



TO: Greenhouse Gas Reduction Fund Program

FROM: Karen Ross
Secretary
California Department of Food and Agriculture (CDFA)

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Manager
Office of Environmental Farming and Innovation

DATE: 7/29/19

SUBJECT: GREENHOUSE GAS REDUCTION FUND:
CDFA

EXPENDITRE RECORD FOR FISCAL YEAR 2019-20:
Alternative Manure Management Program

This Attestation Memorandum documents that CDFA completed the attached Expenditure Record on July 29, 2019, for the Alternative Manure Management Program. The Expenditure Record is consistent with the statutory requirements of Government Code Section 16428.9 to support expenditures from the Greenhouse Gas Reduction Fund.

This Attestation Memorandum and Expenditure Record will be submitted to CARB for public posting on the CARB website at: www.arb.ca.gov/caclimateinvestments

Questions on this Attestation Memorandum or Expenditure Record may be directed to Amrith Gunasekara, Manager of the Office of Environmental Farming and Innovation, Amrith.Gunasekara@cdfa.ca.gov, (916) 654-0433.

Attachment: Expenditure Record for Fiscal Year 2019-20 for Alternative Manure Management Program

cc: Geetika Joshi, Ph.D.
Supervising Senior Environmental Scientist
Alternative Manure Management Program

Greenhouse Gas Reduction Fund: Expenditure Record

2019-20

California Department of Food and Agriculture (CDFA)
Alternative Manure Management Program (AMMP)

Authorizing legislation:

Item 8570-101-3228 of Assembly Bill (AB) 74 (Budget Act of 2019-20), as amended by June 27, 2019 (Chapter 23, Section 2) appropriates to CDFA \$34 million for dairy digester research and development and alternative manure management.

Element (1) A description of each expenditure proposed to be made by the administering agency pursuant to the appropriation.

<input type="checkbox"/> Agency that will administer funding	<ul style="list-style-type: none">▪ California Department of Food and Agriculture
<input type="checkbox"/> Amount of proposed expenditure and appropriation reference	<ul style="list-style-type: none">▪ AB 74, (Ting, Budget Act of 2019, Chapter 23, Section 2), Item 8570-101-3228, appropriates \$34,000,000 to the Department of Food and Agriculture (CDFA) for dairy digester research and development and alternative manure management.▪ CDFA will utilize its existing Alternative Manure Management Program (AMMP) to provide financial incentives for implementation of non-digester management practices on dairy and livestock operations which will capture methane, a greenhouse gas (GHG) many times more potent than carbon dioxide.▪ CDFA will also utilize its existing Dairy Digester Research and Development Program (DDRDP) to incentivize digester related manure management practices on dairy operations that reduce methane emissions under a separate expenditure record.▪ AB 2377 (Irwin, Chapter 868, Statutes of 2018) requires CDFA to develop and implement a technical assistance grant program to assist the applicants of AMMP in application submission and project implementation. AB 74, (Ting, Budget Act of 2019, Chapter 23, Section 2), Item 8570-101-3228 requires that no less than 5 percent or no more than \$5 million of this appropriation may be utilized for this program. The new technical assistance grant program is called the Climate Smart Agriculture Technical Assistance (CSA TA) Grant Program.
<input type="checkbox"/> Estimated amount of expenditures for administering	<ul style="list-style-type: none">▪ Not more than 5 percent of the amount appropriated in Item 8570-101-3228 may be used for administrative costs of the AMMP.

<p>agency administrative costs</p>	
<p><input type="checkbox"/> If applicable, identify laws or regulations that govern how funds will be used</p>	<ul style="list-style-type: none"> ▪ AB 1532 (Pérez, Chapter 807, Statutes of 2012), SB 535 (de León, Chapter 830, Statutes of 2012), SB 1018 (Budget and Fiscal Review Committee, Chapter 39, Statutes of 2012), and SB 862 (Committee on Budget and Fiscal Review, Chapter 36, Statutes of 2014), provide the general framework for how the auction proceeds will be administered to further the purposes of AB 32 (Núñez, Chapter 488, Statutes of 2006). ▪ AB 2377 (Irwin, Chapter 868, Statutes of 2018) requires that at least 25 percent of the technical assistance grant program funds will be used to provide technical assistance to socially disadvantaged farmers or ranchers, as defined in Section 512 of the Food and Agriculture Code.
<p><input type="checkbox"/> Continuation of existing Expenditure Record</p>	<ul style="list-style-type: none"> ▪ This is an update to an existing Expenditure Record from 2018-19, including the total amount of funds available for funding projects under the AMMP. ▪ This appropriation will support continuing the AMMP and will fund the same types of management practice projects that have been previously funded the existing Expenditure Record. ▪ This appropriation may continue to support AMMP Demonstration Projects. ▪ This appropriation will support Climate Smart Agriculture Technical Assistance (CSA TA) Grant Program for the first time.
<p><input type="checkbox"/> Project type(s)</p>	<ul style="list-style-type: none"> ▪ Alternative manure management
<p><input type="checkbox"/> Describe the projects and/or measures that will be eligible for funding</p>	<ul style="list-style-type: none"> ▪ The AMMP provides financial incentives to commercial dairy and livestock operations to implement projects that implement non-digester practices to reduce or avoid methane emissions from manure management. ▪ AMMP may provide financial incentives to demonstration projects that will allow for testing and demonstration of new technologies and manure management practices that are not covered under the AMMP incentives solicitation or demonstrate the adoption of eligible AMMP practice(s) in areas where those practices are underutilized. ▪ The CSA TA grant program will help provide for technical assistance to AMMP applicants during submission of applications and implementation of projects.
<p><input type="checkbox"/> Intended recipients</p>	<ul style="list-style-type: none"> ▪ AMMP: <ul style="list-style-type: none"> ▪ Incentives: California commercial dairy and livestock operations.

	<ul style="list-style-type: none"> ▪ Demonstration: California-based university researchers and academic experts, non-profit organizations, and private companies specializing in dairy and livestock manure management technologies in collaboration with California dairy or livestock operators. ▪ Technical Assistance Program: <ul style="list-style-type: none"> ▪ Eligible recipients of this new program include Resources Conservation Districts (RCDs), the University of California Cooperative Extension and non-profit organizations with demonstrated expertise in designing and implementing HSP agricultural management practices.
<p>☐ Program structure and process for selecting projects for funding</p>	<ul style="list-style-type: none"> ▪ The AMMP will fund competitive incentive and demonstration project grants to reduce methane emissions. Applicants will be scored on the ability to utilize strategies to reduce GHGs. Review criteria include: estimated GHG emissions reductions, evaluation of a project plan, financial soundness and budget, shovel-readiness, and consideration of environmental co-benefits to disadvantaged communities. ▪ The CSA TA Program will competitive grant applications, scored on the thoroughness of a work plan and budget, demonstrated expertise of applicant in specific management practices to assist dairy and livestock producers, and demonstrated need for technical assistance in their region.

Element (2) A description of how a proposed expenditure will further the regulatory purposes of Division 25.5 (commencing with Section 38500) of the Health and Safety Code, including, but not limited to, the limit established under Part 3 (commencing with Section 38550) and other applicable requirements of law.

<p>☐ How the expenditure is consistent with the Investment Plan and the Scoping Plan</p>	<ul style="list-style-type: none"> ▪ AB 1532 (Chapter 807, Statutes of 2012) requires that monies from the Fund be appropriated in a manner that is consistent with the three-year Investment Plan. The “Cap-and-Trade Auction Proceeds Third Investment Plan: Fiscal Years 2019-20 through 2021-22” recommends support for projects for short-lived climate pollutants (SLCPs), waste diversion, reduction and re-use, and sustainable agricultural practices. Therefore, the expenditures covered by this record are consistent with the Investment Plan and align with the priorities expressed in the Plan. ▪ California’s 2017 Climate Change Scoping Plan identified a variety of manure management strategies as key to achieve climate and food production goals across diverse agricultural systems. These projects will continue reducing GHG emissions and achieve the goals and purposes of AB 32 and
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SB 1383, to reduce methane to 40 percent below 2013 levels by 2030 from California's dairy and livestock sector.

- California's 2017 Climate Change Scoping Plan also identifies technical assistance across communities to further the goals of various programs funded through the CCI.
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Element (3) A description of how a proposed expenditure will contribute to achieving and maintaining greenhouse gas emission reductions pursuant to Division 25.5 (commencing with Section 38500) of the Health and Safety Code.

Describe how expenditures will facilitate the achievement of GHG emission reductions in the State

- A large percentage of GHG emissions at dairy and livestock operations are the result of animal manure stored under anaerobic (oxygen lacking) conditions, which produces methane. Methane produced from anaerobic manure storage, such as flush water lagoons, contributes approximately 25 percent of all methane emissions in California. Non-digester management practices funded through the AMMP will reduce methane emissions from the manure management process by (i) managing the manure in aerobic (dry) rather than anaerobic (wet) conditions, thereby favoring decomposition of organic matter to carbon dioxide rather than methane and reducing net GHG emissions, or (ii) reducing the amount of manure volatile solids stored under wet conditions, or (iii) a combination of the above. Non-digester manure management strategies include but are not limited to scrape conversion and solid separation followed by open-solar drying and composting of manure solids onsite; and conversion to pasture based management. GHG emission reductions from the adoption of AMMP practices and their demonstration will be calculated to the baseline scenario of methane being released uncontrolled into the atmosphere. Emission reductions will be realized throughout the project life span, which is expected to vary for the different practices, but a minimum of 5 years.
- CSA TA programs will help increase the adoption of AMMP practices through outreach, application submission assistance and project implementation assistance, complementing GHG reductions achieved by AMMP described above.

Explain when GHG emission reductions and/or co-benefits are expected to occur and how

- GHG emission reductions from AMMP are expected to commence in 2022-23.
 - Expenditures will incentivize the design and construction of non-digester systems in CA which have been shown to reduce methane emissions by minimizing the anaerobic management of manure. The project life for the purposes of
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they will be maintained	quantifying GHG emission reductions is 5 years. GHG reductions are expected to continue for the life of the project, which can be between 5-10 or more years. Co-benefits from the demonstration projects include evaluation of commercial potential and evaluation of new technologies.
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Element (4) A description of how the administering agency considered the applicability and feasibility of other non-greenhouse gas reduction objectives of Division 25.5 (commencing with Section 38500) of the Health and Safety Code.

<input type="checkbox"/> Expected co-benefits, particularly environmental, economic, public health and safety, and climate resiliency	<ul style="list-style-type: none"> ▪ Potential air and water quality benefits of AMMP projects will be evaluated by CDFA prior to implementation of the incentives program. Potential benefits such as the creation of construction-related jobs are anticipated. Eliminating open lagoons or transferring manure to dry-managed systems may result in reduction of odors, volatile organic compounds (VOCs), ammonia and hydrogen sulfide (H₂S) emissions from uncovered wet lagoons. Additional economic benefits may include producing beneficial by-products for animals bedding and soil amendments (e.g. compost).
<input type="checkbox"/> How the project will support other objectives of AB 32 and related statutes	<ul style="list-style-type: none"> ▪ Implementation of AMMP projects will provide GHG emission reduction solutions for dairy and livestock operators beyond digesters. Digesters may not be economically feasible or contribute to potential economic benefits on all dairies, and AMMP will provide alternative approaches that can be adopted. Other AB 32 objectives may include but are not limited to: <ul style="list-style-type: none"> ▪ Maximize additional environmental and economic co-benefits for California. ▪ Provide an opportunity for small businesses to participate in statewide efforts to reduce GHG emissions.
<input type="checkbox"/> Percentage of total funding that will be expended for projects that are located in and benefit priority populations ¹ per CARB guidance	<ul style="list-style-type: none"> ▪ The 2018 Funding Guidelines do not include a minimum target defined for CDFA to locate projects within and provide benefits to priority populations but some projects may meet the criteria for providing benefits.

¹ Priority populations include residents of: (1) census tracts identified as disadvantaged by California Environmental Protection Agency per SB 535; (2) census tracts identified as low-income per AB 1550; or (3) a low-income household per AB 1550. See Section VII.B for more information on the definitions of priority populations.

<p><input type="checkbox"/> Describe the benefits to priority populations per CARB guidance</p>	<ul style="list-style-type: none"> ▪ Consistent with the evaluation criteria in the Funding Guidelines, projects may benefit priority populations through direct water quality improvements or employment opportunities. ▪ Community listening sessions will be held, including in communities housing priority populations, to provide program information and solicit stakeholder feedback on program framework. ▪ Projects that provide benefits to priority populations will receive additional points during review and scoring.
<p><input type="checkbox"/> Explain strategies the administering agency will use to maximize benefits to disadvantaged communities</p>	<ul style="list-style-type: none"> ▪ CDFA will prioritize projects that meet multiple disadvantaged community benefit criteria and demonstrate that the project will meaningfully address an important community need. This will help maximize benefits and support administering agency efforts to meet or exceed statutory requirements for expenditures that benefit disadvantaged communities. ▪ To help maximize benefits to disadvantaged communities, the CDFA will coordinate with local and regional entities to host workshops that allow the public to provide input on the types of projects that would be funded.
<p><input type="checkbox"/> Explain how the administering agency will avoid potential substantial burdens to disadvantaged communities and low-income communities or, if unknown, explain the process for identifying and avoiding potential substantial burdens</p>	<ul style="list-style-type: none"> ▪ Environmental benefits of proposed projects are evaluated by members of the AMMP Technical Advisory Committee, including subject matter experts from State and Federal agencies. Projects providing multiple environmental benefits receive a higher score during review and are more competitive.

Element (5) A description of how the administering agency will document the result achieved from the expenditure to comply with Division 25.5 (commencing with Section 35800) of the Health and Safety Code.

<p><input type="checkbox"/> How the administering agency will track / report progress to make sure</p>	<ul style="list-style-type: none"> ▪ CDFA will track project progress for AMMP incentive and demonstration projects through evaluation of invoices and supporting documentation; and a verification evaluation accompanied by photographs to ensure the project was completed and installed according to the approved grant
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<p>projects are implemented per requirements in statute and CARB guidance</p>	<p>agreement. Demonstration projects will be required to submit quarterly progress reports describing accomplishments and results to CDFA. A final project report is also required.</p>
<p><input type="checkbox"/> Describe the approach that will be used to document GHG emission reductions and/or other benefits before and after project completion.</p>	<ul style="list-style-type: none"> ▪ CDFA will require incentive program applicants to calculate the net GHG emission reductions using CARB approved quantification methodology. For AMMP, the methodology is adopted and modified from the CARB Compliance Offset Protocol for Livestock Projects. ▪ Demonstration project applicants will also be required to calculate the net GHG emission reductions using either CARB approved quantification methodology or, if the CARB methodology does not accurately capture the proposed technology, submit a detailed methodology for evaluation by AMMP technical reviewers and Technical Advisory Committee, which consist of subject matter experts from State and federal agencies and academia. ▪ CDFA will utilize the technical expertise of State and Federal experts and research scientists at several of the University of California and/or California State Universities to provide technical review of the GHG reduction estimates in the applications for AMMP. CDFA will ensure the systems are operational with a verification component post project completion. The technical review of GHG reduction values coupled with the verification component will ensure all projects achieve GHG reductions.
<p><input type="checkbox"/> Type of information that will be collected to document results, consistent with CARB guidance</p>	<ul style="list-style-type: none"> ▪ To determine the job benefits, CDFA will compile data from funding recipients on jobs provided, both the quality and quantity, consistent with CARB guidance. ▪ Once operational, CDFA agency will collect information on project outcomes for 10 percent of projects, consistent with CARB guidance.
<p><input type="checkbox"/> How the administering agency will report on program status</p>	<ul style="list-style-type: none"> ▪ CDFA will report to CARB consistent with CARB guidance. CDFA will provide regular updates on the program, including expenditure amounts, GHG emission reductions, and other benefits, as applicable (e.g., jobs supported). Reports will also include information on project outcomes for, at a minimum, 10 percent of operational projects over 3 years.