

CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE (CDFA)
ENVIRONMENTAL FARMING ACT SCIENCE ADVISORY PANEL

November 9, 2023
9 AM to 2 PM PST

MEETING MINUTES

Panel Member in Attendance

Keali'i Bright, DOC
Don Cameron, Terranova Ranch (Participating Remotely)
Scott Couch, CalEPA, State Water Resources Control Board,
Vicky Dawley, Tehama RCD (Vice Chair)
Leonard Diggs, Pie Ranch
Dr. Jeff Dlott, PhD, LandScan (Chair)
Amanda Hansen, California Natural Resources Agency
Erik Porse, PhD, California Institute for Water Resources
Judith Redmond, Full Belly Farm

Absent:

Dr. Michelle Buffington, PhD, CalEPA, California Air Resources Board
Don Cameron, Terranova Ranch

State Agency Staff and Presenters

Virginia Jameson, CDFA
RaeAnn Dubay, Natural Resources Conservation Service
Amanda Hansen, CNRA
Dr. Tawny Mata, PhD, CDFA
Adam Moreno, California Air Resources Board
Josh Staab, CDFA
Michael Wolff, CDFA

AGENDA ITEM 1 – EFA SAP Call to Order, Roll Call and Approval of the Minutes

The public meeting of the Environmental Farming Act Science Advisory Panel was called to order at 9 a.m. by Chair Dlott. Staff from CDFA and the Panel members introduced themselves.

Chair Dlott led the roll call. Roll call was taken, and a quorum was present.

Chair Dlott moved to pass the Augst 10, 2023, minutes. Moved by Member Dawley and seconded by Member Diggs. The minutes were presented and unanimously approved.

Brian Kolodji made a public comment request for a recording of the EFA SAP Meeting minutes.

AGENDA ITEM 2 – CDFA Office of Environmental Farming and Innovation Updates

Dr. Tawny Mata, Director of the Office of Environmental Farming & Innovation (OEFI), provided an overview of recent events within the office. Dr. Mata provided an update on the Direct-to-Producer Healthy Soils Program Solicitation.

Dr. Mata announced the good news that HSP block grant awards have been awarded. Awards for the AMMP and Dairy Plus awards are also close to being announced.

OEFI is also on the search for a lead Technical Assistance Program coordinator, Dr. Mata said. The hope is to find a candidate who has experience providing technical assistance.

Some bad news Dr. Mata announced was the unexpected reduction in funding for the HSP direct-to-producer solicitation. Due to a legislative council drafting error, a \$40 million reduction had to be made to the HSP projected solicitation.

Dr. Mata and the HSP team are moving quickly to work out the details for the next grant cycle for the HSP. As a result of the delay, OEFI has had to move back its next solicitation to January. A final date will be announced as soon as possible on the HSP website.

There were no questions from the panel.

Chair Dlott opened questions on the topic to the public.

Mr. Kolodji asked for clarification on the numbers available for the SWEEP, and whether the reduction to HSP would impact SWEEP. It would not.

Chair Dlott clarified the process for the RGA and how it'll be ready for the next solicitation well ahead of time.

Krista Marshall posted a question online, "You mentioned priority for SDFR and multiple practices in the healthy soils. Is there less funding available to those pools?" Dr. Mata clarified there will be less funding for everyone, because the pool of funds has been reduced, but first-time applicants (people who were not awarded previously) and SDFRs will still be prioritized. The RGA will be posted soon.

AGENDA ITEM 3 – Federal Funding Opportunities for Climate Smart Agriculture

RaeAnn Dubay from the Natural Resources Conservation Service provided an update on federal funding opportunities for California climate-smart agriculture. Ms. Dubay provided insight on implementing climate mitigation practices. Ms. Dubay noted the strategy focuses on mitigation, through carbon sequestration and greenhouse gas emission reduction.

Ms. Dubay presented the CSP implementation and how the IRA California Investment will look over the next four years. It doubles the financial assistance over the next four years. It's a massive benefit for producers on the landscape and her team will do everything they can to get those dollars in the ground.

Ms. Dubay went over the tenets of the climate-smart focus – the activity must result in a direct impact on net GHG emission reductions. NRCS must have a science-based methodology for quantitatively estimating mitigation benefits using available NRCS activity data.

Ms. Dubay went over the 15 additional practices that will be added for 2024, where energy savings can lead to emission reduction. Practices were also removed from the list as well. Upland Wildlife habitat management was removed but integrated into other practices.

Direct measurements are necessary in many NRCS practices and is available on the NRCS website to get detailed information on the tool that the agency is using.

Ms. Dubay went over the Environmental Quality Incentives Program (EQIP), which is a technical and financial assistance program to address resource concerns. Other program delivery tools include the Conservation Stewardship Program, and the Regional Conservation Partnership Program.

Deadlines for these programs were also provided. EQIP in February 2024, CSP in March 2024, and RCPP is still to be determined.

Over 50 NRCS practices focused on mitigation under EQIP. 100 further enhancements are available under CSP.

Ms. Dubay presented a table of mitigation categories, including forest health, forestry, and livestock, among many others. Dubay acknowledged that communication can be daunting, so the agency is working more closely with producers to make sure they understand all the nuances of the programs.

Ms. Dubay presented opportunities to accelerate conservation in California through CSP. Over the next 3 years, the funding will grow to \$30 million available annually. Minimum payment from \$1,500 to \$4,000. Ms. Dubay encouraged those who are interested in the program, to reach out to her and her team.

Staffing is a challenge, Ms. Dubay noted. New positions are being filled, though it takes time to onboard that many people. It's hoped an announcement will be made about staffing by the end of 2023. As the funding continues to increase, Ms. Dubay recognized how important it will be to fill open positions quickly. The agency is working on providing more flexibility in the NRCS website.

Member Diggs wondered if there were opportunities for partnerships with the CDFA. Ms. Dubay noted a MOA with CDFA along with other invested organizations to build capacity for the technical assistance piece of NRCS practices. CDFA has many companion programs that work well with NRCS, so there will be opportunities to create new standards for practices on the farm. Ms. Dubay also noted a strong partnership with University of California Division of Agriculture and Natural Resources. Ms. Dubay believes strong communication will be key to improving and maintaining these partnerships moving forward.

How are technical assistance providers diversifying in California, Member Diggs asked. On a federal level, she noted there is overlap between applicants applying at the state and federal level.

How long does it take to hire and train new TSPs, Member Redmond asked. Technical Service providers are not NRCS employees, more like contractors. As a true definition as a TSP, there is a certification process, Ms. Dubay said. Ms. Dubay was unable to speak to how long the certification process takes because it can vary from one to the other, depending on the type of technical assistance provided.

Member Porse noted a potential bottleneck is to become a certified TSP. He sought clarification on whether there is a plan to boost those numbers internally and externally. Ms. Dubay acknowledged the clarification and said that is the plan.

Member Dawley asked how the funding interacts with the funding already disbursed, can applicants who already get funding get funded again. The answer Ms. Dubay provided was, "yes." Ms. Dubay noted

there are ranked practices if applicants have a core practice, facilitating practices can be folded in to support the implementation of a project.

Member Hansen asked what the NRCS/USDA defines as “conservation,” and if she thought there were opportunities to align messaging. Ms. Dubay noted that it’s important to “keep working lands working.” National security includes healthy and vibrant environments and agriculture, and everyone can enjoy the benefit of healthy soils, air quality, etc.

Chair Dlott asked how a process could be created to streamline the priority of ag practices and how the panel could help. Ms. Dubay asked if there are practices that could be re-prioritized, it’s a matter of figuring out what that mechanism is, and whether there would be another avenue. Mr. Dlott also asked if there are opportunities to adopt language that focus on eco-system services. Ms. Dubay knows the ecosystem services language is being inserted into certain departments, not necessarily in the NRCS yet. The shift is out there, but it’s unknown how NRCS is adopting language moving forward.

Chair Dlott opened the discussion to public comments.

Public comment was provided by Ben King, who noted there needs to be equity and to make sure local RCDs are properly funded as budgets constantly change. He noted the versatility of water irrigation, since water distribution is so important to healthy soils. He noted that the industry groups and PCAs to focus on soil functionality as well as health. Ms. Dubay recognized that NRCS is going to be working with producers to maintain these practices after the initial project completion. Ms. Dubay recognizes that the local connection is vital to the creation and funding of these types of practices and programs.

Arohi Arja asked two questions: How do we get in touch with you if we’d like to chat about additional CSP opportunities? Can you share if NRCS collects information/data on the climate impacts of their EQIP/CSP grants? For example, how many GHG emissions were reduced/avoided/sequestered due to a soil health grant? If NRCS collects that data, where can the public access that information for analysis purposes? Ms. Dubay provided her contact information as well as several online resources available to the public on the USDA NRCS website. Ms. Dubay did note that it is important that applicants include their reduction plans.

Beth Sue-Powers asked You mentioned Food Infrastructure is considered national security priority. What about petro-based fabrics vs Plant&animal-based fiber infrastructure. This should be National Security issue, too. As there is direct impact on EcoSystems Services/climate mitigation/healthy soils, etc. Is migrating to agricultural-based sustainable fibers & materials part of the discussions & grants? Ms. Dubay mentioned to Beth she would reach out to her directly with a response to her question.

AGENDA ITEM 4 – Kickoff for CDFA’s Climate Strategy for Agriculture

CDFA Deputy Secretary for Natural and Working Lands, Virginia Jameson provided a brief overview of the kickoff for CDFA’s new climate strategy for agriculture, introducing presenters Adam Moreno, and member Amanda Hansen.

AGENDA ITEM 5 – Agriculture in the CARB Scoping Plan

Adam Moreno from the California Air Resources Board provided a remote presentation about CARB’s Scoping Plan as it related to state agriculture.

Adam Moreno provided an overview of carbon inventory of natural and working lands.

Modeling and methods are incorporated into the modeling and will account for rangelands covered.

Dr. Moreno expanded on how CARB is working to quantify statewide carbon dynamics (both where climate action is and isn't occurring). Mr. Moreno explained scenarios and how the CARB plan was accounting for them and how those dynamics change and how modeling for those scenarios must be accounted for to better understand the cost of inaction.

Carbon dynamics must also be projected into the future to account for them across the variety of ecosystems present in California.

Mr. Moreno explained why modeling is so important. Modeling estimates future trajectory of sources and sinks within the NWL sector; assesses how action may change outcomes; cumulative impacts; and custom scenarios, and then provides actions based on the various scenarios, which include global climate models, RCPs, business-as-usual, and alternative management scenarios. Mr. Moreno provided a breakdown of the Scoping Plan Scenario criteria, which included practices, acres and year, as well as the Scoping Plan costs associated with the practice.

Mr. Moreno also provided charts that track ecosystems associated with various scenarios on California NWLs, from the past well into the future. The charts provided a forecast for the performance of these NWLs and their carbon stocks well into the future.

Future developments were also presented for annual agriculture, perennial agriculture, forests, shrublands, and grasslands. However, there are limitations for monitoring and modeling, Mr. Moreno said. Access to empirical data is a challenge, because all inventory and data gathering is based on empirical data. Large scale modeling and monitoring is also a challenge, as the current science is focused on the farm scale in addition to a scientific culture needing to shift to be climate policy relevant. Open tools, code and data tend to be restricted to a few groups globally, limiting communication and innovation at a state-level to make changes to the models quickly.

Member Diggs asked for clarification about the data and field analyses to be at a point to do the correlation, but he wondered if Mr. Moreno was skeptical of that. Mr. Moreno said it depends on the scale and metric being measured. Global mapping can be slightly inaccurate, so getting measurements specific to California can be difficult. Most remote measuring is focused on carbon stocks.

Member Redmond asked about the history of the report and how efforts are going. Mr. Moreno deferred to Deputy Secretary Jameson, who noted there has been progress, but the measuring is still ongoing as projects are completed.

Ben King provided public comment to make recommendations on carbon capture can work in natural lands. He also suggested folks look at current modeling as it applies to watershed levels.

Brian Kolodji illustrated a desire to see specific numbers that he's more familiar with and asked for corroboration on numbers he's seen about tree carbon sequestration he's seen online. He cited the amount of carbon captured, according to the California Department of Energy. Mr. Kolodji cited information he found online, and surmises that natural working lands can capture enough carbon to reverse global warming. He wondered why these aren't being included in the CARB Scoping Plan.

Mr. Moreno offered Mr. Kolodji a response: CARB's objective is not to maximize carbon in NWL, because we depend on these lands for a host of things, Mr. Moreno said. One of those services is carbon storage.

A public comment from the online audience was provided, asking "Given your boundaries are statewide, and our agricultural system in California is global both in its crop exports as well as imports for production (e.g., amendments, equipment, fuel, mineral resource extraction used to create battery, etc.). How do you think these models, estimates, carbon neutrality goals might change?" Mr. Moreno addressed this question, stating he wasn't sure how much it would change the overall loss in atmosphere, though he speculated there wouldn't be much of a change.

AGENDA ITEM 6 – Agriculture in the Natural and Working Lands Climate Smart Strategy

EFA SAP member and California Natural Resources Agency Deputy Secretary Amanda Hansen provided a presentation on agricultural strategy for California's natural and working lands. He noted the loss in statewide carbon.

Ms. Hansen advocated for more to be done through nature-based solutions, one of which is the development of this strategy. Ms. Hansen provided examples of the nature-based solutions for the variety of all NWL.

Ms. Hansen provided an overview of the climate plan, including plans already in action, which include partnerships from several invested state agencies, including CDFA.

Ms. Hansen then broke down the strategy for climate change on our NWL. There are eight regions in California, and how those lands are defined can be very important. Goals include aligning existing state efforts, increasing awareness, guiding and accelerating climate action on CA lands, advancing equity and opportunity, and tracking and measuring collective efforts.

Ms. Hansen provided a summary of the state actions, which included legislative directives, stewardship of existing NWL, just to name a couple.

Ms. Hansen provided regional snapshots to explore opportunities for climate-smart land management across all regions in CA. Tracking and measuring outcomes in CA is a new effort underway, Ms. Hansen said, wrapping with the near-term priorities for CNRA.

Ms. Hansen asked for everyone to remember that climate action planned back in 2006 was a projection of what was going to be a concern then, and the fact is much has changed in that time, so recommendations and strategies have been updated continuously since then to account for the passage of time.

Member Couch asked for clarification on the jurisdiction of agencies across the various state regions. Ms. Hansen thought it would be helpful to clearly align regions with expected impacts and how land management strategies can be created relative to those impacts. As he mentioned earlier, those strategies are constantly reanalyzed to ensure the issues are still relevant.

Member Porse asked if criteria was being developed for above and belowground biodiversity. Ms. Hansen explained that a lot of the work does deliver on benefits, and the more we can understand about the land, there will be means by which to create enhancements for above and belowground biodiversity.

Nature-based solutions are defined by improving the landscape using elements there that are intended to provide benefit, region by region. This work can help mitigate negative nature-based impacts, including wildfire and drought, just to name a few. Ms. Hansen asked for additional input on solutions like these and would encourage folks to contact her with their suggestions. Chair Dlott also asked how these practices compare with other countries going through a similar process, including accounting, modeling, legislation, etc. In the UN Climate negotiations, Ms. Hansen noted much focus was placed on understanding carbon benefits for various forest projects. That conversation has expanded due partially to the biodiversity conversation in addition to the climate change conversation. Countries in different regions were able to acknowledge issues they were facing were similar in ecosystems not unlike our own.

Public comment was provided again by Ben King. Mr. King noted how much change CA has changed in terms of legislating water quality and storage. He suggested to look at the natural state of the region before it was developed, and to look at the way Native American communities were maintaining the land hundreds of years before others arrived in the region. He also asked of the viability of these changes Ms. Hansen is sustainable, based on current numbers.

Ms. Hansen mentioned the base-case was developed by the CARB team, but in terms of wildfire, they have investigated what is beneficial. Ms. Hansen agreed there were benefits to be mined from the past.

Mr. Moreno advised folks to search on “CARB inventory” and “wildfire” to get a better assessment of these efforts.

Brian Kolodji also provided public comment noting that natural working lands are the solutions, better than several solutions that are currently available. Mr. Kolodji went on to provide examples of what he defines as green technologies and what is cost-effective. Mr. Kolodji believes natural working lands solutions are the only scalable solutions available.

AGENDA ITEM 7 – Developing a Climate Strategy for Agriculture

Deputy Secretary Jameson returned to provide an additional presentation on developing climate strategy for agriculture. Deputy Jameson provided a quick update on the various challenges agriculture faces because of climate change. Agriculture is responsible for emissions globally.

Deputy Sec Jameson noted the need for climate resilience and regenerative food systems, as well as a place to communicate with public about climate risks, mitigation strategies, and CDFA activities.

Dep. Sec. Jameson provided an overview of overall climate / ag issues – changing conditions, rarity of Mediterranean climates soils for farming, diminished resources, etc. Dep. Sec. Jameson gave an overview of the topics and sections of the areas she intends to address and asked for feedback on those topics.

She hopes to identify areas of improvement with the help of the Panel, and she hopes the undertaking can start as soon as possible. Ms. Jameson provided a timeline, with the kickoff happening today during the EFA SAP meeting. She hopes the plan be finalized by 2025.

Dep. Sec. Jameson called for the help from the public and the panel to help guide and offer suggestions for the strategic plan and opened the discussion to the panel and the public.

Member Diggs asked Dep. Sec. Jameson and Dr. Mata what they hope the panel can do to help create the strategic plan. Jameson corroborated that and emphasized the priority of acting as soon as possible.

Member Redmond asked a similar question, noting the need for specialized research. Member Redmond believes that research needs to account for acting and creating ongoing communication and positive impact. Dep Sec. Jameson hopes whatever feedback is provided culminates with a call to action.

Chair Dlott responded suggested the feedback result in actionable, science- and solutions-based approaches, and that those points are embedded in the strategic plan.

Member Porse was encouraged by the initiative and provided some thoughts. Mr. Porse suggested a strategy that would include how CDFA is going to lead in policy-making goals and public engagement as well as identifying the research gaps. With the gaps, pull together the info that is already there and present it as the current state of topics relevant to the strategic plan. He noted there may be a difference between the overall research plan and the strategic plan. Member Porse added it may be important to note boundaries and coordinating with agencies to quantify water management, irrigation and energy collection.

Chair Dlott believes it would be important to provide examples of the documented practices to help identify research gaps and what can be done now to provide clear feedback for actions. He believes those examples can directly tie to programs.

Dr. Mata noted the work of advocates who push hard, and what the top 3 of research gaps under all these topics could be.

General public comment period was then engaged.

Ben King provided additional feedback suggesting that CDFA should reach out to agencies focusing on lifecycle analysis to provide scientific scrutiny. Mr. King used water management as example to identify several practices that can provide research notes on the availability of water and how that research can best be integrated into the strategic plan.

Brian Kolodji provided comments reinforcing what DS Jameson and Hansen had to say. He questioned whether biological sequestration was a valid form of sequestration. He cited something he found online, which noted the validity of biological sequestration. He noted SWEEP has no reference to natural working lands as a potential solution to remove GHG emissions.

Dr. Mata took the opportunity to explain how benefits are quantified by SWEEP and HSP, and where that public information can be found on the SWEEP and HSP websites. Those calculators are important. The way in which credits are given is based on the calculators that are developed.

Dr. Sarah Light provided public comment on the topic. She noted research on on-farm benefits would go a long way to improve these practices and the strategic plan.

Chair Dlott and Dr. Mata both shared thoughts on the function of soil and its diversity

AGENDA ITEM 8 – Future of Sharing Healthy Soils Data

CDFA Senior Environmental Scientist for the Healthy Soils Program Michael Wolff provided a presentation on the future of sharing healthy soils data.

Dr. Wolff introduced the Soil Carbon Mapping tool. Mr. Wolff presented background on the Online California Soil Carbon Map. The 2020 Specialty Crop Block Grant Program awarded funding, including tracking the impact of management practices on soil organic carbon levels; creating unique physiographic regions across the state among specialty crop systems; building a “predictive” model of SOC using existing soil point data of measured soil organic content, soils survey data, and other geospatial information; creating an interactive map and a database framework to upload, store and track SOC measurements; conducting project outreach activities; and potentially including HSP incentive projects’ soil organic matter test results for years 1-3 of each project.

Mr. Wolff provided a historical look back at the soil organic carbon testing provided by the HSP. Mr. Wolff noted there were some inconsistencies noted back in 2017-2018. The RePlan tool was introduced to map out field boundaries in 2020. By 2022 the RePlan was further improved for upcoming solicitations, for the application to enter the number of samples for each field defined. By 2023, it ensured at least one per field.

Mr. Wolff provided some lessons learned from researching the data. Farmers may not be aware of the importance of consistent sampling depth and location. Staff changes on farm can also cause inconsistent sampling methods. Soils sampling protocol instances were another factor.

Assessments and recommendations were then provided by Mr. Wolff. He recommended that HSP’s currently available 3-year datasets should not be put in public view on the Soil Carbon Map. Datasets from 2021-22 solicitation would be reviewed beginning in 2025, to determine whether results from that solicitation and later ones should be published.

Mr. Wolff said the team has yet to see most data that he and the team have greater confidence in, but there is plenty of freedom to return to these sites to find statistically significant increases to practices over longer time periods.

Member Redmond asked for clarification on the model and how involved the specialists are when ongoing samples are taken. Mr. Wolff said that data collection will continue to improve as staffing resources improve and confidence in the data result increases.

Member Dawley asked if it’s been considered if a controlled sample has been done. Mr. Wolff knows that has not happened up to this point. He suggested that certain people could be designated to provide controlled samples. Member Dawley wondered if online training would be valuable. The HSP team is working on resources for recipients on that right now. Lastly Member Dawley noted there can be changes in the soil beyond carbon, asking whether the appropriate criteria are being monitored. Chair Dlott acknowledged the controversy over what is and what is not changing in soil.

Member Diggs questioned the real goals of sampling, what potential levels soils should be reaching in organic carbon, and who CDFA could partner with to discover the true goals. If there are references for areas near them, that they can refer to, it might be useful to measuring CDFA’s progress.

Member Couch asked if carbon was the only thing being tested for in these evaluations. Mr. Wolff noted there is not a requirement to test other things, only soil carbon, and that HSP requests that the methodologies be conducted the same way.

Director Mata noted the struggle to identify the data that is researched. She noted it is a conversation that is ongoing with Mr. Wolff, as these research efforts can quickly grow to large sample swaths. There could be opportunities to start to return to fields that began their healthy soils practices 5 years ago or more.

Sarah Light of UC Cooperative Extension provided public comment, asking about how the on-farm incentives program data is analyzed with small sample sizes. Mr. Wolff explained that the results are taken without accounting for bulk density. Ms. Light said bulk density should be measured with every sample. Mr. Wolff explained the confounding nature of that methodology, which answers some questions but raises others since soil density will change over time. Ms. Light also asked if the duration of time or increasing the depth for measuring the soil is on the table. Mr. Wolff agreed now is a good time to consider practice methodologies like those Ms. Light asked about.

As a decisional item, the motion was made, moved and seconded. The motion was passed unanimously.

AGENDA ITEM 9 – GENERAL PUBLIC COMMENT

EFA SAP Chair Dlott opened the panel to public comment.

Sarah Light provided public comment noting the value of the HSP, and advocated an investment in farm advisors, recruiting and maintaining them, as well as when RCDs and scientists work together to provide benefits to the communities.

Chair Dlott agreed and desires more research on defining and framing these strategic plans. How these issues are communicated is a major contributor to how effective change comes along.

AGENDA ITEM 10 - ADJOURN

Chair Dlott motioned to adjourn the meeting at 2:01 p.m. PT, which was seconded by Member Porse and Vice Chair Dawley. The motion was then approved unanimously.

Respectfully submitted by:

Josh Staab, Public Information Officer, California Department of Food and Agriculture