requirements of Part F, Agricultural Carbon Board.
- (d) Third-party audits of verifiers, aggregators and the Agricultural Carbon Board shall be conducted on a scheduled basis by a certifying agent meeting the requirements of the USDA or by an internationally accredited ISO registrar.

### **Sec. 202 Conditions for carbon credits for sale or trade.**

Agriculture-based credits sold or traded shall meet the requirements of this standard.

- (a) Real, measurable, and quantifiable in accordance with Part C, Quantification and Validation of Quantification Methods which are approved by the Agricultural Carbon Board described in Part F;
- (b) Verified by an independent party operating in compliance with Part D, Verifiers;
- (c) The result of a management practice other than baseline practices as defined in Part A and described in Part D, Eligibility and Management Practices;

- (d) Registered with assurance that each credit is associated with a unique project under Part D, Aggregators and monitored by the Agricultural Carbon Board as described in Part F; and
- (e) Permanent to ensure greenhouse gas reduction over an extended period of time as defined in Part A.

### **Sec. 203 Existing contractual agreements.**

An agriculture based project that has been already engaged in an offset contract conforming to the terms and conditions of a listed registry shall be deemed an approved operation until expiration of the contract; Provided, That, the operation submits a management plan according to Sec. 404, Management Plan, and submits to inspection, as deemed appropriate by the aggregator, to assess carbon credits according to Part C, Quantification and Validation of Carbon Credits. At the end of the contract, the operation shall meet all requirements of this Standard to continue producing carbon credits for sale or trade.

### **Sec. 204 Exemptions**

An aggregator who sells carbon credits from its own holdings and does not pool credits for sale with other project owners, is exempt from the requirements of section 504, Aggregator Quality Management System Requirements.

## **Part C - Quantifying Carbon Credits and Validation of Quantification Methods.**

### **Sec. 300 General.**

Carbon credits for sale or trade as offset projects shall be real, measurable and quantifiable. The amount of carbon credit shall be determined from modeling, assessment and quantification through approved methodologies. Methods of quantification methodology shall be scientifically evaluated, verified, validated and accepted as scientifically valid by a government agency, accredited university, or technical advisory committees of the Agricultural Carbon Board. Approved methodologies include models, modeling and protocols with validation and verification developed on a foundation of statistically valid sampling representative of the conditions subject to carbon credit.

### **Sec. 301 Quantification of credits.**

The Project Owner or Aggregator shall use an approved quantification methodology to estimate the amount of net primary greenhouse gas change in the soil over time with statistical representation of the credit validated by appropriate direct measurement.

### **Sec. 302 Validation of quantification methods.**

A quantification method shall:

- (a) Determine net change in primary greenhouse gases in accordance with prevailing conventions for accuracy, precision of measurement and statistical validity. The quantification methods shall be robust to operate over an appropriate range of soils, cropping practices and environments,

and scalable over the scope of the carbon credit. The methodology shall be replicable and thoroughly documented; and

- (b) Be validated by an approved domestic or international body, which shall include those organizations that can demonstrate no conflict of interest and whose work processes are accredited by appropriate national and/or international accreditation agencies. The methodology for quantification shall conform to prevailing principles of quality management.

## **Part D - Management Practices**

### **Sec. 400 General.**

Projects generating credits for sale or trade shall comply with the applicable provisions of this Part. Management practices shall result in additional soil carbon or emission reduction. The practices shall be maintained or improved throughout the duration of the contract to sell carbon credits.

### **Sec. 401 Eligibility.**

- (a) Any agricultural project will be considered eligible to produce carbon credits when it is established that the agricultural management practices performed reduce the greenhouse gas impact and that continuation of the practice over the contract period will continually reduce net greenhouse gas emissions or impacts.
- (b) The amount of net greenhouse gas emissions or impacts shall be based upon a model, test, study or other method that has been approved in accordance with Part C, Quantification and Validation of Carbon Credits.

### **Sec. 402 New Projects.**

A new project is one that has never entered into a carbon credit contract, or it is a project for which the term of a contract has expired. New projects shall:

- (a) Complete a Management Plan as described below, EXCEPT That, if the contract executed between the Project Owner and the Aggregator provides the same information, the contract may be used as the Management Plan.
- (b) Comply with the Part E, Project Owners.

### **Sec. 403 Retroactive Sequestration.**

A Project that has been in compliance with this Standard for up to two years prior to its publication date [INSERT DATE], but has not entered into a contract for the sale of the carbon credits, may be eligible to sell the carbon credits generated during the years prior to the sale.

- (a) Verification of retroactive sequestration shall be made by an accredited verifier.
- (b) Compliance to this Standard shall be based on evidence supported by an unbiased third-party or

parties such as Federal, State or local governments, an organization whose purpose is to measure environmental carbon, or a similar unbiased third-party.

#### **Sec. 404 Management plan.**

A project generating carbon credits for sale by sequestering carbon in the soil or by reducing greenhouse gas emissions shall develop a management plan that is agreed to by the project and the aggregator. A management plan shall meet the requirements set forth in this section.

(a) The management plan shall include:

- (1) The name, address, and contact information of the person responsible for the agricultural practice which results in carbon sequestration or reduction of greenhouse gas emissions;
- (2) An accurate description of the land area in which carbon is being sequestered including:
  - (i) The legal land description; and
  - (ii) The Global Positioning Satellite (GPS) coordinates; or
  - (iii) Spatial record of field in industry accepted Geography Information System format; or
  - (iv) A similar industry-recognized descriptor.
- (3) A description of the practices to be performed and maintained, including the frequency with which they will be performed, during the duration of the contract;
- (4) A nutrient plan that lists the nutrients added to the soil, when they are added, the amount that is added, rainfall or irrigation plan, and any circumstances that may cause a reversal of the carbon credit or emission reduction process ; and
- (5) Additional information deemed necessary by the aggregator or by the exchange to evaluate the quantity of carbon generated or the emissions that are reduced.

(b) The Project Owner shall report immediately to the aggregator or the exchange any changes to the plan as a result of climate, ownership, management personnel, agricultural practices, or any other change that might affect the net change of carbon credit production.

(c) A project sequestering carbon or reducing emissions may substitute a plan or parts of a plan prepared to meet the requirements of a Federal, State or local government regulatory program for the management plan: *Provided*, That, the management plan meets the requirements of this Standard.

#### **Sec. 405 Credit and Reduction Practices.**

The net greenhouse gas impact in a carbon credit or emission reduction method shall be less than the greenhouse gas impact in standard agricultural practices. The following baseline or business as usual practices listed in (a) shall be changed by using one or more method listed in (b), (c), (d), (e) or (f) of this section.

- (a) Baseline or business as usual includes:
- (1) No soil management plan;
  - (2) No grazing plan for rangeland;
  - (3) No management plan for grassland;
  - (4) No nutrient management plan for crop, grassland, or rangeland to account for the emission of GHGs; and
  - (5) No fuel use plan to reduce the quantity of petroleum-based fuels used.
- (b) *Cropping systems, including planted grassland or rangeland.* Cropping systems shall reduce greenhouse gas impact by executing one or more of the following practices to sequester carbon in the soil:
- (1) Reduction of soil disturbance when performing cropping activities such as no-till or conservation tillage as defined by the current edition of the NRCS Handbook of Conservation Practices;
  - (2) Modifying crop rotations to add biomass to the soil, including cover crops;
  - (3) Plantings crops that add carbon to the soil; and
  - (4) Any other practice or technology approved by the Agricultural Carbon Board that results in additional carbon sequestration.
- (c) *Grazing Plan for Rangeland and Grassland.* Grazing plans for rangeland and grassland shall increase carbon sequestration by increasing biomass from vegetation. All of the following requirements shall be met:
- (1) Low-to-moderate grazing based on rainfall or irrigation;
  - (2) Seasonal rotation to increase vegetative production cycle; and
  - (3) Any other practice or technology that results in increased carbon sequestration in the plant material and the surrounding soil profile and that is approved by the Agricultural Carbon Board.
- Note: The Natural Resources Conservation Service (NRCS) Field Office Technical Guides publish guidelines for managing the controlled harvest of vegetation with grazing animals. Stocking rates and livestock distribution criteria are defined according to County and State in the NRCS "Prescribed Grazing Specification" code. A formal grazing plan may be developed with the input of NRCS, BLM, USFS other non-profit agencies or private rangeland consulting firms. Regardless of the source of the grazing plan, it shall at a minimum adhere to NRCS standards.
- (d) *Nutrient Planning.* Methods used to enhance soil fertility shall facilitate net reductions of GHG

emissions into the environment compared to the baseline; a nutrient plan shall include at least one of the following:

- (1) Reduction of the amount of fertilizer used and variable rate application;
  - (2) Selection and use of fertilizer that reduces emissions, such as slow release fertilizers (nitrification inhibitors, and urease inhibitors);
  - (3) Crop rotations that add nutrients to the soil;
  - (4) Management of the timing, placement and method of application of nitrogen fertilizer (including split applications and not using fall application);
  - (5) Use of organic nutrient sources; and
  - (6) Any other fertilization practice approved by the Agricultural Carbon Board that results in net reductions of GHG emissions.
- (e) *Fuel use plan.* Cultural practices shall reduce the amount of petroleum-based fuel. A fuel use plan shall include at least one of the following:
- (1) Overall reduction of fuel use;
  - (2) Use of biological-based fuel such as ethanol or bio-diesel;
  - (3) Use of equipment that reduces GHG emissions;
  - (4) Any other fuel reduction or emission method approved by the Agricultural Carbon Board that result in reduced carbon dioxide emissions.

#### **Sec. 406 Changes in practices.**

Practices may change due to weather conditions, decisions to plant a different crop, advancements in agricultural technology, or other unforeseen events. Contracts between the Project Owner and the aggregator:

- (a) Shall contain provisions that modify carbon credit quantification when a carbon project changes a practice that results in a net increase in the number of carbon credits available for sale;
- (b) Shall include provisions for a reduction in carbon credit quantification when management practices or other factors cause a reduction in the number of carbon credits available for sale.
- (b) May be considered null and void if the terms of the contract are violated. In such circumstances, project owners shall return to the aggregator the proceeds from the sale of carbon credits subject to stated terms of the contract, when changes are not reported within the time agreed upon in the contract.

## Part E - Project Owners, Verifiers, and Aggregators

### Project Owners

#### Sec. 500 Project Owner Responsibilities.

- (a) *General.* Project Owner's responsibilities include:
  - (1) Provision of carbon credits for sale; and
  - (2) Recordkeeping as required by this standard and by the aggregator, including a management plan.
- (b) *Land.* A Project Owner who seeks to sell agricultural carbon credits shall:
  - (1) Demonstrate ownership of the land within which carbon is sequestered or authorization from the owner to sell the sequestered carbon;
  - (2) Enter into a contractual agreement with an aggregator, EXCEPT, THAT an individual entity who registers carbon credits directly with a registry shall meet the requirements of this standard, as applicable, and the requirements of the exchange;
  - (3) Maintain the land management practices as required by this standard; and
  - (4) Allow access to the land for inspection and verification.
- (b) *Recordkeeping for a project generating carbon credits for sale.*
  - (1) An operation shall retain records substantiating management practices that result in the production of carbon credits intended to be sold as a credit.
  - (2) Such records shall:
    - (i) Be adapted to the particular business the project is conducting;
    - (ii) Fully disclose all activities and transactions of the project in sufficient detail as to be readily understood and audited;
    - (iii) Be maintained for not less than 3 years beyond the end of the contract to sell the carbon; and
    - (iv) Be sufficient to demonstrate compliance with the Standard.

Note: Records might include pictures of the practice with identifying landmarks and dates, receipts from the application of nutrients that result in emissions, measurements of rainfall or irrigation, etc.

### Verifiers

#### Sec. 501 Verifier Qualifications

A verifier shall meet the following requirements as established by the Agricultural Carbon Board:

- (a) Minimum financial requirement as demonstrated through
  - (1) Net worth; or

(2) Performance bond.

(b) Evidence of adequate technical expertise and capability through

(1) background, education & training; and

(2) experience; or

(3) performance history; or

(4) accreditation by an accreditation agency approved by the Agricultural Carbon Board

### **Sec. 502 Verification System Requirements**

(a) *General.* A verifier shall produce a report that confirms or does not confirm that:

(1) The land area and location exist as described in the contract;

(2) Management practices as specified in Subpart D are performed in accordance with the contractual agreement.

(b) *Activities.* Upon receipt of contracts for a pool of carbon credits or a request from the exchange, a verifier shall:

(1) Make a statistically valid random selection of projects or land to be verified. The sampling of land and contracts shall be sufficient to verify that project owners meet the requirements and continue to meet the requirements of their contractual agreement to sell carbon credits;

Note: In most cases, verification of at least 10% of contracts covering at least 10% of the land is considered sufficient to ensure that owners are meeting their requirements. However, for a pool of very large sites, statistical sampling techniques that provide a similar level of confidence of compliance may be appropriate

(2) Select an adequate number of qualified personnel based on their availability, education, training, and experience, to provide inspection of the verification sites;

(3) Notify the project owner regarding the land to be inspected and the date of inspection;

(4) Perform an inspection of the selected projects in accordance with the contract specifications; and

(5) Submit a report of findings to the aggregator or exchange, as applicable;

(c) *New technologies.* Other technologies approved by the Agricultural Carbon Board may be used

to verify compliance to the methodologies set forth in Part C.

### **Sec. 503 Verifier Quality Management System Requirements.**

A verifier shall maintain a documented quality management system. The system shall meet the following requirements for documentation:

- (a) A quality manual demonstrating compliance to this standard as applicable to verification activities:
- (b) *Documented Procedures*. Procedures for implementing the quality management system including but not limited to:
  - (1) A Document Control procedure shall ensure that the most current documents are available for use when performing verification activities. It shall include:
    - (i) Approval of documents by management;
    - (ii) Identification of documents by name, reference number, and the date of the most recent version;
    - (iii) A method of ensuring that documents are available to the appropriate personnel when they are needed;
    - (iv) A system for updating and changing documents when necessary, including approval by management of changes;
    - (v) Replacement of obsolete documents with the most current version;
    - (vi) Destruction of obsolete documents or identification of the documents as obsolete; and
    - (vii) A list of documents including the document's identification and most recent version.
  - (2) A Record Control procedure shall ensure that records are available and readable when needed. It shall include:
    - (i) Requirements that records be written legibly, created mechanically, or electronically;
    - (ii) A system to ensure that records are maintained in an orderly, easily accessible manner;
    - (iii) A record retention plan indicating the method of record destruction.
  - (3) An Independence Procedure shall ensure that verification activities are performed without bias or conflict of interest. The procedure shall address the following to prevent conflicts of interest:

- (i) The verifier or a responsibly connected party of the verifier shall not inspect a carbon project if the verifier has or has held a commercial or financial interest, including ownership of stocks or bonds, in the project, including an immediate family interest or the provision of consulting services, within the 12-month period prior to the verification inspection;
  - (ii) Any person, including contractors, with conflicts of interest shall be excluded from work, discussions, and decisions in all stages of the verification process and the monitoring of verified projects in which the person has or has held a commercial interest, including an immediate family interest or the provision of consulting services, within the 12-month period prior to the verification inspection;
  - (iii) The verifier or a verifier's employee, inspector, contractor, or other personnel are not permitted to accept payment, gifts, or favors of any kind, other than prescribed fees, from any project inspected;
  - (iv) The verifier or a responsibly connected party of the verifier shall not give advice or provide consultancy services to projects it is verifying, for overcoming identified barriers to approval;
  - (v) The verifier, a responsibly connected party of the verifier, or a verifier's employee, inspector, contractor, or other personnel shall not review, approve, or audit his or her own work;
  - (vi) All persons who participate in verification activities and all parties responsibly connected to the verifier shall complete an annual conflict of interest disclosure report; and
  - (vii) Records of those performing verification activities shall be kept.
- (4) The Confidentiality Procedure shall ensure the owners of carbon projects that proprietary information is kept confidential. The procedure shall:
- (i) Require that all information concerning the operation verified be kept confidential, EXCEPT WHEN,
    - (A) Required by a court of law; or
    - (B) Permission is received in writing from the project owner whose information is requested;
  - (ii) State the process by which confidential information is provided;
  - (iii) Require all persons who participate in verification activities and all parties responsibly connected to the verifier to sign a confidentiality agreement; and
  - (iv) Records of disclosure of confidential information shall be kept.
- (5) An Internal Audit provides the means for a verifier to monitor its compliance to the standard. The procedure shall:
- (i) Require that an internal audit be performed at least annually;

- (ii) State the frequency and plan, including the audit checklist, for performing the internal audit;
  - (iii) Ensure that an internal auditor does not audit his or her own work;
  - (iv) Require that the internal audit be performed by qualified individuals;
  - (v) Ensure that feedback is provided to the areas audited; and
  - (vi) Require that a copy of the internal audit be provided to management or the management representative.
  - (vii) Records of internal audits, the auditor(s), and identified noncompliance shall be kept.
- (6) A Preventive Action Procedure addresses potential noncompliances. The procedure shall identify the process by which the following is accomplished:
- (i) Identification of a potential noncompliance;
  - (ii) An assessment of the root cause of the potential noncompliance;
  - (iii) Evaluation of the need for action to prevent the occurrence of noncompliance;
  - (iv) Determination and implementation of the action to be taken; and
  - (v) Assessment of the effectiveness of the action.
  - (vi) Records of preventive action activities, including sign off of the effectiveness of preventive actions, shall be kept.
  - (vii) Action shall be taken until the potential noncompliance has been corrected.
- (7) A Corrective Action Procedure is taken when a noncompliance is identified. The procedure shall identify the process by which the following is accomplished:
- (i) Identification of the noncompliance;
  - (ii) An assessment of the root cause of the noncompliance;
  - (iii) Evaluation of the need for action to ensure that the noncompliance does not recur;
  - (iv) Determination and implementation the action needed; and
  - (v) Assessment of the effectiveness of the corrective action.
  - (vi) Records of corrective actions, including sign off of the effectiveness of corrective actions, shall be maintained.
  - (vii) Additional corrective actions shall be taken until the noncompliance has been corrected.

(c) *Administrative requirements.* A verifier's quality manual also shall address the following

administrative requirements:

- (1) Top management shall appoint a Management Representative, who is a member of the organization's management and, irrespective of other responsibilities, has responsibility and authority to:
  - (i) Ensure that processes needed for the quality management system are established, implemented and maintained, and
  - (ii) Report to top management on the performance of the quality management system and any need for improvement.
  
- (2) Management shall determine and provide the resources needed to:
  - (i) Implement and maintain the quality management system and continually improve its effectiveness, and
  - (ii) Ensure that personnel performing work affecting conformity, including management itself, shall be competent on the basis of appropriate education, training, skills and experience. The organization shall:
    - (A) Describe in an organization chart or other means the responsibilities and authorities of management and personnel;
    - (B) Create job descriptions which include proficiencies for all personnel whose work affects the quality of the management system or the verification system;
    - (C) Determine the necessary competence of personnel performing work affecting compliance to the Standard;
    - (D) Where applicable, provide training or take other actions to achieve the necessary competence;
    - (E) Evaluate the effectiveness of the actions taken;
    - (F) Ensure that its personnel are aware of the relevance and importance of their activities and how they contribute to the verification system; and
    - (G) Maintain appropriate records of competence, education, training, skills and experience;
  - (iii) Provide and maintain the infrastructure needed to achieve conformity of verification services including, as applicable:
    - (A) Buildings, workspace and associated utilities;
    - (B) Process equipment including both hardware and software; and
    - (C) Supporting services such as transport, communication or information systems.

- (4) A verifier shall have financial arrangements that are adequate to:
- (i) Cover liabilities arising from its operations and/or activities by maintaining proper insurance coverage;
  - (ii) Ensure financial stability and resources required for the operation of the verification and quality management systems; and
  - (iii) Protect the rights of Project Owners.
- (d) Records to provide evidence that the Quality Management System is implemented and operating in compliance to this Standard.

## **Aggregators**

### **Sec. 504 Aggregator Qualifications**

An aggregator shall meet the following requirements as established by the Agricultural Carbon Board:

- (a) Minimum financial requirement as demonstrated through
  - (1) Net worth; or
  - (2) Performance bond.
- (b) Evidence of adequate technical expertise and capability through
  - (1) background, education & training; and
  - (2) experience; or
  - (3) performance history; or
  - (4) accreditation by an accreditation agency approved by the Agricultural Carbon Board

### **Sec. 505 Aggregation System Requirements**

An aggregator shall:

- (a) Establish a contract with the project owner. Minimum contract information shall include:
  - (1) The project owner's contact information including the name, address, telephone number, and email address;
  - (2) The land owner contact information including the name, address, telephone number, and email address;

- (3) A project description including the type of project, practices used to produce credits, and methodology used to calculate carbon credits;
  - (4) The project boundaries and location of the land included in the project in a form that meets the requirements of the common reporting system, is compatible with the FSA Common Land Units format and includes information on the state, county, township, range and section;
  - (5) Duration of the project;
  - (6) Provisions for deviation or default;
  - (7) Provisions for buffer reserves, escrow, or other risk management; and
  - (8) Terms of sale and payment
- (b) Facilitating the verification of credits by engaging the services of an accredited verifier.
- (c) Reviewing the documentation to establish the accuracy of the contract information based on:
- (1) Information supplied in the contract;
  - (2) Supporting documents, such as government created maps or Conservation Reserve Program contracts;
  - (3) The verification report, and
  - (4) Any other documents necessary to establish accuracy;
- (d) Quantifying credits to meet the requirements stated in Sec. 303, Validation of Quantification Methods, to establish the number of carbon credits that may be sold.
- (e) Collection and maintenance of annual certification of compliance reports.
- (f) Tracing past, present, and future carbon credits in an accounting system that associates the credits to each tract of land.
- (g) Ensuring accurate payment to project owners based on carbon credits sold.
- (h) Maintaining the following transaction records:
- (1) Contract enrollments,
  - (2) Contract amendments/transfers,
  - (3) Annual project certification,
  - (4) Project verification,

- (5) Credit registration,
- (6) Credit sales, and
- (7) Distribution of payments to project owners

Note: Payment to the Project Owner is equal to market value of carbon credits minus verifier fees, registration fees, and aggregator fees.

## **506 Aggregator Quality Management System Requirements**

An aggregator shall maintain a documented quality management system. The system shall meet the following requirements for documentation:

- (a) A quality manual demonstrating compliance to this standard as applicable to aggregation activities.
- (b) Procedures for implementing the quality management system shall meet the following requirements:
  - (1) A Document Control procedure ensures that the most current documents are available for use when performing aggregation activities. It shall include:
    - (i) Approval of documents by management;
    - (ii) Identification of documents by name, reference number, and the date of the most recent version;
    - (iii) A method of ensuring that documents are available to the appropriate personnel when they are needed;
    - (iv) A system for updating and changing documents when necessary, including approval by management of changes;
    - (v) Replacement of obsolete documents with the most current version;
    - (vi) Destruction of obsolete documents or identification of the documents as obsolete; and
    - (vii) A list of documents including the document's identification and most recent version.
  - (2) A Record Control procedure ensures that records are available and readable when needed. It shall include:
    - (i) Requirements that records be written legibly, created mechanically, or electronically;
    - (ii) A system to ensure that records are maintained in an orderly, easily accessible manner;
    - (iii) A record retention plan indicating the method of record destruction.

- (3) The Confidentiality Procedure ensures the owners of carbon projects that proprietary information is kept confidential. The procedure shall:
- (i) Require that all information concerning the operation verified be kept confidential, EXCEPT WHEN,
    - (A) Required by a court of law; or
    - (B) Permission is received in writing from the part whose information is requested;
  - (ii) State the process by which confidential information is provided;
  - (iii) Require all persons who participate in aggregation activities and all parties responsibly connected to the aggregator to sign a confidentiality agreement; and
  - (iv) Records of disclosure of confidential information shall be kept.
- (4) An Internal Audit provides the means for an aggregator to monitor its compliance to the standard. The procedure shall:
- (i) Require that internal audits be performed at least annually;
  - (ii) State the frequency and plan for performing the internal audit;
  - (iii) Ensure that internal auditors do not audit their own work;
  - (iv) Require that internal audits are performed by qualified individuals;
  - (v) Ensure that feedback is provided to the areas audited; and
  - (vi) Supply a copy of the internal audit to management or the management representative.
  - (vii) Records of internal audits, the auditor(s), and identified noncompliance shall be kept.
- (5) A Preventive Action Procedure addresses potential noncompliances. The procedure shall identify the process by which the following is accomplished:
- (i) Identification of a potential noncompliance;
  - (ii) An assessment of the root cause of the potential noncompliance;
  - (iii) Evaluate the need for action to prevent the occurrence of noncompliance;
  - (iv) Determine and implement the action to be taken; and
  - (v) Assessment of the effectiveness of the action.

- (vi) Records of preventive action activities, including sign off of the effectiveness of preventive actions, shall be kept.
  - (vii) Action shall be taken until the potential noncompliance has been corrected.
- (6) A Corrective Action Procedure is taken when a noncompliance is identified. The procedure shall identify the process by which the following is accomplished:
- (i) Identification of the noncompliance;
  - (ii) An assessment of the root cause of the noncompliance;
  - (iii) Evaluation of the need for action to ensure that the noncompliance does not recur;
  - (iv) Determining and implementing the action needed; and
  - (v) Assessment of the effectiveness of the corrective action.
  - (vi) Records of corrective actions, including sign off of the effectiveness of corrective actions, shall be maintained.
  - (vii) Additional corrective actions shall be taken until the noncompliance has been corrected.
- (c) *Administrative requirements.* An aggregator's quality manual also shall address the following administrative requirements:
- (1) Top management shall appoint a Management Representative who is a member of the organization's management and who, irrespective of other responsibilities, has responsibility and authority to:
    - (i) Ensure that processes needed for the quality management system are established, implemented and maintained, and
    - (ii) Report to top management on the performance of the quality management system and any need for improvement.
  - (2) Management shall determine and provide the resources needed to:
    - (i) Implement and maintain the quality management system and continually improve its effectiveness, and
    - (ii) Ensure that personnel performing work affecting conformity, including management itself, shall be competent on the basis of appropriate education, training, skills and experience. The organization shall:

- (A) Describe in an organization chart or other means the responsibilities and authorities of management and personnel;
  - (B) Create job descriptions which include proficiencies for all personnel whose work affects the quality of the management system or the aggregation system;
  - (C) Determine the necessary competence for personnel performing work affecting compliance to the Standard;
  - (D) Where applicable, provide training or take other actions to achieve the necessary competence;
  - (E) Evaluate the effectiveness of the actions taken;
  - (F) Ensure that its personnel are aware of the relevance and importance of their activities and how they contribute to the achievement of the quality objectives; and
  - (G) Maintain appropriate records of competence, education, training, skills and experience.
- (iii) Provide and maintain the infrastructure needed to achieve conformity of verification services including, as applicable:
- (A) Buildings, workspace and associated utilities;
  - (B) Process equipment both hardware and software; and
  - (C) Supporting services such as transport, communication or information systems.
- (4) An aggregator shall have financial arrangements that are adequate to:
- (i) Cover any liabilities arising from its operations and/or activities by carrying proper insurance;
  - (ii) Ensure financial stability and resources required for the operation of the verification and quality management systems; and
  - (iii) Protect the rights of Project Owners.
  - (iv) An aggregator shall annually undergo a financial audit performed by a certified public accountant. After the completion of the audit, a report shall be sent to the Agricultural Carbon Board verifying the accuracy of financial transactions for the sale of carbon credits and payments made to the Project Owners.
- (d) Records to provide evidence that the Quality Management System is implemented and operating in compliance to this Standard.

## PART F - AGRICULTURAL CARBON BOARD

### Sec. 600 General

To ensure continuity of land management practices among aggregators and verifiers and to ensure that carbon credits are sold only one time, a management organization shall be established. The management system also may be called upon to take legal action on behalf of the agricultural carbon industry and to assess fees from industry constituents to ensure sustainability.

### Sec. 601 Creation and Maintenance of the Agricultural Carbon Board

- (a) The Agricultural Carbon Board, hereafter referred to as the Board, shall be selected by the Agricultural Carbon Standards Committee after the Standard is completed and approved by USDA and stakeholders. USDA shall approve membership. The Board shall be comprised of 12 members:
- (1) 2 crop producers,
  - (2) 1 rancher for rangeland;
  - (3) 1 producer or rancher for grassland;
  - (4) 2 verifiers;
  - (5) 2 aggregators;
  - (6) 1 conservationist/environmentalist;
  - (7) 2 scientists; and
  - (8) 1 registry representative.
- (b) *Initial Board.* Board members shall serve a term of 3 years. The terms of the first Board shall be staggered in the following manner:
- (1) 4 members, a crop producer, a verifier, an aggregator and a scientist, will serve 1 year;
  - (2) 4 members, a scientist, a grassland rancher, an aggregator and an environmentalist, will serve 2 years; and
  - (3) 4 members, a crop producer, a verifier, a rangeland rancher, and a registry representative, will serve 3 years.
- (c) *Continuing Board.* New members will be selected by the Board with USDA approval. The Board shall establish a process for seeking nominees to serve on the Board. Membership shall

be voted upon by the Board. At least 9 of the 12 members shall cast affirmative votes to select a new member, or votes shall be a least 67% affirmative, should an existing member recuse themselves on the grounds of conflict of interest. Information regarding the new Board members selected shall be forwarded to USDA for approval.

- (d) The Board may hire a staff or contract with an entity, free of conflicts of interest, to manage its affairs.

## **Sec. 602 Board Activities**

- (a) Board activities shall include:

- (1) Establishing and maintaining a method whereby a parcel of land in which carbon for sale or trade is sequestered and its corresponding market transaction can be uniquely identified and validated;
- (2) Making decisions and approve management practices for sequestering carbon in the soil or reducing emissions into the environment;
- (3) Making decisions and approve testing and validation methods;
- (4) Creating and monitoring a Body of Knowledge with regard to management practices, testing and validation for sequestering carbon in soil; and
- (5) Communicating with USDA and/or other government or private institutions.

- (b) Board activities may include:

- (1) Initiating legal action on behalf of the industry, should the need arise;
- (2) Promoting Programs to educate and improve the industry.
- (3) Assessing fees from industry to pay for:
  - (i) Sustaining the activities of the Board;
  - (ii) USDA involvement; and
  - (iii) A Board Manager, should one be hired.

- (c) Board decisions may be appealed by presenting scientific or verifiable evidence to the Board.

## **Sec. 603 Conducting Board Activities**

- (a) Except for occasional closed sessions to deal with Board related issues, the Board shall meet monthly to discuss industry issues. A meeting may consist of a formal business meeting at one location, a teleconference, a web cast or other electronic mean. In any event, all attempts shall

be made to allow public transparency and to allow public comment to be made and recorded.

(b) A third-party with no conflict of interest as described in Sec. 502 (c) shall be present at all meetings. The third-party shall:

(1) Be one of the following:

(i) An employee of USDA;

(ii) A volunteer; or

(iii) A private contractor.

(2) Take official minutes which shall be:

(i) Used as a record for further Board activities; and

(ii) Made available to the industry and the public as appropriate.

### **Sec. 604 Board Leadership**

The Board shall elect a Chairperson and other board officers, as appropriate, during the first meeting and annually thereafter. The Chairperson shall be responsible for directing the Board and the Board Manager, should one be hired.

### **Sec. 605 Board Member Responsibilities**

Each member shall be expected to meet the following responsibilities:

- (a) Disclose all conflicts of interest and recuse them from any decision-making activity which may be influenced by the conflict of interest;
- (b) Keep confidential any information that is proprietary to a particular entity;
- (c) Attend meetings unless personal or family health or other personal matters prevent attendance;

### **Sec. 606 Review of the Board**

- (a) USDA or a private internationally accepted registrar shall periodically review the Board to ensure that the requirements stated above have been met.
- (b) The Board shall take action based upon the review, when warranted.
  - (1) The Board Chairman shall be responsible for corrective action.
  - (2) Corrective action shall be taken in the following manner:

- (i) The root cause of the non-compliance shall be determined;
- (ii) Action shall be taken to address the root cause;
- (iii) The action shall be monitored to ensure its effectiveness;
- (iv) If the action is not effective, sub-clauses i, ii, and iii shall be repeated until the non-compliance is corrected.