

Greenhouse Gas Sequestration Task Force

MINUTES

November 14, 2019
1:30 – 4:30 pm
Hawai'i State Capitol Room 309
415 South Beretania Street
Honolulu, Hawai'i 96813

ATTENDANCE

Members Present (15):

1. Mary Alice Evans, Director, Office of Planning as Chair of the Greenhouse Gas Sequestration Task Force
2. Earl Yamamoto, Department of Agriculture on behalf of the Chair, Board of Agriculture
3. Christian Giardina, U.S. Forest Service on behalf of the Chair, Board of Land and Natural Resources
4. Pradip Pant, Statewide Transportation Planning Office on behalf of the Director, Department of Transportation
5. Michael Madsen, DOH Clean Air Branch on behalf of Deputy Director, Department of Health, Environmental Health Administration
6. Marianne Rossio, DOH Clean Air Branch on behalf of Director, Office of Environmental Quality Control
7. David Forman, Director, Environmental Law Program, University of Hawai'i at Mānoa, WSR School of Law
8. Leah Laramée on behalf of Administrator, Division of Forestry and Wildlife, DLNR
9. Justine Nihipali as a Member of the Hawai'i Climate Change Mitigation and Adaptation Commission
10. Susan Crow, College of Tropical Agriculture and Human Resources, University of Hawai'i at Mānoa
11. Robert "Rocky" Mould as the Mayor's Representative, City and County of Honolulu
12. Riley Saito as the Mayor's Representative, County of Hawai'i
13. Ashley Lukens of the Frost Family Foundation as the Legislative Representative, Environmental Non-Profit
14. Melissa Miyashiro of the Blue Planet Foundation as the Legislative Representative, Environmental Non-Profit
15. Alan Gottlieb of the Hawai'i Cattlemen's Council as the Legislative Representative, Agriculture/Ranching Association

Members Absent (4):

1. Jonathan Deenik, College of Tropical Agriculture and Human Resources, University of Hawai'i at Mānoa
2. Benjamin Sullivan as the Mayor's Representative, County of Kaua'i
3. Chane "Makale'a" Ane as the Mayor's Representative, County of Maui

4. Bobby Farias of Hawai'i Meats as the Legislative Representative, Agriculture/Ranching Association

Office of Planning Staff Present: Danielle Bass, State Sustainability Coordinator; Lisa Webster, MACZAC Administrative Assistant; Dawn Apuna, Deputy Attorney General.

Public Attendees:

Representative Chris Lee, Hawai'i State House of Representatives; Karen Dang, Hawai'i State Senate; Rock Riggs, Hawai'i State Senate; Charles "Chip" Fletcher, UH SOEST; Emily Gaskin, UH LACO; David Rodrigues, DOT; Sandy Ma, Common Cause Hawai'i; Henry Curtis, Life of the Land; Michelle Agbigay, County of Hawai'i; Joshua Silva, UH CTAHR; Cheryl Bellisazio; Keith McFall, DOH; Melody Aduja, Democratic Party of Hawai'i; Charley Ice, Commission on Water Resource Management; Stephanie Mock, Kualoa Ranch; Erin Dunable, AECOM; Aarin Gross, Conservation International-Hawai'i; Jayme Barton, Hawai'i Agricultural Research Center; Randy Ching, Sierra Club; Julie Yunker, Hawai'i Gas; Michael Chapman, Public Utilities Commission; Anthony Aalto, Sierra Club.

Distributed Material:

- Greenhouse Gas Sequestration Task Force Meeting Agenda for November 14, 2019
- Draft Minutes for February 29, 2019 Greenhouse Gas Sequestration Task Force Meeting
- Office of Planning/AECOM Status Report and Presentation on Act 16, SLH 2018, the Office of Planning's Carbon Offset Symposium and Update on the Study of Feasibility and Implications of Establishing a Carbon Offset Program for the State of Hawai'i
- UH-Mānoa College of Tropical Agriculture and Human Resources Project to Develop a Baseline and Benchmarks Presentation
- Hawai'i Agricultural Research Center Soil Health Plan Pilot Project Presentation
- Conservation International Hawai'i Desktop Analysis to Compare Pathways of Carbon Storage Project Presentation

1. Call to Order and Roll Call:

Chair Mary Alice Evans, Director of the Office of Planning, called the meeting to order at 1:36pm and took the roll. A quorum of 15 members were present of this 19-member task force.

2. Welcome Remarks:

The Chair thanked all members and guests for their commitment to de-carbonizing the planet's atmosphere through farming, ranching, and forestry solutions. Chair Mary Alice Evans noted that the Greenhouse Gas Sequestration Task Force has not met regularly due to the loss of an Office of Planning staff person, who previously coordinated Greenhouse Gas Sequestration Task Force meetings. Chair Evans

noted that no additional funds were provided to the Office of Planning to staff and logistically support the Greenhouse Gas Sequestration Task Force meetings.

3. Introduction of Task Force Members and Stakeholders:

Members and guests were invited to introduce themselves. Representative Chris Lee briefly spoke and thanked Greenhouse Gas Sequestration Task Force members and the public for participating in today's meeting.

4. Approval of Minutes of the February 29, 2019 Meeting:

The minutes were approved as circulated.

5. Public Comments:

The Chair announced that public comments will be requested after each agenda item has been presented and the members have had an opportunity to ask questions.

6. New Business.

A. 2019 Legislative Report:

Chair Evans noted that the 2019 Legislative Session did not provide any additional funding to the Office of Planning to provide the necessary staff support and logistical or travel funding to support the Greenhouse Gas Sequestration Task Force. Chair Evans noted that Act 122, Session Laws of Hawai'i 2019 was passed this year which redescribed the barrel tax funding via the Energy Security Special Fund. This new amendment to Hawai'i Revised Statutes §201-12.8, allows for money from the Energy Security Special Fund subject to legislative appropriation to fund the Greenhouse Gas Sequestration Task Force, among other activities.

Chair Evans reported to the Greenhouse Gas Sequestration Task Force that she will request for funding to this task force via the Energy Security Special Fund during the 2020 Legislative Session, noting that if a legislative appropriation concurred with her request, the appropriation would not be received until July 2020. Chair Evans encouraged task force members to remain hopeful, despite the task force's budgetary limitations.

B. Report on the Hawai'i Agricultural Conference Attendance:

Task Force member Susan Crow reported her attendance to the Hawai'i Agricultural Conference which was held on October 15-16 at the Hawai'i Convention Center, her attendance was funded using original Greenhouse Gas Sequestration Task Force funds.

Task Force member Crow participated on a panel on "Cultivation, Carbon, and Collaboration: Adapting the Carbon Model for Hawai'i's Farms and Ranches,"

which discussed the importance to prioritize carbon sequestration efforts also known as “Carbon sinks” to maximize carbon management and neutrality. The panel discussed how farmers and ranchers help to create healthy soils that ultimately trap and store carbon from the atmosphere through “carbon farming” as a guiding principle of land management to sequester carbon.

C. Status Report on Act 16, SLH 2018, Investigating the Establishment of a State Carbon Offset Program:

A presentation on the Carbon Offset Symposium held at the State Capitol on April 10, 2019, was made by Danielle Bass, State Sustainability Coordinator. Video and PowerPoint Presentations from the Carbon Offset Symposium are available on the Office of Planning’s website:

<http://planning.hawaii.gov/sustainability/carbon-offset-program/carbon-offset-symposium>.

To fulfill the investigatory requirements of Act 16, SLH 2018, the Office of Planning contracted AECOM to organize a report on the feasibility and implications of establishing a carbon offset program for the State of Hawai‘i. Erin Dunable of AECOM presented to the Greenhouse Gas Sequestration Task Force on the status of the draft report to the Legislature and the Hawai‘i Climate Change Mitigation and Adaptation Commission on the “Feasibility and Implications of Establishing a Carbon Offset Program for the State of Hawai‘i.” The presentation included the use of a greenhouse gas offset gate key, which AECOM developed to assist in the initial feasibility of any greenhouse gas reduction project converting to an offset, this tool is also available on the Office of Planning’s website, https://files.hawaii.gov/dbedt/op/sustainability/carbon_offset_symposium/11.ghg_offset_gate_key-spinwheel_animated.pdf

The presentation explained that there are potential conflicts between the State of Hawai‘i’s “Zero Emissions Clean Economy” statutory target found in Hawai‘i Revised Statutes §225P-5, which requires that “*a statewide target is hereby established to sequester more atmospheric carbon and greenhouse gases than emitted within the State as quickly as practicable, but no later than 2045*” and the potential sale of carbon offset credits by the State of Hawai‘i. The presentation noted that should the State of Hawai‘i potentially sell carbon offset credits from a state-owned carbon offset project, there would be minimal revenue raised by the state, and the state’s sold credits would be transferred to the buyer and would be no longer owned or claimed by the state.

The final draft of the publication is expected to be released in mid-December 2019 to fulfill Act 16, SLH 2018’s reporting deadline. The final report will also be made available at the Office of Planning’s website.

Discussion:

Task Force member Giardina asked whether “leakage” will be covered in the “Feasibility and Implications of Establishing a Carbon Offset Program for the State of Hawai‘i” final report. Ms. Dunable confirmed that it will be included.

Task Force member Mould asked whether regulatory or voluntary carbon offset markets were explored in the feasibility analysis. Ms. Dunable confirmed that both are discussed and assessed in the final report.

D. Status Report on 3 Greenhouse Gas Sequestration Task Force Funded Projects:

1) University of Hawai‘i at Mānoa College of Tropical Agriculture and Human Resources (CTAHR) to develop a baseline and benchmarks.

Joshua Silva of University of Hawai‘i at Mānoa College of Tropical Agriculture and Human Resources (CTAHR) provided a status report of this project to task force members. The project developed data resources required to generate a baseline and long-term benchmarks for increasing greenhouse gas sequestration, soil health, and yields and natural and working lands (e.g., pasture, agriculture, agroforests) in Hawai‘i’s agricultural, forestry, and other land uses (AFOLU) sector.

The scope of work is to collate available data and collect additional data resources for natural and working lands that will provide the scientific basis for initialization of a decision support and planning tool that will establish benchmarks for critical indicators of change in greenhouse gas sequestration from the AFOLU sector and best management practices to support soil health, climate change mitigation, and yield in Hawai‘i.

Discussion:

Task Force member Lukens requested if additional sampling could be conducted on pasture lands statewide to reflect different pasture methods, and how different pasture management (e.g.: rotational grazing) affects soil carbon. Mr. Silva explained that some pasture lands were assessed. Task Force member Crow acknowledged that such a request may fall outside of the budgetary limitations of this project. Chair Evans acknowledged that funding and scope was limited for this project and suggested that this additional sampling could be arranged should the Legislature grant additional funding to the Greenhouse Gas Sequestration Task Force in the 2020 Legislative Session.

Audience member Charles Fletcher asked whether any assessment was conducted relating to carbon storage and Hawai‘i’s heat wave since warmer temperatures can potentially accelerate decomposition of dead plants and carbon held in soils, therefore releasing more carbon dioxide into the atmosphere; noting that soil sequestration could potentially become a source of carbon dioxide instead of a sink. Chair Evans suggested that a project to

explore this question could be arranged should the Legislature grant additional funding to the Greenhouse Gas Sequestration Task Force in the 2020 Legislative Session.

Audience member Henry Curtis asked whether there is any change of soil carbon based on climate type, noting that Hawai'i includes 10 of the world's 14 climate zones. Task Force member Crow responded that climate zone is a primary driver of soil formation in Hawai'i, and a change in climate can change the geology and microbes of the soil, she recommended that this question be further explored.

Audience member Charles Fletcher reaffirmed that funding is desperately needed for the Greenhouse Gas Sequestration Task Force to research these serious climate change issues.

Task Force member Lukens asked whether this project has monitored soil health overtime and acknowledge that while the State of Hawai'i may not necessarily have a carbon offset market, perhaps encourage the importance of carbon sequestration through soil health. Mr. Silva responded that this project will monitor soil health overtime, but notes project funding and timeline limitations.

2) Hawai'i Agricultural Research Center (HARC)'s Pilot Program for Soil Health and Carbon Sequestration on Hawai'i's Working Lands.

Jayme Barton of the Hawai'i Agricultural Research Center provided a status report of this project. The purpose of this project is to develop and conduct a soils health plan pilot project for Hawai'i. This project identified best management practices, barriers to adoptions, and started a soil health database.

This project secured funding from Greenhouse Gas Sequestration Task Force and the federal Natural Resources Conservation Service (NCRS). The project interviewed, were advised by, or partnered with over 20 organizations in Hawai'i and California. The project partnered with 5 agricultural producers on Oahu and Maui managing over 5,900 acres. The project financed agricultural producers \$4,000 made in incentive payments to improve their soil health. The project also conducted a survey with a broad and diverse range of agricultural producers representing organic and conventional ranching equally in Hawai'i, 88% of respondents want to improve their soil health. The project yielded positive results within the agricultural industry, recommends future financially sustainable funding to continue this project with local farmers and ranchers.

Discussion:

Task Force member Gottlieb noted that there are already natural economic benefits to farmers and ranchers for their intensive grazing and composting,

these agricultural producers are already performing these natural incentives, and financial incentives would continue to encourage their climate-smart agricultural work.

Audience member Sandy Ma congratulated the Greenhouse Gas Sequestration Task Force in funding these projects since they were derived to fulfill every statutory mandate as described in Hawai'i Revised Statutes § 225P-4, and looks forward to additional funding for the important climate work of this Task Force.

3) Conservation International - Hawai'i: "Project Drawdown: Pathways Analysis in Hawai'i's Natural and Working Lands and Nearshore Waters"

Aarin Gross of Conservation International – Hawai'i provided a status report for this project which describes the approach and progress in identifying carbon sequestration and carbon emission reduction opportunities, incentives and disincentives for the food and land use sectors.

Discussion:

Task Force member Pant asked why urban forestry and green infrastructure was not included in this project. Ms. Gross responded that the project focused primarily on land use and there was no model for assessing urban forestry through "Project Drawdown."

State Sustainability Coordinator Danielle Bass mentioned that while attending a U.S. Green Build conference earlier in the year, she met with the author Paul Hawken who wrote "*Drawdown: The Most Comprehensive Plan Ever Proposed to Reverse Global Warming*," which this project is modeled after. Ms. Bass spoke with Mr. Hawken and informed him of the State of Hawai'i's Greenhouse Gas Sequestration Task Force. Mr. Hawken shared with Ms. Bass information about his upcoming book, which will be published after Fall 2020, which will be titled, "*Regeneration, How to Reorganize Civilization in One Generation*." Mr. Hawken explained that this future publication may be of importance to the state's Greenhouse Gas Sequestration Task Force since it will include relevant information pertaining to aquaculture, agriculture, and focuses more on systematic restoration and regeneration.

Audience member Henry Curtis noted that Project Drawdown's ranking was unclear, and rankings provided in the publication showed no explanation as to the proposal's ranking. Ms. Gross agreed and explained that this specific project was simply using the publication as a reference point. Task force member Giardina emphasized that the purpose of this specific project was to serve as a starting point to explore various options.

E. Discussion of the FY2021 Work Plan for the Greenhouse Gas Sequestration Task Force.

Chair Evans noted that the Legislature created a funding mechanism for further research for the Greenhouse Gas Sequestration Task Force from the Energy Security Special Fund. A request for funds was submitted for inclusion in the Governor's Budget Request. Chair Evans encouraged task force members to share ideas for future potential projects to be funded by the Greenhouse Gas Sequestration Task Force, the following were shared:

Discussion:

Task force member Mould suggested a project to follow up on the economics associated with greenhouse gas sequestration activities.

Task force member Crow suggested additional funding for supplemental work to the University of Hawai'i at Mānoa College of Tropical Agriculture and Human Resources (CTAHR) to continue data-collection for the soil health baseline and benchmarks.

Task force member Forman suggested to continue funding research and incentives of soil health for pasture land and connecting this study with research related to invasive species. Task force member Gottlieb agreed that invasive species is a significant challenge and issue to the agricultural community.

Task force member Giardina suggested research and review of the policy implications related to Hawai'i's greenhouse gas emissions inventory framework, and research and review on leakage and embodied carbon.

Task force member Laramée suggested the Greenhouse Gas Sequestration Task Force become more involved with legislation, and whether the Office of Planning would identify a staff member to represent the task force before the Hawai'i State Legislature. Chair Evans responded that the Office of Planning has significant staffing limitations, this request would require a dedicated staff person for this purpose, and highlighted the need for a dedicated staff person to provide staff support to the Greenhouse Gas Sequestration Task Force. Chair Evans also noted that the task force will also need to meet during the 2020 Legislative Session to discuss legislation related to the task force and vote on action related any legislation.

Task force member Pant suggested a study be funded to review urban green infrastructure management.

Task force member Madsen supported a LIDAR study for urban tree canopy.

Task force member Rossio suggested a study on how the state's Greenhouse Gas Emissions Inventory can improve and provide better information to support the various sustainability and climate-resilient goals and statutory targets.

Task force member Yamamoto emphasized the need for data to increase carbon sequestration and the need to avoid regulatory frameworks on Hawai'i's farmers.

Recommended a study reviewing the tradeoffs between renewable energy projects and local food production on agricultural lands, and the carbon sequestration associated with these types of projects.

Chair Evans emphasized that no vote will be taken on these ideas, as this was just for discussion purposes.

F. Permitted Interaction Groups. Three permitted interaction groups were created in previous meetings of the GHGSTF: Economics, Legal and Policy, and Science.

1) Legal/Policy Permitted Interaction Group:

The Legal/Policy Permitted Interaction Group was formed at the November 29, 2018 Greenhouse Gas Sequestration Task Force Meeting. The Legal/Policy Permitted Interaction Group was tasked to:

- 1) To identify and recommend measures to increase climate resiliency and improve greenhouse gas sequestration, build healthy soils, and provide greenhouse gas benefits to participate in carbon markets and/or establish best management practices;
- 2) To coordinate and consult with any other permitted interaction groups, as needed within the scope of its task and so long as there is not a quorum of the members of the Greenhouse Gas Sequestration Task Force; and
- 3) With a deadline and deliverable date of August 30, 2019 or as soon as possible thereafter.

Chair Evans noted that this was the first Greenhouse Gas Sequestration Task Force meeting past the Legal/Policy Permitted Interaction Group's deadline and deliverable date. Chair Evans asked Legal/Policy Permitted Interaction Group members (Miyashiro, Forman, Rossio; noting that Lukens and the 4 mayoral designees left or were excused from the meeting) whether the group met since November 29, 2018 and whether the Permitted Interaction Group had any findings and recommendations to report to the Greenhouse Gas Sequestration Task Force.

Legal/Policy Permitted Interaction Group members did not meet since November 29, 2018 and had no report for the Greenhouse Gas Sequestration Task Force.

Chair Evans recommended dissolving the Legal/Policy Permitted Interaction Group. A motion was made by Task force member Pant to dissolve the Legal/Policy Permitted Interaction Group and was seconded by Task force member Gottlieb.

Discussion:

Task force member Forman asked whether this vote will permanently dissolve the Legal/Policy Permitted Interaction Group. Chair Evans deferred to Deputy Attorney General Dawn Apuna who explained that this vote would dissolve the Legal/Policy Permitted Interaction Group, but the Greenhouse Gas Sequestration

Task Force can re-create a similar Permitted Interaction Group in the future with similar tasks and a future deadline and deliverable date.

Chair Evans took the vote, the motion to dissolve the Legal/Policy Permitted Interaction Group passed with 11 yes votes (Pant, Evans, Laramée, Giardina, Forman, Gottlieb, Yamamoto, Nihipali, Rossio, Madsen, and Miyashiro), with 8 excused (Deenik, Sullivan, Ane, Farias, Saito, Mould, Crow, Lukens), and zero no votes.

Chair Evans asked whether the Greenhouse Gas Sequestration Task Force would like to re-create a similar Legal/Policy Permitted Interaction Group at this meeting or at a future meeting.

Task force member Forman recommended re-creating the Legal/Policy Permitted Interaction Group at a future meeting.

2) Economics Permitted Interaction Group:

The Economics Permitted Interaction Group was formed at the February 28, 2019 Greenhouse Gas Sequestration Task Force meeting. The Economics Permitted Interaction Group included Task force members: Giardina, Yamamoto, Miyashiro, Farias, former member LaHaela Walter (now represented by Laramée), Mould, former member Whitmore (now represented by County of Hawai'i replacements Saito or Agbigay).

The purpose of the Economics Permitted Interaction Group is to develop an exploratory economic assessment of potential greenhouse gas (GHG) sequestration pathways in agriculture, aquaculture, agroforestry, forestry, and urban forestry in Hawai'i in the context of broader statewide carbon mitigation goals and objectives.

The Economics Permitted Interaction Group met on March 14, 2019, from 10am-11:30am. The Economics Permitted Interaction Group has a deadline or deliverable date from one year of formation on February 28, 2020, or as soon as possible thereafter.

Chair Evans reminded the Economics Permitted Interaction Group that their deadline will be Friday, February 28, 2020, and asked whether the Economics Permitted Interaction Group have any findings and recommendations from its investigation to report to the Greenhouse Gas Sequestration Task Force. The Economics Permitted Interaction Group had no report at this time.

3) Science Permitted Interaction Group:

The Science Permitted Interaction Group was formed at the February 28, 2019 Greenhouse Gas Sequestration Task Force meeting. The Science Permitted Interaction Group included Task force members: Crow, Deenik, Giardina, former

member LaHaela Walter (now represented by Laramée), Maui County designee (now represented as Makale'a Ane), and Gottlieb.

The purpose of the Science Permitted Interaction Group is to guide and coordinate the development of baseline levels and changes in greenhouse gas sequestration, soil health status, best management practices, and co-benefits for participation in carbon markets.

The Science Permitted Interaction Group has a deadline or deliverable date from one year of formation on February 28, 2019, or as soon as possible thereafter.

Chair Evans reminded the Science Permitted Interaction Group that their deadline will be Friday, February 28, 2020, and asked whether the Science Permitted Interaction Group had met or had any findings and recommendations from its investigation to report to the Greenhouse Gas Sequestration Task Force.

The Science Permitted Interaction Group did not meet had no report at this time.

G. Announcements: None.

H. Adjournment. The meeting was adjourned at 4:20 p.m.