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Fact Sheet

USDA's Building Blocks for Climate Smart Agriculture & Forestry – Fact Sheet

Today, the U.S. Department of Agriculture is announcing a comprehensive and detailed approach to support farmers, ranchers, and forest land owners in their response to climate change. The framework consists of 10 building blocks that span a range of technologies and practices to reduce greenhouse gas emissions, increase carbon storage, and generate clean renewable energy. USDA's strategy focuses on climate-smart practices designed for working production systems that provide multiple economic and environmental benefits in addition to supporting resilience to extreme weather, reduced emissions and increased carbon storage.

Through this comprehensive set of voluntary programs and initiatives spanning its programs, USDA expects to reduce net emissions and enhance carbon sequestration by over **120 million metric tons** of CO₂ equivalent (MMTCO₂e) per year – about 2% of economy-wide net greenhouse emissions – by 2025. That's the equivalent of taking **25 million cars** off the road, or offsetting the emissions produced by powering nearly **11 million homes** last year.

President Obama has made clear that no challenge poses a greater threat to future generations than climate change. The effects of climate change can no longer be denied or ignored – last year was the planet's warmest year recorded, and 14 of the 15 hottest years on record have happened this century. All over the country, Americans, including farmers and ranchers, are already facing devastating impacts – from severe floods to extreme heat and drought to increased challenges due to wildfires, disease and pests. That's why the President has taken historic action to cut the carbon pollution that drives climate change and protect American communities from the impacts. And throughout this week, the Administration has announced new steps to address the threat of climate change and protect the people and places climate change puts at risk.

In executing the new initiative announced today, USDA will use authorities in the 2014 Farm Bill to provide incentives and technical assistance to farmers, ranchers, and forest land owners.

Specifically, USDA will encourage actions that promote soil health, improve nutrient management, and conserve and enhance forest resources on private and public lands. In addition, USDA will redouble efforts to improve energy efficiency, develop renewable energy, and use biomass both as a liquid fuel and to contribute to heating, cooling, and electric needs. Through this comprehensive set of voluntary programs and initiatives spanning its programs, USDA expects to reduce net emissions and enhance carbon sequestration by over 120 million metric tons of CO₂ equivalent (MMTCO₂e) per year – about 2

percent of economy-wide net greenhouse emissions – by 2025. That’s the equivalent of taking 25 million cars off the road, or offsetting the emissions produced by powering nearly 11 million homes last year.

USDA’s strategy will be based on the following principles:

Voluntary and incentive-based: Farmers, ranchers, and forest land owners are stewards of the land. USDA has a track record of successful conservation through voluntary programs designed to provide technical assistance for resource management. These efforts fit within USDA’s approach of “cooperative conservation.”

Focused on multiple economic and environmental benefits: To be successful, the proposed actions should provide economic and environmental benefits through efficiency improvements, improved yields, or reduced risks.

Meet the needs of producers: This strategy is designed for working farms, ranches, forests, and production systems. USDA will encourage actions that enhance productivity and improve efficiency.

Assess progress and measure success: USDA is committed to establishing quantitative goals and objectives for each building block and will track and report on progress.

Cooperative and focused on building partnerships: USDA will seek out opportunities to leverage efforts by industry, farm groups, conservation organizations, municipalities, public and private investment products, tribes, and states.

In connection with today’s announcement, the following groups are announcing early actions and commitments in support of USDA’s approach:

Field to Market

Over the next 18 months, Field to Market will work with their more than 70 member organizations across the agricultural supply chain to update a series of farm level sustainability metrics, including a more refined methodology for measuring progress in reducing greenhouse gas emissions from commodity crop production. Through the development of a next generation of sustainability assessment tools, Field to Market and their members will partner with growers at the field level to track environmental impacts, identify opportunities for continuous improvement, and help deliver sustained reductions in greenhouse gas emissions from U.S. cropland per unit of output. To achieve these outcomes, Field to Market members will continue scaling their supply chain engagement with a goal of enrolling 50 million acres of U.S. commodity crop production in the Field to Market program by 2020.

The Fertilizer Institute

Over the next three years, The Fertilizer Institute and industry partners intend to more than double existing investment in 4R nutrient stewardship research, outreach and implementation, providing up to \$6 million in total support to improve nutrient stewardship. Nutrient stewardship using the 4Rs (the right nutrient source applied at the right rate, the right time and in the right place) helps optimize inputs, improve water quality and reduce emissions from fertilizer applications. Optimized fertilizer use by farmers is necessary for food and nutrition security, safeguarding natural resources and ecosystems, and increasing productivity of existing arable land to slow encroachment on natural habitats.

The Nature Conservancy and Walt Disney Company

The Nature Conservancy and USDA are collaborating to enroll 2,000 acres in a program to reforest marginal cropland in the Lower Mississippi Alluvial Valley by 2017, including 600 acres in the next six months. The collaboration is made possible in part by a financial contribution from Disney. Through the collaboration, private funding from Disney coupled with USDA conservation payments allow landowners to reforest their land, resulting in carbon sequestration and habitat restoration. To date, the collaboration has enrolled and reforested over 600 acres to demonstrate a replicable model that can be scaled up by others to achieve even broader impact. The carbon sequestration resulting from the project has been certified under the Verified Carbon Standard, and the carbon credits associated with the increase in biomass on the enrolled properties will be transferred to Disney, to help them achieve a portion of their voluntary greenhouse gas emissions reduction goals.

Equilibrium Capital Group and Church Pension Group

Equilibrium Capital Group is announcing the kickoff of the Wastewater Opportunity Strategy—an effort to accelerate the development and growth of bio-digesters and bio-gas facilities that convert food and farm waste, major sources of methane emissions, into productive economic value in rural communities. Phase I of the strategy upon full deployment is expected to process over 150 million gallons of wastewater per year, generate over 350 million kilowatt hours of renewable energy equivalents annually, produce 2 million hours of employment for skilled construction workers and approximately 130 permanent jobs, strengthen farms and food processing facilities located in up to 35 communities, and reduce over 2 million tons of greenhouse gas emissions. Equilibrium is being joined in this work by Church Pension Group, an investment arm of the Episcopal Church.

The Arbor Day Foundation

The Arbor Day Foundation is announcing plans to work with 19 different utility partners in 17 states and the District of Columbia in 2015 to place 40,000 trees into the hands of tree planters through the Energy-Saving Trees program. The 2015 Arbor Day Foundation Energy-Saving Trees utility partners are Atlantic City Electric, Baltimore Gas and Electric, Black Hills Energy, Black Hills Power, CenterPoint Energy, Colorado Spring Utilities, ComEd, Cheyenne Fuel Light and Power, Delmarva Power, Idaho Power, Nebraska City Utilities, Omaha Public Power District, Oncor, PGE, Pepco, Peco, Sacramento Municipal Utility District, Unitil, and Wiregrass Electric Cooperative. To date, nearly 80,000 trees have been distributed nationwide through the Energy Saving Trees program, engaging nearly 50,000 homeowners, and yielding a projected cumulative environmental impact of 171,397 MWh saved, 156,367 metric tons of carbon sequestered, 2,206,991 Therms saved, and \$1.8 million leveraged by participating electric utility partners.

Walmart, United Suppliers, and the Environmental Defense Fund

As part of the existing commitment from Walmart to eliminate 20 MMT of greenhouse gas emissions from its supply chain by 2015, EDF has worked with companies including General Mills, Smithfield, and United Suppliers to help Walmart meet its emissions reduction goals through optimized fertilizer management. Over the past year, United Suppliers, in collaboration with EDF, created SUSTAIN to guide the use of technologies for improving nutrient management. United Suppliers recently set a goal of enrolling 10 million acres in the program by 2020, and is committed to developing systems to track and manage participation.

Green Diamond Resource Company and the Forest Policy Forum

The Forest Policy Forum, a group of 14 forest industry companies and trade groups, with the counsel of conservation organizations, led by Green Diamond Resource Company, announced today a set of principles for ensuring the forest sector--from landowners to manufacturers--can contribute meaningfully to mitigating climate change. The principles focus on the current contributions and additional steps the sector can take to maintain and grow productive and managed forests in the U.S. that will sustain forest

carbon, properly evaluate the many carbon benefits derived from use of forest products manufactured using biomass energy and sequestering carbon themselves, and include appropriate policy, research, market solutions, and innovation across the sector.

The American Forest Foundation

The American Forest Foundation (AFF) is announcing a new partnership with the US Forest Service to expand work in the West engaging woodland owners in wildfire mitigation which helps reduce carbon emissions from catastrophic wildfires and also helps, over the long-term, increase the carbon storage of these forests. The partnership, that includes roughly \$390,000 in support from the US Forest Service which AFF will match, will seek to engage 20,000 woodland owners in four landscapes where critical watersheds are facing high wildfire threats, to complete thinning and other restoration activities that will mitigate wildfire threats.

The Trust for Public Land and the Forest Climate Working Group

The Forest-Climate Working Group (FCWG), a coalition of forest landowner, industry, government, academic, and conservation organizations is announcing plans to develop a toolkit to help states accomplish state-level carbon reductions by tapping the power of forests and forest products. Supported by \$300,000 in funding from The Trust for Public Land, the new FCWG toolkit will include two elements: 1) science-based metrics to help states link incentives to expected carbon benefits from specified forest practices on private forestland and increased utilization of forest products; and 2) model policy mechanisms that could be adopted by states to structure and deliver forest carbon incentives and track program-level carbon benefits achieved through these incentives.

The Lyme Timber Company

The Lyme Timber Company is announcing that it will list 46,500 acres of Florida timberland with the California Air Resources Board, the agency charged with administering the state's greenhouse gas reduction program. Under California's cap-and-trade program, regulated emitters of greenhouse gases may purchase carbon offset credits from out of state to satisfy a portion of their compliance obligation. This is the second project listed by Lyme Timber and the company is exploring opportunities to list other properties in the future. In order to qualify for the sale of carbon offset credits under California's program, a project must maintain or increase carbon stocks on forested land relative to baseline levels. This is typically achieved by reducing harvest levels and promoting native forests comprised of multiple ages and mixed native species. Lyme's Florida holdings, which are adjacent to the Lower Suwannee National Wildlife Refuge and other conserved areas, provide sustainably harvested wood to local sawmills and provide jobs in this economically-distressed region. Lyme's Florida holdings also help increase coastal resiliency by acting as a natural buffer against sea-level rise and storm surge.

USDA's strategy is made of these 10 building blocks:

Soil Health: Improve soil resilience and increase productivity by promoting conservation tillage and no-till systems, planting cover crops, planting perennial forages, managing organic inputs and compost application, and alleviating compaction. USDA aims to increase no-till implementation from the current 67 million acres to over 100 million acres by 2025.

Nitrogen Stewardship: Focus on the right timing, type, placement and quantity of nutrients to reduce nitrous oxide emissions and provide cost savings through efficient application.

Livestock Partnerships: Encourage broader deployment of anaerobic digesters, lagoon covers, composting, and solids separators to reduce methane emissions from cattle, dairy, and swine operations. USDA plans to support 500 new digesters over the next 10 years, as well as expand the use of covers on 10 percent of anaerobic lagoons used in dairy cattle and hog operations.

Conservation of Sensitive Lands: Use the Conservation Reserve Program (CRP) and the Agricultural Conservation Easement Program (ACEP) to reduce GHG emissions through riparian buffers, tree planting, and the conservation of wetlands and organic soils. By 2025, USDA aims to enroll 400,000 acres of CRP lands with high greenhouse gas benefits, protect 40,000 acres through easements, and gain additional benefits by transferring expiring CRP acres to permanent easements.

Grazing and Pasture Lands: Support rotational grazing management, avoiding soil carbon loss through improved management of forage, soils and grazing livestock. By 2025, USDA plans to support improved grazing management on an additional 4 million acres, for a total of 20 million acres.

Private Forest Growth and Retention: Through the Forest Legacy Program and the Community Forest and Open Space Conservation Program, protect almost 1 million additional acres of working landscapes. Employ the Forest Stewardship Program to cover an average of 2.1 million acres annually (new or revised plans), in addition to the 26 million acres covered by active plans.

Stewardship of Federal Forests: Reforest areas damaged by wildfire, insects, or disease, and restore forests to increase their resilience to those disturbances. USDA plans to reforest 5,000 additional post-disturbance acres by 2025.

Promotion of Wood Products: Increase the use of wood as a building material, to store additional carbon in buildings while offsetting the use of energy from fossil fuel. USDA plans to expand the number of wood building projects supported through cooperative agreements with partners and technical assistance, in addition to research and market promotion for new, innovative wood building products.

Urban Forests: Encourage tree planting in urban areas to reduce energy costs, storm water runoff, and urban heat island effects while increasing carbon sequestration, curb appeal, and property values. Working with partners, USDA plans to plant an average of 9,000 additional trees in urban areas per year through 2025.

Energy Generation and Efficiency: Promote renewable energy technologies and improve energy efficiency. Through the Energy Efficiency and Conservation Loan Program, work with utilities to improve the efficiency of equipment and appliances. Using the Rural Energy for America Program and other programs, develop additional renewable energy, bioenergy and biofuel opportunities. Support the National On-Farm Energy Initiative to improve farm energy efficiency through cost-sharing and energy audits.