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**Governor's Council on Climate Change (GC3)**  
**Working and Natural Lands**  
**Agriculture and Soils Breakout Session**  
**MEETING MINUTES**

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**Meeting Date:** September 29, 2020

**Meeting Time:** 5:30-6:00pm

**Meeting Location:** Zoom

**ATTENDANCE**

<b>Working Group Member</b>	<b>Title</b>	<b>Organization</b>	<b>Present</b>
Lillian Ruiz	Executive Director	CT Council of Soil and Water Conservation	Y
Amanda Fargo-Johnson	Agriculture Programs Manager	CT Resource Conservation and Development	Y
Kip Kolesinkas	Co-Chair and Conservation Consultant	Working Lands Alliance and Connecticut Farmland Trust	Y
Chelsea Gazillo	Executive Director	Working Lands Alliance	Y

<b>Associated Staff</b>	<b>Title</b>	<b>Organization</b>	<b>Present</b>
Kayleigh Royston	Legislative Liaison	Department of Agriculture	Y
Holly Lalime	Environmental Analyst	Department of Agriculture	Y

- **In Attendance:**
  - Kayleigh Royston – Department of Agriculture’s Legislative Liaison
  - Kip Kolesinkas – Co-chair of the Working Lands Alliance and a Conservation Consultant
  - Chelsea Gazillo – Director of the Working Lands Alliance
  - Lillian Ruiz – Executive Director of the Council of Soil and Water Conservation
  - Joana Wozniak – Assistance Director for Resilience Planning at the Connecticut Institute for Resilience and Climate Adaptation
  - Bryan Garcia – CT Green Brank
  - Kim Stoner – CT Agriculture Experiment Station
  - Katie Kemen – Climate Adaptation and Resilience Consultant with BCS Group
  - Briana Devivi – Office of Senator Chris Murphy
  - Amanda Forgo-Johnson – Connecticut Resource Conservation Development Agriculture Programs Manager
  - Amanda Clark – CT Department of Public Health Environmental Engineering
  - Julia Cartabiano – Farmer and Manager of UConn’s Student Run Farm
  - Ed Brolin – Connecticut Clean Energy Business
  - Holly Lalime – Department of Agriculture Environmental Analyst
  
- Kayleigh Royston begins the break-out session by introducing the Ag/Soils sub working group members that are in attendance. They include Kip Kolesinkas, Lillian Ruiz, Amanda Forgo-Johnson, and Chelsea Gazillo. She confirms that this session is being recorded and then opens the floor to questions.
  
- Question from Ali Ghiorse – Did our working group discuss Connecticut’s waste crisis? Can/would the state consider a mandatory food scrap recycling program with the resulting compost being used to build soils?
  - Kip explains that there is information in our larger report about composting and food waste. He notes that there is a lot of potential for getting food and yard waste out of the larger waste stream and having farmers contribute to the generation and distribution of compost for use on farms. He reiterates that there is a lot of potential with this.
  - He adds that there is a need to create the infrastructure to create compost and use it on farmland and on homes.
  - He states that dairy digesters are being built and they function better when food waste is being put into them.
  
- Second question from Ali - Will this report lead to a food action plan for the State?
  - Kayleigh answered that this has been discussed at the agency level, but the agency has not fully committed to an action plan, however it is a long-term goal for the Department.
  - She adds that Commissioner Hurlburt has recently taken on a large responsibility as far as food security and sustainability is concerned since the onset of the pandemic.
  - Chelese Gazillo added to the discussion by pointing out that the Ag/Soils draft report highlights the need for the agency to support organizations such as the

Hartford Food Systems and other non-profit efforts to publish a plan. The group recognizes that there are non-profit sectors in the State working on a plan and they want to prevent duplicative efforts.

- Question from Ed Brolin - What has the discussion about ecosystem services included in this working group? It's critical as we think about solar energy to think about the various ecosystem services that they provide on the land that hosts them while giving farmers another revenue stream.
  - Kip answers saying that there is information in the larger report about ecosystem services.
  - He adds that farms are much more than open cropland. In Connecticut only about 50-75% of farmland is used for crop production. The rest of it is forest, open meadows, and riparian areas which make up great wildlife habitat and have numerous ecosystem services such as groundwater recharge amongst other.
  - He adds that there is information in the report about co-use and that we need to be very careful about where solar happens and how it's cited.
  - He stresses that prime soils are the most impactful for climate change and should be the most heavily protected. The State needs to focus on always protecting this resource.
  - Ed responds by saying that we need to look at what we can do with marginal land. We need to build more solar and we need to think intelligently about the co-benefits of solar.

Question from Joana Wozniak - Were farmworkers, especially immigrant farm workers, mentioned in the report? Heat stress to farmers and farm workers does not seem to be in the Agriculture report. Also along these lines, is the need for temporary housing addressed specifically with migrant farmworkers in mind?

- Kayleigh and Chelsea thank Joana for bringing this up. Chelsea says that it's something Connecticut needs to address and maybe we can put something in there as it relates to Connecticut's Department of Labor's Migrant and Farmworker Program and see how we can be additive to that and how we can do more research to ensure that farm workers are protected as it pertains to increased heat. She adds that housing is also an issue for new and beginning farmers and urban producers that hope to start farming in rural areas. She adds that work needs to be done to make affordable housing more accessible in areas near prime and important soils.
- Joana adds a point about making land more accessible to BIPOC farmers.
- Chelsea responds saying that the American Farmland Trust is working on a farmland access report which will be coming out soon – it includes new ways to increase farmland access for BIPOC farmers.
- Kip adds that we have had the hottest July and August on record. This affects farmers and farm workers as well as customers. We need to figure out how to address this whether it is keeping trees on the edge of fields for breaks from the sun for farm workers or creating shade cloth areas for customers and water stations for workers and customers.

- Joana adds that municipal regulations make distinctions between farm stands and farm stores. One way to solve that problem is to clarify those regulations so that water stations can be provided. She adds that the tree trimming along roads should be flagged as an agricultural business benefit to prevent this from happening.
- Kip adds that more information needs to be added to the report as it relates to agroforestry and silvopasture. These are good strategies for increasing food production and opportunities and they also reduce heat stress for livestock.
- Urban trees can and should be food producing as well.
- Someone adds that a resource for forestry impacts on soil is Eric Tonsmyer – part time professor at Yale.
- Kip adds that there are soil health issues on all landscapes that need to be addressed including the forest sub-group.
- Lillian adds that soil health is tied to mitigation because it is one of the largest sinks of carbon. It is also tied to adaptation because healthy soil helps to fight drought conditions by preventing the need for irrigation which saves energy. She adds that everything is interconnected in a way where the basics that we're dealing with – water, energy, soil health, and food supply – one depends on the other completely.
- She adds that the USDA, the programs to help farmer - federal funds - they're very short in other states, but not in Connecticut. We have plenty of funds and a well-functioning USDA and NRCS office. But farmers are in such a dire situation on the ground that they don't have the capital for matching funds. We need State support to provide a match so we can access that wealth of federal funds on farms in the state.
- Lillian notes that one of the other presentations was taking about urban soils and the need to improve the quality of the soils and the need to manage the soils more effectively. This is extremely important because soils are the basis for the forests and the wetlands.
- She adds that the future of this group in this large undertaking is the need to go forward thinking about the nexus of water, soils, food supply, and energy and how to interconnect these moving forward. This is the key for mitigation, resiliency, and adaptation in the future.
- Kayleigh notes that there was a lot of conversation between the other sub-working groups about soil and how it is the foundation of these other resources such as forests, rivers, and wetlands. She says that she shared our report with folks from wetlands and other groups and had conversations about looking at their content to recognize the role of soil in all the working groups and to understand the interconnectivity of these resources.
- Kip stresses that Prime Farmland is most important for ag production but also that there are particular parts of soil landscapes that are important for soil recharge in wetlands and rivers – how we manage our floodplains is critical and he hopes to see soil mentioned in the other reports.

- Someone asks if there is any work being done on suburban soils and specifically how to address the massive amounts of grass in these areas and the amount of mowing/maintenance involved.
  - Kip is not sure what group that would fall under, but we certainly need to cut down on the amount of lawn area that exists and replace it with native trees and shrubs. There is certainly a lot of emissions coming from lawn maintenance. He adds that heavily mowed lawns and playing areas have the density of a brick. There is no water infiltration and it leads to high levels of runoff from intense precipitation events. This includes large levels of nutrient runoff from these heavily managed area.
  - Lillian adds that this sub working group did not make the distinction between urban/suburban in our report. They were referred to as open areas/lawn/fields no matter if they are urban or suburban.
  - Kim Stoner adds that there is a Pollinator Pathway group doing great work in changing lawns into shrubs, trees, and perennials. <https://www.pollinator-pathway.org> . She adds that urban/suburban soils are not the same and need to be treated differently. For example, urban soils have a chemical legacy from past use. We need to think differently about urban soils from suburban soils.
  - Kip adds that urban soils have a chemical legacy and there are differences we need to pay attention to.
  
- Kip adds that more information needs to be added to the report as it relates to aquaculture. The wetlands group mentioned this as an ecosystem service. Aquaculture has a role in carbon storage and there should be more in our report.
  - Kayleigh adds that there is a DoAg staff member working in aquaculture that is sitting on the GC3's Science and Technology working group. She will reach out to that staff members to see what information was submitted.
  - Joanne adds that fisheries should be included in things like oyster farming in CT. Temperature changes will be having a huge effect – especially on inland fisheries.
  
- Kayleigh asks for any additional comments or questions and lets people know that the public can submit comments during the public comment period and that she is available through e-mail as well.
  
- Kip address the last two comments in the chat box.
  - The comments make the case for ecosystems services and the role of habitat and wildlife corridors on farmland. He stresses how important this is! Farms provide edge habitat for western and mid-atlantic species as well as grassland species. There needs to be discussion about what lands to be protect and why. More research needs to be done on the role of climate change as it relates to biodiversity and habitat.

- Below are two comments in the text box that were not discussed during the breakout session.
  - Potential solutions are soil-based zoning, farm-friendly regs for temporary buildings and farm stands/stores, education on water diversion permits or, if necessary, connection to commercial water utilities not just deeper wells. And while the science on extreme weather events like hurricanes and wind events is less certain with respect to climate change, agriculture needs to be integrated into Natural Hazard Mitigation Plans for workers, advance communication for animal evacuation or even evacuation mutual aid. Councils of Governments should be added as partners for things like that through their work with the Regional Emergency Planning Teams.
  - I was wondering about adding more description of climate threats of flooding, drought, sea level rise beyond soil health to potential recommendations of loss of farmland, salination of groundwater, loss of groundwater supply due to drought or salination, drinking water wells running dry.

**NOTE:** All meetings, minutes, recordings, and working group reports can be found [here](#)

### **Chat Record**

17:51:04 From Amanda Fargo-Johnson : Joe Orefice from Yale - comment on silvopasture.

17:52:02 From Amanda Fargo-Johnson : Also CT RC&D is working with CT DOAG and the town of Lebanon on an affordable farm housing study and potential - that could be applicable to other towns in CT.

17:52:37 From Kimberly Stoner : Eric Toensmeier - has written about carbon in agroforestry. He was also involved in Project Drawdown.

17:53:20 From Rebecca French : Public Health is presenting next week and their recommendations include heat stress. Thank you for highlighting vulnerable populations in the field of agriculture.

17:54:24 From Joanna Wozniak-Brown : Thanks, Rebecca - as a member of that working group, I should have noted that too. So great that heat stress shows up in multiple places!

17:55:09 From Rebecca French : Do we have adequate ways to quantify soil carbon storage or carbon sequestration from different practices to help DEEP account for these approaches in the Global Warming Solutions Act reporting?

17:55:35 From Kayleigh Royston : From a Dept of Ag Policy standpoint, I'd love to take a look at their comments on heat stress and see if there are recommendations we can act on as an agency.

17:55:42 From Joanna Wozniak-Brown : ICLEI has been leading an effort to help municipalities track carbon sequestration.

17:56:15 From Chelsea Gazillo : Rebecca -- AFT is doing some research on that as we speak, we plan to submit comments with numbers that relate to the amount of carbon our agricultural soils can sequester.

17:56:25 From kip Kolesinskas : yes, we know what practices work and approximate carbon stored. And the benefits for adaptation

17:56:31 From Kimberly Stoner : <http://carbonfarmingsolution.com/bio>

17:57:32 From Chelsea Gazillo : I can you put you in touch with American Farmland Trust's Climate and Ag. Program Manager, if you would be interested in speaking to her

17:58:01 From Joanna Wozniak-Brown : I was wondering about adding more description of climate threats of flooding, drought, sea level rise beyond soil health to potential recommendations of loss of farmland, salination of groundwater, loss of groundwater supply due to drought or salination, drinking water wells running dry.

17:59:13 From Rebecca French : Part of my job is tracking the GHG targets. We cannot get to 'net zero' without carbon sequestration accounting.

17:59:18 From Kimberly Stoner : The Pollinator Pathway group is doing great work in changing lawns into shrubs, trees, and perennials. <https://www.pollinator-pathway.org>

18:00:41 From Bryan Garcia : Great job #TeamFarmsCT! I am going to read your report and "offer up" some comments. Have a good evening.

18:01:30 From Bryan Garcia : If every family in CT spent \$10 a week on CT grown foods, we would invest nearly \$700 MM more into our farm economy. Keep up the great work!

18:01:31 From Joanna Wozniak-Brown : Potential solutions are soil-based zoning, farm-friendly regs for temporary buildings and farm stands/stores, education on water diversion permits or, if necessary, connection to commercial water utilities not just deeper wells. And while the science on extreme weather events like hurricanes and wind events is less certain with respect to climate change, agriculture needs to be integrated into Natural Hazard Mitigation Plans for workers, advance communication for animal evacuation or even evacuation mutual aid. Councils of Governments should be added as partners for things like that through their work with the Regional Emergency Planning Teams.

18:02:31 From Joanna Wozniak-Brown : Soil-based zoning didn't seem to be in the report.

18:04:06 From Kayleigh Royston : [Kayleigh.Royston@ct.gov](mailto:Kayleigh.Royston@ct.gov)

18:04:07 From Rebecca French : email comments [deep.climatechange@ct.gov](mailto:deep.climatechange@ct.gov)