

**Public Health and Safety Working Group Report:**  
**Response to Public Comments Received Sept. 21 – Oct. 22, 2020**

**Summary of Comments on PHS Working Group Report**

The Public Health and Safety (PHS) Working Group received 16 sets of comments from submitting entities (either individual or organizations) on its report during the GC3 Public Comment Period (Sept. 21 – Oct. 22, 2020), based on redirected comments from the Connecticut DEEP Office of Climate Planning. In addition, public feedback on the report was also provided through the “Zoom chat” function during the GC3 Public Forum presentation of the PHS Working Group and the “Zoom break-out sessions” that immediately followed. Additionally, the GC3 Equity and Environmental Justice (EEJ) Working Group provided feedback on an initial draft of the report in the weeks leading up to the Public Comment period. Together, the majority of public comments provided substantive feedback in direct response to the PHS report specifically, although a limited number of comments were of a more general nature, such that they were aimed at all Working Group reports rather than our report specifically.

The PHS Working Group is extremely grateful for the thoughtful and insightful comments it received on its report. In general, feedback specific to the report was highly positive and supportive of findings and recommendations of the PHS Working Group. In many cases, specific recommendations from the report were highlighted as priorities by commenters, including those related to the development of local heat and air quality response plans, development of policies to protect low-income residents from indoor heat exposure, protection of residents in flood plains, energy audit programs for the water industry, resiliency and climate assessment for new legislation, recommendations to develop water conservation measures and communications guidelines to manage drought, establishment of an AFN Coordinator for emergency preparedness and response, and establishment of a Climate and Health Coordinator for the state. In other cases, general health topic areas were identified as priorities for adaptation planning put forward by commenters, in particular, concerns over increasing temperatures in urban areas, harmful algal blooms, food distribution coordination, impacts of climate change on mental health, green infrastructure and nature-based solutions, flooding and stormwater pollution, approaches to health equity with regard to vector-borne disease risk, and coordinated planning around water quantity and quality. The myriad impacts of climate change on maternal and child health were also emphasized.

Several comments identified the health co-benefits of greenhouse gas emissions reductions, particularly those that directly impact air pollution, as targets for recommendations. Community resilience was invoked by many comments ranging in content from recognition of the need for support of local adaptation planning (akin to Massachusetts’ MVP and Rhode Island’s MRP) to a call for inclusive planning with climate-impacted communities for all policy recommendations to assessments of cumulative impacts in overburdened communities in project permitting. Focused attention and recommendation development by the Public Health and Safety on the important topic of health co-benefits of climate change mitigation and community resilience will be prioritized for Phase 2 of the GC3 planning process scheduled to occur Jan. 16 – Dec. 1, 2021. Additionally, multiple suggestions specific to climate and health adaptation planning and resilience strategies were complex in nature and will require engagement across multiple stakeholder groups for formalized response. Such suggestions were not feasible to address within the limited timeframe for report revisions and will also be considered for further development during Phase 2. Those comments for which changes to the draft report were made in preparation for review by the GC3 are detailed as bullet points below.

**Description of Specific Changes to Revised PHS Working Group Report for GC3 Review Based on Public Comments:**

- All recommendations in the report were assigned a unique identifier (PHS-1 through PHS-33).
- Feedback received from the EEJ review period and PHS Working Group responses, Appendix II in the original report, have been removed from the report and instead, added to this document.
- A summary table for all report recommendations has been provided as Appendix II in the revised version of the report.
- Feedback received during public forum break-out sessions underscored the need to develop a recommendation specific to a suite of health and safety concerns for residents in floodplains. As such, we recommend that the topic of managed retreat be given consideration for a cross-Working Group recommendation as part of Phase 2.
- We appreciate the suggestion to add inland shelters, particularly for large- scale evacuation events from the coast, to the *recommendation Create an updated Hurricane and Storm Evacuation Plan for Connecticut* (PHS-17) and have made this change.
- In response to a comment about groundwater as a source of nitrogen that can promote cyanobacteria blooms, the recommendation *Track harmful or potentially harmful cyanobacteria algal bloom data in Connecticut and provide technical assistance to community water suppliers to address and prevent these events* (PHS-27) , was modified to clarify that groundwater could also be a source of nutrient pollution.
- One commenter recommended mentioning the potential for increased drought potential to also impact water quality, and subsequently public health. In response, the text within the section entitled, *Health and Safety Impact Domain: Water-borne Illnesses*, was edited to indicate that increased variability in precipitation is also anticipated to make drought periods more likely, impacting the availability of safe potable water from both groundwater and surface water sources. In addition, the potential impact of drought was noted as a climate challenge in the recommendation entitled, *Identify and improve wells that are located within a flood zone to increase resilience and reduce risk of flooding* (PHS-30).
- In response to a comment on database mapping of relevant resources important to public health, the recommendation *Develop a statewide GIS database and framework for continued updates that identifies the location of private wells and decentralized sewage disposal systems* (PHS-25), was edited to note that the recommendation also allowed for coordination with the infrastructure and resource mapping recommendations of other Working Groups.
- Multiple comments received highlighted the need for including local food, food sovereignty, and urban production as part of the recommendation. As such, we have added language inclusive of these concepts in Section 2 of the report.

- In response to comments received regarding connecting with specific people and Connecticut organizations about food insecurity and food system issues, we state that this will be done during the state food action planning process. Hundreds of stakeholders will be engaged during the process to inform the plan.
- One commenter pointed out that the proposed recommendation on standards for indoor heat may be less protective for renters who do not live in government-supported housing. PHS working group agrees that this may be the case, and points to the additional proposal to expand the CT Energy Assistance Program to include cooling, as another protective measure and one that is not limited to those in government-supported housing.
- One commenter described how parks and urban trees play an important role in mitigating the urban heat island effect but that parks are distributed inequitably in Connecticut. The text has been updated to point to how the heat island effect can be mitigated through equitably distributed nature-based solutions, including urban tree planting and urban parks and greenspaces, and that the PHS working group supports recommendations put forward by other GC3 working groups, which call for more funding and support for urban tree planting, conservation, and management in Connecticut.
- One commenter recommends that local health directors be added to the list of implementation entities for the blue-ribbon commission and local health and air quality response plan recommendations. The PHS working group agrees with this recommendation and has made this change. With respect to the local health and air quality response plan recommendation, the commenter also recommends the addition of public service announcements mandated on very hot days and when air quality is not within EPA air standards. In response, the PHS working group notes that the specific standards will be further defined as part of the planning process, based on evidence of effectiveness and stakeholder involvement.
- The important issue of the vulnerability of pregnant people to extreme heat's health effects was raised as a comment. The text has been revised to point to pregnant women as a vulnerable population due to the risk heat presents to their own health, separate from the risk of adverse birth outcomes, as well as to point to the cumulative, intersectional risks climate change poses.

## Public Health and Safety Working Group Report Comments

### Section 1. Feedback and Responses from the Equity and Environmental Justice Review Period

**1. Comment:** Housing recommendations should focus on condos, apartments, other types of structures that don't fit into the energy efficiency and clean energy models. The EEJ working group should make recommendations related to housing.

**Provided By:** Feedback provided during Public Health and Safety Work Group presentation to the Equity and Environmental Justice Work Group on August 18, 2020

**Public Health and Safety Work Group Response:** Response to this comment does not fall within the scope of the Public Health and Safety Work Group and will be redirected to the Equity and Environmental Justice Work Group and the Infrastructure and Land Use Work Group.

**2. Comment:** Thank you for this presentation- Indoor housing issues are prevalent in CT and are a direct barrier to drawing down our energy consumption in residential sectors. I wonder what the status of the Green and Healthy Homes Initiative is at this time? What is DPH doing on this front which impacts more than 30% of all Low and Moderate Income (LMI) housing?

<https://efficiencyforall.org/wordpress/posts/>

- Additional studies on health barriers in homes can be found here :  
<https://efficiencyforall.org/wordpress/2020/08/15/health-and-safety-barriers-to-weatherization-study/>  
and here [https://efficiencyforall.org/wordpress/wp-content/uploads/2019/02/EE-Health\\_2-18-2019\\_Flyer.pdf](https://efficiencyforall.org/wordpress/wp-content/uploads/2019/02/EE-Health_2-18-2019_Flyer.pdf) <https://efficiencyforall.org/wordpress/wp-content/uploads/2017/04/h1801.pdf>
- *No funding support within DPH for a healthy homes program. More details to come. Lots of potential for recommendations outlining some of the needs for LMI housing, those should receive more of a focus through the fall.*
- Without looking at mitigating indoor health barriers, which are prohibitive to energy efficiency demands, we will never meet the goal to reenergize 80% of housing. Non-public, low-income housing needs support, and money was allocated for it and studies were underway, but it seems to have dropped off. Especially with the coming need to shelter in place, this needs to be addressed.

**Provided By:** Feedback provided during Public Health and Safety Work Group presentation to the Equity and Environmental Justice Work Group on August 18, 2020

**Public Health and Safety Work Group Response:** Thank you for this important point. The Green and Healthy Homes Initiative has been added to the fourth recommendation in the Extreme Heat section of this report, "Enact policies to protect low-income residents and renters, particularly those in government supported housing, from indoor heat exposure.".

**3. Comment:** Indoor air quality issues that also present direct barriers to making energy efficiency upgrades include presence of mold, asbestos, gas leaks, improperly vented combustion products and more. Additionally, offgassing materials such as adhesives and sealants, paints, varnishes, and other chemicals, and some carpeting systems and composite wood products all impact indoor air quality.

**Provided By:** Feedback provided during Public Health and Safety Work Group presentation to the Equity and Environmental Justice Work Group on August 18, 2020

**Public Health and Safety Work Group Response:** We consider this point to fall within the scope of The Green and Healthy Homes Initiative, which has been added to the fourth recommendation in the Extreme Heat section of this report, “Enact policies to protect low-income residents and renters, particularly those in government supported housing, from indoor heat exposure.”.

**4. Comment:** On the housing and indoor air quality front: Connecticut Housing Funding Authority right now has a program that promotes Passive House design which main focus is to weatherize, insulate and provide better indoor air quality, unfortunately, this portion is being taken out of their funding or just merely grouped with other goals.

- *Combined with the earlier discussion about the GreenBank and healthy homes, there needs to be more of a focus in the report on housing issues.*
- **Kathy Fay:** Agree with Max Ballardo's comment that Ct Housing Finance Authority (CHFA) not be lobbied out of including extra points for financing applications that feature housing developments that adhere to PassiveHouse standards.

**Provided By:** Feedback provided during Public Health and Safety Work Group presentation to the Equity and Environmental Justice Work Group on August 18, 2020

**Public Health and Safety Work Group Response:** Response to this comment does not fall within the scope of the Public Health and Safety Work Group and will be redirected to the Infrastructure and Land Use Work Group.

**5. Comment:** [via chat] The heat index is also a serious problem. Here is a link to recent study on how this harm LMI populations and links this to climate impacts <https://www.wnpr.org/post/access-air-conditioning-critical-its-also-making-climate-change-worse>

- Hartford = 15% reduction in energy use could reduce health impacts by \$73 per capita annually 15th highest in the nation among large metro areas

**Provided By:** Feedback provided during Public Health and Safety Work Group presentation to the Equity and Environmental Justice Work Group on August 18, 2020

**Public Health and Safety Work Group Response:** The PHS Working Group agrees with this comment and points to the recommendation, “Enact policies to protect low-income residents and renters, particularly those in government supported housing, from indoor heat exposure, which aims to make access to air conditioning more affordable. As is identified in the public comment, addressing affordability is particularly important in Connecticut due to the high cost of electricity in the state (EIA, 2020; <https://www.eia.gov/beta/states/states/ct/overview> ).

**6. Comment:** There is an app called OSHA NIOSH Heat Safety Tool put out by the CDC, which calculates heat index and makes associated risk level worksite recommendations. It is very easy to use.

**Provided By:** Feedback provided during Public Health and Safety Work Group presentation to the Equity and Environmental Justice Work Group on August 18, 2020

**Public Health and Safety Work Group Response:** The PHS Working Group thanks the commenter for the information, which pertains to the recommendation, “Develop legislation to require employers to

develop and maintain a written plan to address heat exposure and prevent heat-related illnesses at outdoor worksites and at indoor facilities where potential heat-related hazards may exist."

**7. Comment:** Heat islands and solar panels info. Solar reduces GHG emissions and also reduces heat islands according to this report. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5338272/>

**Provided By:** Feedback provided during Public Health and Safety Work Group presentation to the Equity and Environmental Justice Work Group on August 18, 2020

**Public Health and Safety Work Group Response:** The PHS Working Group thanks the commenter for the information and notes that climate mitigation actions (including to support increased use of solar panels) are addressed through the GC3 mitigation working groups. The PHS strongly supports mitigation actions that provide climate adaptation and health co-benefits.

**8. Comment:** Food, the federal govt dept of agriculture just changed their requirements for supplying food to those in need that essentially excluded existing farm -> community supply of food. Common Ground, ecology project in New Haven boxes food to feed local families with fresh nutritious food.

Essentially farmers need to be paid for providing this resource.<sup>[P]</sup>

**Provided By:** Feedback provided during Public Health and Safety Work Group presentation to the Equity and Environmental Justice Work Group on August 18, 2020

**Public Health and Safety Work Group Response:** The Public Health and Safety Working Group thanks the commenter for this input. It was not feasible to address this comment within the limited timeframe for report revisions and it will be considered for further recommendation development during Phase 2. Your continued participation is welcome during the Phase 2 process.

**9. Comment:** How can the state of CT promote direct food supply from local farmers to residents in need?

**Provided By:** Feedback provided during Public Health and Safety Work Group presentation to the Equity and Environmental Justice Work Group on August 18, 2020

**Public Health and Safety Work Group Response:** The Public Health and Safety Working Group thanks the commenter for this input. It was not feasible to address this comment within the limited timeframe for report revisions and it will be considered for further recommendation development during Phase 2. Your continued participation is welcome during the Phase 2 process.

**10. Comment:** the new federal regulations require that food boxes include eggs, meat and milk? in addition to fresh vegetables. If the farm only supplies vegetables, they are disqualified from receiving any money from the federal program.

**Provided By:** Feedback provided during Public Health and Safety Work Group presentation to the Equity and Environmental Justice Work Group on August 18, 2020

**Public Health and Safety Work Group Response:** The Public Health and Safety Working Group thanks the commenter for this input. It was not feasible to address this comment within the limited timeframe for report revisions and it will be considered for further recommendation development during Phase 2. Your continued participation is welcome during the Phase 2 process.

**11. Comment:** Northwest Hills Council of Governments (COG) has a food hub to coordinate/distribute food to commercial/institutional entities.

**Provided By:** Feedback provided during Public Health and Safety Work Group presentation to the Equity and Environmental Justice Work Group on August 18, 2020

**Public Health and Safety Work Group Response:** The Public Health and Safety Working Group thanks the commenter for this input. It was not feasible to address this comment within the limited timeframe for report revisions and it will be considered for further recommendation development during Phase 2. Your continued participation is welcome during the Phase 2 process.

**12. Comment:** Given impact of multiple sources of pollution in overburdened communities on air quality, which affects resiliency of populations to climate change, have you considered a recommendation in support of legislation to take cumulative impacts into account in permitting?

*That discussion will need to happen between groups of the GC3, rather than generated from a single working group.*

New Jersey and other states (e.g., California) has such an initiative currently working its way through the state legislature.

**Provided By:** Feedback provided during Public Health and Safety Work Group presentation to the Equity and Environmental Justice Work Group on August 18, 2020

**Public Health and Safety Work Group Response:** The Public Health and Safety Working Group thanks the commenter for this input. It was not feasible to address this comment within the limited timeframe for report revisions and it will be considered for further recommendation development during Phase 2. Your continued participation is welcome during the Phase 2 process.

**13. Comment:** FYI - to follow up on the cumulative impact question - for state agency actions that meet certain thresholds, the CT Environmental Policy Act requires the consideration of cumulative impacts. Doesn't address cumulative impacts for permitting or for all project types, but is a precedent within the state for consideration of cumulative impacts.<sup>[P]</sup>

**Provided By:** Feedback provided during Public Health and Safety Work Group presentation to the Equity and Environmental Justice Work Group on August 18, 2020

**Public Health and Safety Work Group Response:** The Public Health and Safety Working Group thanks the commenter for this input. It was not feasible to address this comment within the limited timeframe for report revisions and it will be considered for further recommendation development during Phase 2. Your continued participation is welcome during the Phase 2 process.

**14. Comment:** Noting in chat that the public health impacts of Combined Sewer Outfalls/Overflows should be mentioned by this team even if recommendations on how to mitigate is addressed in more depth by another Working Group.

**Provided By:** Feedback provided during Public Health and Safety Work Group presentation to the Equity and Environmental Justice Work Group on August 18, 2020

**Public Health and Safety Work Group Response:** The Public Health and Safety Working Group thanks the commenter for this input. It was not feasible to address this comment within the limited timeframe for report revisions and it will be considered for further recommendation development during Phase 2. Your continued participation is welcome during the Phase 2 process.

**15. Comment:** WG proposed standards for indoor heat for renters and government supported housing. This directly protects low-income people in publicly supported housing, who have limited control over

their living conditions. It may not be as protective of renters who may not be able to afford their electric bills.

**Provided By:** Equity and Environmental Justice Working Group Report Review Form provided on September 8, 2020

**Public Health and Safety Work Group Response:** The Public Health and Safety Working Group thanks the commenter for this input. It was not feasible to address this comment within the limited timeframe for report revisions and it will be considered for further recommendation development during Phase 2. Your continued participation is welcome during the Phase 2 process.

**16. Comment:** In the PHS vector control recommendation for evaluation and implementation of sustainable vector management programs, it calls for increased culturally appropriate educational efforts for those with lower SES and limited access to public health services and information. This would be very helpful to low-income people to learn about how to act to reduce risk of exposure to prevent disease and to recognize symptoms of these diseases to allow early treatment. This recommended implementation strategy should be moved up to the implementation action section of the overall recommendation rather than only being in the vulnerable communities section.

**Provided By:** Equity and Environmental Justice Working Group Report Review Form provided on September 8, 2020

**Public Health and Safety Work Group Response:** This change has been made in the revised draft.

**17. Comment:** Also, the PHS recommendation to support communication and outreach to educate resident about preparedness, response and recovery for extreme weather events was also an important equity recommendation. It discusses doing this through the Diverse Communities Working Group, which is apparently on standby to be convened in the event of an emergency that requires multilingual communications channels. This sounds like an excellent resource that should be supported and provided useful climate change and emergency response information to build resilience in Connecticut's non-English speaking communities.

**Provided By:** Equity and Environmental Justice Working Group Report Review Form provided on September 8, 2020

**Public Health and Safety Work Group Response:** Thank you for the support of this recommendation.

**18. Comment:** Incorporating a coordinated strategy for safe evacuation of vulnerable populations in the updating of the Hurricane and Storm Evacuation Plan for Connecticut is an excellent idea. This is needed so that those most vulnerable who cannot evacuate on their own will be able to get out of harm's way. This plan should be developed with those who work with vulnerable people and should then be supplemented with information from joint planning/exercises with those who would be needing the services on the local level in a number of communities. Perhaps the Diverse Communities Working Group can assist with developing and publicizing this strategy. We would note that adequately resources environmental justice groups are often good at reaching and educating vulnerable, hard-to-reach people. They should be supported.

**Provided By:** Equity and Environmental Justice Working Group Report Review Form provided on September 8, 2020

**Public Health and Safety Work Group Response:** We have introduced a new recommendation in the revised draft to address this point, "Establish State and Regional Access and Functional Needs (AFN) Emergency Preparedness and Response Coordinators".

**19. Comment:** The recommendation for developing standards for local heat response plans is an excellent recommendation. It should, however, require involvement of the most vulnerable populations in the local planning process to assure that it is acceptable and meets their needs.

**Provided By:** Equity and Environmental Justice Working Group Report Review Form provided on September 8, 2020

**Public Health and Safety Work Group Response:** This recommendation “Establish evidence-based standards for local heat and air quality response plans” has been updated to reflect this important point.

**20. Comment:** The recommendations around air pollution are for research and monitoring rather than promoting action, or making current actions more equitable. We know that air pollution is harmful, is exacerbated by climate change, and is not evenly distributed. The largest sources of air pollution tend to be located in communities of color. The recommendations should be to prioritize the closure of fossil-fueled power plants in densely populated parts of the state with high rates of asthma and to prioritize renewable energy job creation in these communities.

**Provided By:** Equity and Environmental Justice Working Group Report Review Form provided on September 8, 2020

**Public Health and Safety Work Group Response:** The Public Health and Safety Working Group thanks the commenter for this input. It was not feasible to address this comment within the limited timeframe for report revisions and it will be considered for further recommendation development during Phase 2. Your continued participation is welcome during the Phase 2 process.

**21. Comment:** In addition, PHS should reduce exposure to existing air pollution sources as much as possible. This is especially important for those who have limited ability to move or use air conditioning, no matter how harmful their housing may be. Those who are in government-subsidized housing may be on a waiting list for years before they can be transferred to safer housing that does not cause frequent trips to the emergency room and school absenteeism from asthma due to traffic related air pollution or indoor mold

**Provided By:** Equity and Environmental Justice Working Group Report Review Form provided on September 8, 2020

**Public Health and Safety Work Group Response:** The Public Health and Safety Working Group thanks the commenter for this input. It was not feasible to address this comment within the limited timeframe for report revisions and it will be considered for further recommendation development during Phase 2. Your continued participation is welcome during the Phase 2 process.

**22. Comment:** Because of their limited options to change their circumstances, schools in low-wealth communities and government-supported housing should have standards that are more health protective of their residents. There should be buffers between publicly supported housing and major highways to protect from traffic related air pollution. Schools without adequate financial support and maintenance as well as publicly supported housing should not be built in flood zones. The Connecticut Housing Finance Authority should maintain their incentives for building the highly energy efficient and high IAQ Passive House. PHS and GC3 should support this as a climate equity issue. We do support the section of the ozone warning evaluation that explores how new ways of communication can be used to reach vulnerable populations.

**Provided By:** Equity and Environmental Justice Working Group Report Review Form provided on September 8, 2020

**Public Health and Safety Work Group Response:** The Public Health and Safety Working Group thanks the commenter for this input. It was not feasible to address this comment within the limited timeframe for report revisions and it will be considered for further recommendation development during Phase 2. Your continued participation is welcome during the Phase 2 process.

**23. Comment:** The mental health sections discusses service needs for the chronically mentally ill. This is good; however, it should add a recommendation for planning for post-disaster, culturally and linguistically appropriate mental health service structures. These needs are often underestimated in disaster plans.

**Provided By:** Equity and Environmental Justice Working Group Report Review Form provided on September 8, 2020

**Public Health and Safety Work Group Response:** This is an extremely important comment and will be addressed as part of late Phase 1 and Phase 2 planning of GC3 process. We recognize two levels for further development: 1) strengthening mental health capacity throughout state with specific regard to needs of culturally diverse populations and 2) post-disaster planning with a focus on populations with mental illness, and recognizing that serious mental illness is a disability that is influenced by the social determinants of health, including but not limited to socioeconomic status, health care access, as well as race and ethnicity.

**24. Comment:** EEJ is also concerned about cumulative impacts of environmental health risks. Does PHS have a mechanism of determining and prioritizing areas of cumulative climate vulnerability/impacts?

**Provided By:** Equity and Environmental Justice Working Group Report Review Form provided on September 8, 2020

**Public Health and Safety Work Group Response:** The Public Health and Safety Working Group thanks the commenter for this input. It was not feasible to address this comment within the limited timeframe for report revisions and it will be considered for further recommendation development during Phase 2. Your continued participation is welcome during the Phase 2 process.

**25. Comment:** There was a request that PHS include a recommendation to eliminate Combined Sewage Overflows/Outfalls. As we get more downpours and flooding, which is likely to be greater in urban areas, we will get more release of sewage-contaminated water in basements and backyards with resultant infectious disease. This requires increased funding.

**Provided By:** Equity and Environmental Justice Working Group Report Review Form provided on September 8, 2020

**Public Health and Safety Work Group Response:** Recommendation development in response to this comment will be prioritized for Phase 2 of the GC3 planning process.

**26. Comment:** We are concerned about your recommendation to use Clean Water State Revolving Funds for rural subsurface sewage disposal system upgrades. Would this promote suburban sprawl by making it cheaper to develop the greenfields? Are you proposing to restrict the funds to income eligible households? Would it be open to businesses?

**Provided By:** Equity and Environmental Justice Working Group Report Review Form provided on September 8, 2020

**Public Health and Safety Work Group Response:** Use of Clean Water State Revolving Funds (CWSRF) for improved decentralized management would help prevent sprawl by encouraging better development practices (e.g., conservation and open space subdivisions, use of community subsurface sewage disposal systems (SSDS), eliminate developer practices putting properties in separate ownership to avoid agency permitting). Public Health Code section 19-13-B100a (B100a) helps to ensure consistency with the State's Conservation and Development plan by making sure development in areas without sewers is done at a scale that wastewater can be treated and disposed by the "carrying capacity" of the land. The B100a regulation also helps ensure viable septic repair areas on properties that rely on septic systems. Local health departments conduct thousands of B100a reviews each year.

Once funded, the program development and framework can include income eligible restrictions. A detailed framework of eligibility will be tied to vulnerable populations. Several states are successfully utilizing CWSRF funds to facilitate SSDS management and upgrades.

**27. Comment:** PHS may want to review national recommendations for siting, building, and maintaining IAQ standards for schools in low-wealth communities and government supported housing and tailor them for Connecticut.

**Provided By:** Equity and Environmental Justice Working Group Report Review Form provided on September 8, 2020

**Public Health and Safety Work Group Response:** The Public Health and Safety Working Group thanks the commenter for this input. It was not feasible to address this comment within the limited timeframe for report revisions and it will be considered for further recommendation development during Phase 2. Your continued participation is welcome during the Phase 2 process.

**28. Comment:** How do we think about vector-borne disease with an equity lens?

**Provided By:** Feedback provided during Public Health and Safety Work Group presentation to the Equity and Environmental Justice Work Group on August 18, 2020

**Public Health and Safety Work Group Response:** The risk for vector-borne diseases (VBDs) is not uniform across all populations and climate change will variably impact risk depending upon the abundance of vectors (e.g., mosquitoes and ticks), characteristics of populations, and the physical environment. Socio-economic inequalities will place certain populations, including those in living in poverty and in sub-standard housing, having limited access to healthcare, and in areas with greater environmental risk factors, at higher risk for VBDs in the face of climate change.

The key for reducing the potential impacts of VBDs under climate change is to identify vulnerable communities in Connecticut and evaluate prevention options in these areas. Communities with lower socioeconomic status, limited access to public health services and information on preventive measures, and those not receiving appropriate diagnosis and treatment are at greater risk of contracting VBDs. Increased and targeted culturally appropriate educational efforts for these groups is needed.

**29. Comment:** Are there particular recommendations to address issues related to vector-borne diseases that affect particularly vulnerable populations (such as access to health care)?

**Provided By:** Feedback provided during Public Health and Safety Work Group presentation to the Equity and Environmental Justice Work Group on August 18, 2020

**Public Health and Safety Work Group Response:**

- **Manage water resources.** Mosquitoes breed in stagnant fresh water, swamps, marshes, artificial containers (e.g., tin cans, buckets, discarded tires), untended pools, birdbaths, clogged

rain gutters, and plastic wading pools, oftentimes found around the home. Eliminating standing water in neighborhoods, particularly urban neighborhoods, and biological control of mosquitoes reduces mosquito egg and larval development. Improved management of marshes and natural water bodies will provide habitat for natural mosquito predators such as fish and birds. Water management provides cost effective and environmentally sustainable control of mosquito populations and reduced use of insecticides.

- **Reduce social and economic disparities.** Vector-borne disease distribution is influenced by social determinants of health. In both urban and rural settings, social and environmental drivers such as inequality, poverty, and differential effects of climate change increase the risk of vector-borne diseases. Thus, careful urban planning, socioeconomic development, and improved health services have major implications for vector-borne diseases. Poorly planned urbanization leads to numerous public health challenges, including increased risk for vector-borne diseases, that threaten human health and equity targets. Aging and poor-quality housing allows entry of vectors into houses, which can be effectively prevented by screening windows, doors and eaves of houses, and by reducing the vectors' indoor hiding and breeding places. Poverty and inequality are associated with poor access to healthcare, which delays diagnosis and treatment and increases risk for severe or late-stage disease; subsequent long-lasting health problems cause ongoing economic hardship. Prompt access to affordable and quality healthcare, as well as targeted education on prevention, will greatly reduce the burden of vector-borne disease among vulnerable populations.
- **Promote health of migrant populations.** Quite often, migrant populations have limited access to healthcare and public health resources, are frequently exposed to vector-borne diseases as occupational health hazards, and lack adequate resources for proper housing. These factors increase the risk of vector-borne diseases among migrant populations and illnesses may remain undetected and untreated. As such, special planning is required to protect the health and well-being of these vulnerable populations through targeted and culturally appropriate outreach.
- **Enhance vector surveillance and risk-mapping in vulnerable neighborhoods.** An essential way to improve vector control interventions and make them evidence-based is through risk mapping based on statistical and knowledge-based modelling. Risk-mapping may include landscape level factors such as water bodies, land use, disease incidence, vector and host populations, and neighborhood level socio-economic factors. Risk mapping will be enhanced by sustained systematic vector surveillance in vulnerable urban and rural communities. Integrating risk mapping into vector control programs will make vector-borne disease control more targeted and sustainable.
- **Reduce environmental risk factors for vector-borne diseases.** The emergence and spread of vector-borne diseases are intensified by anthropogenic activities such as deforestation, urbanization, and human mobility, which alter the natural habitats of vectors (i.e., mosquitoes and ticks) and increase opportunities for humans to encounter vectors. Environmental risk factors can be reduced by measures such as landscaping to minimize tick encounters around the home, or eliminating artificial sources of stagnant water to reduce mosquito breeding. Tick prevention for pets is important as untreated cats and dogs can bring ticks into houses, and environmental risk can also be reduced through the use of preventive behaviors when people are in high-risk tick or mosquito habitat.
- **Plan for vector-borne diseases following natural disasters.** Natural disasters which might occur in Connecticut include hurricanes, floods, and drought. Each can affect vector populations and disease transmission and create serious health, social, and economic consequences. Natural disasters, and subsequent vector-borne diseases, are likely to disproportionately affect underserved populations. Crowding, a weakened public health infrastructure, interruptions of

ongoing control programs, concentrations of animal hosts for ticks, and increased mosquito breeding sites are all risk factors for vector-borne disease transmission following a natural disaster. While initial flooding may wash away existing mosquito breeding sites, standing floodwater provides mosquito breeding habitat and can increase potential for disease transmission, depending on the local vector species. A surveillance system should be promptly established to monitor priority endemic and emerging diseases. Training health-care workers to detect vector-borne diseases and report to lead health agencies is of vital importance. This and prompt identification of opportunities to control vector populations should be incorporated into natural disaster planning.

- **Promote health of pregnant women and unborn fetus.** Pregnant women constitute the largest vulnerable group due to immune suppression/modulation and severe consequences of infection that impact the health of mother and fetus. Mosquito-and tick-borne infections present a major health concern to women of childbearing age in Connecticut and worldwide. These infections during pregnancy may cause anaemia, low platelets, low fetal birth weight, congenital deformities, mother-to-child transmission of infection, preterm labor and delivery, among others. Due to safety concerns and potential teratogenicity risks, drug therapy and implementation of other available treatment methods are compounded, particularly in resource-limited settings. In order to mitigate the impact of emerging vector-borne diseases during pregnancy, financial resources are required to study, understand, control and eliminate these infections. In addition, establishment of advisory boards (e.g., at local health departments) to educate and support pregnant women with basic prevention strategies including vaccination, use of approved insect repellents, mosquito nets and staying in air-conditioned accommodation with window and door screens will have lasting health benefits to pregnant women and unborn children of the future.

## Section 2. Public Forum –Main Presentation (Chat Logs)

The Public Health and Safety Working Group thanks all the participants who attended the Public Forum and provided comments during the main presentation, during the individual break-out sessions, and/or during the public comment period. It was not feasible to address all the items discussed during these events within the limited timeframe for report revisions and will be considered for further recommendation development during Phase 2. Your continued participation is welcome during the Phase 2 process.

### Chat Record

16:10:34        From Linda Yannone : Please shut off OXFORD, shut off, BRIDGEPORT, do not allow KILLINGLY and surely shut off CRICKET VALLEY in Dutchess County, NY, adjoining Kent, Sherman& New Fairfield. It is a CRISIS.

16:28:40        From Curt Johnson : It's great you have identified extreme heat and other areas of health threat. I do not see anything about the public health threats related to flooding. Inland and coastal flooding due to increased extreme rain downbursts and coastal flooding are identified as major physical threats facing CT and NE according to the most recent national climate assessment. Vulnerable communities are often in these flood prone areas. Nature based solutions are important. Please include.

16:31:18        From Anthony Allen : I'll second that, Curt, particularly in areas where overflows of combined storm and sewer systems are becoming more likely as heavy rain events become more likely

due to climate change. These overflows dump huge amounts of raw sewage and other pollutants into waterways used for recreation, fishing, and/or water supplies.

16:31:55        From Curt Johnson : Healthy homes should include combo of energy efficiency (included) AND split system heat pump system installation. These split systems save electricity and include built in AC at its most cost-effective. Indoor air quality/ventilation can also be improved with split systems. Focusing this effort on low/mod income is critical. Mold abatement and asbestos/lead cost effective abatement needs to be part of healthy homes.

16:33:30        From Laura Cahn : Air Quality - What about the huge amounts of pesticides being sprayed all over us by lawn companies?

16:34:03        From Amy Velasquez : Unfortunately pesticides are not a climate change issue.

16:35:21        From Curt Johnson : Thanks, Anthony. Agreed. Actually enforcing DEEP's municipal stormwater permit (MS4) would decrease flooding by several billion gallons per year over the next five years, along every flood prone river in the State. Let's enforce our existing DEEP regs!

16:37:14        From Anthony Allen : You could argue that they are related, Amy, given that new insects and plant diseases are coming to the Northeast due in part to climate change. The short- term response to these invasive species and threats to native plants and crops is almost always pesticides and/or other chemicals. It's not the most direct connection, but I think it is connected!

16:37:22        From Adrienne Houel : we're going to talk about flooding now, I think....

16:38:01        From denise savageau : Healthy wetland ecosystems decrease the prevalence of vector borne diseases especially related to mosquitoes. The wetland subgroup report discusses this as a cross-over issue.

16:38:24        From Amy Velasquez : Good point Anthony.

16:40:08        From Kathy Fay : Although pesticides themselves may not be a climate change issue, the increased stormwater is, and it can bring those pesticides into water bodies and other locations that have no pesticide notices posted. This stormwater/pesticide connection does become a climate/health issue that should be addressed

16:41:31        From Rebecca French : Nature-based solutions have been a cross-cutting theme across multiple GC3 working groups, both the Public Health and Financing reports include nature- based solutions and they were also recommendations in the Working and Natural Lands Working Group reports.

16:42:04        From Curt Johnson : Great to have much better natural disaster communications, especially for vulnerable neighborhoods. But how about preventing flooding to vulnerable, flood exposed areas using nature based solutions and enforcing existing regulations to capture and get back in the ground stormwater? Again, enforce MS4 regulations.

16:42:05        From Ben Martin : building a new fracked gas plant in Killingly would make inequality and water quality worse

16:42:22        From Anthony Allen : Thanks Rebecca, looking forward to reviewing all reports!

16:42:38 From Ben Martin : DEEP & GC3 has the power to stop that plant

16:42:42 From Gannon Long : Hey everyone, The Low Income Energy Advisory Board met today. They have a carryover surplus around \$14M for weatherization. Now's the time to invest in contractors that are doing this work to scale up hiring and do more remediation & efficiency measures in more low income homes more quickly.

16:42:47 From denise savageau : Assuming WBI also includes HAB in public water supplies.

16:42:56 From Gannon Long : Thank you Anthony for making those points, so important

16:43:11 From Amy Velasquez : What's HAB?

16:43:36 From Gannon Long : there is also left over money for energy assistance, through federal LIHEAP \$, that we can be spending on weatherization/ efficiency. DSS currently allocates that money.

16:43:38 From Curt Johnson : Great idea on beach inventory. Check out Sound Health Explorer: for lots and lots of great data on pathogens data and opportunities to improve beach health. Also need to look at EQUITABLE ACCESS.

16:43:48 From Diane Mas : HAB = harmful algal bloom

16:44:17 From Amy Velasquez : Thanks

16:44:24 From Rebecca French : Nature-based solutions are mimicking nature to address climate impacts such as flooding or heat. They can include rain gardens, planting trees, or restoring natural shorelines.

16:45:17 From Curt Johnson : <https://soundhealthexplorer.org/>

16:47:15 From Suzi Ruhl : has consideration been given to applying brownfields to health fields as a means to address food insecurity?

16:49:05 From Anthony Allen : All food-related concerns tie into the cross-cutting theme of localization. There needs to be a real conversation about food apartheid and the systems that uphold it. Look to existing leaders in food sovereignty movements for guidance here.

16:50:23 From Curt Johnson : To the health team: the Save the Sound team would be happy to present a 10 minute overview of the deep data set on beach and beach access through the Sound Health Explorer. No need to re-invent the wheel. It won't get you everything, but it is a super important data foundation that exists. [soundhealthexplorer.com](http://soundhealthexplorer.com)

16:50:55 From Joanna Wozniak-Brown : Hi Suzi, brownfields were not discussed in great detail in the Public Health & Safety report; however, they are included in a recommendation in the Infrastructure and Land Use working group report. I was a member of both groups.

16:51:33 From Laura Cahn : Food Safety - NPR report this afternoon on pesticides on food: <https://www.wbur.org/hereandnow/2020/10/07/epa-trump-pesticides>

16:52:25 From Mary Pelletier : Was research regarding access to nature for urban residents included in the draft report?

16:52:28 From Robert LaFrance : Following up on the comments on Nature-based solutions -

- here is a video that Audubon pulled together. Worth a watch:

16:52:51 From Suzi Ruhl : Thanks, Joanna. There are great examples where B2H captures both the remediation and redevelopment objectives, addressing essential needs and services.

<https://www.audubon.org/conservation/coastal-resilience>

16:55:17 From Wayne Cobleigh : Research by Yale and others on how the mind works too fast on decisions about climate risks and the need to let fast thinking hack your mind

16:55:28 From Wayne Cobleigh : <https://www.pbs.org/show/hacking-your-mind/>

16:57:44 From Wayne Cobleigh : correction NOT letting fast thinking hack your mind by thinking slower

16:58:16 From Linda Yannone : Stop funding building of these power plants, INSURANCE AGENCIES.

16:58:42 From Kimberly Stoner : Stop insuring the new power plants, too!

17:01:53 From Kimberly Stoner : I have written to the State Treasurer saying that he needs to stop investing state funds in fossil fuel companies. They will be increasingly risky as we proceed, as we should, in replacing fossil fuels with renewable energy.

17:02:22 From Robert Nixon : What about investments in fossil fuel projects by CT based Insurance companies . It promotes climate destruction.

17:02:56 From Kimberly Stoner : Also CT insurance companies insuring fossil fuel projects!

17:03:02 From Samantha Dynowski : Agree that Connecticut is where insurance could take on the climate crisis. Yet our insurance companies are investing \$247 billion in fossil fuels and insuring fossil fuel projects. <https://www.insureourfuture.us/ct-insurance-report> From Samantha Dynowski : Agree that Connecticut is where insurance could take on the climate crisis. Yet our insurance companies are investing \$247 billion in fossil fuels and insuring fossil fuel projects. <https://www.insureourfuture.us/ct-insurance-report>

17:04:48 From Kris Kuhn : Agree that insuring fossil fuel projects s must be addressed. This cannot be overstated.

17:06:04 From Samantha Dynowski : Lots that CT insurers can and should be doing including:

17:06:08 From Samantha Dynowski : Require that insurance companies:

Immediately cease insuring new coal projects and coal companies, unless they are engaged in a rapid transition process away from coal to clean energy of no more than two years.

Immediately cease insuring new oil or gas expansion projects.

Commit to phasing out insurance for oil and gas companies in line with a 1.5°C pathway.

Divest all assets from coal companies and oil and gas companies that are not in line with a 1.5°C pathway, including assets managed for third parties.

Bring stewardship activities, membership of trade associations and public positions as a shareholder and corporate citizen more broadly in line with a 1.5°C pathway in a transparent way. This must include forceful advocacy for a green and just recovery from COVID-19.

17:07:32        From Mary Pelletier : On-going prioritization funding climate resilience research and preparedness on coastal communities - rather than recognizing the need to invest in preparing inland communities for population shifts is fundamentally problematic.

17:07:38        From denise savageau : FEMA's model relies on municipalities and/or nonprofits to be the applicants and bear the risk if the subapplicant (homeowner) fails in the project. This needs to be addressed.

17:08:22        From Angel Serrano : CT Insurance companies should stop underwriting the very fossil fuel projects that are contributing to Climate Change

17:08:30        From Curt Johnson : thanks Bryan for pointing out importance to hold a separate public forum on nature based solutions during this public input phase.

17:08:51        From Suzi Ruhl : Did you explore the application of NEPA to consider equity and environmental justice in federal projects, programming and funding?

17:09:22        From Rebecca French : We encourage you to check out the new FEMA BRIC program. \$500 million available to implement resilience projects.

<https://www.fema.gov/grants/mitigation/building-resilient-infrastructure-communities>

17:09:31        From Samantha Dynowski : How about a fee on insurance companies that insure climate destroying fossil fuel projects?

17:10:19        From Rebecca French : <https://www.fema.gov/emergency-managers/practitioners/lifelines>

17:10:33        From David Blatt : Tying resilience fees to resilience projects is noble and logically unassailable, but the legislature has routinely plundered special funds.

17:10:40        From Lynn Johnson : Thanks Curt for a list of nature Based Solutions. i downloaded it!

17:11:10        From Kimberly Stoner : What about investing state pension funds in resilience!

17:12:11        From Leticia de : I agree with this comments "On-going prioritization funding climate resilience research and preparedness on coastal communities - rather than recognizing the need to invest in preparing inland communities for population shifts is fundamentally problematic." coastal communities

17:12:37        From Leticia de : coastal communities also often have additional resources of their own

17:12:37        From Diane Keefe : Why is their no recommendation to increase the gas tax to generate local matches or improve resources for public transportation and bicycling facilities in our cities. The state of PA collects 58 cents per gallon. we only charge 38 cents. If we redirerct all the proceeds to low income communities it will be progressive not regressive.

17:13:35 From Curt Johnson : Note that there is an addendum to the finance/funding committee report that identifies the large funding need; importance for evaluating petroleum based taxes coordinated with the TCI effort and considering Maryland's "flush tax" for water resilience projects There is a large built up need. While Bryan is right, there are over 400 nature based/flood adaptation efforts identified, these projects ARE ALMOST ALLNOT FUNDED, EVEN TO THE ENGINEERING EFFORT.

17:13:36 From Anthony Allen : Was there an assessment of the potential of environmental impact bonds as a funding opportunity for nature-based resilience projects?

17:14:10 From Ben Martin : given that there is a lot in today's documentation about water quality sis GC3 recommending DEEP reject the wastewater perm it for NTE

17:14:15 From Aaron goode : need state to authorize stormwater utilities and user fees at local level

17:14:31 From Anthony Allen : YES Aaron, great point

17:15:00 From Suzi Ruhl : did you address the issue of access to resources distinct from the availability of resources? vulnerable communities often lack the capacity to apply for existing funding.

17:16:00 From Samantha Dynowski : How will you prioritize funding in a way the benefit low-income communities and communities of color that have suffered from decades of intentional structural racism, disinvestment, red lining, discrimination, segregation, and many other injustices. 17:16:04 From James Finch : Standard and Poor's issues an annual report on municipal green bonds and resilency

17:17:10 From Samantha Dynowski : NY's landmark climate law requires at least 35% of benefit go to vulnerable communities. Funding and financing in CT should follow suit.

17:17:28 From Anne Hulick : Are there innovative ways to engage healthcare systems to engage and work on these issues and incentivize them to do so?

17:18:27 From Rachel Hiskes : Greenlining as directing resilience and sustainability projects towards low resource communities is a great term

17:19:16 From Diane Keefe : I can't join the break out due to a schedule conflict but a carbon tax hasn't gotten traction nationally because it's complicated to understand but people already know what a gas tax is. It's already in place. If the Governor takes a lead in explaining that gas is like cigarettes. It's in everyone's interest that we discourage its use and that the proceeds will go to climate vulnerable communities.

17:20:51 From Amy Velasquez : Only problem with the gas tax is it already has a history of being hijacked from its original intent.

17:21:11 From Amy Paterson : David is referencing CT DEEP Open Space & Watershed Land Acquisition Grant Program and the Urban Green and Community Garden Grant Program. You can google both and readily access the information.

17:21:31 From Mary Pelletier : Please note there needs to be funding for revitalization of ecosystem resilience along urban riparian corridors, and public parkland,

17:21:32 From Suzi Ruhl : Also the HUD-DOT-EPA Partnership for Sustainable Communities offers funding models.

### **Section 3. Public Forum – Break-out Sessions (Notes)**

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#### **Extreme Heat and Air Quality Notes**

Moderator – Paul Ferrell, DEEP, Director of air planning for bureau of air management

With help from Laura Hayes, DPH

Extreme heat:

Recommendations-

- Establish evidence based standards for local heat and air quality response plans  
More than just putting cooling centers.
- Policies to protect low-income residents and renters, particularly those in government supported housing, from indoor heat exposure.
  - o Sub policies:
    - expand cooling assistance
    - Require landlords to establish Min/max temperatures for winter and summer
    - Protection from power/water shutoff

Air Quality

Recommendations:

- Evaluate ozone alert education
- o Ozone is harsh air pollutant, caustic. Formed indirectly when combustion by-products mix in warm temps, AKA smog.
- o Let people know when we expect high ozone. Need to evaluate if we are reaching the right people.
- Increase Airborne Allergen monitoring
- o Natural air pollutants
- o Outside of DEEP (only looks at manmade pollutants)
- o Monitoring station by Waterbury hospital that is being examined as a model to be expanded to other parts of state.
- Estimate impacts of climate change on 2030 and 2050 ozone levels in CT and identify potential effects on the health of CT Residents
- o Looking at future impacts of ozone. Mitigation efforts drive down air pollution, but we don't know to what extent this will be offset by rising temp and increased fossil fuel emissions. This

will take a look at what we can learn from existing reports that are out there.

QUESTION: ALLEN POIRIER – Most issues can be tackled through education. What is the equivalent of ozone alerts for high temperatures, and telling people to hydrate and avoid sugary drinks?

Response: Laura Bozzi – One of the recommendations, establish evidence-based standards for local heat and air quality response plans, is what we have in mind. There are good best practices about how to do outreach and education effectively at local levels to account for variations across state and engage local residents. There is not a lot of specificity in the report, but that is what is in mind initially.

Question: BEN MARTIN – Monitoring and reporting doesn't seem to be getting to root causes of air quality problems, like pollution (industry, transportation). Any recommendations to deal with root causes, like methane plants built in Bridgeport and proposed in Killingly, to deal with bad air/extreme heat days?

Response: Paul – Comes down to what context. In this context talking about adaptation. No matter what we do, there will be impacts to CT and NE. Adaptation vs mitigation. Mitigation focus is on regulatory tools to reduce emissions, using policies and programs. Carrot vs Stick. Stick, like REGGY and control programs, or carrot, incentives to buy electric vehicles.

Ben – Using regulatory system to prevent emissions and lower ones currently there, means less adaptation. Not recognizing that in some of the documentation seems like we are accepting defeat.

Paul – Even if we stop everything, there will still be some impact to climate, and we need to plan for that and be ready for those consequences.

Laura – focus of this group is on adaptation rather than mitigation, while recognizing that there are real health benefits to reducing use of fossil fuels. Having public perspective pointing to these health benefits is great. That is something that we have seen, but reduced the scope of this time. May expand it in 2021. Making that point is great and is the aim of this public process.

Allen – Yes. We are fortunate to have had the expertise that we have. The big challenge is what can the state do with the information? State has to sort out what it can/cannot do.

Paul – I Agree, it is overwhelming when you think of all the problems out there. How do you prioritize? Public input is helpful.

Allen – Interesting to think about how smaller scale electric vehicles can be helpful. Not 40-50k EVs. Lightweight, low cost EVs. To get to where we use them is a lot of work though.

Paul – Hard to get to that point. Getting even 100k EVs on road is hard, only about 12k now.

Allen – Rebates should be reweighted towards hybrids. Hybrids are more realistic to families. EVs are expensive.

Ben – Are any part of rebates going towards electrifying mass transport?

Paul – not that program, but others are working towards electric buses

Ben – people cant spend 40k on EV, especially low income. Providing better mass transport hubs makes it easier to meet the goals we need to meet. Also goes towards local air quality. Removing diesel bus exhaust and highway traffic exhaust reduces ozone/smog.

Allen– CT can only do so much for mitigation. Cant affect CO2 globally really, but can do tremendous amount towards local pollution.

Paul – Agree. DOT is on path to get to 30% transit buses by 2030.

Laura Hayes – Joined from another group. Asks everyone to introduce themselves.

Paul Ferrell, director of air planning at dept of energy and env. Protections bureau of air mgmt.

Ben Martin, wallingford, CT. Active in group: 350 CT, which is working to get us off of fossil fuels in CT and in nation.

ALLEN POIRIER, old lyme, CT. member of citizens climate lobby, also sierra club, also old lyme land trust.

Laura Hayes – Epidemiologist at department of ...[INAUDIBLE]... Co-lead on public health and safety working group report and has sat in with extreme heat and air quality teams. Currently a small group, but great that it has representation from DEEP, DPH, EPA, and Equity in environmental justice group.

Laura Bozzi – Center on climate change and health at Yale, part of extreme heat team. We just put out big report on climate change and health in CT. Covers a lot of the issues here, air quality, adaptation, local air quality issues. Posted in chat.

Ariel King – law student supporting equity in environmental justice working group

Katie Keyman – Adaptation planner with BSC group. Engineering and Env services group. Just joined them, spent most of career working in Mass. with public health and healthcare.

Ben – Curious if extreme heat part will deal with loss of effectiveness of power plants, since extreme heat can cause them to not be able to run.

Paul – no

Laura Bozzi – Focus is on public health aspects of extreme heat. May be another group that is working on that issue.

Katie Keyman – From scanning report as adaptation planner and previous work in public health, Report seems to be hitting main issues that we see all the time. Recently heard a lot about older adults and their vulnerabilities, and how do we keep them connected and outdoors and connected. We have been talking about green infrastructure and shade/parks located near senior housing areas. What can we do in urban areas to make sure people can be outside.

Laura Hayes – Some of those points have come up repeatedly in working groups with the concepts of community resilience and building social cohesion and where these overlap with protection of individuals against certain health risks. Utilizing green spaces within urban communities. What you will

see in reports is fair amount of overlap with recommendations. Urban tree planting talked about in sci and tech group.

Katie – How will implementation be coordinated between working group. Will that be Rebecca French's group?

Laura Hayes – Not known. Template used is from another state, possibly Mass. Groups developing recommendations were state agencies, so easy for them to oversee implementation. Now it is a different construct with the working groups, and can see there are multiple stakeholders involved, not just state agencies. Universities might want funding. A lot of groups that could be involved in implementation. Sometimes it is clear who lead could be. For example with Dennis, one of the recommendations for extreme events was providing access and functional needs coordinators, and that would be in purview of Dennis if funding was allocated. In other cases it hasn't been decided how to identify the leads. That is just part of the process. This is happening quickly. Expect that directives on how to identify those entities will be coming from Rebecca French's office.

Katie – The recommendation around protecting low income residents/renters. This year especially, it seems like the importance of having good housing has come to the forefront for so many different reasons. Housing is how we start to build resilience for people. Cooling centers are great, but that work is already ongoing and at different stages. Important to include it and make sure shelters are accessible, but that seems like its being taken care of somewhere else. Housing just stands out to me as important.

Paul – that makes a lot of sense. Thinking of cooling shelters as mitigation for extreme heat, how do we approach that in the face of COVID-19 and a pandemic. This report has not gotten a handle on that. You think we are going to think about these things going forward, as they become more prevalent as well.

Laura – That's an interesting point, and it has been recognized through this process that coordination around cooling centers is highly local. Our agency is working with CT institute for resilience and climate adaptation, along with support from Yale, to synthesize info about what's going on with cooling centers around the state and coordinate local plan. In support of 2011 recommendations to establish best practices for cooling centers in CT. That is a separate active project right now. Interesting that you brought up COVID, because in state's with more active cooling centers during summer, ex AZ, COVID was an issue. They had to take everyone's temp coming in from outside, but they had homeless population, who may have been exposed to extreme heat, and that interfered with taking temperatures. It is a fast moving target on how to handle that.

END OF MEETING

## Extreme Events and Water Borne Illnesses Chat Logs

Moderated by David Murphy, Public Health and Safety working group

David Murphy highlighted some of the recommendations from the Extreme Events and Water- borne Illnesses sub-groups and then opened for questions and discussion.

### Questions

- Amy Velasquez

I have a question regarding the energy audit program for wastewater utilities, also how the drinking water management plan will promote resilience.

- David Murphy

Responded that the drinking water management plan promotes resiliency through setting aside and protecting watershed lands

A major part of the GC3 initiative is to reduce greenhouse gas emissions and one opportunity for that would be to examine the energy consumption at wastewater and drinking water treatment plants. As there are upgrades and improvements there should be a focus on improving efficiency.

- Denise Savageau

The Progress on Mitigation Strategies working group is also discussing this. They are looking at recommendations for how do we reduce energy consumption in these areas?

In regards to the drinking water management plan and source water protection

We don't have good policy in Connecticut in terms of non-point source pollution, however, we focus more on point source, which we have good policy on

In terms of land use and other activities there is a lack of policy while we need to be looking at both

It is much easier to prevent pollution than to clean it up after it happens

There is already a lot of funding going towards protecting the Long Island Sound, primarily from nutrient pollution. If we paired this funding with protecting public drinking water that supplies watersheds, we could take care of two issues at once by preventing harmful nutrients from watersheds from going into the Long Island Sound.

- David Murphy

Agreed and pointed out that this is big frustration with the 319 grant, which is only for impaired water, and often times the watershed waters are not impaired but we want to keep them that way

- Anji Seth

The recommendations have a lot to do with extreme rainfall. To what extent is there concern about drought related events?

- David Murphy

Highlighted the working group's recommendations on droughts:

Develop water conservation measures and communication guidelines to manage droughts

Update water supply planning guidelines, drought triggers, and drought response protocols at least once per decade

Develop GIS database and framework for updates to locate critical facilities and identify which public water systems they are served by, and which are served by their own public water systems

Develop emergency interconnections between public water systems to ensure that multiple sources are available for mutually beneficial sharing of water during emergencies

- Anji Seth

The role of Connecticut forests in absorbing carbon and water retention and reduced flooding and yet our forests are not protected. Existing forests that are 50- 100 years old take up more carbon than young forests. The term proforestation refers to a reduction in forest management practices. This could be used by the public health group as a multi-solving approach to help mitigate things like droughts.

- Huan Ngo

Expressed confusion about the terms mitigation vs. adaptation. It seems like most of the recommendations deal with mitigation and not adaptation. In addition, the public health group does not discuss infrastructure when it comes to public health, for example, ways to monitor pathogens from flooding.

- David Murphy

Clarified the definitions of mitigation and adaptation. He expressed that he does think the recommendations cover adaptation and brought up the example of revisiting the drought triggers for reservoirs every 10 years. Assessing these triggers every so often allows us to adapt to a changing climate.

- Huan Ngo

What are the public health implications for drought and flooding?

- David Murphy

In Connecticut, most of the population drinks from the public drinking water system. However, drinking water is not the only source of public health issues with regard to water supply, there is also sanitation and having water to flush toilets and wash etc.

- Diane Mas

A lot of the public health impacts that we see as a result of flooding occur after flooding events. There are current efforts through DEEP to reach out to companies that store harmful chemicals to discuss storage safety and to adapt to these issues by reducing exposure of the places that these chemicals are

stored. In terms of pathogens, we increase the exposure of the population to pathogens in flood waters if we do not have a system set up to evacuate people from flood waters.

- Denise Savageau

Brought up the issue of drought as an extreme event and the impact on water quality. We often look at drought as impacting the quantity of water but it also reduces the quality of the water.

### **Food Safety and Mental Health Notes**

**Moderators:** Lori Mathieu, Caroline Dumont & Cynthia Costa

**Note Taker/Chat Moderator:** Jasper Sha

- Nutrition and Food Safety
- Discussion of Mental Health
- Nutrition and Food Safety

Martha Page: Work underway at regional level that CT participates in that thinks specifically about state level food planning and regional food shed, what do these need to look like to promote equity and a food system for everyone to have access. Can also respond to issues like COVID and hurricane Maria.

- Not starting at a blank position.
- CT does not have a food plan, but in the process with Dept of Ag to develop one.
- Working with other states to develop this.
- Things do not stop but have started to attract funding at the regional level.
- USDA planning grant for 6 state group to look at this issue from a regional perspective, informed by each state activities.
- Beginning stages of the plan but have been worked on for a while. Traction is occurring. Learning from other states.
- Slide 4 of presentation
- Lori: Getting into explaining the connection to climate change is important.
- Martha: The streams of food and climate change have been working in parallel but needs to merge into one subject.
- Cynthia: Food safety isn't usually talked about in those areas. Regulators think differently. To bring Food Safety to the table is different, but food safety is important on any level.
- Lori: Covid has caused an interruption. Not all things are available on the shelves at a grocery store. People were scared and hoarding.
- Michael: Working also on quality aspect of food security and resources. Want to give access to **healthy** food. Can be uprooted by climate change.
- Martha: Want to look at a regional level because of interruptions (food crisis, energy level costs, etc etc.). Food lines are easily disrupted, want to draw it tighter with a resilient, sustainable food system.

- Lee Cruz: (Personal Experience) Talked about being at a food distribution (out of 4 in CT). 600 people in line. People are not all in the know about access or afraid to show up at public events or activities (undocumented people). Attempting to bring food to the homes of people who are afraid to go. **One thing found is lack of a directory within directories.** No one had a page of where to go to for food.
- Michael-discussed how many people showed up to a food resource. Poll indicated people knew that was the only resource to go to (not great information distribution)
- Martha: A lot of pantries are staffed by volunteers (elderly), but when COVID hit, they had to close.
- Lee: There needs to be a directory available about details of different food resources to be updated.
- Lori: Suggested to Lee to add his suggestions. Recognize that what we do may not be good enough and we need the input to make it better.
- Lee: Suggestion. Alicia Santilly- Community Alliance for Research, Food Security in New Haven in 2017. They have data and community people who are fellows working with grad students and are out in the neighborhood and learning, also strong community presence to deliver information out when needed. (inserted into Chat)
- Discussion of Mental Health
  - Slide 6. Caroline Dumont: Emphasize the conversation and thank everyone.
  - Works at CT Mental Health center, public hospital.
  - Clients are impacted by food insecurity and a topic that needs addressing in that population.
  - COVID has cut back on ability to find meals in the community.
  - Opens up for discussion.
  - Sarah Lowe: Information seeking recommendation.
  - Working with Katie to see what CT is doing in disaster associated with mental health.
  - Want to know more about what people in Public Health are doing.
  - Jeri Weiss: Vermont has some experience from hurricane Irene. Shocked by mental health impact by that disaster. Good place for lessons learned for approaches.
  - Lori: These storms on top of COVID along food security, the anxiety and emotional exhaustion along with the difficulties that come along these issues. People are probably struggling and not seeking ways to address it. A lot worse if in a vulnerable population.
  - More examples from people of trauma amongst different populations and the important of mental health professionals and addressing those traumas. Those educations are difficult to communicate.
  - Sarah: Research on trauma going into an experience and the risks and how they recover.
  - Lee Cruz: Alice Forester, Mental Health Clinic. Research on trauma in children. Clifford Biers (Sp) clinic. Discussion on not just how to take care of the kids, but also yourself in the process.
  - Suzi Ruhl: Federal Interagency Working group on Env. Justice has a natural disaster subcommittee looking at full range of impacts on low income populations and flaws in the government acknowledging that. Report coming out soon. Knowledge from this break out group can go into that. Offer up connection to that group for Caroline and Sarah
  - Katie Ebinger: working on capacity to mental health team, more resource needed in CT mental health structure and how to supplement it based on other states. More recommendations and

best practices.

- Anthony Allen: Talk about how to address the systems that we have now so we can get ahead of climate change/disaster issues as they come about. Talk about localization, investing in controlled environment agriculture, connection between rural farm capacity, city space capacity for use. Also, instead of just looking at shoring up systems, but a huge argument for finding leaders in food sovereignty movement to build food security from the grass roots and within the community instead of delivering food into community. (Self production).
- Urban areas have potential for green infrastructure. Can be more than just environmental benefits, but also a source of food. Ex: edible rain gardens in urban communities.
- Lori: Urban revitalization is a great thing. Ex: Philadelphia made small infrastructure improvements. Look at areas of blight and build community garden, hire the people in community to work in them. Can solve issues while invest in urban agricultural environment.
- Local is a good thing to add for recommendations.
- Michael: Good to bring into conversation for connecting the work.
- Anthony: Capacity for this work within the communities. Just address who is controlling resources in the community. Look at setting up new funding channels but also how do you provide awareness of opportunity and match with funds that are not burdensome.
- Tendency to come up with solution and do it in every community but should do things a bit different. Let communities solve their problems.
- Caroline: This also helps with mental health, gets community to get out and have a sense of agency. Connects disenfranchised communities.
- Angel Serrano: Mental health. Look at the system and how it works because of times in disaster, those prone to breakdowns are those who have mental conditions.
- Need to be services in place to serve those people. Examples were given.
- Health care system requires you to be responsible, but those who are having mental problems are the least capable of being responsible.
- Caroline agrees that there needs to be a shoring up of collaborations. Without good mental health care access, cant react well to state of crisis.
- Plans need to be in place during disasters to help those who are having issues.
- Suzi Ruhl: In addition to mental health issues connecting to food, but diabetes is also something to look at (healthy food access, mental health).
- Can we think from a patient approach that affects all this to food security, climate change, etc. Lots of work to be done and bringing people together.
- Lori: During crisis, food pricing and access got out of control.
- Caroline discusses about how to get access or addressing some of these issues.
- Angel Serrano: Needs life coaches to help them through the issues.
- Lori: add access to care for the recommendation. Making sure people are okay.
- Caroline: EEJ had good feedback and get put into mental health access. Focus of community out reach and case managers, there is focus on communities on marginalized groups that need extra attention.
- Bud McAllister: part of GC3 and opioid task force. Unite Us group. Connecting farmers and communities for food delivery to homes.
- Lori: Suggesting other groups can be helpful and other resources into the chat. Email links to provide comments.
- End of Breakout Session.

#### **Section 4. Public Forum – Break-out Sessions: (Chat Logs)**

The Public Health and Safety Working Group thanks all the participants who attended the Public Forum and provided comments during the main presentation, during the individual break-out sessions, and/or during the public comment period. It was not feasible to address all the items discussed during these events within the limited timeframe for report revisions and will be considered for further recommendation development during Phase 2. Your continued participation is welcome during the Phase 2 process.

##### **Extreme Heat and Air Quality Chat Logs**

17:44:26      From Laura Bozzi :

[https://publichealth.yale.edu/climate/YCCCH\\_CCHC2020Report\\_395366\\_5\\_v1.pdf](https://publichealth.yale.edu/climate/YCCCH_CCHC2020Report_395366_5_v1.pdf)

##### **Extreme Events and Water Borne Illnesses Chat Logs**

17:37:26      From Amy Velasquez : I have a question regarding the energy audit program for the water/waste water utilities also how the Drinking Water Management Plan will promote resiliency.

17:44:12      From Anne Hulick : Completely agree with Denise's excellent points

17:46:10      From denise savageau : To the point of source water protection, we need to have a One Water focus

17:48:17      From Christine Kirchhoff : I just completed a review of drought impacts on urban infrastructure for AR6 and really struggled to find a lot of literature on drought and public health.

17:48:58      From denise savageau : There is a big overlap with the Natural and Working Lands recommendations that should be looked at.

17:52:45      From Amy Velasquez : I'm confused about the usefulness of the inventory of critical facilities and water supply systems. If a critical facility is serviced by a private water supply it's likely because a public water supply is not available.

17:57:11      From denise savageau : Does the report deal with salt water intrusion into wells and/or septic systems?

17:57:34      From David Murphy : yes, Denise

17:59:04      From David Murphy : The infrastructure and land use group produced several recommendations about flooding.

##### **Food Safety and Mental Health Chat Logs**

17:54:46      From Lee Cruz : Connect with Alycia Santilli, Community Alliance for Research and Engagement at Southern CT State University for info about collecting and distributing info about access to food at a city and neighborhood level.

18:04:08 From Anthony Allen : I would like to pick up on what Sarah and Lee were talking about, and talk more about what we can be investing in both mental health and food security/access to get ahead of these problems instead of mostly discussing our response to the damage they cause.

18:16:02 From Lee Cruz : check out [www.chathamsquare.ning.com](http://www.chathamsquare.ning.com) to see how one community is self organizing for physical and mental health. Note the multilanguage access.

18:16:20 From Anthony Allen : Examples of organizations working on food sovereignty, security, and nutrition in New Haven: LoveFed New Haven, Gather New Haven, Haven's Harvest, Semilla Collective

18:22:32 From Lee Cruz : "Gather New Haven" has a great, tested model for working with low income families where there are adults and children with diabetes.

18:28:52 From Bud McAllister : Unite Us

18:29:23 From Bud McAllister : Findhorn The New Story Hub

18:29:49 From Bud McAllister : [thegreengazetteblog.com](http://thegreengazetteblog.com)

18:30:23 From Bud McAllister : Partners in Healthy Communities

18:30:41 From Bud McAllister : Practice Green Health

## **Section 5. Submitted as Written Comments to DEEP Office of Climate Planning Sept. 22-Oct.21, 2020**

The Public Health and Safety Working Group thanks all the participants who attended the Public Forum and provided comments during the main presentation, during the individual break-out sessions, and/or during the public comment period.

It was not feasible to address all the comments received during the public comment period within the limited timeframe for report revisions and these comments will be considered for further recommendation development during Phase 2. Your continued participation is welcome during the Phase 2 process.

### **COMMENT #1**

10/7/2020 - Sharon Huttner - Branford, CT

1. Prioritize equity in all recommendations of this workgroup. At least 40% of all new programs should benefit low-income communities and communities of color that have suffered from decades of intentional structural racism, disinvestment, red lining, discrimination, segregation, and many other injustices.
2. Ensure funding for low-income equitable access to Flood Insurance and Resilience Bonds (as recommended on page 30 and 42) by requiring that 1) insurance companies pay a tax for each fossil fuel company or project that they underwrite, 2) insurance companies pay a tax on the profits from investments in fossil fuel companies, and 3) a portion of any proceeds received as a result of the state's lawsuits against fossil fuel companies. Taxes should be set at a level that ensures the adequacy of funding.
3. Require that insurance companies:
  1. Immediately cease insuring new coal projects and coal companies, unless they are engaged in a rapid transition process away from coal to clean energy of no more than two years.
  2. Immediately cease insuring new oil or gas expansion projects.
  3. Commit to phasing out insurance for oil and gas companies in line with a 1.5°C pathway.
  4. Divest all assets from coal companies and oil and gas companies that are not in line with a 1.5°C pathway, including assets managed for third parties.
  5. Bring stewardship activities, membership of trade associations and public positions as a shareholder and corporate citizen more broadly in line with a 1.5°C pathway in a transparent way. This must include forceful advocacy for a green and just recovery from COVID-19.
4. Reintroduce and enact SB 345 introduced in the Connecticut legislature in 2020 to require the Insurance Commissioner to (1) annually conduct a study on issues related to climate change and report the results of such study to the joint standing committee of the General Assembly having cognizance of matters relating to insurance, and (2) assess the feasibility of collecting and reporting additional data concerning climate change.

Sharon Huttner

Branford, CT

sharonhuttner48@gmail.com

**COMMENT #2**

**10-7-2020 - Yann van Heurck, - Madison**

I understand meetings will be held today that will include review of the role of insurance companies in promoting and profiting from climate change, specifically fossil-fuel projects. Companies should not be allowed to profit from the destruction they're helping to finance. Please require them to end all support for new fossil-fuel projects (coal, gas, oil) and tax them on profits from any projects they currently support. Businesses must lead the way to end fossil-fuel dependency. As long as there's profit in it, the destruction will continue. -- Yours, Yann van Heurck, Madison CT 06443

Sent from:

Janina Wolfin

janinawoelfin@gmail.com

**COMMENT #3**

**10-16-2020 - Emily Alexander - Climate Policy Advocate - Connecticut League of Conservation Voters**

Thank you for the opportunity to submit comments on the Governor's Council on Climate Change (GC3) Working Group Draft Reports.

In September 2019, Governor Lamont issued Executive Order #3 to bring Connecticut to a 100% zero-carbon electric grid by 2040 and reinstate the GC3. At that time, CTLCV strongly recommended that the GC3 be composed of a diverse group of stakeholders, including, but not limited to: local and statewide lawmakers, community leaders, climate scientists, economists, labor representatives, and business leaders. In particular, the GC3 should include representatives from marginalized and disenfranchised communities. We are happy to see that the GC3 was able to incorporate voices from various backgrounds.

Please consider CTLCV's specific comments and recommendations below for the report as a whole and the various working groups.

1. Connecticut needs to set a goal of 100% zero-emission electricity, transportation, and buildings that focuses on equity and creates good jobs for low-income and BIPOC communities.
2. Suspend any further approvals for the 650 MW Killingly fossil fuel power plant. Connecticut does not need the energy that this plant would produce. Investing in sustainable and carbon-neutral energy resources will yield both profit and lasting energy resources for far more decades than fracking can provide and will aid Connecticut in the fight against climate change, inequity, and pollution.

3. Connecticut needs to reform or replace the ISO-New England market system. At this time, the grid is not taking into account the clean energy goals that we have worked so hard as a State to progress. If we are going to have a 100% zero-carbon electric grid by 2040, our outdated grid operator needs to share in that goal.
4. Prioritize equity in all aspects of the GC3 working groups reports.
5. Action on climate change can start now. We should not wait on final reports to act if the science is already sound.

We have reviewed and considered all of the reports and strongly support many of the recommendations. Based on our review, we would like to highlight specific recommendations that are particularly important.

From: Emily Alexander - Climate Policy Advocate - Connecticut League of Conservation Voters

#### WORKING AND NATURAL LANDS

While we were thrilled to see the focus on working and natural lands in mitigating climate change, we realize there is some overlap between the subcommittees and some confusion as to what each subcommittee was responsible for. Going forward, we would like to see a crossover group for the entire ecosystem to create comprehensive legislation that takes into account recommendations from each subcommittee. Additionally, clarification for which subcommittee Long Island Sound falls under would be beneficial.

#### RE: FORESTS

CTLCV supports the emphasis on trees and forests in mitigating climate change impacts and in sequestering carbon. In order to protect and encourage forest growth, we are recommending major policy initiatives are pushed forward.

1. Establish a “No Net Loss of Forests” policy as in Maryland to increase forest cover and canopy where needed, avoid losses or conversion of forest, protect and steward resilient forests, mitigate “permitted” loss of forests/trees, and monitor for forests/tree resiliency.
2. It is critical to invest in planting and stewarding trees (as well as open spaces/parks, and community gardens) in our major cities to reduce “heat islands”, improve air quality, create job opportunities for BIPOC youth, and benefit the health of our most vulnerable communities who are already being disproportionately impacted by climate change and COVID-19.
3. It will take funding to make a difference on climate change and we must be willing to invest in natural climate solutions that work and are generally less expensive than most other infrastructure concepts.
4. Biomass must not be considered a Class 1 renewable energy.

#### RE: WETLANDS

Wetlands are an integral part of Connecticut's climate change mitigation strategy. As natural carbon sinks, wetlands need to be protected and nurtured to provide adequate carbon sequestration measures. Additionally, wetlands provide barriers to increased storm surges and habitat to critical species to preserve biodiversity and act as indicators for healthy waters. In order to protect these critical ecosystems, there are significant policy recommendations that we would like to see pushed forward in the 2021 legislative session.

1. Protect and enhance the ecosystem services value of wetlands using sound science and adaptive management strategies. Protecting our coastlines and tidal wetlands is a wise and data-based solution if we want to protect ecosystem services. Inland and tidal wetlands provide all the ecosystem services, from food and freshwater to carbon sequestration, to water filtration, habitat, and recreation.
2. Encourage and expand research on conservation efforts. Provide funding to revise the FIRM maps to include updated precipitation data and alterations in the landscape from changing flood zones.
3. Revise the Tidal Wetland Act and the Inland Wetland and Tidal Courses Act to include language stating that wetlands provide flood protection and carbon sequestration. Review the language of the Tidal Wetland Act to include preservation of near-shore soils known as subaqueous soil.
4. Review the impacts on affordable housing in legislation that incentivizes development in flood hazard areas, essentially bringing low income families to the hazard. We need to ensure that our policies moving forward are equitable as to not further burden already overburdened communities.
5. Reevaluate CT's Green Plan and open space grant programs to prioritize broader acquisition of land and conservation easements for ecosystem services most at risk from climate change.
6. Ensure that the GC3 wetlands policy recommendations are aligned with the State Water Plan goals.

#### RE: AGRICULTURE AND SOILS

While agriculture is a major player in soil health, we need to understand that soils are all around us. Soil health is not just a factor in the agriculture industry, but also relates to infrastructure of impervious surfaces, sewers, wetland soil, and more. Future policies should reflect the big picture of soil health and not only focus on soils relating to agricultural land. There is limited information listed in Connecticut statutes specifically about soil health. Healthy soils resolve a multitude of wrongdoings including water quality and carbon sequestration. Below are policy recommendations referring specifically to soils.

1. Connecticut needs specific legislation to change the definition of "Soil Health".
2. Change the Soil and Water Conservation Act legislation to include Soil Health, not just erosion.
3. A statewide fund needs to be developed to encourage farmers to do Best Management Practices when it comes to soil health and local foods.
4. Encourage programs to invest in composting and anaerobic digestion to synthesize methane and invest in local economies selling organic fertilizers.

#### RE: RIVERS

Rivers are a key factor in combating climate change, and Connecticut's rivers have the potential to provide strong climate change mitigation. Healthy waters lead to healthy communities and a healthy economy. However, the changing precipitation patterns, combined with warmer temperatures put our waters at a significant risk to adverse climate change impacts. Although some progress has been made, we must continue to take action to ensure the quality and quantity of our rivers and streams to meet our future resource needs. Below are some specific policy recommendations going forward:

1. Strong water conservation policies are critical to mitigate the impacts of drought due to climate change.
2. Employ and mainstream nature-based climate solutions that are inexpensive and based on science-driven processes.
3. Protect high-quality upland tributaries to keep healthy temperatures in our rivers and streams.
4. Invest in stormwater management programs to decrease pollution from runoff.
5. Re-establish connectivity of rivers. Invest in culverts based on increased precipitation to allow streams to continue to flow during storm events.
6. There is a need to invest in wastewater infrastructure to maintain the level of investments in the Clean Water Fund and take the burden off of ratepayers.
7. Develop more comprehensive programs for invasive species management.

From: Emily Alexander - Climate Policy Advocate - Connecticut League of Conservation Voters

#### PROGRESS ON MITIGATION STRATEGIES

Connecticut has made substantial progress on employing strategies to mitigate climate change impacts. We support the focus that the Mitigation group put on equity and environmental justice. CTLCV focused specifically on the recommendations of four subcommittees, including Buildings, Electricity, Transportation, and Cross-Sector:

#### CROSS-SECTOR

There are overlapping strategies we must use to fully transition from a fossil fuel economy to a green economy.

1. Strengthen the alignment between State decision making and GHG reduction goals.
2. Implement a price on carbon in the transportation and buildings sectors.

#### BUILDINGS

The building sector is one of the largest contributors to GHG emissions and rising temperatures due to the creation of "heat islands" in cities. CTLCV would like to emphasize the following recommendations to improve sustainability in the building sector.

1. Allocate funds to remediate unhealthy homes which would then allow for Energy Efficiency upgrades. This is especially important in low-income and environmental justice communities.
2. Develop a strategic plan for transitioning from fossil fuels to renewable thermal technology, including electric heat pumps. Biofuels/Biomass should not be considered renewable thermal technology.
3. Expand consumer education and awareness to increase public demand for zero and low carbon technologies. In order to expand use of renewable energy technology, consumers need to first understand what the technology is.
4. Set clear end-dates for the expansion and new infrastructure of fossil fuels.
5. Create energy saving building codes including stretch codes, carbon codes, and all-electric options. Improving our building codes and standards will ensure that new buildings are sustainable, cost-effective in the long-term, and equitable for both the health and vitality of people and the planet.

## ELECTRICITY

Connecticut will continue to become more and more reliant on our electric grid as we transition away from fossil fuels. Therefore, we need to have enough energy, storage and grid technology to support our growing demand. CTLCV recommends:

1. Establish clear targets for offshore wind procurement to foster its significant potential to help meet zero carbon goals and work regionally with our New England neighbors to increase purchasing power.
2. Plan specific and achievable pathways for students in technical high schools, and for people living in areas where new electric infrastructure will be built, that lead to good paying “green” jobs.
3. Commit at least 50 MW of demand reduction per year to the ISO-New England market and ensure that ratepayers do not have to repay that deficit in the next billing cycle.

## TRANSPORTATION

The transportation sector is the leading cause of GHG emissions in our State, so it is the first place we must look to combat our climate crisis. We support many of the recommendations in the Transportation report, and recommend these additions:

1. Establish Statewide goals for zero-emission medium and heavy-duty trucks and for school transportation.
2. All proceeds from the State’s GHG emissions-reduction vehicle registration fee should be allocated to CHEAPR, and additional incentives for the low-income market.
3. Sign onto the Transportation and Climate Initiative to reduce carbon emissions in the transportation sector and allow for complementary policies to promote public transportation, active transportation, electric vehicles and more.

From: Emily Alexander - Climate Policy Advocate - Connecticut League of Conservation Voters

#### INFRASTRUCTURE AND LAND USE ADAPTATION

Many of the core recommendations for the Infrastructure and Land Use working group have been addressed in other sections of the GC3 reports. Our main recommendation for this report is to improve the ability of efficiency programs to overcome health, safety, and legal barriers (also stated in the Mitigation report and Buildings subcommittee). This will address equity issues while also aligning the State's climate goals:

1. Establish an Energy Efficiency and Healthy Homes (EEHH) equity fund.
2. Siting decision for clean energy infrastructure should Incentivize and prioritize redevelopment of previously used sites within established neighborhoods, i.e. Brownfields, abandoned lots, and not on prime forest or farmland.
3. Require that all utilities consider all projected climate change impacts in their planning and ensure they are consistent with state climate plan goals.

From: Emily Alexander - Climate Policy Advocate - Connecticut League of Conservation Voters

#### PUBLIC HEALTH AND SAFETY

As climate impacts bear down on Connecticut and are only projected to get worse, unless we seriously start to alter our behavior, we need to plan for the public health and safety of our residents. CTLCV supports all the recommendations in the Public Health and Safety report, and would like to draw particular attention to the below recommendations:

1. Enact policies to protect low-income residents and renters, particularly those in government-supported housing, from indoor heat exposure.
2. Enact policies to protect residents in vulnerable communities located in flood plains.
3. An energy audit program needs to be developed for the water industry to reduce consumption, conserve resources, increase energy efficiency, and reduce greenhouse gas emissions.
4. Include a resiliency and a climate assessment for all new legislation to show how each policy will impact climate change and align with our climate goals.

From: Emily Alexander - Climate Policy Advocate - Connecticut League of Conservation Voters

#### FINANCING ADAPTATION AND RESILIENCE

Many of the goals of the Financing Adaptation and Resilience working group are addressed in other reports. A main goal for this group would be to:

1. Establish a carbon fee to provide a revenue source for resilience and adaptation funding. Funding for climate mitigation and adaptation should be provided by the root cause of climate issues.
2. Approve legislation to allow individual municipalities Statewide to form stormwater utilities to fund resilient infrastructure.

From: Emily Alexander - Climate Policy Advocate - Connecticut League of Conservation Voters

#### SCIENCE AND TECHNOLOGY

In order to adequately and rapidly mitigate climate change, we need to rely on and develop sound science. Connecticut needs to employ the best science and technology practices to preserve our wildlife and ecosystems, clean air and water, and protect public health. The below suggestions are examples of “multi-solving”, programs that would help mitigate climate change while providing benefits to public health, recreation, transportation, wildlife health and more. CTLCV supports the recommendations of the Science and Technology working group, with special attention to the following:

1. Remove biomass facilities from the list of Class 1 Renewable Energy Sources in the CT Renewable Portfolio Standards.
2. Prioritize “proforestation” and natural area preserves on public land and ensure that old growth forests are protected in order to protect native species and maximize carbon accumulation, fight climate change, and protect public health.
3. Protect Keystone Species on land and water as an essential part of ecosystem integrity.
4. Ensure that all communities, especially low income and BIPOC, have access to clean and safe nature preserves.
5. Invest in reliable and safe people-powered (walking and biking) and public transportation.
6. Develop local systems for resource and food distribution to reduce fossil fuel usage and create a plan to deal with unknown and unpredictable disruptions.
7. Invest in research and landscape level planning to prioritize climate change mitigation programs in areas that are affected by multiple environmental issues (i.e. flooding, heat island effect).
8. Prioritize depaving of impervious surfaces to protect water quality of lakes, rivers and streams.

#### EQUITY AND ENVIRONMENTAL JUSTICE

Connecticut has made a lot of progress on equity and environmental justice in recent years. CTLCV supports the recommendations of the Equity and Environmental Justice working group, with particular consideration made to the following policies:

1. Support the recommendations of the Public Participation subcommittee.

2. Development of a statewide environmental justice mapping tool that provides a visual illustration of vulnerable communities across Connecticut.
3. Develop stricter regulations on permits for installation and construction.

As stated, we encourage DEEP and the Governor's Office to take all the recommendations of the GC3 into consideration when planning for climate change mitigation and adaptation. Thank you for the opportunity to submit comments on the draft working group reports.

Sincerely,  
Emily Alexander  
Climate Policy Advocate  
Connecticut League of Conservation Voters  
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#### **COMMENT #4**

10-19-2020 - Patricia Taylor, Director of the Plastics and Waste Project for EHHI. October 19, 2020

This comment for the GC3 Public Health & Safety Work Group by Environment and Human Health, Inc. (EHHI) is submitted as part of the public review process for the working group reports developed as ordered by Governor Ned Lamont in Executive Order 3.

- 1) EHHI recommends the addition of a sentence to the report's recommendation covering extreme weather events warning systems saying that DPH also needs to notify all Connecticut television and radio stations on "bad air days."

See page 10/116 at [https://portal.ct.gov/-/media/DEEP/climatechange/GC3/GC3-working-group-reports/GC3\\_Public\\_health\\_safety\\_draft\\_report\\_public\\_comment\\_092120.pdf](https://portal.ct.gov/-/media/DEEP/climatechange/GC3/GC3-working-group-reports/GC3_Public_health_safety_draft_report_public_comment_092120.pdf)

[Weather] [e]vent warnings originate in CT DESPP/ DEMHS and are transmitted to CT State Agencies and non-profit partners via the Everbridge Mass Notification and Incident Communications System. DEMHS notifies its partners of an upcoming event and DPH notifies the local health departments, hospitals, and eldercare facilities and provides them with recommendations. [add DPH also needs to notify all Connecticut television and radio stations when the state is experiencing an EPA non-compliant air standard day that will negatively affect the public's health. These "bad air days" typically occur when summer temperatures rise to 90 degrees Fahrenheit or above. The notification should be given to weather reporters so that they can add this information to their weather reports.]

2) EHII is in support of the creation of a multi-stakeholder “blue ribbon” commission to develop guidance for schools, day cares, and youth sports teams for prevention of heat-related illness and death; and recommends that

the implementation entities include local health directors.

See page 25/116 at [https://portal.ct.gov/-/media/DEEP/climatechange/GC3/GC3-working-group-reports/GC3\\_Public\\_health\\_safety\\_draft\\_report\\_public\\_comment\\_092120.pdf](https://portal.ct.gov/-/media/DEEP/climatechange/GC3/GC3-working-group-reports/GC3_Public_health_safety_draft_report_public_comment_092120.pdf)

Create a multi-stakeholder “blue ribbon” commission to develop guidance for schools, day cares, and youth sports teams for prevention of heat-related illness and death.

Recommended Implementation Action Description - This action is a revision to the 2011 Recommendation “Develop criteria for school closings and outdoor play during extreme heat events”. It expands the scope of the recommendation to include guidance for day cares, and provide[s] the specific action needed to support the development of guidelines. The Commission will also provide a biennial report on all heat-related illness and deaths in Connecticut and associated causes using surveillance data available from the Connecticut Hospital Association and the Connecticut Deaths Registry.

and

Implementation Entities - By appointment by the Governor, with representation from CT Department of Education, school districts, DPH, [add local health directors,] CIRCA, Connecticut universities, school athletic associations, and sports medicine experts, stakeholders from impacted communities

3) EHII is in strong support of establishing evidence-based standards for local heat and air quality response plans, and recommends the addition of public service announcements mandated on very hot days and when air quality is not within EPA air standards, and therefore may be harmful to human health; and recommends that the implementation entities include local health directors.

See page 28/116 at [https://portal.ct.gov/-/media/DEEP/climatechange/GC3/GC3-working-group-reports/GC3\\_Public\\_health\\_safety\\_draft\\_report\\_public\\_comment\\_092120.pdf](https://portal.ct.gov/-/media/DEEP/climatechange/GC3/GC3-working-group-reports/GC3_Public_health_safety_draft_report_public_comment_092120.pdf)

Establish evidence-based standards for local heat and air quality response plans.

Recommended Implementation Action Description - This action is an expansion of the 2011 Recommendation to “Develop cooling station best management practices.” This action intends to promote the development of state-issued criteria to support heat and air quality response planning, including funding, to be carried out at the local level. This action moves beyond a focus on cooling stations, as proposed in 2011, to include the establishment of evidence-based standards for early and immediate warning systems, including but not limited to communication tools, public service announcements, preparedness protocols, adaptation measures, and vulnerability re-assessment. [add Public service announcements to television and radio stations should be mandatory on very hot days, and when air quality is not within EPA air standards, and therefore may be harmful to human health.] This includes multi- purpose use of shelters and other designated community sites, including in response to air quality alert days and high pollen days, which are events exacerbated by warming temperatures. Local plans will be incorporated into municipalities’ Emergency Operations Plans. Development of the plans requires involvement of the most vulnerable populations in the local planning process to assure

that it is acceptable and meets their needs. State issued criteria for response to extreme heat events should also be incorporated as a formalized plan into the state's Incident Command Systems.

and

Implementation Entities - DPH, DEMHS, CADH, Regional Councils of Government, local governments, [add local health directors, and] stakeholders from impacted communities

4) EHII is in strong support of the report's recommendation to evaluate ozone alert education efforts, especially in its consideration of new ways of informing the public including wireless emergency alerts via all phones, social media, direct communications to vulnerable populations and direct alerts to institutions such as: youth camps, schools, nursing homes and medical providers; and EHII also recommends that the implementation entities include local health directors.

See page 33/116 at [https://portal.ct.gov/-/media/DEEP/climatechange/GC3/GC3-working-group-reports/GC3\\_Public\\_health\\_safety\\_draft\\_report\\_public\\_comment\\_092120.pdf](https://portal.ct.gov/-/media/DEEP/climatechange/GC3/GC3-working-group-reports/GC3_Public_health_safety_draft_report_public_comment_092120.pdf)

#### Evaluate Ozone Alert Education Efforts

Recommended Implementation Action Description - This recommendation is similar to the 2011 Recommendation, "Evaluate ozone non-attainment alert systems". DEEP and DPH should conduct an evaluation on air quality forecasting and public education and outreach efforts DEEP currently implements on a year round basis. In particular, DPH should survey the public on their awareness of summertime warning about ozone through the Behavioral Risk Factor Surveillance System. Community outreach and focus groups within vulnerable communities should be developed to ascertain input on alert systems and effective communication strategies. In addition, the evaluation should consider new ways of informing the public including wireless emergency alerts via all phones, social media, direct communications to vulnerable populations and direct alerts to institutions such as: youth camps, schools, nursing homes and medical providers. A study in Canada found that air quality alerts alone had limited effectiveness in protecting public health<sup>1</sup>.

and

Implementation Entities - DEEP, DPH, American Lung Association, CADH, NWS, DEMHS, [add local health directors, and] stakeholders from impacted communities

4) EHII is in support of the plan to increase monitoring of airborne allergens, and also recommends that the implementation entities include local health directors.

See page 34/116 at [https://portal.ct.gov/-/media/DEEP/climatechange/GC3/GC3-working-group-reports/GC3\\_Public\\_health\\_safety\\_draft\\_report\\_public\\_comment\\_092120.pdf](https://portal.ct.gov/-/media/DEEP/climatechange/GC3/GC3-working-group-reports/GC3_Public_health_safety_draft_report_public_comment_092120.pdf)

Recommended Implementation Action Description - This recommendation is a restatement of the identically-named 2011 Recommendation. There is currently only one monitoring station in Connecticut that collects data on pollen and mold concentrations, located at Waterbury Hospital. That station does not receive any outside funding and is supported by the hospital. More monitoring of airborne allergens should be a long-term strategy. The state should partner with hospitals and the American Lung

Association to establish and fund more robust monitoring systems. Federal grants on this problem should be explored and partners developed who can help with this effort.

and

Implementation Entities - DEEP, DPH, American Lung Association, and the national Allergy Bureau – The American Academy of Allergy, Asthma and Immunology (formerly funded by Waterbury Hospital) [add , and local health directors]

5) EHII is in strong support of the plan to research, estimate, and identify the potential effects of worsening air quality on the health of Connecticut residents. EHII also recommends that the research plan should include the installation of air quality monitors; and the data from those monitors should be shared with the public in real time, so that residents can take measures to protect their health. EHII also recommends that

the implementation entities include local health directors.

See page 35/116 at [https://portal.ct.gov/-/media/DEEP/climatechange/GC3/GC3-working-group-reports/GC3\\_Public\\_health\\_safety\\_draft\\_report\\_public\\_comment\\_092120.pdf](https://portal.ct.gov/-/media/DEEP/climatechange/GC3/GC3-working-group-reports/GC3_Public_health_safety_draft_report_public_comment_092120.pdf)

Estimate the impacts of climate change on 2030 and 2050 ozone levels in Connecticut and identify potential effects on the health of Connecticut residents.

#### Recommended Implementation Action Description

Climate change is predicted to worsen air quality through increased production of ground-level ozone and particulate matter due to higher temperatures, wildfire emissions, and air stagnation events, among other factors. However, impacts will vary by region and state-level projections of impacts on air quality and health are currently not available. Research is needed into the combined effects of air pollution sources in vulnerable locations like cities combined with the predicted increase in ozone levels. [add The research plan should include the installation of air quality monitors; and the data from those monitors should be shared with the public in real time, so that residents can take measures to protect their health.] Ozone projections are based on complex phot-chemical grid modeling informed by projected emissions inventories and climate condition should be developed for 2030 and 2050, with subsequent projections of impacts on the health of the residents of Connecticut. Successful implementation of this project is contingent on adequate funding

and

Implementation Entities - DPH, DEEP, Connecticut universities [add , and local health directors]

6) EHII is in support of the establishment of a State Climate and Health Coordinator position.

See page 87/116 at [https://portal.ct.gov/-/media/DEEP/climatechange/GC3/GC3-working-group-reports/GC3\\_Public\\_health\\_safety\\_draft\\_report\\_public\\_comment\\_092120.pdf](https://portal.ct.gov/-/media/DEEP/climatechange/GC3/GC3-working-group-reports/GC3_Public_health_safety_draft_report_public_comment_092120.pdf)

Establish a State Climate and Health Coordinator Position

Recommended Implementation Action Description - The challenge of climate change to public health and safety is vast and complex. The U.S. Centers for Disease Control and Prevention has developed the Building Resilience Against Climate Effects (BRACE) framework as an adaptive management approach for health departments to use to address challenge Currently 17 state and local governments receive federal funding to implement this framework and are actively developing interventions to protect the health and safety of their residents from the negative effects of climate change. Connecticut has not yet adopted this framework and has no program to coordinate and oversee such essential actions. A recent report from the Yale Center on Climate Change and Health highlighted the limitations for action of climate and health resilience by DPH in the absence of additional funding (Bozzi and Dubrow 2020). Responsibilities of this position will include coordination among state and local agencies, Yale Center on Climate Change and Health, CIRCA, and internal DPH programs to monitor environmental and climatic changes, track climate-sensitive health outcomes, and implement recommendations to protect public health and safety, prioritizing vulnerable populations, from the negative health impacts of climate adopted by the GC3; coordination with other state health departments throughout the Northeast currently funded by the CDC Climate and Health program to implement the BRACE framework in Connecticut; build strategic partnerships to improve health resilience throughout the state; and competitive grant proposal submissions to support a climate and health program at DPH.

Thank you for the opportunity to comment on this report.

Patricia Taylor, Director of the Plastics and Waste Project for EHHI. October 19, 2020

Patricia Taylor

Director of the Plastics And Waste Project Environment and Human Health, Inc.

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#### **COMMENT #5**

10-19-2020 - Sean Weir

Nature - Therapeutic Mindful Outdoors

Mindful Responder 2038878209

DEEP Climate Change CT,

Mindful Responder - Alistair Sweeney and Sean Weir gave the privilege to share the practices of Mindful Yoga Therapy and Therapeutic Yoga and Meditation Nature Practices to assist Veterans Responders Recovery and Underserved Communities I would like to invite you to view [MindfulResponder.org](http://MindfulResponder.org)

Please feel free to connect anytime with any questions suggestions Respectfully,

Sean Weir  
Mindful Responder 2038878209  
[SeanWeir123@gmail.com](mailto:SeanWeir123@gmail.com) [MindfulResponder.org](http://MindfulResponder.org)

#### COMMENT #6

10-19-2020 Skye Wheeler, Human Rights Watch

Dear Sir, Madam,

Many thanks for inviting input to your draft Report to the Connecticut Governor's Council on Climate Change, prepared by the Public Health and Safety Work Group in September 2020.

My name is Skye and I am a senior researcher in the women's rights division of Human Rights Watch, an international human rights organization working in around 50 countries including the US. I am working on an advocacy-research project on the negative impacts of increasing temperatures in the US and specifically the impact on pregnancy health and pregnancy outcomes, through a reproductive justice lens.

We were very glad to see that you included concerns about pregnancy health and heat in your analysis, most specifically:

P19 Pregnant women are vulnerable as preterm birth, low birth weight and infant mortality has been associated with extreme heat.

... as well as including pregnancy many times as one in a list of vulnerable people, for example to vector borne diseases, extreme weather events and mental health. In our review of heat advisories, heat emergency plans and climate change plans we've found that most cities and localities do not include pregnant people. So thank you so much for including this!

I was hoping you might consider using a more intersectional approach in how you address pregnant people as a population of concern, so rather than giving the impression that the risk is the same for all pregnant people, note how some populations for example women of color because of historical marginalization may face greater risk. (See JAMA review on this:

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7303808/>

Similarly I was hoping you might consider noting that we are in the midst of a maternal health crisis – and this emerging threat to our worsening rates of preterm birth needs to be addressed. As you know rates of adverse birth outcomes are twice as bad for Black women than white women – this is also a reproductive justice priority and any way we can try to address these severe inequities should be seized.

I was hoping you might also consider including the risk heat presents to pregnant people, separate from the risk of adverse birth outcomes. Pregnant people are more vulnerable to heat stress than healthy non-pregnant people but pregnant people usually not included in at-risk lists. A recent working paper from Stanford university, for example, has found the pregnant people are more likely to be hospitalized after extreme heat, and that the effect is greater for Black mothers than white mothers. That heat at work is a concern for pregnant people has been acknowledged by OSHA and NIOSH. People who have heat illnesses can be more at risk for injuries from accidents as well as long term and short term impacts of heat illness itself. Low income job holders may be at more risk of heat exposure and may also find it harder to know about or negotiate for pregnancy accommodations, even if provided under Connecticut law.

You might consider including pregnant workers in your p21 section/table on heat at work, as per NIOSH/OSHA in the bullet above.

Might you consider including pregnant people specifically in your section/table “on evidence-based standards for local heat and air quality response plans” on p23 – as you know pregnancy and air pollution is also a critical issue. While other communities and populations tend to be automatically included in such efforts, pregnant people are OFTEN NOT included and few cities do active outreach to pregnant people and clinics and/or include reproductive justice groups and birth workers etc. in their outreach and education levels.

You might again include pregnant people in your section/table on “policies to protect low-income residents and renters, particularly those in government supported housing, from indoor heat exposure” on p27. Unlike older people and young children pregnant people are not considered a vulnerable group in state LIHEAP plans. Again while other populations are automatically included, pregnant people often are not and so it may be worthwhile explicitly mentioning them here.

I was hoping you might also be able to include the vulnerability to heat of infants. Infants especially, but also young children as you mention, are also high risk for heat illness, and even death. (See the attached for two papers on this, California and Philadelphia)

I've attached here an excel sheet with some of the review studies, studies on heat and maternal health (mostly focused on preterm birth, low birth weight and still birth) and some of the places, including EPA, CDC and the US federal Global Change Program National Assessment 4 where concerns about heat and pregnancy health have been explicitly raised.

Many thanks for considering these suggestions, please let me know if you need formal input from my organization. Because of the elections our review process is extremely overstretched, and I was keen to make your deadline for input, but I can send in additional materials if helpful.

Skye  
Emergencies Researcher Women's Rights Division  
+1 646 203 2539  
Skype [skye.wheeler@hrw.org](mailto:skye.wheeler@hrw.org)  
Studies on pregnancy and heat.xlsx –

#### COMMENT #7

10-21-2020 - To: Dr. Rebecca French From: CIRCA Staff

1080 SHENNECOSSETT ROAD  
GROTON, CT 06340-6048  
PHONE 860.405.9087  
FAX 860.405.9153

JamesODonnell@uconn.edu circa.uconn.edu

Subject: Comments on the Draft Report of the Governor's Council on Climate Change. Introduction

CIRCA was established in 2014 as a collaboration of UCONN and CT DEEP to increase the resilience and sustainability of vulnerable communities to the growing impacts of climate change on the natural, built, and human environment. In collaboration with the State Agencies Fostering Resilience (SAFR) group, which includes CT DEEP, DOH, DOT, and DEMHS, CIRCA leads interdisciplinary research, stakeholder outreach, and technical assistance program to towns and state agencies. Since 2014 CIRCA has raised approximately \$15,000,000 to support its work, most of it from the federal government.

Products included projections of sea-level rise, precipitation, temperature for Connecticut, and many more mapping and planning resources available at <https://CIRCA.uconn.edu>. Through the Resilient Connecticut project (<https://resilientconnecticut.uconn.edu/>), CIRCA and SAFR are developing an adaptation planning process in Fairfield and New Haven Counties that can be replicated across the State. To inform the GC3 process, the CIRCA faculty and staff have reviewed the draft reports from working groups and respectfully offer the following comments for your consideration.

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#### Financing Adaptation and Resilience

We applaud the diverse and well-articulated details in each of the five strategies and the well-organized tables that identify the action, implementation entities, equity impact, and funding scale. It would also help if each table (or using an overview table like Appendix II) were to identify which strategies are best positioned to be implemented in the short term (the coming years) vs. longer-term (5-10 years).

We fully support the Financing Working Group's recommendation that implementing, and financing adaptation programs should encourage (where feasible) nature-based solutions (NBS). We believe that there is a strong case that the State should prioritize such projects for subsidies in the near-term to establish their utility and limitations and to build capacity in local engineering and construction businesses. However, there is a compelling need for adaptation projects of all types. In many, well-tested solutions are practical, necessary, and only require funding. Only funding NBS projects is unlikely to yield the most adaptation value.

We recommend that the working group consider proposing broad guidelines for allocating adaptation project costs between federal, State, and local governments and private property owners. Clearer expectations may reduce the incentive to wait for the availability of new federal or State funds. Of course, equity would require recognition of the heterogeneity in wealth across the State. Financing for more education, outreach, and training in resilience and adaptation planning for municipal staff and consultants will also accelerate adaptation. We also recommend that the committee recommend a process for prioritizing projects and an interagency task force to assist in developing funding strategies.

We highly recommend Strategy 3's approach (p32) to "Provide State General Obligation Bonds as Green Bonds for Financing for Resilience and Adaptation Programs and Projects and Matching Funds for Federal Grants". With direct support and funding from CT DEEP, CIRCA ran both a Municipal Resilience and Matching Funds Grant program in Connecticut from 2014-2019 and had far more applicants than funding allowed for awards. These competitive grant programs were both popular as they allowed local implementation of resilience projects and matching funds required by other funding applications. For example, CIRCA funded 18 grants through its Municipal Resilience Grant Program totaling \$745K, leveraging an additional \$400K. CIRCA's Matching Funds grant awards of \$330K to 11 projects leveraged approximately \$1.4 million in additional project funding. While these amounts were impactful, Connecticut can look to neighboring states, especially Massachusetts, where 82% of the State's communities participate in their Municipal Vulnerability Preparedness (MVP) Program. This year, \$11.6 million in grants were awarded to cities and towns through this program. Massachusetts is proposing to spend \$1 billion on climate resilience by 2022, and Connecticut must anticipate the need for a similar level of investment to minimize the impacts of climate change.

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Working and Natural Lands Wetlands:

Given that the report highlights the importance of ecosystem services that tidal wetlands deliver, there could be more emphasis placed on living shorelines as a climate resilience strategy to protect private property and adjacent marsh and dune wetland habitats. To date, only one living shoreline has been constructed (in 2014 at Stratford Point), and two are nearing implementation (Fenwick and New Haven's East Shore Park). These sites should be monitored both pre- and post-installation to better understand the benefits and challenges of living shorelines and to promote these shoreline stabilization practices in the future at sites where conditions allow their construction. Specific places that the concept of living shorelines can be mentioned or strengthened in this report include the following strategies under 2020.W.1:

- Encourage land and ocean management behaviors that support ecosystem services (including carbon sequestration).
- Identify and conserve ecosystem services vulnerable to climate change.
- Expand monitoring and scientific assessment of climate change impacts on wetlands and near coastal waters and update management tools and strategies.
- Encourage research to understand the effects of potential adaptation approaches and develop new, innovative approaches to support adaptive management.
- The importance of living shorelines can also be articulated in Recommendation 2020.W.3 – Further-develop policies that encourage wetlands protection. CT DEEP policies encourage nature-based solutions and "green infrastructure" or "living shoreline" strategies over hardening and armoring. These practices help protect existing wetlands within or adjacent to vulnerable shorelines.

Forests:

We strongly support the recommendations in the "Monitoring, Evaluation, and Planning" section, particularly the call to "Identify areas that are especially important to landscape-level resilience."

Effectively balancing the management goals at the landscape-level requires reliable and consistent data, as noted in the report and stressed throughout this letter. We support the development of a comprehensive monitoring plan. State agencies and conservation organizations would use such information to track and manage the resource more effectively and prioritize highly vulnerable ecosystems and resilient landscapes for preservation and conservation.

#### Agriculture/Soils:

The potential for the expansion of Aquaculture, including inland fisheries and nearshore industries, to be a component of a resilience and adaption strategy should be noted and explored.

While occupational safety is noted in the Public Health & Safety report, we believe that specific recommendations should be added. For example, there is a need for data on climate change effects on farmers and agricultural workers' exposure to health risks. Studies should appreciate the diversity of language skills in the industry.

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#### Equity and Environmental Justice

We agree that mitigation, adaptation, and resilience strategies should be co-developed in partnership with community groups and that engagement effort to assure equity is a key responsibility of planners. We have found that there is planning fatigue in some communities. Coordination and collaboration among academic, State, and non-profit groups should be enhanced. Approaches should have multiple goals to ensure as much information from the platform useful for climate, environmental, and social science context. Hyperlocal engagement aims to build rapport between agencies and the community to increase the support needed to implement adaptation and mitigation policies in the future. The community's feedback approach should be both ways to inform the public after the engagement process and share that information on different platforms other than online reports. Some of these approaches can be social media, radio, local tv news, local newspapers.

We also suggest preparing an agency-non-profit-academia project portal that lists all the engagement and partnership that has been done in the area, conducted agency, and resulted in reports. This portal will help the different groups to build on what has been done, increase partnership and collaboration, and reduce over engagement with the community over similar issues.

We see the development of the statewide environmental mapping proposed here as a critical element of a comprehensive climate change vulnerability assessment. An effective initiative should include the capacity to visualize the vulnerability, include health impacts of economically disadvantaged communities. In our opinion, the key factors to consider:

- Preparing a statewide analysis provides a state standard for social and health sensitivity. Connecticut has regions that are on both ends of the spectrum within the State in socio-economically. The statewide analysis may not give a sense of urgency in particular towns that require more assistance in providing services to create environmental equity. We suggest the tool to prepare the analysis in a multi-scale approach where the decision-makers can visualize the reanalysis in the county, Center of Government, or any other jurisdiction level to emphasize the environmental inequity within that boundary. We also suggest there may be a need to define new boundaries beyond the political jurisdictions to learn more about the health and environmental risks.

- The mapping tool should use metadata standards and protocols to facilitate data sharing and integration of new information.
- A broad committee should be engaged to advise on the data that is available and should be acquired.
- Community organizations should be participants in the prioritization and data gathering and process.

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#### Infrastructure and Land Use Adaptation

The draft report includes a recommendation to create a Community Resilience Program for the State of Connecticut, inspired by the Massachusetts Vulnerability Program and Climate Smart New York. While these programs exist in other states already, our State stands ahead in its commitment to technical capacity, as evidenced by the lengthy and successful partnership between State Agencies (through SAFR) and CIRCA. This existing capacity could inform, train, and serve municipalities and Councils of Governments with support. Data creation and maintenance, climate vulnerability assessment, adaptation and resilience planning, and grant preparation will be critical elements of a successful strategy and should be sustained. Any policies and programs that encourage or require climate change adaptation must be accompanied by a committed and adept partner.

Recommendations should be added that incorporate climate change vulnerabilities, adaptation planning, and resilience-building activities into planning activities. Some potential activities include:

- Revise CGS 8-23 "Section 8-23 - Preparation, amendment or adoption of a plan of conservation and development" to include climate change as a required consideration. These could include restriction development in flood zones, encouraging conservation areas in flood zones, managing heat islands, etc.
- The state POCD should incorporate climate change into its priorities, especially in funding priorities and designation of growth areas.
- While FEMA does not require climate change to be considered in Natural Hazard Mitigation Plans, the State mandate it through agency policy or enabling statute.
- Create multi-generational capital improvement plans for infrastructure projects. Plans of Conservation and Development and Natural Hazard Mitigation Plans operate on ten- and five-year scales, respectively. Large scale infrastructure requires planning, construction, and maintenance beyond those time-scales.
- Land use data, such as parcels and planimetric information, should be standardized across the State with funding and technical assistance provided to municipalities and COGs to undertake the effort, similar to Massachusetts and New York.

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#### Public Health and Safety

Increased variability in precipitation will make drought periods more likely. Drought should be added as an additional concern for private potable water wells on the recommendation on page 63.

Inland shelters should also be included in the evacuation plan recommendation, particularly for large-scale evacuation events from the coast.

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Science and Technology

We support the recommendations on climate science education for both the public and K-12 school curricula. However, public education on the costs of inaction and options for mitigation adaptation and resilience should be increased.

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#### **COMMENT #8**

Dear Commissioner Dykes and DEEP staff,

Please find an attached letter with The Nature Conservancy in Connecticut's comments on the draft reports developed by the Governor's Council on Climate Change working groups. It is also available for download here. Thank you for this opportunity to provide comment.

I look forward to serving on the Adaptation and Mitigation subcommittees of the Governor's Council on Climate Change in order to further review and strengthen the substantial work represented in the draft reports.

If you have any questions, please do not hesitate to reach out to me ([fryan@tnc.org](mailto:fryan@tnc.org)) or our chapter's Director of External Affairs Nathan Frohling ([nfrohling@tnc.org](mailto:nfrohling@tnc.org)).

Best,

Frogard

Frogard J. Ryan

State Director

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Pronouns: she/her/hers

nature.org

TNC CT Comment on GC3 Draft Reports\_10.21.pdf

Dear Commissioner Dykes,

The Nature Conservancy in Connecticut appreciates the opportunity to comment on the draft work group reports developed for the Governor's Council on Climate Change.

Appended to this cover letter is our detailed analysis and comments of several of the reports, which are the result of review and consideration by our staff. We have been engaged throughout the working group processes, and we have a great deal of respect and appreciation for the hard work and broad participation across so many venues this year.

In addition to our comprehensive review of the reports, we have also provided general suggestions for the Council as it anticipates finalizing recommendations to the Governor and the Legislature. I would like to make special note of these ten key recommendations as priorities of The Nature Conservancy:

- Executive Summary for Policymakers: We assume there will be, and strongly urge the development of, a short executive summary for policymakers to summarize the most important concepts and recommendations.
- Importance of Natural Climate Solutions: Various reports address the role of healthy ecosystems in reducing atmospheric carbon through sequestration and in protecting human and natural communities from the impacts of climate change. We strongly recommend that the final council report reflect these critical benefits of natural infrastructure.
- Zero-Carbon Power by 2040: We want to express our firm support for the goal discussed in Executive Order 3 and reiterated in the work group reports. Energy decarbonation is key for transitioning toward a cleaner energy future while reducing energy costs, improving system reliability, and minimizing negative environmental impacts. We highlight here our new recommendation re the Electricity sector (ref page 43) that would assure that DEEP and PURA have the guidance, authority and responsibility for its permit and other decisions to be consistent and supportive of realizing the State's decarbonization goals.
- Transportation Emission Reduction Programs: We ask that the State fully endorse the Transportation Climate Initiative and strive to communicate the importance of reducing transportation emissions. We recommend that outreach to various communities be done to discuss the wide range of environmental and socio-economic benefits from such programs.
- Off-Shore Wind Development: Off-shore wind (OSW) is disproportionately critical to meeting the State's zero-carbon goals and measures to support its deployment should be given corresponding weight. To that end we highlight and support the OSW recommendations in the Progress on Mitigation Strategies report on page 48 and 49. We particularly ask that the State address grid constraints to OSW and assure that OSW be given priority in regional power markets. We also recommend that DEEP contribute to efforts being made to establish environmental standards for OSW that would protect marine life and in so doing help expedite OSW development by streamlining the extensive permitting process. More specifically, this would strengthen DEEP's utilization of the role of the Commission on Environmental Standards (CES) established by PA 19- 71 and for DEEP to participate where appropriate in efforts within the region (e.g. Regional Wildlife Science Entity (RWSE)).
- Annual Bond Funding of \$35 Million for Resilience: Significant state financial assistance is required to enable communities to prepare for, and avoid the worst of, the impacts of climate change. Failure to make these investments will result in much greater costs to the state and communities if these impacts hit without risk reduction projects having been completed. An interactive, online portfolio has been compiled by TNC, municipalities, and Councils of Governments with over 450 such priority projects, almost all of which will create jobs and other benefits for towns and cities.
- Access to Climate Funding: We ask that any funding programs developed for climate adaptation and/or mitigation be available to non-governmental organizations and community groups. To maintain

maximum flexibility, we strongly recommend that non- state entities be able to administer funding programs for the State.

- Integrated Policy Implementation Across Plans: We encourage CT DEEP to review all public policy recommendations across working groups to identify and prioritize and increase awareness of opportunities for integrating co-benefits into agency planning and management sectors. For example, elevating crossings to reduce road flooding, increasing culvert size to enhance wetland flushing and reducing vectors of mosquito borne illness requires interagency coordination to implement and communicate successfully. Integrating climate adaptation across sectors requires commitment to flexible, preventive and forward-looking approaches that may involve legal, institutional and policy changes as well as shared investments.
- Resilient and Connected Landscape Vision: For more than 10 years, a team of 150 scientists in TNC have developed a comprehensive map of resilient lands and significant climate corridors across North America: the Resilient and Connected Network (RCN). These sites, together with mapped climate corridors and movement zones incorporated in the RCN, will facilitate species range shifts and sustain Connecticut's biodiversity into the future and in the face of climate change. The RCN maps and underlying data are ready for Connecticut to use. We encourage CT DEEP to retain existing references to the RCN in the Climate Action Plan. We strongly recommend that CT DEEP use it as a unified vision to focus conservation strategies like carbon storage, siting energy infrastructure, mitigation of road crossings, and land and water protection. DEEP can also use it to inform effective management for resilience and carbon storage. Working with TNC and other partners on shared priorities can lend additional resources and a higher probability of success to conservation projects.
- State-supported Program for Local Adaptation Planning: The importance of developing a statewide program for local adaptation planning is clear across multiple reports. We agree that The Nature Conservancy's Community Resilience Building program, which started in Connecticut and has been used as the foundation for statewide local adaptation planning programs in Massachusetts (MVP) and Rhode Island (MRP), is the ideal model to build upon for this repeated recommendation. Identifying the steps for this recommended policy and facilitating a dialogue amongst state, regional, and local stakeholders will be key to effectively launching and sustaining this critical action, and we are ready to co-lead this work as we have done in Massachusetts and Rhode Island.

Thank you for your leadership and hard work in preparing these reports. We are grateful to be part of Connecticut's community of invested stakeholders in developing the state's climate change policies, and we appreciate the opportunity to participate in all aspects of the Governor's Council on Climate Change and its associated report development processes.

If you have any questions, please do not hesitate to reach out to me ([fryan@tnc.org](mailto:fryan@tnc.org)) or our chapter's Director of External Affairs Nathan Frohling ([nfrohling@tnc.org](mailto:nfrohling@tnc.org)).

Sincerely,  
Frogard J. Ryan  
State Director, The Nature Conservancy in Connecticut  
Please find our detailed comments starting on the next page.

## General Comments

These 10 separate reports reflect an extraordinary amount of work and expertise across the community of engaged advocates, citizens, and civil servants in Connecticut. However, creating a cohesive body of work that recognizes the overlapping focuses, recommendations, and needs among these reports while covering gaps and clarifying clear, actionable steps will take some additional time. These comments provide additional ideas and guidance for some future steps.

- We suggest that all recommendations clearly list who should or will implement the recommendation; while some reports include this information, there are many recommendations without an identified implementing body. Many recommendations list many actors to implement a recommendation, and in some of those cases we believe that a single lead or multiple co-leads as responsible entities could be noted. The GC3 should be involved in communicating with state agency leadership to understand their capacity and the feasibility of implementing the recommendations for which they would be responsible.

### The Nature Conservancy

- We believe there is still a strong need for a review of all policy recommendations for clarity and impact. There are several overlapping areas of interest, and we believe there are also some conflicts between some recommendations.

### The Nature Conservancy

▪ One key opportunity for high-level integration across working group reports is providing clear, actionable policy recommendations to the Governor and Legislature on water resource planning and water system vulnerability assessments. As noted in the State Water Plan (2018), Connecticut's approach to water management can be fragmented. We assessed water resource recommendations across multiple working group reports and noted several opportunities for increased integration of recommendations for

vulnerability assessments and management actions. Prioritizing integrated water resource climate vulnerability assessments that consider the full cycle, value and uses of all water

– including surface water, groundwater, drinking water, stormwater and wastewater and ecological integrity – will provide greater opportunities for innovative, multi-benefit and cost-effective solutions, and set the stage for policy improvements and shared investments that ensure Connecticut's water is safer, cleaner and more resilient. Based on these reports, we see a clear opportunity across water resource sectors to evaluate and clear state policy barriers, reduce fragmented water management and strengthen incentives for lower-impact land use practices and water conservation at the local level. Rather than following these siloed policy recommendations as written, we encourage the State to work across agencies and with communities to identify policy intersections between watershed management, wastewater systems, drinking water systems, public health, and stormwater and flood management. State agencies should then adapt regulations, update standards and practices, and explore new business and governance models for improved equity, resilience, service and efficiency in the water sector.

### The Nature Conservancy

- We recommend that language, style, and format be made consistent across reports. A summary of all recommendations would be helpful. We appreciated those recommendations that were supported by references, resources, and data, and we recommend that approach be normalized for all major policy recommendations.
- We suggest a clear identification of who should or will implement the recommendation throughout, and we think the GC3 should be involved in dialogue with state agency leadership to understand their capacity and the feasibility of implementing the recommendations for which they would be responsible.

The Nature Conservancy

#### Financing and Funding Adaptation and Resilience Work Group Report

The Financing and Funding Adaptation Work Group report includes many critical and clearly crafted assessments of the challenges that Connecticut faces regarding the impacts of climate change, as well as crucial recommendations to address those challenges before they become disasters. There are several sections and aspects of this report that warrant strong support and attention; we would call out three in particular:

- The focus on Nature-based Solutions (NbS) is critical to ensure that Connecticut utilizes existing and future natural assets to address climate adaptation in the most sustainable and resilient ways possible. While the discussion of NbS may be more precisely appropriate for inclusion in the Adaptation and Planning Implementation Workgroup report, it is certainly relevant to the Financing report, and is crucial for inclusion in any final GC3 reports.
- The emphasis on Environmental Equity and Justice reflects Executive Order #3, and the pertinent recommendations are an essential start to ensuring that Connecticut adequately prepares for the impacts of climate change and addresses historical inequities that have resulted in communities of color bearing a disproportionate share of those impacts.
- The sections on insurance provide very clear background and sound recommendations regarding an industry that will be deeply affected by the impacts of climate change and that has to play a crucial role in helping residents, businesses, and communities prepare for and recover from, those impacts.

Substantive comments (please note that CAPITALIZED words are suggested for insertion or addition)

- On page 6 in the Executive Summary, and on page 25, this sentence would be more informative and relevant if it included a shortened description of the factors included on page 15 in the discussion of Disproportionate impacts on vulnerable communities:

Equity starts by recognizing that there are disparities and inequities in living conditions, WHICH HAVE BEEN EXACERBATED BY HISTORICAL INEQUITIES IN GOVERNMENT POLICIES AND SOCIETAL PRACTICES.

- This sentence in the first paragraph on page 20 is not correct. It could be corrected as so: “Additionally, the cost of maintaining Many LARGE OR HAZARDOUS dams is about \$2,000 annually.”
- The recommendations on page 28 under State-funded and Initiated Infrastructure and Buildings Projects are critical, but primarily address new infrastructure investments that the state and

municipalities make. We should ensure that the Adaptation Planning Work Group report addresses existing infrastructure and prioritizes that which is in most critical need of resilience upgrades.

- On page 30, under “Build Outreach and Capacity and Tracking for the Increased Uptake of Flood Insurance”, this recommendation should include brief explicit reiteration of the serious flaws in the NFIP program mentioned on page 16:

“2) Consideration should be given to developing a community flood insurance program as an additional layer of coverage alongside the National Flood Insurance Program (NFIP). Such a program, creatively designed using insurance vehicles, AND AVOIDING THE FLAWS IN THE NFIP WHICH RESULT IN PUBLIC SUBSIDY FOR COSTLY AND RISKY DEVELOPMENT AND/OR

REDEVELOPMENT IN FLOODPLAINS, could ultimately protect the community by providing a greater level of flood insurance uptake for business owners and residents.

- Under that same section, recommendation 3, which reads “Assistance should be provided to communities to help them qualify for greater flood credits under the FEMA Community Rating System (CRS) program.” is critical, but the recommendation should include what is necessary to provide such assistance, such as increased agency staff, if that is the need.
- Appendices II and III, on pages 69 and 72, include recommendations by the Forests and Working Lands Subgroups to “Expand use of Regional Greenhouse Gas Initiative (RGGI) funds to forest land conservation.” While The Nature Conservancy strongly supports forest conservation, the role that healthy forests play in sequestering carbon from the atmosphere, and initiatives that increase forest resilience, we are also very concerned about the many attempts that have been made to utilize RGGI revenues for purposes other than those for which the program was originally established. When the original RGGI statutes, which are now in Section 22a-200c, were developed in 2007, The Nature Conservancy proposed that the phrase “measures to...mitigate the impacts of climate change”, meaning resilience and adaptation initiatives, be included in paragraph (c) (22a-200c(c)), which as passed, reads:

“The regulations adopted pursuant to subsection (a) of this section may include provisions to cover the reasonable administrative costs associated with the implementation of the Regional Greenhouse Gas Initiative in Connecticut and to fund assessment and planning of measures to reduce emissions, mitigate the impacts of climate change and to cover the reasonable administrative costs of state agencies associated with the adoption of regulations, plans and policies in accordance with section 22a-200a. Such costs shall not exceed seven and one-half per cent of the total projected allowance value....”

We would note that RGGI funds have never in actual practice been used for resilience and adaptation, and would support, as we did in 2007, a use of a limited amount of the funds, as provided in the statutes, for such initiatives. We recommend, however, that this proposal in Appendices II and III note the statutory limit on the use of RGGI funds for adaptation, and that this work group recommendation be focused on using funds within the statutory limit, and not on expanding that limit. Connecticut’s RGGI regulations also allow the use of initiatives for “Sequestration of Carbon due to Afforestation” as offsets for utilities to meet emission requirements. Due to various factors, the use of offsets has been non-existent or very limited. We would support a very limited use of RGGI funds directly for carbon sequestration, but only for projects that clearly demonstrate sequestration benefits.

Comments regarding syntax, semantics, or grammar (please note that CAPITALIZED words are suggested for insertion or addition)

- On the first page of the Executive Summary, this lengthy sentence would be more readable if broken apart, perhaps as so:

Framing: The report frames the needs for climate resilience financing and funding through a discussion of unmet disaster recovery needs following numerous past storms with national disaster declarations in Connecticut., THE REPORT notes that insured assets are at greater risk from climate change, and reviewS the impact of climate change on the financial markets., THESE IMPACTS

including the current regulatory practice of not informing investors of physical and transitional climate risks, warnings of a potential mortgage default crisis, and the potential downgrading of state and municipal bond ratings due to increasing costs if adequate, dedicated and recurring funding sources are not budgeted and invested in proactive natural hazard mitigation and climate resilience projects from planning through operation.

- On Page 8, spell out the abbreviation of “ADU” – Accessory Dwelling Unit.
- This sentence on page 10 does not appear to be a complete sentence:

While more discussion and planning are necessary, preliminary feedback from these limited work groups suggests that a state investingMENT in the range of \$2- 3 million per year for environmental justice and community planning activities and \$35 million per year for nature-based solutions WOULD BE NEEDED TO ADDRESS CRITICAL GAPS.

- The phrase “leading the way” in this sentence “While Connecticut has been leading the way...” at the beginning of page 12 is unduly vague. It would better be phrased: “While Connecticut has been leading the way DILIGENT with its forward-looking investments in recovering with resilience from Sandy,...”
- On page 12, under “Unmet Recovery Needs following Storms”, this “sentence”: “\$158 million in identified unmet recovery needs after Sandy” is not a complete sentence and repeats what was stated earlier in the paragraph. It is redundant and unnecessary.
- This sentence on page 17, under “Difficulty Obtaining Grant Funding”, should be changed to read: “In many aspects of resilience such as cutting-edge building technology, life-cycle analysis, health impact analysis, and community capacity building have not been advanced SUFFICIENTLY FOR CONNECTICUT to be competitive for national demonstration and research funding.” The following sentence “CIRCA has modeled an initiative that has resulted in the knowledge and capacity necessary to secure funding for sea level rise.” needs to be clearer as to what CIRCA is doing regarding sea level rise. It could be assumed that it is primarily research, but will CIRCA also be doing planning or implementation of protective measures? If not, which entities or organizations will in fact be on point for planning and implementation? Clarity would be welcomed here in this section.
- On page 18; although much of the previous sections have addressed Connecticut conditions, it is assumed, but not clear, that the “Take-up Rate of the National Flood Insurance Program (NFIP)” section refers to national statistics. That could be made clearer by editing: “It is estimated that approximately

50% of single-family homes located in the 100-year floodplains IN THE NATION[?] IN CONNECTICUT [?] are covered by flood insurance. It is also estimated that more than 29 million properties NATIONALLY have at least a high or moderate risk of flooding and THERE ARE only 5 million policyholders in the NFIP.

- On page 19, this sentence does not include the number of feet or projected sea level rise: “Connecticut is also planning for up to feet of sea level rise by 2050, which will worsen coastal erosion and coastal flooding.”
- In the second paragraph on page 20, this sentence should read: “These constructed gardens collecting rainwater AND absorbing it back into the ground and groundwater system.”
- In the first paragraph on page 21, this sentence should read: “The shoreline will erode MORE slowly,”
- Two minor edits are needed on page 23: “We suggest there be a small amount of state funding designated for long term monitoring OF the efficacy of these nature-based solution projects.” And “The river restoration working group, formed under the Long Island Sound Study has been a highly a successful model that has allowed practitioners and agency experts to learn and improve restoration techniques AND LINK FUNDING DIRECTLY WITH COLLECTIVELY AGREED UPON, PRIORITY PROJECTS.”
- This sentence in the box on page 27 under “Incentivize Private Developers...” is unclear and may be clearer if “for example” is deleted: “Although private businesses are largely unregulated with respect to floodplain management statutes, for example, we know businesses suffer the impacts of climate change and natural disasters and those damages impact the people of Connecticut through the loss of jobs, services, and tax dollars to pay for recovery.”
- The reference to \$1 million in this sentence on page 30 under “Create Central Governance Authority” sounds artificially precise in a sentence that is otherwise vague. It may be improved with wording such as: “Large-scale resilience infrastructure projects for flood protection can cost in the tens of millions for flood walls and pump stations, but COMPARABLE green infrastructure solutions can COST CONSIDERABLY LESS, ON THE ORDER OF be less than \$1 million.”
- On page 76, under Nature-based Solutions, this sentence is unclear and should be worded: “Any legislative authorization must allow for third party administration and incorporate an allowable USE OF UP TO 10% OF FUNDS FOR administrative PURPOSES fee of 10%.”
- Since some readers will only consult Appendix II and not Appendix I, Table 1 in Appendix II, which starts on page 64 would benefit from an explanation of the headings, similar to that provided in Appendix 1, either by noting to refer back to Appendix 1, or repeating that Legend with added terms not included in the one for Appendix I. For example, there are two headings in Appendix II which refer to “match”; a description of what each means would be helpful.

The Nature Conservancy

Equity and Environmental Justice Work Group Report

The Equity and Environmental Justice Draft Report represents the essential work that the working group has been doing as part of the larger process. The time and effort expended by working group members throughout a difficult process has resulted in critical recommendations for the GC3, and we strongly support this work. We highlight various specific details we find most important in these comments.

We hope that we can be partners in supporting and furthering the goals of this report and working group if and where appropriate.

General comments (please note that CAPITALIZED words are suggested for insertion or addition)

- We agree with the report's recommendation on page 2 and page 5 and that a funded public participation process should take place in 2021 to inform the further development and implementation of Connecticut's climate policies and plans. We believe that outreach to state legislators, municipal leaders, community advocates and grassroots organizers, and the general public is all critical for highlighting the importance of equity and climate justice in the State's response to climate change.
- As part of the public participation process, we recommend also identifying a working group of environmental justice experts and community advocates. Work to inform the State's climate planning process should be compensated by the State. The Nature Conservancy would be interested in serving as a resource if it would be useful to environmental justice experts and community advocates.
- We appreciate the work to develop definitions and clear explanations of the importance of equity in the development of policies to mitigate and adapt to climate change. We recommend that the first sentence under "What is Equity" on page 7 be amended: "A commitment to equity starts by recognizing that HISTORICAL INEQUITIES IN LAW AND SOCIETAL PRACTICE HAVE RESULTED IN disparities in health outcomes, inequities in living conditions, and lack of political power THAT place many communities of color, including Black, Indigenous, and other People of Color ("BIPOC"), low-income communities, people with disabilities, and other historically disadvantaged people at greater risk and limit the capacity of their communities to adapt to climate change."
- On page 10, the section with examples of equitable policies and approaches could be improved by moving this section into or, ideally, incorporating relevant policy examples in the table immediately preceding it for each type of equity there: distributive, procedural, contextual, and corrective. The section "More Details on Components of Equity" on page 11 should also be added to the table instead of being listed two pages later. There seems to be considerable repetition in this subsequent section.
- We recommend further developing the basic principles listed on page 10 and 11. The principles vary widely in their scope, specificity, and applicability to the GC3 policy recommendation development process. We support the development of principles for equity and environmental in state climate policymaking. Such principles should define key terms like "cumulative impacts" and "just transition."
- Additional resources that may be helpful for reference in this section are the State of California's Resiliency Guidebook Equity Checklist and Sustainable CT's Equity Toolkit, which is already being used with many municipalities in Connecticut. Custom- designed resources for the implementation of GC3 principles could help translate consensus climate equity principles into a format for policymakers to review key questions related to equity.
- We agree with the concluding assessment on page 41 that more time and structure is needed to adequately integrate and communicate equity into Connecticut's developing climate change policies and activities. We hope to continue to support the ongoing work on equity, environmental justice, and climate change adaptation and mitigation.

Public participation-related comments

- The recommendations, guidance, and resources provided on pages 12 through 32 on public participation are very thorough, and we support the GC3, DEEP, and other State of Connecticut agencies utilizing and adopting it for further work.
- Creating discrete resources out of key tables and information could be helpful in making sure this useful and necessary work is utilized in the future. The tables on pages 26-29 and page 30 should be formatted as stand-alone files, made available for the public, and distributed to state agency staff for use.
- We also recommend the Government Alliance on Race and Equity's Racial Equity Toolkit as a reference and example of a clear and actionable tool for decisionmakers in state and local government.

#### Mapping-related comments

- We strongly support the top priority action of developing, launching, and maintaining a state tool that identifies communities at greater risk from environmental and climate hazards. While the group has focused on a mapping tool, the designation of census tracts per a methodology informed by pollution burden and demographic characteristics could be an important first step if the development of a GIS viewer would delay the publication of this data.
- We strongly support the use of the environmental justice mapping tool to direct shares of state funding to the communities at greatest risk; the report should include the recommendation that the Legislature and Governor use the tool to direct a minimum percentage of funding to those communities (per California's SB 535 and AB 1550).
- We commend the work of the mapping subcommittee and Max Teirstein on the selection of geospatial data available for the creation of an environmental justice mapping tool titled "Sources of Statewide Data." We are grateful for the work being done in the Department of Public Health and at CIRCA that could support the development of a statewide environmental justice mapping tool.
- We urge caution around developing a quantified assessment of physical climate risks that is applied across all communities in Connecticut as part of this tool; the complexities of climate threats will be difficult assess in a standardized way, and we hope this tool would be used to direct a minimum share of funds to communities found to experience the greatest impacts from pollution and have the greatest vulnerability according to selected demographic characteristics. While we have seen other comments asking for the environmental justice mapping tool to incorporate physical climate risk, natural resources, and other important geospatial information, we recommend starting this project with a streamlined focus on environmental justice. As additional geospatial tools are designed and/or required to inform policy decisions, they should of course be coordinated with an environmental justice screening tool as well as existing geospatial resources at CIRCA and elsewhere. However, a focused approach may be critical for the State developing a tool that is used to direct a greater share of funding to communities that are experiencing the brunt of environmental racism and have demographic characteristics that make them most vulnerable to both pollution and the ongoing and projected climate impacts.
- A standing committee to evaluate the coordination and development of climate and environmental geospatial tools may be helpful as part of the GC3 process moving forward. As compiled in the document "Overview of Existing Publicly Available, Statewide Mapping Resources," there are

already a great deal of mapping resources. The Nature Conservancy has additional geospatial resources and science. Of note, TNC maintains CoastalResilience.org (which includes mapping and visualization tools as part of a large suite of resources being used in Connecticut and around the country for coastal resilience). TNC has also developed the Resilient and Connected Network, which has associated new tools and information to supplement initial mapping applications like the Resilient Land Mapping Tool. Both initiatives already guide decision-making about climate change by state, regional, local, and nonprofit entities. Even for a geography as relatively small and homogenous as Connecticut, there is no way to create “one map to rule them all”; instead, we support the focused development of tools for specific purposes. We see a need to channel more funding to communities experiencing environmental injustice and are composed of individuals known to be more vulnerable to climate impacts, and a targeted screening tool can serve that purpose while being coordinated with additional statewide mapping resources and approaches to addressing and understanding climate impacts.

- On page 38, step 7 in the table should be clarified so that “relative cumulative impacts” is understood to refer to environmental pollution burden. The relative cumulative impacts of the myriad of climate threats facing Connecticut are too complex and unquantifiable to be included in an index.
- On page 39, we recommend that step 9 more explicitly discuss the policy rationale behind using the environmental justice screening tool to direct state funds to the most vulnerable communities as discussed in the bullets above.

#### The Nature Conservancy

##### Mitigation-related comments

- We support the mitigation subcommittee recommendation on page 40. Specifically, we want to emphasize the potential of Natural Climate Solutions for bringing co-benefits to low-income, historically under-resourced communities. Urban greening, urban forestry, green stormwater infrastructure, and other Natural Climate Solutions provide extensive air and water quality benefits, resilience capacity, quality of life improvements, job opportunities, and other co-benefits while sequestering carbon and aiding in other mitigation strategies. We appreciate how this is communicated in the questionnaire and throughout other reports; we hope the power and potential of Natural Climate Solutions will continue to be highlighted if these reports are compiled into a cohesive format.

##### Adaptation-related comments

- We support the development of a priority program for municipalities to develop local adaptation plans with the support of State guidance, geospatial information, and funding for implementation. We have long strongly advocated for the State of Connecticut to support local climate adaptation planning at the municipal level, via several programs TNC has co-created using the “Community Resilience Building” process including the Massachusetts’ Municipal Vulnerability Preparedness Program and Rhode Island’s Municipal Resilience Program. Both programs depend on the “Community Resilience Building” process to define and advance municipal-based resilience priorities. This process was first pioneered in Connecticut and has already been held in over 40 municipalities across the state. The Nature Conservancy has partnered with the Community Foundation of Eastern Connecticut, Sustainable CT, Council of Governments, municipal leaders and staff, business communities, faith-based organizations, public health providers and districts, NGOs, and academic

institutions, among many other groups on the development and implementation of local capacity-building to address the impacts of extreme weather and climate change.

- While there are some connections in the “Review of Financing Adaptation and Resilience Working Group Report” and other sections across the GC3 draft reports that bring together the full scope and implications of related adaptation funding and policy recommendations, we see a clear need for more discussion, coordination, and consolidation of a clear set of recommendations around these interrelated topics. It may take additional time – and will certainly require the inclusion of key working group participants in conversations with the GC3 members assigned to the Council’s adaptation committee that will convene in November – but there would be a real benefit for the ultimate report to the Governor and Legislature if there is focused and comprehensive overview of the interrelated recommendations in the EEJ, Adaptation, Natural and Working Lands, and Financing Adaptation reports.
- Many of the 40 municipalities in Connecticut that have gone through the Community Resilience Building process have indeed forged a direct connection between FEMA Local Hazard Mitigation Plans and Plans of Conservation and Development – specifically on actions (i.e. capital expenditures, policies, projects, etc.) to improve resilience and reduce risk. This synergy highlights the opportunities for implementing comprehensive climate planning within existing municipal planning processes – an important consideration. For example, California has required integrated climate adaptation planning supported by state guidance and resources as part of mandatory Local Hazard Mitigation Plans that are incorporated into the Safety Element of General Plans (SB 379); the integration of climate impacts across all local planning efforts can then inform many forms of local decision-making. Additionally, the inclusion of certain projects and concepts in Local Hazard Mitigation Plans can facilitate post-disaster FEMA funding for resilience projects that may otherwise not be fundable.

Comments regarding structure, syntax, semantics, or grammar

- The heading of the section “How does equity relate to climate change?” on page 7 is followed directly by a section with the same title on page 8. The two sections are somewhat repetitive, though all the information is good. The first section could be retitled, “Why is equity an important consideration in climate policy development?” The second section could be retitled, “How should climate policy incorporate equity?”
- On page 23, there should not be a comma after “Clearly and frequently”.

The Nature Conservancy

Science & Technology

We appreciate this broad and optimistic overview of the state of climate science in Connecticut. We believe that the recommendations relating to climate science across all the reports can be developed to be made more specific and integrative. There is a clear need for the State and/or CIRCA to provide more information and guidance for basic modeling and downscaling approaches that can be used by all entities in Connecticut.

For example, we developed these two recommendations that compile information and needs across the Rivers, Wetlands, Utility Infrastructure, and Public Health and Safety sections related to water vulnerability assessments that directly relate to climate science needs also communicated across the recommendations detailed in the latter half of the report:

- There is a need to conduct integrated watershed-scale assessments using a common modeling approach that incorporates climate change to identify risks, assets, and community vulnerabilities to water in our ecosystems, drinking water supply, stormwater and wastewater. Evaluating and managing water resources in a more integrated and inclusive way provides opportunities to focus on water-related investments that achieve multiple economic, environmental, and societal benefits.
- Once this work is done, state and local governments should overlay those technical water vulnerability assessments that incorporate climate impacts (natural ecosystem, geology, hydrology and infrastructure) with social, economic and population data to ensure investments are equitable and targeted to the most vulnerable communities and populations. (This recommendation connects with the environmental justice screening tool recommendation in the Equity and Environmental Justice report.)

Page-specific comments (we suggest that the report include page numbers)

- We strongly support the recommendation to join the International Association to Combat Ocean Acidification (OA Alliance) on page 29. We support the recommendations in this report, but we wanted to note the special benefits and importance of this action.

The Nature Conservancy

Public Health and Safety Work Group Report

We appreciate this report's focus on complex, varied and dynamic public health impacts of climate change and applaud the working group for their effort to address the many challenges to health and safety driven by climate change through the lens of seven domains. The report appropriately brings attention to the ongoing need to assess current and potential future health risks to vulnerable communities, while also establishing suitable interventions and supporting their implementation at multiple scales – including state, regional, municipal and hyper-local levels. This report highlights the inextricable links between public health and safety and the resilience of both the built and natural environment and we are happy to support its critical content in the Council's final report to the Governor and Legislature.

General recommendations:

- Commit to collaborative, inclusive planning and communication approaches to resilience across multiple sectors, including municipalities, utilities, and businesses and residents. Identify, prioritize problems, and co-develop solutions with communities to ensure local needs are met and avoid unintended consequences and inequities. Avoid developing strategies, then informing stakeholders.
- Incentivize regional collaboration and multi-sector innovation on water management solutions.
- Evaluate and clear state policy barriers, update standards and practices to better protect human health and safety, reduce fragmented water management and explore new business and governance models for improved service and efficiency.
- Sustain adequate funding for water infrastructure, prioritize and target investments in vulnerable communities. Explore options to increase grant and loan flexibility by combining multiple

programs for increased impact and reach. Require or incentivize best management practices to enhance project benefits.

We also wanted to repeat these two recommendations from the Science and Technology report that directly relate to the actions identified above:

- Conduct integrated watershed-scale assessments using a common modeling approach that incorporates climate change to identify risks, assets, and community vulnerabilities to water in our ecosystems, drinking water supply, stormwater and wastewater. Evaluating and managing water resources in a more integrated and inclusive way provides opportunities to focus on water-related investments that achieve multiple economic, environmental, and societal benefits.
- Overlay technical water vulnerability assessments that incorporate climate impacts (natural ecosystem, geology, hydrology and infrastructure) with social, economic and population data to ensure investments are equitable and targeted to the most vulnerable communities and populations. (This recommendation connects with the environmental justice screening tool recommendation in the Equity and Environmental Justice report.)

#### Page-specific recommendations

- On page 23, we strongly support the recommendations for evidence-based standards to establish local heat and air quality response plans and recommend including socio- economic and environmental data to both assess vulnerable geographies, at-risk populations and opportunities for urban trees and green infrastructure. Increasing urban trees and other natural systems provide a range of physical health benefits including improved air and water quality, mitigating the heat island effect, and helping to alleviate noise pollution (see EEJ Draft Report, page 2, Theme 6: Natural and Working Lands; Forest Subgroup Report, pages 30 - 38).
- On page 53 we support the recommendations to develop water conservation measures & communication guidelines to manage droughts. We recommend establishing an integrated approach to water communications that promote a vision for all Connecticut residents to enjoy safe and reliable water.
- On page 60, the PHS report provides an excellent overview of health risks associated with increasing harmful algal blooms. While increasing temperatures and changing precipitation patterns are driving these increases, research shows groundwater nitrogen pollution is also a driver. We recommend evaluating emerging science related to increasing harmful algal blooms and where needed, update water quality nutrient standards to address climate impacts of warming temperatures, changing precipitation patterns and sea level rise.

TNC

#### Infrastructure and Land Use Adaptation Work Group Report

- We are concerned about the prioritization of priority actions in “Recommendations for Further Review in 2021.” Who, how, and when will these priority recommendations be reviewed and provided the same status as those that received a full description?

- We would like to see recommendation “LUB-1 – Establish State-wide Storm Water Utility” elevated to a priority action for 2020 versus relegation to the “Recommendations for Further Review in 2021”.
- TNC has led the implementation of the Community Resilience Building process across the state (i.e. 40 CT municipalities to date). Massachusetts (MVP – over 300 municipalities to date), and Rhode Island (MRP – 13 municipalities to date) have created statewide community resilience programs using Community Resilience Building as the foundation for planning and developing local resilient action plans. We would be willing to co-create and co-lead the advancement of “Recommendation LUB-3 – Establish Connecticut Community Resilience Program” based on our experiences in Connecticut and neighboring states. We would appreciate the explicit inclusion of TNC as an implementation entity on page 15 under LUB-3.
- On page 15 under LUB-3, “The Nature Conservancy Municipal Resilience Program <https://www.communityresiliencebuilding.com/>” needs to be corrected to “TNC’s Community Resilience Building Program – [www.CommunityResilienceBuilding.org](http://www.CommunityResilienceBuilding.org)” in the “References for action” box. We also recommend including “State of Rhode Island Municipal Resilience Program” as a specific reference for action alongside “Resilient Rhody.”

TNC

#### Progress on Mitigation Strategies Work Group Report

General comments:

- Overall, we are pleased that the recommendations in the Mitigation report are achievable and would strongly reduce GHG emissions in Connecticut. The report serves as an example of what stakeholders across diverse backgrounds and needs can accomplish together on behalf of planning for climate mitigation. We are proud to be part of this effort.
- We are concerned that there are various overlapping recommendations from each sub- working group that would benefit from a larger discussion with the entire Mitigation team to create a clearer and more concise list of recommendations. Then, policy recommendations should be reviewed and discussed, regardless of working group and intent, by the entire GC3. By doing so, redundancy evident across sub-working groups and working groups could be avoided. This will then create a cleaner and clearer picture of policy the GC3 would like the state to consider.
- The language, style, and formatting from each sub-working group was not consistent. This was likely due to many people constructing each sub-report and the differences in backgrounds from each sub-working group member. For example, the Mitigation report would strongly benefit from 1 person copy-editing the entire report to create a cohesive report. Effort should also be made to create cohesiveness between the Mitigation report other working group reports.

#### Chapter 2: Buildings

- We would first recommend making recommendations more concise with clearer points for comprehension and impact. To this end, consider taking out unnecessary adjectives and superlatives. In addition, recommendations would be more credible if they were backed by numbers or statistics with references (example: the first strategy could list the actual dollar amount of diverted funds).

- There were footnotes and hyperlinks throughout the report. We would suggest that hyperlinks are not useful in this context, and footnotes are preferable. Footnotes would make the report more accessible for those who read the report in print and/or those who do not wish to open multiple windows in their browser to understand the point of the aforementioned hyperlink. Where hyperlinks are helpful, they could be included in the footnote.
- We also question whether all appendices for this sub-sector report are needed or complete. For example, Appendices 2, 4, 5, and 7 could be footnotes rather than an additional page of text. The focus should be on policy recommendations, and the appendices listed are better listed as references. Appendix 6 is a list of data fields with no added information, please consider taking out this appendix. And finally, Appendix 9 does not appear to be complete.
- On page 16, the third recommendation on this page, the workgroup recommends the creation of a Building Energy Concierge function, and we support this recommendation. This would provide invaluable, consistent information for builders and owners in their goal of creating structures that are efficient and sustainable. Such a function has worked well in other states, and following examples from New York and Massachusetts could allow for ease in creation and implementation.
- On page 17, third paragraph, renewable thermal technology (RTT) expansion in the building sector is discussed, and we strongly back this recommendation. Reducing the “winter peak” in energy consumption is important as most winter energy currently comes from high GHG fossil fuel sources. Promoting RTT was discussed in the 2018 GC3

report, and there were statistics used to validate this recommendation, but these were not mentioned in this report. Updating and referencing those statistics would strengthen this policy recommendation.

- In last two paragraphs on page 20 and first bullet point on page 21, there is a new policy recommendation targeting natural gas infrastructure as it relates to adoption of RTT in buildings which we support and appreciate. Given that the recommendation to limit the expansion of natural gas infrastructure is also discussed in various other reports and sub- reports, we recommend making reference in the Buildings report to those other similar policy recommendations. This will help strengthen each recommendation while also tying them together for the big picture.
- In the fifth bullet on page 21 and the first paragraph on page 22, biodiesel is discussed. We share concern with other members of the working group about biodiesel being included in the recommendations and suggest a more careful weighing of all relevant factors before including it. The reasons for this concern are primarily life-cycle emission issues, reduction in energy density when adding biodiesel to fuel mix and needed technology/additives to run B100 biodiesel at low temperatures, all of which contribute in some way to GHG emissions or other problems. Additionally, the Science and Technology working group report discusses the drawbacks of biofuels and strongly advocates against the use of biofuels.

### Chapter 3: Electricity

- We had been active in the drafting of this section, and as such, have already made policy recommendations to the Electricity sub-working group. We appreciate that these suggestions and edits were incorporated into the report.

- We fully support energy efficiency measures and the renewable energy transition recommendations outlined in this report, particularly highlighting the importance of offshore wind (OSW). OSW is a critical component to meeting state 2040 renewable energy goals, as well as 2030 and 2050 emission targets. OSW is the largest potential source of renewable energy during winter months, and as such, promotion of and planning for OSW should be prioritized.
- We support of all the recommendations in this draft GC3 report in relation to the electricity sector. However, there is considerable overlap with the Buildings report in terms of infrastructure and energy efficiency. As stated previously, we would strongly recommend that the language be consistent and referenced across sub-working groups.
- In the last paragraph on page 38, the discussion regarding how the creation of the Killingly natural gas plant will prevent Connecticut from meeting energy and emission goals is valuable, but we do not believe that this topic is addressed in any of the policy recommendations. To that end, we suggest that language be included as a new recommendation that seeks to assure DEEP has or will have the legal authority to take into account energy and emission goals when making decisions on construction/permits or other measure needed for new energy sources and/or related infrastructure. Although it is common sense that aligning State decisions with State climate mitigation policy and goals is critical to meet such goals, it may not be sufficiently established in the State's day to day direction or procedures. Suggested wording for this new recommendation could be: "Determine and establish measure(s) needed (administrative, legislative or other) to give DEEP/PURA/the State of CT authority and responsibility to assure that it's decision-making (e.g. for permits and other forms of State approval) is in conformance with and supports the State's climate mitigation/zero-carbon goals. This should include development of a plan for phasing out building new fossil fuel energy generation and infrastructure so the State, DEEP and PURA have the guidance and direction to implement such decision making."
- In the fourth paragraph on page 42, the workgroup acknowledges the role battery storage will play in future energy transmission is crucial for distributed energy resources (DER) like solar and wind. While a discussion of battery storage was included in the report, results from the 2020 Integrated Resource Plan (IRP) Value of DER study have not been fully incorporated. We think this is important information that should be included in the report and could be done so by noting that it is "incorporated by reference." Reference to the 2020 IRP should be explicit regardless of the timing of its release.
- In the last paragraph on page 51 (continuing on page 52), discussion of micro-grids was brief, and we believe the current Connecticut Microgrid Program should be mentioned and discussed in more detail in this report given it has been around since 2012. This program is mentioned in the Infrastructure report, and a cross-reference here would be beneficial as well.
- On pages 57-58, Appendix 3 is not complete. Many definitions are not included. We would recommend including the missing definitions.

#### Chapter 4: Non-energy

- The Non-energy sub-working group report covered a small number of policy recommendations but contained some important references and data. Although only a few recommendations, these covered a wide range of topics, some of which were briefly discussed in the 2018 report.

- As previously stated, formatting across sub-working groups should be consistent. We would also like to point out that the chapter summary table is incomplete. This may be a reoccurring copying issue, as evident by incomplete appendices in previous chapters. It is important that this table be fixed as soon as possible.
- Many of the recommendations regarding forestry and agriculture are also included in the Natural and Working Lands, Forestry and Agricultural reports. There is a strong need to remain consistent in policy recommendations across working groups.
- In the third paragraph on page 60 (continuing onto page 61), a hydrofluorocarbon (HFC) phase out was recommended, which we strongly support. HFCs are extremely potent GHGs and should be explicitly targeted in state policy. As stated in this sub-report, the state has already begun the investigation into a state-wide phase-out of HFCs. Given widespread industry support and that most of the Northeastern states are already implementing refrigerant management and HFC programs, this policy recommendation should be highlighted.
- In the third paragraph on page 62, the workgroup discusses limiting agricultural emissions. We support this policy recommendation but would again stress the importance of referencing the policy recommendations from the Natural and Working Lands, Agriculture sub-working group.
- In the first paragraph on page 67, the workgroup recommends policy to limit waste emissions. TNC supports efforts to reduce emissions from waste. This is an area that warrants further investigation and would benefit from public comment and expert analysis. We recommend input be added or referenced from the Bureau of Waste

Management, as this policy recommendation would be enhanced by more Connecticut specific information.

- In the last paragraph on page 68, the workgroup recommends urban tree planting. While TNC has worked extensively to promote urban greenspace and planting, this policy recommendation should be more closely aligned with policy recommendations given in the Natural and Working Lands and the Infrastructure and Land Use Adaptation working groups. Overall, we support efforts and policy to plant trees in urban and suburban areas and will continue to work with communities in these types of endeavors.

## Chapter 5: Transportation

- The 2018 GC3 report extensively covered mitigation policy for the transportation sector, which was critical given that the largest source of state-wide emissions comes from the transportation sector. This report followed up on those recommendations while creating several new recommendations, all of which we support. Given the importance of transportation emission reduction programs, TNC strongly supports efforts like the Transportation Climate Initiative (TCI) and the Electric Vehicle Roadmap.
- Given that the clearest goal of most of the recommendations is to electrify and decarbonize the transportation sector, policy recommendations to decrease energy consumption must consider the increased demand from the transportation sector. We recommend adding a reference that would estimate the impact the State's EV deployment goals would have on the electric sector. Establishing the infrastructure necessary to power all light, medium, and heavy-duty vehicles as well as e-bikes and e-scooters will require intensive cooperation across state agencies and landowners. To this end, we also

strongly believe that the EV Roadmap plan put forth by DEEP and DOT should be mentioned in this Transportation report with a recommendation to fully implement it.

- In the second paragraph on page 93, TCI is specifically referenced as a strategy to reduce transportation emissions. While many references are given, the Transportation, Equity, Climate and Health (TRECH) Project report from the Harvard School of Public Health should also be referenced. One of the key findings of this report is that the estimated health benefits under the TCI climate mitigation policy scenarios are substantial and are larger than estimated TCI program proceeds. This should be highlighted.
- In the second bullet point on page 94, the workgroup references a survey done by TNC that shows rural communities would support a program like TCI. In August 2020, TNC released a report titled: Supporting Rural Communities through Clean Transportation Investments, which lists several benefits to rural communities through the proposed investments from TCI. This study should be referenced to illustrate how all communities would benefit from TCI  
([https://www.nature.org/content/dam/tnc/nature/en/documents/TCI\\_Report\\_Rural\\_Aug\\_2020.pdf](https://www.nature.org/content/dam/tnc/nature/en/documents/TCI_Report_Rural_Aug_2020.pdf))

TNC

#### Natural and Working Lands Work Group Reports

We strongly recommend that DEEP adopt TNC's Resilient and Connected Network data (as described on page 3 of the cover letter to these comments). It provides a unified vision for the conservation community that will result in a protected network of landscapes that support Connecticut's plants and animals into the future. Specifically, we recommend that the vision and supporting data are incorporated into a) the Connecticut Wildlife Action Plan, b) criteria for public grant programs that support land protection, restoration, and management, c) resilience data support tools for the Community Resilience Building program and any other resources associated with the implementation of the recurring recommendation for a local adaptation planning program, and d) priorities and criteria for state land protection funding.

#### Forests Subgroup Report

We appreciated the excellent summary and policy recommendations, and we support the discussion of core forests and their importance throughout.

- We believe the document's recognition of U.S. Climate Alliance work is important and should remain in the final draft. We believe that Connecticut can further support the Natural and Working Lands initiative and hope to further support our state's contributions to the USCA's work in this area.
- We recommend a greater focus on the need for investment in active reforestation of riparian areas and floodplains. When the highly productive soils in riparian areas are reforested, they tend to lead to faster and greater carbon benefits than upland soils. The benefits to water quality, such as reducing streambank erosion and filtering pollutants, are also well worth the investment. There is the opportunity for reforestation on lands that are frequently flooded in Connecticut. Programs such as the Natural Resource Conservation Service cost-share programs provide one potential funding source for active reforestation (tree planting) in these areas. State funding through wildlife habitat grants and aquatic restoration grants, for example, should also be expanded to support riparian reforestation. From an ecological and climate change perspective, reforestation of streambanks and floodplains is a no-

regrets action. As Connecticut considers how to compensate for forest loss due to development (e.g. No Net Loss policies, or mitigation), these areas may be prime opportunities to increase our forest acreage.

- In the section about active and passive forest management (pages 9 and 10), we recommend further emphasizing the importance of expanding activities eligible for tax credit for forest management. TNC, American Forest Foundation, and New England Forestry Foundation are launching initiatives in carbon incentive payments. Furthermore, TNC's Working Woodlands, TNC/AFF's Family Forest Carbon Program, and NEFF's Pooled Timber Income Fund are examples of existing programs that could have a lot of promise if brought to Connecticut.
- On page 11, the second paragraph in the section titled "Forests mitigate climate change and clean the air" is drawn from a paper that was further built upon by later research that served as the basis for the United States Climate Alliance (USCA) work referenced in the preceding paragraph. We recommend a review of the paper "Natural climate solutions for the United States" by Fargione et al. that was published in *Science Advances* 4 (11) in November 2018 for additional key information about the activities cited in the USCA fact sheet cited in endnote 22 and the global work cited in the Griscom et al. paper cited in endnote 23. The USCA work is drawn primarily from the team led by TNC scientist Joseph Fargione, and we would be happy to follow up with further information about the models and information developed by TNC and partners for Connecticut and other USCA states as part of the Natural and Working Lands initiative.
- On page 24, we do not believe that proforestation should be presented as the most effective solution to preserve and foster further carbon storage. We are concerned about valuing one natural climate solution over another, and the science coming out of TNC's global science team contradicts this claim. This claim may be relevant for very particular geographies, but we are not sure that Connecticut is one of them. There is a great deal of scientific debate about the viability of proforestation to be a major climate sequestration contributor in many regions around the world, and Connecticut may not necessarily be an area where natural forest growth has the greatest potential. We absolutely do need forests to help us address climate change in many ways, so we recommend focusing on the importance of keeping forests as forests, and then on managing them in a range of ways (including creating new forests through reforestation and urban tree planting). It may be better to list management practices for natural and working lands as a package rather than promoting one strategy as better than the others. We ask for additional conversation around the language in this bullet so as to not miscommunicate the important benefits of proforestation and other natural climate solutions.
- We support the language in the section on timber harvesting in Connecticut on pages 25 and 26. We recommend a shift away from high grading to sustainable forest management, and we urge this recommendation to be more explicit. A message of harvesting as an afterthought risks backlash. Consulting the New England Forestry Foundation on this topic could be powerful; this outreach could help diplomatically make the case that relying on other states for wood needs is not climate friendly.
- We found the discussion of reforestation on page 27 to be very helpful, and we strongly support the action plan to maintain and increase forest cover over the next twenty years.
- While the other recommendations regarding the avoidance of core forest destruction target all forms of conversion, this recommendation on page 28 inappropriately singles out solar development:

"Actively discourage conversion of forest, particularly core forest, for industrial solar projects, while increasing incentives for renewable energy projects on the built environment, such as on brownfields or along highway infrastructure."

The valuable features of core forest will be destroyed with most types of development, whether it be housing, commercial, or industrial, and most other types will not have the same emission reduction value of solar, so solar should not be targeted in this manner.

- On page 30: Rather than setting a target percentage (70%) of large forest reserves on state land in the short-term actions section, we recommend that the report recommend considering a target range in percentage of large core forest areas on state lands, or a process to determine which core forests should be reserves and which might have recreation, model forest, or other values that would be more suitable to manage for. A fixed target can lead to a focus on total area rather than on the quality or suitability of those forest areas.
- At the bottom of page 31, we suggest adding under Longer Term Actions, "Promote American Forest Foundation/TNC's Family Forest Carbon Program, a new approach that gives forest owners with relatively smaller parcels an opportunity to bring in income from their land, in exchange for implementing sustainable forest practices that help sequester and store more carbon." We would be happy to provide more information about this developing initiative being implemented in Massachusetts and Vermont.
- On page 49, we believe further examination of the assumption that forests sequester carbon equivalent to 20% of emissions is needed. We strongly urge deleting the suggestion that natural climate solutions could sequester 20% of greenhouse gas emissions in the state for multiple reasons. We should not be portraying natural carbon sequestration as an excuse to only reduce carbon emissions by 80%. Sustained effort towards reducing as much emissions as possible over the long-term is the only feasible option for minimizing destruction from climate change. Additionally, we should have a clearer sense of the actual science behind the specific annual carbon sequestration rate on Connecticut's natural and working lands before referencing them in policy recommendations. We also need a better understanding of the climate and human threats to our state's natural carbon stocks into the future.

#### Wetlands Subgroup Report

- On page 21, we believe it is very important that Recommendation 2020.W.2.1 "Continue to develop and update all municipal emergency preparedness plans for extreme weather events" more explicitly incorporate climate science. Under the approach recommended explicitly and implicitly in the Science and Technology report, common approaches to modeling and downscaling climate impacts should be incorporated into all planning. Even if appropriate updated sea level rise, hydrology, and extreme weather event information is not available for the model severe weather event planning at regular intervals, it is important to provide clarity and guidance about how the ongoing and projected impacts of climate change can be addressed in these processes. This recommendation also dovetails with the recommendation to support local climate planning that is reiterated in many reports; it also directly relates to our suggestion about how Local Hazard Mitigation Plans are a key piece of the comprehensive integration of climate considerations into all state and municipal planning processes. Identifying all of the resources and references that are included in this recommendation and throughout

this report that do not incorporate sea level rise and climate change would be a useful exercise to show the baseline resources that need to be addressed for coordinated and climate- smart planning to occur.

- On page 29, TNC is very interested in being a partner to provide information and approaches related to Recommendation 2020.W.3.1 “Update and develop wetland protection policies, including regulatory programs, to ensure that they include protection for climate change mitigation, adaptation, and resiliency benefits of wetlands and near coastal waters.” TNC’s CoastalResilience.org site provides many resources powered by years of research that would be useful, including the Future Habitat app. We believe this resource, among others, could be a helpful reference for action on page 30.

Rivers Subgroup Report (note that we recommend adding CAPITALIZED letters and words) We want to highlight general recommendations for the implementation of integrated water management approaches that are discussed in the Rivers report, but are also important for recommendations in the Wetlands, Public Health and Safety, and Land Use and Infrastructure reports. These central principles should be adopted for planning, communication, and education of stakeholders and communities for water policy in Connecticut, and we urge state agencies to adopt them as part of new practices to address the challenges of climate change for water planning:

- Commit to collaborative, inclusive planning and communication approaches across multiple municipalities, utilities, and private entities.
- Identify and prioritize problems and co-develop solutions with communities to prioritize needs and avoid unintended consequences and inequities. Avoid developing strategies, then informing stakeholders.
- Incentivize regional collaboration and multi-sector innovation on water management.

Page-specific comments (capitalized words are for addition)

- On page 6, we suggest clarifying the definition of nature-based solutions by adding this phrase: “Nature-based solutions ARE ACTIONS THAT ARE INSPIRED BY PROCESSES AND FUNCTIONING OF NATURE TO increase the resilience...”
- On page 6, we suggest adding land protection to the description of actions.
- On page 6, under Targets, Indicators and under the first bullet, replace “river systems with the most capacity for being resilient to extreme weather” with “RIVER NETWORKS THAT WILL LIKELY MAINTAIN DIVERSITY AND FUNCTIONAL INTEGRITY INTO THE FUTURE, EVEN UNDER SHIFTS DUE TO CLIMATE CHANGE...”
- On page 6, under Targets, Indicators and under the first bullet, add the purpose of the freshwater resilience data: “...protecting the ecosystem services of inland waters. THE RESULTS CAN BE USED TO EXPLICITLY GUIDE LAND ACQUISITION, INFORM WATERSHED MANAGEMENT, AND PRIORITIZE DAM REMOVALS TOWARD THE GOAL OF MAINTAINING THE RESILIENCE OF STREAM NETWORKS.”
- On pages 7 and 8, we suggest including UConn CLEAR for their spatial analysis of all riparian areas in the state. University of Connecticut researchers have also done innovative analysis of flooding and locations for riparian corridor improvements.

- We suggest that TNC be included in the list of implementation entities on page 7, especially since we are explicitly listed in the first action on page 6.
- On pages 7 and 8, we recommend adding the following resources to the list of “References for action”:

Naturally Resilient Communities - <http://nrcsolutions.org/>

EPA Green Infrastructure - <https://www.epa.gov/green-infrastructure>

#### **COMMENT #9**

10-21-2020 - Ruth Canovi, MPH Director, Advocacy - The American Lung Association

Distinguished Members of the Governor’s Council Climate Change:

Thank you for the opportunity to weigh in on the GC3 Working Group Draft Reports. The American Lung Association is the oldest voluntary health organization in the country and our mission is to save lives by improving lung health and preventing lung health disease through education, advocacy, and research. It is clear that there has been an impressive level of work and collaboration in creating these reports. Congratulations to you all and thank you. The American Lung Association views climate change as public health emergency and commends the Council for making health and equity priorities within these reports.

As the Lung Association, we are very concerned about the quality of air we all breathe. For over twenty years we have been releasing our “State of the Air” Report which looks at two dangerous pollutants – ozone pollution and particulate matter pollution – to track our progress in cleaning up our air and educating the public about the health risks of exposure to poor air quality. While we have seen great progress throughout our country since the enactment and implementation of the Clean Air Act, climate change is threatening our progress and makes the job of cleaning our air more difficult. It is clear that not only do we need to continue to protect gains made under the Clean Air Act, as states we have a lot more to do.

As air pollution does not recognize state boundaries, efforts on the local, state, regional and national level are all necessary to improving public health. In addition to commenting on the Working Group Draft Reports, we are regularly engaged in the development of the multi-state Transportation Climate Initiative and believe that Connecticut’s role in that process is a critical opportunity to continue leading on programs and projects to protect public health locally and inform regional policies to achieve the same.

#### Dangerous Air Pollutants

Ground-level ozone levels are addressed often in these workgroup reports. This is an area the Lung Association has prioritized as well and we recognize the real health risks heightened levels of ozone present, particularly for many at-risk individuals. Ozone pollution, sometimes called “smog,” forms in the atmosphere when gases that come from tailpipes, smokestacks, oil and gas extraction and other

sources react in the presence of sunlight. Ozone levels most often rise between May and October when temperatures, increased sunlight and stagnant atmospheric conditions transform air pollutants into ozone. When a person inhales ozone pollution it reacts chemically with the body's internal tissues, causing inflammation — like a sunburn of the lung. Ozone acts as a powerful respiratory irritant at unhealthy levels frequently found across the nation and our state. Ozone pollution causes respiratory harm, early death, and cardiovascular harm, and may cause harm to the central nervous system and reproductive and developmental harm.<sup>1</sup> Rising temperatures from climate change are making it harder to reduce ozone.

Currently, Connecticut's ozone levels are too high. In fact, we have some of the worst ozone levels in the Eastern half of the country. The 2020 "State of the Air" report gave all of Connecticut's eight counties failing grades for ozone levels.<sup>2</sup>

Another air pollutant we focus on is particle pollution – which refers to a mix of tiny solid and liquid particles that are in the air we breathe. Our natural defenses help us to cough or sneeze larger particles out of our bodies. But those defenses don't keep out smaller particles. These particles get trapped in the lungs, while the smallest are so tiny that they can pass through the lungs into the bloodstream, just like the essential oxygen molecules we need to survive.

Particle pollution is a known carcinogen and has many other dangerous health impacts including premature death in people with heart and lung disease, nonfatal heart attacks, aggravated asthma, decreased lung function, and increased respiratory symptoms.<sup>3</sup>

Particle pollution also comes from many sources. Factories, power plants, diesel- and gasoline- powered motor vehicles (cars and trucks) and equipment generate a large part of the raw materials for fine particles. Other sources include burning wood in residential fireplaces and wood stoves or wildfires, which also contribute to climate change in the form of black carbon.

It is important to point out that the current National Ambient Air Quality Standards (NAAQS) for ozone and particle pollution are too weak and do not sufficiently protect Americans, so the Air Quality Index likely underestimates the impacts to health of elevated levels of these pollutants. The Environmental Protection Agency (EPA) held hearings in late August and September on their proposal to maintain their inadequate NAAQS for both particle pollution and ozone. The Lung Association has advocated that the EPA follow the science and set a level no higher than 60 parts per billion in order to adequately protect human health.

### Climate Change and Health

From the direct impact of the temperature and weather changes to the special burdens these changes place on the most vulnerable communities, climate change seriously threatens our wellness – especially our lung health. The science is clear – communities across the nation are experiencing the health impacts of climate change now, which makes the commitment to both mitigation and adaptation key. Many of the sources of climate pollution – including power plants, oil and gas operations, and cars and trucks – also produce pollution that harms health at the same time, such as ozone precursors and particle pollution. The good news is that cleaning up these sources is a win-win for health.

In 2019, the American Lung Association worked with other public health, environmental health, patient advocacy, healthcare, nursing and medical organizations to release A Declaration on Climate Change and

Health. As part of this we recognize that children, seniors, pregnant women, low-income communities, communities of color, people with disabilities and people with chronic disease disproportionately bear the health impacts of climate change. The prioritization of environmental justice and equity within the working group draft reports and the specific report on this issue is significant.

The Lung Association supports policies aiming to help Connecticut residents breathe healthy air and reduce the burden of lung disease that air pollution places on our residents and our health care system. The health benefits of emissions reductions are well documented, as are the serious health risks to so many in exposure to air pollution. By moving forward on climate mitigation strategies like improving energy efficiency, increasing and diversifying our renewable portfolio and reducing a wide range of harmful emissions, we can protect public health particularly for the hundreds of thousands in our state at risk for poor health outcomes because of poor air quality.

In addition to our broader support of the concepts raised in these reports, we would like to offer a few specific comments on particular reports and sections.

#### Progress on Mitigation Strategies Draft Report

It is clear from the ideas put forth in this report that we have similar goals for Connecticut to move toward cleaner energy and transportation systems for Connecticut's residents and businesses. The American Lung Association believes that protection of lung health and a sound U.S. energy policy are compatible goals that require an emphasis on energy conservation, energy efficiency, and the transition to non-combustion renewable resources. Our overarching principles call for the implementation of effective air quality programs and standards, transitioning to a clean energy future, with a commitment to promote environmental justice.

Within the Buildings chapter, we would like to address the goal of energy efficiency funds and a potential lockbox. These goals are aligned with the American Lung Association's policy goals of significantly reducing the demand for energy by increasing the efficiency of homes and businesses. We support programs and policies to encourage consumers and utility companies to expand investment in energy efficiency and energy conservation measures to reduce air pollution emissions, to reduce household energy expenses and to stimulate new economic opportunities and job creation.

When we look at the potential for a lockbox, we recommend using very strong language to protect these funds. Unfortunately, in Connecticut we are all too familiar with seeing funds designated for one purpose being rerouted to the General Fund. We can use lessons learned from another issue integral to our mission – tobacco cessation and prevention work. The Master Settlement Funds and the Tobacco and Health Trust Fund offers a cautionary tale.

According to the most recent Tobacco and Health Trust Fund report, "since the inception of the Trust Fund, slightly over \$277 million of the Trust Fund's monies have been statutorily transferred without Board input or approval... The majority of funds have been transferred to the General Fund with the remainder transferred to other programs." This is just from what was initially deposited into the trust fund; this does not address the times that the transfer was never made.<sup>4</sup> Please ensure that ratepayer funds collected for energy efficiency are used for those programs.

Regarding the chapter on Electricity, the American Lung Association supports policies that will drive the deployment of clean, non-combustion energy. The goals establishing targets for off- shore wind,

expanding solar and the state's Renewable Portfolio Standards are all policies we support. However, the American Lung Association does not support the use of biomass burning or trash incineration for electricity production because of the dangerous emissions these processes create, and oppose their inclusion in renewable portfolio standards. One major pollutant produced from burning biomass is also one of the most dangerous: particle pollution. Burning biomass also releases carbon monoxide, nitrogen oxides (like nitrogen dioxide) and cancer-causing chemicals, including benzene and formaldehyde. While these pollutants are harmful to us all, they pose even greater health risks for millions of more vulnerable Americans, such as infants and children, older adults, individuals with respiratory or cardiovascular disease, and diabetics.

The goals to implement a shared clean energy program and to identify ways to increase local involvement in energy decision making such as targeting energy efficiency dollars based on local priorities and increasing local government ability to procure zero carbon energy underscore that these workgroups have put some real energy and focus on the equity priority; we support these suggestions.

Within the chapter on Non-energy GHG emissions, specifically methane, the Lung Association supports protective regulations and state-of-the-art pollution controls, including leakage detection and emissions monitoring, throughout the entire system during the exploration, production, transmission, transport, refining and use of oil and natural gas. Reducing methane leakage is critical in our fight against climate change. Methane is extremely effective at retaining heat, fostering the warmer temperatures that have brought us longer and hotter heat waves, increased wildfires and drought and greater risk of ground-level ozone formation.

Methane is a greenhouse gas more than 80 times more potent than carbon dioxide in the short term.

The Transportation Section within this document is significant, as it should be. The transportation sector in Connecticut generates a significant share of our greenhouse gas emissions. We simply cannot ensure clean air and a livable climate for all Americans without addressing transportation in terms of vehicle technologies, aligning transportation funds with meeting clean air and climate standards and ensuring safe, practical and affordable mobility options for all residents. This air pollution threatens the health and lives of so many of our residents, including those who are most vulnerable to harm. We support measures to reduce the air pollution caused by cars, trucks, and other mobile sources. The Lung Association recommends that the state maintain a comprehensive approach to reducing harmful transportation pollution through a hierarchical approach that includes reducing vehicle miles traveled through prioritization of active transportation (e.g. walk, bike), transit investments, and supporting the widespread transition to zero emission technologies that match with local needs so that all residents have access to the most efficient option for each trip. These strategies must remain central to Connecticut's approach to confronting climate change in an equitable, health-protective and sustainable way. Similarly, the Transportation Climate Initiative must be designed to ensure that funding is available to support the transition to more sustainable transportation choices, zero-emission infrastructure and other initiatives that support cleaner air in our most impacted communities.

With that said, all of these have opportunities to reduce emissions and improve health. In September 2020, the American Lung Association released a report entitled "The Road to Clean Air." Our report is grounded in a scenario wherein electric vehicles account for 100 percent of new passenger vehicle sales by 2040 and of heavy-duty truck sales by 2045 -- with other heavy-duty vehicle classes advancing along

the way. The report highlights what is possible if immediate actions are taken to support the transition to a zero-emission transportation sector

- and target solutions in ways that ensure all communities and people benefit, beginning today and into the future.

The report projects that Connecticut could realize a \$637 million health benefit in 2050.5 Too many communities across the United States deal with excessive doses of dangerous

pollution from highways and trucking corridors, ports and warehouses and other pollution hot spots. Low-income communities and many communities of color too often bear a disproportionate burden from transportation pollution.

Key policies recommended via our “Road to Clean Air” report include:

- The federal government must also allow states to protect their residents. State authority to adopt and implement the more protective vehicle standards established by California under the Clean Air Act must be defended and maintained, not rolled back.
- Use Clean Air Act authority to adopt the California zero-emission standards for passenger vehicles and medium- and heavy-duty trucks.
  - We strongly support Connecticut’s continued adherence to California’s more protective vehicle standards and are pleased with Connecticut’s endorsement of the 15-state Memorandum of Understanding to pursue the transition to zero emission medium and heavy duty trucks by 2050.
- Pursue fully electric public fleets and support zero-emission infrastructure including in all public buildings and garages.
- Support accelerated fleet turnover through incentive programs targeting older vehicles, consumer purchase decisions via point-of-purchase rebates and non-financial incentives.
- Ensure vehicle registration fees are structured to support electric vehicle deployment and complement —rather than counteract—consumer incentives.
- Invest in publicly available charging infrastructure along major highways and roads to ensure both personal and commercial charging opportunities exist.

In addition to the widespread transition to zero emission technologies, sustained progress toward meeting health-protective climate goals requires reducing the growth in vehicle miles traveled (VMT). As noted on page 89 of the Mitigation Strategies Document, “reducing GHG emissions in the transportation sector will be achieved in part by replacing ICE vehicles with ZEVs in all vehicle categories...Reducing VMT is equally important, especially in passenger vehicles.” The document appropriately calls for new actions to support the reductions in VMT growth at the state, regional and local levels, including on page 92, as follows:

- strategy in long-range state and regional transportation plans to reduce vehicle miles traveled and rural sprawl;
- disincentivizing sprawl to inhibit land uses that increase VMT; and

- inclusion of goals for revitalizing transit and transit ridership (a critical strategy for reducing VMT) in COVID-19 recovery plans.

Also noted in the document, there is not a clear benchmark or target in place for VMT reductions over the coming decades in Connecticut. Aligning state and regional transportation strategies toward specific targets would help maintain progress, and should be coupled with regular tracking to allow for course corrections as needed.<sup>1</sup> The benefits of healthy, active transportation strategies were recently highlighted by a multi-university evaluation of TCI investment scenarios which noted that a strong cap on emissions and a strong focus on investment in active transportation and transit could yield the most substantial health benefits, and yield the strongest results in terms of reducing disparities in air pollution exposures.<sup>6</sup>

As noted above, Connecticut has a long history of partnership with California and other states in pursuing more health-protective vehicle emissions and technology standards. The July Memorandum of Understanding between 15 states and Washington DC also sets the pathway to the transition to heavy duty zero emission technologies. As this sector moves forward, it is important to consider the opportunities for other segments of the transportation sector to also be cleaned up, including the on- and off-road freight systems. Under the freight strategies section of the Mitigation strategies, we recommend noting that the shift from trucks to rail and ports must be accompanied by corresponding upgrades to port and rail technologies as the truck fleets move toward zero emission technologies.<sup>2</sup>

1 As an example of tracking progress toward greenhouse gas reductions via changes in land use and transportation strategies, the California Air Resources Board's 2018 Progress Report on Sustainable Communities Strategies implementation found "that California is not on track to meet the greenhouse gas reductions expected under SB 375 for 2020, with emissions from statewide passenger vehicle travel per capita increasing and going in the wrong direction..." October 2018.

<https://ww2.arb.ca.gov/resources/documents/tracking-progress>

2 For example, research underway by the California Air Resources Board in the context of policies to clean up the trucking section (including the Advanced Clean Truck and Low NOx Omnibus rules adopted in 2020), indicates that future truck fleets could yield greater reductions in emissions than rail transportation. California Air Resources Board. DRAFT Truck vs. Train Emissions Analysis.

<https://ww2.arb.ca.gov/resources/fact-sheets/draft-truck-vs-train- emissions-analysis>

## Public Health and Safety

We are pleased to see continued ozone forecasting and community education included in the report. As part of work with the State Health Improvement Plan, a subgroup on Air Quality and Health was able to get a question included on the state 2018 Behavioral Risk Surveillance Survey to ask about the public's awareness of air quality and whether or not these forecasts impact individual behavior to help protect their health.<sup>7</sup> This provides important baseline data. It is important to note that it can be difficult to get a question like this on the BRFSS, but we should try to get another follow-up question included in a few years. The Lung Association works hard to increase public awareness about air quality and we are happy to help partner with state agencies and community partners on this work. Another resource to look to with this strategy could be the EPA's Air Quality Flag program. Within Connecticut, the Stratford Health Department did extensive work to create a great model for community air quality awareness and education. <http://www.townofstratford.com/health/airnow>

When it comes to the goal about airborne allergen monitoring, we know that warmer weather from climate change contributes to longer pollen seasons, more pollen and more powerful pollen. The Lung Association supports efforts to further monitor airborne allergens and to increase public awareness of the presence of these allergens and the health risks associated with them.

The one other thing that we want to comment on within this report is the recommendation to establish a Climate and Health Position at the Department of Public Health (DPH). We support this recommendation. While clearly climate change is a significant public health issue, much of this work has traditionally been housed within the Department of Energy and Environmental Protection (DEEP). DPH has a strong interest in this work but lacks the staff and resources to engage as they could. Having a bridge between the health and environment is incredibly important to ensuring proper evaluation — and prioritization — of proposed strategies based on the potential for positive or negative impacts to health.

#### Equity and Environmental Justice

The Lung Association is committed to dismantling systemic racism in public health, healthcare and pollution exposures, advancing health equity and protecting segments of the population who are particularly vulnerable including people disproportionately exposed to causal factors of disease, such as environmental exposures and social stressors, as well as those with less access to quality and affordable health care.

We support the protection of all people from the harm of air pollution, especially those who suffer disproportionate exposure from local sources of emissions. The American Lung Association recognizes that major sources of air pollution are often located near where many communities of color or families with lower income levels live and work, which means their exposure to pollutants emitted can be more immediate and harmful. The American Lung Association recognizes that, for many reasons, people in those communities also face a greater burden of lung disease, making them even more vulnerable to these pollutants.

The American Lung Association recognizes that many factors have contributed to the disproportionate levels of exposure in these communities, including missing or weak limits on emissions, poor enforcement of existing regulations, inadequate monitoring of pollutants and limited scientific research. The American Lung Association supports greater research focus on disparities in pollution burdens, the formulation, execution and enforcement of health and environmental laws and policies to address these factors, clean up contributing sources and reduce such exposures. As we transition to cleaner sources of electricity and healthier modes of transportation, disproportionately burdened communities should be prioritized for clean-up and investment.

The American Lung Association supports regular, thorough assessments of the impacts to nearby communities of sources of dangerous air pollutants, including highways, ports, industrial boilers, power plants, and other sources of air pollution. The American Lung Association supports the aggressive targeting of these sources for cleanup. The American Lung Association is working to reduce the disproportionate health burdens borne by historically marginalized, economically disadvantaged, and politically disenfranchised communities.

We should also note that emissions trading schemes can lead to disproportionate outcomes and extend the life of local pollution burdens. If, for example, a polluting facility purchases carbon pollution credits

under a trading scheme rather than cleaning up, the community nearby could continue to bear the burden of toxic air emissions, even as the facility is in compliance with overall carbon emissions standards. It is critical that trading or pricing schemes take proactive design steps to promote health equity, including by directing funds from the purchase of emissions credits to address health in communities near polluting sources, or adapting the program to require more directed reductions if unintended health impacts occur.

These reports demonstrate a commitment to equity. We applaud you and ask that this commitment remain a priority throughout the Governor's Council on Climate Change work. As you know, proactive and meaningful engagement of the communities most impacted by air pollution and climate change is critical to addressing these issues. We also encourage you to ensure a focus on reducing the cumulative impacts of exposure to multiple pollutants that many communities near polluting sources experience.

Thank you to all of the subcommittees for this comprehensive work and for your clear commitment to health equity and climate justice. We appreciate the opportunity to engage in this process and work towards the opportunity for all Americans to breathe healthy air.

Sincerely,

Ruth Canovi, MPH Director, Advocacy  
American Lung Association in Connecticut

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2 2020 State of the Air Report. American Lung Association. [www.lung.org/sota](http://www.lung.org/sota) Accessed October 20, 2020. 3 Health and Environmental Effects of Particulate Matter (PM). <https://www.epa.gov/pm-pollution/health-and-environmental-effects-particulate-matter-pm> Accessed October 19, 2020.

4 Annual Report of the Tobacco and Health Trust Fund Board of Trustees. January 2018.  
<https://portal.ct.gov/-/media/OPM/2017THTFBoardAnnualReportpdf.pdf>

5 The Road to Clean Air. Benefits of a Nationwide Transition to Electric Vehicles. American Lung Association Report. 2020. <https://www.lung.org/getmedia/99cc945c-47f2-4ba9-ba59-14c311ca332a/electric-vehicle-report.pdf>

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Research Update Preliminary Results of Five Illustrative TCI Policy Scenarios. October 2020.  
<https://cdn1.sph.harvard.edu/wp-content/uploads/sites/2343/2020/10/TRECHResearchUpdate10.20.pdf>

7 Connecticut Behavioral Risk Factor Survey. Prevalence Estimates for Risk Factors and Health Indicators. Selected Summary Tables. 2018. State of Connecticut Department of Public Health. October, 2019.  
[https://portal.ct.gov/-/media/Departments-and-Agencies/DPH/BRFSS/CTBRFSS2018\\_Summary\\_Tables.pdf](https://portal.ct.gov/-/media/Departments-and-Agencies/DPH/BRFSS/CTBRFSS2018_Summary_Tables.pdf)

## COMMENT #10

10-21-2020 Suzi Ruhl – Elevate Policy Lab, Yale School of Medicine

The Elevate Policy Lab (Elevate) at the Yale School of Medicine appreciates the opportunity to provide comments on the GC3 Working Group Draft Report on Mental Health. We firmly agree with Connecticut's commitment to enhance resiliency of the state's economic, cultural, human and natural resources to the impacts of climate change, as expressed in Governor Ned Lamont's Executive Order No. 3 (E.O. 3). Further, we commend the Connecticut Department of Energy and Environmental Protection (CT DEEP) for its leadership and commitment to this vital goal.

### Background

Elevate is a policy lab at the Yale School of Medicine that works with government partners to elevate mental health and disrupt intergenerational poverty. We aim to advance mental health as a pathway for families to achieve social and economic mobility, thereby seeing families' lives improve as a result. Elevate achieves its mission through several mechanisms. First is the federally recognized Mental Health Outreach for MotherS (MOMS) Partnership®, an evidence-based program that lowers depressive symptoms and increases family well-being in multiple arenas including economic mobility. Born out of Yale School of Medicine in 2011, MOMS brings mental health within reach of over-burdened, under-resourced mothers. Triple Bottom Line Justice (TBLJ), as a key focus of the Elevate policy agenda, involves simultaneously tackling mental health, economic, and environmental challenges facing overburdened and under-resourced populations to address the root causes of health inequities and improve outcomes. TBL Justice builds on the MOMS Partnership® model to advance behavioral wellness while supporting economic stability and environmental sustainability through an integrated policy and place-based practices methodology. TBLJ is premised on the experience that meaningful engagement of underserved, overburdened, and underrepresented individuals in environmental, economic and health decisions at the local, state and national government levels improves the health of these individuals and communities and increases the effectiveness of government policies. Elevate is applying the MOMS Partnership® model to increase the capacity of overburdened and under-resourced individuals to meaningfully engage in government decisions that affect their lives.

### Elevate Policy Lab Recommendations

Elevate commends the efforts of the GC3 Working Group Draft Report on Mental Health, including the description of mental health challenges experienced as a result of climate change and the proposed recommendation. In addition, Elevate offers the following additional recommendations.

#### Recommendation 1: Inclusive definition of vulnerable populations

**Recommended Implementation Action Description:** Across the workgroup reports, there is clear agreement that measures to identify and address climate change effects must recognize vulnerable populations. Given this recognition, it is important to establish an inclusive definition of "vulnerable populations" so that unique conditions can be addressed, and a general population approach can be avoided.

The Working Group on Public Health and Safety articulates the importance of recognizing vulnerable populations, including those with preexisting mental illness (Doherty and Clayton 2011; Sullivan et al. 2013). More specifically, the draft report provides

**Vulnerable Populations:** Special consideration is needed for specific groups of Connecticut's population who are at high risk of distress or adverse mental health outcomes following exposure to climate-related disasters. These include children, the elderly, pregnant and postpartum women, first-responders, those with pre-existing mental illness, those with low socio-economic status, and the homeless (Dodgen et al. 2016). Furthermore, those with preexisting mental illness have been identified as a population with multiple 78 vulnerabilities to climate change, in particular extreme heat (Gamble et al. 2016). This is in part due to underlying nature of their illness and that medications they are prescribed can impair the body's ability to thermoregulate.

The Working Group on Equity and Environmental Justice also highlights the need to address vulnerable populations. The draft report provides

Identifying those communities that are especially vulnerable to climate change impacts, such as childhood asthma, flooding, extreme heat, and other impacts aggravated by a lack of resources to meet basic needs. The principles of equity mandate that race, national origin, socio-economic status, religion, gender, sexuality, or other facets of identity do not impact a person's access to resources, including basic necessities such as safe shelter, water, food, heat, and light, as well as opportunities for safe employment to support oneself and one's family, equal access to community supports such as public education, public transportation, healthcare and mental health care.

In addition, the White House Hurricane Sandy Rebuilding Strategy recognizes vulnerable populations as "groups of people especially at risk to impacts of a major storm due to their location or because they are overburdened and lack resources or have less access to services." The strategy explained

**Vulnerable Populations** The Task Force understands that the affected areas include a diversity of businesses, neighborhoods, residents, and workers that may have been disproportionately vulnerable to the impacts of Hurricane Sandy due to their location, limited financial or other resources, less access to emergency services and support, or other disadvantages. Accordingly, the Task Force's Rebuilding Strategy seeks to address the needs of such "vulnerable populations," which is meant to include: low-income communities, overburdened populations, children and youth, elderly individuals, certain communities of color, households and people with limited English proficiency, immigrants, individuals with chronic medical conditions, people who are homeless or at risk of homelessness, and individuals with disabilities.

The US Global Climate Change Research Program also addressed the physical states or conditions that increase vulnerability. It emphasized that older adults, young children, pregnant women, and people with chronic health conditions or mental illness are more susceptible to harm from effects of climate change. US Global Climate Change Research Program See: 16. USGCRP, 2016: The Impacts of Climate Change on Human Health in the United States: A Scientific Assessment. Crimmins, A., J. Balbus, J.L. Gamble, C.B. Beard, J.E. Bell, D. Dodgen, R.J. Eisen, N. Fann, M.D. Hawkins, S.C. Herring, L. Jantarasami, D.M. Mills, S. Saha, M.C. Sarofim, J. Trtanj, and L. Ziska, Eds. U.S. Global Change Research Program, Washington, DC, 312 pp. <http://dx.doi.org/10.7930/J0R49NQX>

Finally, the State of California Governor's Office of Planning and Research pursuant to Executive Order B-30-15 identified factors that contribute to vulnerability of people and communities to the impacts of climate change:

- Existing inequities, institutionalized racism, or exclusion
- Poor environmental conditions, access to services, or living conditions
- Physical states or conditions that increase vulnerability
- Lack of investment and opportunities

See: [https://www.opr.ca.gov/docs/20180313-Building\\_a\\_Resilient\\_CA.pdf](https://www.opr.ca.gov/docs/20180313-Building_a_Resilient_CA.pdf)

Accordingly, Elevate offers the following definition of vulnerable populations that includes populations identified by both the Working Group on Public Health and Safety and the Working Group on Equity and Environmental Justice:

Vulnerable populations are “groups of people especially at risk to impacts of climate change due to their location or because they are overburdened and lack resources or have less access to services. These populations include low-income communities, overburdened populations, children and youth, pregnant women, elderly individuals, certain communities of color, households and people with limited English proficiency, immigrants, individuals with chronic medical conditions, people who are homeless or at risk of homelessness, and individuals with disabilities. In addition, specific groups of Connecticut’s population who are at high risk of distress or adverse mental health outcomes following exposure to climate-related disasters include children, the elderly, pregnant and postpartum women, first-responders, those with pre-existing mental illnesses, those with low socio-economic status, and the homeless, including those with pre-existing mental health conditions.

Recommendation 2: Establish a pilot program to study physical and mental health benefits to babies and mothers to provide a holistic approach to pre and post-natal care in order to increase resiliency in the face of natural and man-made disasters.

#### Recommended Implementation Action Description

The proposed pilot program, with a specific focus on prevention and mental health, uses research data to demonstrate the impact of providing basic needs, such as diapers on the mental health of mothers and the overall health and well-being of infants and toddlers. The proposed pilot program would be administered by the CT Department of Social Services (DSS) in collaboration with the CT Department of Energy and Environmental Protection (DEEP). As a direct benefit, it would provide diapers and other resiliency related capacity for babies. Peer-reviewed, published literature indicates that diaper need is associated with maternal depression, diaper dermatitis (diaper rash) and that the provision of diapers in pediatric settings increases attendance to pediatric well childcare visits. Outcomes to be achieved by addressing diaper need include a reduction in diaper dermatitis, urinary tract infections, maternal depressive symptoms, behavioral healthcare utilization for mother, ED visits for mother and child, immunization rates, and pediatric well child care utilization. DEEP’s role in this pilot would be to support the pilot through DEEP leadership, sharing administrative data and offering consultation and advisement on the potential to scale should the findings be positive. This model of mental health promotion and basic needs could ultimately increase the resilience of families who are most at-risk of the impacts of

climate change. Families would build social supports, social networks and social capital through the mental health and basic needs intervention, position families to better face the stress and adversity associated with climate change and man-made and natural disasters. The intervention in this pilot could easily be scaled and replicated by DSS and DEEP to communities in Ct disproportionately burdened by climate change.

In addition, the pilot would establish a demonstration program for a bundled payment (“maternity or pediatric bundle”) to support effective interventions that are proven to reduce maternal depression and increase the health and well-being of babies. This payment could reduce Medicaid costs through reductions in diaper dermatitis and urinary tract infections for the child and reductions in acute maternal mental health visits.

Phase One would implement the pilot in New Haven, CT by providing diapers for all births at Yale New Haven Hospital for babies receiving care at the Yale Pediatric Primary Care Center from January 2021-June 2021. Phase Two would establish a similar pilot in Bridgeport, adapting for lessons learned in Phase One.

As further support for this pilot program, Connecticut has been a leader on this issue. In 2007, the state of CT was the first state to have a line item in the budget for a diaper bank. The research connecting diaper need to maternal depression was conducted in CT. The first ever economic analysis of a diaper bank was conducted on The Diaper Bank of Connecticut. In 2019, the CT state budget included funding for The Diaper Bank of Connecticut to provide diaper assistance for TANF eligible families in need. Connecticut would be innovative in this pilot, using research to connect the provision of diapers to improved health outcomes for babies and mothers, as a means of advancing climate resiliency for underserved and overburdened mothers and babies.

Accordingly, Elevate Policy Lab recommends the establishment of a pilot program on physical and mental health benefits to babies and mothers in order to increase resiliency in the face of climate change and natural and man-made disasters.

Suzi Ruhl – Elevate Policy Lab, Yale School of Medicine

Recommendation 3: Cross Reference Relevant Findings and Support Recommendations on Mental Health proposed in the Equity & Environmental Justice Draft Report September 21, 2020.

Recommended Implementation Action Description:

The Equity and Environmental Justice Working Group recognized the discussion of mental health in the draft Public Health and Safety Report, finding it to be “critical.” It also made the following observation and recommendation:

The mental health section discusses service needs for the chronically mentally ill. This is good; however, it should add a recommendation for planning for post-disaster, culturally and linguistically appropriate mental health service structures. These needs are often underestimated in disaster plans.

It is also critical to account for the recognition of mental health in Presidential Policy Directive -8, which provides for the federal National Disaster Recovery Framework. The National Disaster Recovery Framework highlights Psychological and Emotional Recovery as one of eight principles that when put

into practice, maximize the opportunity for achieving recovery success, support survivor needs and build resilience.

Accordingly, Elevate Policy Lab supports the inclusion of the Equity and Environmental Justice recommendation regarding mental health and disaster planning. In addition, we reinforce the need to address service needs throughout the full continuum of natural disaster response, recovery and preparedness. The following language can be incorporated as a recommendation:

In natural disaster response, recovery and preparedness, state and local governments should plan for and provide culturally and linguistically appropriate mental health service structures.

Ultimately, Elevate is grateful for the opportunity to offer our expertise and experience on intergenerational maternal mental health and Triple Bottom Line Justice as a pathway to enhance resiliency of the state's economic, cultural, human and natural resources to the impacts of climate change.

Sincerely,

B. Suzi Ruhl, JD, MPH, Director of Policy

Megan Smith, DrPH, MPH, Principal Investigator and Founder

Hilary Hahn, EdM, MPH, Executive Director

Elevate Policy Lab

Yale School of Medicine

#### COMMENT #11

10-21-2020 – Walker Holmes - The Trust for Public Land

The Governor's Council on Climate Change (GC3) working group reports are an impressive compilation of research, strategy, and goals that will enhance Connecticut's climate resilience – the positive co-benefits of this work are sure to reverberate in our state's economy, health, natural resources, community cohesion, and quality of life. The Trust for Public Land thanks staff of CT DEEP and members of all working groups for the collaborative effort to produce these reports. We are grateful for the opportunity to provide comment. For questions and followup, please contact Walker Holmes, CT State Director for The Trust for Public Land at [walker.holmes@tpl.org](mailto:walker.holmes@tpl.org).

Walker Holmes - The Trust for Public Land

Working and Natural Lands: Forests Sub-Group Draft Report

- The report does a wonderful job of touching on the important factors in this topic area, including co-benefits, equity, cross-sector partnerships, and more. Kudos to the working group.
- Comment on Establishing a Forest Carbon Baseline for Connecticut (page 48). The Forests Sub-Group Draft Report recognizes the opportunities and challenges of accounting for carbon fluxes resulting from land use changes. The draft report covers opportunities for state-wide accounting; recent advancements in local and regional accounting practices could be added. Last summer, "ICLEI–Local Governments for Sustainability USA (ICLEI) unveiled new guidance that enables U.S. cities and counties to include forests and trees within their greenhouse gas (GHG) emissions accounting, a key activity to ensure representation of local forestry and land use consideration in climate action planning." Appendix

J to the “U.S. Community Protocol for Accounting and Reporting of Greenhouse Gas Emissions will help fill a critical gap in enabling communities to develop climate action related to land management at a local level.” (<https://icleiusa.org/communities-now-better-equipped-to-include-trees-in-climate-action-planning/>). If the working group deems it appropriate, this report could recommend that municipalities with climate action plans update their plans to incorporate forests as outlined in the ICLEI protocol, and that new climate action plans include this new forest protocol.

- For consideration re: mapping/GIS: The Forest Carbon Map (<https://web.tplgis.org/carbonmap/>) is a publicly available tool developed by the Trust for Public Land and American Forests. The tool was designed to answer three key questions: where are the existing forest carbon stocks, what are the threats to the carbon stocks, and where can conservation provide the most co-benefits. It includes county-level summaries and provides context on how much forest carbon is stored on private vs public land as well as the value of those carbon stocks. Originally created to guide county and state policy, this resource is constantly being improved and could be a valuable tool for decision makers.

Walker Holmes - The Trust for Public Land

Financing Adaptation and Resilience

General Comments:

- Kudos to the working group for a thorough analysis of funding for nature- based solutions/natural climate solutions through an equity lens. The analysis of the funding mechanisms includes implications for underserved communities; it is important to remember that existing funding mechanisms can be amended to become more equitable. For example, the Denver CO climate measure being considered this November is a sales tax, a very regressive option. For this reason the program, and even the ballot language, ensures that 50% of the revenues generated will be used for investments in traditionally underserved communities, i.e., those facing the largest challenges from a changing climate).
- The Trust for Public Land believes in three key ingredients for funding mechanisms to be successful: elected official support; demonstrable need/threat/benefit for revenue proposed; on-the-ground coalition of advocates. We strongly recommend robust community outreach as well as polling, to ensure that the need is fully understood and that mechanisms will generate enough funding to fit the need.
- Nature-based solutions/natural climate solutions are about more than mitigating the effects of climate chance and protecting ecosystems. Natural climate solutions provide critical co-benefits that are not currently emphasized in this draft report: thriving communities, health, and wellness. With natural climate solutions, we can provide close-to home parks for Connecticut residents who currently have no park access. We can create green schoolyards that offer the triple benefits of outdoor play, environmental education, and green infrastructure. And we can create opportunities for all people to experience the physical and mental health benefits that nature provides.
- We concur with the importance of understanding the costs and benefits of natural climate solutions, as well as the return on investment and associated risks; we suggest that conservation economics analyses be sought to assist with this information gap.

Comments on Funding Mechanisms:

- In lieu of a detailed commentary on all funding mechanisms, we offer select comments on a handful of the mechanisms considered in the report based on our experience with similar mechanisms in other states; we look forward to additional consideration and discussion.
- Wastewater Use Fee: Large potential, as a small fee can generate large dollar amounts.
- Carbon tax: This mechanism has great potential and we hope to see more of these implemented across the country. The concept tends to make sense to voters, due to its similarity to the “polluters pay” principle.
- Community Investment Act: Increasing funding for this mechanism has huge upside. The CIA has funded incredible work in Connecticut since its inception; current funding levels are not commensurate with the ambitious goals and challenges at play in present times.
- TIFs: We echo this concern from the report: “A challenge here is that solely relying on TIF Districts for resilience improvements means that wealthy areas will be the only neighborhoods to see an increase in resilience.”
- Stormwater Authorities: A critical funding source for green infrastructure implementation in other geographies, including parks and green schoolyards (both of which have substantial co-benefits).
- Create an Environmental Infrastructure Bank: We support this idea. CT Green Bank has achieved much-deserved notoriety in green energy. Expanding its purview has great potential. For example, the Rhode Island Infrastructure Bank’s broad infrastructure mandate has led to significant progress in natural climate solutions.
- Green bonds: A go-to option, depending on electorate and debt service.
- State Revolving Fund: Fully funding the 10% state revolving loan funds for green infrastructure has great benefit. Vermont recently reworked its State Revolving Fund program with the result that more funding becomes available for climate-related strategies, specifically conservation. Maine and New Hampshire are also in the process.
- Incentivize CT’s insurance industry to promote and grow the catastrophe bond market and pilot a resilience bond program: A concept worthy of further study.
- Revolving loan fund for 1-6 Family Affordable Housing: A mechanism with notable equity strength. Associated additional urban green spaces would have substantial co-benefits.
- Regarding next steps: The Trust for Public Land looks forward to participating in further discussion and analysis of financing mechanisms. For background, The Trust for Public Land helps elected officials, government executives, legislatures, land trusts, and public agencies research and evaluate conservation finance options and design ballot and legislative measures that reflect public priorities. Since 1996, we’ve helped pass over 572 measures—82 percent of those we’ve worked on—that generated \$80 billion for parks and conservation. The following online tools may be useful references:
  - o Conservation Almanac: a website for discovering, analyzing, and mapping the results of federal, state, and local land conservation funding. <http://conservationalmanac.org/>

- o Landvote®: a searchable online database of all state and local conservation ballot measures since 1988. <http://landvote.org>

Walker Holmes - The Trust for Public Land

#### Public Health and Safety

- Kudos to this working group as well for a thoroughly researched draft report that considers a broad range of climate-related public health and safety concerns. If helpful, we offer the following research and tools:
  - The Trust for Public Land's research on urban heat islands confirms that communities with nearby parks can be dramatically cooler than those in so-called "park deserts." Our analysis of 14,000 cities and towns shows that nationwide, areas within a 10-minute walk of a park are as much as 6 degrees cooler than areas beyond that range. And yet, not everyone has equal access to the kinds of parks that lower temperatures (and in current times, that allow for safe social distancing). Our data reveals that across the United States, parks serving primarily nonwhite populations are half the size of parks that serve majority white populations and nearly five times more crowded. In addition, parks serving majority low-income households are, on average, four times smaller and nearly four times more crowded than parks that serve majority high-income households. For more information, see <https://www.tpl.org/the-heat-is-on>.
  - A data source that might help: The Trust for Public Land's ParkServe mapping tool measures park access in cities and towns nationwide and includes a first-of-its-kind nationwide dataset on urban heat islands, which we developed using Landsat 8 satellite data and processed in partnership with Descartes Labs. ParkServe shows optimized points in urban areas where creating new green spaces will address both park need and extreme heat. This free platform has the potential to increase awareness of heat islands and to drive local decision-making to implement urban greening projects to protect those who are most vulnerable. <https://www.tpl.org/parkserve>
  - When GC3 considers mapping tools, we would be pleased to participate in discussion of options and needs, based on our experience creating climate-related GIS decision support tools in other geographies. These tools foster effective collaboration and science-based prioritization for natural climate solutions. The tools can consider climate risks within and across a geography and identify priority areas for multi-benefit green infrastructure investment, based on environmental and health threats and the location of vulnerable populations. For example, the Healthy Connected Chattanooga tool: [https://web.tplgis.org/chattanooga\\_csc/](https://web.tplgis.org/chattanooga_csc/).

Walker Holmes - The Trust for Public Land

#### Equity and Environmental Justice

- We applaud the sincere commitment of the Equity and Environmental Justice working group in developing this draft report and in the clear effort to weave equity and environmental justice into all aspects of the GC3, such that equity is in the fabric of the process. The importance of this approach cannot be overemphasized. The Trust for Public Land looks forward to participating meaningfully and authentically in the implementation of GC3 equity and environmental justice goals.

- Please also see comment in Financing Adaptation and Resilience, above, on equity considerations in financing mechanisms.
- Please also see comments in Public Health and Safety, above, on urban heat island, vulnerable communities, and GIS tool development.

#### COMMENT #12

**10-21-2020 - Li <[lua.dwr@gmail.com](mailto:lua.dwr@gmail.com)>**

1. Working and Natural Lands
  1. Agriculture
    1. More and deeper changes to education is required than technical assistance provided by dedicated expert staff, restorative land practices are necessary. Ensure indigenous staff and require indigenous land care training.
    2. Livestock farmers could be incentivized to price up meat and dairy.
    3. Alternative solutions like seaweed feed for livestock would greatly reduce methane emissions.
    4. State-wide composting mandate must be issued along with public education tools, with returns given to farmers.
    5. More than just pollinators programs, we need to phase out pesticide use for insect health and to protect delicate ecosystems,
  2. Forests
    1. A focus on heat-resilient trees for research.
    3. Rivers
      1. Investment in carbon sinks underwater, kelp growth, polyculture underwater farming would be great additions!
2. Infrastructure
  1. Transportation:
    1. The recommendations offered are great for the purposes of resiliency, but don't offer much in the way of mitigation
    2. Transportation makes up nearly 40% of CT's GHG emissions, and most of this comes from passenger vehicles and light duty cars.

3. We can either encourage the purchase of electric/low-emission vehicles, but this raises an equity question because these are typically prohibitively expensive
4. OR we can encourage people to drive less
5. With COVID, there has been a rise in biking and walking...this moment needs to be seized! There should be a strong push to encourage active transportation as an actual form of transportation rather than just a leisurely activity, and this can be done by rapid implementation of bicycle and pedestrian infrastructure.
6. More funding needs to go towards electrifying CT's transit fleet, expanding service, and making transit service more connected, less confusing, and more seamless across the state to encourage ridership (i.e. touchless fare, single transit pass for all services, including micromobility, etc.)

## 2. Land Use & Buildings

1. CT is facing a critical shortage of affordable housing
2. CT must implement a Green New Deal for Public Housing program
  1. LUB-8 starts to address this, but a GND for public housing would more comprehensively address both the need for upgrading existing low-income housing, and making sure more affordable housing is built throughout the state that is efficient

### **Li <lua.dwr@gmail.com**

4. Equity and Environmental Justice
  1. Appreciated Sena's point about carbon pricing exacerbating impacts on LMI communities
  2. Integrating mutual aid training and climate-based info sessions, wildlife integration into LMI communities
  3. Focus on trees and regrowth in LMI communities would be wonderful.
  4. Treating CC as a public health crisis in LMI communities and requiring information disseminated about new infrastructure projects to have a public health focus

## **COMMENT #13**

10-21-2020 - Elizabeth Gara, Connecticut Water Works Association

The Connecticut Water Works Association (CWWA), which represents municipal, private and regional water utilities, appreciates the opportunity to comment on the draft recommendations of the Governor's Council on Climate Change (GC3).

Connecticut's water utilities are committed to protecting the public health and safety of their customers by ensuring the continued availability of safe, high quality public water supplies at a reasonable cost. In addition to complying with extensive state and federal laws and regulations, water utilities are

proactively responding to the impact of climate change on water systems and water quality as well as the need for greater resiliency due to more severe storm events.

CWWA respectfully submits the following comments for your consideration:

## INFRASTRUCTURE INVESTMENT

GC3 Recommendation:

- Identify and prioritize funding for critical infrastructure (UI-10)

A reliable water infrastructure that delivers a safe supply of water to residents and businesses is critical to the public health and safety of our communities. Investing in infrastructure replacement allows water companies to meet the needs of current customers while protecting systems and resources for future generations. It also improves water quality, strengthens system resiliency and reliability and helps preserve precious water resources by minimizing breaks and leaks in aging distribution systems.

In addition, water companies must invest in infrastructure to comply with new and pending state and federal regulatory requirements, including revisions to the Lead and Copper Rule, addressing emerging contaminants, such as PFAS and upgrading dams and systems to comply with the state's stream flow regulations.

As Connecticut utilities' investments are reflected in customer rates, it is important to have funding mechanisms in place to assist water companies in funding infrastructure projects. Connecticut's Drinking Water State Revolving Fund (DWSRF) administered by the state Department of Public Health Drinking Water Division relies on federal funds to assist water companies in financing drinking water infrastructure projects. In addition, the Clean Water Fund (CWF), administered by the state Department of Energy & Environmental Protection, provides financial assistance to municipalities for projects addressing wastewater needs.

The importance of maintaining grant/loan forgiveness as a component of DWSRF and CWF with availability for all Connecticut utilities regardless of form of ownership, must also be acknowledged. Over the last decade the grant portion of DWSRF projects has frequently been reduced to ten percent or less, which reduces investment in infrastructure across water industry and makes less funding available for the investments outlined in this report.

Additionally, DWSRF funding has previously excluded funding for work on water supply dams. The increase in rainfall intensity and flooding may require the upgrade of water supply dams to withstand flooding and a state funding mechanism would help to complete these upgrades and maintain the safety of drinking water reservoirs. CWWA also supports efforts to ensure that DWSRF or other funding is available to support interconnections.

In addition, CWWA supports the creation of an Infrastructure Bank to fund infrastructure improvements, including projects related to water supply dams, well fields, water treatment plants, distribution systems pumping stations and storage tanks, wastewater treatment plants, collections systems and pumping stations, environmental infrastructure, green technology, and photovoltaic facilities, which are of particular importance to public water suppliers.

## WATER SUPPLY AND WATER QUALITY

### GC3 Recommendation:

- Update Safe Daily Yield Calculations and assess current drinking water quality measures/testing to understand and address climate change impact.

Currently, water companies serving more than 1,000 customers are required to develop comprehensive water supply plans, which are submitted to the state Department of Public Health and updated on a regular basis. The plans are reviewed by the state Department of Public Health to ensure the adequacy of a system's safe yield (the amount of water needed to meet the current public health and safety needs of customers) and margin of safety (supplies sufficient to meet current and future demands). This, in addition to other laws and regulations, ensures that a water company has sufficient public water supplies to meet the current and future needs of its customers.

Water companies are required to follow safe yield methodologies defined in regulations administered by the Department of Public Health. Although climate change is a critical factor to take into account, historical hydrological data is and will continue to be relied upon for modeling safe yield. Given the potential impact on available public water supplies, any changes in the data and assumptions used to calculate safe daily yield must be subject to expert review and modeling to ensure reasonable accuracy in estimating the adequacy of water supplies necessary to meet public health and safety needs. In addition, regulators must consider how any changes in safe daily yield calculations in the context of how it may affect the need for development of additional water supply sources and currently required stream flow releases.

## INTERCONNECTIONS

### GC3 Recommendations:

- Develop emergency interconnections between public water suppliers to ensure that multiple sources and interconnections are available for mutually beneficial sharing of water during emergencies.
- Identify and incentivize construction of high-priority water supply interconnections to improve resiliency (UI-6).

CWWA supports efforts to provide for redundancies in water supplies by developing emergency interconnections and constructing water supply interconnections, which are critical to addressing potential water supply disruptions and environmental concerns. CWWA notes however that such interconnections are subject to regulatory review, including provisions under the Water Diversion Policy Act, and further recommends that the report calls for streamlining the process for approving interconnections, diversion permits and new water supply sources.

The GC3 report acknowledges the three regional Water Utility Coordinating Committees (WUCCs) in its recommendation and cites the Coordinated Water System Plan developed through the WUCC process, but it does not include the WUCCs in the Implementation Entities. CWWA recommends that the WUCCs be added to this category.

## DROUGHT MANAGEMENT & RESPONSE

### GC3 Recommendations:

- Update planning guidelines, drought triggers and drought response protocols at least once per decade
- Develop water conservation measures & communication guidelines to manage droughts

Connecticut's current drought situation underscores how vital drought management and response activities are to protecting the availability and reliability of public water supplies to meet the state's public health and safety demands. As precipitation levels continue to fall below normal and climate conditions change, additional stress is being placed on our water systems.

CWWA supports the GC3 recommendations to 1) update planning guidelines, drought triggers, and drought response protocols and 2) develop water conservation measures and communication guidelines to manage droughts.

Connecticut's Interagency Drought Work Group updated the Drought Management Plan in 2018 to further improve the coordination and enforcement of drought management and response activities. The updated plan places a greater emphasis on the consideration of regional differences in drought status. The plan also establishes a new initial drought stage which ensures that state, regional, and local officials and water utilities are alerted earlier to worsening drought conditions, which will better position them to respond.

Typically, there is significant variability in the types of drought and the relative severity of the drought experienced in different regions of the state and in different areas served by water utilities. As such, drought management and response activities must be flexible and adjusted to address local conditions and circumstances.

In addition to the state's Drought Management and Response Plan, Connecticut's public water suppliers have long been required to develop comprehensive drought management plans as part of their water supply plans. The plans reference the various drought stages and the water use restrictions that are triggered by each stage, including a 20% reduction in water use during the drought warning stage.

Connecticut's ongoing drought situation has highlighted the need for the state and municipalities to strengthen mechanisms for enforcing water use restrictions during periods of drought and other water supply emergencies. Water use restrictions on non-essential uses, such as lawn watering, car washing and filling up swimming pools, are in large part related to seasonal residential use and can have a dramatic impact on reducing water consumption without affecting essential uses or disrupting businesses that rely on a stable supply of water in their operations or processes.

However, enforcing water use restrictions on the local level has posed significant challenges. Although the state has developed a model ordinance to assist municipalities in enforcing water restrictions, very few municipalities have adopted the ordinance, which can involve a time-consuming and costly process.

CWWA supports efforts to ensure that public outreach and/or water use restrictions are effectively implemented at the local level, such as drought communication plans or authorizing municipalities to enforce water use restrictions consistent with the water utility's drought management and response plan. CWWA also supports efforts to continue to encourage and promote public awareness regarding water conservation measures.

## RESILIENCY: SOURCE WATER PROTECTION AND WATERSHED PROTECTION

### GC3 Recommendations:

- Use source water protection and the Drinking Water Quality Management Plans to encourage resiliency and support investment in watershed protection.
- Identify and improve Community Water System wells that are located within flood zone to increase resilience and reduce risk of flooding.
- Incorporate resiliency into the consideration of new laws, regulations, and policies and promote greater education of public water suppliers about the importance of resiliency.
- Require that all utility sectors be subject to statutory and policy-based directives that require consideration of all projected climate change impacts in their planning.

CWWA supports efforts to improve system resiliency and assist water utilities in incorporating climate change into planning, updating the sanitary survey resiliency metric, and providing more funding to support source water protection. In addition, promoting the conservation and protection of watershed and aquifer protection lands can protect the quality of water supplies while providing other benefits for Connecticut residents, including vulnerable populations.

Connecticut's water utilities have taken several important steps in addressing the need for greater resiliency, including:

- Developing more resilient water supply sources and resiliency solutions, such as hardening existing infrastructure;
- Maintaining redundant power supplies, such as emergency generators; and
- Providing for redundancies in water supplies, such as interconnections and back up wells.

Given the continued changes with the data and science, we have concerns about the practical implementation and would seek clarification on the recommendation that would require consideration of all projected climate change impacts in their planning. Utilities will make all reasonable efforts but cannot be expected to reflect 'all' projected impacts.

## SOLAR INSTALLATIONS – WATERSHED LANDS

CWWA agrees with the concerns raised by the GC3 Forest Subgroup regarding the placement of solar energy installations on non-water company owned public water supply watershed lands.

The discussion was prompted by a 1.9 megawatt solar project proposed by a private entity within the Regional Water Authority's (RWA's) Lake Whitney watershed that would clear-cut 12 acres of mature forest adjacent to land preserved by the RWA for source water protection. The developer has submitted a petition to the CT Siting Council (CSC) seeking a declaratory ruling that a certificate for environmental compatibility and public need is not required. The Town of Hamden is opposing the project and the RWA has filed a Motion of Intervention with the CSC. Evidentiary and public hearings are scheduled for November 17.

CWWA supports the recommendation in the draft report which strongly discourages conversion of forest for the purpose of solar projects. Projects on water company-owned public water supply watershed lands require a Water Company Lands Permit from the state Department of Public Health to ensure that activities do not compromise water quality and quantity. However, no such approval is required for development activities by non-water company landowners.

## ENERGY EFFICIENCY

### GC3 Recommendation:

- Develop an energy audit program for water and wastewater systems to increase energy efficiency and reduce greenhouse gas emissions across the water industry

Water treatment and distribution systems are highly energy intensive inasmuch as energy is embedded in all stages of the water supply and treatment cycle: pumping, treatment, distribution, recycling. Recognizing that energy efficiency programs are critical to controlling costs and promoting water conservation, many water companies are incorporating renewable energy technologies into their operations, including solar technology, electric vehicles, wind power applications, energy efficient lighting, and other energy efficient programs.

Given the energy intensive nature of water distribution and treatment processes, CWWA recommends that the report expands upon this recommendation to assist water utilities in improving energy efficiency and reducing greenhouse gas emissions ensuring they have access to available programs and tools which support rate recovery and the financial viability of investments in alternative energy supplies

To achieve this goal, CWWA supports efforts to expand the state's Virtual Net Metering program to include private and regional water utilities and to increase the cap on net metering. Under current law, although municipal water and sewer departments are eligible to utilize virtual net metering to share the billing credit among their electric accounts, regional water authorities, metropolitan corporations and private water companies are not. Given the considerable benefits to the state, the environment and water utility customers in reducing energy costs and consumption, providing water system reliability and resiliency by developing renewable energy sources, authorizing all water utilities to utilize virtual net metering is an important public policy goal.

## CYANOBACTERIA ALGAL BLOOMS

### GC3 Recommendation:

- Track harmful or potentially harmful cyanobacteria algal bloom data and provide technical assistance to community water suppliers to address and prevent these events.

Cyanobacterial blooms are an increasing concern for water utilities because they can contaminate drinking water reservoirs by spreading from lakes and ponds located upstream. Fortunately, water utilities can utilize a variety of successful reservoir management approaches for the reduction, avoidance, or elimination of Cyanobacterial blooms.

The American Water Works Association and the Water Research Foundation published a "Utility Manager's Guide to Cyanotoxins", which includes a self-assessment tool to help utility operators understand whether they are prepared for a Cyanotoxin event. Utilities can also rely on early warning systems to: 1) identify early indicators, such as pH, water temperature, Secchi disk depth,

location/extent of thermocline, turbidity, phycocyanin fluorescence, and microscopic examinations; 2) define trigger levels for increased monitoring; and 3) identify action thresholds that tie source water monitoring to operational decisions. There are also in-plant treatment options available, including intracellular and extracellular Cyanotoxins removal.

CWWA agrees that technical assistance to community water suppliers to address and prevent these events is essential.

#### VULNERABLE UTILITY FACILITIES

GC3 Recommendation:

- Inventory and geo-locate vulnerable utility facilities and their service areas.

Connecticut's water utilities are required under federal law to develop and update vulnerability assessments to identify potential concerns with critical facilities. Recognizing the sensitive nature of information regarding vulnerable utility facilities, however, such information is protected from public disclosure. CWWA is concerned that this recommendation appears to promote sharing of such information which could compromise efforts to protect critical water utility infrastructure.

Thank you for the opportunity to comment on the draft reports. CWWA is continuing to review the draft reports and recommendations and will provide comments accordingly.

#### Comment #14

**Provided by:** Mr. Thomas Kaput 1051 Copper Hill Rd West Suffield, CT 06093-2906  
[thomaskaput@yahoo.com](mailto:thomaskaput@yahoo.com)

**Comment:** Connecticut has ambitious climate targets, and I support our state's goals of reducing greenhouse gas emissions and planning for a resilient and equitable future. The draft reports of the Governor's Council on Climate Change work groups are an important step in achieving those goals.

I particularly support these recommendations, and urge their inclusion in the final reports:

- Strengthen alignment between the state's decision-making and its greenhouse gas reduction goals. All regulatory decisions should be evaluated for consistency with meeting Global Warming Solutions Act targets.
- Move climate adaptation and resiliency measures—like nature-based solutions, forest and wetland protection, urban green infrastructure and tree planting, and making low/moderate income housing energy efficient and healthy—from demonstration project scale to widespread adoption and protection.
- Support robust, equitable state funding and financing (leveraged and matched by federal and local sources) for emissions reduction and adaptation programs. This is a large (\$150-600 million/year) investment. Promising sources include:

- a) adopting the Transportation & Climate Initiative (up to \$250 m/yr) and increasing the petroleum gross profits tax (~\$100 m/yr). Connecticut can help ensure robust TCI implementation that drives down emissions while reinvesting auction proceeds in other high-impact and equitable programs;
- b) increasing or re-directing state bonding (up to \$70 m/yr);
- c) adopting the Maryland “flush tax” model (up to \$75 m/yr).
- Reduce stormwater pollution and flooding, and help municipalities afford green infrastructure and resiliency investments, by passing statewide enabling legislation for stormwater authorities.
- Target future building projects to already-developed areas, and prioritize the conservation and preservation of naturally- resilient coastal marsh, dunes, and forests.
- Develop and fund a community engagement strategy to inform the 2021 GC3 process and implementation, including grants for community-based NGOs partners and ensuring environmental justice perspectives are integral to the process.

**The reports could be made even stronger. Please consider these additions and modifications to build the ambitious climate mitigation, resilience, and justice plan Connecticut needs:**

- Emphasize the importance and urgency of strong climate mitigation action, by:
  - a) highlighting the current and projected impacts of climate change in Connecticut, including health and economic impacts;
  - b) identifying the greenhouse gas reduction potential of suggested projects;
  - c) prioritizing, among the many valuable ideas in the reports, the highest-impact policies that will be most effective in driving down emissions and transitioning to a carbon-free economy.
- Eliminate, not just “phase down,” biomass as an eligible resource in the Renewable Portfolio Standard (RPS). If we are to achieve our climate goals, we can’t keep subsidizing dirty energy sources.
- Add dams to the proposed statewide GIS database of culverts, flood gates, tide gates, and other water control structures, and create a dynamic list that prioritizes structures for replacement, removal, and/or modification—including identifying dams that are vulnerable to our changing climate, and ensuring culverts can handle 100-year floods and allow migratory fish to pass.
- Encourage municipalities to adopt green infrastructure as a first-choice solution to flooding and stormwater pollution.

Together, this suite of policies can reduce Connecticut’s contribution to climate change and help our region adapt to the changes that are already occurring—while protecting public health, generating good jobs, and protecting vulnerable communities from storms, flooding, and air pollution.

**Provided by:** Mr. Thomas Kaput 1051 Copper Hill Rd West Suffield, CT 06093-2906  
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### Comment #15

**Provided by:** Dario Del Puppo, Professor, Language & Culture Studies Trinity College, Hartford, CT 06106 **Comment:** As you are well aware, only 1% of CT's land is "protected". We need to increase that as recommended by the Governor's Council on Climate Change. Every day when I check the weather report online, I look to see what the air quality is like in CT and, most of the time, it is "moderate". In other words, we've chosen to live with "moderate" air quality, not "good" or "great". Consistent exposure to pollutants has long term devastating effects on our health, the quality of life, but also on the economy. Can it get better? Only if the state acts now, quickly and boldly.

By increasing the amount of "protected" lands in CT, we will help purify the air and also create spaces that improve our mental and physical wellbeing.