Maryland
Department of Agriculture
Office of the Secretary

Agriculture | Maryland's Leading Industry

Larry Hogan, Governor
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July 30, 2019

The Honorable Lawrence J. Hogan Jr.
Governor
100 State Circle
Annapolis, MD 21401

The Honorable Adrienne A. Jones
Speaker
Maryland House of Delegates
State House, H-101
100 State Circle
Annapolis, MD 21401

The Honorable Thomas V. Mike Miller, Jr.
President
Maryland Senate
State House, H-107
100 State Circle
Annapolis, MD 21401

RE: Report Required by EN § 2-1305(c), HB 514/Ch. 429, 2015 - MSAR # 10679

Dear Governor Hogan, Speaker Jones and President Miller:

EN § 2-1305(c), HB 514/Ch. 429, 2015 states "(1) the following state agencies shall report annually on the status of programs that support the State's greenhouse gas reduction efforts o address climate change, in accordance with § 2–1246 of the State Government Article, to the Commission and the Governor: …

(ii) the Department of Agriculture; …

(2) the report required in paragraph (1) of this subsection shall include:

(i) program descriptions and objectives;

(ii) implementation milestones, whether or not they have been met;

(iii) enhancement opportunities;

(iv) funding;

(v) challenges;

(vi) estimated greenhouse gas emissions reductions, by program, for the prior calendar year; and

(vii) any other information that the agency considers relevant.

I have included the annual reports from 2016, 2017 and 2018. I hope you find the information contained in these reports useful. Should you have any questions, please do not hesitate to reach out to Cassie Shirk, Director of Legislation and Governmental Affairs, at cassie.shirk@maryland.gov or 410-841-5886.

Sincerely,

Joseph Bartenfelder
Secretary, Department of Agriculture

2016 - MDA Report to Comply with Climate Change Commission Requirements

MSAR #10679

From the

Maryland Department of Agriculture

August 1, 2019

2016 - Buy Local for GHG Benefits

Program Description

Increasing public awareness and interest in the benefits of fresh, healthful, locally sourced food has sparked an unprecedented consumer preference for locally-grown and locally-produced agricultural products. Maryland Department of Agriculture's (MDA) Buy Local campaign has effectively promoted traceable, wholesome, locally grown agricultural products. This campaign has proven to be highly successful in promoting local farms as the preferred food source for Marylanders. Furthermore, Buy Local has assisted local producers in marketing directly to not only consumers, but also supermarket, food service, institutional and other wholesale buyers. MDA developed the Maryland's Best website (www.marylandsbest.net) as a resource for finding locally grown products. A farmer's market directory is also available at: mda.maryland.gov/maryland_products/pages/farmers_market_dir.aspx.

MDA's promotion of sustainable production and consumption of local agricultural goods helps to displace the production and consumption of products transported from other states and countries. In addition to the energy savings and GHG reductions resulting from decreased transportation emissions, greater demand for local products preserves the agricultural landscape, supports agro-biodiversity, and encourages beneficial environmental practices.

Program Objectives

MDA works with farmers, local governments, restaurants, food distributors and retailers, value-added producers, public and private institutions, and trade associations to maintain and expand its popular Buy Local program. MDA's 2020 goals are to establish a state farmers market association, raise the number of farmers markets by 20%, and increase direct sales (buy/grower) by 20%.

Implementation Milestones (have they been met?)

MDA appears to have already fulfilled its goals under this initiative.

- The Maryland Farmers Market Association (www.marylandfma.org) was established in 2012 through a federal matching grant awarded to MDA in cooperation with the University of Maryland and Maryland's market managers.
- As of spring 2016, there were 147 farmers markets across the state, with at least one in every Maryland county and Baltimore City.
    - This number represents 95% of the 2020 goal, but it is likely that the target of 155 markets has been achieved because there are always markets that are not included in the official count for a variety of reasons.
    - Using data from the first confidential survey of farmers markets completed at the end of the 2015 season, MDA and the Maryland Farmers Market Association

estimate farmers market sales at $51 million, with more than 2.3 million consumers visiting the markets last year.

- MDA does not track direct sales figures, but if annualized participant numbers at the Buyer-Grower Expo, held each winter since 2002, are used as a proxy, the event has grown over 90% during the subsequent years.
- MDA participates in the U.S. Department of Agriculture's (USDA) Farmers Market Nutrition Program (FMNP), which provides checks for the purchase of fresh produce to low-income senior residents and participants in the federal Special Supplemental Nutrition Program for Women, Infants and children (WIC).
    - In 2015, 400 Maryland farmers joined in this effort and received over $449,000 through the program.
- In 2014, the Maryland Department of Human Resources joined with the Maryland Farmers Market Association to support a federal program to install point-of-sale machines in farmers markets across that state, so that purchases can be made by low-income residents on electronic benefit transfer cards.
- Last year, Maryland became the first state to pilot the Farmers Market Finder, a mobile website (farmersmarketfinder.ub.1.co/) that lists all farmers markets in the state with vendors who accept FMNP checks.
    - The site also educates participants about the use of their checks, informs them of what foods are eligible for purchase, and provides links to videos and photos of farmers active in FMNP.
    - Participants can opt to receive mobile text messages every month from the site to remind them to use their FMNP checks before they expire.
    - In addition, the site has recipes for fresh produce dishes and provides farmers market shopping tips.

Estimated Emission Reductions for CY 2015

The revised potential emission reductions from the Buy Local for GHG Benefits initiative in 2020 are estimated to be 0.02 MMtCO2e.

Enhancement Opportunities

As is demonstrated by the numerous enhancements already made, MDA is always open to opportunities to improve the experience of all users of the Buy Local program.

Funding

The Buy Local initiative receives ongoing support from a number of sources, including grants from USDA; matching funds from MDA, the Maryland Department of Health and Mental Hygiene; and state General Funds. The costs of some events are offset by sponsorships and registration fees.

Challenges

The primary challenge of the Buy Local program is maintenance of its success.

Relevant Information

Although it was derived from reported results from about one-third of the state's farmers markets, the 2015 sales figure suggests that earlier estimates of job creation, net economic output, and wages appear to be substantially understated.

2016 - Conservation of Agricultural Land for GHG Benefits

Program Description

Land conservation offers an important mechanism for mitigating and adapting to climate change. Healthy and vigorous forests and grasslands not only provide direct benefits in GHG reduction but keeping them intact also helps to avoid or diminish GHG emissions associated with development.

MDA seeks to safeguard Maryland's network of natural areas, agricultural lands, and coastal zones through its established conservation programs and practices. MDA continues to pursue policies and programs that curb the conversion of agricultural lands and encourage the conservation of natural resources while working with its partners at DNR and MDP to promote the preservation and restoration of forested, grassed, and wetland areas on agricultural lands. Two MDA programs that are key to these efforts are the Maryland Agricultural Land Preservation Foundation (MALPF) and the U.S. Department of Agriculture's Conservation Reserve Enhancement Program (CREP).

MALPF, which purchases permanent preservation easements, was established in 1977 and is one of the most successful programs of its kind in the country. Besides maintaining prime farmland and woodland as a viable local base of food and fiber production, the protection of agricultural land reduces random urban development, safeguards wildlife habitat, and enhances the ecology of the Chesapeake Bay and its tributaries.

Maryland has participated in CREP since 1997 to target high-priority conservation concerns by offering rental payments for 10 to 15-year set-aside contracts, and other incentives, to agricultural producers to protect environmentally sensitive lands, improve wildlife habitat, and reduce nutrient and sediment loss. Currently Maryland landowners can receive five types of payments: a one-time signing bonus, annual rental payments that include a per-acre incentive, cost-share assistance, a one-time practice incentive payment, and maintenance payments.

Program Objectives

The State of Maryland's 2020 goal is to permanently protect 962,000 acres of farmland, woodland and open space land from commercial, residential, and industrial development by purchasing permanent easements through MALPF, local government land preservation programs, local Transfer of Development Rights (TDRs), and other similar initiatives.

If fully implemented at its authorized 100,000 acres, CREP has the potential to plant up to 16,000 acres of marginal land into grass, shrubs, and trees, establish 77,000 acres of grassland and forest buffers and 5,000 acres of water and wetland habitat, and restore 2,000 acres of habitat for declining, threatened, or endangered species.

Implementation Milestones (have they been met?)

MALPF:

- As of June 30, 2016, 2,207 farms have been protected and land has been preserved in each of Maryland's 23 counties.
- MALPF's purchases represent a cumulative public investment of over $674 million and increase total acres preserved in the program to 299,234.
- Current acreage totals bring MALPF's contribution alone to 31% of the 2020 goal.
- With a total of almost 877,000 protected with easements of all types, the state is on track to achieve its target by 2020.

CREP:

- CREP enrollments have generally been declining.
    - Enrollments peaked at 74,500 acres in 2008.
    - Enrollments averaged just under 70,000 acres in the intervening years, but as of June 2016, dropped to 57,300 acres.
- The success of earlier years is unlikely to be repeated, and the achievement of almost 75% of the overall acreage goals in 2008 also represents a peak for the program.
- Even though contracts expire each year, most of the funded practices remain on the land and continue to provide the intended environmental benefits.

Estimated Emission Reductions for CY 2015

The revised emission reductions from the Conservation of Agricultural Land for GHG Benefits initiative in 2020 are estimated to be 0.18 MMtCO2e.

Enhancement Opportunities

No enhancements to these ongoing programs are contemplated at this time. However, through a developing collaboration between the Mitigation and the Adaptation and Response Work Groups, MDA is participating in a new Healthy Soils initiative that will complement and supplement these and others of MDA's existing programs by enhancing the sequestration capacity of agricultural lands.

Funding

MALPF's purchases are funded by dedicated percentages of the Real Estate Transfer Tax and the Agricultural Transfer Tax, along with county and state allocations.

The monies in CREP vary with authorized funding and participation levels. USDA funds CREP rental payments and a percentage of cost-shares and incentives through its Farm Service Agency. The Maryland Agricultural Water Quality Cost-Share Program (MACS) offers grants, which are financed by state bond funds, to provide up to 87.5% of the costs to install eligible best management practices. State signing incentive payments are funded through grants from the Chesapeake and Atlantic Coastal Bays 2010 Trust Fund.

Challenges

Each year, the applications for participation in MALPF exceed available funding. Since 2009 the General Assembly has diverted monies from the program and partially replaced them with bond funds. Because of these decreases, the program has combined its acquisition years over five cycles in order to have enough funding in each cycle to make at least one offer in each participating county.

Even though commodity prices have dropped substantially, CREP participation has not rebounded as expected. An aging farm population and turn-over in ownership, together with concerns about the demands of maintenance standards, suggest that farm operators are less willing to enter into the lengthy contracts typical of CREP.

Relevant Information

RESI's 2015 study estimated that the programs under the Conservation of Agricultural Land for GHG Benefits initiative would, when fully implemented, support a total of 292 jobs by 2020 and produce $982,330, 321 in net economic output and $173,229,219 in wages over the lifetime of the programs. Chapter 6 and Appendix K of the RESI report provide more detail on job creation and associated economic benefits.

2016 - Nutrient Trading for GHG Benefits

Program Description

Many of the agronomic, land use, and structural practices promoted by the Maryland Nutrient Trading Program also store carbon and lower other GHG emissions. Because of this, the existing nutrient marketplace could provide a platform for the addition of a voluntary carbon component. Just like the nutrient and sediment markets, carbon trading offers entities under regulatory requirements a potentially more cost-effective means to maintain their limits by acquiring credits or offsets generated from reductions elsewhere.

Program Objectives

MDA expects to add carbon credits and enhanced nutrient credits to the Maryland Nutrient Trading Program. Carbon and enhanced nutrient credits would be "stacked" onto existing nutrient and sediment credits as tradable commodities. This will increase the potential value of the total credit package and serve as another incremental step toward building a comprehensive environmental marketplace. Encouraging cross-sector trades between nonpoint and permitted point sources will create new opportunities for GHG reductions. Nonpoint sources include agricultural operations. Permitted point sources now include entities operating under the Municipal Separate Storm Sewer System (MS4) permits. Cross-sector trades will also improve water quality, reduce fertilizer and energy use, reduce soil erosion, and restore wetlands and wildlife habitats. In addition, it will also provide supplemental income for farmers and foresters, and promote the preservation of agricultural and forested lands. By 2020, MDA aims to achieve participation by 10% of farms and landowners in providing nutrient, sediment and carbon credits to an active environmental market in Maryland.

Implementation Milestones (have they been met?)

- The Bay Restoration Fund (BRF) provides monies to upgrade Maryland's major wastewater treatment plants. Maryland's program was designed from its inception to supply offsets to accommodate new growth and development. This program is unique to many trading programs across the county that furnish compliance credits for existing wastewater facilities.

- The lack of progress in finalizing Accounting for Growth (now known as "Aligning for Growth") policies and regulations has left the program without the necessary driver for trading. However, the new cross-sector proposal to allow Phase I MS4 jurisdictions to meet a portion of their impervious area restoration requirement, through the purchase of credits, promises to offer a much needed substitute.

- In 2015, the Maryland Agricultural Nutrient Trading Advisory Committee was disbanded and a new Water Quality Trading Advisory Committee (WQTAC) was convened in 2016. WQTAC provides direction to the overall trading program and oversees any further development of the trading infrastructure. The first task of the new committee is to review and refine a comprehensive trading manual that incorporates policies and guidelines for all point and nonpoint sources.

- A public/private stakeholder advisory group started meeting in November 2009. Their purpose was to assess carbon mitigation activities, determine a menu of eligible practices, and develop the policies and guidelines to implement a carbon trading program. These efforts were discontinued in 2012 when carbon credit prices collapsed worldwide.

- MDA plans to re-convene the carbon advisory group when the nutrient and sediment marketplace is fully functioning. The timing of this is uncertain. However, it is possible that 10 percent of Maryland's farms could be generating nutrient, sediment, and carbon credits in an active environmental market, through either intra or inter-state trading, by 2020.

- A multi-state trading platform has been realized using the Maryland model as the template, and this platform already has the embedded capacity to calculate carbon credits.

- MDA recently completed development of a web-based, inter-active, site-specific assessment tool to determine offset needs for development projects. In addition, they also made substantial enhancements to online registry and marketplace components to make them functional for all types of trades and use by all sectors.

- MDA's regulations for the generation, verification, and certification of agricultural nutrient and sediment credits became effective as of August 29, 2016.

Estimated Emission Reductions for CY 2015

The revised potential emission reductions from the Nutrient Trading for GHG Benefits initiative in 2020, are estimated to be 0.57 MMtCO2e

Enhancement Opportunities

Work on Aligning for Growth policies and guidance is expected to resume this year under the aegis of the Water Quality Trading Advisory Committee. MDE also has offered a proposal to seek legislative approval for the use of BRF funds to purchase credits and incentivize trading in Maryland.

Funding

Trading program policy and infrastructure development was funded by: the U.S. Department of Agriculture through the Natural Resources Conservation Service's Conservation Innovation Grants; the U.S. Environmental Protection Agency Clean Water Act, Section 319(h); and Chesapeake Bay Implementation, Section 117, Grants. The last remaining grant will end during Fiscal Year 2017 and alternative funding will be sought.

Challenges

Major concerns center around the following issues:

- Appropriate metrics to estimate or measure pollution reductions
- Viability of a voluntary program and participation levels
- Verification and certification protocols and the assurance that credits are real and reliable
- Public reporting procedures and accessibility and their role in fostering transparency and trust
- Compliance, liability, and enforcement provisions and exposure to legal action

Relevant Information

RESI has not yet evaluated the potential economic impact of an active environmental market. Such a market would provide new employment and income opportunities for individuals and organizations that offer services to support an environmental restoration economy. Furthermore, such a market will benefit the environment by creating a need for regular inspections, assessment and verification of credits, and the development of environment-friendly systems. These credits can then be acquired, managed and re-sold, and would be a revenue source for engineers, contractors, aggregators, brokers, environmental bankers and more.