HOW PRODUCTION AGRICULTURE AND USDA/NRCS CAN COLLABORATE TO DEVELOP A UNIFORM SUSTAINABILITY ASSESSMENT METHOD

Official White Paper of the USDA Agricultural Air Quality Task Force

September 12, 2014

EXECUTIVE SUMMARY

Chief Weller stated at the December 2013 AAQTF meeting in Beltsville, Maryland that NRCS intends to focus on soil, water, and air resources and help provide a sustainability index that can be used to meet various needs of the agricultural community. . Since the December 2013 AAQTF meeting, numerous sustainability index initiatives have been initiated with minimal input from production agriculture. There are instances where large multinational food manufacturers have attempted to decide from the top down (fork to field) what constitutes sustainable production agriculture and this clearly is not a favorable model. This white paper is intended to demonstrate the need for USDA/NRCS to take an active and focused role in prioritizing the key sustainability efforts and to incorporate the substantial work, funding, infrastructure and results that are included in Comet-FARM, the Quantifying Greenhouse Gas Fluxes in Agriculture and Forestry: Methods for Entity-Scale Inventory report, the GHG CIG grants and the Regional Climate Hubs. While air quality and climate change are issues of primary focus for the AAQTF, they are intrinsically a part of any ecosystem assessment that also includes soil, water and other factors. Air quality improvements or greenhouse gas (GHG) reductions can lead to co-benefits in soil, water and energy conservation that need to be analyzed as a whole system instead of a silo approach.

Recommendations are given to provide direction for USDA and NRCS to provide leadership in corralling these disparate sustainability index efforts and help insure that production agricultural practices are analyzed and presented in a fair and balanced manner when used for quantifying sustainability. It is important for the production agriculture community to support continuity of a scientific, systems-based approach. The USDA should confirm accuracy of the agricultural production data so that sustainability decisions are made with up-to-date economic and environmental measurements. Collecting and providing this information and making any operational practice changes takes time and money. This should be recognized by food manufacturers, distributors and consumers and could serve as one of various potential economic drivers to participate in voluntary ecosystem and GHG mitigation markets and sustainability programs.

BACKGROUND (HOW WE GOT HERE)

At the December 2013 AAQTF meeting in Beltsville, Maryland, the Taskforce discussed topics of interest to address during the 2013-15 term. NRCS Chief Weller asked the Taskforce to work on emerging agricultural issues that could lead to regulatory challenges impacting the nation's farmers and ranchers. He asked that Taskforce members try to identify actions that could help alleviate or provide information about these challenges, especially solutions that could lead to quantifiable successes.

One of the examples of a success story cited by Chief Weller was the voluntary incentive-based air quality emission reductions that were achieved using EQIP funds (and other cost-sharing monies) in the California San Joaquin Valley, a result of work initiated by AAQTF members. There were many steps to yield this result. A collaborative effort between the NRCS, the EPA, and the state and local air agencies in California all played a part in this success. EPA approved these voluntary reductions as creditable for the State Implementation Plan helping alleviate the regulatory burden that the San Joaquin Valley growers continue to face as further air quality reductions must be achieved.

In addition to citing this success as a good example of regulatory credit, Chief Weller said regulatory certainty is becoming an important issue with GHG gas emissions and sustainability being key aspects. It is important that the environmental benefit attributed to any operational change be substantiated with solid science so that agriculture gets acknowledged and credited for these environmental improvements. Otherwise, food manufacturers and other stakeholders using an index could be accused of misrepresenting environmental improvements (aka green washing). The Chief instructed the Taskforce to explore ways to provide food security with ecosystem services and benefits to respond to the corporate marketplace which appears to be moving toward their own sustainability index in the absence of a standardized NRCS-approved method. **Chief Weller stated that NRCS intends to focus on soil, water, and air resources and provide a sustainability index that can meet scientific certainty. As such, Chief Weller asked the AAQTF to provide recommendations to the NRCS.**

The new USDA focus on market-based incentives and opportunities was initiated with a directive from Congress in the 2008 Farm Bill requiring the USDA to create the tools and guidelines necessary to enable the agricultural sector to participate in market-based opportunities. This directive included a primary focus on carbon markets. The USDA responded with investments in a dedicated round of Conservation Innovation Grants (CIG) for GHG mitigation projects adding some critical momentum, agricultural sector engagement, and a significant source of hands-on experiences. Additionally, it included maturation of concepts, programs, and policies necessary to further the development of voluntary GHG mitigation opportunities for the agricultural sector. CIG funding ended in July 2014 just as many of these projects were reaching maturity. A sign of the success of some of these projects is that several are expanding into broader programs over larger geographic areas, and finding traction with the agricultural sector as well as interest from buyers of carbon offset credits for voluntary sustainable supply chain initiatives and regulatory offsetting requirements.

There are numerous initiatives underway to assess the sustainability of agricultural production, some having minimal input from production agriculture. There are already instances where corporate offices of large multinational food manufacturers have attempted to decide from the top down (fork to field) what constitutes sustainable production agriculture and this is not a favorable model.

The Climate Variability and Bioenergy Subcommittee recommends that the AAQTF support the efforts of the USDA/NRCS to help create a sustainable index inclusive of air quality improvements, GHG reductions leading to co-benefits in soil, water, and energy conservation. Some known sustainability index actions include the following:

- **USDA Climate Hubs**
- **White House Food Resilience Initiative**

- **General Mills**
- **Field to Market, The Alliance for Sustainable Agriculture**
- **National Sustainable Agriculture Coalition (NSAC)**
- **Biogenic Carbon Assessment**

An overview description of these programs follows below. The question becomes how the USDA/NRCS could take a more active leadership role with the various programs to steer efforts toward collaborating with production agriculture. The needed end result is that production agriculture practices are analyzed and presented in a fair and balanced manner when quantifying sustainability.

Previous experiences have established that when a scientific, systems-based approach is used, collecting and providing the market value of agricultural production data takes time. Changing practices takes money. One way for food manufacturers to effect change is to provide various economic incentives for voluntary sustainability measures. Corporate responsibility then comes in the form of agricultural sustainability supported by their stakeholders.

ASSESSING THE EMERGING SUSTAINBILITY LANDSCAPE – THE MANY PIECES

Frequent announcements are occurring of government-sponsored initiatives or food manufacturers' corporate policy claim's to promote sustainable agricultural production, including air quality and climate change solutions. The following are just a few examples of such announcements and efforts regarding agricultural sustainability index programs:

1) USDA Climate Hubs Get New Tools to Assist Producers Facing Climate Challenges

On February 5, 2014, Agriculture Secretary Tom Vilsack announced the creation of the first ever Regional Hubs for Risk Adaptation and Mitigation to Climate Change at seven locations around the country. "Climate Hubs" will address increasing risks such as fires, invasive pests, devastating floods, and crippling droughts on a regional basis, aiming to translate science and research into information to farmers, ranchers, and forest landowners on ways to adapt and adjust their resource management. The hubs are part of the President's Climate Action Plan to responsibly cut carbon pollution, slow the effects of climate change and put America on track to a cleaner environment.

The Secretary first announced his intention to create the Hubs last summer. The Hubs will provide outreach and information to producers on ways to mitigate risks; public education about the risks climate change poses to agriculture, ranchlands and forests; regional climate risk and vulnerability assessments; and centers of climate forecast data and information. They will also link a broad network of partners participating in climate risk adaptation and mitigation, including universities; non-governmental organizations; federal agencies such as the Department of Interior and the National Oceanic and Atmospheric Administration; Native Nations and organizations; state departments of environment and agriculture; research centers; farm groups and more.

The Hubs were chosen through a competitive process among USDA facilities. In addition to the seven Hubs, USDA is designating three Subsidiary Hubs ("Sub Hubs") that will function within the Southeast, Midwest, and Southwest. The Sub Hubs will support the Hub within their region and focus on a narrow and unique set of issues relative to what will be going on in the rest of the Hub. The Southwest Sub Hub, located in Davis, California, will focus on specialty crops and

Southwest forests, the Southeast Sub Hub will address issues important to the Caribbean, and the Midwest Sub Hub will address climate change and Lake State forests.

The following locations have been selected to serve as their region's center of climate change information and outreach to mitigate risks to the agricultural sector:

- Midwest: National Laboratory for Agriculture and the Environment, Agricultural Research Service, Ames, Iowa (Sub-Hub in Houghton, Mich.)
- Northeast: Northern Research Station, Forest Service, Durham, N.H.
- Southeast: Southern Research Station, Forest Service, Raleigh, N. C. (Sub-hub in Rio Piedras, Puerto Rico)
- Northern Plains: National Resources Center, Agricultural Research Service, Fort Collins, Colo.
- Southern Plains: Grazing lands Research Lab, Agricultural Research Service, El Reno, Okla.
- Pacific Northwest: Pacific Northwest Research Station, Forest Service, Corvallis, Ore.
- Southwest: Rangeland Management Unit/Jornada Experimental Range, Agricultural Research Service, Las Cruces, N. M. (Sub-hub in Davis, Calif.)

USDA released a report on July 31, 2014 that provides uniform scientific methods for quantifying the changes in GHG and carbon storage from various land management and conservation activities. The report, titled *Quantifying Greenhouse Gas Fluxes in Agriculture and Forestry: Methods for Entity-Scale Inventory*, will help USDA evaluate current and future GHG conservation programs, as well as develop new tools and update existing ones to help farmers, ranchers, and forest landowners participate in emerging carbon markets. The methods report and the tools provided in it will aid the Hubs in giving landowners information on management options to improve agriculture production, soil health, and resource conservation.

2) White House Food Resilience Initiative

Two days after the USDA released their GHG quantification report, on July 31, 2014, the White House unveiled a "Food Resilience" initiative, aimed at empowering America's agricultural sector and strengthening the resilience of the global food system in a changing climate. In March 2014, the Obama Administration unveiled the Climate Data Initiative—a key deliverable of the President's Climate Action Plan to cut carbon pollution in America, prepare communities for the impacts of climate change, and lead international efforts to address this global challenge. The Climate Data Initiative leverages the Federal Government's data resources to stimulate innovation and entrepreneurship to empower America's communities and businesses to take action against climate change and prepare for the future.

The National Climate Assessment, released in May, 2014, states that climate disruptions to agriculture have been increasing, are projected to become more severe over this century, and that climate-change effects on agriculture will have consequences for food security, both nationally and globally, through changes in crop yields and food prices, as well as effects on food processing, storage, transportation, and retailing. The Obama Administration plans to connect farmers, food distributors, and agricultural businesses with the data, tools, and information they need to understand how climate change impacts—such as more intense heat waves, heavier downpours, and severe droughts and wildfires out west—are affecting their operations today and steps they can take to both prepare for and help fight climate change.

The July 31st launch includes a number of Administration commitments by Federal agencies and private-sector collaborators to combat climate change and support food resilience through data-driven innovation.

- Convening Agriculture and Technology Leaders at the White House. Senior Obama Administration officials met at the White House with representatives of leading food, agriculture and technology businesses to discuss ways these companies are leveraging open government data, related information tools, and other innovations to improve the resilience of the U.S. and global food system and reduce the contributions of food production to climate change.
- New Features on climate.data.gov. The Obama Administration unveiled an expanded climate.data.gov to include new pages and features that make data about the risks of climate change to food production, supply, nutrition, and security more open and accessible to innovators, entrepreneurs, and researchers. Through a collaboration between the U.S. Department of Agriculture (USDA), the National Aeronautics and Space Administration (NASA), the National Oceanic and Atmospheric Administration (NOAA), and other Federal agency partners, hundreds of datasets, web services, and tools on these topics and more are being made accessible through climate.data.gov, including data from the Census of Agriculture, current and historical data on production, supply, and distribution of agricultural products, and data on climate-change-related risks such as storms, pests, and drought. The Administration is also expanding climate.data.gov to include datasets from climate models, projecting potential future climate impacts.
- Hosting Agriculture-Innovation Workshops. The Obama Administration will host and participate in a series of innovation workshops focused on data-driven innovation at the nexus of climate-change and agriculture, including:

July 30, 2014: USDA hosted two innovation workshops in Washington, DC, one with young and beginning farmers and another with food distributors, to spur the development of creative information-technology tools that can help farmers and those in the food supply chain to prepare for climate-change impacts.

August 1, 2014: USDA and NYU's Governance Lab (GovLab) hosted an Open Data event in Washington, DC, focused on food resilience and climate change, as well as preparedness for food emergencies. The event encouraged dialogue between government agencies and the businesses and organizations that use their data, in support of the goals of the Climate Data Initiative.

August 5, 2014: Concurrent with the US-Africa Leaders' Summit in Washington, D.C., the U.S. Government, IBM, and partners of the Global Open Data for Agriculture and Nutrition Initiative hosted a data-innovation event focused on developing technological innovations based on open data that can help address global food security and nutrition in Africa.

Partial list of Private-Sector Commitments to the Food Resilience Imitative:

- The Global Landscapes Initiative at the University of Minnesota's Institute on the Environment is committing to openly share data and maps that illustrate how climate change affects risks to major crops within the food system. In conjunction, **Kellogg Company** is committing to use these agricultural data and climate-related maps to foster

geographically relevant implementation in its global sourcing. Kellogg Company, the Global Landscape Initiative, and other partners will use climate data, research, and assessments to guide education and actions that help create efficient, adaptable, and sustainable supply chains, as well as identify information gaps and needs to improve the resilience of the agricultural sector to climate change.

- To help reduce the company's environmental footprint across its value chain, the **Coca-Cola Company i**s committing to rapidly expand the application of the Field-to-Market program and its data-driven tool to quantify water use, fertilizer use, energy use, greenhouse emissions and more. By the end of 2014, Coca-Cola will launch major initiatives with two of its four leading suppliers to implement this commitment. By the end of 2015, Coca-Cola will aim to engage farmers representing 250,000 acres, and by 2020, up to 1 million acres—equating to roughly 50% of the company's global corn supply.
- **Nestlé** will review and expand the scope of its public commitments on climate change leadership by setting greenhouse-gas reduction targets that are based upon science and incorporating both absolute-carbon and carbon-intensity aspects. Nestlé will also incorporate climate change provisions into its responsible sourcing & traceability program, will engage in further water stewardship programs, and will extend education and training within its Farmer Connect initiative regarding good farming practices and water stewardship. Nestlé's nutritional profiling tool (which can be used to link nutritional value calculations to calculations of environmental impact) and related data will be made available outside Nestlé through the publication of algorithms for nutritional assessments in peer reviewed scientific journals, the sharing of data on Life Cycle Inventories, and other mechanisms.
- **Walmart** is committing to the ongoing use of data to help set priorities for future actions to reduce GHGs, including meeting the company's 2020 goal of driving the production or procurement of 7 billion kWh of renewable energy globally every year and reducing the kWh/sq. ft. energy intensity required to power Walmart's buildings globally by 20 percent compared to 2010 levels. Walmart will use data-driven tools such as the Sustainability Index (launched in 2009 in collaboration with The Sustainability Consortium) to measure, track, and identify hot spots in its overall supply chain and provide buyers with transparency into the key impacts, such as GHG emissions, of the products they source. In addition, Walmart recently announced a partnership with eight of the largest food companies to help ensure that tomorrow's food supply is more sustainable, including by bringing an additional eight million acres of farmland into sustainability agriculture programs.
- The United-Nations-supported Principles for Responsible Investment (PRI) has formed an investor group made up of **Rockefeller & Co.** and five European-based institutional investors to address the risks from climate change to companies with agricultural supply chains – including in the food, beverage, and apparel sectors. Using data from the World Wildlife Fund's (WWF) Water Risk Filter mapping tool and Pricewaterhouse Coopers' (PwC) ESCHER model, the investor group will engage approximately 50 major companies in constructive dialogue to increase resilience to water risks and foster informed investment decision-making.
- **Microsoft** and USDA will co-host a series of workshops, webinars, and an app-athon aimed at demonstrating the value of open-data and data-driven tools to boost climate preparedness and resilience in the agricultural sector. Microsoft and USDA will also jointly launch a climate-change-focused Innovation Challenge to inspire the development of new tools and services that harness data available via data.gov, as well as an initial

collection of USDA datasets that will be made available through Microsoft's Azure Marketplace.

- Through the **Innovation Center for U.S. Dairy**, the U.S. dairy industry will advance a series of science-based efforts, including additional research to understand and optimize dairy's role in a resilient, efficient, and sustainable food system, as well as testing and piloting four new Farm Smart modules—energy, feed, nutrient, and herd management—by the end of 2014. Farm Smart is a data-driven online tool that helps dairy farmers assess their farm's environmental footprint; explore the potential environmental value and cost-effectiveness of on-farm innovations; and communicate progress.
- **ESRI** will work with USDA, GEOGLAM, CGIAR and others to expose and unlock authoritative data as live data feeds across dimensions of agricultural production, risk and trade. In the fall of 2014, ESRI will host an Executive White Boarding session to target the development of common information products (maps, apps and templates) needed to address specific needs in the domain of climate, society, and agriculture.
- In August 2014, the Michigan Agri-Business Association will launch a publicly-available web-based mapping tool for use by the state's agriculture sector. Resulting maps will aggregate soil, water, meteorological and infrastructure GIS data that can be compared and visualized to help farmers, rural businesses, conservationists and economic development professionals.
- SWIIM System, Ltd. will develop an application using USDA Quickstats data that will allow users to easily view trends in water use by irrigated agriculture as climate changes occur and as water transfers from agricultural to municipal and industrial uses take place. This new application will allow users to explore the consequences of future climate- and water-use scenarios to water available for crop production, and will educate the user on effects of water transfer and climate change on irrigated agriculture on a localized basis. The application will be made available on the SWIIM client page and its parent website. Development is expected to commence in August 2014 and completed within approximately six months.
- Monsanto will donate a multi-site/multi-year maize breeding trial dataset to open data portals maintained by the International Center for Tropical Agriculture (CIAT) and the Agricultural Model Intercomparison & Improvement Project (AgMIP). Opening these data will make it possible for public- and private-sector scientists to improve models being used to understand how climate and water-availability changes will impact crop productivity and food security.
- The Climate Corporation has launched a free online and mobile service called Climate Basic that provides farmers with hyper-local weather information to help them identify the impact of recent and current weather conditions on their fields. To enable the development of additional data science driven tools and services to help farmers increase production to meet increasing global demand, they helped found the Open Ag Data Alliance (OADA), an open source software project to ensure farmers have full data access across different agricultural technology platforms.

3) General Mills

After General Mills Inc. was branded a "clear laggard" by climate activists for not doing enough to cut its carbon footprint; they committed on July 28, 2014 to reduce climate change-causing GHG emissions from its entire supply chain, including the farms that produce its ingredients. The company behind brands like Cheerios, Betty Crocker and Haagen-Dazs set GHG targets for its own operations in 2005, but their recent announcement goes much further. Its latest climate commitment also covers water use and waste.

"However, given that nearly two-thirds of General Mills' GHG emissions and 99 percent of water use throughout our value chain occur upstream of our direct operations, primarily in agriculture, we've also been focused on advancing sustainable agriculture," said John Church, General Mills' executive vice president of supply chain operations.
The company plans to set concrete reduction targets in terms of emissions, water use, waste, packaging and transportation, it said. It will seek to eliminate deforestation for its supplies, improve watersheds and maintain a committee to track its progress. General Mills also became a member of the Business for Innovative Climate & Energy Policy coalition, a group organized by corporate sustainability organization Ceres that advocates for sustainable policies and business practices.

4) Field to Market, The Alliance for Sustainable Agriculture

One of the groups that wanted to insure that production agriculture is involved in the development of these emerging sustainability assessments is Field to Market, The Alliance for Sustainable Agriculture. Field to Market was organized with a diverse group of producers, agribusinesses, food and retail companies, conservation and non-profit organizations, universities, and agency partners that are working together to define, measure, and develop a supply-chain system for agricultural sustainability. Rod Snyder, President of Field to Market was asked to make a presentation at the August 2014 AAQTF meeting to talk about the organization's efforts and goals but had a calendar conflict. We will continue to seek Mr. Snyder's participation in a future AAQTF meeting. They have developed a Fieldprint calculator for corn, cotton, rice, wheat, potatoes and soybean growers in eight states. The calculator estimates field level performance on land use, conservation, soil carbon, irrigation water use, water quality, energy use and GHG emissions.

Coalition on Agricultural Greenhouse Gases

C-AGG is a multi-stakeholder coalition that was developed in 2009, funded largely by the Packard Foundation, to focus on promoting and supporting voluntary, incentive-based opportunities to engage the agricultural sector in GHG mitigation and enhanced sequestration. Several AAQTF members have and are currently actively involved in C-AGG's efforts. Other participants include representatives of production agriculture, scientists, academics, government, carbon and ecosystem market developers and investors and environmental NGO's. A recent development is that C-AGG is now a member of Field to Market and will be working with them to expand their sustainability index.

5) National Sustainable Agriculture Coalition (NSAC)

On June 25, 2014, the one-year anniversary of the President's Climate Action Plan, the NSAC announced the availability of a document that articulates principles and recommendations for NRCS to consider as it implements conservation programs under the 2014 Farm Bill that address the nexus between climate change and agriculture.

There is an emphasis on low external input, biologically diverse agricultural systems, including certified organic agriculture and crop-livestock integrated farming systems that they believe play an important role in addressing climate change. The NSAC document is based on a set of principles for addressing climate change adaptation and mitigation through NRCS conservation programs, and includes specific recommendations for actions NRCS can take to integrate these principles with conservation program development and delivery.

NSAC urges USDA to look to existing solutions that can be achieved through farm bill program implementation and the USDA climate change initiative, which includes new Regional Climate Hubs, science-based guidelines for cover crop management, among other new tools and programs.
These include:

- Integrating climate and energy issues into conservation planning by incorporating a climate adaptation and mitigation component that specifically addresses on-farm benefits, including energy savings;
- Updating the Conservation Practice Standard GHG Ranking Tool to reflect the full scope of climate benefits that a practice offers by assessing both adaptation and mitigation benefits;
- Prioritizing enrollment in the new easement program and targeted conservation program for those projects that provide the greatest climate benefits, both in terms of carbon sequestration and avoided transportation- and development-related GHG emissions.

6) Biogenic Carbon Assessment

In a 2010 rulemaking, EPA introduced uncertainty for the future of biomass energy and bio-manufacturing. EPA treated biomass energy carbon emissions the same as fossil fuel emissions under its regulation governing greenhouse gas permits for stationary sources (the "Tailoring Rule"). EPA is finalizing its CO2 accounting framework that it will use to determine biomass's contribution of CO2 related to production and use as a fuel. It is expected that EPA will complete the report in the summer of 2014. 25 x 25 states, "Given the fact that EPA expects states to use the framework as a resource in developing their own CCA section 111 (d) plans, it is imperative that this framework be based on sound science." Biomass accounting and policy decisions for fuel and crop production need to recognize and account for the full carbon cycle including best management tools used in agriculture.

On August 7, 2014 over 100 agriculture and forestry interests submitted a letter to John Podesta, Counselor to President Obama, to seek an expeditious release of EPA's assessment of biogenic carbon emissions. This is important to both bioenergy interests but also to the development of sustainable production criteria and models. (The letter is attached.)

PULLING THE PIECES TOGETHER-WORKING EXAMPLES

NRCS has developed working relationships with several groups either through their USDA GHG-CIG grants or their field calculators that estimate field level performance on land use, conservation, soil carbon, irrigation water use, water quality, energy use and GHG emissions. NRCS should consider building on these collaborations detailed below with C-AAG, Field to Market, Delta Institute and Climate Trust to engage the agricultural sector into getting "sustainable credit" when they provide food, fiber and fuel to both buyers and suppliers in global supply chains by using a systems approach developed by and for agricultural production, not the other way around. There are pressures on food manufacturers and retailers to provide food that is sustainably produced, unless production agriculture is involved in defining what is sustainable, it will be defined without our input.

C-AGG has worked closely with NRCS on providing a forum for the nine USDA GHG-CIG projects to meet on a regular basis and discuss their challenges and successes. This collaboration has been recognized as contributing to the great strides made in the development of offset methodologies for agricultural participation in carbon markets. Projects are now growing into

programs with broader geographic applicability and committed investors are seeking credits. USDA committed $10 million in additional incentive funds to further develop these market-based CIG opportunities by continuing to develop needed infrastructure and programmatic investments. This commitment is vital to leverage the proof of concept evidenced by the string of recent market transactions involving agricultural GHG mitigation and is where **Field to Market**, C-AGG and USDA/NRCS could work effectively together to integrate these three efforts into a more expansive and useful effort that could benefit more commodities and ecosystem benefits beyond carbon.

The Climate Trust and Delta Institute announced in February 2014 to reward farmers for reducing the environmental impacts of their nitrogen fertilizer practices. Delta Institute of Chicago and its partners will work with farmers across the Midwest to encourage voluntary changes to fertilizer applications to reduce emissions of nitrous oxide (N2O) while maintaining crop yields. Through careful adjustments in nitrogen fertilizer application, participating farmers can generate revenue from reducing N2O emissions while achieving cost savings through increased fertilizer efficiency. The modified fertilizer practices will also provide benefits to both air and water quality. Delta will quantify the emission reductions, verify them with a third party, and list the credits on the American Carbon Registry. The Climate Trust will purchase and then retire the credits. Profits from the sales will be returned to the farmer, marking the first-of-its-kind credit transaction to reduce agricultural N2O emissions.

This transaction, and the partnership between Delta Institute and The Climate Trust, represents a successful result of the USDA/NRCS CIG program. “Projects like this show that environmental improvement, GHG emissions reductions, and increased yields are not mutually exclusive,” said Robert Bonnie, USDA Undersecretary for Natural Resources and the Environment. “By implementing nitrogen conservation practices, agricultural producers can limit the amount of nitrogen released into the air and downstream waters, and also find new ways to generate income.”

The Delta Nitrogen Credit Program will focus on corn farmers in the North Central Region, spanning twelve states from Ohio to the Dakotas. Delta Institute is heading a coalition of organizations to reach farmers throughout this geography, including American Farmland Trust, Conservation Technology Information Center, Environmental Defense Fund, and agricultural retailers.

The timing is right to use the expertise gained from each of these type efforts. Several of the GHG-CIG projects are progressing into GHG mitigation programs, building on the successes of the demonstrations and of additional transactions soon to be announced, including in water quality markets. With these successes, a coordinated approach with Field to Market, NRCS and C-AGG and other potential partners like the Delta Institute and Climate Trust could stoke this momentum and engage the agricultural sector into getting “sustainable credit” when they provide food, fiber and fuel to both buyers and suppliers in global supply chains by using a systems approach developed by and for agricultural production.

TANDEM VERSUS PARALLEL APPROACHES WILL MAXIMIZE POSITIVE RESULTS

Continued attention from **every** stakeholder in the food chain to agriculture, food security, corporate social responsibility, and threats to continued access to natural resources and

commodities has fostered interest in technologies to measure, monitor and verify agricultures' GHG and environmental footprint and to identify and incentivize best management practices. Interest in engagement and collaboration in support of these activities is high as the U.S. and other international governments seek to leverage limited resources through public-private partnerships and by enhancing the research and policy application interface. Within the US and globally, sustainable supply chain initiatives are a clear point of entry and organizing tool for these initiatives, particularly for the agricultural sector.

The time is now for the USDA NRCS to engage the various factions to insure that any sustainable supply chain initiative that has agriculture as a key sector actually involves agriculture in the formation of sustainable practices, inclusive of high-quality measurable "sustainability credits." The NRCS commands the best position from which to bring together the stakeholders, tools, programs, and infrastructure with an end result of a more harmonized, realistic, and sensible approach to help both buyers and suppliers in global supply chains. By taking a leadership role, the NRCS could insure sustainable agricultural ecosystems that benefit everyone and enable the increased participation of agricultural producers.

LEADERSHIP STEPS THAT NRCS AND USDA CAN TAKE TO HELP ESTABLISH CONTINUITY IN A SYSTEM-BASED APPROACH SUSTAINABILITY INDEX

The AAQTF wants to foster interest in technologies to measure, monitor and verify agriculture's environmental footprint so that best management practices can be identified and incentivized and believes the sustainable supply chain initiatives are a clear point of entry and organizing tool. To that end, the AAQTF hereby makes these recommendations:

1) Request that NRCS work with partners such as Field to Market, C-AGG, Delta Institute and Climate Trust to incorporate the use of COMET-Farm, the *Quantifying Greenhouse Gas Fluxes in Agriculture and Forestry: Methods for Entity-Scale Inventory* report, the GHG CIG grants and the Regional Climate Hubs to insure a uniform, scientific, systems-based approach is developed that can be used as a template for all production agriculture sustainability index efforts.

2) Request that USDA work with EPA as they initiate implementation of the "Clean Power Plan" to investigate if there is a role for offsets to be provided to existing power plants under Section 111(d) of the Clean Air Act when agricultural producers utilize voluntary, verifiable best practice standards. This new effort is expecting power plants to reduce total power sector emissions by 30% from 2005 levels by 2030. States have requested flexibility that includes "beyond-the-fence" measures, including energy efficiency and there should be opportunity for the environment, agricultural producers and the power plants to benefit while GHG emissions are reduced.

3) Request that USDA provide AAQTF an assessment of the 9 GHG CIGs so we can determine whether to recommend another round of funding.

4) The California Department of Food and Agriculture is in the process of awarding $10 million in competitive grant funding through the State Water Efficiency and Enhancement Program (SWEEP), authorized by emergency drought legislation (Senate Bill 103). AAQTF requests that NRCS staff work with CDFA and the California Air Resources Board to help quantify the water efficiency, reduced GHG emissions and any other environmental benefits that will

result from the water conservation measures that are implemented using these funds. This could serve as pilot using NRCS practice standards (i.e. 441 and 442) to provide verifiable results that can be used in various venues. The current qualitative ranking tool for GHG benefits is a good first step but is not adequate for the quantification needed for this and other venues.

5) Request a presentation to the AAQTF on the First Adaptation Plan and what steps are planned for the next 1-10 years.

6) Update AAQTF on response and integration of NRCS to USDA Regulation 1070-001 of June 2, 2011 that instructed agencies to determine vulnerability to climate change and impacts on their agency mission and EO 13514 issued October 5, 2009 that directed the assessment of energy use, GHG footprint and methods for climate change mitigation and adaption.

7) Consult with EPA on the Biogenics Assessment to assure sound science and best management practices have been considered.

Attachment

Mr. John Podesta
Counselor to the President
The White House
1600 Pennsylvania Avenue
Washington, DC 20500

August 7, 2014

Dear Mr. Podesta:

As organizations positioned to help generate affordable and reliable renewable energy, create jobs and contribute to our nation's low carbon future, we write to strongly urge your support to release a draft federal policy on carbon accounting for biomass that will secure this important energy source as part of our nation's long term energy solution. Along with promoting the climate benefits from biomass, the Administration can adopt a clear and simple biomass policy that will create jobs, conserve working lands and sustain rural communities across America.

Biomass, or the material derived from plants, crops and trees used for bioenergy, renewable chemicals, and bioproduct production, occupies a unique position in our national portfolio. Because plants, crops, trees and aquatic vegetation can remove carbon from the atmosphere as they grow, they are part of an ongoing natural process that recycles atmospheric carbon. The use of plants, crops and trees for energy and bioproducts operate within this carbon cycle in a way that, unlike fossil fuels, does not add new sources of carbon to the atmosphere. Indeed, other uses of biogenic carbon, such as biochemicals, bioplastics, and forest products, recycle carbon and sequester CO2, reducing atmospheric GHG concentrations.

Biomass is an essential part of both federal and state energy strategies. Unfortunately, however, federal policy has created significant uncertainty for the future of biomass energy and biomanufacturing. In its June 3, 2010 rulemaking, the Environmental Protection Agency (EPA) treated biomass energy carbon emissions identically to fossil fuel emissions under its regulation governing greenhouse gas permits for stationary sources (the "Tailoring Rule"). Following a significant response from the biomass community, including a letter from 113 noted scientists affirming the carbon benefits of biomass energy and bioproducts, EPA took corrective action by committing to complete a carbon accounting framework for biomass energy by July 21, 2014. As of the date of this letter, both the timing and the content of the framework are unknown. Until the framework is completed, the uncertainty surrounding biomass will continue with negative repercussions for both federal and state policies, including President Obama's Climate Action Plan.

We urge your support for timely completion of a carbon accounting framework that clearly affirms the role of biomass as part of our nation's long-term energy solution. Specifically, we urge that the accounting framework:

- Be proposed as soon as possible and provide an efficient public review process.
- Fully recognize the natural carbon cycle and acknowledge that biomass has a neutral or *de minimis* impact on atmospheric carbon compared with fossil fuels.

- Apply broad temporal and spatial scales to avoid accounting distortions.
- Use actual data rather than complex or speculative models that seek to predict future market behavior.
- Be simple to implement.
- Provide states maximum flexibility to administer their renewable energy programs.

We look forward to working with you and the EPA to firmly establish biomass as a reliable contributor to our nation's renewable, low carbon energy and product portfolio.

Sincerely,

25x25 Alliance
Advanced Biofuels Association
Alabama Forestry Association
Algae Biomass Organization
American Council on Renewable Energy
American Farm Bureau Federation
American Forest Foundation
American Forest & Paper Association
American Loggers Council
American Seed Trade Association
American Wood Council
Arkansas Green Energy Network
Arkansas Forestry Association
Associated Logging Contractors of Idaho
Association of Consulting Foresters
Association of Equipment Manufacturers
Biomass Power Association
Biomass Thermal Energy Council
Biotechnology Industry Organization
Broughton Lumber Company
BTG Pactual Timberland Investment Group
California Forestry Association
Campbell Global, LLC
Catchmark Timber Trust
Conservation Forestry, LLC
Corn Refiners Association
Drax Biomass International
Empire State Forest Products Association
Florida Forestry Association
Forest Landowners Association
Forest Products Industry Labor Management Committee
Forest Resources Association
Genera Energy Inc.
Georgia Forestry Association
Giustina Resources
GMO Renewable Resources
Green Diamond Resource Company
GreenWood Resources, Inc.
Growth Energy
Hancock Timber Resource Group
Hardwood Federation
Heating the Midwest with Renewable Biomass
Idaho Forest Owners Association
John Deere
Kentucky Forest Industries Association
Lone Rock Resources
Louisiana Forestry Association
Louisiana Logging Council
Maine Forest Products Council
Merrill & Ring
Michigan Association of Timbermen
Minnesota Forest Industries
Minnesota Timber Producers Association
Mississippi Forestry Association
Missouri Forest Products Association
Molpus Woodlands Group
Montana Wood Products Association
National Alliance of Forest Owners
National Association of State Foresters
National Corn Growers Association
National Farmers Union
National Network of Forest Practitioners
National Oilseed Processors Association
New England Wood Pellets 3

New Hampshire Timberland Owner Association
New York Biomass Energy Alliance
North Carolina Forestry Association
Northeastern Loggers Association
Ohio Forestry Association
Oklahoma Forestry Association
Olympic Resource Management
Oregon Forest Industries Council
Oregon Small Woodlands Association
Oregon Women in Timber
Pellet Fuels Institute
Plum Creek Timber Company
Port Blakely Tree Farms, L.P.
Potlatch Corporation
Professional Logging Contractors of Maine
Rayonier Advanced Materials
Rayonier Inc.
Recast Energy
Red River Forests, LLC
Resource Management Service, LLC
Shasta Forests Timberlands, LLC
Sierra Pacific Industries
Society of American Foresters
SDS Co. LLC
SDS Lumber Company
Southeast Agriculture and Forestry Energy Resources Alliance
South Carolina Forestry Association
Strategic Biomass Solutions
Stimson Lumber Company
Tennessee Forestry Association
Texas Forestry Association
The Forestland Group LLC
The Lyme Timber Company
The Westervelt Company
Timberland Investment Resources, LLC
Treated Wood Council
Virginia Forest Products Association
Virginia Forestry Association
Washington Contract Loggers Association, Inc.
Washington Forest Protection Association
West Fork Timber Company
Weyerhaeuser Company
Wisconsin Paper Council

cc: EPA Administrator Gina McCarthy