



CALIFORNIA DEPARTMENT OF  
FOOD & AGRICULTURE

Karen Ross, Secretary

TO: Greenhouse Gas Reduction Fund Program

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

Tawny Mata, Ph.D.  
Director  
Office of Environmental Farming and Innovation (OEFI)

DATE: 04/21/2023

SUBJECT: GREENHOUSE GAS REDUCTION FUND: CDFA  
EXPENDITURE RECORD [FOR FISCAL YEAR 2022-23]:  
Alternative Manure Management Program (AMMP)

This Attestation Memorandum documents that CDFA completed the attached Expenditure Record on April 21, 2023, for AMMP. 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](http://www.arb.ca.gov/caclimateinvestments). Questions on this Attestation Memorandum or Expenditure Record may be directed to Tawny Mata, Director, OEFI at [Tawny.Mata@cdfa.ca.gov](mailto:Tawny.Mata@cdfa.ca.gov) or (916) 205-3624.

Attachment: Expenditure Record for the AMMP

cc: Roberta B Franco, Ph.D.  
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Karen Ross  
Secretary



**Greenhouse Gas Reduction Fund: Expenditure Record**

California Department of Food and Agriculture  
Alternative Manure Management Program

**Authorizing legislation:** Item 8570-102-3228 of the Budget Act of 2022, as amended by Assembly Bill (AB) 179 (Ting, Chapter 249), appropriates to CDFA \$20 million for the Alternative Manure Management Program.

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

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<b><i>Agency that will administer funding</i></b>	<ul style="list-style-type: none"><li>California Department of Food and Agriculture (CDFA)</li></ul>
<b><i>Amount of proposed expenditure and appropriation reference</i></b>	<ul style="list-style-type: none"><li>The expenditure is \$20 million, appropriated by the FY 2022-23 Budget, as amended by AB 179 (Ting, Budget Act of 2022, Chapter 249, Section 2), Item 8570-102-3228, to the Department of Food and Agriculture (CDFA) for the Alternative Manure Management Program from the Greenhouse Gas Reduction Fund.</li><li>CDFA will utilize its existing Alternative Manure Management Program (AMMP) to provide financial incentives for the implementation of non-digester manure management practices on dairy and livestock operations which will reduce methane, a greenhouse gas (GHG) many times more potent than carbon dioxide. The program is proposing to distribute the funds in two grant solicitations of \$10 million each.</li></ul>
<b><i>Estimated amount of expenditures for administering agency administrative costs</i></b>	<ul style="list-style-type: none"><li>Not more than 5 percent of the amount appropriated in Item 8570-102-3228 may be used for administrative costs of the AMMP.</li></ul>

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***If applicable, identify laws or regulations that govern how funds will be used***

- 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 CDFA to develop and implement a technical assistance grant program to assist the applicants of AMMP in application submission and project implementation. It also 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.

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***Continuation of existing Expenditure Record***

- This is an update to an existing Expenditure Record. The Expenditure Record elements being updated includes 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 by the existing Expenditure Record, under the updated Quantification Methodology for the AMMP and its accompanying Benefits Calculator Tool.
- This appropriation may support the Climate Smart Agriculture Technical Assistance (CSA TA) Grant Program.

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***Project type(s)***

- Alternative manure management
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***Describe the projects and/or measures that will be eligible for funding***

- The AMMP provides financial incentives to commercial dairy and livestock operations for projects that implement non-digester practices to reduce or avoid methane emissions from manure management.
- The CSA TA grant program will help provide technical assistance to AMMP applicants during the submission of applications and implementation of projects.

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***Intended recipients***

- AMMP: California commercial dairy and livestock operations.
- Technical Assistance Program: Eligible recipients of this program include Resources Conservation Districts (RCDs), the University of California Cooperative Extension, and non-profit organizations with demonstrated expertise in designing and implementing alternative manure management practices.

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***Program structure and process for selecting projects for funding***

- The AMMP will fund competitive incentive 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 fund competitive grant applications, scored on the thoroughness of a work plan and budget, demonstrated expertise of the 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.**

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***How the expenditure is consistent with the Investment Plan and the Scoping Plan***

- 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 Fourth Investment Plan: Fiscal Years 2022-23 through 2024-25” recommends support for projects for reducing short-lived climate pollutants (SLCPs), waste diversion, and sustainable agricultural practices, including investment in the Livestock sector towards alternative manure management, anaerobic digestion, and pilot efforts to reduce livestock enteric fermentation emissions. Therefore, the expenditures covered by this record are consistent with the Investment Plan and align with the priorities expressed in the Plan.
- California’s 2022 Climate Change Scoping Plan identified a variety of strategies for achieving success to address dairy and livestock methane reduction, including installing anaerobic digesters, increasing alternative manure management projects, implementing enteric fermentation strategies, and accelerating demand for dairy and livestock product substitutes. These projects will continue reducing GHG emissions and achieve the goals and purposes of AB 32 and SB 1383, to reduce methane to 40 percent below 2013 levels by 2030 from California’s dairy and livestock sector.

**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.**

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***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 the 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; conversion to pasture-based management; and alternative manure treatment and storage such as compost bedded pack barns. GHG emissions reductions from the adoption of AMMP practices will be calculated against the baseline scenario of methane being released uncontrolled into the atmosphere. Emissions reductions will be realized throughout the project life span of at least 5 years following implementation, although this is expected to vary for the different practices.
  
- 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 they will be maintained***

- GHG emission reductions from AMMP projects funded by this appropriation are expected to commence in 2024-25. Co-benefits may include a reduction in criteria and toxic air pollutant emissions, improved soil health such as compost production, and odor reduction.
  - 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. Once these systems are operational, it is expected that the GHG emission reductions will continue for a quantification period of 5 years. However, with proper maintenance, the full life of projects is anticipated to be 5-10 or more years, during which benefits would still occur.
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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.**

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***Expected co-benefits, particularly environmental, economic, public health and safety, and climate resiliency***

- 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 the reduction of odors, volatile organic compounds (VOCs), ammonia, and hydrogen sulfide (H<sub>2</sub>S) emissions from uncovered wet lagoons. Additional economic benefits may include producing beneficial by-products for animals' bedding and soil amendments (e.g., compost).

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***How the project will support other objectives of AB 32 and related statutes***

- 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 for all dairies, and AMMP will provide alternative approaches that can be adopted. Other AB 32 objectives may include, but are not limited to:
    - Maximize additional environmental and economic co-benefits for California.
    - Provide an opportunity for small businesses to participate in statewide efforts to reduce GHG emissions.
  - Projects also complement AB 398 priorities towards reducing short-lived climate pollutants and sustainable agricultural practices that promote transitions to clean technology, water efficiency, and improved air quality.
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***Percentage of total funding that will be expended for projects that are located in and benefit priority populations<sup>1</sup> per CARB guidance***

- The 2018 Funding Guidelines do not include a minimum target defined for CDFA to locate projects within and provide benefits to AB 1550 populations, but some projects may meet the criteria for providing benefits.

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***Describe the benefits to priority populations per CARB guidance***

- Consistent with the evaluation criteria in the Funding Guidelines, projects may benefit disadvantaged communities through reducing odor causing pollutants (such as hydrogen sulfide or ammonia) or on-site criteria air pollutant or toxic air contaminant emissions, providing access to employment or job-training opportunities, among other benefits.
- Projects that provide benefits to priority populations will receive additional points during review and scoring.

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***Explain strategies the administering agency will use to maximize benefits to disadvantaged communities***

- CDFA will prioritize projects that meet the criteria for providing benefits to priority populations 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, and increase participation and accessibility, CDFA will coordinate with local and regional entities to host workshops during the application process and offer free-of-charge technical assistance for project application and implementation.

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<sup>1</sup> 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.

***Explain how the 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***

- 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. While not required, applicants that demonstrate community engagement and outreach efforts during the planning of their project are eligible to receive additional points during review and scoring.

**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.**

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***How the administering agency will track / report progress to make sure projects are implemented per requirements in statute and CARB guidance***

- CDFA will track project progress for AMMP incentive projects through the evaluation of invoices and supporting documentation.
- A verification evaluation accompanied by photographs to ensure the project was completed and installed according to the approved grant agreement is required.

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***Describe the approach that will be used to document GHG emission reductions and/or other benefits before and after project completion***

- CDFA will require incentive program applicants to calculate the net GHG emission reductions and co-benefits using the most recent version of CARB's approved Benefits Calculator Tool and quantification methodology. For AMMP, the methodology is based on the CARB Compliance Offset Protocol for Livestock Projects.
  - CDFA will utilize the technical expertise of State and Federal experts and research scientists at several of the University of California and 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 their estimated GHG reductions.
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***Type of information that will be collected to document results, consistent with CARB guidance***

- To determine the job creation benefits, CDFA will compile data from the CARB Jobs Modeling tool or funding recipients on jobs provided, both in the quality and quantity consistent with CARB guidance.
- The administering agency will collect data such as project location, planned workshops, and outreach efforts, consistent with CARB guidance
- Once operational, CDFA will collect data on project outcomes for at least 10 percent of projects, consistent with CARB guidance.

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***How the administering agency will report on program status***

- 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.
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