From: d.h.redmond@att.net [mailto:d.h.redmond@att.net]
Sent: Wednesday, June 28, 2017 6:08 PM
To: CDFA OEFI@CDFA <CDFA.OEFI@cdfa.ca.gov>
Subject: soils program via carbon

To Whom It May Concern,

I am a newbie to much of this technical verbiage. But I do have one very serious comment from my direct experience. I am currently an urban farmer. This soon will change as the transition to a much more rural situation occurs and enlarges my efforts in a regenerative situation.

Please excuse my intense comments but I have felt this for many years. How in the hell is the State of California even contemplating such issues when many folks within the state send soil samples clear across the country to UMass for affordable soil testing services, which I personally have been using for some time.

How is the State of California even going to monitor any actions of this situation going forward. The state needs a non-profit soil testing lab available to it's citizens for a fair price. Now.

This is a serious weak link.

Not sure how far this comment will go so will leave it there for now. I am very welcome to any response and will reply.

Thank-you for your time.

Dan Redmond

From: David Grefrath [mailto:djgrefrath@gmail.com]
Sent: Friday, June 30, 2017 9:24 AM
To: CDFA OEFI@CDFA <CDFA.OEFI@cdfa.ca.gov>
Subject: Re: CDFA SEEKS PUBLIC COMMENT ON $6.75 MILLON CAP-AND-TRADE-FUNDED HEALTHY SOILS PROGRAM

Hello,

I represent a group of farmers who practice soil conservation & carbon sequestration. We would like to see an emphasis within the Healthy Soils initiative to aid small farmers who restore soils while growing food. Also, we seek funding for projects who can show demonstrable carbon sequestration through increasing Organic Matter through Keyline Terracing and Mycological & Compost applications.

With gratitude and best wishes,

David Grefrath
~Mendocino Farmer's Guild
~Snow Mountain Research Labs

From: MikeTinney@aol.com [mailto:MikeTinney@aol.com]
Sent: Friday, June 30, 2017 9:15 AM
To: CDFA OEFI@CDFA <CDFA.OEFI@cdfa.ca.gov>
Subject: demonstration projects

Hi,
Recycling of used carpet in California is an ongoing challenge.
40% of the weight of discarded carpet is in the backing.
Tests show that close to 50% of the backing material is calcium carbonate.
There have been several applications over the last 12 months spreading the carpet backing material on almond orchards.
How would one apply for a grant to sponsor a pilot project on a larger scale in California as part of the Healthy Soils Program to determine the materials impact on the soil and on GHG's?
Regards,
Mike Tinney

President
Tinney Associates
6368 Silveira Way
Sacramento, Ca 95831
916-849-2114

From: Heather Nichols [mailto:Heather@yolorcd.org]
Sent: Wednesday, July 05, 2017 4:35 PM
To: CDFA OEFI@CDFA <CDFA.OEFI@cdfa.ca.gov>
Cc: Wrysinski, Jeanette @yolorcd.org <wrysinski@yolorcd.org>
Subject: Public comment: Healthy Soils Demonstration projects

Hello,
I would like to make a comment about the demonstration project requirement to have 100 farmers and ranchers visit the demonstration site each year. I believe this is an unrealistic expectation and would deter many potential applicants.

In my nearly 10 years at the Yolo County RCD, we have never been able to get 100 many farmers or ranchers to attend any of our workshops. Successful attendance for a free, voluntary field workshop ranges between 20-40 attendees (who are actual farmers or ranchers). If there are CEU offered, there might be up to 80, but many of those folks are crop advisors or PCAs.

My recommendation would be to lower that number to 150 total over the course of the three years.

Another suggestion would be to allow for other methods of outreach, such as online videos that require some kind of registration or survey as proof of outreach.

Thank you for your consideration of this matter.

Heather
Executive Director
Yolo County RCD

From: Ben Wallace [mailto:benswallace@sbcglobal.net]
Sent: Thursday, July 06, 2017 10:29 AM
To: CDFA OEFI@CDFA <CDFA.OEFI@cdfa.ca.gov>
Subject: Questions for HS webinar

Replications. For Type A Demonstration Projects, what counts as a "replication"?
For instance, would replication of the same **practice** on different operations and/or different geographic locations be ok? Or do **environmental/geographic** conditions need to be replicated as well?

Indirect Costs. The budget template does not appear to allow for indirect/overhead charges. Can these be charged as match?

From: Benjamin Fahrer [mailto:farmtheroof@gmail.com]
Sent: Thursday, July 06, 2017 11:34 PM
To: CDFA OEFI@CDFA <CDFA.OEFI@cdfa.ca.gov>
Cc: Benjamin Fahrer <farmtheroof@gmail.com>
Subject: Application and comments for July 12

Thank you for the great webinar info session, I was unable to attend the beginning and had a few clarifying questions

the link for timetable is not active in this document, can you send me the timetable
https://www.cdfa.ca.gov/oefi/healthysoils/docs/2017-HSPDemonstration_RequestforGrantApp.pdf

When is the application actually due? it states a day in August.

I am a organic farmer for 20 years with a wide range of experience and knowledge in regenerative agriculture and have moved to the urban environment to apply strategies in the city. We now have urban agricultural and rooftop projects in Oakland and Berkeley with a Urban farmer Incubator and Institute we are setting up on 120 acres just outside the city to apply scalable solutions and provide urban farmers with contact. We look forward to applying for this grant and engaging more deeply in this work. Any additional information is greatly appreciated.

In growing
benjamin

Top Leaf Farms #998152
consult . design . build . farm
www.farmtheroof.com
(c) 831-667-2376

Benjamin Fahrer
about.me/benjamin_fahrer

From: Reed Hamilton [mailto:grassvalleygrains@gmail.com]
Sent: Monday, July 10, 2017 9:20 AM
To: CDFA OEFI@CDFA <CDFA.OEFI@cdfa.ca.gov>
Subject: Re: Healthy Soils webinar

I have a few comments on the draft grant application process for demonstration projects and and one about the technical assistance grant application process. I am part of the Nevada County Climate Change Coalition and we had hoped to get a grant to conduct technical assistance in cooperation with the county RCD. However, the timeline for applications is very short, the staff of the RCD is small, and the rest of us are volunteers so getting that in line as well as setting up the outreach seems difficult.

In regard to the demonstration project draft application, I note three problems immediately. First, the application window will be very short. Again, our group had hoped to set up a demonstration project with the RCD and NRCS but think it will be difficult to make the deadline with NRCS facing funding cuts. Second, unless an applicant was already doing serious soil monitoring they are unlikely to have the required data and gathering it mid-summer won't be very accurate. Many of the soil measurements required should be made when soil is moist, so unless it its irrigated, infiltration data, soil chemistry, and some other measures won't fully reflect the baseline, I think. Third, I have tried to use the Comet-Planner to estimate GHG savings from agricultural land in this county and whenever I enter California as the state, the site says new data are available but it never downloads.

Humboldt County Resource Conservation District
5630 South Broadway Eureka, CA 95503
Phone (707) 442-6058 Ext. 5
hcrcd@yahoo.com

July 11, 2017

California Department of Food and Agriculture
Sacramento, CA
Submitted via email to cdfa.oefi@cdfa.ca.gov

Subject: Comments regarding 2017 Healthy Soils Program Demonstration Projects Request for Grant Applications Draft for Public Comment dated June 28, 2017

To whom it may concern:

We are submitting the following comments on the Demonstration Projects RGA for your consideration. Thank you for providing this opportunity for review, and please don't hesitate to contact me if you have any questions or need further clarifications.

Sincerely,

Jill Demers
Executive Director

Section 3.1 Eligibility
Eligible organizations should also include federally recognized tribal nations.

Section 3.2 Exclusions
The threshold of exclusion for compost application on soils over 12% organic matter content is excessive. One suggestion is to modify this requirement to 6% for pasture/rangeland systems and 10% for cropland systems.

Section 6 Project Types
We recommend removing Type A Projects and have only one demonstration project type, and increase funding limits up to $250,000 per project. The current funding limits appear to be insufficient to allow for multiple projects with a research-based structure, and 3 replications may be impractical under real farm conditions. We also recommend removing any requirement for measuring GHG. Measurement of GHG can add significant costs to projects; instead, the Air Resources Board has defined Quantification Methods that should be utilized for projects.

Section 8 Technical Specifications for Estimations of GHG Benefits
We suggest increasing eligible compost application rates by a factor of 4.

Section 9.1 Practice Implementation Requirements

Please clarify requirement number 3, 'projects must be conducted on the same field.' It is unclear if all practices proposed with a multi-practice project must be applied on the same field.

Section 9.2 Data Collection Requirements

Please clarify requirement in number 1, why crop yield information is required for Type A projects only, and specify how data will be reported.

Section 9.3 Outreach Requirements

The requirement for attendance of a minimum of 100 participants per year for 3 years would be very difficult or impossible to meet for smaller, rural counties. Even requiring outreach notifications to 100 producers may be too difficult. We suggest reworking this language with consideration for counties with smaller total population sizes.

Section 9.6 Baseline Data

Please include a soil sampling protocol with information about the number of samples to take, if composite sample is required, identification of sampling area for repeated sampling over project life, soil sampling depth, etc.

Section 10.2 Proposal Development – Sub-section C Project Justification

Please clarify requirement number iv., 'rationale of crop(s) that will be used for the experiment.' It is unclear if this is referring to the choice of cover crop, herbaceous or woody cover practices selected.

Please clarify requirement number iv., 'the possibility and scale for farmers and ranchers to adopt the demonstrated management practice(s).' It is unclear if this is in reference to a statewide or a regional scale.

Section G Budget Justification

We recommend using an assumed start date of December 1, 2017 to align with the timeline given in Section 9.4 Project Term and Matching Funds.

Section 15.2 Project Implementation

We recommend allowing flexibility in project start dates for consideration of appropriate timing for agronomic activities and regional climatic conditions, and suggest extending the window for starting dates from December 1, 2017 to not later than December 1, 2018.

Section 15.3 Project Reporting Requirements

We recommend removing the requirement for annual reporting of crop yield data as many of the eligible management practices could take many years before any changes in crop yields are seen.

Section 15.4 Post-Project Completion Requirements

Please clarify language for project maintenance period after project completion and if the required timeframe matches the practice lifespan. Also, please clarify if the stated 3-year period includes the project period or is after project completion.

Humboldt County Resource Conservation District
5630 South Broadway Eureka, CA 95503
Phone (707) 442-6058 Ext. 5
hcrcd@yahoo.com

July 10, 2017

California Department of Food and Agriculture
Sacramento, CA
Submitted via email to cdfa.oefi@cdfa.ca.gov

Subject: Comments regarding 2017 Healthy Soils Program Incentives Program Request for Grant Applications Draft for Public Comment dated June 28, 2017

To whom it may concern:

Humboldt County Resource Conservation District is submitting the following comments on the Incentives Program RGA for your consideration. Thank you for providing this opportunity for review, and please don't hesitate to contact me if you have any questions or need further clarifications.

Sincerely,

Jill Demers, Executive Director

Section 3.2 Exclusions

The threshold of exclusion for compost application on soils over 12% organic matter content is excessive. One suggestion is to modify this requirement to 6% for pasture/rangeland systems and 10% for cropland systems.

We suggest modifying language from "Fund projects that use potted plants or other plant growth media" to "Fund projects that use potted plants or plant growth media other than native soil."

Section 6 Eligible Agricultural Management Practices

We recommend modifying language to allow practices regardless of APN as long as they are newly installed practices on the farm.

Section 7 Technical Specifications for Estimations of GHG Benefits

We suggest increasing eligible compost application rates by a factor of 4.

Please confirm for Windbreak/Shelterbelt Establishment (CPS 380) that multiple rows of woody plantings would be credited additively.

Section 8.1 Applicant ID

Please provide clarification and definition for what constitutes an agricultural operation. For example, are there minimum annual production thresholds, gross total annual sales, or other criteria that must be met to be considered an agricultural operation for the purposes of this RGA?

Section 8.2 Project Term and Matching Funds

Please provide more clarification on matching funds, such as is there a minimum level desired that would make a proposal more competitive. The timeframe for using matching funds is very limited. There may be costs incurred by producers in early phases of the project but cannot be claimed until April – November 2020. Please consider revising this requirement.

There are typos in the dates in the Table: Timeline for funding expenditures of awarded projects.

Section 8.3 Baseline Data

Please include a soil sampling protocol with information about the number of samples to take, if composite sample is required, identification of sampling area for repeated sampling over project life, soil sampling depth, etc.

Section 9.2 Project Verification and Reporting

Please specify that Resource Conservation Districts are eligible technical service providers.

Section 10.2.3 Project Evaluation and Adoption Plan

Please provide more detail on the requirement for the plan for project evaluation. As currently written, it is vague and could be confusing to applicants.

Section 10.3 Estimated GHG Reductions

Please clarify if all eligible soil management practices are quantified in Compost-Planner. If not, revise language to require Compost-Planner for compost application practice only.

Section 10.5 Conservation Plan

Conservation plans can vary in detail depending on who completes them. Conservation plans completed by USDA-NRCS conservationists range from basic plans that show only practices to be implemented to plans more holistic and farm-wide; it depends on the request and the specific goals of the landowner. Additionally, producers may not want to share these documents with a state agency. Please consider revising this section by including only a question about whether a conservation plan is in place for the farm. We recommend removing any reference to a "certified" conservation plan as obtaining appropriate signatures for certification can be a challenge.

Section 11.3 Additional Considerations

Please clarify how distribution across county and geographic location will be determined.

Section 15.2 Project Implementation

We recommend allowing flexibility in project start dates for consideration of appropriate timing for agronomic activities and regional climatic conditions, and suggest extending the window for starting dates from December 1, 2017 to not later than December 1, 2018.

Section 16.2 Post-Project Completion Requirements

Please clarify language for project maintenance period after project completion and if the required timeframe matches the practice lifespan. Also, please clarify if the stated 3-year period includes the project period or is after project completion.

From: Heather Nichols [mailto:Heather@yolorcd.org]
Sent: Tuesday, July 11, 2017 5:28 PM
To: CDFA OEFI@CDFA <CDFA.OEFI@cdfa.ca.gov>
Subject: Public comment: Healthy Soils projects and GHG emission reduction measurements

Hello,
I strongly urge CDFA to drop the requirement to measure/monitor GHG emission reduction on demonstration projects. While additional information and data would be valuable, monitoring would be too costly, and applicants may not be able to locate sufficient expertise.

COMET tool calculations and best available science have provided reasonable estimates of GHG emission reduction. Your program is doing its job by supporting incentives and promotion of practices that are broadly agreed to be beneficial to soil health and carbon sequestration. Resources toward complicated GHG emission reduction measurements take away from funding needed for implementing practices, basic monitoring for improvements to soil health and ag operations, and cost-benefit analysis.

Thank you for your consideration of this matter,
Heather

Heather Nichols, Executive Director
Yolo County Resource Conservation District
221 West Court Street, Suite 1
Woodland, CA 95695
(530) 661-1688 ext. 12 office
(916) 475-8659 cell

find us on:

Sustainable Conservation

July 12, 2017

Honorable Karen Ross, Secretary
California Department of Food and Agriculture
1220 N Street
Sacramento CA 95814

Dear Secretary Ross:

Thank you for the opportunity to comment on the draft Request For Grant Applications from the Healthy Soils Program's (HSP) Incentives Program. We write to express our serious concerns about the current definition of compost eligible for use in the Healthy Soils Program, and to request an amendment of that definition to allow for the use of properly finished and regulation-compliant compost produced on farms and dairies in the program.

The White Paper "Compost Application Rates for California Croplands and Rangelands for a CDFA Healthy Soils Incentives Program" (hereafter "White Paper") currently defines "compost eligible for the program" as all of the following:

- The product resulting from the controlled biological decomposition of organic wastes *that are source separated from the municipal solid waste stream, or which are separated at a centralized facility* [emphasis added]. Feedstocks may include green materials, food materials, wood waste, yard trimmings, agricultural materials or biosolids as defined in 14 CCR Section 17852.
- Must be produced by a facility permitted or otherwise authorized by state and local authorities that can demonstrate compliance with all state regulations regarding inspection of incoming feedstocks, finished-product testing requirements including the Process to Further Reduce Pathogens (PFRP) as described in 14 CCR Section 17868.3, maximum metal concentrations for heavy metals per 14 CCR Section 17868.2, and physical contamination limits per 14 CCR Section 17868.3.1. (14 CCR Section 17868.

By limiting eligible compost to that derived from "*the municipal solid waste stream"* or "*separated at a centralized facility*," the definition effectively prohibits the use of compost produced on farms and dairies in the program for no apparent purpose. We strongly concur with the need to ensure that only quality compost is used by the program, but the second paragraph of the definition contains all the permitting and quality assurance requirements needed to protect product integrity, public health, and the environment, no matter what the source of the feedstock or nature of the producing facility might be. Given this fact, the current definition has the effect of discriminating against a class of compost producers for no reason that can be based on the protection of

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Sustainable Conservation

consumers or public health and safety. We recognize that the White Paper definition is grounded in CalRecycle's compost regulations, but the problematic language in the definition comes from CalRecycle's requirements for large landfill diversion operations and fails to recognize the wide range of authorized composting feedstocks and facilities that can produce high quality compost that meets all permitting and quality assurance requirements. For all these reasons, we request that CDFA delete the words "that are source separated from the municipal solid waste stream, or which are separated at a centralized facility" from the first paragraph of the definition of compost eligible for use by the HSP.

Sustainable Conservation has been doing a significant amount of work on the issue of dairy manure compost for a number of years and has recently issued a report titled "Compost: Enhancing the Power of Manure" (http://suscon.org/pdfs/compostreport.pdf), in which we find that composting dairy manure provides significant methane reduction and water quality benefits. Our study also demonstrates that there is a substantial potential market for manure compost, and that many customers prefer manure compost since it does not contain the contaminants (glass, plastic, etc.) found in compost made from urban waste streams. The fact that dairy compost (and on-farm compost) is likely to be produced in close proximity to its potential users in agriculture means that VMT and diesel emissions from transporting the compost can be significantly reduced. You and other members of the SB 1383 Dairy and Livestock Working Group have recognized the important role that manure compost can play in achieving the dairy methane emission reductions mandated by that bill. Finally, while the CDFA staff in charge of the HSP have made it clear that the program is concerned with expanding the demand for compost rather than the supply, it is generally acknowledged that achieving the goals of the HSP will require a lot of compost. Given dairy manure compost's potentially crucial role in achieving the goals of a range of state initiatives, including but not limited to the HSP, it should be embraced by the program, not excluded from eligibility for no substantive reason.

Once again, thank you for the opportunity to comment on this important program. Sustainable Conservation has been a longtime advocate for the use of incentives rather than mandates to create positive environmental change that also makes economic sense, and we applaud CDFA for taking that approach with the HSP.

Sincerely,

J Stacey Sullivan
Policy Director

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PHONE 415-977-0380 FAX 415-977-0381 EMAIL suscon@suscon.org

July 12, 2017

SUBJECT: C-AGG comments on the draft Request for Grant Applications for the Healthy Soils Program (HSP) Demonstration Projects and Incentives Program

TO: California Department of Food and Agriculture (CDFA)
Submitted to: cdfa.oefi@cdfa.ca.gov

FROM: Debbie Reed, Executive Director,
Coalition on Agricultural Greenhouse Gases (C-AGG)
Debbie@c-agg.org

C-AGG Background

The Coalition on Agricultural Greenhouse Gases (C-AGG) is a multi-stakeholder coalition of agricultural producers, scientists, environmental NGO's, methodology experts and developers, carbon investors, and project developers that promotes the development and adoption of science-based policies, programs, methodologies, protocols and tools for voluntary, incentive-based greenhouse gas (GHG) emissions reductions and carbon sequestration from the agricultural sector. C-AGG supports capacity-building and concrete approaches to incentivize voluntary GHG emissions reduction opportunities for agricultural producers that enhance productivity and income generation opportunities while benefiting society. C-AGG applauds the decision by the California government, including the CA Department of Food and Agriculture (CDFA) and the CA Air Resources Board (ARB) to develop the Health Soils Program as a means of financially rewarding farmers and ranchers for activities that increase soil carbon sequestration, reduce GHG emissions, and improve overall soil health. We submit the following comments and suggestions in support of ensuring a successful program.

C-AGG Comments on the Requests for Grant Applications (RGA) for Healthy Soils Program (HSP) Demonstration Projects and Incentives Program

C-AGG appreciates the opportunity to provide comments to the California Department of Food and Agriculture (CDFA) Healthy Soils Program Demonstration Projects and Incentives Program. C-AGG has been following the HSP process and providing updates to our stakeholders through our newsletter and in-person meetings. Representatives from CDFA and ARB provided status updates on the CA Healthy Soils Program at our March 2017 Sacramento meeting. This allowed C-AGG participants and stakeholders to provide comments and feedback and ask questions during the program's formative stages. We appreciate this opportunity to provide input on the draft program.

Overarching Question:

- We are interested to know whether CDFA will seek additional funding for this program and initiative, and if so, in what period. Soil carbon sequestration and soil carbon pools in particular accumulate over time horizons of years, with accruals often not detectable on an annual basis. We support continued implementation of this program over a longer time horizon, for instance 20 years, to fully capture the GHG mitigation and enhanced soil health benefits for farmers and ranchers and the state of California, as well as for GHG mitigation for society.

C-AGG Comments on the Healthy Soils Program Incentives Program:

- In §3.1 Eligibility, it is indicated that (italics added by C-AGG for emphasis):

  "*Projects must result in net GHG benefits from specific eligible agricultural management practices identified in this solicitation for the grant agreement term*;" (and)
  "*Applicants must provide supporting documentation directly related to actual, on-farm GHG emissions and soil quality to be eligible for funding* (See: Baseline Data)."

  We suggest that the language be changed to indicate instead that that project proposals should include scenarios that show how the projects *are intended* to result in net GHG benefits. Given variables such as weather, climate, and other potential factors outside the control of landowners, projects may be perfectly executed according to plans and not result in net GHG benefits due to circumstances outside the control of producers, who should not be penalized if that is the case. We suggest instead the following language be inserted in place of the language highlighted above:

  "*Projects must show how net GHG benefits from specific eligible agricultural management practices identified in this solicitation for the grant agreement term are intended to be achieved*"

  (and)

  "*Applicants must provide supporting documentation directly related to how actual, on-farm GHG emissions and soil quality impacts are intended to be achieved to be eligible for funding (See: Baseline Data)*."

- In §6. ELIGIBLE AGRICULTURAL MANAGEMENT PRACTICES, we suggest the following addition to text for clarity (additional suggested text underlined): "*Applicants must select <u>to implement</u> at least one of the Soil Management Practices as a minimum requirement to be eligible for funding*."
- Under §8.2 PROJECT TERM AND MATCHING FUNDS, the date March 31, 2017 should be changed to March 31, 2018; and April 1 ,2017 should be changed to April 1, 2018.
- Under §8.2 PROJECT TERM AND MATCHING FUNDS, it should also be possible for projects to expend matching funds concurrently with CDFA Grant Funds, or prior to April 1, 2018 – should it not? Particularly if the project requires more funds be expended up front to achieve success? It

is not clear why this restriction should be maintained, and we suggest more flexibility be allowed in the timing of expenditures.

- Under §9.1 CERTIFICATION OF PROJECT COMPLETION, we suggest the language be changed as follows: "*Applicants will be required to certify that the project will continue through the end of the Year 3, until project completion date of November 30, 2020 using CDFA and matching funds obtained for this purpose*." While the intent may be that CDFA funds should be expended by a date certain, the statement as written implies that only matching funds can be utilized by the project.
- The following two statements are both labeled as §9.2; we suggest that the second be changed to §9.3 for consistency and clarity. We also suggest that both statements require additional explanations for clarity and to provide producers with assurance of exactly what actions might be entailed in either scenario.
    - §9.2 PROJECT VERIFICATION AND REPORTING "*The State of California has the right to review project documents and conduct audits during project implementation and over the incentive period*." We suggest clarification of what may be entailed in an audit be specified in the document, and we further suggest that the document clarify that the audit will not result in increased costs to the producers beyond the costs of project implementation as documented in proposals. In other words, if CDFA undertakes an audit, it should be at CDFA's expense and not result in increased costs to producers.
    - §**9.3** POST -PROJECT REPORTING "*CDFA will contact a subset of awarded projects to collect data including, but not limited to management practice implementation and GHG reduction estimates, for 3 years after project completion, consistent with CARB Funding Guidelines for Administering Agencies (Final Supplement – December 2016*)." We suggest clarification of what may be entailed in this extended period of data collection, and we further suggest that the document clarify that the extended data collection period will not result in increased costs to producers beyond what is included in the project documentation as submitted. In other words, if CDFA seeks an extended period of data collection and reporting, it should be at CDFA's expense and not result in increased costs to producers.
- In §10.2.1. PROJECT NARRATIVE, please explicitly define "*short and long terms*", as indicated in item #2. Is this intended to be reported in months? In years? Greater clarification will ensure that the question is answered to the satisfaction of CDFA and the proposal reviewers. Also in this section, item 4 states: "*Articulate how the proposed project will sequester carbon, reduce atmospheric greenhouse gases and improve soil health*." We suggest this be changed as follows: "*Articulate how the proposed project will sequester carbon in soil, reduce emissions of greenhouse gases and improve soil health*," since asking how atmospheric GHG (concentrations?) will change via these proposals or projects is outside the scope of the work.
- In §10.4 BUDGET WORKSHEET, the following 2 statements should be clarified to ensure that project participants can expend matching grant funds at any time during the grant period, while ensuring that CDFA funds are expended within a certain period. As drafted, the language here (and in §8.2, as previously indicted) is confusing and should be clarified: "*Grant recipients must*

obtain matching funds for Year 3 of the projects and use these funds for all project expenses between April 1, 2020 and November 30, 2020." And "*Projects are encouraged to include matching funds in Year 1 and 2 of the project term. Funding to be contributed each year must be specified*."

- § 16.1 PROJECT VERIFICATION, states: "*The purpose of project verification is to determine whether and when deliverables are being met and evaluate project progress to ensure management practice(s) are completed within the grant term. Recipients may be required to submit financial records and project related documentation (such as receipts for payment of services/goods) to ensure HSP Incentives Program funds are used in compliance with the Grant Agreement terms and conditions. The verification must be completed by March 31, 2020*." The verification process as described here is quite vague; to clearly establish expectations and requirements of the verification process that CDFA will deem to be acceptable for projects to remain in compliance with the Grant Agreement, the verification requirements should be explicitly and clearly stated in this document.
- In §16.2 POST-PROJECT COMPLETION REQUIREMENTS, the following language is included (bold and italics added for emphasis): "*Execution of the Grant Agreement is conditional upon agreement to post-project completion requirements. Recipients are expected to maintain the proposed eligible agricultural management practice(s)* ***for several additional years after project completion****. Additionally, applicants are required to maintain documentation related to the HSP funded project, including records documenting maintenance of the agricultural management practice(s) and any soil testing reports for the project APNs, to report actual benefits achieved for a period of three years. Failure to work with CDFA to provide the necessary project-related documentation will be considered non-performance. In the event of non-performance, CDFA may take any action deemed necessary to recover all or any portion of the grant funding*." We suggest that the period for retention of management practices be made explicit, since the term 'several years' is subject to interpretation and thus disagreement. Given this vagueness, recipients should not be required to potentially return grant funding unless the terms are explicitly stated and understood by all parties to the agreement.

C-AGG Comments Specific to HSP Demonstration Projects:

- In §2. FUNDING AND DURATION, the document states: "*Grant recipients must expend matching funds during April 1, 2020 – November 30, 2020*." We suggest that the restriction for matching funds be changed to allow matching funds to be expended during the entire length of the project, to ensure that the project allows for the appropriate flexibility. If the desire is to ensure that CDFA funds be expended within a time certain, and/or before matching funds are expended then those limitations can be added, but the temporal limitation as stated may unnecessarily prevent needed project flexibility.
- In §7. ELIGIBLE MANAGEMENT PRACTICES we suggest the following addition to text for clarity (additional suggested text underlined): "*Applicants must select <u>to implement</u> at least one of the Soil Management Practices as a minimum requirement to be eligible for funding.*"

- In §7. ELIGIBLE MANAGEMENT PRACTICES we suggest the following sentence be changed for clarity and accuracy (additional suggested text underlined): "Estimated (r)eductions in GHG emissions from the use of these practices will be quantified using the quantification methodology (QM) and tools developed by the CARB…"
- In §9.2 DATA COLLECTION REQUIREMENTS, the following statement: "*Conduct measurements of field GHG emissions and carbon sequestration values*…" should be changed as follows (suggested changes underlined): "*Conduct measurements of estimated field GHG emissions and carbon sequestration values…"*
- In §9.4 PROJECT TERM AND MATCHING FUNDS we suggest it should also be possible for projects to expend matching funds concurrently with CDFA Grant Funds, or prior to April 1, 2020 – should it not? Particularly if the project requires more funds be expended up front to achieve success? It is not clear why this restriction should be maintained, and we suggest more flexibility be allowed in the timing of expenditures.
- In §10.1 HOW TO APPLY, the following statement should be clarified by adding the suggested underlined text: "*Estimation of GHG reduction or increased soil carbon sequestration via CARB COMET-Planner and/or Compost Planner*."
- In §15.4 POST-PROJECT COMPLETION REQUIREMENTS, the following statements are included (bold and italics added for emphasis): "*Execution of the Grant Agreement is conditional upon agreement to post-project completion requirements. Recipients are expected to maintain the proposed eligible agricultural management practice(s**) for several additional years after project completion**. Additionally, applicants are required to maintain documentation related to the HSP funded project, including records documenting maintenance of the agricultural management practice(s) and any soil testing reports for the project APNs, to report actual benefits achieved for a period of three years. Draft for Public Comment 2017 HSP Demonstration Projects California Department of Food and Agriculture Page 20 of 21. Failure to work with CDFA to provide the necessary project-related documentation will be considered non-performance. In the event of non-performance, CDFA may take any action deemed necessary to recover all or any portion of the grant funding*." We suggest that the period for retention of management practices be made explicit, since the term 'several years' is subject to interpretation and thus disagreement. Given this vagueness, recipients should not be required to potentially return grant funding unless the terms are explicitly stated and understood by all parties to the agreement.

C-AGG also has the following recommendations for demonstration projects:

- The HSP demonstration projects chosen should ideally cover different sectoral approaches to maximize learnings and outcomes across program types and across the full spectrum of California crops and specialty crops, and should consider the long-term investments needed to assess benefits and outcomes.
- Considerations for perennial crops and approaches for perennial crops should explicitly be included in the Incentive and the Demonstration Programs. For example, the CA Almond Board funded research on carbon improvement in soils and found that increased soil carbon can take a

period of several years to accumulate and to show increases via measurement—particularly with perennial crops and the broad spectrum of soils in California's Mediterranean climate. With 3-year grant cycles, it is unknown how or whether perennial systems will be able to demonstrate measurable outcomes. We therefore suggest longer grant periods or project cycles for perennial tree crops.

- It is important to use metrics that growers value and can measure. How will the metrics be evaluated and assessed after year one of the program in a way that is meaningful to growers?
- C-AGG has heard that CDFA is starting to perform an analysis of biochar (a soil amendment) through the organic review program and is funding research in biochar. New practices and tools such as biochar and other carbon sequestration options should be included in this program to determine their efficacy in sequestering carbon and reducing GHG emissions in CA soils and crops.

C-AGG looks forward to the final grant applications for the Healthy Soils Program and thanks CDFA for the opportunity to comment. We would be happy to provide any additional input or clarification of these comments if desired.

From: Heather Nichols [mailto:Heather@yolorcd.org]
Sent: Wednesday, July 12, 2017 8:58 AM
To: CDFA OEFI@CDFA <CDFA.OEFI@cdfa.ca.gov>
Cc: Wrysinski, Jeanette @yolorcd.org <wrysinski@yolorcd.org>
Subject: RE: Public comment: Healthy Soils Demonstration projects

Hello,
After further discussion with conservation partners in our community, I would like to revise my recommendation on outreach requirements to include only 100 farmers and ranchers for the total of the three years. I believe this is a more realistic and obtainable number to achieve, and recognizes that some farmers take longer to gain interest in a new practice.

Thank you for your consideration of this matter.

Heather

Heather Nichols, Executive Director
Yolo County Resource Conservation District
221 West Court Street, Suite 1
Woodland, CA 95695
(530) 661-1688 ext. 12 office
(916) 475-8659 cell

find us on:

-----Original Message-----
From: Heather Nichols
Sent: Wednesday, July 05, 2017 4:35 PM
To: cdfa.oefi@cdfa.ca.gov
Cc: Jeanette Wrysinski <Wrysinski@yolorcd.org>
Subject: Public comment: Healthy Soils Demonstration projects

Hello,
I would like to make a comment about the demonstration project requirement to have 100 farmers and ranchers visit the demonstration site each year. I believe this is an unrealistic expectation and would deter many potential applicants.

In my nearly 10 years at the Yolo County RCD, we have never been able to get 100 many farmers or ranchers to attend any of our workshops. Successful attendance for a free, voluntary field workshop ranges between 20-40 attendees (who are actual farmers or ranchers). If there are CEU offered, there might be up to 80, but many of those folks are crop advisors or PCAs.

My recommendation would be to lower that number to 150 total over the course of the three years.

Another suggestion would be to allow for other methods of outreach, such as online videos that require some kind of registration or survey as proof of outreach.

Thank you for your consideration of this matter.

Heather
Executive Director
Yolo County RCD

Sent from my iPhone

CalCAN
California Climate & Agriculture Network

July 12, 2017

Bonnie Soriano
Transportation and Toxics Division
Climate Investments Branch
Climate Investments Assessment Section

Re: GHG Quantification Methodology for the Healthy Soil Program

Dear Ms. Soriano,

Thank you for the opportunity to provide comment on the draft Quantification Methodology (QM) for the Healthy Soils Program. The California Climate and Agriculture Network (CalCAN), a coalition of the state's leading sustainable and organic agriculture organizations, has been actively engaged in the creation and development of the Healthy Soils Program for several years now.

We strongly support the decision by the California Air Resources Board to use COMET-Planner as the primary QM tool for the program. By using COMET-Planner and Compost-Planner, ARB is using scientifically robust and user-friendly tools that will make it easier for farmers and ranchers, especially under-resourced producers, to access the program.

Our comments on the QM focus on the soil test requirements for applicants and a couple areas in the QM that need clarity.

Thank you and your team for your steady and thoughtful work to advance healthy soils practices. We look forward to our ongoing work with you. Please let us know if you have any questions regarding our comments.

Sincerely,

Jeanne Merrill
Policy Director

Brian Shobe
Policy Associate

cc: Dr. Amrith Gunasekara, Dr. Geetika Joshi, Office of Environmental Farming and Innovation, CDFA
Deputy Secretary Jenny Lester Moffit, CDFA

1. Require award recipients – not applicants – to conduct soil tests.

We understand that baseline data are necessary for effective outcome measurement and to meet the requirements of CCI programs. However, we believe the burden of providing that data should be shifted to award recipients, who are the only entities CDFA and ARB needs that data from, and away from applicants to the program.

Shifting the timing of this requirement from the application to the award stage will also lighten the load on applicants and increase the likelihood of a robust applicant pool. Given the short application window and the extremely busy summer growing season for many potential applicants, we anticipate that most farmers and ranchers who do not already have the required soil tests will not be able to complete them in time to submit their application.

To address concerns about soil organic matter levels above 12 percent, which occur in a very small percentage of agricultural soils in the state, applicants could be asked to confirm that their soil organic matter content does not likely exceed the 12 percent threshold by checking the online NRCS soil survey map[1]. After reviewing the soil survey online, applicants could be asked to check a box on their application that they have reviewed the NRCS soil survey and their soils are unlikely to exceed 12 percent SOM.

2. Clarifying comments on the QM

There are a couple of places in the QM where we suggest clarifying language. They are:

<u>Page 6, third paragraph:</u>
Current language states: "Multiple practices can be implemented on the same area within a project, but only one implementation of each practice can be selected for each area."

This is somewhat confusing. We suggest the following:
"Multiple practices can be implemented on the same area. For example, cover crops, mulch and hedgerow plantings can occur on the same APN. But only one type of implementation per practice can be selected for each APN. For example, the same compost application rates or type of cover crop must be used per APN."

<u>Page 10, first paragraph:</u>
Current language states: "To quantify the GHG reduction for each practice implementation selected from Step 1, applicants must determine upon how many acres each practice will be implemented. Applicants can do this by developing a conservation management plan or by relying on knowledge of the project area."

This is overly confusing. We suggest the following:
"The quantification tools for the program – COMET-Planner and Compost-Planner – will require the applicant to state the total acreage each practice will be implemented on (e.g. how many acres do you plan to plant cover crops on or apply mulch to?). Below, we provide examples on how to provide this information."

[1] See: https://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm

Secretary Karen Ross
California Department of Food and Agriculture
1220 N Street
Sacramento, CA 95814

July 12, 2017

Dear Secretary Ross,

On behalf of the organizations listed below, we offer the following comments on CDFA's draft Requests for Grant Applications for the Healthy Soils Program. Our comments reflect our shared objective of creating a program that is appealing to all of California's farmers, transformative in its impact on agriculture and our climate, and worthy of further investment from the state.

Many thanks to you and your dedicated staff for the extensive and groundbreaking work you all have done over the past two years to create this first-in-the-nation Healthy Soils Program.

We greatly appreciate CDFA's commitment to a collaborative process and its invitation to submit comments on the program's draft Requests for Grant Application. We look forward to working with you and your staff on implementation of this important program.

Sincerely,

Virginia Jameson
Interim California Director
American Farmland Trust

L. Ann Thrupp
Executive Director
Berkeley Food Institute

Karen Buhr
Executive Director
California Association of Resource Conservation Districts

Jeanne Merrill, Policy Director
Brian Shobe, Policy Associate
California Climate & Agriculture Network

Torri Estrada
Executive Director and Director of Policy
Carbon Cycle Institute

Jane Sooby
Senior Policy Specialist
CCOF

Dave Runsten
Policy Director
Community Alliance with Family Farmers

Jim Fullmer
Executive Director
Demeter USA

Jan Derecho
Executive Director
Ecological Farming Association

Brittany Jensen
Executive Director
Gold Ridge RCD

Rex Dufour
Western Regional Office Director
National Center for Appropriate Technology

Margaret Reeves
Senior Scientist
Pesticide Action Network North America

David S. Gates, Jr.
Vice President, Vineyard Operations
Ridge Vineyards, Inc.

Michael Dimock
President
ROC Fund

Sopac McCarthy Mulholland
President and CEO
Sequoia Riverlands Trust

Erin Axelrod
Sonoma County Rancher

Kevin Watt
Strategy and Policy Manager
TomKat Ranch

Jo Ann Baumgartner
Executive Director
Wild Farm Alliance

Incentives Request for Grant Application

1. ***Achieve GHG emission reductions and full farmer access to the Healthy Soils Program***

We share Secretary Ross's commitment to ensure that all California farmers and ranchers can take advantage of the Healthy Soils program. However, the current requirement that at least one "soil management" practice be implemented in order to be eligible for the program unnecessarily limits the impact of the Healthy Soils program and the number of producers who can access it.

Scientists from CDFA, ARB, NRCS, and the COMET-Planner team have reviewed the scientific literature and verified that all of the Healthy Soils eligible practices have demonstrable soil carbon sequestration and GHG reduction benefits[1]. These benefits are reiterated in ARB's GHG Quantification Methodology for the Healthy Soils Program (see page 5 of ARB's Draft QM). As such, we believe farmers and ranchers should be free to apply for any one (or combination) of the eligible practices.

Under the proposed requirement of applying for at least one "soil management practice," farmers who already utilize most or all of the "soil management practices," as many organic farmers already do, will be ineligible for the program even though they may improve their carbon sequestration and GHG emissions reductions through the establishment of herbaceous cover or woody cover.

Furthermore, many ranchers may not be eligible to apply for the Healthy Soils program because their only "soil management practice" option is to apply compost to their rangelands and many may find that infeasible based on the steepness of their rangeland, the cost and availability of compost in their region, etc. Such limitations should not prevent organic farmers and ranchers from applying for herbaceous or woody cover practices that have demonstrable GHG emission reductions and Healthy Soils benefits.

What makes this program groundbreaking is its focus on the nexus between soil health and GHG reductions. All of California's farmers and ranchers should have the freedom to explore that nexus utilizing whichever eligible practices make the most sense on their land and operation.

Recommendation: Drop the requirement that applicants must adopt at least one "soil management practice" and allow applicants to choose freely from the list of eligible practices under the Healthy Soils program.

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[1] Food and Ag Code 569(e)(2): "Healthy soils" means soils that enhance their continuing capacity to function as a biological system, increase soil organic matter, improve soil structure and water- and nutrient-holding capacity, and result in net long-term greenhouse gas benefits.
Food and Ag Code 569 (e)(1): "Greenhouse gas benefits" means greenhouse gas emissions source reduction or carbon sequestration.

2. ***Encourage producer interest by reducing applicant burden, simplifying application requirements, and extending proposed application deadline***

We share the goal of attracting a robust pool of applicants to this program for two reasons: 1) broad competition is likely to increase the impact and diversity of projects awarded and 2) high demand for the program makes the strongest case for renewed or increased funding for the program.

To achieve these goals, farmers must be convinced that the time and costs invested in applying for the Healthy Soils program are worth the potential return.

We suggest the following changes to the application, which we believe strike the balance between program and applicant needs and ensure a robust applicant pool.

A. Simplify application and reduce redundancy

Section 10.2: Drop the proposed requirement to submit a separate project proposal (described as up to 6 pages in length) in addition to the FAAST application. Instead, convert the project proposal prompts into short answer questions and incorporate them into the FAAST application.

Section 10.2.1: We strongly encourage eliminating this section of the application. By offering the eligible practices under the Healthy Soils Program, CDFA is acknowledging the importance of those practices. Much like the USDA-NRCS EQIP application, we should seek to streamline (using check boxes, etc.) as much as possible and drop the narrative requirements under the application. The narrative, open-ended questions do not help reviewers to better understand the project, nor encourage the farmer or rancher to consider applying – quite the opposite. We should especially not ask farmers and ranchers to explain climate or other environmental science (questions 4 and 5). The state would not offer these practices through an incentives program if there was not sound science to support their implementation.

Section 10.2.2: This section requires applicants to provide a written description of the project work plan and design, and then to fill out and attach a work plan template and draw up and attach a schematic of the design. We suggest eliminating the written description prompts and modifying the work plan template and schematic design attachments to meet reviewers' and CDFA staff's needs. Bearing in mind that many applicants will have never applied for a grant program, we also suggest providing applicants with one or more examples of schematics and filled out work plan templates.

Section 10.2.3: Ensuring successful adoption of a project's proposed practices is critically important. We believe the proposed requirement that recipients sign a contract agreeing to the terms of the project and program, especially if it involves technical assistance from qualified conservation professionals from NRCS, Point Blue, or RCDs, should be sufficient to ensure success. This is the standard process for NRCS-EQIP, for example, which has very high success rates. Therefore, we suggest eliminating this section, which as proposed

requires farmers to speculate about the appropriate amount of detail to provide in responding to three vague and open-ended prompts. If CDFA requires specific data for its own program evaluation purposes, we suggest clarifying what data/metrics it will need and stating that in the project verification section of the RGA.

Recommendations: Eliminate the open-ended narrative questions of the application. Streamline the project design and work plan attachments. Offer examples of project design schematics and work plan templates to make it easier for first-time grant applicants.

B. Shift the timing of proposed soil test requirement to award recipients and reimburse them for more expensive soil tests

Section 8.3: We know baseline data are necessary for effective outcome measurement and to meet the requirements of CCI programs. However, we believe the burden of providing that data should be shifted to award recipients, who are the only entities CDFA needs that data from.

Shifting the timing of this requirement from the application to the award stage will also lighten the load on applicants and increase the likelihood of a robust applicant pool. Given the short application window and the extremely busy summer growing season for many potential applicants, we anticipate that most producers who do not already have the required soil tests will not be able to complete them in time to submit the application.

We also want to note that the list of CDFA-recommended Soils Testing Laboratories is quite limited. For example, the list does not include UC Laboratories. A quick web search turned up other UCANR-approved lists of accredited labs (examples: Northern and Central California Soil & Plant Labs; UCCE-El Dorado County List) that are much more extensive. We recommend expanding the current list to give farmers and ranchers more flexibility.

Section 3.2: When a question was asked about the timing of this proposed requirement on the July 6th webinar, CDFA staff responded that the organic matter content was necessary in the application stage to determine if an applicant had higher than 12 percent soil organic matter (SOM), which would render them ineligible for compost application. A very small percentage of farmers in the state operate on soil that has higher than 12 percent SOM.

To address concerns about SOM levels above 12 percent, applicants could be asked to check that their SOM content does not likely exceed the 12 percent threshold by using the online NRCS Web Soil Survey Map. After reviewing the soil survey online, applicants could be asked to check a box on their application that they have reviewed the NRCS soil survey and their soils are unlikely to exceed 12 percent SOM.

Sections 8.3, 9.2, and 11.3: In multiple sections, the RGA encourages, recommends, or offers additional consideration to applicants who provide additional soil health baseline data on their soils' water holding capacity, aggregate stability, and/or biological properties. We believe soil health data is valuable to both producers and the program. However, we

suspect the ambiguity surrounding these extra categories of data and their potential reward as an "additional consideration" will confuse applicants more than encourage them.

To avoid this confusion, we suggest CDFA: 1) shift the soil test requirement to award recipients and 2) specify which additional tests the department recommends and reimburse recipients for tests that go beyond the minimum soil texture and organic matter requirements.

Recommendations: Shift the soil test requirement to awardees, to be completed at the beginning of the project. Provide more options for CDFA-recommended soil labs. Clarify what is encouraged under the additional considerations regarding soil monitoring data and reimburse farmers and ranchers for conducting more sophisticated and expensive soil tests that include water holding capacity data, etc.

C. Give applicants a minimum of six weeks to apply

The draft RGA did not specify how many weeks applicants would have to apply, but on the CDFA webinar on July 6th, CDFA staff indicated applicants would only have one month. For technical assistance providers and other stakeholders to effectively get the word out and for farmers to have the time to design a project and apply, CDFA should grant applicants a minimum of six weeks. We have heard near-unanimous feedback from technical assistance providers that even six weeks is often too short for farmers just learning about similar programs like SWEEP. The more time applicants have to learn about, design projects, and apply for the program, the more robust the application pool will be.

Recommendation: Ensure applicants have at least six weeks to apply.

3. ***Support successful implementation by allowing for fall planting (e.g. cover crops and perennial herbaceous or woody cover)***

In many parts of the state, the best time to plant cover crops and establish many perennial herbaceous or woody cover plants is in the fall. The proposed timeline for project implementation makes it unclear how award recipients whose work plans involve those practices would be able to do so under the proposed project implementation timeline.

Section 15.2 states that "implementation must begin on or after December 1, 2017, but no later than June 30, 2018." If implementation is defined as "planting" for these practices, then that timeline prevents farmers from planting in the best months to do so. However, if implementation is defined as "signing one's award contract" or "ordering seed, plants, or supplies," then award recipients would be more likely to comply with the proposed timeline.

As such, we recommend clarifying the timeline and definition of implementation in order to assure producers that they will be able to plant cover crops and perennial plants in the best season for doing so. If CDFA is required by law to begin transferring funds to awarded

projects by June 30, 2018, we suggest explaining to applicants how and when they would need to request the optional 25% advance payment CDFA is offering.

Recommendation: Ensure successful practice implementation by allowing fall 2018 plantings under the program implementation timeline.

4. ***Describe evaluation criteria and prioritize GHG emissions reductions and soil health***

To increase consistency in interpretations for both applicants and reviewers, we hope CDFA will provide descriptions of the evaluation criteria similar to what was provided at the May 19 EFA SAP meeting. Such descriptions can be vitally important in guiding applicant and reviewer decision-making.

Given the focus of the program, we feel those evaluation criteria should more heavily prioritize GHG emission reductions and soil health. Above, we recommended removing "Project evaluation and adoption" (Section 11.2), which would free up 10 points in the scoring criteria. If that recommendation is accepted, we would propose shifting those 10 points to the GHG emission reductions and soil health category, effectively giving equal weight to project impact and project feasibility/implementation.

Recommendations: Provide descriptions of evaluation criteria categories, drop the project evaluation and adoption category, and increase GHG reduction and soil health points by 10.

5. ***Incentivize the application of quality compost, regardless of its source***

In recognition of the climate, soil health, and public health benefits of compost application, multiple agencies, businesses, and nonprofits are working on simultaneous efforts to boost compost production and application within the state.

We believe the role of the Healthy Soils program in that effort is to incentivize compost application – *not* a specific type of compost production. Other agency and industry efforts are directly addressing the latter. The current definition of compost in CDFA's Compost White Paper excludes the application of on-farm compost, which is an important source of compost in rural areas of the state where compost from large municipal waste streams is either non-existent or prohibitively expensive to transport.

This exclusion is based on the erroneous notion that on-farm compost is unregulated and that the quality of compost can only be verified by commercial compost producers. We agree that when it comes to estimating soil health and GHG benefits, the quality and application rate of compost matters. Instead of excluding farmers from on-farm composting, CDFA could simply require on-farm composters to provide the results of tests for C:N ratios and any other tests CDFA deems necessary, bearing in mind that on-farm compost is already regulated for human health concerns by the Food Safety Modernization Act (FSMA).

We are also concerned that the maximum allowable application rates may be so low as to discourage applicants from applying for them, given that most producers who apply compost do so in hopes of significantly offsetting reductions in synthetic N application. It is difficult to anticipate the proposed application and payment rates' appeal to producers due to the lack of comparison for this practice to other well-established conservation incentive programs (e.g. EQIP). For that reason, we hope CDFA will seek applicant and technical assistant provider feedback on the feasibility of this practice after this initial round.

Recommendations: Allow the application of on-farm compost. Should CDFA find it necessary, require on-farm composters to submit tests on their compost's C:N ratio.

6. ***Clarify Disadvantaged Communities section***

There appear to be some typos in Section 10.6 on Disadvantaged Communities, which may confuse an applicant about how to meet the DAC criteria and how applications will be scored for the DAC criteria. The FAAST questions in Appendix C explain the criteria clearly, so we simply suggest clarifying the Section 10.6 paragraph and explicitly mentioning the 10-point allocation for meeting the DAC criteria in an application score.

Recommendation: Clarify the DAC evaluation criteria using the Appendix C language.

7. ***Clarify Project Verification, Reporting, and Post-Project Completion Requirements sections to alleviate applicant concerns about unexpected mandates and terms of award agreement***

Section 9.2 (Project Verification and Reporting) states *"The State of California has the right to review project documents and conduct audits during project implementation and over the incentive period."* Farmers and ranchers understandably like to know under what conditions audits will happen, what kind of notice they will receive beforehand, what audits will entail, and how much they will cost. To prevent applicants from being discouraged from applying because of the ambiguous audit language, we recommend CDFA specify what audits would consist of and when and how they would happen, as well as assure applicants that the audit will be at CDFA's expense.

Section 9.3 (Post-Project Reporting) states *"CDFA will contact a subset of awarded projects to collect data including, but not limited to management practice implementation and GHG reduction estimates, for 3 years after project completion, consistent with CARB Funding Guidelines for Administering Agencies (Final Supplement – December 2016)."* The "but not limited to" language could raise concerns for some applicants, as could the possibility of additional costs not currently specified in the project application. We suggest clarifying to the extent possible the data that would be collected, as well as reassuring applicants that any currently unspecified post-project data collection would come at CDFA's expense.

Section 16.2 (Post-Project Completion Requirement) includes a number of ambiguous phrases like "several additional years," "records documenting maintenance," and "actual benefits." Combined with the threat of recovery of funds, this ambiguity may discourage

applications. In order for applicants to feel comfortable with the terms of the program, we strongly encourage clarifying in this section the number of years that practices and records of benefits are expected to be maintained, as well as the specific records that will be required to verify such maintenance and benefits.

Recommendations: Specify to the greatest extent possible the audit process and post-project record-keeping and maintenance requirements. Assure applicants that CDFA will bear the expense for any additional costs that result from these verification and reporting requirements.

Demonstration Projects Request for Grant Application

1. ***Prioritize investment in projects that will promote the widespread adoption of Healthy Soils practices throughout the state***

We strongly agree with CDFA that the objectives of the demonstration projects (Section 1) are to "showcase conservation management practices" with soil health and climate benefits and to create "a platform promoting widespread adoption of conservation management practices throughout the state."

As such, we recommend prioritizing investments in demonstration projects that focus on reaching, inspiring, and educating farmers about the practical considerations and agronomic and economic benefits of Healthy Soils practices. More specifically, we recommend restoring the funding level for "Type B" projects to $250,000 and removing Type A projects from the program. Should field measurements be maintained as a potential component of these projects, we suggest opening their focus up to other metrics/measurements that farmers are more likely to be interested in and motivated by.

We agree that crop, climate, and soil-specific research on actual GHG emissions is valuable for furthering our understanding of agricultural climate solutions, and our coalition actively seeks funding for such research from other sources. However, further research on GHG reductions potential is unlikely to achieve the main objectives of this program: to motivate and give farmers the information they need to adopt new practices. Most farmers are more motivated by other factors (cost/benefit, yields, pest pressure, labor, etc.). For those producers who care deeply about the climate science basis for adopting these practices, we believe they will accept the consensus from CDFA, NRCS, ARB, and the COMET-Planner team that we can reasonably expect climate and soil health benefits from the program's eligible practices.

Recommendation: Focus the demonstration project funding on the statutory requirements of the demonstration projects to "establish and promote" healthy soils[2] by eliminating the Type A project and restoring the project cap to $250,000 for Type B projects.

2. ***Increase likelihood of full subscription of demonstration project funding by basing matching fund requirements on reasonably available funding sources***

At this point in time, it is not clear that there is a good source of matching funds for the Healthy Soils demonstration projects, in part due to the program's pioneering nature. $50,000-$125,000 is a significant commitment for most organizations and their farmer partners to make without a matching funding source in mind, so we are concerned that the proposed matching requirement may result in undersubscription of the program. Recognizing the benefits of matching funds if they are available, we suggest aligning the Healthy Soils Program with the Alternative Manure Management Program's approach: make matching funds preferred (and perhaps worth additional points), but not required. Of course, if more reliable sources of matching funds become available in subsequent years, the proposed requirement could be reinstated.

Recommendation: Encourage matching funds for demonstration projects by making matching funds "preferred, but not required".

3. ***Ensure demonstrable, compelling demonstration project outcomes while taking into account differences in regions, cropping systems, and approaches to outreach and education***

Very rarely does one size fit all in this big and diverse state. Demonstration projects are no exception. The proposed 100-farmer per year attendance requirement is unrealistic for many regions of the state. We heard near-unanimous feedback at the May EFA-SAP meeting from experienced agricultural professionals who expressed concern about setting an across-the-board attendee requirement for demonstration projects. They commented that 30-40 participants at an on-farm workshop in many rural areas of the state is considered a superb (and rare) outcome. Repeating such a turnout for the same practices in the same location 8-10 times over the course of 3 years seems highly unlikely, and the requirement would likely discourage experienced outreach and education entities from applying. Focusing on farmer attendance as the sole outcome measurement also limits organizations from seeking innovative and creative ways to leverage a demonstration site for outreach and educational purposes.

We share CDFA's ambition and desire to achieve measureable and consequential outcomes through this program. Based on our experiences with other outreach and education programs like the Specialty Crop Block Grant (SCBG) program and USDA's Sustainable

[2] Food and Ag Code 569(e)(3): "On-farm demonstration projects" means projects that incorporate farm management practices that result in greenhouse gas benefits across all farming types with the intent to establish or promote healthy soils.

Agriculture Research and Education (SARE) program, we believe the following steps would ensure both a robust and diverse applicant pool and successful program outcomes:

A. Require applicants to set "SMART"[3] goals based on their knowledge of a region's farmers, crop types, common practices, and most effective outreach and education strategies
B. Recruit experienced extension and outreach professionals to serve as reviewers on the Technical Review Committee

Recommendations: Drop the numeric requirement for farmer outreach (e.g. 100 farmers/year) and instead require robust "SMART" goals from applicants.

4. ***Describe the evaluation criteria, align the DAC and additional consideration criteria between the Incentives and Demonstration RGAs, and separate unrelated criteria***

To increase consistency in interpretations for both applicants and reviewers, we hope CDFA will provide descriptions of the Evaluation Criteria similar to what was provided at the May 19 EFA SAP meeting. Such descriptions can be vitally important in guiding applicant and reviewer decision-making. For example, whether "Project Team Qualifications" is interpreted as academic degrees or field experience in farmer outreach and education could make a big difference for projects focused primarily on the latter.

As proposed, the DAC and additional consideration criteria (Section 11.2) and the way they are rewarded differs significantly between the Incentives RGA and Demonstration Project RGA. We think projects that provide benefits to DACs should be rewarded equally in the Demonstration Projects, as should the additional considerations for implementing multiple practices in the project and providing geographic (and crop system) diversity.

Given the focus of the program, it seems "GHG reductions and soil health" merits its own set of points. The remaining "multiple benefits and post-project impacts" portion of the proposed category needs clarification.

Recommendations: Describe the evaluation criteria, add 10 points each for meeting the DAC criteria and additional considerations criteria as described in the Incentives RGA, and give "GHG emissions reductions and soil health" its own set of points. Taking all of that into account, we propose the following evaluation criteria:

Criteria	**Maximum Points**
Project Merit: • Demonstration Component • Outreach Component • GHG emissions reductions and soil health	 20 20 10
Project timeline and implementation plan	10

[3] SMART stands for Specific, Measurable, Achievable, Relevant, and Time-bound

Project team qualifications	10
Project budget and justification	10
DAC criteria	10
Additional Considerations (including multiple management practices and geographic and crop system diversity)	10

5. ***Add tribal governments to the list of eligible entities for the program***

The RGA does not list tribal governments in its list of eligible entities (Section 3.1) to apply. Given California indigenous peoples' long history of sustainable resource management and continued stewardship of croplands and rangelands across the state, we hope CDFA will make their tribal governments eligible for the demonstration projects and proactively seek their engagement in this program.

Recommendation: Include tribal governments as eligible entities under the Healthy Soils Program.

The Healthy Soils Program Demonstration Projects

The Healthy Soils Program is funded by the California Climate Investments Program

Request for Grant Applications

Draft Released for Public Comment:
June 28, 2017

Comments Due:
By 5:00 p.m. PST on July 12, 2017

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

Blarimor
2017-07-05 16:36:54

See comments on Incentive Program in addition to comments in this document.

California Department of Food and Agriculture
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CONTENTS

1. BACKGROUND AND PURPOSE

The California Department of Food and Agriculture (CDFA) is pleased to announce, in coordination with the California Air Resources Board (CARB), a competitive grant process for the 2017 Healthy Soils Program (HSP) Demonstration Projects.

The 2017 HSP Demonstration Projects is part of the Healthy Soils Program (HSP), is funded by the Greenhouse Gas Reduction Fund (GGRF) and stems from the California Healthy Soils Initiative which promotes the development of healthy soils on California's farmlands and ranchlands. All projects that receive GGRF monies are required by statute (Government Code Section 16428.9) to achieve greenhouse gas (GHG) emission reductions and further the purposes of the Global Warming Solutions Act of 2006 (AB 32).

The objectives of the HSP are to build soil organic carbon and reduce atmospheric GHGs by (1) providing financial incentives to California growers and ranchers for agricultural management practices that sequester carbon, reduce atmospheric GHGs and improve soil health, (2) funding on-farm demonstration projects that showcase conservation management practices that mitigate GHG emissions and increase soil health, and (3) creating a platform promoting widespread adoption of conservation management practices throughout the state.

The HSP Demonstration Projects addresses Objectives 2 and 3. Objective 1 is addressed in the 2017 HSP Incentives Program. Request for Applications for the HSP Incentives Program and HSP Demonstration Projects are available on the HSP webpage: https://www.cdfa.ca.gov/oefi/healthysoils/.

2. FUNDING AND DURATION

The HSP Demonstration Projects will provide up to $3 million in funding for on-farm demonstration projects. The projects must showcase conservation management practices that mitigate GHG emissions, increase soil health and create a platform promoting widespread adoption of conservation management practices throughout the state.

- The maximum grant award is $250,000 for projects that implement eligible agricultural management practices, conduct required outreach, and, measure and collect data on GHG emissions and carbon sequestration.
- The maximum grant award is $100,000 for projects that implement eligible agricultural management practices and conduct required outreach.
- Matching funds must be obtained for approximately one third of the anticipated project costs.
- The grant agreement term, i.e., project duration is from December 1, 2017 to November 30, 2020 (three years).
    - CDFA grant funds cannot be expended before December 1, 2017 or after March 31, 2020.
    - Grant recipients must expend matching funds during April 1, 2020 – November 30, 2020.

Please see Table: Timeline for funding expenditures of awarded projects, which clarifies grant agreement term, and spending duration for CDFA grant funding and matching funds.

- CDFA reserves the right to offer an award different than the amount requested.
- The HSP Demonstration Projects funds may be combined with other funds from public and private sources as matching funds for the same project.

3. ELIGIBILITY AND EXCLUSIONS

3.1 ELIGIBILITY

- Not-for-profit entities, University Cooperative Extensions, Federal and University Experiment Stations, Resource Conservation Districts (RCDs), and farmers and ranchers in partnership with one of the aforementioned entities are eligible to apply.
- A single lead organization/entity may not be the principal applicant for more than two projects. However, the lead applicant may be a collaborator on other applications.
- Projects must include an actual farm (privately or university/government owned) to fulfill demonstration requirements.
- More than one farm can be listed on a single application. However, those same farms cannot be listed on multiple applications.
- Applicants must demonstrate control of the land under APNs where project is proposed to ensure project implementation for three years' grant agreement term. If leasing land, applicants must have documented landowner approval to implement proposed practices(s) for the duration of the grant agreement term.

3.2 EXCLUSIONS

- HSP Demonstration Projects funds cannot be used to implement management practices that are not listed as an **eligible agricultural management practices** in this grant solicitation.
- Awards made through the HSP Demonstrations Projects cannot be used as matching funds for awards made through the HSP Incentives Program.
- Compost application may not be implemented on APNs consisting of soils with organic matter content greater than 12% by dry weight (20 cm depth).
- Fund projects that use potted plants or other plant growth media.

4. TIMELINE

The application period begins [day], July [date], 2017. The deadline to submit a grant application is [day], August [date], 2017 at 5:00 p.m. (PST). ***No exceptions will be granted for late submissions.***

Invitation to Submit Grant Applications	July, 2017
CDFA Grant Application Workshops and Webinar	July – August, 2017
Project Review Period	August – November, 2017
Award Announcement	November, 2017
Project Implementation Begins	December, 2017

5. APPLICATION ASSISTANCE WORKSHOPS

CDFA will conduct three workshops and one webinar on the 2017 HSP grant application process. For the CDFA Grant Application Workshop schedule and locations, visit the HSP webpage: https://www.cdfa.ca.gov/oefi/healthysoils/.

6. PROJECT TYPES

CDFA will fund two types of Demonstration Projects to facilitate applicants from diverse groups for widespread adoption of eligible conservation management practices. Applicants must indicate which type of projects they are applying for on the application.

- Type A: Projects are required to implement the selected eligible management practice(s) and include field measurements of GHG emissions at the on-farm demonstration sites where management practices are implemented, in addition to conducting outreach and education to other farmers and ranchers. The maximum grant award for a Type A project is $250,000.
- Type B: Projects are required to implement the selected eligible management practice(s) and conduct outreach to other farmers and ranchers at the on-farm demonstration sites. The maximum grant award for a Type B project is $100,000.

7. ELIGIBLE MANAGEMENT PRACTICES

CDFA has identified eligible agricultural management practices that sequester carbon, reduce atmospheric greenhouse gases and improve soil health for the 2017 Healthy Soils Program. Applicants must select at least one of the Soil Management Practices as a minimum requirement to be eligible for funding. The selected eligible agricultural management practice(s) must include the APN(s) of the field(s) where the management practices will be implemented. An applicant is allowed to include multiple practices in the same APN or the same practice in multiple APNs.

The following management practices were selected from the United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) Conservation Practice Standards (CPS) and CDFA specified Compost Application:

Soil Management Practices (at least one must be selected)

- Cropland Management Practices

  - Mulching (USDA NRCS CPS 484)
  - Residue and Tillage Management – No-Till (USDA NRCS CPS 329)
  - Residue and Tillage Management – Reduced Till (USDA NRCS CPS 345)
  - Cover crops (USDA NRCS CPS 340)
- Compost Application Practices (CDFA)
  - Compost Application to Annual Crops (CDFA)
  - Compost Application to Perennials, Orchards and Vineyards (CDFA)
  - Compost Application to Grassland (CDFA)

Cropland to Herbaceous Cover Practices (must be implemented in combination with at least one soil management practice(s))

- Herbaceous Wind Barrier (USDA NRCS CPS 603)
- Vegetative Barriers (601) (USDA NRCS CPS 601)
- Riparian Herbaceous Cover (USDA NRCS CPS 390)
- Contour Buffer Strips (USDA NRCS CPS 332)
- Field Border (USDA NRCS CPS 386)
- Filter Strip (USDA NRCS CPS 393)

Establishment of Woody Cover Practices (must be implemented in combination with at least one soil management practice(s)

- Woody Plantings Practices
  - Windbreak/Shelterbelt Establishment (USDA NRCS CPS 380)
  - Riparian Forest Buffer (USDA NRCS CPS 391)
  - Hedgerow Planting (USDA NRCS CPS 422)
- Grazing Lands Practices
  - Silvopasture (USDA NRCS CPS 381)

Reductions in GHG emissions from the use of these practices will be quantified using the quantification methodology (QM) and tools developed by the CARB and can be accessed at the CARB Quantification Materials webpage: https://www.arb.ca.gov/cc/capandtrade/auctionproceeds/quantification.htm.
There are two quantification tools:
(i) QM and tool to estimate net annual GHG benefits from compost application (hereafter referred to as Compost-Planner), and,
(ii) QM and tool to estimate net annual GHG benefits from all other management practices included below (hereafter referred to as COMET-Planner).

8. TECHNICAL SPECIFICATIONS FOR ESTIMATION OF GHG BENEFITS

- For the purpose of estimating the net GHG benefits due to a practice implementation, the expected life of the practice is as follows:

Eligible Agricultural Management Practice	Practice Lifespan
Soil Management Practices	3 Years
Cropland to Herbaceous Cover Practices	3 Years
Woody Cover Establishment Practices	10 Years

- Compost Application Rates Eligible for Funding:

Crop Type	Compost Type	Dry Tons/Acre
Annual Crops	Higher N (C:N ≤ 11)	2.2 – 3.6
	Lower N (C:N > 11)	4.0 – 5.3
Tree / Perennial	Higher N (C:N ≤ 11)	1.5 – 2.9
	Lower N (C:N > 11)	4.0 – 5.3
Rangeland	Lower N (C:N > 11)	4.0 – 5.3

NOTE: Compost application rates eligible for funding through this program were developed under the guidance of the Environmental Farming Act – Science Advisory Panel (EFA-SAP) and are published in a white paper report titled "Compost Application Rates for California Croplands and Rangelands for a CDFA Healthy Soils Incentives Program" (abbreviated as Compost Application White Paper) by CDFA.

9. PROGRAM REQUIREMENTS

9.1 PRACTICE IMPLEMENTATION REQUIREMENTS

1) Projects must include at least one of the eligible Soil Management Practices (applies to both Type A and B projects).
2) Projects must have a control treatment (e.g., a current management practice) as a comparison (applies to both Type A and B projects).
3) Projects must be conducted on the same field (i.e., the same location within the APN proposed in the project) during the project term (applies to both Type A and B projects).
4) Have minimum of three replicates (applies to Type A projects only).

9.2 DATA COLLECTION REQUIREMENTS

The following data collection requirements apply to HSP Demonstration Projects:

1) Record crop yields (applies to Type A projects only).
2) Conduct measurements on soil organic carbon or soil organic matter. Other data on soil health and co-benefits, such as air and water quality, are not required but encouraged (applies to both Type A and Type B projects).

3) Conduct measurements of field GHG emissions and carbon sequestration values (applies to type A projects only).

9.3 OUTREACH REQUIREMENTS

Outreach requirements apply to both Type A and Type B projects. A minimum of 100 farmers and ranchers per year for three years must attend the demonstration projects so the project awardees can showcase the project benefits and co-benefits and share information on the implemented management practice(s).

Demonstration project awardees will be required to provide a list of participants as part of the biannual and annual reporting to CDFA. Failure to meet outreach and education requirements may be considered grounds for termination of the CDFA HSP Demonstration Projects Grant Agreement. Projects that fail to meet outreach and education obligations will not be considered for future HSP Demonstration Project funding.

9.4 PROJECT TERM AND MATCHING FUNDS

The project duration is three years for all awarded projects. The HSP Demonstration Projects will provide funds for implementation of management practice(s) from December 1, 2017 to March 31, 2020. Applicants are required to implement management practice(s) during April 1, 2020 – November 30, 2020 with matching funds (see table below).

Applicants will be required to certify the project will continue to completion in order to receive any funds withheld for verification (See: Project Verification) by March 31, 2020. Applicants will be required to sign documents of matching funds for the period of April 1 – November 30, 2020 and be verified by providing invoices occurred in the period.

Table: Timeline for funding expenditures of awarded projects.

	Begin grant agreement term	Begin spending CDFA grant funds	Conclude spending CDFA grant funds	Begin spending required matching funds	Conclude spending required matching funds	End grant agreement term
December 1, 2017	X	X				
March 31, 2020			X			
April 1, 2020				X		
November 30, 2020					X	X

9.5 ALLOWABLE AND UNALLOWABLE COSTS

9.5.1. Allowable Costs

Project costs must be itemized and clearly support installation of eligible management practices, including supplies, equipment, labor, and any other allowable cost necessary for project implementation. Project cost must be reasonable and consistent with cost paid for equivalent work on non-grant funded activities or for comparable work in the labor market.
Examples of allowable costs include but are not limited to, cost of implementation of proposed agricultural management practices, cost of sample analysis for type A projects, cost of materials needed for outreach activities, e.g. printed handouts or brochures.

9.5.2. Unallowable costs

Unallowable costs, include, but are not limited to:

- Costs incurred outside of grant agreement term.
- Training costs to obtain professional certification and certification costs for project award recipients.
- Costs covered by another State or Federal grant program/match funds.
- Pre-development costs, including, but not limited to, project design and other activities that contributed to a project's readiness.
- General purpose equipment which is not required for research, scientific and technical activities (e.g., office equipment and furnishings).
- Expenditures for purchasing or leasing land or buildings.

9.6 BASELINE DATA

Applicants must submit baseline data at the time of application. Required baseline data include:

1. Cropping and management practice history for the past three calendar years (January 2014 – December 2016) in field(s) in all APN(s) included in the proposal (for both Type A and Type B projects).
2. Soil texture and organic carbon content measured in the past one ye… accredited Soils Testing Laboratories recommended by CDFA, acce… http://ccmg.ucanr.edu/files/51308.pdf for all APNs included in the p… Type A and Type B projects).
3. Other soil data such as water holding capacity, aggregate stability a… biological properties are encouraged and may be required for Type A projects, … if applicable. Applicants must include the laboratory report as an attachment to the application.

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2. Suggest adding "or soil organic matter". 3. Suggest adding soil bulk density.

9.7 GHG REDUCTION DATA

Reductions in GHG emissions from the applicant's selected eligible agricultural management practices must be estimated using the Quantification Methodology (QM) and calculator tools

developed by the CARB (See: Eligible Agricultural Management Practices). The QMs and calculator tools used for this program can be accessed at the CARB Quantification Materials webpage. Once on the site, click on the appropriate QM (as indicated below) for instructions on how to use the GHG reduction calculation tool. The web link to the GHG reduction calculation tool will be provided in the QM.

There are two GHG reduction calculation tools:

1. Compost-Planner QM and Tool
   This will be used to estimate GHG reduction from ***compost application***.
2. COMET-Planner QM and Tool
   This will be used to estimate GHG reduction from ***all other eligible agricultural management practices***.

The COMET or Compost-Planner Carbon Sequestration and GHG Estimation Report is required for all eligible Soil Management Practices and must be included as an attachment in FAAST when any of these practices are selected. Since including a Soil Management Practice as a management practice is a requirement for all HSP Demonstration projects proposals, all applications must include this report.

The Comet-Planner Carbon Sequestration and GHG Estimation Report is required for all eligible Cropland to Herbaceous Cover Practices and Woody Cover Establishment Practices and must be included as an attachment in FAAST when any of these practices are selected.

If more than one management practice is proposed, GHG emission reduction from each of the management practices must be calculated and summed to provide the total GHG reductions; data from individual management practices must also be reported.

10. PROPOSAL APPLICATION PROCESS

10.1 HOW TO APPLY

CDFA has partnered with the State Water Resources Control Board (SWRCB) to host a web based application submission process. Applicants will utilize the SWRCB's Financial Assistance Application Submittal Tool (FAAST). FAAST can be accessed through the SWRCB website at http://faast.waterboards.ca.gov/. Applicants must create a user account in FAAST to submit a grant application.

FAAST is organized into several tabs and includes a question and answer format. The questionnaire tab in FAAST contains the grant application, which is a series of questions regarding the proposed project. Questions are answered in one or more of the four following formats: a drop down menu; a check box; a text box with predetermined character limitations; or

as a document attachment. Responses to all questions must be submitted in the manner and format required by the application questionnaire in FAAST without exception.

The SWRCB website contains a Frequently Asked Questions section and a User Manual for the FAAST system. Applicants that have additional questions about the FAAST System should contact FAAST customer service at (866) 434-1083, Monday through Friday, 8:00 am to 5:00 pm or via email, faast_admin@waterboards.ca.gov.

Prior to completing the application questionnaires in FAAST, applicants are encouraged to gather all required information using Appendix B: Grant Application Checklist and Appendix C: FAAST Grant Application Questions to facilitate effective and timely submission of the grant application.

Applicants are required to submit the following attachments:

- Baseline data (cropping and management histories in the past three years, soil texture and latest soil organic carbon/matter content).
- Soil texture and organic matter laboratory report.
- Estimation of GHG reduction via CARB COMET-Planner and/or Compost Planner.
- Project Proposal (See: Proposal Development).
- Budget Worksheet Template (Appendix D).
- Work Plan Template (Appendix E).
- Year 3 Cost Sharing Summary Template (Appendix F).

10.2 PROPOSAL DEVELOPMENT

The Project Proposal must include Sections A through I as described below. The Proposal must be submitted in PDF format, single spaced using one inch margins and 12 point Times New Roman font and Sections A through I must not exceed a total of 15 pages, not including CDFA provided templates, and, resumes and publication lists required under Section I. Full proposals that do not meet the formatting requirements or exceed 15 pages will not be accepted or considered for funding.

A. **Cover Page**

i. Project Title: Provide a unique and concise name for the proposed project.

ii. Project Leader(s): Specify each project leader's name, title, affiliation, mailing address, telephone number, and email address.

iii. Cooperator(s), Collaborator(s) and/or Farmer Partner: Specify each one’s name, title, affiliation, mailing address, telephone number, and email address, their role in the project, and estimated time commitment.

iv. Funding Request Amount: Provide the dollar amount requested from CDFA and the amount committed from academic research or in-kind sources for each year of the project. Specify organizations that have committed funding to this project including funding amounts, contact names, addresses, and telephone numbers.

B. Summary

The summary should include the proposal title, a brief description of the need and why this demonstration project for soil health is important. Describe the outreach components and research to be conducted (if Type A projects), and explain how the project will distinctively or creatively address the objectives of this Request for Grant Applications. A clear and concise description of the proposal is important for the review process. The summary should minimize the use of technical terms and may be included with information shared publicly for projects funded through California Climate Investments (CCI).

C. Project Justification

The Project Justification section must include, at a minimum, the following:

i. A short description on the mechanisms of proposed management practices in reducing GHG emissions, increasing carbon sequestration, improving soil health, and/or providing other environmental benefits.
ii. Baseline data (cropping and management histories in the past three years, soil texture and latest soil organic carbon/matter content).
iii. A description about geographic location and/or regional representation of the experimental site.
iv. Rationale of crop(s) that will be used for the experiments.
v. Agronomic, environmental or other impacts on a local, regional and statewide basis.
vi. The possibility and scale for farmers and ranchers to adopt the demonstrated management practice(s).

D. Project Objectives

Provide a clear, concise and complete statement of the project objectives for both the demonstration and outreach components.

E. Project Implementation

The Project Implementation section must include the following:

Data collection component (Type A projects only):

i. An experimental design that is statistically sound (randomized and replicated) and includes a schematic representation of management practice implementation that fits in the production plan.

ii. A proposed approach, procedure or methodology that is clearly described and must be suitable and feasible to complete the project. Specifically, methods and scheme of monitoring of soil health parameters, economic analysis, and field GHG emissions measurements must be included.

Outreach component (Type A and B projects):

i. A description of outreach activities that must include farmer or rancher Field Day activities. Other activities such as workshops, farmer and rancher meetings, social media communications, and publications are encouraged.
ii. A proposed approach, procedure or methodology for outreach activities, for example, methods of notification, record of attendance, distribution and collection of surveys, etc. must be clearly described, suitable and feasible.

Work Plan component (Type A and B projects):

A completed Work Plan template (See: Appendix E) that must be uploaded as a separate attachment in FAAST. For Data Collection tasks (Type A projects only), organize the plan into workable tasks and sub-tasks which are designed to achieve the specific project objectives. Each task should be numerically identified with a descriptive title and include a detailed description of activities and methods. Describe interim and final tasks and completion dates or milestones. For Outreach Component tasks (Type A and B projects), the plan should include a timeline for completing activities, approximate dates, individuals/organizations invited, expected number of participants, etc.

F. Evaluation of Project Success

The Evaluation of Project Success section must include the following:

i. Methods to assess the progress and success of the project, including soil organic matter content and/or other parameters on soil health, GHG emission reduction, and cost/benefit analysis of adoption of the management practice(s) as well as barriers to adoption, where applicable (Type A projects).
ii. Definitions and means to analyze success of outreach activities beyond counting numbers of participants in outreach events. Applicants must provide indicators and methods to quantify potential impacts in short and mid-term (e.g., percent increase in farmer/rancher participation and/or percent adoption of the management practices (Type A and B projects).

G. Budget Justification

Provide a detailed narrative to justify the proposed budget. Assume a start date of January 2018 and explain in the respective budget category.

H. Budget Worksheet *(Microsoft Excel workbook)*

Download the Budget Worksheet Template from FAAST (Appendix D). Applicants are required to download and complete a Budget Worksheet by entering the amount of grant funds budgeted for each category and itemizing all costs included in the grant request for the proposed project. The Budget Worksheet must be attached in Microsoft Excel format and be consistent with the project design. Failure to submit the required Budget Worksheet or submission of an alternate template/file type may result in disqualification.

Budget Cost Categories

- Personnel expenses
    - Salary: For each individual working on the project, list the name, percent time based on fulltime salary, and their role in the project in the salary section.
    - Benefits: Percentage of benefits (fringe) to be paid may be listed in this section.
    - Labor costs: For hourly contract worker payment.
- Supplies: Itemize the estimated cost of supplies by providing a description and quantity to be purchased. Supplies are items with an acquisition cost less than $5,000 per unit that are used exclusively for the project (e.g., cover crop seeds or plantings).
- Equipment: Itemize the estimated cost for any equipment by providing a description and quantity to be purchased. Equipment is an article of nonexpendable, tangible personal property, which equals or exceeds $5,000 per unit. This includes only ***special purpose equipment*** that is used for research, scientific, or other technical activities (e.g., spectrometers).
- Cost of field sampling and sample analysis: Itemize the estimated cost of allowable expenses for field GHG sampling, soil sampling, and sample analysis.
- Outreach expenses: Itemize the estimated cost for outreach events, providing details including but not limited to, event name (e.g., field day, workshop), number of events, and expected number of participants.

Matching Funds

i. Matching funds are defined as a portion of project costs not borne by the HSP Demonstration Projects grant award and can include cash and/or in-kind contributions. In-kind contributions include costs associated with labor involved with the implementation of the project.

ii. Applicants must complete and attach to FAAST the Year 3 Cost Sharing Summary template (Appendix F).

iii. Provide written description of the source of matching funds and specify the funds to be contributed each year. Provide supporting documentation (e.g. commitment letter), if applicable.

I. Project Team and Matching Fund Documentation

Project Team and Matching Fund attachments may be submitted in Microsoft Word (doc/docx) or PDF format.

i. For each Project Leader Include:

- A two-page resume.
- A list of recent publications (Type A projects only, if applicable).
- A description of current outreach activities; provide information on all current, planned, pending, and recent research and/or outreach projects, whether or not there is a specific time commitment and how it will impact the proposed project.

ii. For each cooperator/collaborator include:

- A letter describing the role in the project, estimated time commitment, and statement of agreement to participate in the project.
- Copies of faxed letters are acceptable if attached to the proposal at submission time.

11. REVIEW AND EVALUATION PROCESS

11.1 REVIEW PROCESS

CDFA will conduct multiple levels of review during the grant application process:

1. The first level review is an administrative review to determine whether application requirements were met.
2. The second level review is a technical review by The HSP Technical Advisory Committee (TAC), comprised of a group of experts affiliated with the University of California, California State University systems, and, state and federal agencies. The technical reviewers will evaluate grant applications based on the overall expected success of the project, including sufficient data generated to demonstrate the expected benefits on GHG emissions reduction, carbon sequestration, soil health improvement and dissemination of the information to a wide audience.
3. CDFA will select applications for funding based upon the score provided by the review committee. CDFA aims to fund projects that will result in increased knowledge in management practices and widespread adoption of these management practices by California farmers and ranchers.

11.2 EVALUATION CRITERIA

Proposals are evaluated based on the following criteria.

Criteria	**Maximum Points**
Project merit:	

• Demonstration Component • Outreach Component	20 20
Project timeline and implementation plan	10
Project team qualifications	10
Project budget and justification	15
GHG reductions, multiple benefits and post-project impacts	25
Total	100

Additional Considerations

During the review process, the following additional considerations will be evaluated when selecting projects for an award of funds based on the number of additional criteria met:

- Soil management practices may vary with climatic regions, soil conditions, and crop production systems. Therefore, projects with greater regional and crop production representation may be given additional consideration in order to achieve widespread adoption of the management practices.
- Projects that provide benefits to Disadvantaged Communities[1] (DACs), targeted outreach to farmers located in DACs, and/or providing translation services for languages other than English.

12. ASSISTANCE AND QUESTIONS

CDFA cannot assist in the preparation of grant applications; however, general questions may be submitted to grants@cdfa.ca.gov. In order to ensure all potential applicants benefit from receiving all submitted questions and answers, CDFA will post Frequently Asked Questions (FAQ) on [release date] on the Healthy Soils Program webpage and an additional FAQ will be posted according to the following schedule:

Questions received by	Responses posted by
TBD	TBD
TBD	TBD

[1] SB 535 requires that a minimum of 25 percent of California Climate Investments is allocated to projects that provide benefits to disadvantaged communities, and of that 25 percent, a minimum of 10 percentage points is allocated to projects that are also located within disadvantaged communities. The California Environmental Protection Agency (CalEPA) identified disadvantaged communities using CalEnviroScreen, a tool developed by the Office of Environmental Health Hazard Assessment that assesses all census tracts in California to identify the areas disproportionately burdened by and vulnerable to multiple sources of pollution.

In order to maintain the integrity of the competitive grant process, CDFA is unable to advise and/or provide applicants with any information regarding specific grant applications during the solicitation process.

13. NOTIFICATION AND FEEDBACK

All applicants will be notified regarding the status of their grant application. Applicants not selected for funding will receive feedback on their grant application within 60 days after receiving notification.

14. DISQUALIFICATIONS

The following will result in the disqualification of a grant application:

- Incomplete grant applications: applications with one or more unanswered questions necessary to administrative or technical review.
- Incomplete grant applications: applications with missing, blank, unreadable, corrupt, or otherwise unusable attachments.
- Applications for more than the maximum award amount.
- Applications with unallowable costs or activities necessary to complete the project objectives.

APPEAL RIGHTS: Any discretionary action taken by the Office of Grants Administration (OGA) may be appealed to CDFA's Office of Hearings and Appeals Office within ten (10) days of receiving a notice of disqualification from CDFA. The appeal must be in writing and signed by the responsible party named on the grant application or his/her authorized agent. It must state the grounds for the appeal and include any supporting documents and a copy of the OGA decision being challenged. The submissions must be sent to the California Department of Food and Agriculture Office of Hearings and Appeals, 1220 N Street, 4th Floor, Sacramento 95814 or emailed to CDFA.LegalOffice@cdfa.ca.gov. If submissions are not received within the time frame provided above, the appeal will be denied.

15. AWARD PROCESS

15. 1 GRANT AGREEMENT

CDFA will initiate the Grant Agreement process with applicants selected to receive a 2017 HSP Demonstration Projects grant award. Applicants with projects selected for award of funds will receive a Grant Agreement package with specific instructions regarding award requirements including information on project implementation, project reporting, verification, and payment process.

15.2 PROJECT IMPLEMENTATION

Once a Grant Agreement is executed, the grant recipient can begin implementation of the project. Recipients are responsible for the overall management of the awarded project to ensure all project activities are completed as identified in the Project Work Plan.

Implementation must begin on or after December 1, 2017, but no later than June 30, 2018.

Failure to implement the project later than June 30, 2018 may result in all or any portion of the grant funding withheld or termination of the Grant Agreement.

15.3 PROJECT REPORTING REQUIREMENTS

Recipients are required to submit mid-year and annual progress reports during the grant term and a final report in the third year. Financial records and project documentation may be required to ensure HSP funds are used in compliance with the Grant Agreement terms and conditions.

Recipients must submit progress and final reports during the project term:

- Mid-year progress report due every June should include:
  - Status of project implementation (what has been completed) and any reportable data.
  - Plan for next 6 months.
- Annual progress report due every December should include:
  - Demonstration component: Soil carbon and crop yield (required for both Type A and Type B Projects); co-benefits, ecosystem service, and economic analysis (optional); and annual GHG emissions (Type A Projects only).
  - Outreach component activities and impacts.
  - Demonstration and outreach plan for next year.
- Final report due December 2020 should include:
  - Demonstration component: Soil carbon and crop yield (required for both Type A and Type B projects); co-benefits, ecosystem service, and economic analysis (optional); and annual GHG emissions (Type A Projects only).
  - Outreach component activities and impacts.

15.4 POST-PROJECT COMPLETION REQUIREMENTS

Execution of the Grant Agreement is conditional upon agreement to post-project completion requirements. Recipients are expected to maintain the proposed eligible agricultural management practice(s) for several additional years after project completion. Additionally, applicants are required to maintain documentation related to the HSP funded project, including records documenting maintenance of the agricultural management practice(s) and any soil testing reports for the project APNs, to report actual benefits achieved for a period of three years.

Failure to work with CDFA to provide the necessary project-related documentation will be considered non-performance. In the event of non-performance, CDFA may take any action deemed necessary to recover all or any portion of the grant funding.

Project Outcome Data Collection

CDFA will contact a subset of awarded projects to collect data including, but not limited to, management practice implementation and GHG reduction estimates, for three years after project completion, consistent with CARB Funding Guidelines for Administering Agencies (Final Supplement – December 2016).

16. PAYMENT PROCESS

CDFA will provide the grant recipient with the necessary grant award and invoicing documents. Grant recipients may be eligible to receive an advance payment up to 25 percent of the total grant award for a project. The remaining funds will be allocated on a reimbursement basis through quarterly or monthly invoicing.

CDFA will withhold 10 percent from the total grant award until the verification requirement is complete to ensure grant recipients complete their project as approved by CDFA. . Invoicing and closeout of all project expenditures must be completed no later than March 31, 2020.

Applicants will be required to certify the project will continue to completion as part of the verification process and to receive funds withheld (See: Project Verification).

17. PROJECT VERIFICATION

The purpose of project verification is to determine whether and when deliverables are being met and evaluate project progress to ensure management practice(s) are completed within the grant term. Recipients may be required to submit financial records and project related documentation (such as receipts for payment of services/goods) to ensure HSP Demonstration Projects funds are used in compliance with the Grant Agreement terms and conditions. The verification must be completed by March 31, 2020. Applicants will be required to certify that the project will continue through the end of the Year 3 project completion date of November 30, 2020 using the matching funds obtained for this purpose.

Appendix A: CARB Quantification Methodology and Tools

Accessible at: https://www.arb.ca.gov/cc/capandtrade/auctionproceeds/quantification.htm

Appendix B: Application Check List

Accessible at: https://www.cdfa.ca.gov/oefi/healthysoils/

Appendix C: FAAST Grant Application Questions

Accessible at: https://www.cdfa.ca.gov/oefi/healthysoils/

Appendix D: Work Plan template

Accessible at: https://www.cdfa.ca.gov/oefi/healthysoils/

Appendix E: Budget Worksheet

Accessible at: https://www.cdfa.ca.gov/oefi/healthysoils/

Appendix F: Year 3 Cost Sharing Summary template

Accessible at: https://www.cdfa.ca.gov/oefi/healthysoils/

The Healthy Soils Program Incentives Program

The Healthy Soils Program is funded by the California Climate Investments Program.

Request for Grant Applications

Draft Released for Public Comment:
June 28, 2017

Comments Due:
By 5:00 p.m. PST on July 12, 2017

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

Blarimor
2017-07-12 18:14:09

We recommend that compost be purchased from a California compost facility permitted or otherwise authorized by CalRecycle. That will ensure that compost meets public health and safety standards. Preference is given to compost

California Department of Food and Agriculture
1220 N Street, Room 120
Sacramento, CA 95814
(916) 657-3231
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CONTENTS

1. BACKGROUND AND PURPOSE

The California Department of Agriculture (CDFA) is pleased to announce, in coordination with the California Air Resources Board (CARB), a competitive grant process for the 2017 Healthy Soils Program (HSP) Incentives Program.

The 2017 HSP Incentives Program is funded by the Greenhouse Gas Reduction Fund and stems from the California Healthy Soils Initiative which promotes the development of healthy soils on California's farmlands and ranchlands.

The objectives of the HSP are to build soil organic carbon and reduce atmospheric greenhouse gases (GHGs) by (1) providing financial incentives to California growers and ranchers for agricultural management practices that sequester carbon, reduce atmospheric greenhouse gases and improve soil health, (2) funding on-farm demonstration projects that showcase conservation management practices that mitigate GHG emissions and increase soil health, and (3) creating a platform promoting widespread adoption of conservation management practices throughout the state. All projects that receive GGRF monies are required by statute (Government Code Section 16428.9) to achieve GHG emission reductions and further the purposes of the Global Warming Solutions Act of 2006 (AB 32).

The HSP Incentives Program addresses Objective 1. Objectives 2 and 3 are addressed in the 2017 HSP Demonstration Projects. Request for Applications for the HSP Incentives Program and HSP Demonstration Projects are available on the HSP webpage: https://www.cdfa.ca.gov/oefi/healthysoils/.

2. FUNDING AND DURATION

The HSP Incentives Program will provide up to $3.75 million in financial incentives to California growers and ranchers for implementation of agricultural management practices that sequester carbon, reduce atmospheric greenhouse gases, and improve soil health.

- The maximum grant award is $50,000.
- The grant agreement term is from December 1, 2017 to November 30, 2020 (three years).
    - CDFA grant funds cannot be expended before December 1, 2017 or after March 31, 2020.
    - Grant recipients must expend matching funds from April 1, 2020 – November 30, 2020.

  Please see Table: Timeline for funding expenditures of awarded projects, which clarifies grant agreement term, and spending duration for CDFA grant funding and matching funds.
- CDFA reserves the right to offer an award different than the amount requested.
- The HSP funds may be combined with other funds as matching funds for the same project, such as funds from the United States Department of Agriculture (USDA), Natural Resource Conservation Service (NRCS) Environmental Quality Incentive Program (EQIP).

3. ELIGIBILITY AND EXCLUSIONS

3.1 ELIGIBILITY

- California farmers and ranchers are eligible to apply.
- Projects must be located on a California agricultural operation. For the purpose of this program, an agricultural operation is defined as row, vineyard, field and tree crops, commercial nurseries, nursery stock production and livestock and livestock product operations.
- Awards are limited to one per agricultural operation using a unique tax identification number per round of funding.
- Projects must result in net GHG benefits from specific eligible agricultural management practices identified in this solicitation for the grant agreement term.
- Applicants must provide supporting documentation directly related to actual, on-farm GHG emissions and soil quality to be eligible for funding (See: Baseline Data).
- Applicants must demonstrate control of the land under APNs where project is proposed to ensure project implementation for the three year grant agreement term. If leasing land, applicants must have documented landowner approval to implement proposed practices(s) for the duration of the grant agreement term.

3.2 EXCLUSIONS

The HSP Incentives program funds cannot be used to:

- Fund ongoing eligible agricultural management practices unless one of two conditions is satisfied:
  - The continuing management practice(s) is/are expanded to new field(s) identified by the Assessor's Parcel Number (APNs); or
  - The continuing management practice(s) is/are implemented with an additional quantifiable conservation management practice.
    This requirement is needed to ensure alignment with the CCI program which is required to reduce GHGs relative to a baseline or business as usual scenario.
- Compost application may not be implemented on APNs consisting of soils with organic matter content greater than 12% by dry weight (20 cm depth).
- Implement management practices that are not listed as an **eligible agricultural management practice** in this grant solicitation.
- Fund projects that use potted plants or other plant growth media.

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2017-07-12 18:17:20

Commercial nurseries are listed as eligible under 3.1, but seem to be excluded under this section (3.2) as funds cannot be used to fund projects that use potted plants or other plant growth media. Suggest this be clarified.

4. TIMELINE

The application period begins [day], July [date], 2017. The deadline to sub[illegible] is [day], August [date], 2017 at 5:00 p.m. (PST). ***No exceptions will be gra[illegible] submissions.***

CDFA will conduct three workshops and one webinar on the 2017 Healthy Soils Program grant application process. For the CDFA Grant Application Workshop schedule and locations, visit the HSP webpage: https://www.cdfa.ca.gov/oefi/healthysoils/.

Invitation to Submit Grant Applications	July, 2017
CDFA Grant Application Workshops and Webinar	July – August, 2017
Project Review Period	August – November, 2017
Award Announcement	November, 2017
Project Implementation Begins	December, 2017

5. WORKSHOPS AND TECHNICAL ASSISTANCE

CDFA will offer three workshops and one webinar on the 2017 Healthy Soils Program grant application process.

In addition, in partnership with the Strategic Growth Council, Technical Assistance Workshops (hosted by a non-CDFA entity, such as not-for-profit organization and/or academic experts) will be offered on the technical aspects of the application process, including the GHG calculation requirements. CDFA strongly encourages applicants to obtain technical assistance when developing a grant application.

CDFA will post the time and locations for grant application and technical application workshops to the HSP webpage: https://www.cdfa.ca.gov/oefi/healthysoils/.

6. ELIGIBLE AGRICULTURAL MANAGEMENT PRACTICES

CDFA has identified eligible agricultural management practices that sequester carbon, reduce atmospheric greenhouse gases and improve soil health for the 2017 Healthy Soils Program. Applicants must select at least one of the Soil Management Practices as a minimum requirement to be eligible for funding. The selected eligible agricultural management practice(s) must include the APN(s) of the field(s) where the management practices will be implemented. An applicant is allowed to include multiple practices in the same APN or the same practice in multiple APNs.

The following management practices were selected from the United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) Conservation Practice Standards (CPS) and CDFA specified Compost Application:

Soil Management Practices (at least one must be selected)

- Cropland Management Practices
  - Mulching (USDA NRCS CPS 484)
  - Residue and Tillage Management – No-Till (USDA NRCS CPS 329)

  - Residue and Tillage Management – Reduced Till (USDA NRCS CPS 345)
  - Cover crops (USDA NRCS CPS 340)
- Compost Application Practices
  - Compost Application to Annual Crops (CDFA)
  - Compost Application to Perennials, Orchards and Vineyards (CDFA)
  - Compost Application to Grassland (CDFA)

Cropland to Herbaceous Cover Practices (must be implemented in combination with at least one soil management practice(s))

- Herbaceous Wind Barrier (USDA NRCS CPS 603)
- Vegetative Barriers (601) (USDA NRCS CPS 601)
- Riparian Herbaceous Cover (USDA NRCS CPS 390)
- Contour Buffer Strips (USDA NRCS CPS 332)
- Field Border (USDA NRCS CPS 386)
- Filter Strip (USDA NRCS CPS 393)

Establishment of Woody Cover Practices (must be implemented in combination with at least one soil management practice(s)

- Woody Plantings Practices
  - Windbreak/Shelterbelt Establishment (USDA NRCS CPS 380)
  - Riparian Forest Buffer (USDA NRCS CPS 391)
  - Hedgerow Planting (USDA NRCS CPS 422)
- Grazing Lands Practices
  - Silvopasture (USDA NRCS CPS 381)

Reductions in GHG emissions from the use of these practices will be quantified using the quantification methodologies (QM) and tools developed by the CARB and can be accessed at the CARB Quantification Materials webpage: https://www.arb.ca.gov/cc/capandtrade/auctionproceeds/quantification.htm.

There are two quantification tools:
(i) QM and tool to estimate net annual GHG benefits from compost application (hereafter referred to as Compost-Planner), and,
(ii) QM and tool to estimate net annual GHG benefits from all other management practices included below (hereafter referred to as COMET-Planner).

Management practices cannot be accounted as creating GHG benefits if they have been previously implemented in the past year on APNs included in project. However, management practices can be implemented on the previous APNs if additional APNs can be brought into the management practice. This requirement is needed to ensure alignment with the CCI program where reduction of GHGs relative to a baseline level is required.

7. TECHNICAL SPECIFICATIONS FOR ESTIMATION OF GHG BENEFITS

- For the purpose of estimating the net GHG benefits due to a practice implementation, the expected life of the practice is as follows:

Eligible Agricultural Management Practice	Practice Lifespan
Soil Management Practices	3 Years
Cropland to Herbaceous Cover Practices	3 Years
Woody Cover Establishment Practices	10 Years

- Compost Application Rates Eligible for Funding:

Crop Type	Compost Type	Dry Tons/Acre
Annual Crops	Higher N (C:N ≤ 11)	2.2 – 3.6
	Lower N (C:N > 11)	4.0 – 5.3
Tree / Perennial	Higher N (C:N ≤ 11)	1.5 – 2.9
	Lower N (C:N > 11)	4.0 – 5.3
Rangeland	Lower N (C:N > 11)	4.0 – 5.3

NOTE: Compost application rates eligible for funding through this program were developed under the guidance of the Environmental Farming Act – Science Advisory Panel (EFA-SAP) and are published in a white paper report titled "Compost Application Rates for California Croplands and Rangelands for a CDFA Healthy Soils Incentives Program" (abbreviated as Compost Application White Paper) by CDFA.

- Feet-to-acre conversion for Agricultural Management Practices.

Several practices supported by the HSP Incentives Program are implemented by length (in feet). However, applicants must enter the total acres of practice implementation in COMET-Planner and Compost-Planner tools to estimate GHG reductions achieved from their project. A methodology to convert feet of practice implementation to acres is provided below. For the practices listed in the table, applicants must enter total length of implementation (feet) in the Budget Worksheet template, and acres of implementation in COMET-Planner.

Category	Practice name and CPS code	Minimum width at which practice must be	Total Length of implementation (feet)	Acres of Implementation

		implemented (feet)		
Cropland to Herbaceous Cover	Herbaceous Wind Barriers (CPS 603)	2	L	(2xL)/43,560
	Vegetative Barriers (CPS 601)	3	L	(3xL)/43,560
Establishment of Woody Cover	Windbreak /Shelterbelt Establishment (CPS380)	8	L	(8xL)/43,560
	Hedgerow Planting	8	L	(8xL)/43,560

8. PROGRAM REQUIREMENTS

8.1 APPLICANT ID

An agricultural operation can only submit one grant application using a unique tax identification number. If an agricultural operation does not have a unique tax identification number, that operation should only use the ***last four digits*** of their social security number (e.g., 000-00-1234) as their unique business identification number in their grant application.

An agricultural operation must use the operation's legal business name and associated tax identification number in their application. The business name provided in the application is the entity to which CDFA will extend a Grant Agreement if the project is selected for an award. (See Award Process.)

- Applicants must have control of the agricultural operation for duration of the project (three years).
- If leasing land, applicants must have documented landowner approval to implement proposed management practice(s) for the duration of the grant.

8.2 PROJECT TERM AND MATCHING FUNDS

The project duration is three years (December 1, 2017 to November 30, 2020) for all awarded projects. The program will provide funds for implementation of management practice(s) from December 1, 2017 to March 31, 2020. Applicants are required to implement management practice(s) during April 1, 2020 – November 30, 2020 with matching funds.

Applicants will be required to certify the project will continue to completion as part of the verification process and to receive funds withheld (See: Project Verification) by March 31, 2020.

Applicants will be required to sign documents of matching funds for the period of April 1 – November 30, 2020 and be verified by providing invoices occurred in the period (see Table below).

Table: Timeline for funding expenditures of awarded projects.

	Begin grant agreement term	Begin spending CDFA grant funds	Conclude spending CDFA grant funds	Begin spending required matching funds	Conclude spending required matching funds	End grant agreement term
December 1, 2017	X	X				
March 31, 2017			X			
April 1, 2017				X		
November 30, 2020					X	X

8.3 BASELINE DATA

Applicants must submit baseline data at the time of application. Required baseline data include:

- Cropping and management practice history for the past three calend… 2014 – December 2016) in field(s) in all APN(s) included in the pr…
- Soil texture and organic carbon content measured in the past one ye… accredited Soils Testing Laboratories recommended by CDFA, acc… http://ccmg.ucanr.edu/files/51308.pdf for all APNs included in the … data such as water holding capacity, aggregate stability and biologic… encouraged but not required. Applicants must include the laboratory … attachment to the application.

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2017-07-12 18:22:45

This section requires measurement of soil organic carbon (SOC), while section 9.2 requires reporting of soil organic matter (SOM). I realize SOC to SOM conversion factor can be used, but is the use of different terms intended? May need to clarify that

8.4 ESTIMATION OF GHG REDUCTION

Applicants are required to use the quantification methodologies developed by the California Air Resources Board (CARB) for GHG calculations listed at the CARB Cap-and-Trade Auction Proceeds Quantification Materials webpage: https://www.arb.ca.gov/cc/capandtrade/auctionproceeds/quantification.htm (i.e. COMET-Planner and/or Compost-Planner). Detailed information on GHG reduction estimation is provided by CARB and accessible at the link provided in Appendix A.

Applicants must include these GHG calculations as attachment to the application.

9. PROGRAM AGREEMENT

If selected for an award, execution of the Grant Agreement is conditional upon applicants agreeing to the following program requirements:

9.1 CERTIFICATION OF PROJECT COMPLETION

Applicants will be required to certify that the project will continue through the end of the Year 3, until project completion date of November 30, 2020 using the matching funds obtained for this purpose (See: Payment Process).

9.2 PROJECT VERIFICATION AND REPORTING

The requirements will be within the three -year project term.

1) Verification: Applicants will be subjected to verification that the management practices were implemented consistent with the USDA-NRCS Conservation Practice Standards (CPS) by CDFA or a third-party contracted entity who will conduct field evaluations by APN to verify program compliance during the grant agreement term.
2) Reporting: Data of soil organic matter is required to be reported to CDFA for each year of the three year project management practice implementation period. Other soil health data (water holding capacity, biological properties) are recommended but not required.

The State of California has the right to review project documents and conduct audits during project implementation and over the incentive period.

9.2 POST-PROJECT REPORTING

CDFA will contact a subset of awarded projects to collect data including, but not limited to management practice implementation and GHG reduction estimates, for 3 years after project completion, consistent with CARB Funding Guidelines for Administering Agencies (Final Supplement – December 2016).

10. RANT APPLICATION PROCESS

10.1 HOW TO APPLY

CDFA has partnered with the State Water Resources Control Board (SWRCB) to host a web based application submission process. Applicants will utilize the SWRCB's Financial Assistance Application Submittal Tool (FAAST). FAAST can be accessed through the SWRCB website at http://faast.waterboards.ca.gov/. Applicants must create a user account in FAAST to submit a grant application.

FAAST is organized into several tabs and includes a question and answer format. The questionnaire tab in FAAST contains the grant application, which is a series of questions regarding the proposed project. Questions are answered in one or more of the four following formats: a drop down menu; a check box; a text box with predetermined character limitations; or

as a document attachment. Responses to all questions must be submitted in the manner and format required by the application questionnaire in FAAST without exception.

The SWRCB website contains a Frequently Asked Questions section and a User Manual for the FAAST system. After reading the information available on the website, applicants that have additional questions about the FAAST System should contact FAAST customer service at (866) 434-1083, Monday through Friday, 8:00 am to 5:00 pm or via email, faast_admin@waterboards.ca.gov.

Prior to completing the application questionnaires in FAAST, applicants are encouraged to gather all required information using Appendix B: Grant Application Checklist and Appendix C: FAAST Grant Application Questions to facilitate effective and timely submission of the grant application.

All applicants are required to submit the following attachments in the FAAST. Additional attachments may be required depending on the individual project proposal (See Project Proposal).

1. Laboratory report of soil texture and organic carbon content for each APN.
2. GHG reduction estimation report using CARB COMET-Planner and/or Compost Planner.
3. Schematics of the project design.
4. Work Plan Template (Appendix D).
5. Budget/Cost Summary Template (Appendix E).
6. Matching Funds Required: Year 3 Cost Sharing Summary Template (Appendix G).

10.2 PROJECT PROPOSAL

Applicants are required to submit a project proposal, in addition to providing answers to the questions within FAAST (see Appendix C: FAAST Grant Application Questions). The project proposal is limited to six pages using a font no smaller than 12-point Times New Roman and 1-inch margins. A complete proposal should include section A through C as described below.

10.2.1. Project Narrative

Within the Project Narrative text box in FAAST, clearly address the following:

1. Explain why the proposed project is important to the agricultural operation.
2. What critical needs will the proposed project address in the short and long-terms?
3. Identify any limitations in the current production system for the identified APNs and how the proposed project will address them.
4. Articulate how the proposed project will sequester carbon, reduce atmospheric greenhouse gases and improve soil health.

5. Provide a qualitative description of the environmental co-benefits of the proposed project such as water and air quality improvements and ecosystem protections. Examples of co-benefits include reduction of on-farm fuel use and GHG emissions due to changes from conventional to no-till/reduced tillage and reduced sediment as a result of establishing a riparian buffer.

10.2.2. Project Implementation Plan

The Project Implementation Plan includes the Project Design and the Project Work Plan.

Within the Project Design text box in FAAST, clearly address the following:

1. Purpose of the design.
2. How the design will reduce environmental impacts.

Project implementation plan should include project design and a yearly project work plan for a total of three years. A schematic of the Project Design should be drawn up and included as an attachment in FAAST. The Schematic attachment should consist of a detailed map of the field operations that identifies the following:

1. Each APN included in the proposed project.
2. The acreage for each eligible agricultural practice being implemented.
3. The location of all major activities that will be completed.

The Work Plan Template (See: Appendix D) provided in FAAST should be completed and included as an attachment in FAAST. The Work Plan attachment should include the following:

1. Identification of the field(s) by APN(s) and the eligible management practices that will be implemented on each.
2. A breakdown of activities to be completed for each year of the project(s).

10.2.3. Project Evaluation and Adoption Plan

The Project Evaluation and Adoption Plan require applicants to evaluate and consider how to ensure project success during and beyond the project term.

Within the Project Evaluation and Adoption text box in FAAST, clearly address the following:

1. How current resources (e.g., water use) will be utilized or adapted to ensure the three-year implementation of the project and maintenance for the life of practice (up to 10 years).
2. The plan for the project evaluation (i.e., how to assess/measure possible changes/impacts after project implementation).

3. The plan for adoption and continuation of the eligible agricultural management practices implemented in the proposed project based on the project's success or lessons learned.

10.3 ESTIMATED GHG REDUCTIONS

Reductions in GHG emissions from the applicant's selected eligible agricultural management practices must be estimated using quantification methodologies (QM) and calculator tools developed by the ARB. The QMs and calculator tools used for this program can be accessed at the ARB Quantification Materials webpage. Once on the site, click on the appropriate QM (as indicated below) for instructions on how to use the GHG reduction calculation tool. The web link to the GHG reduction calculation tool will be provided in the QM.

There are two GHG reduction calculation tools:

1. Compost-Planner QM and Tool
   This will be used to estimate GHG reduction from ***compost application***.
2. COMET-Planner 2.0 QM and Tool
   This will be used to estimate GHG reduction from ***all other eligible agricultural management practices***.

The Compost-Planner Carbon Sequestration and GHG Estimation Report is required for all eligible Soil Management Practices and must be included as an attachment in FAAST when any of these practices are selected. Since including a Soil Management Practice as a management practice is a requirement for all HSP Incentive Program project proposals, all applications must include this report.

The Comet-Planner Carbon Sequestration and GHG Estimation Report is required for all eligible Cropland to Herbaceous Cover Practices and Woody Cover Establishment Practices and must be included as an attachment in FAAST when any of these practices are selected.

10.4 BUDGET WORKSHEET (Microsoft Excel workbook)

Applicants are required to download and complete a Budget Worksheet (Appendix E) from the CDFA HSP webpage. The Budget Worksheet attachment should include the following:

- The acreage or linear feet (depending on management practices selected).
- The sum of the cost for each proposed management practice in the application.

A standard payment rate per unit acre or foot for each of the listed management practices is provided as Appendix F and incorporated in the Budget Worksheet.
The Budget Worksheet template must be attached in Microsoft Excel format and be consistent with the project design. Failure to submit the required Budget Worksheet or submission of an alternate template/file type will result in disqualification.

Matching funds are defined as a portion of project costs not borne by the HSP Incentives Program grant award and can include cash and/or in-kind contributions. In-kind contributions include costs associated with labor involved with the implementation of the project.

Grant recipients must obtain matching funds for Year 3 of the projects and use these funds for all project expenses between April 1, 2020 and November 30, 2020.

Projects are encouraged to include matching funds in Year 1 and 2 of the project term. Funding to be contributed each year must be specified.

Applicants must complete the Year 3 Cost Sharing Summary template (Appendix G) and upload to FAAST.

10.5 CONSERVATION PLAN

Providing a Conservation Plan is optional, however, applications that include a qualified conservation plan with the application will receive additional points during review (See: Evaluation Criteria).

A conservation plan is a broad environmental/ecological impacts and solutions plan for the whole farm and is prepared by an NRCS specialist, an NRCS-trained individual or entity, or a professional agronomist. A Conservation Plan, should include, at a minimum:

- An aerial photo or diagram of project fields.
- A list of current management decisions.
- The location of and schedule for applying new conservation practices.
- A soil map and soil descriptions.
- Information explaining how to carry out specific management decisions.
- A plan for operation and maintenance of the management practice(s).

10.6 DISADVANTAGED COMMUNITIES

Providing benefits to disadvantaged communities (DACs) is optional, however, applications that include this consideration are eligible to receive during review (See: Evalua

Consistent with CARB Funding Guidelines for Administering Agencies (F December 2016), priority will be given to those projects that maximize ben communities[1], (DACs) using the following criteria. These criteria are addre questions described in Appendix C: FAAST Grant Application Questions. documents verifying that the projects meet the criteria below to receive add

Kpogue
2017-07-12 18:06:22

Seems like something is missing here. A confusing sentence. I believe this is intended to say that additional points will be received, but not sure.

[1] SB 535 requires that a minimum of 25 percent of California Climate Investments is allocated to projects that provide benefits to disadvantaged communities, and of that 25 percent, a minimum of 10 percentage points is allocated to projects that are also located within disadvantaged communities. The California Environmental Protection Agency (CalEPA) identified disadvantaged communities using CalEnviroScreen, a tool developed by the Office of Environmental Health Hazard Assessment that assesses all census tracts in California to identify the areas disproportionately burdened by and vulnerable to multiple sources of pollution.

11. REVIEW AND EVALUATION PROCESS

11.1 REVIEW PROCESS

CDFA will conduct multiple levels of review during the grant application process:

1. The first level review is an administrative review to determine whether application requirements were met. All required documentation must be submitted to avoid disqualification.
2. The second level review is a technical review by a committee made up of academic researchers, extension specialists, and farm advisors affiliated with the University of California and California State University systems, and state and federal agency experts. The technical reviewers will evaluate grant applications based on the overall expected success of the project, including the potential for the project to reduce GHG emissions, sequester carbon, improve soil health and provide other co-benefits (e.g., air and water quality improvement).
3. CDFA will select applications for funding depending on the scores provided by the review committee based on Evaluation Criteria outlined in section 11.2.

11.2 EVALUATION CRITERIA

Proposals are evaluated based on the following criteria.

Criteria	Score
Project feasibility and implementation plan	30
Project evaluation and adoption	10
GHG emission reductions and soil health	20
Environmental co-benefits	10
DAC criteria	10
Certified conservation plan	10
Additional considerations (Please see Section 11.3)	10
Total	**100**

11.3 ADDITIONAL CONSIDERATIONS

During the review process, the following additional considerations will be evaluated when selecting projects for an award of funds based on the number of additional criteria met:

- Implementing multiple eligible new management practices or expanding existing eligible practices to new APNs.
- Providing the additional soil health baseline data (e.g., water holding capacity, biological properties) and a plan for future assessments on soil health.
- County and geographic location (in order to maximize distribution of funds across counties and the State).

12. ASSISTANCE AND QUESTIONS

CDFA cannot assist in the preparation of grant applications; however, general questions may be submitted to grants@cdfa.ca.gov. In order to ensure all potential applicants benefit from receiving all submitted questions and answers, CDFA will post Frequently Asked Questions (FAQ) on [release date] on the Healthy Soils Program webpage and an additional FAQ will be posted according to the following schedule:

Questions received by	Responses posted by
TBD	TBD
TBD	TBD

In order to maintain the integrity of the competitive grant process, CDFA is unable to advise and/or provide applicants with any information regarding specific grant applications during the solicitation process.

13. NOTIFICATION AND FEEDBACK

All applicants will be notified regarding the status of their grant application. Applicants not selected for funding will receive feedback on their grant application within 60 days after receiving notification.

14. DISQUALIFICATIONS

The following will result in the disqualification of a grant application:

- Incomplete grant applications: applications with one or more unanswered questions necessary for administrative or technical review.
- Incomplete grant applications: applications with missing, blank, unreadable, corrupt, or otherwise unusable attachments.
- Applications for more than the maximum award amount.
- Applications with unallowable costs or activities not necessary to complete the project objectives.

Blarimor
2017-07-07 18:13:07

Recommend identifying allowable and unallowable costs.

APPEAL RIGHTS: Any discretionary action taken by the Office of Grants Administration (OGA) may be appealed to CDFA's Office of Hearings and Appeals within [redacted] receiving a notice of disqualification from CDFA. The appeal must be in writing and signed by the responsible party named on the grant application or his/her authorized agent. It must state the grounds for the appeal and include any supporting documents and a copy of the OGA decision being challenged. The submissions must be sent to the California Department of Food and Agriculture Office of Hearings and Appeals, 1220 N Street, 4th Floor, Sacramento 95814 or emailed to CDFA.LegalOffice@cdfa.ca.gov. If submissions are not received within the time frame provided above, the appeal will be denied.

15. AWARD PROCESS

15.1 GRANT AGREEMENT

CDFA will initiate the Grant Agreement process with applicants selected to receive a 2017 HSP Incentives Program grant award. Applicants with projects selected for award of funds will receive a Grant Agreement package with specific instructions regarding award requirements including information on project implementation, verification, and payment process.

15.2 PROJECT IMPLEMENTATION

Once a Grant Agreement is executed, the grant recipient can begin implementation of the project. Recipients are responsible for the overall management of the awarded project to ensure all project activities are completed as identified in the Project Work Plan.

Implementation must begin on or after December 1, 2017, but no later than June 30, 2018.

Failure to implement the project later than June 30, 2018 may result in all or any portion of the grant funding withheld or termination of the Grant Agreement.

16. AYMENT PROCESS

CDFA will provide the grant recipient with the necessary grant award and invoicing documents. Grant recipients may be eligible to receive an advance payment up to 25 percent of the total grant award for a project. The remaining funds will be allocated on a reimbursement basis through quarterly or monthly invoicing.

CDFA will withhold 10 percent from the total grant award until the verification requirement is complete to ensure grant recipients complete their project as approved by CDFA. Invoicing and closeout of all project expenditures must be completed no later than March 31, 2020.

Applicants will be required to certify that the project will continue to completion as part of the verification process and to receive funds withheld (See: Project Verification).

16.1 PROJECT VERIFICATION

The purpose of project verification is to determine whether and when deliverables are being met and evaluate project progress to ensure management practice(s) are completed within the grant term. Recipients may be required to submit financial records and project related documentation (such as receipts for payment of services/goods) to ensure HSP Incentives Program funds are used in compliance with the Grant Agreement terms and conditions. The verification must be completed by March 31, 2020.

16.2 POST-PROJECT COMPLETION REQUIREMENTS

Execution of the Grant Agreement is conditional upon agreement to post-project completion requirements. Recipients are expected to maintain the proposed eligible agricultural management practice(s) for several additional years after project completion. Additionally, applicants are required to maintain documentation related to the HSP funded project, including records documenting maintenance of the agricultural management practice(s) and any soil testing reports for the project APNs, to report actual benefits achieved for a period of three years.
Failure to work with CDFA to provide the necessary project-related documentation will be considered non-performance. In the event of non-performance, CDFA may take any action deemed necessary to recover all or any portion of the grant funding.

Appendix A: CARB Quantification Methodology and Tools

Accessible at: https://www.arb.ca.gov/cc/capandtrade/auctionproceeds/quantification.htm

Appendix B: Application Check List

Accessible at: https://www.cdfa.ca.gov/oefi/healthysoils/

Appendix C: FAAST Grant Application Questions

Accessible at: https://www.cdfa.ca.gov/oefi/healthysoils/

Appendix D: Work Plan Template

Accessible at: https://www.cdfa.ca.gov/oefi/healthysoils/

Appendix E: Budget Worksheet

Accessible at: https://www.cdfa.ca.gov/oefi/healthysoils/

Appendix F: Management Practice Payment Rates

Accessible at: https://www.cdfa.ca.gov/oefi/healthysoils/

Appendix G: Year 3 Cost Sharing Summary Template

Accessible at: https://www.cdfa.ca.gov/oefi/healthysoils/

12 July, 2017
California Department of Food and Agriculture
1220 N Street
Sacramento, California, 95814

CENTER FOR CARBON REMOVAL

Dear Amrith Gunasekara,

The Center for Carbon Removal thanks and congratulates the California Department of Food and Agriculture on its current work with the Healthy Soils Program. Our organization, which strives to remove carbon pollution from the atmosphere, would like to show our ongoing support for the Healthy Soils Program as it endeavors to sequester carbon in agricultural soils. Thus far the receptiveness to public comments and general stakeholder engagement has made for promising prospective outcomes.

The draft Request for Grant Applications provides a comprehensive informational grant application guide for potential rancher and farmer applicants. However, the framework can elaborate on a few key details of the application submission. For example, it can:

1. Include additional clarification on the content of each criterion in the Evaluation Criteria table for section 11.2 (page 16). Farmers that apply for the Healthy Soils grants should have a well defined understanding of the elements in their submitted proposals. To ensure that this is the case, it would be beneficial to give a brief description of each criterion in the evaluation rubric, so farmers can best address the program's objectives through their proposals. There are already descriptions for the "conservation plan" criterion and the "additional considerations" criterion. On the other hand, differentiation between the "project feasibility and implementation plan" criterion and the "project evaluation and adoption" criterion is not definitively defined. The application should provide a description for all the criteria in the evaluation.

2. Offer a brief overview section that describes the various components required to complete an application, as well as the optional components for the application. Although the Healthy Soils Program webpage contains a comprehensive checklist for the grant application process, it would be beneficial to include a paragraph in the Request for Grant Application document that presents the “Application Requirements” and links to the checklist. This could be inserted within the “Grant Application Process” section, and therefore would help prevent any initial confusion for prospective applicants. This section could also summarize the application components that are encouraged, but not required.

Adding additional informational details will help ensure compliance with the application process and will facilitate the creation of comprehensive high quality proposals. By providing additional clarity on these points, implementation plans will maintain stronger alignment with the program's objective to generate environmental and communal prosperity through carbon farming incentives.

Respectfully Submitted,

Noah Deich
Executive Director
Center for Carbon Removal

About Us: The Center for Carbon Removal is a team of experts and advocates for a new kind of climate action: carbon removal. We empower scientists, policy makers, and industry leaders to embrace climate solutions that can build a cleaner, stronger economy. To achieve our mission, we conduct research, convene events, and curate an online hub for information and discussion on carbon removal. Visit our website to learn more (www.centerforcarbonremoval.org) or join the discussion on Twitter (@CarbonRemoval).

SONOMA
RESOURCE CONSERVATION DISTRICT

1221 Farmers Lane, Suite F
Santa Rosa, CA 95405

707.569.1448
www.SonomaRCD.org

July 12, 2017

Submitted via email to Cdfa.oefi@cdfa.ca.gov

Re: The Healthy Soils Program Demonstration Projects, Comments on Request for Grant Applications Draft dated June 28, 2017

Section 6. Project Types Are there defined protocols that can be used for collecting field measurements of GHG emissions for Type A projects? Field GHG measurement typically involves complex research equipment and requires laboratory equipment to analyze the gaseous samples collected, which could be beyond the budget allowed within this grant program.

Section 7. Eligible Management Practices. Is there a practice standard developed for "Compost Application Practices" or is all guiding information regarding how to implement this practice derived from the White Paper referenced in Section 8 (page 8)?

Section 8. Technical Specifications For Estimation of GHG Benefits. The allowable compost application rates appear to be low and may not allow an adequate amount of compost (minimum of ¼ - ½" coverage, as shown in research done by Marin Carbon Project on rangelands) to be applied to the study plots within this research trial.

Section 9.3. Outreach Requirements. Requirement of "minimum of 100 farmers and ranchers per year for three years must attend the demonstration projects" is too restrictive due to several factors – compared to total amount of farmers/ranchers within the region may be lower, site access may be limited for such a large group, and guaranteeing attendance of 100 in general seems impractical. Suggest to modify outreach requirements to include hosting an annual field day to tour the demonstration site + outreaching to a minimum of 100 farmers and ranchers with information regarding the field trial and field tours.

Section 9.4 Project Term and Matching Funds. Project Term is prohibitive of completing two full field years under CDFA funding, particularly if compost application and tillage is involved. Tillage typically occurs through the summer and compost application is advised in the fall, just prior to winter rains. A start date of December 1, 2017 would make it difficult to apply compost in 2017 as it may be too wet in early December for any applications. If not applying in Fall 2017, the demonstration trial would not begin until Fall of 2018 with compost application followed by soil sampling in Spring of 2019 and Spring 2020. Soil conditions in March could be too saturated to allow soil sampling to occur so the timeline for concluding CDFA funds and starting Match

funds should be extended beyond April 1, 2020 in order to cover the first two years of field data collection.

Section 9.5 Allowable and Unallowable Costs.
-Please clarify if funds can be used to cover CEQA or any other permitting needs for eligible management practices.
- Can indirect costs (per a federally-approved indirect cost rate agreement) be included in the project budget?

Section 9.6 Baseline Data. Item 3 notes that other soil data parameters "may be required for Type A projects, if applicable". Please clarify in what instances this additional data collection would be required.

Section 10.2 Proposal Development, (G) Budget Justification. An assumed start date of January 2018 is noted here, which contradicts the start or implementation date of December 1, 2017 noted elsewhere. Please clarify the anticipated date when funds could begin to be billed.
(H) Budget Cost Categories. Please clarify if subcontracting costs will be allowed and covered.

Section 11.2 Evaluation Criteria. Required match is estimated to be approximately 1/3 of the project costs. Please clarify if more points will be awarded if more than a 1/3 match is obtained.

Sincerely,

Anya Starovoytov, Project Manager
astarovoytov@sonomarcd.org

and

Kari Wester, Project Manager
kwester@sonomarcd.org

Sonoma Resource Conservation District

Point Blue Conservation Science

Conservation science for a healthy planet
3820 Cypress Drive, #11 Petaluma, CA 94954
T 707.781.2555 | F 707.765.1685
pointblue.org

June 27, 2017

Dr. Geetika Joshi
CA Department Food and Agriculture
1220 N Street
Sacramento, CA 95814

Chair Don Cameron
Environmental Farming Act Scientific Advisory Panel (EFA SAP)
Sacramento, CA 95814

Dear Chair Cameron and Dr. Joshi,

Thank you for the opportunity to comment on the draft Request for Grant Applications for both the HSP Incentives Program and the HSP Demonstration Projects.

Point Blue Conservation Science (Point Blue) advances conservation of wildlife and ecosystems through science, partnerships, and outreach. Our 160 scientists work hand-in-hand with land, ocean and wildlife managers to improve conservation outcomes for ecological and economic benefits. We collaborate with the USDA Natural Resource Conservation Service (NRCS), other agencies and more than 500 ranchers on over a half million rangeland acres in California to implement practices that capture and store rainwater naturally, sequester carbon in the soil, enhance biodiversity, and improve ranchers' bottom lines.

Timeline for Implementation and Use of CDFA Funds

We are concerned that a December 1 start date for practice implementation and expenditure of CDFA funds will be late for successful implementation of some of the practices. This is a greater concern in northern areas of the State with shorter growing seasons and winter ground-freeze limitations where fall planting needs to occur earlier than more temperate, southern regions of the State. We recommend that producers and demonstration site practitioners be allowed to initiate practice implementation upon notification of proposal acceptance, with reimbursement requests not to be submitted till December 1 or after to meet program requirements.

Benefits of Rangeland Practices

The current practice list has good potential for contributing to the desired GHG benefit; however, we feel that the list is incomplete. A number of additional NRCS practices have potential for reaching GHG reduction goals due to the level of anticipated carbon capture (based on COMET Planner quantification) and feasibility of implementation (i.e. producer cost/benefit, accessible acreage). Many of these practices are already included in the CA COMET Planner GHG assessment tool. We recommend that all practices with quantification methodologies be included in the program, including but not limited to, Conservation Cover (CPS 342), Prescribed Grazing (CPS 528), and Tree/Shrub Establishment (CPS 612).

Incentivizing Compost Application

We would like to reiterate our previous comment that we are concerned that the $35 per ton, per acre payment for compost application is insufficient. We inquired with two North State compost suppliers for cost estimates on certified compost delivered (not spread) within 20 miles of the composting facility. The costs estimates provided

to us were $132 per dry ton and $125 per dry ton. Based on the GHG benefits calculated to occur through compost application on rangeland using the COMPOST Planner tool (4 to 5 tonnes CO_2 equivalent per acre per year) versus GHG benefits calculated to occur through riparian forest buffer establishment on rangeland using the COMET Planner tool (2 tonnes CO_2 equivalent per acre per year) we encourage a higher cost share payment to adequately incentive producers to utilize this practice so the program may recognize the anticipated GHG benefits.

Questions

- Can data from other soil labs (including University based labs) be used for baseline data provided that specific details of the assay methodology are provided?
- Can Mulching (CPS 484) be applied to specific locations on rangeland sites, such as in conjunction with Hedgerows or Windbreaks/Shelterbelts? It seems to meet the intent and criteria identified in the Conservation Practice Standard description, but it is unclear if rangeland application is allowed under HSP.
- It is unclear to us what the planting requirement is under the Riparian Forest Buffer (CPS 391) practice. Other woody planting practices require at least one row of plants with a minimum of 200 plants/acre. The planting requirement is not specified for CPS 391.
- How is producer match in year 3 envisioned for one-time practices, such as hedgerow or windbreak/shelterbelt establishment? Producer match is understood for annual practices such as reduced tillage and cover cropping, but not for the permanent practices. Is the maintenance cost considered as producer match?
- Is compost application considered a one-time implementation practice or are multiple applications of compost required?

With continued gratitude for CDFA's diligence in developing a meaningful Healthy Soils program, we hope these comments are helpful in finalizing the program guidelines. Please let me know if you have any questions or would like clarification on any of our comments (ecohen@pointblue.org, ext. 318). Thanks again!

Sincerely,

Ellie M. Cohen
President and CEO

Cc: Karen Ross, CDFA Secretary
Jennifer Lester Moffitt, CDFA Deputy Secretary
Carlos Suarez, NRCS State Conservationist

RESOURCE
CONSERVATION DISTRICT
OF SANTA CRUZ COUNTY

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July 12, 2017

Karen Ross
Secretary, California Department of Food and Agriculture
1220 N Street
Sacramento, CA 95814

Dear Secretary Ross:

The Resource Conservation District of Santa Cruz County (RCD) would like to express its full support to all the comments contained in the letter from CalCAN and partners and the letter from the Carbon Cycle Institute in response to California Department of Food and Agriculture's (CDFA) request for comments on the two Healthy Soils Program Request for Grant application (RGA) draft guidelines (incentives and demonstration projects). The comments in both of these letters represent well our observations and concerns, and they reflect our shared objective of creating a program that is appealing to all of California's farmers, transformative in its impact on agriculture and our climate, and worthy of further investment from the state. In addition to those comments, we would like to provide the following additional recommendations:

- Provide a less restrictive timeframe for expending required match funds. The rationale for requiring all match funds to be spent only during the last 8 months of the project's third year is unclear, and such timeframe poses cash flow challenges for small farming operations/businesses and non-profit organizations.

- Consider posting a grant agreement template for review during the solicitation process so that applicants can be clear on the detailed statutory, legal, etc. requirements.

- Clarify how the matching fund percentage is to be calculated: on total project costs (i.e. direct costs + match) or direct costs only?

- Clarify if indirect costs are allowed, and if so at what percentage, and on what (i.e total direct costs, personnel only, etc.)?

- Use the same practice implementation units (acres) for the Budget worksheet template and COMET-Planner and Compost-Planner tools to estimate GHG reductions achieved from their project.

We greatly appreciate CDFA's effort to make this program a reality and your commitment to a collaborative process by inviting stakeholders to submit comments on the program's draft RGA guidelines. We look forward to working with you and your staff on implementation of this important program.

Sincerely,

Chris Coburn
Executive Director

Carbon Cycle Institute

July 12, 2017

Secretary Karen Ross
California Department of Food Agriculture
1220 N Street
Sacramento, CA 95814

Re: Healthy Soils Program – Comments in Draft Request for Grant Application

Dear Secretary Ross:

On behalf of the **Carbon Cycle Institute (CCI)**, we are writing to offer comments and suggestions to the Draft Request for Grant Applications for the Healthy Soils Program (HSP). The HSP will increasingly play a central role in the State meeting its goals under AB32 and climate adaptation policy. We deeply appreciate CDFA and its staff for their work to shape and refine the HSP. And, we look forward to working with CDFA to strengthen the Program.

We have worked with a coalition of organizations, including CALCAN, to develop a comprehensive set of recommendations for the HSP. We have provided additional and complimentary recommendations in that comment letter as well. And, in addition, we will provide additional comments and thoughts in response to the Air Resources Board's Greenhouse Gas Quantification Methodology for the CDFA Healthy Soils Program.

The Carbon Cycle Institute's mission is to stop and reverse climate change by advancing science-verified solutions that remove atmospheric carbon while promoting environmental stewardship, social equity and economic sustainability. To that end, we support and develop projects that promote climate-beneficial management practices on working lands throughout California, work to build the technical capacity of land managers and producers to plan and implement impactful projects that reduce GHGs and sequester carbon in the land base, and are heavily engaged in gathering scientific data on the important role these practices can play in sequestering carbon from the atmosphere.

Currently, we are working in over 20 counties with farmers, ranchers, and land managers to plan and implement on-farm conservation measures that improve soil health, sequester carbon, and improve resilience to climate change and drought – the very goals and practices supported by HSP. With this on-the-ground experience, we offer the recommendations below.

Sincerely,

Pelayo Alvarez, Director, Outreach and Partnerships

Jeff Creque, Director of Rangeland and Agroecosystem Management

Torri Estrada, Executive Director

245 Kentucky Street, Suite A, Petaluma, CA 94952
(707) 992-5373, testrada@carboncycle.org

Demonstration Projects - Request for Grant Application

The HSP, generally, and the Demonstration Projects program, specifically, represents an important achievement in integrating agriculture and working lands in State climate change mitigation and adaptation policy. The central goals of the Demonstration Projects program are to showcase conservation management practices that mitigate GHGs and increase soil health, and create a platform promoting widespread adoption of conservation management practices throughout the state. For the most part, the draft request for grant application will achieve these goals, with some refinements we have included below.

However, the current focus of the Demonstration Projects program on conducting research and collecting data on sociological, economic and GHGs undermines its overall foundation and ultimate feasibility. CDFA and ARB, working with Colorado State University and others, have adopted an effective and scientifically valid quantification platform for agriculture, in terms of measurement of soil carbon and GHG impacts. In layering additional quantification, analysis and reporting requirements onto program participants, CDFA may undermine the success of its own program.

We strongly urge CDFA to limit quantification and reporting to those criteria specified by ARB and contained within the QM. If CDFA wants additional information on sociological or economic impacts of the program, or verification of GHG models, it should fund that work under a separate program, rather than trying to fit it into the limited budget allocated for on the ground, on-farm GHG reduction projects.

Summary of Recommendations

Soil Health should be defined, perhaps in a footnote.

Sections 3.1 and 8.1: Clearly state the criteria that defines an "actual farm" or agricultural operation in order to determine eligibility for the funding.

Section 3.2: The threshold of exclusion for compost application on soils over 12% OM (to 20cm depth) is excessive. While we recognize ARB established this threshold as the point beyond which Compost-Planner can no longer accurately predict the impact of compost additions to soil, we suggest 6% for pasture/rangeland systems and 10% for cropland systems are much more realistic values. This should also allow compost use to be focused on soils that have greater room for SOM improvement.

Section 6**:** We would recommend not splitting the projects into A/B type and not requiring measurement of GHG in these projects. GHG measurement is extremely costly; ARB's QM has been defined and should be utilized (as indeed required). CDFA seems to want to structure the type A projects as pseudo-research projects, but there is insufficient funding provided for effective research and the criteria (3 replications) are impractical, if not impossible, in real farm conditions. The effect will be to produce un-publishable data not amenable to the rigorous statistical analyses needed to draw meaningful conclusions and therefore of little utility (especially since every project will vary widely) at great expense. We urge funding all

demonstration projects up to $250,000 and eliminating the "3 replication" and GHG measurement requirements, and support using ARB's QM to derive GHG values.

Section 8**:** The eligible compost application rates listed are a lot lower than the rates currently used by producers and may not meet the GHG capture goals and/or co-benefits. These rates should be increased by a factor of 4.

Section 9.2-3**:** The requirement to "Conduct measurements of field GHG emissions and carbon sequestration values" suggests a level of research expertise and instrumentation that the grant amount does not support. Nor will 1-3 years of field measurement be significant to draw any reliable (and generalizable) conclusions nor scientifically valid results from, especially across multiple funded projects across the State.

Section 9.3**:** The requirement for attendance of 100 participants 3 years in a row is not practical or meaningful. It is impossible to guarantee attendance of that many farmers and ranchers at a field day, and three years in a row for the same project will be particularly difficult. Hosting an annual field day and requiring ***outreach*** to at least 100 farmers/ranchers is a more reasonable approach.

Section 10.2-E-i**:** Experimental design, randomization and replication are not practical nor effective in the context of a demonstration project. A control may be possible in some cases, but how does one "control" for a windbreak? What is meant by "management practice implementation that fits in the production plan."?

Section 10.2-F-i**:** A cost-benefit analysis is beyond the scope of this work and should not be required.

Section 10.2-F-ii**:** The requirement of sociological analysis is beyond the scope of this work; it should not be required.

Section G**:** Project work may need to start as soon as funds are allocated, which could be December 1, 2017. We would suggest eliminating the reference to January 2018 as a required start date to provide projects with flexibility for implementation.

Section 15.2**:** Implementation requirements do not necessarily fit the agronomic calendar. Compost should be applied in Fall, prior to Fall rains; woody planting should occur with onset of fall rains (e.g. November). We would recommend extending the start date to December 1, 2018, and specifying inclusion of planning, sourcing material and logistical staging as "implementation". For above reasons, we would recommend changing "Failure to implement the project" date from June 30, 2018 to January 1, 2019.

Section 15.3**:** We recommend removing the requirement for crop yield information as it is meaningless within the timeframe of a funded project. Reporting co-benefits, including ecosystem services and economic analysis, should be optional; the purpose of the program is GHG reductions.

Points of Clarification

Section 9.1-3**:** What is meant by the statement: 'Projects must be conducted on the same field'? Does CDFA mean to require all practices in a multi-practice project to be applied on the same field? If so, this is not practical, as all practices may not be appropriate or needed on the same field.

Section 9.2-1**:** We are unclear of the value of reporting crop yield information for type A (or any) projects. How will this be reported and how will the information be used?

Section 9.6**:** While labs are identified, there is no sampling protocol identified. Is the assumption that any soil sampling protocol will suffice? Will sampling depth be specified?

Section 10.2-C-iv**:** What is meant by "Rationale of crops..." does this refer to the choice of cover crop, herbaceous or woody cover practices selected? Please clarify.

Section 10.2-C-vi**:** What is meant by "possibility and scale"; statewide potential? Regional? Please clarify.

Section 10.2-E-ii: If a QM has already been adopted by ARB, why is "monitoring of soil health parameters, economic analysis, and field GHG emissions measurements…" required? Please clarify. The funding ($250K) may not cover these costs and these activities do not lead to GHG reductions.

Section 15.4**:** This section is unclear: "Recipients are expected to maintain the proposed…practice(s) for several additional years after project completion … Additionally, applicants are required to…report actual benefits achieved for a period of three years." Are the 3-year period and the "several years" period the same? . Is the 3-year period "after project completion or included in the project period? Please clarify.

Healthy Soils Program - Incentives Request for Grant Application

Summary of Recommendations

Section 3.2**:** Again, the threshold of exclusion for compost application on soils over 12% OM (to 20cm depth) is excessive. We suggest a threshold of 6% for pasture/rangeland systems and 10% for cropland systems.

Section 7**:** The suggested incentivized compost application rates are very low; we suggest increasing these limits by at least a factor of 4x.

Section 8.2: Delete the requirement that matching funds need to be spent on the third year.

Section 9.2-1**:** Please specify that RCD's are eligible technical service providers.

Section 10.2.3: Add RCDs as authorized entities to write up, sign, and complete the terms of an award contract

Section 10.3: **"**The Compost-Planner Carbon Sequestration and GHG Estimation Report is required for all eligible Soil Management Practices." If only compost impacts are quantified in Compost-Planner, this requirement should be specific to compost application only, not "all eligible soil management practices."

Section 10.5**:** We strongly urge eliminating "certification" requirement for conservation plans, as NRCS is not currently structuring Conservation Planning Certifications around GHG reductions. **(**"… applications that include a qualified conservation plan with the application will receive additional points during review." This becomes a "certified" conservation plan later in the document [11.2, table]). At the same time, ARB's requirement for *apriori* use of COMET-Planner and Compost-planner to quantify anticipated GHG impacts of project implementation suggests the imperative of producer engagement of a Technical Service Provider and a previously-developed Carbon-Plan.

Section 15.2**:** "Implementation must begin on or after December 1, 2017, but no later than June 30, 2018." Compost application on grassland/rangeland and perennial crops should occur in the fall, prior to fall rains. The December-June window for project initiation conflicts with this. Similarly, it may take some time for a project to gather the plant materials for a major shelterbelt planting (for example). Planting is typically best carried out in November-December, after the start of Fall rains. Strongly recommend changing language to read: Implementation initiation should occur December 1, 2017 but not later than January 15, 2018.

Points of Clarification

Section 3.2**:** The statement, HSP cannot "Fund projects that use potted plants or other plant growth media" is ambiguous; please clarify.

Section 6**:** This section is ambiguous and unclear. **"**Management practices cannot be accounted as creating GHG benefits if they have been previously implemented in the past year on APNs included in project. However, management practices can be implemented on the previous APNs if additional APNs can be brought into the management practice." *This is ambiguous and appears to contradict requirement for all practices to fall within the same APN. Please clarify.*

Section 7**:** Windbreak and shelterbelt establishment; please confirm that multiple row woody plantings would be credited additively (eg, assume 8' width for EACH ROW, not the entire windbreak or shelterbelt).

Section 8.3**:** A suggested sampling protocol, including sampling depth, should be provided.

Section 10.6**:** The first sentence is incomplete; please clarify.

Section 11.2**:** The criteria stated are ambiguous. "Project evaluation and adoption;" "GHG emission reductions and soil health;" What is meant here? Also, please change "Certified conservation plan" to "Conservation plan."

Section 16.2**:** This section is unclear. "Recipients are expected to maintain the proposed…practice(s) for several additional years after project completion…Additionally, applicants are required to…report actual benefits achieved for a period of three years." Are the 3-year period and the "several years" period the same? Is the 3-year period "after project completion or included in the project period? Please clarify.

CDFA Healthy Soils Initiative – Draft RGA Comments

The Monterey Bay Regional Climate Action Compact (Compact) is a network comprised of local jurisdictions, non-profits organizations, academic institutions, and private businesses from throughout the 21 jurisdictions within Monterey, Santa Cruz, and San Benito counties. The Compact works to support the causes and effects of climate change on a local level through regional collaboration. The Compact is interested in supporting local projects that meet the goals of the CDFA and Healthy Soils Initiative. Due to the narrow application period, we request your consideration of the following comments.

Comment #1: On the CDFA Healthy Soils Webinar held on July 6th, it was stated that the application period would likely be one month, whereas in the Healthy Soils Webinar held on May 30th the application period was anticipated to be six weeks. We respectfully request that the application period be extended up to eight weeks with a minimum of six weeks to allow adequate time to prepare a quality proposal.

Comment #2: Please reconsider the minimum outreach requirement of 100 farmers and ranchers attending the demonstration projects per year for project sites in rural communities. Population may be an obstacle in meeting this requirement for sites in rural communities. Furthermore, the number of individuals in the farming community engaged in carbon farming practices may be an additional limiting factor in meeting this requirement. We request that this minimum threshold be lowered for projects established in rural communities, giving them the opportunity to meet the outreach and education requirement and participate in future Healthy Soils Initiative projects.

Comment #3: We request that the baseline data requested at the point of application submission, outlined in section 15.3, be allowed submission with the first mid-year progress report (June 2018) as opposed to submission with the application. The availability of this information for target demonstration sites prior to the application period may be a potential deterrent for prospective applicants.

Comment #4: The discussion regarding demonstration project requirements on the Healthy Soils Initiative webinar on May 30th stated that a cropland component would be required for demonstration projects. In reading the draft RGA, this requirement is unclear. It would be helpful to have more specific instructions pertaining to whether or not demonstration projects can be conducted on rangeland or if they must be on cropland for funding eligibility. If the demonstration projects require a cropland component, we request that it be removed. California has approximately 62,960,129[1] acres of rangeland and covers approximately 50% of California[2]. Requiring a cropland component for all demonstration projects eliminates potential projects aimed at reducing greenhouse gas emissions and increasing carbon sequestration through carbon farming practices that may otherwise not be appropriate for cropland management.

Thank you kindly for your consideration of these comments. We look forward to reviewing the official solicitation.

[1] http://rangelandarchive.ucdavis.edu/Online_Learning_Resources/_file196534_/

[2] https://nicholasinstitute.duke.edu/sites/default/files/ni_ggmoca_r_4.pdf

USDA
United States Department of Agriculture

Dr. Amrith Gunasekara
Science Advisor to the Secretary
California Department of Food and Agriculture

July 12,2017

Dear Dr. Gunasekara,

Thank you for the oppmtunity to comment on *The Healthy Soils Incentives Program, Request for Grant Applications.* I appreciate the work that went into preparing the document and the complexity of creating guidance for the program, my hope is that these recommendations are constructive as you refine program guidance.

Section 6. Eligible Agricultural Management Practices

- Recommend that the categmy *Cropland to Herbaceous Cover Practices* be changed to vegetative practices. This will align with NRCS terminology.

Section 7. Technical Specifications for Estimation of GHG Benefits

- For NRCS practices, it should be noted that installation needs to meet NRCS practice standards, and site specific implementation requirements. The requirements listed in this section appear to be intended to be additional requirements for GHG benefit calculation.
- Practice lifespans for soil management, cropland and herbaceous cover practices do not correspond with the lifespans for the NRCS practices. These should be changed, or it should be noted that, even though the practices utilized are NRCS practices, the practice lifespans differ from NRCS practice lifespans due to CDFA program constraints.

Section 8.2 Project Term and Matching Funds

- The language in this section is confusing, for example: "Applicants are required to implement management practice(s) during April I, 2020- November 30, 2020 with matching funds." The requirement for spending matching funds may need to be reworded in order to not confuse other program requirements. Unless a waiver is granted, EQIP practices cannot begin until after the contract is obligated, and a practice in the contract must commence within 12 months of the contract obligation

Section 10.5 Conservation Plan

- The language in this announcement implies that NRCS may provide the conservation planning technical assistance. NRCS does not have the staffing capacity to provide the conservation planning for this initiative. Other types of certifications should be recognized in order to adequately meet the technical assistance needs of applicants. Some options may include Soil and Water Conservation Society (SWCS) Certified Professional in Erosion & Sediment Control, Certified Crop Advisors, Certified Professional Soil Scientist, and Certified Professional Agronomist.

Natural Resources Conservation Service
430 G St., #4164, Davis, CA 95616-5475
Voice: (530) 792-5600 Fax: (530) 792-5790

- Since NRCS is referenced as a technical authority, and NRCS practices are used, reference to conservation plan needs to be consistent with NRCS requirements. This includes: statement of landowner objectives, plan map, soils map, resource inventory and assessment, record of decision to implement conservation practices that will address the resource concerns identified in the assessment. For each of the practices, implementation requirement and/or design should be included. The intent may be to provide an alternative to a conservation plan, if this is the case, it should be referred to simply as application suppotting documentation.
- Proper terminology for NRCS trained conservation planners are NRCS certified Conservation Planners.
- I recommend that Resource Conservation Districts (RCD's) be referenced as a source for technical assistance.

Thank you for your continued partnership. Feel free t? contact me if you would like to discuss these issues.

Sincerely,

Thomas Hedt
State Resource Conservationist

Cc:
Carlos Suarez, NRCS State Conservationist
Tony Rolfes, NRCS State Soil Scientist

COUNTY OF LOS ANGELES

DEPARTMENT OF PUBLIC WORKS

"To Enrich Lives Through Effective and Caring Service"

MARK PESTRELLA, Acting Director

900 SOUTH FREMONT AVENUE
ALHAMBRA, CALIFORNIA 91803-1331
Telephone: (626) 458-5100
http://dpw.lacounty.gov

ADDRESS ALL CORRESPONDENCE TO:
P.O. BOX 1460
ALHAMBRA, CALIFORNIA 91802-1460

IN REPLY PLEASE
REFER TO FILE EP-4

July 12, 2017

Ms. Karen Ross, Secretary
California Department of Food and Agriculture
1220 North Street, Room 120
Sacramento, CA 95814

COMMENTS ON THE HEALTHY SOILS PROGRAM REQUESTS FOR GRANT APPLICATIONS

Dear Ms. Ross:

The County of Los Angeles Department of Public Works (Public Works) appreciates the opportunity to comment on the California Department of Food and Agriculture's (CDFA's) draft Requests for Grant Applications (RGA) for the Healthy Soils Program (HSP). Public Works is supportive of practices and projects that sequester carbon, reduce atmospheric greenhouse gas emissions, and improve soil health. Public Works has been pursuing and promoting the use of anaerobic digestion and other conversion technology for many years to meet similar goals through sustainable management of municipal solid waste.

Based on our review of documents available for public review for the HSP Incentives Program and the HSP Demonstration Projects, including public comments previously submitted to CDFA, we encourage CDFA to expand the applicability of the RGA to include healthy soil amendments in addition to compost that provide carbon sequestration and GHG reductions, such as biochar. Biochar is a product of the thermochemical conversion of organic material in an oxygen-limited environment, typically pyrolysis or gasification. Biochar is commonly produced from biomass, such as wood and manure, and can also be produced from the pyrolysis of the organic fraction of municipal solid waste, pest-infested green waste, or biosolids. Allowing for projects that produce biochar within the RGA would be consistent with CDFA's goals for the Healthy Soils Program and with Public Works objectives for sustainable management of municipal solid waste.

On that basis, Public Works recommends that the RGA be expanded for inclusion of projects that produce biochar from any feedstock of organic waste for healthy soils.

If you have any questions, you may contact Mr. Patrick Holland at (626) 458-3592.

Very truly yours,

MARK PESTRELLA
Director of Public Works

CARLOS RUIZ
Principal Engineer
Environmental Programs Division

CA:jl
P:\Sec\DPW Comment Letter CDF Grants.docx

FIBERSHED

Local Fiber, Local Dye, Local Labor

July 12, 2017

Secretary Karen Ross
California Department of Food and Agriculture
1220 N Street
Sacramento, CA 95814

Re: Comments on the Draft Request for Applications for the HSP

Dear Secretary Ross;

Thank you for the opportunity to submit comments regarding the Draft Request for Applications for the Healthy Soils Program (HSP) on behalf of Fibershed, a nonprofit organization developing regional fiber systems that build soil and protect the health of our biosphere. Fibershed's Producer Program is a membership-based network that includes over 80 farmer and rancher members in Northern California. We offer soil carbon baseline testing and processing to our producer members, along with opportunities throughout the year for carbon farming education and support.

We are hopeful that California's Healthy Soils Program will be effective in enlisting the widespread participation of producers and inspiring land managers across the state to act quickly in increasing adoption of all practices that have been shown to reduce GHG emissions and build soil carbon.

We are grateful to participate in the process to inform and support this important new program for California's agricultural producers. We hope that these comments will be helpful in supporting the important work of the HSP. The outcome of this program is critical for all Californians, and we wish you and your staff great success in achieving the goals and objectives you have put forward for the Healthy Soils Program.

Sincerely,

Rebecca Burgess, Executive Director

Marie Hoff, Producer Program Coordinator

Heather Podoll, Grants and Policy Coordinator

PO Box 221 San Geronimo, CA 94963
harvestingcolor@gmail.com

Comments Regarding HSP Incentives Program:

Application length and narrative complexity: We have concerns that the length of the application, with detailed narratives required in several sections, will prevent many producers from applying. This is especially a concern for smaller producers who will be eligible for less funding based on their available land base. We encourage you to shorten and streamline the proposal contents, including the narrative, implementation plan and adoption plan.

Compensation rates are too low to effectively incentivize some practices, particularly for woody cover installation: The level of compensation for many of the practices seems far too low to cover the actual costs of implementation, which will therefore present an inadequate incentive for producers. For example, the rate of $193 per acre for silvopasture, when at least 200 tree and shrub plantings are required per acre: given the cost of nursery stock, labor, and plant protection materials, this amount seems unreasonably low.

Compost application rates: We recommend that higher compost application rates be permitted/recommended. The current allowable range is too low to meet the needs of many producers. In addition, on-farm composting is of interest to many producers. We encourage you to consider including incentives for on-farm produced compost in the future.

Adjustments to implementation timeline: Some practices, including compost application and establishment of perennial plantings, are best carried out at the onset of fall/winter rains. The timeline created here does not accommodate this schedule. Please consider how the grant program's timeline can be adjusted to accommodate the optimum annual production and planting cycle on the land.

Technical Review Committee with practitioner representation: We encourage you to include a practitioner with experience implementing these practices in the grant review committee.

Eligible practices list encouraged to include prescribed grazing: One of the most common requests we hear from our producer members is for technical support and funding to develop a prescribed grazing program. As this is a practice already included in the NRCS-developed COMET-Planner, and one with a high degree of interest and potential for building soil carbon levels, we hope that prescribed grazing will be added to the list of incentive practices in the HSP.

Comments Regarding Demonstration Program:

GHG emissions research does not match the objectives of this program: Given the objectives of this program are to incentivize and demonstrate the effective implementation of practices already shown to have carbon sequestering and GHG emissions reductions, it is not appropriate to utilize a large percentage of the funding from this program for research. This is not intended to be a research program, and therefore the burden of establishing statistically robust controls

and replicate sampling plots within the demonstration projects of the HSP is inappropriate for the design of the program. Requiring a study of the GHG emissions of each practice in separate field applications likely will not allow the demonstration site to focus on and showcase the ideal combination of practices for that farm or ranching operation.

Number of attendees required for outreach events should be reasonable: 100 attendees each year on a site is a very large number to accommodate, especially for three years in a row. For most sites this seems too large of a number, and unrealistic to expect for three years in a row.

Technical Review Committee must include reviewers who work directly with producers and also individuals who have experience implementing these practices: For demonstration projects especially, it is critical to prioritize evaluation by individuals whose expertise allows them to understand the likelihood of effectiveness in outreach. We hope that the evaluation process will emphasize well-designed projects for demonstration and outreach purposes, rather than focusing on generating sufficient data for new research.

From: Christopher MacDonald [mailto:chris@filamentscientific.com]
Sent: Wednesday, July 12, 2017 4:37 PM
To: CDFA OEFI@CDFA <CDFA.OEFI@cdfa.ca.gov>
Subject: Comments on the draft Request for Grant Applications

Dear CDFA Healthy Soils Program Regulators

Nice to meet you via this channel.

As a former emissions trade regulatory scientist from EPA's Office of Air Quality Planning and Standards (OAQPS) and current cofounder of a soil-centered "ancillary" cannabis service corporation, warm thanks for your recent and effective departmental work in soil and cannabis.

The Heathy Soils Program Demonstration Projects is the best current chance to open up and educate the newly forming cannabis industry to soil based carbon sequestration as a method to combat global warming.

Our ask is that to the extent that it may be possible during this rapid transformation of the new cannabis industry, that soil centered cannabis cultivation practices be included as within both program grant structures.

Thank you for your consideration.

CALIFORNIA ASSOCIATION OF RESOURCE CONSERVATION DISTRICTS
801 K Street, 14th Floor Sacramento, CA 95814
***Phone:** (916) 457-7904 **Fax:** (916) 457-7934*
www.carcd.org

RESOURCE
CONSERVATION DISTRICTS

California Department of Food and Agriculture
1220 N St.
Sacramento, CA 94814

Dear Environmental Advisory Panel,

Thank you for the opportunity to offer comments on the Requests for Grant Applications (RGA) for the Healthy Soils Program (HSP). We are honored to participate and greatly appreciate of the collaborative process. We recognize the extensive work and commitment that CDFA has made to create this ground-breaking program.

Following are our comments that reflect our 75-year history working directly with landowners to spur conservation and healthy soils. We look forward to our continued partnership.

Sincerely,

Karen Buhr

Karen Buhr
Executive Director

Incentives Program

Section 3.2: The notion of Agricultural Operation should be defined.

Section 8.3: Collecting baseline soil data will be crucial for demonstrating effectivity of implemented GHG reduction practices. However, soil sampling would be too burdensome as an application requirement for growers and is a costly expenditure, particularly if not awarded the grant.
1) We recommend not requiring soil sampling as an application requirement, but CDFA could contract the sampling and laboratory as a first after the grant has been awarded to ensure no cost is expended without need.

Secondly, The CDFA recommended soil labs list is somewhat limited and does not include University of California laboratories. We recommend that CDFA recommends more soil labs, including those accredited by UCANR, for ease of access and flexibility for producers.

Section 7: Given the NRCS-RCD compost field trials and current scientific literature, the incentivized compost applications rates are too low for effective sequestration. We recommend increasing these limits by 4x.

Section 9.2 (Project Verification and Reporting)**:** The final sentence is ambiguous and needs clarification for greater transparency. We recommend more specification as to the conditions that would prompt an audit., what it would involve, when they would happen, the amount and form of notification beforehand, and to assure applicants that the audit would be at CDFA's expense. More information upfront will allow producers to be as knowledgeable as possible and thus more comfortable with terms of agreement and will reduce the chance of surprise.

Also, we recommend suggesting Resource Conservation Districts (RCDs) as an eligible third-party contract to conduct verifications. RCDs are located throughout the State for ease of access and have the necessary technical expertise deeming them most appropriate.

Section 9.2 (Post-Project Reporting): This section is somewhat ambiguous and needs clarification in two specific instances. First, how the subset of awarded projects would be chosen. Second, the phrase "but not limited to" could raise concerns for some applicants, as could the possibility of additional costs not currently specified in the project application. We recommend clarifying the potential data collection as much as possible and assuring the applicants that the audit would be at CDFA's expense. More information upfront will allow producers to be as knowledgeable as possible and thus more comfortable with terms of agreement and will reduce the chance of surprise.

Section 10.2.2: We recommend offering examples of schematics and an example filled-out work plan template to make it easier for first-time grant applicants.

Section 10.2.3: The Project evaluation needs to be as clear as possible for the success of a project. We recommend offering examples of project design and an example filled-out work plan template to make it easier for first-time grant applicants.

Section 10.5: We concur that including an NRCS conservation plan should receive additional points in the application. However, we noted that the term "certified" conservation plan is later used (11.2) although NRCS is not currently structuring conservation planning certifications around GHG reductions. We recommend eliminating the "certification" requirement.

Section 11.1.2: We recommend including a wider breadth of experts on the technical review committee to include people with experience implementing practices.

Section 16.2: This section has a few ambiguities we recommend clarifying in order for greater transparency for the producer. First, "several additional years" should be as specific as possible. Second, the phrase "actual benefits" should be clarified as to what exact data will be sought. More information upfront will allow producers to be as knowledgeable as possible and thus more comfortable with terms of agreement, particularly in duration, and will reduce the chance of surprise. We recommend including as specific information as possible in regards to length of post-project documentation and practice maintenance, and assuring applicants that post-project verification costs will be at CDFA's expense.

Note: The draft RGA did not specify the length of time applicants would have to apply. We recommend that applicants be given a minimum of six weeks to apply. Outreach of this opportunity may take time to reach all interested producers and generate a broad application pool. This would then give producers more time to learn about the program, coordinate with partners, and generate interesting and effective projects.

Demonstration Projects

Section 3.2: We recommend that CDFA includes Tribal Governments as eligible applicants.

Section 6: We recommend that CDFA offers only one type of Demonstration Project that eliminates the applicants' responsibility to measure GHG and to conduct three replicates (section 9.1), yet to fund all the demonstration projects at $250,000. We understand the need for quantifiable data and urge CDFA to take responsibility of GHG measurement, utilizing Air Resource Board's Quantification Methodology for accuracy, replicability of collection, and producing publishable data.

Section 7: Given the NRCS-RCD compost field trials and current scientific literature, the incentivized compost applications rates are too low for effective sequestration. We recommend increasing these limits by 4x.

Section 9.3: The project's goal of large-scale adoption of healthy soil and GHG reduction practices is crucial for ensuring the sustainability of California's soils and agricultural economy. However, requiring 100 farmers' attendance per year is unrealistic for many parts of the State and is not necessarily the method for wide adoption. We recommend requiring documentable outreach and attendance records at farm events. We also recommend CDFA encourage including inviting educational institutions and other creative ways to leverage the demonstration site.

From: David Olson [dolson@omsoft.com]
Sent: Friday, April 21, 2017 11:58 PM
To: CDFA OEFI@CDFA
Cc: dave@caff.org
Subject: Comments on CalCan Program

Hi,

Unfortunately I was unable to attend the presentation so I just finished reviewing the .pdf of the presentation. So often the important parts of a presentation are the speakers' words more than the words on the slides.

When I heard about your program I was very interested as building healthy soils to reduce chemical inputs is nearly our company mission statement. We produce compost teas, microbe foods and microbial inoculants for commercial agriculture with the objective of restoring the microbial functions in the soil and with the plant to as near a natural and undisturbed state as possible. The restoration of the microbial community is the very definition of a healthy soil and it does lead to less application and need for: fumigants, nematicides, pesticides, fungicides, herbicides and fertilizer. A large, diverse and fully functioning microbial community in the soil results in healthy roots which in turn makes for a healthy plant. A healthy plant requires less chemical inputs and results in a larger and better quality crop at an overall lower production cost.

If you would consider these concepts inclusive in your definition of healthy soils, we would like to participate in your program. We are a commercial manufacturer so we do not fit into your qualified categories. If you have University or RDAs that are looking for ideas and an industry partner, please let them know about our interest.

Most soils in the central valley have 10% or less (or one millionth in some cases) of what a healthy and diverse soil microbial community. We have made it our business to restore these soils. We have: increased the microbial respiration rate of the soil, improved soil tilth - water infiltration rate - water holding capacity - oxygen exchange, increased the Cation Exchange Capacity (reducing nutrient leaching and increased nutrient efficiency, increased organic matter, inhibited urease formation of ammonia and ammonia volatilization, reduced the incidence of pests and diseases, and increased microbial population size and diversity. Tests to quantify most of these metrics are not difficult or overly expensive to do.

For your information I have attached two of our brochures. One describes the benefits of our stable compost tea and the other just generally describes the function and benefits of the microbes in the soil and their interactions with the plants. I also attached a graphic of our view of the relationships between healthy microbes, healthy soils and healthy plants. It is very simple, but I have found that it resonates as a concept with growers. Carbon sequestration in soils is a rapidly evolving science. Some recent technical papers have determined that increases in organic matter in soils (and thus carbon sequestration) was due more to microbial activity than crop residue. Apparently we still all have a lot to learn and I hope that your program can lead to additional insights as well as industry adoption.

Dave Olson
35410 Jefferson Blvd.
Clarksburg, CA 95612
(916) 284-9706

SGS Sustainable Growing Solutions, LLC
Microbial Inoculants for Agriculture - Made by Farmers for Farmers

MetaGrow™ ST
Stable Earthworm Compost Tea

Restore Soil Microbiology
Irrigation apply 2-5 gallons per acre per month during the irrigation season.

Multiply Microbe Populations by Adding Microbe Food
Add 0.1lb of MetaGrow™ MFOOD wettable powder per gallon of MetaGrow™ ST.

SGS Sustainable Growing Solutions, LLC

Microbial Inoculants for Agriculture - Made by Farmers for Farmers

MetaGrow™ ST
Different Than Other Compost Tea: (continued)

- Our microbes are put into stasis using a proprietary process. Our stable microbes are very durable and can be applied anytime within a year of brewing;
- Most compost teas must be used in less than 72 hours from brewing;
- Stable tea comes with a large amount of microbial metabolites built up in it so plant response is almost immediate after application;
- Fresh tea needs time to build metabolites in the soil so it is slower acting on the plant;
- Our compost teas are lab tested for pathogens prior to product shipping while other fresh teas (if they are tested at all) only receive lab results after the product has been applied;
- Our compost tea is unrestricted for use right through harvest while other teas may have a 120 day application restriction prior to harvest.
- **MetaGrow ST** is CDFA OIM, OMRI and CCOF approved.

Contact:
35410 Jefferson Blvd.
Clarksburg, CA 95612
(916) 284-9706
dolson@ag-recon.com

Restore Your Soil

MetaGrow™ ST
Stable Earthworm Compost Tea

SGS Sustainable Growing Solutions, LLC

Microbial Inoculants for Agriculture - Made by Farmers for Farmers

MICROBES

MetaGrow™ ST

- "**ST**" stands for "stable" which allows the microbes in stasis in **ST** to have a 1 year shelf life guarantee.
- Contains very large and diverse populations of beneficial bacteria, fungi and protozoa.
- Restores the population size and diversity of microbes in the soil and their functions for the plant.

CREATE SOIL

Compost Tea Benefits:

- Improves soil structure and porosity, which improves soil oxygen exchange for healthier roots;
- Increases soil water infiltration rates which reduces erosion, runoff and ponding of water;
- Improves soil moisture holding capacity of lighter textured soils;
- Improves soil Cation Exchange Capacity (CEC) which improves soil nutrient retention and plant availability;
- Increases nutrient uptake efficiency through mineralization of nutrients into plant available forms;
- Supplies high quality organic matter to the soil and plants;
- Supplies beneficial microorganisms which reduce the frequency and severity of plant diseases;
- Promotes root growth;
- Buffers soil pH;
- Improves the plant moisture stress tolerance;
- Provides vital plant nutrients and amino acids;
- Increases yield and improves crop quality; and,
- Increase Brix and improve sugar to acid ratios and flavor profiles.

HEALTH

Different Than Other Compost Tea:

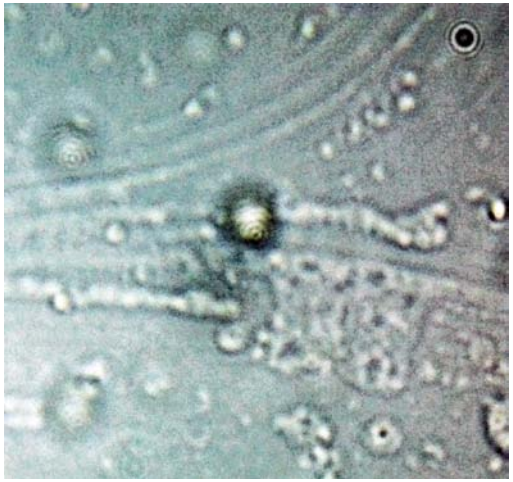
- Our green waste compost is thermophillically composted to eliminate potential pathogens;
- Our compost is then fed to earthworms to further break down the compost, add additional microbial diversity and to add their own metabolites;
- Most other compost teas are made from manures or food waste products, both of which can result in pathogens being included in their teas and lower quality and diversity microbial populations;
- Our microbes are fed with a proprietary food formula (no simple sugars);
- Many compost teas are made using molasses which raises microbe populations that are dependent upon simple sugars which don't readily exist in the soil;
- Our microbes are brewed using an intensive aerobic process to avoid development of anaerobic microbes;
- Many compost teas use an insufficiently aerobic or an anaerobic process which can result in the development of pathogens (e.g. E-coli and Salmonella) and plant toxins (e.g. alcohol, ethanol, glycol, aldehyde, formaldehyde), etc;
- Continued on back...

MICROBES CAN

Enhance Plant Water Efficiency

Enhance Nutrient Efficiency

Increase Plant Stress Tolerance



(Fungi)

This information is intended as general education materials for growers as a brief synthesis of published literature on microbe soil and plant functions - This information is not a product claim for SGS products.

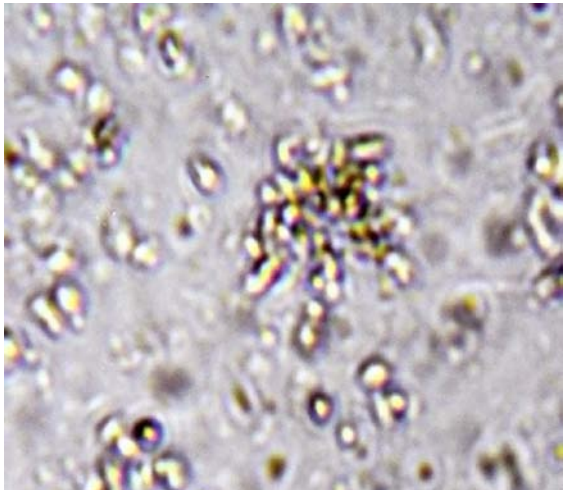
MICROBES CAN

Microbe Plant and Soil Function References:

- 1.http://soilminerals.com/Cation_Exchange_Simplified.htm
- 2.http://www.ipni.net/publication/bettercrops.nsf/0/11BB45564B82018A85257E14005D83BA/$FILE/BC%202015-1%20p18.pdf
- 3.http://aob.oxfordjournals.org/content/97/5/839.full
- 4.http://articles.extension.org/pages/61397/benefits-of-mycorrhizae
- 5. http://overton.tamu.edu/faculty-staff/gerald-wayne-evers/cool-season-legumes/nitrogen-fixation/#.WEg-2oWcHIU
- 6. http://www.extension.umn.edu/garden/fruit-vegetable/nutrient-cycling-and-fertility/#nutrient-cycling
- 7.http://extension.uga.edu/publications/detail.cfm?number=C990
- 8.http://www.plantstress.com/Articles/min_deficiency_i/root_exudates.pdf
- 9.http://www.sciencedirect.com/science/article/pii/S1369526608001003
- 10.https://www.nrcs.usda.gov/wps/portal/nrcs/detailfull/soils/health/biology/?cid=nrcs142p2_053868
- 11.http://pub.jki.bund.de/index.php/JABFQ/article/viewFile/2090/2475
- 12. http://www.discoverbiotech.com/wiki/-/wiki/Main/Soil+microorganisms+and+their+interactions
- 13.http://www.bioworksinc.com/products/shared/beneficial-soil-microorganisms.pdf
- 14.http://articles.extension.org/pages/18524/how-cover-crops-suppress-weeds
- 15.http://www.greenflashtech.com/files/Download/GFT%20SALT%20DETOXIFICATION%20TECHNOLOGY,%20020111.pdf.

35410 Jefferson Blvd.
Clarksburg, CA 95612
(916) 284-9706
dolson@ag-recon.com

Microbes Do More For Your Plants and Soil Than You Know



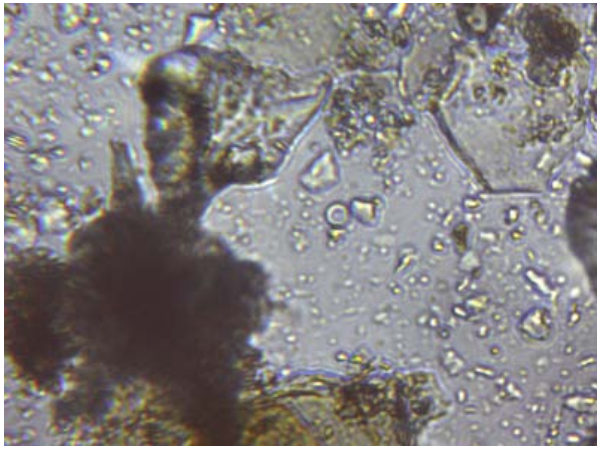
(Bacteria Feeding)

Microbes Enhance Plant Water and Nutrient Efficiency and Plant Stress Tolerance

MICROBES CAN

Enhance Water Use Efficiency

- Produce exudates that expand root systems for increased water storage and water interception (4)
- Act as extensions of the roots to collect water for the plant from interstitial soil spaces that plant root hairs can't reach (4)
- Build soil tilth (4)
- Increase water holding capacity in lighter textured soils (4)
- Increase water infiltration rates (4)
- Build soil organic matter more than plant residue (4)
- References on back...



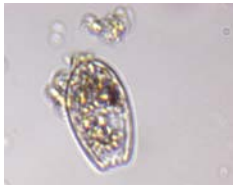
(Sandy Soil with Organic Matter and Microbes)

MICROBES CAN

Enhance Nutrient Efficiency

- Increase soil Cation Exchange Capacity, which (1)
  - Reduces nutrient leaching and volatilization, and,
  - Increases nutrient availability for the plant
- Mineralize nutrients (e.g. N, P, Fe, S) into plant available forms (2)
- Produce exudates that stimulate expansion of root systems for increased nutrient interception (3)
- Act as extensions of the roots to collect nutrients for the plant from interstitial soil spaces that plant root hairs can't reach (4)
- Fix free nitrogen from the air into the soil (5)
- Actively retrieve and exchange nutrients for plants (6)
- Digest organic matter into humus, organic acids and recycle nutrients (6)
- References on back...

(Amoeba cycling nutrients)

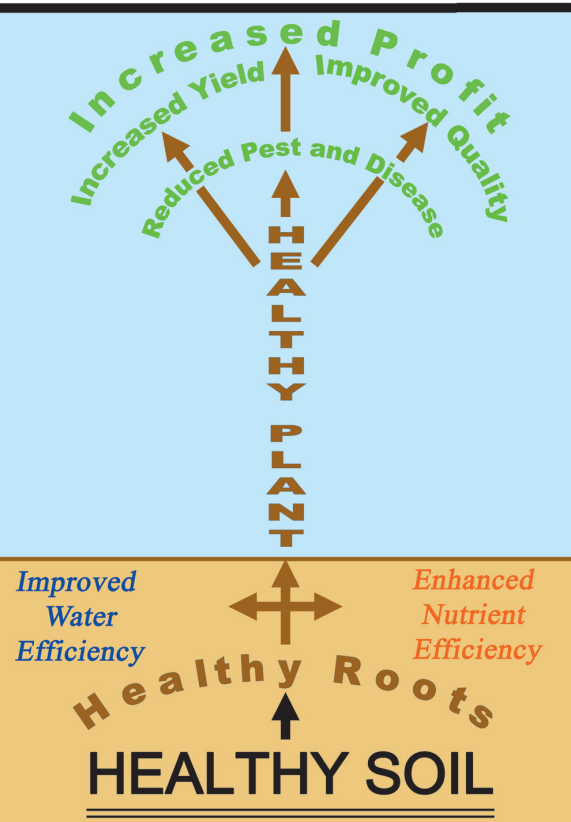


MICROBES CAN

Increase Plant Stress Tolerance

- Produce exudates that expand root systems for increased water, nutrient and energy storage (7)
- Increase soil oxygen exchange rates from improved soil tilth (4) which reduces anaerobic conditions that favor some plant pathogens
- Act as extensions of the roots to collect water for the plant from interstitial soil spaces that plant root hairs can't reach (4)
- Respond to plant signals through root exudates to (8):
- Gather specific needed nutrients,
- Build complex organic compounds for root uptake for use in fruit flavor and color,
- Trigger immune responses for the plant to protect itself from pathogens and toxins (9)
- Provide a food source for earthworms and beneficial and switcher nematodes (10)
- Respond to plant signals through root exudates to protect the plant from toxins and pathogens (11)
- Break down leaf litter, wood, organic matter which limits overwintering and breading habitat for some pathogens (12)
- Suppress plant pathogens by competition for food or space as well as direct predation (13)
- Discourage growth of invasive weed species (14)
- Moderate plant uptake of Sodium (15)
- Facilitate break up of salts and heavy metal toxins into organic compounds where they are sequestered

Microbes Create HEALTHY SOIL



Rory P. Crowley, B.A., Th.M.
Director of Business & Research Development
Nicolaus Nut Company, INC.
Chico, CA 95928

Environmental Farming Act Scientific Advisory Panel (EFA SAP)
ATTN: Chairperson Don Cameron
Sacramento, CA 95814

March 16th, 2017

RE: EFA SAP Public Comments; Soil Health Quantification Methods (QM); QM Tool

Chairperson Cameron, et al.:

I sincerely apologize for not being present at the session today; I was meeting with our local Farm Service Agency for Butte County because of flood damage on three of our orchards. We have also fallen prey to the bacterial blast in our young almond orchard, which needed attention from NRCS. I showed up to the CDFA offices just after the meeting adjourned.

My name is Rory Crowley. I am a recent graduate of the Almond Board Leadership Program, an honorary member of the Technical and Regulatory Affairs Committee for the Almond Board, and perhaps most importantly, I am a young farmer for our family almond and walnut operation up in Chico.

Today I want to briefly highlight three vital areas of importance for the EFA SAP, ARB, and CDFA to consider when moving forward with the formation of this Healthy Soils Initiative, and in particular, the quantification methods and its related tool.

The three areas are: (1) the need for a broader or alternative definition of "composting;" (2) the need to create incentivized practices that are applicable to California's unique climate, soils, irrigation methods, and crops; and (3) the need to leverage and collaborate with already-existing, currently-funded, and data-driven projects for the purpose of sharing knowledge and enabling an environment that encourages innovation specific to California cropping systems.

As an orchardist, one of the most important things I have learned in my time farming almonds and walnuts is that we must begin well; that is to say, we must put ourselves in the greatest, healthiest position possible when developing new ground into permanent orchard.

Indeed, just as vital as starting an orchard off right, I would contend, is starting the Healthy Soils Program off right. These three needs that I highlight below, I believe, are crucial for the continued success of this program, as well as its environmental and economic impact the program holds for all Californians. So, to my first comment, allowing for a wider or alternative definition of "composting."

Traditional forms of composting are both costly and time consuming. Agricultural sectors in the state have high volumes of organic material byproducts. For example, the almond industry has high volumes of almond hull and shell, and also woody biomass from orchard take out and reintegration. All of these forms of organic material are high carbon as well as nutrient sources.

Certainly much of this biomass will be composted in a traditional manner. However, given the high increase of volume projected over the next five years, I fear that we will not be able to compost

all of the material by traditional methods. As such, I am asking the CDFA and the ARB to consider including in-field, or 'sheet-composting' of organic materials within their incentives framework.

Indeed, some proposed NRCS soil health practices could, theoretically, run counter to certain innovative approaches to soil health that farmers are currently working on here in California.

For example, our company is currently working on a lab scale study with UC Davis on 'biosolarization,' a new form of natural soil decontamination. Biosolarization uses anywhere from 5–10 tonne of organic matter mixed with manure, which is then tarpped and irrigated to produce an temporary anaerobic environment. The result is decontaminating harmful soil pathogens prior to replanting. Theoretically, the practice could replace chemical fumigation. However, the process also involves a one-time tilling operation of the organic matter into the soil at fourteen inches, a practice that goes against NRCS-type no-till or minimal till practices.

Moving on to my second point then, the CDFA should begin thinking through, right now, how to get the data needed for practices that are not covered by NRCS standards, that is, for practices that are often particular for specialty crops.

Given the extensive acreage of perennial crops in California, there is a huge need to develop practices that are appropriate and relevant to California-specific crops. According to 2015 NASS data, there is approximately 3 million out of 7 million bearing acres in California's central valley that are perennial, permanent fruit and nut crops. NRCS practices are largely based on Midwest, annual row crops.

If the goal of the program is to make a significant impact on GHG emissions, neglecting almost half of the crops here in California's central valley would not be a strong start.

This leads me to my third point: the Almond Board and the Walnut Board are currently funding a number of projects related to soil health. For example, projects related to cover crops, composting, woody biomass recycling, almond biomass processor recycling of almond hull and shell, and the list continues.

In my view, these projects could be perfect for collaboration with CDFA, and would leverage already funded, data-driven research in permanent crop environments. Such projects theoretically would work very well with the proposed Soil Health Initiative demonstration projects, and would likely show returns not only to growers, but to the important political and research-oriented stakeholders and decision makers.

So, in conclusion, there are three areas I have highlighted: the need for broader or alternative definitions of composting; the need to collect data for and focus on permanent crops; and third, the need to collaborate with current data-driven research within permanent crop systems.

California has always been a state that innovates, that takes good standards to great standards; we push the envelope in sustainability and fighting climate change. We have the chance to start off strong, to adapt, to innovate, to lead, to broaden definitions, and make good standards great standards. California is different. Our climate is different. Our soils are different. Our crops are different. Our ecosystems are different. Our farming practices are different. And so too should our standards of soil health, be different. I encourage the EFA SAP, the ARB and the CDFA to think different, and to innovate from good to great. In three years, may the NRCS be saying, "we follow CDFA standards." Thank you for your time and attention.

Gratefully yours,

From: Greg Baker [greg@glenncountyrcd.org]
Sent: Monday, March 20, 2017 7:36 PM
To: CDFA OEFI@CDFA
Subject: NRCS BLUE BOOK

In last weeks meeting, discussion was brought about on a book, we can use by NRCS on the quantitve methods currently being used for Soil Health Initiatives applications.

May I ask of you for the link or reference name of the book

--
Regards,

Greg Baker, CCA PCA
GCRCD Soil Health Coordinator
132 N. Enright Ave, Suite C
Willows CA 95988
530.934.4601 x126

From: Gorder, Nan@CDPR [Nan.Gorder@cdpr.ca.gov]
Sent: Friday, March 17, 2017 11:25 PM
To: CDFA OEFI@CDFA
Subject: Feedback on the EFA SAP Meeting

Thank you for Webcasting these meetings. It is a great way to offer up maximal transparency on related activities and programs. It allows folks to keep up on the direction and details of your important work.

It would be helpful if panel members would state their names before speaking.

Speakers should not assume the audience has heard it all before and should avoid acronyms and initialisms where possible to ensure all can follow the details.

Finally, great progress at getting the Healthy Soils elements into place. It's a big job to launch demonstration projects. I understand the desire to remove competition from the demonstration grants, but instead of "first come first served" I suggest setting up categories you want covered. This limits the competition to a smaller universe for each applicant, raising the odds of funding success.

Great job OEF!

CalCAN
California Climate & Agriculture Network

Secretary Karen Ross
California Department of Food and Agriculture
1220 N Street
Sacramento, CA 95814

April 18, 2017

Dear Secretary Ross,

On behalf of the California Climate & Agriculture Network (CalCAN), we offer the following comments on CDFA's latest proposed framework for the Healthy Soils Program. Our comments reflect our desire to create resources for farmers and ranchers to achieve pragmatic, far-reaching climate solutions.

Please find below our most recent set of recommendations on the Healthy Soils Program. We look forward to working with you and your staff on implementation of this important program.

Sincerely,

Jeanne Merrill, Policy Director
jmerrill@calclimateag.org

Brian Shobe, Policy Associate
brian@calclimateag.org

Incentives

1. *Create a Technical Review Committee to Facilitate Addition of Nutrient Management*

Nutrient management that seeks to reduce nitrous oxide emissions should be an eligible practice under the Healthy Soils Program. As noted by UC Davis researchers in their 2009 review article on the climate change benefits of soil management practices: "In contrast to increases in soil organic carbon, reductions in nitrous oxide or methane emissions are permanent. A reduction in nitrogen application will lead to a permanent reduction in nitrous oxide emissions and so does not pose a legacy problem for the future (Smith et al. 2007).[1]"

Our understanding is that among the concerns regarding the inclusion of nutrient management in the program is the complexity the practice may present in terms of documentation of baseline and project-level fertilizer applications. There may be other issues to address as the NRCS practice standard, 590, was not developed with GHG emission reductions in mind.

We recommend that CDFA convene a technical review committee this year to provide guidance on addressing issues related to including nutrient management in the second year of the Healthy Soils Program. The committee should include members of the Environmental Farming Act Science Advisory Panel (EFA SAP), UC researchers with expertise on these issues, Resource Conservation District staff and others familiar with the science and practice of nutrient management vis-à-vis Healthy Soils Program goals.

2. *Make Scoring Criteria Transparent & Encourage Co-Benefits & Stacking of Practices*

For both the incentives and the demonstration projects, we encourage CDFA to make scoring criteria available to provide some guidance to applicants. The scoring criteria can be general enough to provide reviewers some flexibility, especially in the first year of the program, but still provide direction to the applicants on what is important to consider as they put together their projects.

We also suggest that those projects that demonstrate multiple environmental and community co-benefits receive higher application points than those projects that do not. AB 32 is clear that our climate change efforts should achieve multiple health and environmental co-benefits, especially greater resilience and improved air and water quality.

We know from the scientific literature that combining management practices that improve soil organic matter does more to increase carbon sequestration and reduce GHG emissions than any single practice. We also know that many of the proposed eligible practices can have complementary agronomic and soil health relationships. For example, mulching and

[1] De Gryze S, Albarracin M, Catalá-Luque R, Howitt R, Six J. 2009. Modeling shows that alternative soil management can decrease greenhouse gases. Calif Agr 63(2):84-90. DOI: 10.3733/ca.v063n02p84.
See: http://calag.ucanr.edu/archive/?article=ca.v063n02p84

cover cropping can reduce weed pressure; thus, reducing the need to till, while also building soil organic matter and improving water infiltration.

CDFA and the broader agricultural community should see the Healthy Soils program as an opportunity to explore the agronomic and soil health relationships between these practices. Thus, projects that combine or "bundle" practices should receive higher application points and/or incentive payments than those that do not.

3. ***Offer Application Assistance Workshops and One-on-One Support***

We appreciate what CDFA has done with the SWEEP program by funding application workshops and one-on-one application assistance. Based on our analysis[2], we know that such assistance is absolutely essential to making programs like SWEEP, and soon Healthy Soils, accessible to small and mid-scale farms, farmers of color[3] and farmers who speak English as a second language. We hope CDFA will find a way to fund similar outreach under the Healthy Soils program.

4. ***Fund Full Cost of Practices***

As CDFA considers the funding levels of incentives, the full costs associated with particular practices should be considered and adequately incentivized. We cannot rely exclusively upon the costs NRCS associates with their practice standards because NRCS does not always include the full costs of the practices or reflect California production costs.

For example, the installation of new hedgerows requires costs for which NRCS does not currently reimburse, including the design, appropriate plant selection, and continued maintenance of the hedgerow, which includes irrigating those new plantings as they become established. Another example is the cost of fencing near riparian plantings to exclude livestock and wildlife from the newly established trees and shrubs. These costs are real, and adequately funding them can make the difference for the grower in successfully deploying the practice.

Additionally, NRCS practice costs are determined at the national level and in many cases do not adequately reflect the true cost of the practice in California, which has higher production costs than many parts of the country.

We suggest basing the incentive payments on actual grower costs. Like other grant programs, growers could include in their application their budget for each practice. CDFA could then determine what percent of the costs it plans to cover. Alternatively, if CDFA prefers to set practice costs in advance, we suggest that CDFA work with NRCS partners

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[2] http://calclimateag.org/wp-content/uploads/2016/05/SWEEP-Report.pdf

[3] According to the 2012 Ag Census, nearly a quarter of California's farm operators are farmers of color, including more than 12,000 (~15%) who identify as Hispanic or Latino and more than 5,500 (~7%) who identify as Asian. The 2012 Ag Census also shows that farmers of color tend to farm smaller acreages, earn less money, and receive 36% less in government funding than their white counterparts.

and other agricultural professionals (e.g. RCDs, Cooperative Extension, etc.) to put together cost estimates for the Healthy Soils practices, based on California production costs and the full range of expenses associated with implementation.

If we fail to offer incentives that reflect the true costs of implementing the practices, the Healthy Soils Program may fail to inspire and engage the farmers and ranchers the program seeks to serve.

Demonstration Projects

1. *Establish a Technical Advisory Committee to Conduct a Competitive, Transparent Review Process*

The Food and Agriculture Code section 569 (a)(4) requires CDFA, in consultation with the Science Advisory Panel, to "establish a technical advisory committee to review on-farm demonstration project applications for scientific validity and the proposed project's potential to achieve greenhouse gas benefits".

We recommend asking a subset of EFA SAP members and a handful of researchers with relevant expertise to serve on that committee. CalCAN is available to recommend to soil science and climate researchers.

We also echo EFA SAP members' feedback during the March 16 meeting and support a competitive review process, as required by statute, to ensure the selection of the best possible projects with adequate geographic and crop distribution. In this same vein, we suggest removing the two-award limit per applicant. Instead, CDFA should make available clear scoring review criteria for all projects, awarding projects based on their competitive merits.

2. *Clearly Describe Reimbursable Costs, Including for Outreach, Education, & Research*

We strongly support CDFA's proposal to require outreach and education, as well as its commitment to reimburse the costs associated with those activities. We also support EFA SAP members' suggestions to require a standardized methodology for soil organic carbon monitoring and surveys of farmers who have visited the project in order to conveniently compare and aggregate demonstration projects' impact.

We hope that CDFA will describe in detail all reimbursable costs, including those associated with outreach, education, and data collection, such as project partners' expenses to coordinate the project, conduct outreach, host field days, publish related materials, and track relevant data. Doing so will reduce uncertainty and assist applicants in creating more accurate, detailed project budgets.

Thank you for your consideration of these comments.

From: Garcia, Steven@DWR [Steven.Garcia@water.ca.gov]
Sent: Thursday, March 16, 2017 5:25 PM
To: CDFA OEFI@CDFA
Subject: RE: Healthy Soils Program - Comments for 3/16/2017 meeting

1. Are California State Agencies eligible to receive funding for demonstration projects. We plan to have an on farm component/demonstration.
2. I agree with the Board's concerns about first-come, first-serve process for selection. I think having the best projects should be chosen.

Thank you,

Steven Garcia, P.E.
Delta Ecosystem Enhancement
CA Dept. of Water Resources
901 P Street, Rm 411A
Sacramento, CA 95814
(916) 651-0844

AGRICULTURAL WASTE SOLUTIONS,INC.

4607 Lakeview Canyon Drive, # 185 • Westlake Village, CA 91361
805-551-0116 • mccorkle@agwastesolutions.com

March 1, 2017

California Department of Food and Agriculture
Healthy Soils Initiative

Subject: Comment letter for CDFA Healthy Soils Initiative

To Whom It May Concern,

Ag Waste Solutions ("AWS"), headquartered in Westlake Village, California, wishes to express our gratitude to CDFA for inviting us to participate in the Healthy Soils Initiative Summit of January 11, 2017 and for inviting comments from stakeholders and the public. AWS works with California dairy farms to produce low-carbon transportation fuels and carbon negative co-products that reduce GHG emissions and improve water and soil quality while creating new profit centers from manure and other ag resources.

Please see below our comments from the January 11, 2017 Healthy Soils Initiative Summit and documents:

1. There is a high level of interest in the Healthy Soils Initiative from the compositing entities, which is understandable given the current regulatory trends; however, we are concerned that composting alone may not represent the best solution for the future of healthy soils in California. Compost is becoming oversupplied in California, and high VOC emissions and odors from composting operations increasingly require expensive indoor facilities and air filtration systems. We suggest that CDFA encourage new opportunities for symbionic soil health improvement solutions that combine soil health microbiology, bio-carbon and bio-nutrient soil amendments (e.g.nutrient rich-biochar from manure, digestate, other high GHGE ag residuals), and bio-fertigation practices. For example, biochar has been shown to be a value-added addition to composting operations that can dramatically lower VOC's and odors while reducing curing times up to 25% by using only a 5% volume of biochar feedstock in the compost. Combined, symbionic solutions produce superior results.
2. Listed in the "Actions for Healthy Soils Initiative" is "To incentivize voluntary on-farm management practices," which is an excellent objective. Leading through example with actual on-farm practices is a strong method in gathering credible data for large-scale farming applications. We support a state-wide effort to integrate healthy soil on-farm best management practices, enabling a strong and on-going support mechanism from the federal, local, and state agencies (e.g. NRCS,RCD's,CDFA) working together to support famers.
3. A growing source of compost feedstock is from the anerobic digester (AD) digestate solids from the solids material separated from the slurry post AD. With legistlation such as SB 1383 calling for a 40% reduction in methane emissions from dairies by year 2030, and the estimates of ~ 300 AD systems required to meet this mandate (16 AD today), anerobic digestate solids will become an increasing source of methane emissions. We are concerned that SB 1383 and related legislation may regulate out compost and composting as a method of anerobic digestate solids land application due to the high VOC's and high GHGE of these operations. We would like CDFA to be mindful of this and enable other, more sustainable methods and technologies to create healthy soil amendments (e.g.biochar) in a Healthy Soils Initiative that truly represents California's future.

Sincerely,

Stephen McCorkle, CEO
Agricultural Waste Solutions, Inc.

From: Craig And Melanie Johnson [alpenglowfarms@gmail.com]
Sent: Thursday, March 02, 2017 5:08 AM
To: CDFA OEFI@CDFA
Subject: Comments from Alpenglow farms

To Whom it May Concern,
Regarding the CDFA hosted discussion regarding the Healthy Soils Program framework. My recommendations are to:
1. Provide information regarding local resource use practices with recommendations to fund projects that involve small scale mixed use farms and cannabis farms specifically, that implement holistic property management plans.
2. Secure funding to systematically quantify baseline and improved soil health conditions on farms geographically situated within sub-watersheds. Help those farmers to continue to transition away from potting soil to living soil cultivation systems. AND collect additional climate data at the same time to inform the development of appellations.
Furthermore, participating in the first stakeholder meeting yeild the following comments:
1. The focus is on the implementation of healthy soil practices that store carbon in an effort to offset climate change. This focus specifically supports the type of outdoor full sun food and cannabis cultivation occurring in northern California.
2. While not stated explicitly, the language used led me to believe that the current envisioned project locations will be large-scale food farms. There was no discussion of crop diversity. Crop diversity is an extremely important component to building healthy soils that store carbon as it reduces the need for pesticide and insecticide use and allows for no- till operations.
3. Science appears to be a core value of the program. The metrics presented for quantifying change in soil health over time are (in the presenter's words):
- Soil carbon & total organic matter content
- Bulk density
- Soil texture
- pH
- Species composition
- Soil aggregate stability
- Forage production
- Infiltration rate
- Compaction
- Total N in soil solution
- Wildlife identification

It is my professional opinion that the following soil metrics will provide a more cost effective approach to quantifying soil health:

- Total soil fertility profile

- Percent soil carbon

  - Total organic matter content

- pH

- Microbial abundance and species composition

- Water holding capacity

- Nitrogen to Carbon ratio

4. In my opinion, forest management must be a fundable component where farms and forests co-exist. Northern California watersheds are covered with dense unmanaged recovering timberlands that use way too much water, degrade habitat, create fire risk and contain valuable soil building, carbon rich, organic matter.
5. Small farms must be fundable. In Humboldt, Trinity and Mendocino Counties, the cultivated area on most cannabis farms ranges from 1/4 - 1 acre in size. These farms are the bread basket of the Northern portion of the state. While the cultivated area is small, farmers manage adjacent forest and wildlands that require additional funds to manage in a manner that stores carbon rather than creates a potential source of atmospheric carbon via forest fire.
With my best regards,
Craig Johnson
Alpenglow farms
PO box 567
Bayside Ca. 95524

From: Athene Sav [athenesav@gmail.com]
Sent: Thursday, March 02, 2017 3:42 PM
To: CDFA OEFI@CDFA
Subject: Healthy soils program

To Whom it May Concern,
Regarding the CDFA hosted discussion regarding the Healthy Soils Program framework. My recommendations are to:
1. Provide information regarding local resource use practices with recommendations to fund projects that involve small scale mixed use farms and cannabis farms specifically, that implement holistic property management plans.
2. Secure funding to systematically quantify baseline and improved soil health conditions on farms geographically situated within sub-watersheds. Help those farmers to continue to transition away from potting soil to living soil cultivation systems. AND collect additional climate data at the same time to inform the development of appellations.
Furthermore, participating in the first stakeholder meeting yeild the following comments:
1. The focus is on the implementation of healthy soil practices that store carbon in an effort to offset climate change. This focus specifically supports the type of outdoor full sun food and cannabis cultivation occurring in northern California.
2. While not stated explicitly, the language used led me to believe that the current envisioned project locations will be large-scale food farms. There was no discussion of crop diversity. Crop diversity is an extremely important component to building healthy soils that store carbon as it reduces the need for pesticide and insecticide use and allows for no- till operations.
3. Science appears to be a core value of the program. The metrics presented for quantifying change in soil health over time are (in the presenter's words):
- Soil carbon & total organic matter content
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- pH
- Species composition
- Soil aggregate stability
- Forage production
- Infiltration rate
- Compaction
- Total N in soil solution
- Wildlife identification

It is my professional opinion that the following soil metrics will provide a more cost effective approach to quantifying soil health:

- Total soil fertility profile

- Percent soil carbon

- Total organic matter content

- pH
- Microbial abundance and species composition
- Water holding capacity
- Nitrogen to Carbon ratio

4. In my opinion, forest management must be a fundable component where farms and forests co-exist. Northern California watersheds are covered with dense unmanaged recovering timberlands that use way too much water, degrade habitat, create fire risk and contain valuable soil building, carbon rich, organic matter.
5. Small farms must be fundable. In Humboldt, Trinity and Mendocino Counties, the cultivated area on most cannabis farms ranges from 1/4 - 1 acre in size. These farms are the bread basket of the Northern portion of the state. While the

cultivated area is small, farmers manage adjacent forest and wildlands that require additional funds to manage in a manner that stores carbon rather than creates a potential source of atmospheric carbon via forest fire.

From: Jim Brown [jimb@karrgroupco.com]
Sent: Monday, January 30, 2017 3:42 PM
To: CDFA OEFI@CDFA
Subject: Bio-char

I did not see any mention of Bio-char. California is losing all of the bio-mass to electric plants, because of lost subsides. All the orchards and other wood waste will need to be burned. We have the technology to take that carbon out of the air and put in the ground where it is needed while being carbon negative.

We have the most economically and environmentally sustainable use of bio-mass.

www.karrgroupco.com

James Brown
COO
Karr Group of Companies, LLC
360-880-4054

From: Carl Bruice [CBruice@wilburellis.com]
Sent: Monday, January 23, 2017 11:51 PM
To: CDFA OEFI@CDFA
Subject: Health Soils Initiative Framework

Just reviewed the HSI framework that was released this afternoon and I think if the intent is to include actual farmers that your timeline is unrealistic. You have to get their attention, engage them, train them on what this all means to THEIR operation (including how to use the tools that verify reductions in GHG from agricultural fields) and expect proposals for grants to be due by June. For many if not the vast majority of CA farmers the busy season is right around the corner and their top priority is to farm successfully. It will be very interesting to observe the level of interest that this receives from the farming community.

From a scientific viewpoint when organic matter sources such as cover crops, green manures, composts, etc. are incorporated into soils and irrigated there is an increased release of CO2 as these energy sources are digested by soil microorganisms. In fact one of the analytical techniques developed by scientists including USDA scientists is measuring the amount of CO2 released from soils under controlled conditions with the concept being the more microbial biomass present, the greater the burst of CO2 released.

Perhaps the ARB has a formula showing NET C release is reduced (Carbon fixed by growing crop – carbon released by decomposing plants).

Good luck!

Carl Bruice

National Nutrition Technical Manager
Wilbur-Ellis Company
916-296-2030
841 West Elkhorn Blvd
Rio Linda, CA 95673
cbruice@wilburellis.com

Secretary Karen Ross
California Department of Food and Agriculture
1220 N Street
Sacramento, CA 95814

February 27, 2017

Dear Secretary Ross,

On behalf of the undersigned agriculture and conservation organizations, we offer the following comments on CDFA's latest proposed framework for the Healthy Soils Program.

Since 2014, we have met as a group to discuss the opportunities and challenges of a new Healthy Soils Program. We came together as farmers, agricultural professionals, policy experts and advocates. Our aim is to assist with efforts to forward a vision for Healthy Soils that delivers real climate change solutions that provide multiple benefits to our communities, while steeped in the practical needs of farmers and ranchers the program aims to serve.

Please find below our most recent set of recommendations on the Healthy Soils Program. We look forward to working with you and your staff on implementation of this important program.

Sincerely,

Ed Thompson, Jr.
California Director
American Farmland Trust

Ann Thrupp
Executive Director
Berkeley Food Institute, UC Berkeley

Karen Buhr
Executive Director
California Association of Resource Conservation Districts

Kelly Damewood
Policy Director
California Certified Organic Farmers (CCOF)

Jeanne Merrill
Policy Director
California Climate and Agriculture Network

Torri Estrada
Executive Director
Carbon Cycle Institute

David Runsten
Policy Director
Community Alliance with Family Farmers

Janet E. Derecho
Executive Director
Ecological Farming Association

Brittany Heck Jensen
Executive Director
Gold Ridge RCD

Nancy Scolari
Executive Director
Marin Resource Conservation District

Patricia Hickey
Executive Director
Mendocino County Resource Conservation District

Rex Dufour
Western Regional Office Director
NCAT/ATTRA

Dave Henson
Executive Director
Occidental Arts & Ecology Center

Margaret Reeves
Senior Scientist
Pesticide Action Network

Ellie Cohen
President and CEO
Point Blue Conservation Science

Chris Coburn
Executive Director
Resource Conservation District of Santa Cruz County

David S. Gates, Jr.
Senior Vice President, Vineyard Operations
Ridge Vineyards, Inc.

Michael Dimock
President
ROC Fund

Sopac McCarthy Mulholland
President and CEO
Sequoia Riverlands Trust

Kara Heckert
Executive Director
Sonoma Resource Conservation District

Wendy Millet
Director
TomKat Education Foundation

Kris Beal
Executive Director
Vineyard Team

Jo Ann Baumgartner
Director
Wild Farm Alliance

Healthy Soils Incentives Program:

1. ***Fund full cost of practices***

As CDFA considers the funding levels of incentives, the full costs associated with particular practices should be considered and adequately incentivized. We cannot only rely exclusively upon NRCS costs associated with their practice standards because NRCS does not always include the full costs of the practices or reflect California production costs.

For example, the installation of new hedgerows requires costs that NRCS does not currently reimburse for, such as design and appropriate plant selection, as well as continued maintenance of the hedgerow, which includes irrigating those new plantings as they become established. Another example is the cost of fencing near riparian plantings to exclude livestock and wildlife from the newly established trees and shrubs. These costs are real and adequately funding them can make the difference for the grower in successfully deploying the practice.

Additionally, NRCS practice costs are determined at the national level and in many cases may not adequately reflect the true cost of the practice in California, which has higher production costs than many parts of the country.

We suggest basing the incentive payments on actual grower costs. Like other grant programs, growers could include in their application their budget for each practice. CDFA could then determine what percent of the costs it plans to cover. Alternatively, if CDFA prefers to set practice costs in advance, we suggest that CDFA work with NRCS partners and other agricultural professionals (e.g. RCDs, Cooperative Extension, etc.) to put together cost estimates for the Healthy Soils practices, based on California production costs and the full range of expenses associated with implementation.

If we fail to offer incentives that reflect the true costs of implementing the practices, the Healthy Soils Program may fail to inspire and engage the farmers and ranchers we seek to serve and who will serve our state by their good work.

2. ***Eligible Practices Should Include Cover Crops, Reduced Tillage***

We support the list of proposed eligible practices as outlined in the California Air Resources Board presentation from the January meeting of the Environmental Farming Science Advisory Panel (which can be found on slide 6 of the ARB presentation from 1/19/17).

We understand that there has been some concern about whether or not to include cover crops and reduced tillage in the program. We strongly urge the inclusion of these two practices. There have been several studies on the climate benefits of these

practices[1]. One comprehensive California study found that cover crops and reduced tillage lower GHG emissions and improve soil organic matter[2]. Moreover, the study found that the mitigation benefits of those practices are enhanced when done in combination. We will miss out on the carbon sequestration and nitrous oxide emission reductions associated with those practices if not included in the program.

We suggest that the agency's scoring system reflect the enhanced beneficial impact of stacked practices, as described further below.

3. ***Develop a process for adding new eligible practices to the program***

We note that the proposed list of Healthy Soils practices includes some, but not all of the USDA/NRCS Climate Change Building Blocks practices, the initial basis for the Healthy Soils practice list. For example, managed/ prescribed grazing is included in the USDA list, but not on the Healthy Soils list.

We suggest that CDFA develop a technical review committee, made up of members of the Environmental Farming Science Advisory Panel, and members of the California research community with expertise in these issues. The committee could review proposals for the inclusion of additional practices, reviewing the status of the literature and forwarding recommendations to CDFA and ARB. This kind of process has served CDFA's Fertilizer Research and Education Program and other state programs.

4. ***Simplify Application Process***

The CDFA draft framework suggests that applicants will be required to submit baseline data and documentation, but provides no other details on the application requirements. We urge CDFA to keep the application as straightforward as possible, asking farmers and ranchers to submit data that they would typically have readily available to them, such as soil type and quality, cropping history, management history, etc.

Healthy Soils Demonstration Projects

5. ***Determine Eligible Funding Under Demonstration Projects***

We support CDFA's proposal to allow for multi-year (2 year) demonstration projects under the Healthy Soils Program. We believe the $250,000 project cap makes sense, especially if the full costs of the project can be covered.

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[1] For CalCAN's 2014 literature review, please see: http://calclimateag.org/wp-content/uploads/2015/02/Climate-Benefits-of-Agriculture-2015.pdf

[2] De Gryze, S., A. Wolf, S.R. Kaffka, J. Mitchell, D.E. Rolston, S.R. Temple, J. Lee, and J. Six. 2010. Simulating greenhouse gas budgets of four California cropping systems under conventional and alternative management. Ecological Applications 20(7), 1805–1819.

Those expenses include not only the installation of the on-farm practices that will be highlighted in the demonstration project, but also the partner project expenses to coordinate the project, conduct the outreach, host farm field days, publish related materials, track relevant data (e.g. soil testing, etc.), etc.

We encourage CDFA to outline the eligible costs associated with the demonstration projects and ask for stakeholder feedback on their proposed list of costs.

Scoring for Incentives, Demonstration Projects

6. *Make Scoring Criteria Transparent, Include Co-Benefits, Stacking of Practices*

For both the incentives and the demonstration projects, we encourage CDFA to make scoring criteria available to provide some guidance to applicants. This is done, for example, for the Strategy and Outcome Grants under the Sustainable Agricultural Lands Conservation Program (SALCP) and the Specialty Crop Block Grant program. The scoring criteria can be general enough to provide reviewers some flexibility, especially in the first year of the program, but still provide direction to the applicants on what is important to consider as they put together their projects.

We also suggest that those projects that demonstrate multiple environmental and community co-benefits receive higher application points than those projects that do not. AB 32 is clear that our climate change efforts should achieve multiple health and environmental co-benefits, especially greater resilience and improved air and water quality.

Finally, we know from the literature that combining management practices that improve soil organic matter does more to increase carbon sequestration and reduce GHG emissions than any single practice[3]. Thus, projects that combine practices, showing the greatest promise for greenhouse gas emission reduction and carbon sequestration, should receive higher application points than those that do not.

Technical Assistance

7. *Funding technical assistance*

As we have seen with the State Water Efficiency and Enhancement Program (SWEEP), grower access to technical assistance is crucial to the success of the program. There is precedent at the Air Resources Board for allowing state agencies responsible for implementing climate change programs to partner with outside agencies/NGOs to assist with implementation. Examples include the Low-Income Weatherization Program, the Strategic Growth Council's funding for technical assistance for its Affordable Housing and Sustainable Communities Program, and the Urban Forestry Program that allows for on-going maintenance of trees.

[3] De Gryze, S., et. al. 2010. Ibid.

The Vision for the Healthy Soils Initiative outlines the need for technical assistance (Action 3). We echo that need. There are several types of technical assistance that we suggest that CDFA consider eligible under the Healthy Soils Program, including:

A. Project Development: Work with farmers and ranchers to identify management opportunities to improve carbon storage in soils, to reduce greenhouse gas emissions, and to achieve related agronomic, environmental and economic benefits.
B. Outreach and Assistance: Outreach to farmers and ranchers to let them know of the Healthy Soils Program opportunity. Provide workshops and other assistance for grant applications.
C. Project Implementation and Evaluation: Once funded by the Healthy Soils Program, technical assistance providers can work with grantees on implementation of their practices (e.g. Urban Forestry program). Technical assistance providers can also work with CDFA to evaluate the projects' impacts over time.

We are glad to the see that the Strategic Growth Council has one-time funding for application assistance. But because successful technical assistance stretches beyond grant application assistance to include implementation issues, for example, it is important that we seek more robust technical assistance for the Healthy Soils Program.

We suggest that CDFA seek to fund technical assistance as part of the Healthy Soils Program either as part of department's administrative funds for the program and/or as an eligible component of the funded projects.

Thank you for your consideration of these comments.

CALIFORNIA ASSOCIATION OF RESOURCE CONSERVATION DISTRICTS
801 K Street, 14th Floor Sacramento, CA 95814
***Phone:** (916) 457-7904 **Fax:** (916) 457-7934*
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RESOURCE
CONSERVATION DISTRICTS

California Department of Food and Agriculture
Environmental Farming Advisory Panel
1220 N St
Sacramento, CA 95814

Dear Environmental Farming Advisory Panel,

Thank you for the critical and exciting Healthy Soils Initiative (HSI) program. Resource Conservation Districts (RCDs) are looking forward to assisting and partnering with you in the implementation of funding in our local communities. Thank you for making this opportunity available.

As you know, the 98 RCDs in the State implement projects that promote soil health, agricultural viability, habitat and conservation of our critical natural resources among many other issues facing our communities. We work with local landowners and partners to help our communities thrive both economically and environmentally.

We offer these suggestions in order to build a stronger partnership with CDFA and a stronger program for our farmers and ranchers. We look forward to working with you as this program goes forward. Please call on us if we can be of assistance.

Technical assistance for farmers and ranchers is the most critical need for this program. We want to stay focused on finding funding to support farmers and ranchers to get technical assistance. We have worked and partnered with CDFA over the last few years, so we understand the challenges, but also feel that without technical assistance, the program will not be as effective or efficient as it could be.

Please find the attached recommendations as additional ways to strengthen this critical program. We also support the letters submitted both by Carbon Cycle Institute and CalCAN.

Thanks for your time and attention to this matter.

Karen Buhr
Executive Director

Karen Buhr

General Recommendations

#1 - Leverage existing local RCDs' and NRCS programs

Collaboration with existing NRCS and RCD programs and funding will be vital in order to ensure the practical application and longevity of HSI. For instance, leveraging already existing NRCS financial support, such as EQIP, includes technical assistance and additional funding, both of which further supports producers in implementation. Local RCD and NRCS offices not only have the technical expertise, but also already have rapport with landowners and long term relationships within their communities. Cumulatively, these diverse qualifications are critical for successful implementation of on-farm practice implementation and establishing trust, funding, and interest for future projects. CDFA should aim to collaborate HSI projects with existing RCD and NRCS programs.

#2 Use COMET-Planner as a quantifying tool and for on-farm planning

A set of online tools developed by USDA-NRCS and researchers at Colorado State University, COMET-Planner helps guide the process of developing a carbon farm plan and allows the quantification of GHG benefits. This program uses a whole-farm approach and offers all feasible and site appropriate practices possible for maximum on-farm greenhouse gas (GHG) reduction and sequestration opportunities. Developed by a technical advisor in conjunction with the landowner, a Carbon Farm Plan is based on the NRCS Conservation Planning process and engages practices that increase ecosystem carbon sequestration and provide important environmental co-benefits, including water savings, increased productivity and improved wildlife habitat.

#3 Eligibility of ALL NRCS conservation practices found in COMET-Planner and other climate-beneficial practices supported by research

We support the list of eligible practices laid out in the HSI draft framework, however, we believe more can be included to enhance the effort to reach this project's goals. COMET-Planner has adopted all 35 practices that NRCS has identified to either sequester carbon or reduce GHG, including but not limited to: crop rotation, compost application, alley cropping, prescribed grazing, agroforestry. COMET-Planner also includes other climate-beneficial practices that are supported by research such as compost application on rangeland and riparian restoration. HSI should include all practices utilized in COMET-Planner as eligible practices.

#4 Incentivize a whole-farm perspective

Using a whole-farm approach when identifying GHG sequestration or mitigation practices optimizes the goals of HSI along with producing additional co-benefits. We recommend CDFA encourages a whole-farm perspective by requiring or giving preference to producers who includes multiple practices or will enact a conservation plan or carbon farm plan developed with an RCD or NRCS. By tying multiple GHG beneficial practices, HSI will have a significantly greater environmental impact and address the full range of co-benefits that are statewide priorities. Working with a conservation or carbon farm plan ensures that practices are appropriate to the specific site and that the grower understands how to appropriately implement the practice through technical assistance.

Funding

#5 Funding for producers can be used to contract RCDs for technical assistance

Technical assistance - including conservation and carbon farm plans, implementation oversight, and monitoring and measuring soil organic carbon and co-benefits - from agricultural conservation experts is crucial in ensuring effective implementation and anticipated results ensuring the success of the HIS program. Healthy soil practices are not intuitive for farmers and can have devastating impacts if implemented incorrectly, thus require technical assistance. Eligible use of funds should include contracting the producer's local RCD in order to carry out technical assistance, and ability to leverage funds through other sources that support technical assistance, such as NRCS EQIP. This would not only encourage the use of technical assistance, but it would also allow for more of the costs to be covered providing more incentive for projects that have little to no economic incentive.

#6 Raise the Incentive funding cap and install tiered funding levels

Raising the funding cap to $50,000 will allow further opportunity for producers to implement multiple carbon-beneficial practices on as large of a scale as feasible as suggested by a whole-farm approach. Funding levels for the incentive projects should have a tiered structure based on number and/or scale of practices proposed. For example, depending on the practice and potential GHG impact, 1 practice at $25,000, 2 practices at $35,000, 3-4practices at $50,000. We also suggest that projects proposing multiple practices, or practices that support multiple ecosystem benefits are awarded higher scoring.

#7 Fund full cost of practices

Many of the projects being proposed provide little or no economic gain. Yet the practices with the least benefit to farmers often provide the highest benefits for California's landscapes, waterways, water supply and environment. To incentivize adoption of healthy soils practices, HSI should fund the entirety of the projects including the associated costs such as necessary infrastructure to support the practice being implemented. While a standard framework should be adopted, applicants should have the opportunity to explain why the economics may be different in their particular project.

#8 Match Suggestions:

1) We recommend that producers' in-kind work is recognized and eligible to be used for fund matching for the Incentive and Demonstration programs. Producers work extensively every day and few have the actual or financial flexibility of working outside the norm and should be incentivized in doing so.
2) Funding for demonstration projects should include partner projects such as outreach, field days, data tracking, etc. If direct funding is unavailable to partner organizations, we recommend creating the option for the producer to use their funds to contract a local RCD, or allow the partner to use their time as match to fulfill this important requirement.

CCOF
Organic Certification Education & Outreach Political Advocacy Promotion

Amrith Gunasekara
Science Advisor
California Department of Food and Agriculture
1220 N Street
Sacramento, California 95814

Re: Healthy Soils Program: draft framework

February 27, 2017

Dear Dr. Gunasekara,

Thank you for the opportunity to comment on the draft framework for the Healthy Soils Program. CCOF (California Certified Organic Farmers) commends the California Department of Food and Agriculture (CDFA) for its leadership in advancing soil management practices that will benefit our climate and our communities.

CCOF is a nonprofit organization governed by the people who grow and make our food. Founded in California more than 40 years ago, today our roots span the breadth of North America and our presence is internationally recognized. We are supported by an organic family of farmers, ranchers, processors, retailers, consumers, and policymakers.

Soil health is a fundamental tenet of organic agriculture. With over 3,000 registered organic farmers throughout the state, CDFA and the Environmental Farming Act Science Advisory Panel have the opportunity to learn from a vast network of organic farmers and to incentivize wider use of long-established organic farming practices throughout the state.

Please find below CCOF's comments on CDFA's latest proposed framework. We would welcome the opportunity to provide further information on the numerous benefits of organic agriculture and look forward to participating in the development of the Healthy Soils Program.

Sincerely,

Policy Director

cc: Cathy Calfo, Executive Director/CEO

2155 Delaware Avenue, Suite 150, Santa Cruz, CA 95060 • (831) 423-2263 • fax (831) 423-4528 • ccof@ccof.org • www.ccof.org

Healthy Soils Incentives Program

1. *Consider using net greenhouse gas reduction as a metric of project success.*

CDFA should consider using net greenhouse gas (GHG) reduction as a metric of project success under the Healthy Soils Program because a net reduction metric would better reflect the full scope of benefits achieved over the course of the project. Although carbon sequestration does not directly reduce GHG emissions, it does help decrease the overall GHG budget for an agricultural operation. For example, the table below shows that an organic farm sequestered 1,953 kg of CO_2 equivalents per hectare annually. Additionally, the organic farm relies on biological forms of nitrogen rather than energetically intensive synthetic forms, which has a net lower energy use. Despite higher nitrous oxide release from the organic system, its overall greenhouse gas intensity was negative—meaning that it absorbed more CO_2 equivalents than it released—compared to the other systems, which had net GHG releases.

Global warming potential (GWP) of three cropping systems.

	Δ soil C[a,b]	N_2O flux[a,c]	Energy use[a,d]	Total GWP[a]	GHG Intensity[e]
No till	0	303	807	1110	330
Chisel Till	1080	406	862	2348	153
Organic	-1953	540	344	-1069	-207

a kg CO_2 ha^{-1} y^{-1} equivalents
b Average carbon change rates over 11 years.
c N_2O data were measured in 2008.
d Energy use is for a typical year using published values and field records.
e kg CO_2 Mg $grain^{-1}$ equivalents

Source: Cavigelli, M., M. Djurickovic, C. Rasmann, J. Spargo, S. Mirsky, and J. Maul. 2009. Global warming potential of organic and conventional grain cropping systems in the mid-Atlantic region of the U.S. Proceedings of the Farming Systems Design Conference, Monterey, California: 51-52.

Therefore, CDFA will be able to support a broader range of farms and practices by specifying that the goal of the Healthy Soils program is *net* GHG reductions for any given farm or ranch.

2. *Add crop rotation to the list of eligible practices.*

CDFA should add Conservation Crop Rotation (328) to the list of eligible practices because it is a fundamental soil-building practice. Planting different types of crops in sequence can result in numerous additional benefits to carbon sequestration, including reduced pest and disease pressure, increased soil cover, decreased erosion, and increased soil water-holding capacity.

3. *Allow applications of farm-produced compost as an eligible practice in the incentives program.*

CDFA should clarify that it will allow farm-produced compost as an eligible practice in the incentives program because compost made on-farm is an important practice for many organic farmers. On-farm composting reduces crop wastes and recycles them into useful nutrients for subsequent crops. It also reduces energy use to transport compost from facility to farm. Therefore, we encourage CDFA to clarify that, in addition to compost from certified facilities, on-farm compost is eligible for the incentives program.

4. *Consider strategies to spread incentives funding further.*

CCOF would support an incentives program that reaches all scales of farms and ranches. One strategy to increase the reach of funding would be to direct some funding for comprehensive farm and ranch energy audits. This would enable each farm and ranch to make an energy conservation plan including a range of practices and strategies to reduce net GHG emissions.

5. *Consider adjusting timing of solicitation release to better align with farming seasons.*

CDFA may consider adjustments in its solicitation for application as the program develops. Releasing the grant solicitation in May with a June deadline will likely be difficult for farmers and ranchers to respond to because these months are prime farming season. CCOF supports this timeline for the upcoming cycle and recommends that CDFA consider adjusting the solicitation release and deadline to late fall-early winter for future funding cycles to make it more feasible for producers to apply.

6. *Include co-benefits of organic farming practices under master list.*

CDFA stated that it is developing a list of co-benefits "to be given additional consideration during application review." Studies conducted at University of California—Davis have documented the following co-benefits of certified organic soil management practices in addition to sequestering carbon:

- Improved soil nutrient cycling
- Improved soil structure, resulting in increased water infiltration and soil water holding capacity
- Reduced soil erosion
- Healthier plants that are more resistant to crop diseases.

Additionally, some scientists have found that organic crops maintain yields during drought conditions because the soils have improved water retention.

Healthy Soils Demonstration Projects

CCOF supports the objective, proposed grant amount, and eligibility requirements that CDFA presented for the demonstration project component of the Healthy Soils Program. CCOF encourages CDFA to fund demonstrations on a range of operation scales and types to maximize the educational impact and relevance of the projects.

26 February, 2017

California Department of Food and Agriculture
1220 N Street
Sacramento, California, 95814

CENTER FOR
CARBON
REMOVAL

Dear Amrith Gunasekara,

The Center for Carbon Removal thanks and supports the California Department of Food and Agriculture for their progress on the Healthy Soils Initiative and Incentive programs as a means of meeting AB-32 emission mandates. As a non-profit organization dedicated to removing carbon pollution from the atmosphere, we strongly support the strong emphasis on actions and management practices associated with carbon sequestration. Additionally, we want to applaud the stakeholder organization and engagement through public meetings of the Environmental Farming Act Science Advisory Panel. With clear delineation of the many co-benefits of soil carbon building, the value of ecosystems services and carbon storage make California's agricultural soils a vital asset for economic and agricultural prosperity.

The outlined action items and accredited management practices that the CDFA has established in cooperation with methodology produced by the Air Resources Board offer a variety of valuable research opportunities with regard to soil priming and storage. As a next step, it will be critical to enhance this framework to make it as actionable as possible for the relevant organizations and stakeholders. For example, this incentives program can:

1. **Offer a more detailed plan for future tracking and reporting after the conclusion of project grants in 2020.** A valid and important concern of many soil scientist and agriculturalists alike is that soil priming and sequestering techniques will not be sufficiently followed by locking and conservation practices to ensure long term storage. It may also be valuable for the Air Resources Board to include in their methodology, a projection of CDFA's long term expectations regarding ideal soil carbon conservation and locking practices following project completion.
2. **Expand on the ability of soil carbon projects to benefit disadvantaged communities and educate or involve constituents and legislators.** While acknowledging that the primary incentive of projects ought to be the verified and maintained storage of carbon in agricultural soils, the continuation of successful techniques beyond 2020 will demand a framework that demonstrates soil's value to disenfranchised agricultural communities and curious constituents. To persuasively and effectively educate and assist disadvantaged communities, issues of target audience, regional and cultural diversity, and communal involvement will need to considered and clarified. .
3. **More clearly define the role of nonprofits, resource conservation districts, and academic institutions in partnership with industry and agricultural firms to promote the Healthy Soils Initiatives.** The partnership between agricultural implementers and academic or policy organizations will be a key allyship in the successful construction and verification of sequestration practices. However, avenues for non-profit and non-governmental actors to assist and coordinate with agriculturalists are not well established. The earliest possible involvement of these organizations and institutions offers collaboration among policy and soil science to produce projects that are well economically feasible, politically popular, and educationally engaging.

Clarification on the avenues for nonprofit or academic partnership, benefits for disadvantaged communities, and strategies for long term soil surveillance and securitization of carbon offer an opportunity to increase the involvement of non-agriculturalists and ensure long term success of pilot projects. By defining these elements early in the project application process, implemented solutions will be more adequately prepared to educate intended audiences, collaborate with relevant organizations and institutions, and retain sequestered carbon after funding concludes.

Respectfully Submitted,

Noah Deich
Executive Director
Center for Carbon Removal

About Us: The Center for Carbon Removal is a team of experts and advocates for a new kind of climate action: carbon removal. We empower scientists, policy makers, and industry leaders to embrace climate solutions that can build a cleaner, stronger economy. To achieve our mission, we conduct research, convene events, and curate an online hub for information and discussion on carbon removal. Visit our website to learn more (www.centerforcarbonremoval.org) or join the discussion on Twitter (@CarbonRemoval).

From: Trevor Anderson [tanderson@climateactionreserve.org]
Sent: Thursday, January 12, 2017 12:40 AM
To: CDFA OEFI@CDFA
Subject: Modeling Questions - Building Partnerships on Healthy Soil Summit

To Whom It May Concern,

Today's Joint USDA-NRCS and CDFA Summit on Building Partnerships on Healthy Soil has been very encouraging. I have been tuning in all day via webinar. The Climate Action Reserve (the Reserve) is currently reviewing existing models for quantifying greenhouse gas (GHG) emissions from improved nutrient management practices. The Modeling, Tools and Management Practice Panel Session was particularly helpful, especially Ms. Amy Swan's presentation on COMET-Planner and COMET-Farm. I want to ask Amy, Colorado State University, CDFA and the USDA and NRCS the following questions:

1. Do they (you) anticipate any funding shortfalls to COMET from the incoming U.S. administration that could potentially hinder the efforts to improve and expand the tools?
2. If so, how do they (you) plan to address them?

I am unsure if it will be possible to get the above questions asked during the Q & A session currently underway in the summit, but the answers would be very informative for the Reserve. If they not cannot be addressed during this final session, I would greatly appreciate it if you could get back to me at a later date with the answers.

Thank you for your support and for a great summit!

Best regards,
Trevor

Trevor Anderson
Policy Associate
Climate Action Reserve
601 West 5th Street, Suite 650, Los Angeles, CA 90071
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Save the date for Navigating the American Carbon World 2017 – April 19-21 in San Francisco.

March 1, 2017
California Department of Food and Agriculture
1220 N Street
Sacramento, CA 95814
Re: Comments on Healthy Soils Initiative Draft Framework

Dear California Department of Food and Agriculture Staff and Members of the Environmental Farming Science Advisory Panel,

Community Alliance for Agroecology works alongside the most impacted communities of the San Joaquin Valley to address the environmental injustices perpetuated by the food and farming system and to create solutions that foster ecological balance, public health, and economic equality in the region. The San Joaquin Valley is California's agricultural production center and suffers from some of the most harmful air quality in the state. Additionally, the Air Resources Board Greenhouse Gas Inventory reports that the agricultural sector emits 8% of the California's total greenhouse gas emissions. The Healthy Soils Program presents an opportunity to explore sustainable solutions to climate change that benefit communities and hasten the adoption of on-farm environmental stewardship practices, while simultaneously addressing some of the region's most egregious health disparities caused by poor agricultural soil management. We thank you for your work in building this historic program and look forward to partnering to ensure the success of its implementation in California's most impacted regions.

Historic Barriers to Adoption of Environmental Stewardship Practices in the San Joaquin Valley California's San Joaquin Valley is home to the most agriculturally productive farmland in the nation, however historic and cultural barriers to adoption have caused the region to fall behind in the push towards greater environmental stewardship in the state. For instance, reported in the Ag Census from 2012, farms in Marin, Sonoma, and San Luis Obispo counties all reported 8-12 farms that piloted alley-cropping and silvopasture, one of the Healthy Soils Initiative proposed practices. In the same year Fresno County reported 0 farms using these practices[1]. Fresno County, despite leading the state in the output of milk, almonds and grapes, relies primarily on the UC Cooperative Extension and USDA Service Centers for technical assistance related to environmental stewardship programs. One small Resource Conservation District (RCD) in the Sierra foothills, run almost entirely by volunteer support, represents all of Fresno County. Without county-level infrastructure and investment in environmental stewardship, USDA and UC Coop Extension agents are burdened with the task of facilitating the outreach and engagement with growers on state programs in addition to federal programs, and adoption remains slow. We suggest that the Healthy Soils Initiative roll-out take this into

[1] California Agricultural Statistics 2012 Crop Year. United States Department of Agriculture. National Agricultural Statistics Service.

consideration and provide additional support to areas of the state that deal with a lack of TA capacity in environmental stewardship.

Technical Assistance in Disadvantaged Communities AB 1550 requires that 25% of the Greenhouse Gas Reduction Fund (GGRF) be directed to projects within and benefiting disadvantaged communities, 5% to projects in low-income communities or benefiting low-income households, and 5% to projects within low-income communities or low-income households within ½ mile of a disadvantaged community. As shown on CalEnviroScreen, many of the communities among the top 25% of the State's most overburdened are located in the San Joaquin Valley. These disadvantaged communities generally do not possess the infrastructure needed to support Healthy Soils implementation as these communities often lack RCDs and do not have a strong Natural Resources Conservation Service (NRCS) presence. In order to adhere to the requirements set forth by AB 1550 and ensure that the communities most impacted by climate change and greenhouse gases are benefiting from this program, CDFA must actively work to close the gap in resources that farmers in the San Joaquin Valley currently face. Additionally, only a small number of nonprofit organizations who work with small-scale and minority-operated farms are supporting this type of work. We suggest that CDFA prioritize technical assistance to small, disadvantaged farmers who can benefit from implementing innovative farmland management practices but do not have access to the resources and support needed to do so.

Linguistically Appropriate Outreach In Fresno County alone, almost half of the region's over 4,000 family farms are operated by ethnic minorities. More than 54% of these family operations are run by Asian and Asian American operators, the majority of which are refugee farmers from South Asia. There are over 900 Laotian and Hmong families running small-scale farm operations marketing over 100 varieties of produce and tens of thousands of Hmong and Lu-Mien refugees farm as their primary livelihood. Between 2002 and 2007 there was an over 20% increase in the number of farms owned and operated by Latinos, over 75% of those farmers being beginning farmers[2], speaking to the courageous move that many farmworkers are taking into farm ownership and operation. It is critical that CDFA oversee the translation of grant guidelines and solicitation materials for the Healthy Soils Initiative for access by historically disadvantaged farmers and ranchers. In the same way that the national EQIP program is structured to prioritize participation by Historically Underserved Farmers and Ranchers, we suggest that CDFA ensure participation by disadvantaged community residents and small farm and business-owners by conducting outreach efforts in-language and in-culture. We suggest that CDFA use administrative funds towards these ends, in order to avoid continuing to burden the limited bilingual staff at regional USDA and UC Coop Extension Offices. Alternatively, increased funding for Cooperative Extension to hire additional bilingual staff can support this process where RCDs are lacking altogether. In prior comments on the ARB funding guidelines for the GGRF we have provided a list of languages to staff for inclusion in the administration guidelines, including but not limited to Spanish, Hmong, Vietnamese, Chinese (Cantonese and Mandarin), and Punjabi.

Maximizing GGRF Co-Benefits to Disadvantaged and Small-Scale Agricultural Operations The Healthy Soils Initiative presents an opportunity to highlight the co-benefits of historically neglected farmers. For instance, Cal EnviroScreen deems South West Fresno as the single most environmentally burdened area of the state. When observing a map of where our small farms are

[2] Sowerwine, Jennifer. and Getz, Christy. 2013. The Changing Face of California Agriculture: Identifying challenges and providing opportunities for Southeast Asian and other minority farmers. Rural Connections.

located overlaid with CalEnviroScreen mapping tool, it is clear that a concentration of ethnic-owned small farms are located directly in some of the top 10% areas of environmental and social burden. These farmers are the least participant in government programs, yet they do the greatest work in building ecologically resilient farm-scapes that provide access to fresh produce for the local area. The San Joaquin Valley continues to suffer from some of the worst food insecurity in the nation. A strong co-benefit of small-scale production production is meeting local needs for fresh vegetables. We suggest that such co-benefits such as improved market channels and improved regional food security are counted as community co-benefits.

Eligible Practices We support the list of proposed practices that qualify a project for program funding. The named practices that are in line with existing NRCS suggested environmental stewardship goals are supported for their co-benefits of reducing pesticide and fumigant use, increasing water retention and holding capacity, and buffering against the runoff of nitrogen fertilizer and soil amendments into precious drinking water sources. The two non NRCS approved practices of Cropland Compost Application and Grassland Compost Application hold some areas of question for environmental justice around the mobility of nitrogen from these land-applications of compost. We are pleased to see a process underway to define eligible compost sources, feedstocks and determining C:N ratios in eligible compost applications for these 2 practices. We strongly recommend that these variable considerations be made clear in the funding guidelines and ensure that applicants understand the requirement that all compost sources comply with any additional regulations pertinent to their management systems, such as the National Organic Program guidance for USDA certified organic growers, the Food Safety Modernization Act Produce Safety Rule as well as any forthcoming regulatory processes resulting from the California organics management program under EPA.

Agriculture is critical to the economy and culture of our disadvantaged communities, and with sensitivity to local ecology can also have a positive impact on environment, health, and community food-access. International climate science continues to uncover that biodiverse and smaller scale agriculture is the key to a more resilient and climate friendly food system. We hope to see CDFA reflect these findings in the administration of the Healthy Soils Initiative, and empower small scale and agroecological growers to preserve culturally appropriate farming practices that cool the planet. Thank you for your leadership in this landmark funding program. Questions can be sent directly to Janaki Jagannath at janaki@allianceforagroecology.org

Janaki Jagannath
Coordinator
Community Alliance for Agroecology

Kevin D. Hamilton, RRT
Chief Executive Officer
Central California Asthma Collaborative

Sarah Aird
Co-Director
Californians for Pesticide Reform

From: Evan Edgar [evan@edgarinc.org]
Sent: Tuesday, January 24, 2017 12:48 AM
To: CDFA OEFI@CDFA
Subject: Comments on the Healthy Soils Initiative and CDFAs role on the AB 1045 Compost Use law

California Compost Coalition would like to clarify the intent of the AB 32 Scoping Plan language is that compost use is not just for grasslands, but also for irrigated croplands. Copied below is an excerpt from the Table in the working lands presentation by Alan V. Di Vittorio of Lawrence Berkeley National Laboratory on the CALAND model, where the modeling inputs low and high management scenarios for an incremental 10,000 acres each year, both for croplands (no till/cover crop) and grasslands, would be adopting sustainable agriculture practices, adding a total of 260,000 acres by 2030. However, compost use on irrigated cropland was not specifically mentioned and needs to be identified. We support the use of metrics and goal- setting to get to 2030, and specifically identifying compost use on irrigated cropland can accommodate a new 7 million tons in California. CCC added in the line items below the Table where 40,000 acres per year to 80,000 acres per years should be identified as low and high management scenarios.

5

Management scenarios

- **These scenarios are applied to the baseline, from 2017-2030**

Activity	Low management	High management
Forests - fuel reduction, restoration (state/private)	60,000 ac/yr through 2030	175,000 ac/yr through 2030
Forests – reforestation is implicit in the model	Increase rate 15% above BAU by 2030 (assume 15% above BAU rate in each year to 2030)	Increase rate 30% above BAU by 2030 (assume 15% above BAU rate in each year to 2030)
Croplands – conserve soil C (no-till/cover crop)	10,000 ac/yr through 2030	10,000 ac/yr through 2030
Meadow restoration - rangeland (state/private)	10,000 acres by 2030	30,000 acres by 2030
Grasslands – compost amendment (state/private)	10,000 ac/yr through 2030	10,000 ac/yr through 2030
Delta Fresh Wetlands Restoration (state/private)	15,000 acres by 2030	30,000 acres by 2030
Coastal/Tidal wetlands restoration (state/private)	30,000 acres by 2030	60,000 acres by 2030
Urban – Increase urban tree canopy fraction	20% above current by 2030 (same as baseline)	40% above current by 2030
Ocean – restore eelgrass beds	5% above current levels by 2030	10% above current levels by 2030
Croplands (irrigated) - compost amendment (CCC comments)	**40,000 ac/yr through 2030 3.5 million tons per year by 2030.**	**80,000 ac/yr through 2030 7 million tons per year by 2030**

According to CDFA, there are roughly 9 million acres of irrigated farmland, so if just 10,000 acres per year in developed, compost use on only 130,000 acres of working lands would represent only a 1.5% increase. According to UC Rangelands at UC Davis, there are 62.9 million acres of rangeland; pushing for another 130,000 acres would mean only a 0.2% increase. Neither could be classified as aggressive targets and barely qualify as a 'low management scenario', where agriculture could use all of the compost derived from organics recycling mandated by SB 1383 to mitigate methane, given more robust market development targets.

The following is recommended with supportive information:

- **Include Irrigated Cropland (compost use) in the model with a low and high management scenario of 40,000 acres per year and 80,000 acres per year**
- **Grasslands – compost amendment (state/private) -– Require CalTrans and Department of General Services and other state agencies to use compost following current state law and increase by over 10,000 acres per year**
- **Have CalRecycle prepared the Fourth Assessment of California Compost and Mulch-Producing Infrastructure for 2017**
- **Link compost use on irrigated croplands to the implementation of the Five Pillars programs by diverting organics form landfills to mitigate methane and producing compost to support the Healthy Soil Initiative and**
- **Starting 2018, have compost use (bulk and organic) be included in the County Crop Report and have CDFA and CalRecycle report compost use**
- **Include Irrigated Cropland (compost use) in the model with a low and high management scenario of 40,000 acres per year and 80,000 acres per year.**

CALIFORNIA COMPOST COALITION

Evan W.R. Edgar

California Compost Coalition
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916-739-1200 (office)
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CALIFORNIA
COMPOST COALITION

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www.californiacompostcoalition.org

January 13, 2017

Chief Rajinder Sahota and Assistant Secretary Claire Jahns
California Environmental Protection Agency
California Air Resources Board
1001 I Street Sacramento, CA 95814

Re: Comments on 2030 Target Scoping Plan Update
Public Workshop on Carbon Sequestration Modeling Methods and Initial Results for the Natural & Working Lands Sector

Dear Rajinder Sahota and Claire Jahns

The California Compost Coalition (CCC) is a statewide organization representing operators of permitted facilities involved in the processing and composting of green and food waste materials throughout California. On behalf of these companies, we respectfully submit the following comments on Public Workshop on Carbon Sequestration Modeling Methods and Initial Results for the Natural & Working Lands Sector for the 2030 Target Scoping Plan.

Composting and anaerobic digestion form the cement that binds the Governor's Five Pillars together. Eliminating organics from the landfills will mitigate methane generation as a short-lived climate pollutant to implement SB 1383 (Pillar 4), and instead, create biomethane power at anaerobic digestion facilities to generate more renewable energy to achieve the goals of SB 350 (Pillar 2) and carbon negative fuel for the CNG fleet that collects the organics and implements the Low Carbon Fuel Standard (Pillar 1) to displace diesel. The diverted food waste and digestate can be composted to sequester carbon and be integral to healthy soils (Pillar 5). Organic power and compost use have been deemed the most cost-effective greenhouse gas (GHG) reduction strategy that bonds all Five Pillars together. The California Legislative Analyst's Office determined the cost of composting and anaerobic digestion to be at just $9/ton of GHG reduction while the overall average is $57/ton.

CCC shares the vision to set 2030 Targets and develop a sustained funding mechanism to foster the use of compost on our working lands with a focus on irrigated croplands and provide incentives to develop the infrastructure for a low-carbon system in California and improve the sustainability of the California infrastructure. Without 2030 targets coupled with incentives, the regulatory certainty will wane and many projects underway will falter. We need these policy

drivers fortified with incentives to develop this multi-billion dollar low carbon future for the solid waste and recycling industry,

CCC has previously provided detailed verbal and written comments to your staff regarding the CARB/CalRecycle Technical Papers for the 2014 Update, which support the development of a low-carbon system in California today to improve the sustainability of the California infrastructure for tomorrow which includes more compost infrastructure development and compost use to support the Healthy Soils Initiative.

CCC would like to clarify the intent of the Scoping Plan language is that compost use is not just for grasslands, but also for irrigated croplands. Copied below is an excerpt from the Table in the working lands presentation by Alan V. Di Vittorio of Lawrence Berkeley National Laboratory on the CALAND model, where the modeling inputs low and high management scenarios for an incremental 10,000 acres each year, both for croplands (no till/cover crop) and grasslands, would be adopting sustainable agriculture practices, adding a total of 260,000 acres by 2030. However, compost use on irrigated cropland was not specifically mentioned and needs to be identified. We support the use of metrics and goal- setting to get to 2030, and specifically identifying compost use on irrigated cropland can accommodate a new 7 million tons in California. CCC added in the line items below the Table where 40,000 acres per year to 80,000 acres per years should be identified as low and high management scenarios.

5

Management scenarios

- **These scenarios are applied to the baseline, from 2017-2030**

Activity	Low management	High management
Forests - fuel reduction, restoration (state/private)	60,000 ac/yr through 2030	175,000 ac/yr through 2030
Forests – reforestation is implicit in the model	Increase rate 15% above BAU by 2030 (assume 15% above BAU rate in each year to 2030)	Increase rate 30% above BAU by 2030 (assume 15% above BAU rate in each year to 2030)
Croplands – conserve soil C (no-till/cover crop)	10,000 ac/yr through 2030	10,000 ac/yr through 2030
Meadow restoration - rangeland (state/private)	10,000 acres by 2030	30,000 acres by 2030
Grasslands – compost amendment (state/private)	10,000 ac/yr through 2030	10,000 ac/yr through 2030
Delta Fresh Wetlands Restoration (state/private)	15,000 acres by 2030	30,000 acres by 2030
Coastal/Tidal wetlands restoration (state/private)	30,000 acres by 2030	60,000 acres by 2030
Urban – Increase urban tree canopy fraction	20% above current by 2030 (same as baseline)	40% above current by 2030
Ocean – restore eelgrass beds	5% above current levels by 2030	10% above current levels by 2030
Croplands (irrigated) - compost amendment (CCC comments)	**40,000 ac/yr through 2030 3.5 million tons per year by 2030.**	**80,000 ac/yr through 2030 7 million tons per year by 2030**

According to CDFA, there are roughly 9 million acres of irrigated farmland, so if just 10,000 acres per year in developed, compost use on only 130,000 acres of working lands would represent only a 1.5% increase. According to UC Rangelands at UC Davis, there are 62.9 million acres of rangeland; pushing for another 130,000 acres would mean only a 0.2% increase. Neither could be classified as aggressive targets and barely qualify as a 'low management scenario', where agriculture could use all of the compost derived from organics recycling mandated by SB 1383 to mitigate methane, given more robust market development targets.

The following is recommended with supportive information:

- **Include Irrigated Cropland (compost use) in the model with a low and high management scenario of 40,000 acres per year and 80,000 acres per year**
- **Grasslands – compost amendment (state/private) -– Require CalTrans and Department of General Services and other state agencies to use compost following current state law and increase by over 10,000 acres per year**
- **Have CalRecycle prepared the Fourth Assessment of California Compost and Mulch-Producing Infrastructure for 2017**
- **Link compost use on irrigated croplands to the implementation of the Five Pillars programs by diverting organics form landfills to mitigate methane and producing compost to support the Healthy Soil Initiative and**
- **Starting 2018, have compost use (bulk and organic) be included in the County Crop Report and have CDFA and CalRecycle report compost use**

Include Irrigated Cropland (compost use) in the model with a low and high management scenario of 40,000 acres per year and 80,000 acres per year.

Compost use on irrigated croplands is the biggest opportunity is currently underway at over 1,000,000 acres per year, and is not included the CALANDS model as a huge potential market.

- Low Management
    - Assumed - 1,000,000 acres baseline in 2017 (see below on assumptions)
    - 500,000 acres by 2030 to get 50% of new compost produced –
    - Add 40,000 acres each year
    - Possible 1.5 million acres using compost – 17% of all irrigated cropland

- High Management
    - Assumed - 1,000,000 acres baseline in 2017 (see below on assumptions)
    - 1,000,000 acres by 2030 to get 100% of new compost produced –
    - Add 80,000 acres each year
    - Possible 2.0 million acres using compost – 22% of all irrigated cropland

Grasslands – compost amendment (state/private) -– Require CalTrans and Department of General Services and other agencies to purchase compost following current state law and increase by over 10,000 acres per year.

Current law, as noted in ***PRC 42240, PRC 42241, PRC 42241.5*** and ***PRC 4224,*** requires state agencies to use compost with CalTrans starting in 1991, and Forestry, Parks and Recreation and General Services since 1993. For over 20 years the compost industry has attempted to implement these current laws and had to propose legislation, that failed, to add metrics, incentives, water efficiency linkages, and funding for compost use on these state lands. Compost use on state lands is not being tracked or reported, and is not being used in significant quantities. Compost us on state grass lands at just 10,000 acres per year is a starting point over 20 years in the making.

PRC 42240 requires that the Department of General Services and the board, in consultation with other affected state agencies, shall maintain specifications for the purchase of compost by the State of California. The specifications shall designate the state minimum operating standards and product quality standards. The specifications shall be designed to maximize the use of compost without jeopardizing the safety and health of the citizens of the state or the environment.

PRC 42241requires that on or after January 1, 1991, the Department of Transportation shall use compost in place of, or to supplement, petroleum-based commercial fertilizers in the state's highway landscape maintenance program.

PRC 42241.5 is where CalRecycle may develop a program to increase the use of compost products in agricultural applications. The program may include, but shall not be limited to, the following:
(a) Identification of federal, state, and local financial assistance.
(b) Cooperative efforts with appropriate federal and state agencies.

PRC 42243 requires that on or after January 1, 1993, the Department of Forestry and Fire Protection, the Department of Parks and Recreation, and the Department of General Services shall initiate programs to restore public lands that use compost, co-compost, rice straw, and chemically fixed sewage sludge and shall use those products or materials wherever possible.

CalRecycle 2010 Report – Third Assessment of California Compost and Mulch-Producing Infrastructure

There is a need for a CalRecycle Fourth Assessment Report soon for 2017, as it has been nine years since the last report.

- According to the CalRecycle 2020 Report
    - 5.76 million tons of compost produced in 2008
    - 56% agricultural sales
    - 3.2 million tons applied to agricultural
- Using 7 tons per acres average use – 460,000 acres using compost in 2008
- Croplands – irrigated – compost amendment use – not listed in AB 32 Working Lands CALAND model
- 9 million acres of irrigated farmland in use
- 460,000 acres using compost as a 2008 baseline – use as baseline for AB 32 Scoping Plan (2008)

- Assume 1,000,000 million acres using compost as a 2017 baseline for now based on 9 years of growth since 2008, and anecdotal market surveys since then
- Adjust baseline to 2017 with new CalRecycle Fourth Assessment study and CDFA organic input registry information

SB 1383 – Methane Mitigation – diversion of organic waste from landfill to compost use

- Another 7 million tons per year of compost may be produced and be available in the market between 2025 and 2030 as the Short-Lived Climate Pollutant Plan (SB 1383, Lara) get implemented to reduced all organics by 75% from the landfill disposal by 2025.
- By 2025, over 13.2 million tons of organics need to be diverted from landfills, representing over 5.7 million tons of GHG reductions, and by 2030, over 13.9 million tons of organics need to be diverted from landfills, representing over 6.0 million tons of GHG reductions
- These organics feedstock could produce about 7 million tons of new compost needing a market
- Healthy Soils Initiative is one of the Governor's Five Pillars
- Market potential at 7 tons per acres – for 7 million tons of compost by 2025 is 1,000,000 acres potential market

Beginning in 2018, require compost use (bulk and organic) be reported by CDFA, and County Crop Reports, recognizing AB 901 regulations

- Need CDFA to determine the amount of 'organic input material' category – compost – for both bagged and bulk compost in tons, since it has been a registration program only reported in dollars – to determine mill tax
- Since compost is an agricultural commodity, have the County Crop Report, report compost use in acreage each year starting in 2016
- CalRecycle will be implementing the AB 901 regulations in 2018 which can assist in reporting compost use to gauge the development of the market to 2020, 2025 and 2030.

We appreciate the opportunity to provide comments on these market concepts to implement current laws and to set 2030 goals that include irrigated croplands and on state lands.

Should you have any questions, please contact me at (916) 739-1200.

Sincerely,

Neil S.R. Edgar
Executive Director

CALIFORNIA
COMPOST COALITION

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Northern Recycling Compost
Eric Potashner
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Sonoma Compost
Tracy Delta Compost
Upper Valley Recycling
Vision Recycling
Zanker Road Resource Management
Z-Best Compost Facility
Zero Waste Energy Development
Zero Waste Energy, LLC

January 19, 2017

Grant Cope, Deputy Secretary
California Environmental Protection Agency
1001 I Street, Sacramento, CA 95814

Jenny Lester Moffitt, Deputy Secretary
California Department of Food and Agriculture
1220 N Street, Sacramento, California, U.S.A. 95814

Scott Smithline, Director
CalRecycle
1001 I Street, Sacramento, CA 95814

Re: Implementation of AB 1045 (Irwin) - Composting and Organic Management

Dear Mr. Cope, Ms. Moffitt, and Mr. Smithline

The California Compost Coalition (CCC) is a statewide organization representing operators of permitted facilities involved in the processing and composting of green and food materials throughout California. On behalf of these companies, we respectfully submit the following comments on the implementation of AB 1045 (Irwin, 2015). CCC attended the December 22, 2016 Public Meeting on Composting and Organic Management, and have followed up to obtain copies of the presentations, to no avail at this point, and have scoured the Cal-EPA's website looking for recommendations for promoting organic waste processing infrastructure statewide.

CCC and all parties recognize the huge lift required to implement AB 1826 – mandatory commercial organic collection, and now SB 1383 – the short-live climate pollutant strategy. We have been anticipating these policies for years, being deeply engaged in the AB 32 Scoping Plan, its Updates, and the implementation of SB 605 charting the course for the short-live climate pollutant strategy. We have all rallied for cap-and-trade revenues and other incentives to energize compost and anaerobic digestion facility development. Even with those incentives, facility development is stalling out due to regulatory fatigue and the crashing of the urban wood waste market. Having been a huge supporter of AB 1045, we were hoping that after one year of dialogue, there would be more deliverables to discuss. AB 1045 was multi-pronged, requiring the assessment of the State's progress, promotion of compost use, and ensuring proper coordination of agency regulations and goals in their implementation. CCC has specific comments for each topic area and recommendations on **promoting compost use, assessing progress**, and **coordinating regulations**.

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Neil@californiacompostcoalition.org • www.californiacompostcoalition.org

AB 1045 and Promoting Compost Use:

PRC 42649.87.
(a) The California Environmental Protection Agency, in coordination with the department, the State Water Resources Control Board, the State Air Resources Board, and the Department of Food and Agriculture, shall develop and implement policies to aid in diverting organic waste from landfills by promoting the use of agricultural, forestry, and urban organic waste as a feedstock for compost and by promoting the appropriate use of that compost throughout the state.

b) In developing policies pursuant to subdivision (a), the California Environmental Protection Agency shall promote a goal of reducing at least five million metric tons of greenhouse gas emissions per year through the development and application of compost on working lands, which include, but are not limited to, agricultural land, land used for forestry, and rangeland. The California Environmental Protection Agency shall work with the Department of Food and Agriculture to achieve this goal.

We appreciate the efforts of the Governor promoting The Healthy Soils Initiative over the last few years and the recent funding of $7.5 million. The HSI is laced with compost concepts, but without adequate metrics to assess the progress that could be made to divert the organic wastes resulting from both AB 1826 and SB 1383 towards compost use. CCC has estimated (see additional comments below) where irrigated cropland could use approximately 7 million tons of compost by 2030 to aid in diverting organic waste from landfills with a demand pull for compost products.

We have concerns that the AB 1045 process does not engage a broad enough group of stakeholders, (specifically, air districts, local governments, and other state agencies, who will be required to achieve the already-monumental infrastructure development effort needed, now that the landfill diversion of organics has more imminent target dates and much higher capacity needs, following the passage of SB 1383.

There ought to be a law to require compost use...and there are four laws on the books some since 1991 promoting compost use. Current law, as noted in ***PRC 42240, PRC 42241, PRC 42241.5,*** and ***PRC 42243*** requires state agencies to use compost, with CalTrans starting as far back as 1991, and Forestry, Parks and Recreation, and General Services since 1993. For over 20 years the compost industry has attempted to implement these current laws and has proposed legislation, SB 1345, (Chesbro, 2006), that failed, to add metrics. We sponsored legislation, AB 921 (Allen, 2011), to study incentives for water efficiency and greenhouse gas reductions. We have also recommended funding for compost use on these state lands using cap-and-trade revenue and an increased landfill tip fee. Compost use on state lands is not being tracked or reported, and is not being used in significantly quantifies. Compost use on state grass lands at just 10,000 acres per year is a starting point, as mentioned in the Public Workshop on Carbon Sequestration Modeling Methods and Initial Results for the Natural & Working Lands Sector for the 2030 Target Scoping Plan.

PRC 42240 requires that the Department of General Services and the board, in consultation with other affected state agencies, shall maintain specifications for the purchase of compost by the State of California. The specifications shall designate the state minimum operating standards and product quality standards. The specifications shall be designed to maximize the use of compost without jeopardizing the safety and health of the citizens of the state or the environment.

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(a) Identification of federal, state, and local financial assistance.

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PRC 42243 requires that on or after January 1, 1993, the Department of Forestry and Fire Protection, the Department of Parks and Recreation, and the Department of General Services shall initiate programs to restore public lands that use compost, co-compost, rice straw, and chemically fixed sewage sludge and shall use those products or materials wherever possible.

CCC would like to clarify the intent of the Scoping Plan language is that compost use should not be just for grasslands, but also for irrigated croplands, as we pointed out during the Public Workshop on Carbon Sequestration Modeling Methods and Initial Results for the Natural & Working Lands Sector. Copied below is an excerpt from the Table in the working lands presentation by Alan V. Di Vittorio of Lawrence Berkeley National Laboratory on the CALAND model, where the modeling inputs low and high management scenarios for an incremental 10,000 acres each year, both for croplands (no till/cover crop) grasslands, would be adopting sustainable agriculture practices, adding a total of 260,000 acres by 2030. However, compost use on irrigated cropland was not specifically mentioned and needs to be identified. We support the use of metrics and goals setting to get to 2030, and specifically identifying compost use on irrigated cropland can accommodate a new 7 million tons in California. CCC added in the line items below the Table where 40,000 acres per year to 80,000 acres per years should be identified as low and high management scenarios.

According to CDFA, there are roughly 9 million acres of irrigated farmland, so if just 10,000 acres per year are targeted, only 130,000 acres of compost use on working lands would occur, representing only a 1.5% increase. According to UC Rangelands at UC Davis, there are 62.9 million acres of rangeland; pushing for another 130,000 acres would mean only a 0.2%. increase. Neither could be classified as aggressive targets and barely qualify as a 'low management scenario', where agriculture could use all of the compost derived from organics recycling mandated by SB 1383 to mitigate methane, given more robust market development targets.

The following is recommended with supportive information to increase compost use:

- Include Irrigated Cropland (compost use) in the model with a low and high management scenario of 40,000 acres per year and 80,000 acres per year
- Grasslands – compost amendment (state/private) -– Require CalTrans and Department of General Services and other state agencies to use compost following current state law and increase by over 10,000 acres per year

Compost use on irrigated croplands is the largest current market, estimated at over 1,000,000 acres per year, and yet is not included the CALANDS model despite its huge potential growth.

- Low Management

- Assumed - 1,000,000 acres baseline in 2017
- 500,000 acres by 2030 to get 50% of new compost produced –
- Add 40,000 acres each year
- Possible 1.5 million acres using compost – 17% of all irrigated cropland

- High Management
  - Assumed - 1,000,000 acres baseline in 2017
  - 1,000,000 acres by 2030 to get 100% of new compost produced –
  - Add 80,000 acres each year
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5

Management scenarios

- **These scenarios are applied to the baseline, from 2017-2030**

Activity	Low management	High management
Forests - fuel reduction, restoration (state/private)	60,000 ac/yr through 2030	175,000 ac/yr through 2030
Forests – reforestation is implicit in the model	Increase rate 15% above BAU by 2030 (assume 15% above BAU rate in each year to 2030)	Increase rate 30% above BAU by 2030 (assume 15% above BAU rate in each year to 2030)
Croplands – conserve soil C (no-till/cover crop)	10,000 ac/yr through 2030	10,000 ac/yr through 2030
Meadow restoration - rangeland (state/private)	10,000 acres by 2030	30,000 acres by 2030
Grasslands – compost amendment (state/private)	10,000 ac/yr through 2030	10,000 ac/yr through 2030
Delta Fresh Wetlands Restoration (state/private)	15,000 acres by 2030	30,000 acres by 2030
Coastal/Tidal wetlands restoration (state/private)	30,000 acres by 2030	60,000 acres by 2030
Urban – Increase urban tree canopy fraction	20% above current by 2030 (same as baseline)	40% above current by 2030
Ocean – restore eelgrass beds	5% above current levels by 2030	10% above current levels by 2030

Croplands (irrigated) compost amendment (CCC comments)	**40,000 ac/yr through 2030 3.5 million tons per year by 2030.**	**80,000 ac/yr through 2030 7 million tons per year by 2030**

AB 1045 and 5 million tons of Greenhouse Gas Reductions through compost use:

PRC 42649.87.b states that California Environmental Protection Agency shall promote a goal of reducing at least five million metric tons of greenhouse gas emissions per year through the development and application of compost. Using the adopted emission factors, it would take 9.8 million tons of compost use to reach this requirement, diverting almost 17 million tons of organics from landfills. Calculations are provided on the next page. Cal-EPA should provide the metrics and needed programs to achieve this requirement. Applying compost on irrigated croplands could use 7 million tons of compost by 2030, and Caltrans and the other state agencies should be able to use the rest.

PRC 42649.87.b	5,000,000	$MTCO_2e$	from compost *use*.
Decreased Soil Erosion	0.25	$MTCO_2e$/per ton compost	
Decreased Fertilizer Use	0.26	$MTCO_2e$/per ton compost	
Decreased Herbicide Use	0	$MTCO_2e$/per ton compost	
	0.51	$MTCO_2e$/per ton compost	
	9,803,922	**tons of compost to reach this goal**	
	0.58	conversion from feedstock to compost	
	16,903,313	tons of compost feedstock	
Source: https://www.arb.ca.gov/cc/waste/cerffinal.pdf			pg 19

AB 1045 and SB 1383 – Methane Mitigation – diversion of organics waste from landfill to compost use

By 2025, over 13.2 million tons of organics need to be diverted from landfills, representing over 5.7 million tons of GHG reductions, and by 2030, over 13.9 million tons of organics need to be diverted from landfills, representing over 6.0 million tons of GHG reductions.

AB 1045 and Assessing Progress:

PRC 42649.87 (a)
(1) Assess the state's progress towards developing the organic waste processing and recycling infrastructure necessary to meet the state goals specified in Assembly Bill 341 (Chapter 476 of the Statutes of 2011), Assembly Bill 1826 (Chapter 727 of the Statutes of 2014), the State Air Resources Board's May 2015 Short-Lived Climate Pollutant Reduction Strategy concept paper, and the Department of Food and Agriculture's Healthy Soils Initiative.

There has not been a full assessment of the compost industry and compost use since 2010 when CalRecycle published the *Third Assessment of California Compost and Mulch-Producing Infrastructure*, using 2008 data. Now is the time to have CalRecycle prepared the *Fourth Assessment of California Compost and Mulch-Producing Infrastructure* for 2017 in order to measure the current status.

- According to the CalRecycle Third Assessment Report:
  - 5.76 million tons of compost produced in 2008
  - 56% agricultural sales
  - 3.2 million tons applied to agricultural
- Using 7 tons per acres average use – 460,000 acres using compost in 2008
- Croplands – irrigated – compost amendment use – not listed in AB 32 Working Lands CALAND model
- 9 million acres of irrigated farmland in use

- 460,000 acres using compost as a 2008 baseline – use as baseline for AB 32 Scoping Plan (2008)
- Assume 1,000,000 million acres using compost as a 2017 baseline for now based on 9 years of growth since 2008, and anecdotal market surveys since then
- Adjust baseline to 2017 with new CalRecycle Fourth Assessment study and CDFA organic input registry information

To further the efforts of the state to determine the progress in achieving the goals of AB 1045, we recommend, starting in 2018, to have compost use (bulk and organic) be reported to CDFA, included in the County Crop Reports, while recognizing the upcoming AB 901 regulations.

- Starting 2018, have compost use (bulk and organic) be included in the County Crop Report and have CDFA and CalRecycle report compost use
- Need CDFA to determine the amount of 'organic input material' category – compost – for both bagged and bulk compost in tons, since it has been a registration program only reported in dollars – to determine mill tax
- Since compost is an agricultural commodity, have the County Crop Report, report compost use in acreage each year starting in 2016
- CalRecycle will be implementing the AB 901 regulations in 2018 which can assist in reporting compost use to gauge the development of the market to 2020, 2025 and 2030.

AB 1045 and Coordinating Regulations:

PRC 43032.
(a) The department, in coordination with the State Air Resources Board and the State Water Resources Control Board, shall develop a policy that promotes the development of coordinated permitting and regulation of composting facilities while protecting the environment.

The AB 1045 process would be most beneficial if it were to help develop a policy between CARB and the local air districts to recognize baseline conditions for organic waste management practices such as landfilling when adopting their local regulations and issuing permits. Some local air districts are treating new covered aerated static pile (CASP) compost facilities using the best available control technologies as a new source where the permitting and cost of off-sets would stop the development of the facility. When applying for air permits, baseline conditions need to be recognized where the net benefit of both greenhouse gas reductions and criteria pollutants can be demonstrated when diverting food waste from landfills to composting and/or anaerobic digestion facilities.

Cal-EPA should prepare a Program EIR for covered aerated static pile composting facilities similar to what CalRecycle prepared for anaerobic digestion. This Program EIR would be used to develop policies and recommendations to coordinate permitting by local air districts, where baseline conditions need to be recognized and that CASP facilities should not need to be treated under new source review.

AB 1045 and the Public Process

PRC 42649.87(c)
(2) Meet at least quarterly and consult with interested stakeholders, including, but not limited to, the compost industry, local governments, and environmental organizations, to encourage the continued viability of the state's organic waste processing and recycling infrastructure.
(3) Hold at least one public workshop annually to inform the public of actions taken to implement this section and to receive public comment

We look forward to being invited to the next quarterly meeting to share this letter. We would also ask that the quarterly meeting include representatives of CalTrans and General Services to inquire about their historical compost use and plans to utilize more compost in the future.

The annual public workshop was held during Christmas week, under short notice, and still attracted over 50 participants who are hungry to participate and provide information in the AB 1045 process. The information presented has not been made available to date and offered few new recommendations. We suggest that the next quarterly meeting be noticed to the public where the dialogue can continue.

PRC 42649.87(c)
(4) Develop recommendations for promoting organic waste processing and recycling infrastructure statewide, which shall be posted on the California Environmental Protection Agency's Internet Web site no later than January 1, 2017, and updated annually thereafter.

We have not located this information on the internet Web site to date.

We appreciate the opportunity to comment on the AB 1045 process and look forward to continuing as an active stakeholder.

Should you have any questions, please contact me at (916) 739-1200.

Sincerely,

Evan W.R. Edgar

Regulatory Affairs Engineer

From: Daniella Malin [daniella@coolfarmtool.org]
Sent: Tuesday, January 24, 2017 8:42 PM
To: CDFA OEFI@CDFA
Subject: QMTool development

Dear Geetika Joshi,

I'm interested in the QMTool development process and progress. I have been immersed in the topic of agricultural GHG quantification methodology since 2008, have done or participated in multiple model comparisons and have been project managing the development of the Cool Farm Tool now adopted by many of the worlds largest food companies (Unilever, Nestle, Danone, Kellogg, Pepsico, BASF, Tesco, Marks and Spencer, Syngenta, Heineken, McCain and many more).

I'm also working with Colorado State on a USDA grant we just received to improve the soil carbon quantification for both COMET-Farm and the Cool Farm Tool and possibly wire them together. I believe these tools could be of use in the QMTool and would love to be involved in the development of the QMTool.

Can you let me know who to reach out to about this?

Thanks very much.
-Daniella

Daniella Malin,
Deputy General Manager, Cool Farm Alliance
Email: daniella@coolfarmtool.org
Office: +1 (802) 436 4062 x107
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Rory P. Crowley, B.A., Th.M.
Director of Business & Research Development
Nicolaus Nut Company, INC.
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California Department of Food and Agriculture
ATTN: Geetika Joshi, PhD
1220 N Street
Sacramento, CA 95814

February 27th, 2017

RE: Soil Health Quantification Methods (QM); QM Tool; Almond Industry Biomass

Dr. Joshi:

My name is Rory Crowley. I am a recent graduate of the Almond Board Leadership Program, a visiting columnist for the Chico E-R covering agriculture, and an almond and walnut grower in Northern California for our 700+ acre family farm. I had the pleasure of seeing Secretary Karen Ross and Deputy Secretary Jenny Lester Moffitt at a recent Farm Bill listening session in Chico. During the session, I highlighted three areas of vital importance for the future of agriculture in California: enabling young farmers and ranchers to succeed; finding dynamic solutions for our agricultural biomass; and improving our soil's health.

I emphasized during my comments that these topics are not mutually exclusive. Indeed, they can and should be seen as mutually beneficial to and for one another. Whether conventional or organic, young farmers like myself have a renewed appreciation for sustainable food systems, and understand that the soil's health is vital for human health and longevity, as well as for the health of the environment. I write to you today with reference to the Quantification Methods that the CDFA is currently working on with the ARB. I see the formation of these as vital to tackling the issues surrounding biomass and soil health in California.

Over the last year and a half, I have dedicated a vast amount of time and effort to finding alternative uses for almond biomass, specifically for almond hull and shell. Traditionally, hull has been used for feed for the dairy industry, and shell has largely gone to cogeneration facilities or been utilized as animal bedding. As you know, the dairy industry is in decline and congregation is anything but certain for California's future energy system.

The fact is, the almond industry continues to grow and much of our biomass will not have an outlet. According to the Almond Board of California, hull biomass will increase by 1/3 by 2020 with new acreage coming into production; our shell will also grow by 1/3. I have proposed in multiple forums that we can return much of this biomass back to the orchard in a pre-composted. In so doing, we will not only be taking feed away from the dairy industry, we will also be building soil health by reintroducing carbon to our orchard systems.

The solution is scalable, near-term, and benefits California's environment, as well as the health of our orchards. However, for farmers to have buy-in, there must be incentive. As I perused the possible management practices that will receive incentives through the Initiative, compost application was on the list. While composting is key to building soil health, we must also have the option of non-traditional forms of composting, like infield so-called 'sheet composting.'

Traditional forms of composting are both costly and time consuming. Agricultural sectors in the state have high volumes of organic material byproducts. As stated, the almond industry has high volumes of almond hull and shell, both of which are high carbon and nutrient sources. Certainly much of this biomass will be composted in a traditional manner. However, given the high increase of volume projected over the next five years, I fear that we will not be able to compost all of the material by traditional methods. As such, I am asking the CDFA and the ARB to consider including in-field composting of almond hull and shell within their incentives framework.

Our company, along with many other farms in the area, is experimenting with putting the hull and shell back into the orchard in a pre-composted form. This kind of composting is a sheet composting process, whereby the material is allowed to compost infield, delivering nutrients to our trees and carbon back to the soil over the course of a season. This has a dual effect: first, it is lessening the almond industry's footprint by drawing back our involvement in methane emissions produced from dairy cows; second, it is actively returning nutrients and most importantly carbon back to the soil and building organic matter.

The end goal of my letter to the CDFA is to ask for a wider or alternative definition of 'composting.' The inclusion of almond biomass, or other forms of agricultural biomass, in a pre-composted form, must be included in the Initiatives QM and its related tool. Please consider this request and let me know if I can offer any further assistance to the great work the CDFA is currently undertaking.

Gratefully yours,

March 1, 2017

Scientific Advisory Panel
Office of Environmental Farming & Innovation
c/o Amrith Gunasekara, Ph.D.
California Department of Food and Agriculture
1220 N Street
Sacramento, CA 95814

Submitted via email to: cdfa.oefi@cdfa.ca.gov

Re: Healthy Soils Incentive Program

Dear Chair Cameron:

Please accept the following feedback from Environmental Defense Fund (EDF) in response to the public solicitation for comments on the Healthy Soils Incentive Program (here forward "HS Incentive Program") presented during the Scientific Advisory Panel (SAP) meeting on January 19.

We have two main recommendations for the proposed HS Incentive Program based on the January 19 presentation.

1. **Consider Priority and Focus on Included Practices**
   EDF commends the comprehensive list of practices California Department of Food and Agriculture (CDFA) has included in the HS Incentive Program. In considering the Project Quantification for the included practices, we strongly encourage the prioritization of the practices based on the scientific certainty of their GHG benefits. Practices such as improved fertilizer management to decrease nitrous oxide (N_2O) and hedgerow planting to increase carbon sequestration have reliable and quantifiable net GHG benefits. Other practices, such as conservation tillage and cover crops, are worth encouraging for their overall environmental and soil health benefits, but CDFA and the California Air Resources Board (ARB) should be cautious in the evaluation of their carbon sequestration benefits.[1]

[1] Other management practices tentatively included for incentives: mulching, cropland compost application, grassland compost application, herbaceous wind barriers, vegetative barriers, riparian herbaceous cover, contour buffer strips, field border, filter strip,

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As the SAP recognizes, broadly applied practice-based recommendations for carbon sequestration and greenhouse gas (GHG) mitigation are challenging when trying to address net reductions of GHG emissions throughout California's complex agroecosystems. EDF's team of scientists and scientific partners have investigated various practices on a number of crops which can generate mitigation and sequestration of greenhouse gases on Natural and Working Lands in California and we strongly encourage CDFA to prioritize the use of Greenhouse Gas Reduction Funds (GGRF) to support the implementation of practices that demonstrate consistent net GHG benefits to the environment. We recommend that the ranking and scoring of practices included in HS Incentive Program be prioritized using the latest peer-reviewed science for overall GHG benefits.

While there is mention of the HS Incentive Program accounting for both sequestration and mitigation opportunities, both the presentation and the conversation during the SAP meeting focused on the sequestration potential for natural and working lands as a carbon sink. As EDF mentioned in related comments to ARB on the Draft Scoping Plan, we encourage a review of additional journal articles on the sequestration potential of the practices mentioned in the HS Incentive Program. Further comments on these practices are provided below.

Carbon Sequestration

It is clear that CDFA is thoughtfully considering a variety of agricultural working lands practices that can help mitigate greenhouse gas emissions and/or sequester carbon and we strongly encourage additional research and investigation in this space. Given the state of the science on soil carbon sequestration, recommendations for practices to incentivize that sequester carbon must address potential constraints, as outlined in Powlson et al, 2010.[2] Some of the practices identified in the presentations during the SAP meeting on January 19 (conservation tillage and the use of cover crops) have been shown to improve soil health; EDF supports and promotes the use of such practices to increase soil health as part of the broader Healthy Soils Initiative.[3] However, varied results in the scientific literature indicate that these practices, implemented individually, may actually increase or decrease overall sequestration depending on soil type, geography, and additional interacting practices. Additionally, methods of implementation of these practices varies significantly between row and perennial crops.

Specifically for no-till, early suggestions that this practice could sequester soil carbon have been discredited; it appears that no-till redistributes carbon within the soil profile but does not sequester additional carbon.[4] In addition, it appears that the effects of no-till on nitrous oxide (N_2O) emissions

windbreak/shelterbelt establishment/renovation, riparian forest buffer, and silvopasture. (CDFA SAP Meeting, January 19, 2017, https://www.cdfa.ca.gov/oefi/efasap/docs/Binder-EFSAP-Meeting-01192017.pdf).

[2] Powlson, Whitmore and Goulding, 2010. Soil carbon sequestration to mitigate climate change: a critical re-examination to identify the true and the false. European Journal of Soil Science, Feb 2011, 62, pp.42-55

[3] https://www.cdfa.ca.gov/oefi/healthysoils/docs/HealthySoilsFactSheet.pdf

[4] Powlson, D.S., Stirling, C.M., Jat, M.L., Gerard, B.G., Palm, C.A., Sanchez, P.A. and Cassman, K.G., 2014. Limited potential of no-till agriculture for climate change mitigation. Nature Climate Change, 4(8), pp.678-683

are highly variable, are not clearly expressed unless no-till is maintained for more than 10 years, and in some cases no-till may actually increase N_2O emissions.[5,6]

For cover crops, a recent meta-analysis concludes that cover crops can sequester soil carbon, although the extent of carbon uptake is ultimately limited by SOC saturation.[7] However, increasing soil organic carbon can increase N_2O emissions, leading to uncertain net impacts in GHG emissions.[8] Another recent meta-analysis likewise concluded that the impact of cover crops on N_2O emissions was extremely variable, in some cases leading to a decrease but in other cases leading to an increase in N_2O emissions.[9]

The application of compost to grasslands has shown promise in a long-term trial on a valley grassland and a coastal grassland.[10] However, this is a limited data set in a single microclimate and should not be extrapolated to other grasslands in California. EDF supports the additional trials by the Natural Resource Conservation Service and the California Resource Conservation Districts of compost application on rangelands throughout the state. The results of those studies should be used to update the criteria for crediting practices under the HS Incentive Program.

The one practice where there is significant science to support carbon sequestration is the avoided conversion of rangelands to croplands or urban infrastructure. When grasslands are disturbed, such as when the land is tilled for crop cultivation, a significant portion of the stored carbon oxidizes and decays, releasing CO_2 into the atmosphere. This is carbon which has been stored in the soil over decades by natural cycles of growth and decay. By preserving intact grasslands or rangelands, CDFA can maintain the carbon sequestered throughout the state. This is particularly important as rangeland ecosystems cover approximately half the land area of California.[11, 12]

For all practices included under the HS Incentive Program, we recommend that CDFA and ARB provide the literature sources used to justify the inclusion of these practices, in order to provide agricultural proponents with a full picture of various working lands' sequestration capacity and net carbon benefit over time.

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[5] Kessel, C., Venterea, R., Six, J., Adviento-Borbe, M.A., Linquist, B. and Groenigen, K.J., 2013. Climate, duration, and N placement determine N2O emissions in reduced tillage systems: a meta-analysis. Global Change Biology, 19(1), pp.33-44

[6] Six, J., Ogle, S.M., Conant, R.T., Mosier, A.R. and Paustian, K., 2004. The potential to mitigate global warming with no-tillage management is only realized when practised in the long term. Global change biology, 10(2), pp.155-160.

[7] Poeplau, C. and Don, A., 2015. Carbon sequestration in agricultural soils via cultivation of cover crops–A meta-analysis. Agriculture, Ecosystems & Environment, 200, pp.33-41.

[8] Bos, J.F., ten Berge, H.F., Verhagen, J. and van Ittersum, M.K., 2016. Trade-offs in soil fertility management on arable farms. Agricultural Systems

[9] Basche, A.D., Miguez, F.E., Kaspar, T.C. and Castellano, M.J., 2014. Do cover crops increase or decrease nitrous oxide emissions? A meta-analysis. Journal of Soil and Water Conservation, 69(6), pp.471-482.

[10] Ryals, R., Silver, W.L., 2013. Effects of organic matter amendments on net primary productivity and greenhouse gas emissions in annual grasslands. Ecological Applications, 23(1), pp.46-59.

[11] Brown, S., A. Dushku, T. Pearson, D. Shoch, J. Winsten, S. Sweet, J. Kadyszewski. 2004. Carbon supply from changes in management of forest, range, and agricultural lands of California. Winrock International, for the California Energy Commission, *PIER Energy-Related Environmental Research*. 500-04-068F. 144 p

[12] Havstad, K., D. Peters, B. Allen-Diaz, J. Bartolome, B. Besterlmeyer, D. Briske, J. Brown, M. W. Burnson, J. Herrick, L. Huntsinger. 2009. The Western United States Rangeland: A Major Resource. Grassland: quietness and strength for a new *American agriculture. American Society of Agronomy* 75-94

When developing the Project Quantification criteria for HS Incentive Program practices, we encourage CDFA to rank practices based on their scientific certainty. For most of the sequestration practices, we recommend that CDFA place them at the bottom of the priority list and for practices which permanently mitigate emissions, we recommend that CDFA place them higher on the priority list. Furthermore, to reduce the uncertainty of the GHG benefits of these practices, we encourage additional research be conducted by crop, geography, and soil type to better understand the full GHG benefits of these practices. Finally, CDFA can incorporate findings from California-specific research on these various practices which has been done by UC Davis researchers Martin Burger,[13] Will Horwath, and Chris van Kessel and as summarized in the Nicholas Institute's report series *Greenhouse Gas Mitigation Opportunities*.[14]

Mitigation

Given the complexity and uniqueness of California's diverse agricultural crops, sequestration and mitigation potential throughout the state will vary significantly and cannot be incentivized the same for all California crops which is why we courage a scoring or prioritization methodology over a more traditional quantification approach used for carbon offsets. At the top of this priority list should be practices that address the significant potential for N_2O emissions reductions in California presented by Martin Burger to ARB in June 2016 and more recently by Will Horwath.[15]

In the SAP meeting presentation on January 19, 2017, it is not clear how practices will be prioritized for different California crops or practices. Practices appear to be recommended for all crops and all locations despite the fact that there are significant differences on how practices and implemented and potential outcomes for those different crop. The HS Incentive Program should differentiate, even at a high level, between crops and not recommend all practices to all crops and geographies.

Thought must be given during program design to the potential incentive for each type of practice and crop. The cost and ongoing operation of some practices will require a larger investment over time. Other practices will require a larger investment up front. Practice implementation costs will also depend on acreage and crop type. The initial proposed maximum amount of $25,000 incentive per project will need to be considered in this context.[16]

CDFA should also consider the timing of the implementation of practices. The timing of the implementation of practices may not align well with the timing for the HS Incentive Program. Some practice require multiple seasons to accomplish demonstrated net GHG benefits, while other practices cannot be implemented until the start of the next growing season in over a year's time (compared to

[13] Burger, Martin. "Evaluating Mitigation Options of Nitrous Oxide Emissions in California Cropping Systems." Seminar: Air Pollution Research Seminar Series. California Air Resources Board, 16 June 2016.
[14] Information Support for a Greenhouse Gas Reduction Strategy for California Agriculture. Duke Nicholas Institute for Environmental Policy Solutions, Feb. 2014. Web. 13 Jan. 2017. <https://nicholasinstitute.duke.edu/focal-areas/technical-working-group-agricultural-greenhouse-gases-t-agg/california-project>.
[15] Burger, Martin. "Evaluating Mitigation Options of Nitrous Oxide Emissions in California Cropping Systems." Seminar: Air Pollution Research Seminar Series. California Air Resources Board, 16 June 2016.
[16] Slide 38, https://www.cdfa.ca.gov/oefi/efasap/docs/Binder-EFSAP-Meeting-01192017.pdf

the proposed timeline of project implementation beginning October 2017[17]). Conversely, some practices could be implemented multiple times for different crops on the same field over one year. The Project Quantification criteria should include the prioritization for the timing of the practice benefits.

During the next SAP meeting the program staff should discuss how CDFA, with the support of ARB, intends to determine the prioritization of practices and process for determining the appropriate incentive amount for each practice and crop given differences in GHG benefits, implementation timing and practice costs. We encourage CDFA to incentivize practices that have demonstrated GHG net benefits in California over the timing of the HS Incentive Program funding and recognizes the variation in benefit and therefore incentive value for crops and practices.

2. **HS Incentive Program Implementation**

   Just as with SWEEP, we would encourage the use of technical assistance for growers looking to implement practice changes and submit applications to this incentive program. The success of SWEEP has been attributed in part to the support from groups providing technical assistance with program applications. We encourage CDFA and ARB to describe what, if any, connection exists between reductions through the HS Incentive Program and the Scoping Plan target reductions from natural and working lands.

   Regardless of the chosen quantification methodology and practices, details of planned project verification methods must be outlined early in program development to ensure that the verification method can distinguish between types of practice implemented, time frames for implementation and resulting benefits. The SWEEP model for verification provides project flexibility and is a good example for the developing HS Incentive Program verification.

   Finally, to reduce the data burden on growers, CDFA should consider other programs (like NRCS conservation planning and Irrigated Lands Regulatory Program reporting) that already collects the data necessary to show the practice implementation. That way, growers will not need to duplicate efforts in reporting and can perhaps streamline efforts to demonstrate their stewardship.

We thank CDFA's Scientific Advisory Panel for the opportunity to provide comments. We look forward to continued collaboration with CDFA, ARB and other stakeholders throughout the design and implementation of the Healthy Soils Incentive Program to reward California producers for ambitious and innovative practices that reduce greenhouse gases and sequester additional carbon in California's working lands.

Sincerely,

Robert Parkhurst
Director, Agriculture Greenhouse Gas Markets
Environmental Defense Fund

[17] Slide 43, https://www.cdfa.ca.gov/oefi/efasap/docs/Binder-EFSAP-Meeting-01192017.pdf

Farm Fuel Inc.

organic soil amendment & mustard seed biodiesel

Office of Environmental Farming & Innovation
California Department of Food and Agriculture
1220 N Street
Sacramento, CA 95814

Dear CDFA,

We at Farm Fuel are enthusiastic about the Healthy Soils Program and hope to assist Central Coast farmers in applying for incentive grants in the first round. We were successful in helping Whiskey Hill Farm with their SWEEP grant in 2016, and we enjoy developing beneficial working relationships with farmers to help them meet their goals and to increase the number of farms utilizing sustainable practices in California. The purpose of our business is to provide alternatives to chemical fumigation for both conventional and organic growers. Our mustard seed meal product and anaerobic soil disinfestation (ASD) process are at work on thousands of acres in California already. Enhancing soil microbial action with mustard seed meal and mustard cover crops can lead to increases in soil organic matter, water holding capacity, and general health of soils. We look forward to learning how best to measure soil carbon increases through the Healthy Soils process.

As a comment on the upcoming grant criteria being developed by CDFA at this time, we would like to make a strong recommendation that demonstration farms be developed in 12 distinct regions of the state where farming conditions are different in terms of soil types, predominant weather patterns, and typical crop selections. In the central coast region, a farm should be selected that produces both berries and vegetables, and perhaps includes an orchard.

To enhance the educational component of the demonstration farm, we feel a site should be selected that already includes a classroom or large barn. We have attended many field days in places where nobody could sit down, the (often) internationally renowned researcher had to speak in windy or rainy conditions, and it was difficult to take notes. There is very little take-away from a meeting like this.

In order to scale up proven practices and appeal to new, younger farmers, we propose that demonstration farms be selected to be fully advantageous learning centers with space for microscopes hooked up to digital screens, online access to websites, projectors for powerpoints, blackboards, and all the advantages of a modern classroom/lab with the farm field study area right outside the door. Would educational equipment like this be eligible for funding along with tables and chairs?

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www.farmfuelinc.com info@farmfuelinc.com

We wonder if these demonstration farms need to be family-owned farms or could they be non-profits or farms with long-term leases?

We look forward to following the progress of the Healthy Soils grant process, and we hope many, many farmers in the state can learn to mitigate some of the effects of climate change on their own farms starting this year.

Warmly,

Ellen Farmer
Marketing and Sales Manager
Farm Fuel Inc.

From: Victoria Vegis [victoria@foris.io]
Sent: Thursday, February 16, 2017 9:53 PM
To: CDFA OEFI@CDFA
Subject: Climate Smart Agriculture-Healthy Soils Webinar

Carolyn,
It was an outstanding webinar. It more than validated the foris.io direction of integration of all of the data available for growers to give them the management tools to make efficient decisions. We will use machine learning, big data analytics, current sensor data and IBM's Watson™ to give growers an advantage of having all pertinent knowledge in the palm of their hands.

I was hoping that you might guide me to some resources for some data we are seeking.

- One of the aspects we want to integrate is the current government regulations, requirements, and reports required of growers. Is there a resource where we can pull this information and integrate it into our system
- Is there any data available on how many farms use various forms of data generating equipment, i.e. moisture sensors, drone sensors, etc. We would like to know what number of farms have the various types of data generated.

Also, in the Healthy Soils Initiative that you mentioned in the seminar, nothing is mentioned regarding for-profit small entrepreneurs who are focusing on soil and crop health. Is that an oversight?

Looking forward to your response.

Regards,
Vicki

Victoria [Vicki] Vegis
Founder • President

Enabling "Just Enough • Just In Time" soil and crop Management

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From: Barbara Gemmill-Herren [bg11@mac.com]
Sent: Wednesday, March 01, 2017 3:34 AM
To: CDFA OEFI@CDFA
Subject: comment on Healthy Soils Initiative Framework

Dear CDFA,

I would like to make the following comment on the Healthy Soils Initiative Framework.

As I understand it, you will accept applications of compost as a practice within this framework, but not the making of compost. It seems as if the regulatory framework will only allow large, centralized facilities for producing compost, or operations on a single farm. But it is very difficult for farmers to economically make their own compost. A very green, progressive alternative would be to explore small cooperative compost-making facilities; in Capay Valley where we farm, this has been proposed as a citizen priority. In the discussion today at the CALCan Summit, it was pointed out that such a small operation would have a hard time overcoming water regulations, but surely this can be addressed, a small integrated facility with small scale water treatment is quite possible in a rural community, and could provide a viable rural enterprise.

I hope you may be able to integrate such possibilities into the Framework.

best,

Barbara

Barbara Gemmill-Herren
Vitus and Ovis Vineyard
Capay, California

From: Aaron Gilliam [agcypress@gmail.com]
Sent: Friday, February 10, 2017 1:10 AM
To: CDFA OEFI@CDFA
Subject: Public comment on CDFA Healthy Soils Initiative- Aaron Gilliam

Good afternoon,

I would like to provide public comment on the Healthy Soil Initiative specifically in relation to the Management Practices included for Incentive programs.

Currently the only Grassland management practice on the list of tentatively fundable practices is spreading compost. I support the inclusion of this practice, but think there is a great deal of both soil and ecological benefits that are being missed if we do not address the larger grassland management practices.

Grasslands have already been identified as having a large potential for contribution to the sequestration of atmospheric carbon, and given that their carbon storage is primarily held below ground, it is not at threat of being lost in the event of a wildfire. Currently on public and private lands the management is either grazing, haying, mowing, spraying or non-management. Each of these practices has its own effect on the health of the soil. Depending on how, when and where they are applied they can either maintain the existing health of the soil, they can increase it, or they can decrease it. When the soil is healthy, the plant community diversifies and the plants that grown are able to grow deeper roots and pump more carbon out of the air and into the ground.

Here I would like to focus specifically on the different practices of **grazing** and their varying effects on soil health and thus the health of the grassland plant community that does all the carbon sequestration.

California grasslands have declined in productivity, diversity, and draught tolerance from their historical capacity prior to the introduction of Spanish cattle and sheep operations in the mid 18th century. Along with the spread of non-native annual grasses and reduced soil health that has resulted from overgrazing of our rangelands, further degradation has resulted from breaks in critical ecological cycles that keep wild species of grazing animals moving in dense herds across the grasslands (severe reduction and some extinction of large predators, disruption to migration corridors, reduced flow in seasonal and perennial water resources, etc.)

In the present, our conventional model of grazing ("set stocking") continues to reduce health and productivity of the grasslands soils. So, although they do still function to sequester carbon, they are doing so at an increasingly reduced capacity. There are however other way of managing livestock that mimic the historic movements of dense herd of ruminants that create the soil surface conditions for improving soil health while at the same time fostering increased biodiversity and supporting the perennial native species of grass that hold the greatest capacity for carbon sequestration. These practices (rotational grazing; high density grazing; mob stocking;

management intensive grazing, etc) have the ability to rebuild the health of the soils so they can in turn filter and hold more water, grow healthier deep-rooted grasses, and sequester more carbon. However these regenerative grazing practices require an investment in infrastructure and equipment and they require considerably more labor and management, which is to say that they are far more costly and can not financially compete with the conventional model. The conventional practices set the price of production in the meat industry, and even then, most ranches in California are operating at a loss every year (National Cattlemen's Association).

It is here that the **Healthy Soils Initiative could help turn the tide towards better grazing practices**. Without some sort of financial incentive, these regenerative practices, at whatever scale, will not be economically competitive with the conventional practices that continue to reduce our grasslands capacity to store water and carbon. The research has been done that shows how beneficial these regenerative grazing practices can be (https://vimeo.com/181861077).

Please consider funding the investment in infrastructure, equipment and increase labor required for ranchers and grazers to revolutionize their land management and turn the pervasive story of grassland degredation into a story of large-scale ecological health, abundance and diversity that will play directly into the management of carbon in our atmosphere.

Thank you for taking the time to consider my comments.

Sincerely,

Aaron Gilliam

From: Hollie Hall [hollierhall@gmail.com]
Sent: Thursday, March 02, 2017 4:17 AM
To: CDFA OEFI@CDFA
Subject: Healthy Soils Initiative Comments

To Whom it May Concern,
Regarding the CDFA hosted discussion regarding the Healthy Soils Program framework. My recommendations are to:
1. Provide information regarding local resource use practices with recommendations to fund projects that involve small scale mixed use farms and cannabis farms specifically, that implement holistic property management plans.
2. Secure funding to systematically quantify baseline and improved soil health conditions on farms geographically situated within sub-watersheds. Help those farmers to continue to transition away from potting soil to living soil cultivation systems. AND collect additional climate data at the same time to inform the development of (cannabis!) appellations.
First impressions garnered via the first stakeholder meeting are:
1. The focus is on the implementation of healthy soil practices that store carbon in an effort to offset climate change. This focus specifically supports the type of outdoor full sun food and cannabis cultivation occurring in northern California.
2. While not stated explicitly, the language used led me to believe that the current envisioned project locations will be large-scale food farms. There was no discussion of crop diversity. Crop diversity is an extremely important component to building healthy soils that store carbon as it reduces the need for pesticide and insecticide use and allows for no- till operations.
3. Science appears to be a core value of the program. The metrics presented for quantifying change in soil health over time are (in the presenter's words):
- Soil carbon & total organic matter content
- Bulk density
- Soil texture
- pH
- Species composition
- Soil aggregate stability
- Forage production
- Infiltration rate
- Compaction
- Total N in soil solution
- Wildlife identification

It is my professional opinion that the following soil metrics will provide a more cost effective approach to quantifying soil health:

- Total soil fertility profile

- Percent soil carbon

- Total organic matter content

- pH

- Microbial abundance and species composition

- Water holding capacity

- Nitrogen to Carbon ratio

4. In my opinion, forest management must be a fundable component where farms and forests co-exist. Northern California watersheds are covered with dense unmanaged recovering timberlands that use way too much water, degrade habitat, create fire risk and contain valuable soil building, carbon rich, organic matter.
5. Small farms must be fundable. In Humboldt, Trinity and Mendocino Counties, the cultivated area on most cannabis farms ranges from 1/4 - 1 acre in size. These farms are the bread basket of the Northern portion of the state. While the cultivated area is small, farmers manage adjacent forest and wildlands that require additional funds to manage in a manner that stores carbon rather than creates a potential source of atmospheric carbon via forest fire.

With my best regards,
Dr. Hollie Hall

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Hollie Hall, PhD
Watershed Resources Specialist

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"Anyone who can solve the problems of water will be worthy of two Nobel prizes - one for peace and one for science." John F. Kennedy
~~~~~~~~~~~~~~~~~~~~~~~~~~~~

From: John S. Pomeroy, Jr. [oaklandfarmer@gmail.com]
Sent: Tuesday, February 28, 2017 6:40 PM
To: CDFA OEFI@CDFA
Subject: Re: Healhty Soils Framework-Public Comment Requested

Hello Ms. Uber-

As the president of the East Bay Community Guild (EBCG, a chapter of CA Guild [not affiliated with CA Grange]), I would like to offer some comments on the attached framework (which is amazing!).

On page 8, compost application is addressed, but I didn't see anything about compost *creation*. Understandably, much of the traditional soils information is geared toward rural areas, but much of the food waste that contributes immensely to GHG is created in urban areas (where the food is shipped). By encouraging intelligent metropolitan composting systems, the benefits are multiple: off-gassing of decomposing materials is a large contributor to GHG, but intelligent systems can utilize those gases. Additionally, by composting where the waste is located, less transportation is needed, also reducing GHG from buying fuel for transport. Lastly, through controlled systems, food waste can be utilized for its highest purpose, not just immediately directed to compost. Animals (livestock, birds, worms, fish) can process certain single-source streams most efficiently (with the added benefit of manure/frass/etc).

We would also really like to see an educational component, perhaps curriculum developed (initially) for FFA/4-H, illustrating the importance of healthy soils for conservation practices: life in soil means water in soil (water is life) and water in soil means that less irrigation is needed. With approximately 85% of CA's water consumption is agriculturally driven, healthy soils will maximize irrigation efficiency.

The systems that EBCG is supporting are many, including producers of human goods like cider. Food waste is a big problem in metropolitan areas, but as with most problems, offers a unique opportunity. Please don't hesitate to reach out should you have any questions or would like to talk more.

Thank you for doing this very important work!

Best,

John S. Pomeroy, Jr.
415-439-3798

From: Uber, Amy@CDFA [mailto:Amy.Uber@cdfa.ca.gov]
Subject: Healhty Soils Framework-Public Comment Requested

Dear Stakeholders,

In partnership with the Environmental Farming Act Science Advisory Panel, CDFA's Office of Environmental Farming and Innovation is seeking comments on the Healthy Soils Program framework. Key components of the framework are described in the PowerPoint presentation attached. CDFA will accept comment letters until March 1, 2017. All comment letters should be sent/emailed to cdfa.oefi@cdfa.ca.gov. There will be additional opportunities to provide comments on the Healthy Soils Program following the March 16th, 2017, meeting of the Environmental Farming Act Science Advisory Panel in Sacramento.

Kind regards,

Amy Uber, M.P.S., M.S.

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<image001.jpg>

"We are what we do. Therefore, excellence is not an act, but a habit" -Aristotle

<HSP Framework EFA-SAP Meeting Jan 19 2017.pdf>

From: Megan Kemple [megank@efn.org]
Sent: Tuesday, February 28, 2017 11:39 PM
To: CDFA OEFI@CDFA
Subject: comment on Healthy Soils Incentive Program

Please consider this comment on the Healthy Soils Incentive Program.

I understand that one of the proposed eligibility requirements for funding is that a project must decrease GHG emissions during the project period, as compared to existing practices.
I think it is important to consider whether or not existing projects utilizing climate friendly agriculture practices also reduce GHG emissions and how to incentivize farmers and ranchers to continue the practices they are already utilizing. It seems to me the current proposed design incentivizes those who are implementing them for the first time and not those who have been practicing them previously.

It might be wise to score projects based on the expected GHG reductions of the project, regardless of whether it has been implemented previously.

Thank you for your consideration.

Megan Kemple

From: kmscow@gmail.com [kmscow@gmail.com] on behalf of Kate Scow [kmscow@ucdavis.edu]
Sent: Thursday, February 16, 2017 2:49 AM
To: CDFA OEFI@CDFA
Cc: Scowlab
Subject: Comments on Healthy Soil Initiative

Dear CDFA Staff: Please find here comments from the Kate Scow Soil Microbial Ecology Lab in the Dept of Land, Air and Water Resources, University of California, Davis CA 95616.

Specific Comments on Powerpoint Information Provided on the "Healthy Soils Incentive Program"

SLIDE 7 Framework Proposed for Discussion: Incentives Program - Eligibility:

1. Why does Incentives Program not refer to "increasing soil carbon" or "soil carbon sequestration" in addition to reducing GHG emissions (similar to the first paragraph on Slide 13-Demonstration Programs)?
2. Is there any incentive (e.g. funding level) for adoption for more than one practice?

SLIDE 8 Management Practices Tentatively Included for Incentives:

1. Is there information available on how GHG emissions are affected by these practices?
2. Clarify whether compost addition is a required practice, or is it optional and thus simply one of the options on the list?

SLIDE 10: Frameworks Proposed for Discussion: Incentives Program - Application:

1. Is baseline estimation of GHG emission from a farmer's plot supposed to be conducted in the timeframe between grant solicitation and proposal submission,e.g. one month (Slide 12)?
2. Who is to conduct the "tracking and reporting of net GHG benefits from project activities?" Will it be self-reported by the farmer? If so, what is the plan for verification?
3. Will there be any "ground truth" (field) monitoring or measurements made?
4. What is the status of the "GHG reduction estimate" methodology? Ready to implement?

SLIDE 12: Framework Proposed for Discussion: Incentives Program - Tentative Timeline

1. Slide 12 states that project implementation is to begin by Oct 2017, but Slide 5 states that funds must be encumbered by June 30th 2018. Is this a discrepancy?
2. Slide 12 does not include date that the projects must be finished by, but Slide 5 states that funds must be expended by June 30th 2020. Is there a date by which an incentive project must be finished?

SLIDE 13: Framework Proposed for Discussion: Demonstration Projects:

1. Can you clarify who are the minimal partners required in demonstration projects? The current wording seems unclear as to who the "required" partners are:
2. Do partnerships require an ag operation/industry group to be involved?
3. What is the definition of an "agricultural operation"? Does it only include commercial farms? Or are research farms also possible
4. Are academic partnerships required, or are academics just one of the possible partners?
5. Are the same monitoring procedures going to be used for demonstration and incentive projects?

Need to better differentiate between DEMONSTRATION PROJECTS and INCENTIVE PROGRAMS

- Surprised that the monitoring asked for for the two programs is quite similar even though the Demonstration program is much larger and more extensive than the Incentive program.

Let us know if you need clarification on any of this.
Best, Kate Scow and Scowlab

--
Kate M Scow
Professor of Soil Science and Microbial Ecology (http://scowlab.lawr.ucdavis.edu/)
Director of the Russell Ranch Sustainable Agricultural Facility
(http://asi.ucdavis.edu/rr; http://asi.ucdavis.edu/)
Chair of International Agricultural Development Graduate Group (http://iad.ucdavis.edu/)
Dept. of Land, Air and Water Resources
3236 PES Building, One Shields Ave
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530-752-4632 530-752-1552 (fax)
kmscow@ucdavis.edu

From: Sonja Brodt [sbbrodt@ucdavis.edu]
Sent: Tuesday, February 28, 2017 7:00 AM
To: CDFA OEFI@CDFA
Subject: comments on Health Soils Incentives Program

Please find below a few comments on the Health Soils Incentives Program framework, as outlined in the powerpoint by Geetika Joshi.

I note that cover crops are included as one of the farm management practices under consideration to be included in the incentives program. Cover crops provide a large array of soil building services and are important for healthy agricultural soils. However, if they are to reduce net greenhouse gas emissions under this program, care must be taken to incentivize the most appropriate cover crop practices. For example, a study by Kallenbach et al. 2010 (Agriculture, Ecosystems, and Environment 137: 251-260), has shown that N2O emissions can increase under nitrogen-fixing cover crops, compared to emissions from fallow ground, under certain irrigation conditions. Non-leguminous cover crops may have a different effect. These details should be researched in the literature and clearly laid out in order to ensure that the desired emissions reductions are in fact achieved.

In addition, combinations of practices may be synergistic and should receive additional incentive, or points in selection of project proposals. For example, utilizing cover crops along with improved fertilizer management practices could reduce GHG emissions to a greater extent than either practice alone, through various processes such as uptake of residual nitrogen in the soil, addition of biologically-fixed nitrogen to the farm nutrient budget, thus reducing the need for synthetically-fixed ammonia fertilizer (which is very costly in terms of CO2 emissions), etc.

Cover crops effect change in soil organic matter and long-term carbon storage over time, and stopping use of cover crops may quickly reverse the gains obtained. How will this consideration for stability over time be built in to the farmer incentives program?

Regarding grassland compost application, I understand from my colleagues that there is concern over the potentially negative effect of compost on the balance of native versus invasive or non-native grassland species. I would like to repeat a suggestion from a colleague that such compost applications should be limited to degraded landscapes, already relatively devoid of native species, until research can provide further insights into the effects on less degraded lands.

Finally, I feel that setting aside funds for the demonstration program is an important component of this framework. However, given that the incentive grants to farmers will be relatively few (around 150), relative to the large numbers of farms and ranches in California, and the number of demonstration projects will also be limited to approximately 12 for the whole state, I would suggest considering whether a demonstration component should be built into the farmer/rancher incentives program as well. For example, farm applicants could opt to become a demonstration site and host a certain number of field days, etc. for some additional compensation (or perhaps some cooperation with outreach and extension entities for further publicizing of the project and its results would be a mandatory part of the incentives grant program).

Thank you for considering my input.

Regards,

Sonja Brodt
Coordinator, Agriculture, Resources, and the Environment
UC Sustainable Agriculture Research and Education Program
Agricultural Sustainability Institute at UC Davis www.asi.ucdavis.edu
1 Shields Ave.
Davis, CA 95616
530-754-8547

From: Kelly Schoonmaker [KSchoonmaker@stopwaste.org]
Sent: Thursday, March 02, 2017 2:45 AM
To: CDFA OEFI@CDFA
Subject: Healthy Soils Initiative framework - comments

Thank you for the opportunity to comment on the framework for CDFA's Healthy Soils Initiative. StopWaste is the Alameda County Waste Management Authority, Source Reduction and Recycling Board, and Energy Council. Our mission is to reduce waste in Alameda County and our boardmembers represent the cities in Alameda County, the County, and two sanitary districts.

StopWaste supports CDFA's efforts to create healthy soils and incentivize the use of compost and mulch on rangelands and croplands. Alameda County has ambitious waste reduction goals for organic materials and has adopted several policies and programs to enable County residents and businesses to achieve high diversion of organic materials, including a landfill ban on plant debris a mandatory commercial recycling and composting ordinance. All cities in Alameda County have required the use of compost on all new civic landscape construction since 2010 and most jurisdictions have also required compost on new private development since 2012.

We have reviewed the framework for the Healthy Soils Initiative provided in the presentation materials from the January 19, 2017, meeting as well as the white paper "Compost Application Rates for California Croplands and Rangelands for a CDFA Healthy Soils Incentive Program" (Healthy Soils White Paper). We strongly support the framework and providing incentives to farmers and ranchers to engage in carbon farming. To assist CDFA in making the Healthy Soils Initiative as successful as possible, we submit the following comments and references (at end of email):

Eligibility: **Include land owners and public agencies as eligible entities.**
In both the incentives and demonstration programs, we recommend including land owners and public agencies as eligible entities. Ranchers often lease grazing land, so engaging the land owner of a given site will be critical to successful long-term management of the property. In addition, public agencies, including cities, counties, water districts, and other special districts own rangelands in California. Public entities may be better positioned to take on upfront costs of carbon farm planning and implementation, where an independent rancher or farmer may not have the resources or time. In addition, public agencies have motivation to become early adopters either to work toward the goals stated in their own climate plans or because carbon farming dovetails with other existing agency goals and activities. Public agencies should also be considered as priority demonstration sites because they serve the public by providing education and can model innovative practices.

Co-benefits
StopWaste recommends that CDFA include the following co-benefits to be given consideration during application review:

- **Diversion of organics from landfill to create quality compost:** StopWaste supports the existing recommendation from the Healthy Soils White Paper to use CDFA-OIM and STA as standards for compost used on rangelands as well as the requirement to use compost from a permitted facility. StopWaste encourages CDFA to amend the framework as follows:

- *require* projects to use compost from facilities participating in the US Composting Council's STA program.
- *give preference to* the use of materials listed by the Organic Materials Review Institute (OMRI) in addition to CDFA-OIM, or non-OMRI/OIM compost made from municipal source-separated food and green waste.
- *prohibit* the use of compost from mixed municipal solid waste (MSW) feedstock, which has been shown to be heavily contaminated with glass and plastic and therefore not compatible with agriculture or grazing operations (Stretton-Maycock and Merrington, 2009).

Prioritizing municipal source-separated organic feedstock supports the goals of both AB 1826 and SB 1383 to divert organics from landfill. This recommendation also supports AB 1045 requiring CDFA and other state agencies to work together to support composting facility development and compost markets to meet the state's organics diversion goals.

- **Improved Water Quality:** Application of compost has been shown to reduce runoff and sediment and improve water quality (Crohn et al., 2013, Faucette et al., 2006, Faucette et al., 2008). During previous workshops, some members of the EFA-SAP have expressed concern over the nutrient migration potential of compost. However, research has shown that compost reduces volume of runoff, traps sediment, and prevents erosion. This research has been supported in practice by CalTrans District 5 where compost has been used for erosion and sediment control during and post construction (Scott Dowlan, personal communication). Compost blankets and berms have been found to be more effective than straw wattles, hydroseeding, and bonded fiber matrix at improving water quality by reducing runoff and erosion, and are commonly used on 2:1 slopes, with evidence of success at 1:1 slopes as well.

Evaluation of compost performance

We appreciate the work and research that has gone into developing the Healthy Soils incentive framework and developing the application rates. For example, CDFA has been very conscientious about referring to California-specific or Mediterranean climate-based studies and acknowledging the diversity of landscapes throughout the state. Similarly, StopWaste encourages CDFA to be equally conscientious about drawing on results of research that studies the use of compost only, rather than developing practices based on studies on the application of manure, biosolids, or synthetic fertilizer. Manure and biosolids are types of feedstocks for compost, as is mentioned in the Healthy Soils White Paper. Feedstocks are inherently unstable; through the composting process, the material becomes stable compost, and is a different material from its feedstock. Therefore, it performs differently when applied to soil, and should be evaluated independently from fertilizer or raw feedstocks.

Thank you again for developing this program and for providing the opportunity to comment. We value the process set up by CDFA and look forward to continuing to work with you to advance the Healthy Soils Initiative. Through developing our own compost programs, our agency has collected a significant amount of research on compost use, and we are happy to share with CDFA for the development of the Healthy Soils Initiative.

Sincerely,

Kelly Schoonmaker, RLA, LEED AP
Program Manager | StopWaste
1537 Webster St. | Oakland, CA 94612
p: (510) 891-6510 | f: (510) 893-2308

References:

California Department of Transportation. (2008). *Roadside Erosion Control and Management Study 3 Year Summary Report 2005-2008.* CTSW-RT-08-067-01-1.

Crohn, D., et al. (2013) Composts as post-fire erosion control treatments and their effect on runoff water quality. *Transactions of the ASABE*, 56(2): 423-435.
Faucette, B. et al. (2006). Vegetation and soil quality effects from hydroseed and compost blankets used for erosion control in construction activities. *Journal of Soil and Water Conservation*, 61(6): 355-362.
L.B. Faucette, K.A. Sefton, A.M. Sadeghi, and R.A. Rowland. (2008). Sediment and phosphorus removal from simulated storm runoff with compost filter socks and silt fence**.** *Journal of Soil and Water Conservation*, 63(4):257-264
Stretton-Maycock, D. and G. Merrington (2009). *The use and application to land of MBT compost –like output – review of current European practice in relation to environmental protection.* Science Report – SC030144/SR3 Environment Agency, Bristol UK.

CONSERVATION PARTNERSHIP
ACRCD • NRCS

ALAMEDA COUNTY RESOURCE CONSERVATION DISTRICT

3585 GREENVILLE RD. STE 2
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PHONE: 925-371-0154
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February 28, 2017

Secretary Karen Ross
California Department of Food and Agriculture
1220 N Street
Sacramento, CA 95814

Dear Secretary Ross:

We commend CDFA for its continued leadership and thoughtfulness in building its Healthy Soils Program. The undersigned producers and organizations have valued our continued partnership to create an impactful program to support innovations in deploying climate-smart strategies across CA agricultural lands. We have been working for many years on building the essential on-the-ground capacity and projects that have reduced atmospheric greenhouse gases, improved soil health, increased soil carbon and created resilience at the farm and watershed scale – the core goals of the Healthy Soils Program.

We offer the following recommendations for CDFA's latest proposed framework for the Healthy Soils Program. These recommendations are gleaned from our experience working on soil health and on-farm conservation projects, and a set of recent meetings with practitioners across CA. We look forward to continuing to work with CDFA staff on further development and launching of this ground-breaking partnership.

Recommendation #1: The Program should leverage existing healthy soils and farm conservation efforts at the local level.

NRCS Conservation programs must be leveraged to ensure a successful Program; without NRCS technical assistance and financial support (EQIP, etc), Program-funded projects will be difficult to accomplish and unlikely to yield measureable carbon/GHG benefits for State policymakers, including ARB. To that end, the Program should support projects that leverage federal (NRCS), state and local resources, and help create long-term funding streams for projects.

Resource Conservation Districts (RCDs), UC Cooperative Extension, farm advisors and nonprofits working at the local level with producers and land managers are essential in ensuring successful projects that meet GGRF requirements and ultimately make the Program successful. These organizations have long-term working relationships and established trust with producers and local partners; the technical expertise required to effectively plan, execute, and evaluate projects for their climate and soil carbon impacts, and decades of experience in on-the-ground farm conservation and land management. Technical assistance provided by these organizations should be prioritized supported by the Program. In addition, the Program should support activities that build the long-term capacity of local partnerships to scale their efforts.

Lastly, we urge CDFA to make public landowners and leased lands eligible for the Program, including incentives. Public agencies, water districts, and some RCDs own and manage their own farms/ranches and those properties should be eligible for support through the Program.

Recommendations #2: The Program should provide support, through incentives and technical assistance, for the adoption of ALL climate-beneficial NRCS conservation practices, and other climate-beneficial practices supported by research.

Technical assistance is one of the key components of effective farm conservation programs. There are numerous GGRF-funded programs that recognize the importance of technical assistance, including but not limited to SWEEP, and provide direct support for such activities. The Program should provide grants for the provision of technical assistance to enable producers to develop, implement, and measure the soil carbon and GHG benefits of on-farm projects.

CDFA should include ALL NRCS practices included in COMET-Planner for support through Program incentives. This includes agroforestry practices, grazing management, and compost applications to croplands, among many others. In addition, other practices where research supports soil carbon and/or GHG benefits should also be included, such as compost application to grazed grasslands and riparian restoration. We strongly recommend using COMET-Planner as the quantification platform for the Program, including investment in its further refinement to support the diversity of crops, climates and soils in California, as needed.

Recommendation #3: The Program should incentivize and prioritize projects that develop whole-farm conservation plans, including a Conservation Plan or Carbon Plan as defined by NRCS, and projects that include multiple practices and multiple environmental benefits, as appropriate and feasible for a given farm or ranch.

CDFA should encourage a whole-farm perspective in identifying soil-based GHG reduction and sequestration opportunities on farm, and fund multiple practices, as appropriate on each farm, to optimize the benefits of a whole-farm approach. To that end, CDFA should use the whole-farm GHG planning tool, COMET-Planner, to quantify the anticipated benefits of incentivized practices, stacking practices wherever feasible. Incentivized practices that may not be included in COMET-Planner should be supported with research results, including peer-reviewed models as appropriate.

Current carbon farming and climate smart agricultural efforts being led by RCDs, land trusts and producers across CA bring significant resources, expertise, and shovel-ready projects to the Program. In many regions, local partnerships have, or soon will, establish carbon farming programs, with the goal of significant participation of local farms and ranches in a scaled, long-term program (not merely single, one-time projects). The Program, particularly support for Demonstration, should prioritize projects that have the verified potential for significant impact at the regional scale and are part of an effort to scale results, in terms of soil carbon increases, GHG reductions, and producer participation.

Recommendation #4: CDFA should set a funding level cap for Incentives that provides ample support for practice adoption and to maintain those practices for the project term.

The current cap of $25,000 per project application for incentives should be increased to at least $50,000 to allow for the implementation of practices at large enough scale so that the soil carbon/GHG impact and other co-benefits realized encourage producers to maintain and expand those practices. In addition, a

higher cap will allow for the implementation of multiple practices as defined by a whole-farm conservation plan, which will have additional benefits due to the synergistic effect of those practices.

Recommendation #5: CDFA should provide more specific details on the goals and intended outcomes of the Demonstration program, with an emphasis on supporting innovation in producer participation, practice adoption, and scaling adoption, including overcoming current barriers to adoption.

The Demonstration component of the Program should be clear on what it intends to demonstrate. Proposals for demonstration projects should focus on increasing the adoption rates of soil health practices. Any program focused on agricultural land and soil management at its core must address adoption and maintenance of practices. The Program should serve as a laboratory to test barriers and opportunities/strategies to deepen and broaden adoption of practices. We would strongly suggest the following are essential components of a statewide program whose primary goal is to achieve measureable and significant carbon sequestration and GHG reduction and lead to broad adoption of climate-beneficial practices to reach the State's climate goals.

- Demonstrate the ability to achieve measureable and ongoing carbon sequestration and GHG reduction.

- Demonstrate the capacity to scale adoption across diverse regions, farm systems, and sizes of operations, while addressing current barriers to adoption, including the following:

    - Lack of experience with a given practice or set of practices and the on-farm beneficial impacts such practices have for production and other on-farm goals;

    - Lack of technical assistance and support for producers to identify and assess practices, to implement them successfully, and to monitor/evaluate/manage practices over time. This is especially true with respect to carbon and climate-related practices that require longer project duration and measurement and,

    - Lack of sufficient cost supports for practice project development, implementation, and monitoring. While EQIP can provide up to 50% of the cost for practice implementation covered under that USDA-NRCS Program, in many cases the funding gap is too large for a producer to agree to move forward. This is where the Incentives portion of the HSI Program can be most useful.

In addition, Demonstration projects should support a whole farm system approach to climate change mitigation and improving soil health. Eligible entities should include those with a track record of working successfully with agricultural producers on soil health and conservation projects. Projects should include a long-term outreach and education strategy, an estimation of the potential number of stakeholders reached, and a clear methodology for project evaluation. Priority should be given to projects that implement multiple practices on a given farm/ranch and those that will define strategies for scaling up.

Recommendation #6: CDFA should set a carbon sequestration goal for the Program that is commensurate with the preeminent position of California in global agricultural production, education and research.

As a first step, California could sign on to the aspirational Four Per Thousand (4PT) Initiative of the French Ministry of Agriculture. This non-binding Initiative recognizes the essential role of terrestrial carbon sequestration in addressing global climate change, and challenges agriculture globally to engage as a key participant in the solution of this unprecedented global crisis. By positioning itself in the global 4PT context, CA agriculture lends enhanced credence to the soil as a key component of the climate change solution and offers the State a clear path to meet its 2030 and 2050 GHG reduction goals. It also positions California agriculture to reap the production, water, environmental, and economic benefits of carbon rich soils in both the near and long term.

Program Design Questions

Below, we raise questions regarding the Program's design and requirements that we feel are important to clarify as the Program is finalized.

Project Costs: The Program should provide further guidance on the range of project costs eligible for support, including through the Incentives portion of the Program. Of particular importance are costs associated with Program requirements for baseline and project monitoring, permitting and consultation, and the provision of prevailing labor wages.

CEQA: What will the Healthy Soils Program require in terms of CEQA compliance for proposed projects? Will CDFA address CEQA through a programmatic negative declaration?

Project Monitoring: The Program should provide guidance on project monitoring requirements, including the type and duration of monitoring for soil carbon and GHG reductions. Monitoring could greatly increase project costs, depending upon its extent.

Sincerely,

Katherine Boxer
Executive Officer
Alameda County RCD

Carbon Cycle Institute

February 28, 2017

Secretary Karen Ross
California Department of Food and Agriculture
1220 N Street
Sacramento, CA 95814

Dear Secretary Ross:

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We offer the following recommendations for CDFA's latest proposed framework for the Healthy Soils Program. These recommendations are gleaned from our experience working on soil health and on-farm conservation projects, and a set of recent meetings with practitioners across CA. We look forward to continuing to work with CDFA staff on further development and launching of this ground-breaking partnership.

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NRCS Conservation programs must be leveraged to ensure a successful Program; without NRCS technical assistance and financial support (EQIP, etc), Program-funded projects will be difficult to accomplish and unlikely to yield measureable carbon/GHG benefits for State policymakers, including ARB. To that end, the Program should support projects that leverage federal (NRCS), state and local resources, and help create long-term funding streams for projects.

Resource Conservation Districts (RCDs), UC Cooperative Extension, farm advisors and nonprofits working at the local level with producers and land managers are essential in ensuring successful projects that meet GGRF requirements and ultimately make the Program successful. These organizations have long-term working relationships and established trust with producers and local partners; the technical expertise required to effectively plan, execute, and evaluate projects for their climate and soil carbon impacts, and decades of experience in on-the-ground farm conservation and land management. Technical assistance provided by these organizations should be supported by the Program. In addition, the Program should support activities that build the long-term capacity of local partnerships to scale their efforts.

Lastly, we urge CDFA to make public landowners and leased lands eligible for the Program, including incentives. Public agencies, water districts, and some RCDs own and manage their own farms/ranches and those properties should be eligible for support through the Program.

Recommendations #2: The Program should provide support, through incentives and technical assistance, for the adoption of ALL climate-beneficial NRCS conservation practices, and other climate-beneficial practices supported by research.

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CDFA should include ALL NRCS practices included in COMET-Planner for support through Program incentives. This includes agroforestry practices, grazing management, and compost applications to croplands, among many others. In addition, other practices where research supports soil carbon and/or GHG benefits should also be included, such as compost application to grazed grasslands and riparian restoration. We strongly recommend using COMET-Planner as the quantification platform for the Program, including investment in its further refinement to support the diversity of crops, climates and soils in California, as needed.

Recommendation #3: The Program should incentivize and prioritize projects that develop whole-farm conservation plans, including a Conservation Plan or Carbon Plan as defined by NRCS, and projects that include multiple practices and multiple environmental benefits, as appropriate and feasible for a given farm or ranch.

CDFA should encourage a whole-farm perspective in identifying soil-based GHG reduction and sequestration opportunities on farm, and fund multiple practices, as appropriate on each farm, to optimize the benefits of a whole-farm approach. To that end, CDFA should use the whole-farm GHG planning tool, COMET-Planner, to quantify the anticipated benefits of incentivized practices, stacking practices wherever feasible. Incentivized practices that may not be included in COMET-Planner should be supported with research results, including peer-reviewed models as appropriate.

Current carbon farming and climate smart agricultural efforts being led by RCDs, land trusts and producers across CA bring significant resources, expertise, and shovel-ready projects to the Program. In many regions, local partnerships have, or soon will, establish carbon farming programs, with the goal of significant participation of local farms and ranches in a scaled, long-term program (not merely single, one-time projects). The Program, particularly support for Demonstration, should prioritize projects that have the verified potential for significant impact at the regional scale and are part of an effort to scale results, in terms of soil carbon increases, GHG reductions, and producer participation.

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Recommendation #5: CDFA should provide more specific details on the goals and intended outcomes of the Demonstration program, with an emphasis on supporting innovation in producer participation, practice adoption, and scaling adoption, including overcoming current barriers to adoption.
The Demonstration component of the Program should be clear on what it intends to demonstrate. Proposals for demonstration projects should focus on increasing the adoption rates of soil health practices. Any program focused on agricultural land and soil management at its core must address

adoption and maintenance of practices. The Program should serve as a laboratory to test barriers and opportunities/strategies to deepen and broaden adoption of practices. We would strongly suggest the following are essential components of a statewide program whose primary goal is to achieve measureable and significant carbon sequestration and GHG reduction and lead to broad adoption of climate-beneficial practices to reach the State's climate goals.

- Demonstrate the ability to achieve measureable and ongoing carbon sequestration and GHG reduction.

- Demonstrate the capacity to scale adoption across diverse regions, farm systems, and sizes of operations, while addressing current barriers to adoption, including the following:

    - Lack of experience with a given practice or set of practices and the on-farm beneficial impacts such practices have for production and other on-farm goals;

    - Lack of technical assistance and support for producers to identify and assess practices, to implement them successfully, and to monitor/evaluate/manage practices over time. This is especially true with respect to carbon and climate-related practices that require longer project duration and measurement; and,

    - Lack of sufficient cost supports for practice project development, implementation, and monitoring. While EQIP can provide up to 50% of the cost for practice implementation covered under that USDA-NRCS Program, in many cases the funding gap is too large for a producer to agree to move forward. This is where the Incentives portion of the Program can be most useful.

In addition, Demonstration projects should support a <u>whole farm system approach</u> to climate change mitigation and improving soil health. Eligible entities should include those with a <u>track record of working successfully with agricultural producers</u> on soil health and conservation projects. Projects should include a <u>long-term outreach and education strategy</u>, an estimation of the potential number of stakeholders reached, and a clear methodology for project evaluation. Priority should be given to projects that implement <u>multiple practices</u> on a given farm/ranch and those that will define strategies for scaling up.

<u>Recommendation #6</u>: <u>CDFA should set a carbon sequestration goal for the Program</u> that is commensurate with the preeminent position of California in global agricultural production, education and research.

As a first step, California could sign on to the aspirational Four Per Thousand (4PT) Initiative of the French Ministry of Agriculture. This non-binding Initiative recognizes the essential role of terrestrial carbon sequestration in addressing global climate change, and challenges agriculture globally to engage as a key participant in the solution of this unprecedented global crisis. By positioning itself in the global 4PT context, CA agriculture lends enhanced credence to the soil as a key component of the climate change solution and offers the State a clear path to meet its 2030 and 2050 GHG reduction goals. It also positions California agriculture to reap the production, water, environmental, and economic benefits of carbon rich soils in both the near and long term.

Program Design

Below, we raise questions regarding the Program's design and requirements that we feel are important to clarify as the Program is finalized.

Project Costs: The Program should provide further guidance on the range of project costs eligible for support, including through the Incentives portion of the Program. Of particular importance are costs associated with Program requirements for baseline and project monitoring, permitting and consultation, and the provision of prevailing labor wages.

Project Monitoring: The Program should provide guidance on project monitoring requirements, including the type and duration of monitoring for soil carbon and GHG reductions. Monitoring could greatly increase project costs, depending upon its extent.

Sincerely,

Torri Estrada, Executive Director, Carbon Cycle Institute

Rebecca Burgess, Executive Director, Fibershed

Karen Buhr, Executive Director, California Association of Resource Conservation Districts

Sherman A. Boone, Board Chairman, East Stanislaus RCD

Bob Reid, President and CEO, Tejon Ranch Conservancy

Sopac Mc Carthy Mulholland, President and CEO, Sequoia Riverlands Trust

Chris Coburn, Executive Director. Santa Cruz RCD

Leigh Sharp, Executive Director, Napa RCD

Patricia Hickey, Executive Director, Mendocino RCD

Katherine Boxer, Executive Officer, Alameda RCD

Heather Nichols, Executive Director, Yolo RCD

Nancy Scolari, Executive Director, Marin RCD

Kellyx Nelson, Executive Director, San Mateo RCD

Brittany Jensen, Executive Director, Gold Ridge RCD

Anna Olsen, Executive Director, Cachuma RCD

Kara Heckert, Executive Director, Sonoma RCD

Wendy Millet, Director, Tomkat Ranch Educational Foundation

Jamison Watts, Executive Director, Marin Agricultural Land Trust

Lani & John Estill, Owners, Bare Ranch

Marie Hoff, Owner, Full Circle Wool

Sally Fox, Owner, Vreseis Farm

Arianna and Casey Strozzi, Owners, Casari Ranch

Kelly Dunaj, Owner, Spring Coyote Ranch

Alexis and Gillies Robertson, Owners, Skyelark Ranch

Stephanie Moreno, Executive Director, Guadalupe-Coyote RCD

Elisa Noble, Executive Director, Placer RCD

Susanna Kirchner, Project Manager, Inland Empire RCD

Gabrielle Mann, Owner, Mann Family Farm

Erin Axelrod and Kevin Bayuk, Owners, LIFT Economy

Jim Jensen, Owner, Tomales Sheep Company

Pete Lassotovitch, President, Sierra RCD

Sheryl Landrum, Executive Director, RCD of Greater San Diego County

Jacquelynne Crabb, District Manager, Coastal San Luis RCD

Robby Avilla, President, Valley Farm Alliance

Jean Okuye, President, East Merced RCD

Sandra and Rob Guidi, Owners, Black Rock Ranch

Ellen Farmer, Marketing and Sales Manager, Farm Fuel Inc.

Scott Stone, Owner, Yolo Land & Cattle Co.