

memo

To: Katie Dykes, Commissioner CT DEEP and Chair, Governor's Council on Climate Change
Members Governor's Council on Climate Change

From: Audubon Connecticut, Leslie Kane, Managing Director and Robert LaFrance, Director of Policy
Connecticut Association of Conservation Districts, Denise Savageau, President
Connecticut Forest & Park Association, Eric Hammerling, Executive Director
Connecticut Land Conservation Council, Amy Blaymore Paterson, Executive Director
Rivers Alliance of Connecticut, Alicea Charamut, Executive Director
Working Lands Alliance: a project of American Farmland Trust, Kip Kolesinskas, Co-Chair and
Chelsea Gazillo, Director

Date: January 6, 2021

Re: Comment on the Working and Natural Lands Section of the DRAFT **Phase 1 Near-Term
Actions Report of the GC3, *Taking Action on Climate Change and Building a More Resilient
Connecticut for All***

Thank you for the opportunity to comment on the Phase 1 Near-Term Actions Report of the GC3. We recognize both the importance and the enormity of the work that the GC3 has begun and the additional challenges posed by the pandemic on this effort. As members of Connecticut's environmental community, we were pleased that the GC3 included a working group on Working and Natural Lands and were honored to serve both as leaders and participants on the various subgroups.

The Working and Natural Lands (WNL) Working Group was appropriately recognized as a cross-over group with elements of climate mitigation as well as adaptation/resiliency reflected in many of its recommendations. Connecticut is fortunate to have a rich and diverse natural history that provides numerous ecosystem services that are critical to maintain as we move towards a more sustainable future. Our working and natural lands face many challenges, including impacts from climate change but also pressure from development and other human impacts.

Protecting and enhancing our existing natural resources is low-hanging fruit full of best management practices available to resource managers. Protecting our forests, including urban forests, is the first step to provide a clean and abundant water supply during drought and providing relief from extreme heat events. Maintaining our supply of prime agricultural land provides a secure local food supply and reduces impacts of transporting foods from afar. Safeguarding wetlands provides nature-based flood control, vector disease control, and is critical to maintaining our biodiversity. Caring for our rivers also provides for clean water, diverse ecosystems, a boost to local economies, and is critical to the health of Long Island Sound. In addition, our soils, forests, and wetlands are important carbon sinks with the potential to continue to store and sequester carbon when effectively managed as intact ecosystems.

Given the importance of our working and natural lands, we have reviewed the near-term actions of this WNL section. Conscious of your short timeframe for considering recommendations, we are mostly providing specific language changes to the WNL section to clarify, support, and strengthen the existing actions. The following edited section is provided for your consideration, and we thank you for all of your hard work and leadership through the GC3.

Working and Natural Lands

24. Identify and adopt usable models to reliably monitor, report on, and value carbon sinks as well as ecosystem services provided by working and natural lands relating to climate change mitigation and adaptation/resiliency including, but not limited to, models developed by federal, state, academic, and nonprofit partners including efforts of the U.S. Climate Alliance.

a. Mitigation models should include carbon storage/sequestration in soils, forests, wetlands, and farmland and be included as part of considering a negative emissions strategy alongside reported emissions for the building, energy, and transportation sectors. (cross-listed with Science and Technology, Progress on Mitigation Strategies).

b. Adaptation/resilient models should include those beneficial services provided naturally by intact ecosystems including but not limited to providing for clean air, clean and abundant water, secure local foods, moderation of temperatures (shade, windbreaks, evapo-transpiration), flood attenuation, vector disease control, and sustainable fish and wildlife habitat.

25. Adopt land use policies for siting of renewable and non-renewable energy infrastructure that avoid loss of forests, farmland, and other lands as well as recognize the ecosystem services they provide. As Connecticut deploys large-scale solar projects, it is important that this development does not supersede other climate change mitigation and/or adaptation strategies, including the carbon sequestration potential of natural and working lands and the importance function they play in providing clean, abundant water and local food supplies. The state should establish incentives to encourage developers to site their projects on brownfields, rooftops, parking lots, and other developed spaces. (cross-listed with Progress on Mitigation Strategies)

Forests

26. Adopt a statewide “no-net-loss of forest” policy. Establish a taskforce in 2021 with stakeholders regarding the “no-net-loss of forest” policy to plan for its implementation in 2022, including evaluation of feasibility, needed resources, and associated efforts such as a no-net-loss of farmland/agricultural soils policy, to maximize mitigation and adaptation/resiliency potential. Consideration should be given to the following actions as part of the implementation of this policy: avoid forest conversion; protect healthy, intact forests; offset all planned or permitted forest losses; provide incentives for stewardship, forest retention, and forest resiliency; and protect urban forests, build more parks, and plant more trees.

27. Increase adaptation and resilience of Connecticut’s forests through keeping forests as forests and supported actions to maintain un-fragmented forests.

a. *Support keeping forests as forests and establish mechanisms to achieve this goal*, such as encouraging private landowners to protect forestland through easements, ecosystem payment mechanisms, and strong markets for local forest products.

b. *Support and enhance statewide, regional, and local actions that align to maintain un-fragmented forests within and across political boundaries* with emphasis on connections to waterways and wetlands, core forests, and wildlife habitat linkages, including continuing work under the Coalition

of New England Governors and Eastern Canadian Premiers on resolution 40-3, Resolution on Ecological Connectivity, Adaptation to Climate Change, and Biodiversity Conservation.

28. Increase mitigation of greenhouse gases in Connecticut's forests through sequestration and storage of carbon.

a. *Confirm and set a statewide goal of permanent protection of at least 50% of core forests greater than 250 acres by 2040* and identify resources that would be needed to achieve that goal.

b. Develop an action plan by the end of 2021 to increase statewide forest cover from 59% to over 60% by 2040.

c. *Develop improved guidelines for vegetation management* utilized by electric utilities, Department of Transportation, and public works within available resources.

d. *Evaluate and develop guidelines regarding how to improve forestry practices in Connecticut's working forests* by following scientific principles including the emerging body of knowledge on how to manage forests for resilience and to store and sequester carbon.

29. Protect vulnerable communities from climate change. Enhance existing or establish new programs to strengthen urban forestry and community interest in tree planting, parks, and/or community gardens in densely populated areas to support climate solutions that could meet multiple needs such as protecting against extreme heat events and increasing health outcomes, employment, and entrepreneurial opportunities and the Social Determinants of Health as well as provide ecosystem services. Pursue the creation of a Youth Conservation Corps to help community-based groups with implementation.

30. Protect forests with a changing climate through state and federal land acquisition, stewardship and protection programs and research for adaptive management.

a. Update Connecticut's Green Plan and open space grant programs to prioritize acquisition of land and conservation easements for habitats with the most climate resilience benefits.

b. Advocate with partners for federal funding programs that support habitat stewardship and protection such as the Recovering America's Wildlife Act, and others.

c. Identify and invest in research and opportunities for adaptive management for ecosystems vulnerable to climate change.

31. Identify funding, programs, and resources needed for implementation of recommendations.

a. *Incorporate more specific climate-related criteria into selection of projects/level of funding.* These include the Open Space and Watershed Land Acquisition Grant Program (OSWA), the Recreation and Natural Heritage Trust Program (RNHT), and the Recreational Trails Program (RTP).

b. Preserve fully authorized funding for Community Investment Act (CIA) and support state authorization allowing municipalities to adopt a buyer's real estate conveyance fee to fund resilience

and other community environmental projects (see Financing/Funding Adaptation and Resilience recommendation #56d as amended at the bottom of this memo).

c. Strengthen and expand the Urban Green and Community Garden Program to include Urban Forest Improvement Projects.

Wetlands

32. Protect and enhance the ecosystem services value of wetlands using sound science and adaptive management strategies by incorporating new and emerging science and technologies, identifying and conserving ecosystems vulnerable to climate change, monitoring climate impacts, and developing habitat suitability models.

a. *Encourage land and ocean management behaviors that support ecosystem services* by incorporating new and emerging science and technologies, such as sediment additions to marshes, low impact development, green infrastructure, living shorelines, conservation, and other nature-based adaptations.

b. *Conserve identified ecosystem services vulnerable to climate change.* Identifying and preserving future inland advancement zones would help create future protective storm buffers for coastal communities while providing the co-benefit of preserving an ecologically important habitat and protect Long Island Sound from pollutants.

c. *Continue monitoring and assessment of impacts of climate change on wetlands and near coastal waters* and update management tools and strategies.

d. *Work with partners to develop and implement a habitat suitability model for restoring inland and coastal wetlands*, identifying areas which provide the greatest increase in ecosystem benefits when protected or restored.

33. Communicate the value of wetlands to Connecticut home and business owners through engagement on climate resilience efforts, including through natural hazard mitigation planning, education on better management of private lands, and utilizing nature-based strategies for addressing water inundation.

a. *Include nature-based solutions as part of the state Natural Hazard Mitigation Plan (NHMP)* and encourage municipalities and Councils of Governments to include this approach in local NHMPs.

b. *Work directly with partners to educate and assist private landowners and developers in the management of their lands to minimize impacts to wetlands and reduce risk from climate change.*

c. *Prioritize nature-based adaptation strategies that will ameliorate the effects of water inundation*, including natural habitat conservation, Low Impact Development (LID) Best Management Practices (BMPs), agriculture water BMPs, and drinking water treatment standards. (cross-listed Science and Technology)

34. Further develop policies that encourage protections for wetlands under a changing climate, including integrating the latest climate science into stormwater and floodplain management and prioritizing acquisition of land at risk from climate change.

a. Integrate the newest rainfall data modeling into stormwater models and management tools and ensure coastal floodplain planning is informed by the state's sea level rise scenarios.

b. Prioritize acquisition of land and conservation easements for ecosystem services most at risk from climate change, leveraging Connecticut's Green Plan and open space grant programs. Preserve fully authorized funding for Community Investment Act (CIA) and support state authorization allowing municipalities to adopt a buyer's real estate conveyance fee to fund resilience and other community environmental projects (see Financing/Funding Adaptation and Resilience recommendation #56d as amended at the bottom of this memo).

c. Review state policy/laws relating to wetland protections, including the Tidal Wetland Act and the Inland Wetland and Watercourses Act, by the end of 2021, and provide recommendations needed to include climate change mitigation, adaptation, and resilience benefits in decision making and protection strategies. Update training modules for local inland wetland commissions to include climate change impacts to wetlands and the ecosystem services they provide for climate change mitigation, adaptation, and resiliency.

Rivers

35. Protect the future ecosystem services value of inland waters under a changing climate, including prioritizing resilient river networks, prioritizing land acquisition, utilizing nature-based solutions, and including climate resilience in watershed-based planning.

a. Develop the scope for a science-driven process for identifying and prioritizing river networks that will likely maintain diversity and functional integrity, even under shifts due to climate change, and protect the ecosystem services of inland waters.

b. Formalize continuation of land acquisition that will protect high-quality waters.

c. Promote urban forestry and expansion of urban green spaces, including protection and/or re-establishment of riparian corridors, including daylighting rivers in urban areas, and creation and expansion of public open spaces that incorporate nature-based solutions, low impact development, and green infrastructure.

d. Expand water quality focus of watershed-based planning to also consider related flooding and climate resilience issues and solutions.

36. Re-establish free-flowing character and connectivity of inland waters and hydrological connectivity by exploring programs to eliminate physical barriers in streams, encouraging nature-based adaptive restoration and solutions, and incorporating culverts into hazard mitigation planning.

a. Identify and invest in programs that will eliminate physical barriers to stream connectivity. As part of a program the following should be considered: identifying resources to remove barriers; assessing impacts of road crossing designs; engaging partners to develop educational content on dam removal; and

identifying, assessing, and prioritizing known barriers in the state, the removal of which would lower flood risk, allow for stream and habitat connectivity, and promote resilient ecosystems.

b. *Encourage nature-based adaptive restoration approaches for rivers, floodplains, and estuaries and encourage the utilization of nature-based adaptation approaches over hard armoring techniques.* Engage partners for education, outreach, and technical training in these areas and establish priority projects for implementation through the development of project pipelines.

c. *Incorporate high-priority culverts into hazard mitigation planning* and leverage federal funding sources for project implementation.

37. Create safe, equitable opportunities for people of diverse backgrounds to access and enjoy water resources through strengthening grants; enhancing programs that better engage and inform underserved communities and improve their access to freshwater resources; and improving staff training and diversity.

a. *Strengthen Open Space and Watershed Land Acquisition grants, Recreation and Natural Heritage Trust Program, Section 319 nonpoint source grants access opportunities for vulnerable communities.* In addition, preserve fully authorized funding for Community Investment Act (CIA) and support state authorization allowing municipalities to adopt a buyer's real estate conveyance fee to fund resilience and other community environmental projects (see Financing/Funding Adaptation and Resilience recommendation #56d as amended at the bottom of this memo).

b. *Enhance programs that will help outdoor recreation, natural resource partners, and municipalities engage with diverse communities.* Engage external stakeholders to evaluate program impact for underserved and vulnerable communities.

c. *Enhance accessibility of information and signage for all communities.* Better utilize technology for improved communication beyond English language signage.

d. *Implement and encourage programs that will foster the level of comfort with freshwater resource activities (e.g., paddling and fishing instruction, outdoor swimming lessons, etc.) especially for underserved populations.*

f. *Enhance state agency staff training and staffing* in promoting equity, inclusion, and diversity, including for access, recreation, and safety issues around inland waters.

g. *Increase recruitment of more diverse staff* for positions within environmental conservation and environmental quality sectors and explore additional resources for environmental justice and public outreach in the area of environmental education to support both internal and external needs for guidance, information, and programming.

38. Promote demand-side water conservation and water reuse by reducing transmission losses and developing educational programming.

a. *Review opportunities to reduce transmission losses* by expanding leak detection and maintenance programs.

b. *Work with partners to develop educational programming and outreach* to educate the public as to where their drinking water comes from, the connection between a healthy environment and clean drinking water.

c. Provide resources for State Water Plan implementation.

39. Explore water rights options that protect fish and wildlife through supporting their needs in decision-making, educating about the role of fishing and boating in the economy, and focusing planning and funding on conservation for cold water streams and rivers.

a. Support fish, wildlife, and ecological needs when balancing economic and social needs in decision-making processes.

b. Share analysis that fishing and boating are Connecticut's top contributor to the outdoor recreation economy.

c. Focus state land conservation plans and funding on conservation lands around cold water streams and resilient river systems.

40. Encourage protection for inland waters through further development of policies, education/outreach, research, and funding opportunities that encourage protections for inland waters.

a. Engage partners to develop training on green infrastructure and nature-based solutions for public works and other municipal staff.

b. Enhance education, outreach, and research through goal setting, incentivizing participation, and providing training and data management for monitoring and research projects that can detect climate change impacts on inland waters.

c. Provide opportunities for coordination and data sharing among individuals participating in citizen monitoring.

d. Develop educational campaigns for climate change adaptation awareness targeted at multiple sectors.

e. Develop and implement opportunities to improve and expand citizen participation in monitoring, including schools, non-profits, and others.

f. Support opportunities to best utilize federal funding for wastewater infrastructure and wastewater solutions.

g. Support continued funding for the Clean Water Fund.

h. Maintain high standards for Combined Sewer Overflow (CSO) reduction in CSO communities.

- i. Complete comprehensive updates of the Stormwater Quality Manual, Erosion and Sediment Control Guidelines.
- j. Evaluate barriers to implementing alternative treatment waste systems (ATS) and integrate and coordinate permitting across DPH and DEEP to enable use and oversight of high performing ATS.

Agriculture and Soils

41. Reduce conversion of Prime and Important Farmland Soils, active agricultural land, forest land, and other soil landscapes that provide critical ecosystem functions and values/ goods and services such as groundwater recharge/discharge, protection of headwaters of cold-water streams, public water supply watersheds, floodplains and riparian areas, wetlands, and wetland hydrology, support special habitats and migration corridors for species. According to American Farmland Trust's Farms Under Threat: State of the State from 2001-2016, 23,000 acres of Connecticut's farmland were developed or compromised, the 6th highest percentage in the nation. Baselines of kinds of farm acreage goals should be established, and goals for reduced conversion, and protection established. (citation: Freedgood, J., M. Hunter, J. Dempsey, A. Sorensen. 2020. Farms Under Threat: The State of the States. Washington, DC: American Farmland Trust).

a. Accelerate and streamline the Farmland and Open Space and Watershed Land Acquisition Grant programs with a goal of closing in two years or less and doubling the number of easements closed within four years. Evaluate Grant programs criteria to achieve these goals while including equity, adaptation, mitigation, and resiliency elements.

b. Maintain funding for the farmland preservation program through both the Community Investment Act (CIA) dollars and lump sum bonding; prioritize utilizing the federal "buy-protect-sell" and state "buy-protect-farm" programs and Community Farms Program to expedite farmland preservation process; create farmland access opportunities for the next generation of farmers; protect smaller farms in more urban and suburban communities; and support state authorization allowing municipalities to adopt a buyer's real estate conveyance fee to fund resilience and other community environmental projects (see Financing/Funding Adaptation and Resilience recommendation #56d as amended at the bottom of this memo).

c. Disincentivize location of solar projects on farmland. Incentivize multiple-use projects that allow for solar and agricultural production to co-exist on the same footprint when there are no other prudent and feasible alternatives, and as needed, as part of the farm business and/or succession plan. Develop soil health standards for projects since maintaining soil health on all landscapes needs to be a critical component of the planning, installation, and possible decommissioning of solar arrays.

42. Increase the adoption of on-farm energy production and reduce on farm energy usage through enhancing energy efficiency, renewable energy production, renewable natural gas from anaerobic digestion, and composting.

a. Enhance energy efficiency programs available to farms. Increase the funding available for renewable energy production opportunities.

b. Investigate successful models of funding and technical assistance to allow new and innovate farm energy technology.

c. Identify barriers, risk, and unexpected costs for farms seeking to implement on-farm energy projects and develop tools and assistance to overcome them.

d. Provide technical, financial, and regulatory support for Energize Connecticut Programs where farms can receive assistance in retrofitting their inefficient equipment with high energy measures.

e. Establish a process in which the State may direct the electric distribution companies to enter into long-term agreements to purchase power or renewable natural gas from anaerobic digestion facilities, including policies and incentives to enable on-farm anaerobic digesters.

43. Strengthen land use planning tools for agriculture through a more regional approach and updating and streamlining zoning.

a. *Take a more regional planning approach to supporting and planning for Connecticut agriculture.* In Connecticut, land use planning is conducted at the local municipal level. 169 sets of land use regulations have a direct impact on the growth and sustainability of Connecticut farms. Consider adoption of Regional Agricultural Councils such as the Lower CT River Valley Regional Agriculture Council that can take a more regional approach to supporting and planning for Connecticut agriculture.

b. *Reflecting the current industry trends, municipalities should consider eliminating minimum acreages for farms in municipal zoning regulations.*

c. *Municipalities should streamline their planning and zoning rules and regulations and techniques to prevent farmland loss, protect special soil landscapes and improve soil health and water management, utilizing available technical assistance, including the 2020 American Farmland Trust's and the CT Department of Agriculture's Planning for Agriculture and Conservation Options for Connecticut Farmland guides. Develop Statewide Model P & Z regulations, for adoption, that provide language that supports climate change mitigation, adaptation, and resiliency practices.*

44. Improve soil health practices on all landscapes through technical assistance and training, education, and outreach, and leveraging federal funding.

a. *Work with partner universities and the CT Agricultural Experiment Station in the state to provide technical assistance on tillage practices/equipment, soil health practices, grazing/forage management, and lawn and landscaping practices, and controlled environment agriculture. Increase training, technical assistance, and outreach on the programs, tools, techniques, and applied research needed to implement mitigation and adaptation practices. Virtual training should be an important component.*

b. *Conduct outreach and education on the importance of soil health practices, and the value of agriculture and forestry's contributions to mitigation, adaptation, and resiliency.*

c. *Raise awareness of the critical need for a strong soil science curriculum for agriculture and environmental science, particularly in the area of carbon sequestration and storage, and the role of soils*

in adaptation and resiliency strategies on all landscapes.

d. Leverage federal funding through the United States Department of Agriculture (USDA) and Environmental Protection Agency programs and assistance to accelerate protection and management of parcels in public water supply areas, important habitats, flood prone areas, and recharge and discharge areas.

45. Build a sustainable and equitable food system through support for local, State, and regional agriculture, and strengthening state grant programs. A sustainable and equitable food system is more than urban agriculture. Building such system will require analyzing the food system “from farm to table, from processing to disposal, ensures economic opportunity; high-quality jobs with living wages; safe working conditions; access to healthy, affordable, and culturally appropriate **food**; and environmental **sustainability** “(retrieved 1.4.21 from policylink.org).

a. Increase urban agriculture initiatives, including support for urban agriculture master plans at the local and regional level.

b. Develop capacity for an urban agriculture program at the CT Dept. of Agriculture, including coordination with CT DEEP’s Urban Greens and Community Gardens program to develop complementary policies, funding, and assistance.

c. Allow Senior Farmers Market Vouchers to be utilized with online purchasing platforms

d. Support research initiatives by CT’s Colleges, Universities, and Agricultural Experiment Station to develop additional farm and forest adaptation strategies and practices.

46. Support socially disadvantaged producers incorporating climate smart agricultural practices by working collaboratively to increase their use in state and federal grant programs.

a. Increase knowledge of federal and state programs including risk management and crop insurance tools.

b. Increase support and outreach to the growing number of socially disadvantaged farmers and producers throughout Connecticut to better understand how climate change is directly impacting this sector of producers and work collaboratively to develop solutions.

c. Establish a Diversity and Race Working Group within the CT Department of Agriculture that will build organizational capacity with the CT Department of Agriculture to work towards creating racial equity across the state’s agricultural sector. This initiative must aim to achieve true consultation in stakeholder engagement that goes beyond dissemination of information and asking for input to allowing BIPOC led organizations and producers in the state to influence decision making at the CT Department of Agriculture. Outreach efforts for this working group must be designed to reach diverse demographics with different communication needs and must be coordinated across state, federal and local government, and nonprofits to have collective impact to advance equity and inclusion.

47. **Sustain environmental and soil health** by working with partners to improve research to develop additional weather stations, prediction models and practices for water management, including excesses, droughts, storage, and use.

48. **Address impacts of climate change to coastal aquaculture and the shell-fishing industry including but not limited to ocean acidification and increase stormwater runoff.**

a. *Join the International Association to Combat Ocean Acidification (OA Alliance) and commit to furthering the five goals identified in the Alliance's Call to Action: 1) Advance scientific understanding; 2) Reduce causes of OA; 3) Build adaptation and resiliency; 4) Expand public awareness; and 5) Build sustained international support. (cross-listed with Science and Technology)*

b. *Evaluate approaches to research, monitor, and address coastal acidification impacts to natural resources including shellfish, crustaceans, and fish, including a monitoring system for water quality parameters critical to the shell-fishing industry in real-time to forecast potentially high-risk events. (cross-listed with Science and Technology and Public Health and Safety)*

c. Identify and develop management strategies to address other impacts from increased runoff, saltwater intrusion into septic systems, and the additional nutrient and pathogen loads to shellfish beds. Provide incentives and disincentives to increase the implementation of practices to improve stormwater and land management in municipalities that impact shellfish beds.

Recommendation 56 d.

Support state authorization allowing municipalities to adopt a buyer's real estate conveyance fee to fund resilience and other community environmental projects. The authorizing legislation would allow, not require, municipalities to adopt a small and limited buyer's conveyance fee (up to 1% of the value of any real estate transaction valued at \$150,000 or greater) on the transfer of real estate. This dedicated fee could be used by municipalities to fund municipal land conservation, stewardship, climate mitigation, resilience and adaptation strategies, and other community environmental projects. The legislation would be structured to ensure that the program does not undermine the development of affordable housing in the participating municipalities..