MEETING AGENDA
July 20, 2017

EFA SAP MEMBERSHIP
https://www.cdfa.ca.gov/oefi/efasap/
Don Cameron, Terranova Ranch, Member and Chair
Jocelyn Bridson, MSc, Rio Farms, Member and Co-Chair
Vicky Dawley, Tehama RCD, Member
Jeff Diott, PhD, SureHarvest, Member
Emily Wimberger, CalEPA, ARB, Member
Judith Redmond, Full Belly Farm, Member
Scott Couch, CalEPA, State Water Board, Member
Julie Alvis, Resources Agency, Member
David Bunn, PhD, Resources Agency, DOC, Member
Doug Parker, PhD, Subject Matter Expert
Tom Hedt, USDA NRCS, Subject Matter Expert

EFA SAP Members only (informational items)
8:30 AM to 12:30 AM
Lawrence Berkeley National Lab Presentations and Tour
1 Cyclotron Rd, Berkeley, CA 94720

Public Meeting
1 PM to 5 PM
103 Mulford Hall
University of California Berkeley
Berkeley, CA 94720

REMOTE ACCESS
Webinar information
Registration URL: https://attendee.gotowebinar.com/register/6972746885402918401
Webinar ID: 963-861-899

Please note the webinar is on listen-only mode.
For verbal questions and comments, please attend the meeting in person.
Presentation materials will be posted at the following link prior to the meeting:
https://www.cdfa.ca.gov/EnvironmentalStewardship/Meetings_Presentations.html

1. Introductions
   Chair Cameron

2. Minutes from previous meeting
   Chair Cameron

3. Berkeley Food Institute (BFI) Informational Presentation
   Claire Kremen, PhD, and Nina Ichikawa (BFI)

4. Compost Application on Rangelands Informational Presentation
   Whendee Silver, PhD (UC Berkeley)

5. OEFI Incentive Programs Updates
   • State Water Efficiency and Enhancement Program
   • Healthy Soils Incentives Program
   • Healthy Soils Demonstration Projects
   Ravneet Behla, PhD (CDFA)
   Guihua Chen, PhD and Geetika Joshi, PhD (CDFA)

6. Public comments
   Chair Cameron

7. Next meeting and location
   Chair Cameron
CDFA Honors Environmental Farming Science Advisory Panel Member Luana Kiger on Her Retirement

Posted on June 30, 2017 by Office of Public Affairs

Environmental Farming Act Science Advisory Panel (Science Panel), appointed by CDFA Secretary Karen Ross, has the critical job of assessing and documenting agriculture’s positive impacts on the environment. The group examines issues like ecosystem services and how they relate to agriculture. The panel has also been responsible for developing the framework for the State Water Efficiency and Enhancement Program (SWEEP) and the Healthy Soils Program (HSP) – two new incentive programs designed to reduced atmospheric greenhouse gases, save water, sequester carbon and increase soil health.

Luana Kiger, Special Assistant to the State Conservationist for the United States Department of Agriculture’s Natural Resources Conservation Service (NRCS) in California, is one of the founding members of the Science Panel, and her service concludes July 3 when she retires as a federal employee.

“NRCS California, under the leadership of State Conservationist Carlos Suarez, has been an incredible partner for us and Luana has provided many hours of time and advice as we worked to build our incentive programs” said Secretary Ross.
Science Panel chair Don Cameron said, “Luana has been a very engaging member of the Science Panel and provided lots of good direction on our programs. We are going to miss her participation but we are happy she is beginning a new chapter of her life.”

Ms. Kiger has also helped the Science Panel make important connections with other technical staff in NRCS and other federal agencies.

“Having a key contact person with the right technical expertise at the federal level who can not only provide advice to you but also connect you to other pertinent technical and policy staff is key to getting things done in a timely manner,” said Dr. Amrith Gunasekara, CDFA’s liaison to the science panel and science adviser to the secretary.

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**Related**

- **California and Australia - a continuing partnership**
  - March 30, 2017
  - In "Climate Smart Agriculture"

- **Cannella Panel to hold first public meeting on November 7th at CDFA**
  - November 2, 2011
  - In "Cannella Panel"

- **Secretary Ross Announces Science Advisor and Environmental Farming Appointments**
  - August 16, 2011
  - With 2 comments
MEETING MINUTES

Panel Members in Attendance

Don Cameron (Chair and Member)
Vicky Dawley (Member)
Jeff Dlott, PhD. (Member)
Julie Alvis, Natural Resources Agency (Member)
Bruce Gwynn (filling in for David Bunn, PhD.), Natural Resources Agency (Member)
Scott Couch, State Water Resources Control Board (Member)
Emily Wimberger, PhD. Air Resources Board (Member)
Luana Kiger, MSc. USDA NRCS (Subject Matter Expert)
Doug Parker, PhD. UC ANR (Subject Matter Expert)

State Agency Staff and Presenters

Bonnie Soriano, MSc. Air Resources Board
Benjamin Nicholson, Air Resources Board
Matthew Harrison, Air Resources Board
Guihua Chen, PhD. CDFA
Geetika Joshi, PhD. CDFA
Amrith Gunasekara, PhD. CDFA

AGENDA ITEM 1 - Introductions

The meeting was called to order at 9:34 AM by the Chair, Mr. Don Cameron. Introductions were made. Present at the meeting were all the members noted above under “Panel Members in Attendance”. A quorum of six members was established.

AGENDA ITEM 2 – Minutes from Previous Meeting

Chair Cameron introduced the minutes from the March 16, 2017 meeting. A motion was made by Mr. Gwynn to accept the minutes as presented by CDFA staff and the motion was seconded by Ms. Alvis. The motion was moved by all members present and accepted without further changes.

AGENDA ITEM 3 – Healthy Soils Program (HSP)

A summary of activities related to the HSP was provided by Dr. Joshi. Dr. Chen provided background of the Healthy Soils Initiative and overview of HSP followed by a summary of the public comments received during January 1 to April 21, 2017 public comment period. Staff from the Air Resources Board (ARB) also provided an update on the Quantification Methodologies for the Science Panel members.
There were a total of 37 emails comments/comment letters covering five categories: funding, compost application, incentives and demonstration programs and others. Dr. Joshi responded to each public comment by either providing a direct answer or noting that it is addressed in the programmatic framework.

Questions were entertained by CDFA staff from Panel members. Chair Cameron inquired about the eligibility of leased lands as leasing terms may vary and not be consistent with the project implementation term of three years. Dr. Gunasekara noted that CDFA will evaluate this inquiry further and will be open to suggestions and recommendations by panel members. He noted that the application will request the landowner to provide information to CDFA to ensure funded practices be conducted and maintained in the project term and meet the programmatic requirements. Suggestions were made to ensure the landowner is involved in cases of leased land during the project term.

Dr. Dlott inquired if demonstration projects will lead to increased adoption on other agricultural lands/farms to bring about greater greenhouse gas (GHG) reductions. Dr. Parker asked if the demonstration projects will address and document other multiple benefits besides GHG reductions. Dr. Gunasekara noted that both these questions are being taken into consideration in the programmatic framework and CDFA is looking to include such characteristics into the HSP and application.

Several questions on compost were facilitated by CDFA staff. CDFA staff referred members to the Compost Application White Paper report that was developed through the Science Panel. CDFA noted that details on compost sources and use are highlighted in the report and that these details will be further reflected in the solicitation for clarity.

Ms. Wimberger inquired about technical assistance for the HSP. CDFA noted that technical assistance will be provided by funds allocated from the Strategic Growth Council in the amount of $25,000.

Members inquired about the standard payment rates for each practice and for greater clarity in what the payment rates covered. CDFA staff provided explanation of what costs are covered in the standard payment rates adopted from USDA NRCS including cost for labor, equipment and seed for cover crops. Ms. Kiger noted that USDA NRCS pays 50% of the total cost. CDFA staff noted that payment rates will be doubled since HSP covers the total cost for awardees in the first two years.

Dr. Jeff Dlott asked for clarification on who are eligible as applicants and if industry and grower associations will be eligible for Demonstration Projects. Dr. Joshi stated that the primary or lead applicants the HSP are targeting on the Demonstration Projects are not-for-profit entities and other entities such as farmer or industry can be collaborators which may bring matching funds to the projects.

Members inquired about the timeline for the HSP including public comment period, how matching funds are required for the third year of participation, if costs for monitoring are covered by HSP funds, whether the technical reviewers will be the same for both programs. CDFA staff responded to the comments and noted that monitoring costs are covered by the program and the technical reviewers are different for each program with incentive applications being reviewed by experts at the university level and demonstration projects being reviewed by state scientists.

Requests were made by members to include more details on Disadvantage Community requirements (Ms. Wimberger) and provide clear and easy to follow application guidelines.
AGENDA ITEM 4 – Public Comment

Several questions and comments from the public were heard. They included reasons as to why on-farm compost is not being considered in the program and why at least one soil management practice must be included in all applications. Comments from the public attendees included noting that USDA NRCS payments are too low, requirements for baseline soil data requires more time and may not be required to stand up to the HSP, application requirements described in the presentation seem complicated, allocated additional review points to co-benefits and ecosystem services, ensure that any grasslands in the program are grazed grasslands, include on-farm composting in the HSP, the 200 person requirement for demonstration projects are too high, might be difficult to secure matching funds for demonstration projects, combination of monitoring for GHGs and demonstration projects are not practical, insufficient funding amounts for GHG monitoring as part of the demonstration projects and that the solicitation must be released for public comment prior to being released for collecting applications.

AGENDA ITEM 5 – EFA SAP Recommendations for the CDFA HSP

In consideration of the comments made by the Science Panel members and the public, Chair Cameron advised CDFA staff to work to include as many suggestions and comments into the HSP solicitation and finalize the Request for Applications (RFA). Chair Cameron recommended, along with other members of the Science Panel, that the solicitation be posted for a two week public comment period and consideration of those public comments prior to its release. CDFA staff noted that they will finalize the solicitation (RFA) and release it for public comment. CDFA staff will also provide an update on the comments at the next Science Panel meeting as an informational item.

AGENDA ITEM 6 – Next Meeting and Location

Dr. Gunasekara noted that the next meeting is scheduled for July 20, 2017 in Berkeley California. The meeting will held on the campus of the University of California. The meeting was adjourned at 3:10 pm.

Respectfully submitted by:

______________________________  ________________________
Amrith Gunasekara, Ph.D.        Date
Berkeley Food Institute: Cultivating Diversity, Justice, Resilience and Health

Nina F. Ichikawa
EFA-SAP Meeting
July 20, 2017
Context: Critical Trends in Food Systems
Pervasive Environmental Impacts
Pervasive Human Impacts

- Skyrocketing rates of diet-related diseases
- Widening social inequality = greater need for food aid at home and abroad
- Heightened consumer interest, desire for transparency
- Local food impacts local economies

“Never before have consumers been so food engaged”

(Hartman Group)
Vision and Mission: The Berkeley Food Institute seeks to transform food systems—to expand access to healthy, affordable food and promote sustainable and equitable food production. We empower new leaders with capacities to cultivate diverse, just, resilient, and healthy food systems.
BERKELEY FOOD INSTITUTE

NGOS & CIVIL SOCIETY
RESEARCHERS & EDUCATORS
PUBLIC HEALTH
NATURAL RESOURCES
FOOD BUSINESSES
JOURNALISM
ENVIRONMENTAL DESIGN
BUSINESS
OTHER DISCIPLINES
PUBLIC POLICY
POLICYMAKERS & AGENCIES
LAW
WORKERS' GROUPS
MEDIA
STUDENTS
FARMERS & RANCHERS

YOU

140 Affiliated faculty

Red = UC Berkeley Schools and Colleges
Priority Themes/Goals

- Good Food Access
- Agroecology
- Fair and Healthy Jobs
Programs

• Research: Interdisciplinary, Innovative, Action-Oriented
• Policy
• Education
• Community Engagement
Research

• Seed Grant Research Projects (2013-16)
• 2017-18 Targeted Research Initiatives
  – Diversified Farming Systems/Soil Health
  – Agricultural Labor
  – Urban Agroecology and Food Security

Interdisciplinary, collaborative, innovative, potential to affect policy
Policy

• Linking Research to Policy Change
  – Communication and Outreach With Policy Groups and Policymakers on Critical Issues
  – Workshops and Training With Faculty & Policymakers
  – Policy Analysis Projects: Soil Health & Organic Ag State Policies
Soil Health and Carbon Sequestration in US Croplands: A Policy Analysis

Prepared for: Natural Resources Conservation Service (NRCS) of the United States Department of Agriculture (USDA) and the Berkeley Food Institute (BFI)

By: Léopold Biardeau, Rebecca Crebben-Coates, Ritt Keerati, Sara Litke, and Hortencia Rodríguez
Goldman School of Public Policy, University of California Berkeley

May 2016

Factors Influencing Farmer Adoption of Soil Health Practices in the United States: a Narrative Review

Liz Carlisle

To cite this article: Liz Carlisle (2016): Factors Influencing Farmer Adoption of Soil Health Practices in the United States: a Narrative Review, Agroecology and Sustainable Food Systems, DOI: 10.1080/21683565.2016.1156596

To link to this article: http://dx.doi.org/10.1080/21683565.2016.1156596
Education & Community Engagement

- BFI Public Forums, Seminars and Other Educational Events
- Student Fellowships/Leadership Program
- Minor in Food Systems
- Equity and Inclusion in Food Programming
- UC Gill Tract Community Farm
Berkeley Food Institute
food.berkeley.edu
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https://food.berkeley.edu/#newsletter
Assessing the benefits, costs, barriers and opportunities for diversified farming systems

Professor Claire Kremen
Faculty Co-Director
Berkeley Food Institute
Environmental challenges for California agriculture
CA Specialty Crops: dependency on pollinators

- Essential
- Great
- Modest
- Little
- Unspecified
- No increase

California crops, $29 billion; Pollinator-dependent crops, $11 billion

Chaplin-Kramer, Tuxen-Bettman & Kremen 2011
Colony Collapse Disorder

California crops, $29 billion; Pollinator-dependent crops, $11 billion

Chaplin-Kramer, Tuxen-Bettman & Kremen 2011
Food safety issues
Vulnerability?
Contribution?
Research Questions (Center for Diversified Farming Systems):

1. **How does diversification of farming systems affect biodiversity, and in turn, ecosystem services?**
2. **How does diversification affect crop yields, economic performance and resilience?**
3. **Understand grower experiences with diversified farming practices – barriers, opportunities.**
DFS: Conceptual Model

Above

- Planned (space + time)
  - Animal integration
  - Crop diversity
  - Non-crop diversity
  - Organic soil amendments
  - No or low tillage

Below

Colonizing

- Resources for associated biota
  - Habitat
  - Food

Ecosystem service Cascade

Intermediate
- Pollination
- Pest/disease control
- Nutrient cycling
- Carbon cycling
- Water regulation
- Water purification
- Soil structure

Final
- Provisioning: Food, Fiber, Fuel
- Water
- Regulating: Climate
- Soils
- Biodiversity
Diversified Farming System
California’s Central Coast region

Diversified Farm

Diverse Landscape

Simple
Diversification practices we observed

Crop diversity
Crop rotation
Cover cropping
Fallow field

Hedgerows
Flower strips
Windblocks
Sediment
Retention ponds
% Natural habitat

Livestock
Compost
Fertigation

Animal integration
Non-crop diversity
Organic soil amendments
No or low tillage

Crop diversity

Livestock

Compost

Fertigation

Animal integration
Non-crop diversity
Organic soil amendments
No or low tillage
Ecosystem services we measured

- Crop diversity
- Crop rotation
- Cover cropping
- Fallow field

- Hedgerows
- Flower strips
- Windblocks
- Sediment
- Retention ponds
- % Natural habitat

- Livestock
- Compost
- Fertigation

- Greenhouse gases
- Water use
- Pest & disease control
- Soil and water quality
- Pollination
- Biodiversity
- Pollution
Preliminary results: pollinator biodiversity

Diversification → Biodiversity

Farm + Pollinator abundance + Pollinator richness

Landscape +
Preliminary results: pollination

Sciligo, M’Gonigle and Kremen, in prep.
Preliminary results: bird biodiversity

Diversification → Biodiversity

Farm → Bird abundance
Farm → Bird richness
Landscape → Bird abundance
Landscape → Bird richness

Gonthier, Sciligo, Karp, Lu, Garcia, Juarez, Chiba & Kremen, in prep.
Not all birds are created equal!

Bird damage

Lygus damage
Preliminary results: bird biodiversity

Diversification \rightarrow \text{Biodiversity}

Farm \rightarrow \text{Pest bird abundance}

Landscape \rightarrow \text{Insectivore abundance}

Gonthier, Sciligo, Karp, Lu, Garcia, Juarez, Chiba & Kremen, in prep.
Preliminary results: pest control

Diversification → Biodiversity → Pest control

Farm → Pest bird abundance → Bird damage

Landscape → Insectivore abundance

Gonthier, Sciligo, Karp, Lu, Garcia, Juarez, Chiba & Kremen, in prep.
Preliminary results: pest control

Bird beak damage in controls about the same amount as *Lygus* damage in exclosures...

Control (bird) & Exclosure (no bird)

**Conclusion:** More natural habitat in the surrounding landscape reduces pest birds and bird damage. Exclosure study suggests negative effects of pest birds may also be balanced by positive effects of insectivorous birds.
Preliminary results: food safety

Conclusion
- High average levels of fecal contamination (~60%)
- Specialized farms are aided by surrounding natural habitat.
Research Questions (Center for Diversified Farming Systems):

1. How does diversification of farming systems affect biodiversity, and in turn, ecosystem services?
2. How does diversification affect crop yields, economic performance and resilience?
3. Understand grower experiences with diversified farming practices – barriers, opportunities.
Launching new project – DFS through the lens of Soil Health

- Many diversification practices increase soil organic matter, soil biodiversity, and soil-based ES like water infiltration/storage; nutrient capture/cycling; carbon-storage.
- But market, knowledge, agronomic, environmental, and policy barriers can prevent uptake.
- BFI’s project goals:
  - RESEARCH: Identify **barriers, motivations, and enabling conditions** that affect the ability of California farmers (including organic and non-organic) to implement DFS practices that have beneficial soil health outcomes;
  - POLICY: Develop **policy recommendations** to facilitate adoption of these practices to benefit growers, consumers, and environmental quality; and
  - OUTREACH: Increase adoption of these practices by **communicating** to California’s farmers and consumers about the benefits of soil health in sustainable agriculture and the role of diversified practices in improving soil health.
Promoting Soil Health Innovations: Barriers, Motivations, Enabling Conditions

• Builds off of BFI’s earlier work at federal level on soil health
• Opportunity to provide information that might help shape HSI’s future funding and growth:
  – Baseline data of participant’s motivations and challenges
  – Social science data to complement physical (GHG) data
    • [What enables farmers to take up soil health practices? What interferes? What could be altered to improve adoption?]
Promoting Soil Health Innovations

**Year 1**
- Literature review
- Survey UCCE and RCD networks
- Grower interviews (different crops and regions)
  - Sub-group: HSI
- Convene stakeholders

**Year 2**
- Synthesis of results
- Policy briefs
- Stakeholder workshops

*Currently hiring a postdoc to conduct the research!*
All of our farmer partners involved with this research for their time and allowing access to their farms.

Partners who helped up with study design, recruiting, coordination and results discussion: Ben Burgoa, Sacha Lozano, Jenny Broom, Michael Seagraves, Eric Brennan, Shimat Joseph, Mark Bolda, Sasha Gennet, and Nathan Harkleroad

Collaborating organizations: Driscoll’s, WFA, OFRF, CCOF, RCD Monterey, RCD Santa Cruz, ALBA, UCCE, USDA-ARS, and TNC


Funders: Army Research Office, CS Fund, Berkeley Food Institute,, NSF, USDA NIFA (RENRE) Project #CA-B-INS-0143-CG
SWEEP UPDATE

EFA
SCIENTIFIC
ADVISORY PANEL

July 20th 2017

Ravneet Behla
Environmental Scientist

Scott Weeks
Environmental Scientist
SWEEP BACKGROUND

- **$10 million**: Emergency Drought Legislation Bill - SB 103 signed by Governor Brown on March 1, 2014

- **$10 million**: AB 91 allocated additional funds March 27, 2015

- **$40 million**: Budget Act of 2015, Item 8570-001-3228 (Chapter 321, Statutes of 2015) appropriate funds from the Greenhouse Gas Reduction Fund

- **7.5 million**: AB1613 (Chapter 370, Statutes 2016)

  “...to invest in irrigation and water pumping systems that reduce water use, energy use and greenhouse gas emissions.”
PROJECT TYPES

Water Conservation

• Sensors for Irrigation Scheduling
  (*weather, soil or plant based*)

• Micro-Irrigation or Drip Systems

AND

GHG Reductions

• Fuel Conversion
• Improved Energy Efficiency
• Low Pressure Systems
• Variable Frequency Drives
• Reduced Pumping
SWEEP 2017

• $7.5 million from AB1613

• Reduction of total grant from $200,000 to $100,000

• OGA is executing agreements for 58 projects
  • CDFA funds: $5.1 million
  • Matching Funds: $7.2 million
## SWEEP 2017: AWARD UPDATE

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<th>Category</th>
<th>#</th>
<th>Requested Funds (million)</th>
<th>Matching Funds (million)</th>
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<td>Received Applications</td>
<td>237</td>
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<td>$17.3</td>
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<td>Incomplete Applications</td>
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<td>Reviewed Applications</td>
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<td>Awarded Applications</td>
<td>58</td>
<td>$5.1</td>
<td>$7.2</td>
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<td>Oversubscription Rate (%)*</td>
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<td>394</td>
<td>249</td>
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Oversubscription Rate (%) = Total funds requested*100/ Total funds awarded

Disclaimer: 2017 grant agreements yet to be executed
## 2017 SWEEP: Awarded Projects by County

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<thead>
<tr>
<th>County</th>
<th>#</th>
<th>Acreage</th>
<th>County</th>
<th>#</th>
<th>Acreage</th>
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<tr>
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<td>Kern</td>
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<td>Tehama</td>
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<td>Tulare</td>
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<td>80</td>
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<tr>
<td>San Benito</td>
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<td>180</td>
<td><strong>Total</strong></td>
<td>58</td>
<td>7,128</td>
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TECHNICAL ASSISTANCE WORKSHOPS

Total funds $50,000
- $25,000 from NRCS
- $25,000 from SGC
- Accepted applications for Technical Assistance Workshops
- $2,500-5,000 per institution
- News Release on January 13, 2017

Required
- Have an Irrigation systems expert available
- Internet access for applicant assistance
- Having at least one workshop in a DAC (SGC funding requirement)
TECHNICAL ASSISTANCE WORKSHOPS

• 11 Providers

• 24 Workshops
## 2017 Technical Assistance Workshops by County

<table>
<thead>
<tr>
<th>County</th>
<th>DAC</th>
<th>Bilingual</th>
<th>Attended</th>
<th>Additional In person</th>
<th>Additional Remote</th>
<th>Total</th>
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<td>Spanish</td>
<td>32</td>
<td>23</td>
<td>16</td>
<td>71</td>
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<td>Trinity</td>
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<td>-</td>
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<tr>
<td>Tehama</td>
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<tr>
<td>Fresno</td>
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<td>Spanish, Hmong</td>
<td>21</td>
<td>15</td>
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<td>38</td>
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<td><strong>Total</strong></td>
<td></td>
<td></td>
<td><strong>157</strong></td>
<td><strong>81</strong></td>
<td><strong>32</strong></td>
<td><strong>270</strong></td>
</tr>
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</table>
SWEEP: Number of Technical Assistance Workshops
Held During 2016 and 2017 by County

SWEEP: Total number of Individuals assisted during 2016 and 2017 by County

![Bar chart showing the number of individuals assisted in 2016 and 2017 by county. Each county is represented with a bar for each year, with the number of individuals assisted indicated on the y-axis and the county names on the x-axis. The chart shows a significant increase in the number of individuals assisted in some counties.]
3 YEAR AUDITING REQUIREMENT

• Required to select 10% of projects for auditing
• Obtain energy and water records from agricultural operations
• Compute, compare, and report to ARB
DWR/CDFA Joint Project

**Objective**
To demonstrate the potential multiple benefits of conveyance enhancements combined with on-farm agricultural water use efficiency improvements and greenhouse gas reductions

**Goals**
1) Water use efficiency, conservation and reduction
2) Greenhouse gas emission reductions
3) Groundwater protection
4) Sustainability of agriculture operations and food production

**DWR Funding**
- $3 million for Agriculture Water Supplier - **Proposition 1** §79746(a)(2) (2014)
- 50% cost sharing (waived/reduced for DAC and EDA)

**CDFA Funding**
- $3 million for individual agriculture operations - **AB1613** (Chapter 370, Statutes 2016)
- Cost sharing encouraged but not required
# DWR/CDFA Joint Project-Update

<table>
<thead>
<tr>
<th>Ag Water supplier</th>
<th>Ag Operations</th>
<th>Acreage impacted</th>
<th>DWR Funds requested</th>
<th>CDFA Funds Requested</th>
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Latest News section: [http://www.water.ca.gov/wuegrants/AgWUEPilot.cfm](http://www.water.ca.gov/wuegrants/AgWUEPilot.cfm)
Preliminary Analysis: 2014-17 SWEEP Program
SWEEP $: Total Funds Since Inception

Disclaimer: 2017 grant agreements yet to be executed
SWEEP $: Total Funds by Year Since Inception

- **Total Funds Requested**
  - Round 1 and 2 (2014): 10 million
  - Round 3 (2015): 16 million
  - Round 4 (2016): 22 million
  - Round 5 (2016): 17 million
  - Round 6 (2017): 19.3 million

- **CDFA Funds**
  - Round 1 and 2 (2014): $8.5 million
  - Round 3 (2015): $9.4 million
  - Round 4 (2016): $16 million
  - Round 5 (2016): $21.9 million
  - Round 6 (2017): $5.1 million

- **Matching Funds**
  - Round 1 and 2 (2014): $5.9 million
  - Round 3 (2015): $4.7 million
  - Round 4 (2016): $9.7 million
  - Round 5 (2016): $11.2 million
  - Round 6 (2017): $7.2 million
SWEEP $: Funds Awarded per Project by Year Since Inception

- Highest $ Awarded (Cap)
- Average $ Awarded
- Lowest $ Awarded

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<td>7,692</td>
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*Average of two rounds
Oversubscription Rates (%) By Year

Oversubscription Rate (%) = Total received (requested) / Total awarded
SWEEP: Average Acreage per Project by Year

- Round 1 and 2 (2014): 181 million
- Round 3 (2015): 190 million
- Round 4 (2016): 208 million
- Round 5 (2016): 191 million
- Round 6 (2017): 123 million

Acreage in millions:
SWEEP Impact: Total Acreage Impacted by Year

- Round 1 and 2 (2014): 24,088 acres
- Round 3 (2015): 19,035 acres
- Round 4 (2016): 26,860 acres
- Round 6 (2017): 7,128 acres

Total acreage impacted:
- 2 million
- 7.5 million
- 16 million

Impacted acreage by year:
SWEEP Impact: Projected GHG reduction for 10 years of project life

Projected GHG reduction

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SWEEP Impact: Projected Water Savings for 10 years of Project Life

Projected Water savings

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<th>Round</th>
<th>Acre Feet</th>
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<tr>
<td>Round 3 (2015)</td>
<td>129,597</td>
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<tr>
<td>Round 4 (2016)</td>
<td>205,732</td>
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<td>Round 5 (2016)</td>
<td>286,462</td>
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<tr>
<td>Round 6 (2017)</td>
<td>92,955</td>
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10 million  22 million  16 million  7.5 million
SWEEP: Environmental Impact per CDFA
$1 million spent

- GHG reductions (MTCO2e) per CDFA $ 1 million
- Water Savings (Acre feet) per CDFA $ 1 million

<table>
<thead>
<tr>
<th>Round</th>
<th>GHG Reductions</th>
<th>Water Savings</th>
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<tbody>
<tr>
<td>Round 3 (2015)</td>
<td>13816.3</td>
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<td>Round 4 (2016)</td>
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<td>3491.3</td>
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<td>Round 5 (2016)</td>
<td>13080.4</td>
<td>5070.0</td>
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<tr>
<td>Round 6 (2017)</td>
<td>13771.1</td>
<td>4071.3</td>
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</table>

- 10 million
- 22 million
- 16 million
- 7.5 million
Summary

• CDFA dispersed $ 62.5 million against the request of $152.1 million since 2014
• CDFA leveraged 38.7 millions in matching funds
• Oversubscription rate ranged from 1.6X to 4X.
• To date 587 SWEEP projects has been awarded in 6 rounds impacting a total of 109,060 acres
• Next Steps
  • Analyze data
Thank you for the time and your attention

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Crystal Myers – Office of Grants Administration, CDFA

Geetika Joshi - Senior Environmental Scientist, CDFA
PROGRAM UPDATES

- The HSP Incentives Program: no major changes.

- The HSP Demonstration Projects: one major change upon consideration of public comments received May 18, 2017:
  - Type A Projects: Required on-farm GHG measurements; maximum award $250,000/project.
  - Type B projects: No requirements for GHG measurements; maximum award $100,000/project.
PROGRESS UPDATES

- Draft RGAs and supporting documents for Both Incentives Program and Demonstration Projects
  - June 28: Released for public comments.
  - July 07: Webinar on how to comment; Q&A.
  - July 12: Public comments due.
- RGA for Technical Assistance Workshop Grant (for HSP Incentives Program) – first come first serve
  - $25,000 available through Strategic Growth Council.
  - RGA released July 07, applications due July 20.
  - Upto $5,000 per workshop provider.
PUBLIC COMMENTS ON DRAFT RGAs

- July 07 webinar:
  - 84 attendees.
  - 53 comments/questions received from 20 individuals.

- June 28 – July 12
  - 29 comment letters/emails received.
PUBLIC COMMENT SUMMARY - TOPICS

1. Eligible Agricultural Management Practices
2. Soil Organic Matter (SOM) and Other Soil Health Data
3. Program Timeline
4. Farm Size
5. Funding
6. Demonstration Projects
7. Incentives Program
8. Others
ONE: ELIGIBLE AGRICULTURAL MANAGEMENT PRACTICES (I)

Soil Management Practices: 3 aspects

- Not make at least one soil management practice a requirement:
  - Organic farms already implemented soil management practices.
  - Rangeland farms may only select compost application.
- Inclusion of other soil management practices.
- Mulching: eligibility for rangeland.
- Compost application (next slide).
ONE: ELIGIBLE AGRICULTURAL MANAGEMENT PRACTICES (I) – CONT’D

Compost Application: 12 aspects
- Threshold of SOM excluded for compost application.
- Compost application rate is too low: 4-fold increase.
- Payment rate $35 is too low.
- Availability of a standard compost application practice.
- Eligibility of on-farm, liquid, and manure compost.
- Frequency of compost application.
- Fund on-farm compost facility.
- Sources of eligible compost.
- Others: language edits.
ONE: ELIGIBLE AGRICULTURAL MANAGEMENT PRACTICES (II)

- **Woody cover**
  - Payment rate is too low.
  - Windbreak/Shelterbelt establishment: multiple rows be credited additively.

- **Cropland to Herbaceous Cover**
  - Language edits to be consistent with NRCS practices.

- **All NRCS practices**
  - Include both practice standards and site specific implementation requirements.
  - Indicate lifespan for GHG purpose, different from NRCS required lifespan.
TWO: SOM AND OTHER SOIL HEALTH DATA

- Require a standard soil sampling protocol.
- Suggest more option on soil testing laboratories.
- Frequency of SOM sampling.
- Difficulty to get other soil health data in mid-summer.
- Clarify if data from past one or two years be allowed.
- Specify what other soil health data are.
- Grant recipients, not applicants, must submit these data.
- CDFA should pay cost of soil tests.
THREE: PROGRAM TIMELINE

- Application window is short: allow 6 - 8 weeks.
- Allow initiating practice implementation upon notification of proposal acceptance and reimbursement after Dec. 1 2017 or after meeting program requirements.
- Current timeline does not allow completing two compost applications (applying in fall followed by tillage next summer).
- Allow longer project term for perennial tree crops.
- Clarifying starting and ending dates for post-project reporting.
FOUR: FARM SIZE

- Minimum size of farm to be eligible.
- How will GHG benefits be weighed for scoring.
- What other components to be weighed for small farms?
FIVE: FUNDING

- Will CDFA seek funding to continue the program?
- Matching funds or cost sharing (Apr. 1 – Nov. 30, 2020)
  - Allow a flexible timeframe for expending matching funds.
  - Will matching funds more than 1/3 receive scoring points?
  - How will matching funds be calculated? Varys depending on practices.
  - Change “matching funds preferred but not required”.
SIX: HSP DEMONSTRATION PROJECTS

- **Eligibility**
  - Allow tribal governments and cannabis cultivation.

- **Project Types**
  - Remove Type A projects and increase maximum award to $250,000 for Type B projects.

- **GHG measurements**
  - Do not require GHG measurements.
  - Provide methodology and protocol.
  - Difficult to replicate in some practices such as windbreak.

- **Clarify definitions**
  - Multiple farms (sites), same field.
  - Control.
Outreach
- Not be able to get 100 farmers per year.
- Remove numerical requirement and use SMART (Specific, Measurable, Achievable, Relevant and Time-bound) goal.
- Require documentable outreach and attendance records at farm events.

Review
- Reviewers should have worked directly with producers and have experiences implementing these practices.

Scoring Criteria
- Remove co-benefits.
- DAC -10 points, GHG & soil health - 10 points, additional consideration - 10 points.
SIX: HSP DEMONSTRATION PROJECTS – CONT’D

- Project budget
  - Will fund be allowed to cover CEQA or other permitting needs?
  - Will indirect costs (per federally approved) be allowed?
  - Will subcontracting costs be allowed?

- Proposal development
  - Clarification of some languages (e.g., rational of crop, possibility and scale for farmers/ranchers to adopt the demonstration management practices).

- Reporting
  - No crop yield.
  - Optional: co-benefits, ecosystem services and economic analysis.
SEVEN: HSP INCENTIVES PROJECTS

- Project proposal requirement
  - Remove narrative, implementation plan and adoption plan and require only work plan and schematic map with provided templates.
  - Provide detail requirements on project evaluation and adoption.

- Conservation plan
  - Remove from scoring criteria as people who do not have one may get discouraged.
  - Simplify language in the RGA as it is in the Appendix C.

- Review criteria
  - Include additional clarification on the content of each criterion.
Project verification and reporting:
- Provide details on when to happen and what to collect.
- Specify RCDs are eligible technical service providers.
- Clarify CDFA will pay.

Post-project reporting:
- Specify time length of documentation and practice implementation.
- Clarify what and when to collect, and who pay.
- Clarify how subset projects will be selected.

Technical assistance during application.
Definitions:
- Agricultural operation: any requirements on minimum annual production thresholds, gross total annual sales, etc.
- APN.
- Soil Health definition to be included in a footnote.

Inclusion of other projects:
- Will application include water quality improvement projects examples for applicants interested in applying for funding?

What is maximum of GHG expected to be achieved through this program?
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