



California Department of Food and Agriculture

Alternative Manure Management Practices (AMMPs)

Draft Framework for Program Development

April 17, 2017

Sacramento, CA

OUTLINE

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- Legislative updates and background: 2016-17
- Funds allocation
- Program objective and development process
- Program framework
- Proposed scoring criteria
- Discussion

LEGISLATIVE UPDATES & BACKGROUND: 2016-17

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□ AB 1613

- \$50 million for methane emission reductions from dairy & livestock operations, to be encumbered by June 2018 and expended/liquidated by June 2020.

□ SB 859, Section 2 and 6

- Nondigester manure management practices and environmental impacts

□ SB 1383 (Lara) Short Lived Climate Pollutants - ARB to develop comprehensive strategy no later than Jan. 1, 2018

- Target: to reduce dairy and livestock sector methane emissions by 40% of 2013 levels by 2030
- ARB, in consultation with CDFA, to adopt regulations to reduce methane emissions from livestock manure management operations and dairy manure management operations; to take effect on or after January 1, 2024.

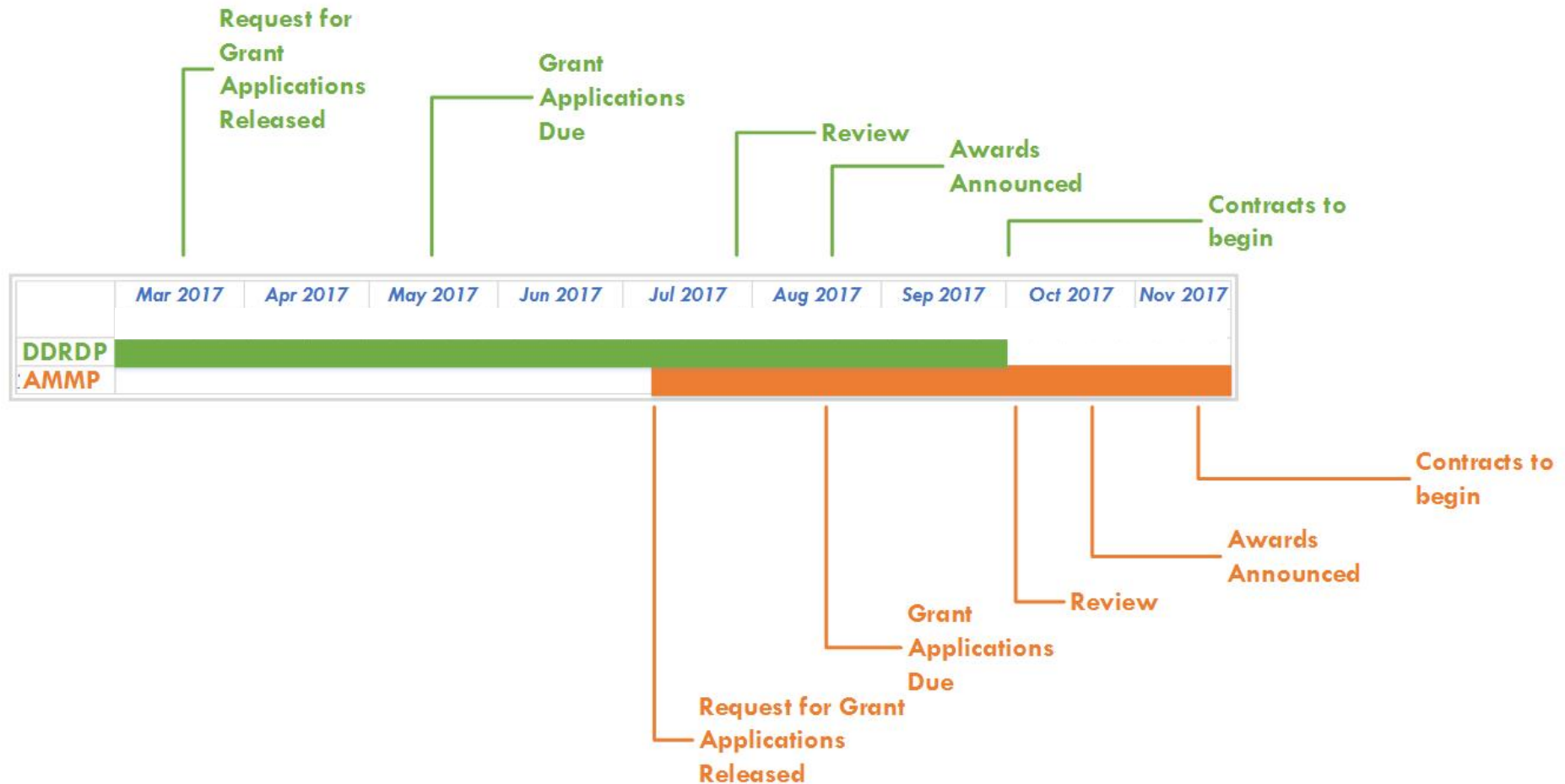
FUNDS ALLOCATION 2016-17

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- Total funds appropriated: \$50 million
- Administrative costs: up to 10%
- **Alternative Manure Management Program (AMMP): \$9-\$16 million**
- Dairy Digester Research and Development Program (DDRDP): \$29-\$36 million

TIMELINE: AMMP vs DDRDP

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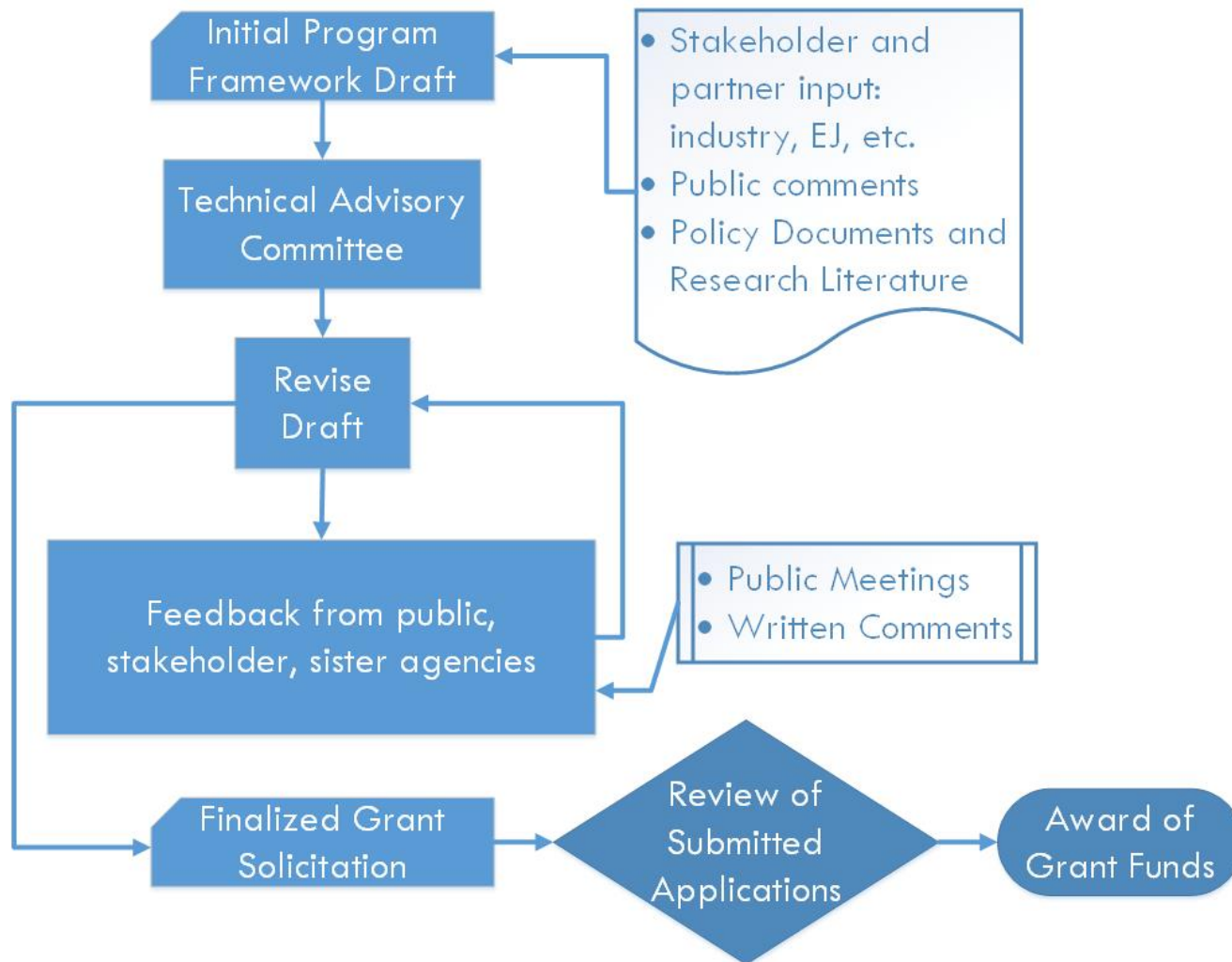
AMMP: PROGRAM OBJECTIVE

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- *Objective:* To incentivize the adoption of alternative (non-digester) manure management practices that reduce greenhouse gas emissions through financial assistance for California's dairy and livestock operations.

PROGRAM DEVELOPMENT PROCESS

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PROJECT REQUIREMENTS AND ELIGIBILITY

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- Projects must be located in CA and:
 - ▣ Achieve permanent, measurable reduction in baseline GHG emissions
 - ▣ Maximize protection of water and air quality.
- Existing dairy and livestock operations.
- Applications for single site – 1 project application per operation.
- Quarterly status reports, annual greenhouse gas emissions reduction data for 5 years after project implementation.
- Verification of GHG emissions reduction from funded projects.

GRANT SIZE/MATCHING FUNDS

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□ GRANT SIZE

- ▣ Up to \$1 million maximum per project.

□ MATCHING FUNDS

- ▣ Match preferred but not required.
- ▣ Other state or federal grants qualify as matching funds.

GRANT SIZE – METHODOLOGY

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- Cost range for all practices, all dairy sizes :
\$112,093-\$19,786,239
- Median capital cost: \$1,093,214
- Example award amount: \$1M
 - ▣ ~9-16 projects
 - ▣ GHG mitigation potential of ~ 24,000-43,000 MTCO₂e per year

Proposed award amount: \$ 1 million max. per project.

PROPOSED SCORING CRITERIA

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Criteria	Max. Points
Project Feasibility, Financial Soundness and Budget	35
Greenhouse Gas Emissions Reduction Estimation	35
Environmental Performance (air and water quality protection)	10
Project Readiness - Regulatory Information, Permits and CEQA	10
Local Community Impacts (Responsive to SB 859)	10
TOTAL	100

PROJECT FEASIBILITY

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- ❑ Operation's history, background, herd size, current management practices and proposed plan.
- ❑ Project designs/plan: Applicant must describe proposed change in practices from current and its impact on overall management of the operation.
- ❑ Work plan.
- ❑ Long term operations and maintenance plan.
- ❑ Team qualifications.

FINANCIAL SOUNDNESS AND BUDGET

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□ Financial Soundness:

- Independent CPA Auditor's Report (preferred); Three most recent fiscal year balance sheets; Profit/loss statements and federal tax returns.
- Other appropriate documentation that demonstrates your organization's (e.g. Limited Liability Company, LLC) financial stability, such as Articles of Organization, Operating Agreement, Bank Statements (including those related to operating and payroll, and lines of credit if applicable), General Ledger.
- Key financial information from all collaborators (if applicable)
- All additional funding sources and ability to commence work while waiting for grant payments in arrears.
- Project partners must not have filed for bankruptcy in the past five years.

□ Budget:

- Template/worksheet provided.

GHG EMISSIONS REDUCTION ESTIMATION – 35 POINTS

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- Data input via spreadsheet/ GHG estimation quantification methodology and tool developed by ARB in collaboration with CDFA.
- Minimum Project Life: 10 years.
- Applicants to report GHG emission reduction results as:
 - ▣ Total GHG emissions reduction
 - ▣ GHG reduction per unit energy-corrected milk produced by dairy operations
 - ▣ GHG reduction per \$ CDFA grant money invested

PRACTICES FOR EVALUATION FOR POTENTIAL INCLUSION

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Management Practice for Evaluation	Reference/Source
Conversion to scrape, followed by open solar drying, closed solar drying, forced evaporation with natural gas, composting with a bulking agent	Kaffka et al., 2016; SB 859 SEC. 1.
Solid/liquid separation	Kaffka et al., 2016; SB 859 SEC. 1.
Conversion to pasture	SLCP Reduction Strategy, 2017; SB 859 SEC. 1.
Daily spread, solid storage, dry lot, liquid/slurry, pit storage below animal confinements, cattle and swine deep bedding/bedded pack manure, composting (in-vessel/ static pile/intensive windrow/passive windrow)	ARB Compliance Offset Protocol – Livestock Projects, 2014; Methane Conversion Factor (MCF) available
Gasification, pyrolysis	Public/stakeholder input
Recycling of manure into cattle bedding	TAC input

ENVIRONMENTAL PERFORMANCE – 10 POINTS

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- Air quality protection: Project's impact on NO_x, criteria pollutants, toxic air contaminants and hazardous air pollutants, including how pollutant emissions would change before and after implementation of project. Benefits to air quality beyond permitting requirements.
- Water quality protection: Project's impact on water quality and benefits to water quality beyond permitting requirements.
- Example: change in CNMP after implementation of project.

LOCAL COMMUNITY IMPACTS

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- Description of how community was engaged, including method of notification, attendance, location, date/time, translation services/childcare/meals provided, etc.
- Potential adverse impacts of projects discussed in community meetings and through CEQA process.
- Description of mitigation measures to be included with project.
- Support letters from community members and/or leaders.
- Localized economic benefits (if applicable).

PROJECT READINESS

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- Permits - state which permits are required, which ones already held and which ones will be obtained. Permit check list will be included.
- CEQA - level of anticipated CEQA review required, current status of, and projected timeline for completion.
- Projects to provide evidence of CEQA Compliance *within 6 months* from project start date.

APPLICATION PROCESS

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- Application process will be through SWRCB FAAST – electronic submission.
- Application Workshops (3 workshops and a webinar) will be announced.
- Q&A period will be announced.

AMMP TIMELINE

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Item	Proposed Dates*
Public/Stakeholder Meetings	April 2017
Notice of Funding availability released	July 2017
Grant Application Workshops	July - Aug 2017
Applications proposals due	August 2017
Proposal evaluation period	Aug – Sept 2017
Announce grant awardees	October 2017
Project Implementation begins	November 2017
*Subject to change	

Comments due by Monday, May 8, 5:00 p.m.

Send comments to: cdfa.oefi@cdfa.ca.gov

AMMP – PUBLIC LISTENING SESSIONS

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- **Monday, April 17, 2017 – 2:00 p.m. – 4:30 p.m.**

California Department of Food and Agriculture, 1220 N Street, Auditorium
Sacramento, CA

- **Friday, April 21, 2017 – 10:00 a.m. – 12:00 p.m.**

Sonoma County Department of Agriculture, 133 Aviation Blvd., Suite 110
Santa Rosa, CA

- **Monday, April 24, 2017 – 4:30 p.m. – 6:30 p.m.**

Energy Education Center, 4175 S. Laspina Street
Tulare, CA

- **Friday, April 28, 2017 – 9:00 a.m. – 11:00 a.m.**

Webinar

Registration information for the webinar available at:

<https://www.cdfa.ca.gov/oefi/AMMP/>

AMMP WEBPAGE

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The screenshot shows the CDFA website with the following elements:

- Header:** "CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE" with a search bar and radio buttons for "This Site" and "California".
- Navigation Menu:** Home, Divisions, Customer Service, Meetings, News, Jobs, Laws/Regs, Statistics, Publications. Below this is a secondary menu: Find Subject, Programs & Services, Public Meetings, Site Map, FAQs, Contact Us, About CDFA, Español.
- Banner:** "THE OFFICE OF ENVIRONMENTAL FARMING & INNOVATION" with a logo of a cow head in a purple square, followed by the text "alternative manure management practices".
- Breadcrumbs:** "CDFA Home > Office of Environmental Farming & Innovation > Alternative Manure Management Program".
- Section Header:** "ALTERNATIVE MANURE MANAGEMENT PROGRAM".
- Text Content:**

Milk and dairy products are important protein and nutrient food sources for human health. California leads the nations in milk production. California dairies are some of the most efficient and innovative in the world. One tradeoff is the production of methane, a greenhouse gas and a short-lived climate pollutant, from livestock manure. Management practices exist for reducing methane emissions from animal manure through non-digester methodologies.

CDFA received \$50 million from the Greenhouse Gas Reduction Fund in 2016 (AB 1613 Section 13, Item 8570-101-3228) for methane emissions reductions from dairy and livestock operations. The Alternative Manure Management Program (AMMP) will be developed and implemented by CDFA to support non-digester dairy methane reduction practices. CDFA will allocate \$9-16 million from the total \$50 million appropriation as incentives to support project development to support the AMMP objective. The remainder of the funding appropriation will incentivize development of dairy digesters through the [Dairy Digester Research and Development Program](#).
- Right Sidebar:** Contains three sections: "EMAIL SUBSCRIPTIONS" with a "Sign up for Email Notifications" button, "RESOURCES" with a list of links, and "AMMP LINKS" with a list of links.

<https://www.cdfa.ca.gov/oefi/AMMP/>

KEY REFERENCES

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- CalEPA Air Resources Board. 2017. Short-Lived Climate Pollutant Reduction Strategy
- Kaffka, S., Barzee, T., El-Mashad, H., Williams, R., Zicari, S., and Zhang, R. 2016. *Evaluation of Dairy Manure Management Practices for Greenhouse Gas Emissions Mitigation in California: Final Technical Report to the State of California Air Resources Board.*
- California Department of Food and Agriculture. 2015. *Recommendations for Short-lived Climate Pollutants: an Agricultural Workgroup report for CDFA*
- Sustainable Conservation. 2015. *Greenhouse Gas Mitigation Strategies for California Dairies.*
- Kotin, A., Noble, M. and Merrill, J. 2015. *Diversified Strategies for Reducing Methane Emissions from Dairy Operations.*
- UC Davis Biomass Collaborative, U.S. EPA Region 9 & National Risk Management Research Lab Office of Research and Development. 2016. *DRAFT Evaluating the Air Quality, Climate & Economic Impacts of Biogas Management Technologies.*
- Rothstein, M. 2015. *Waste Management on California Dairy Farms: A Comparison of Waste Management Systems.*

CONTACTS

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