June 5, 2024

Maine Climate Council
Governor's Office of Policy Innovation and the Future
181 State House Station
Augusta, ME 04333

Dear Maine Climate Council Members:

On behalf of the Community Resilience Working Group (CRWG), we are proud to present our proposed updates to *Maine Won't Wait* (MWW) with a focus on Strategies F (Build Healthy and Resilient Communities), G (Invest in Climate-Ready Infrastructure), and H (Engage with Maine People and Communities). Our strategies support Maine's efforts to become more informed, prepared, and resilient in the face of a changing climate.

The significance and importance of effective communication and authentic community engagement weave throughout our proposal and are emphasized in many of our new and modified recommendations. Accordingly, the Climate Council may choose to identify a new strategy and associated actions to capture the role of communication as well as related concepts of hope and agency, which arise in our analysis of mental health resilience to climate impacts. Indeed, if we are to be successful in achieving our goals and mitigating harm, we must address such factors as resilience, mental health, hope, engagement, communication, and leadership. Such crucial omissions explain many of the difficulties climate leaders encounter in reaching diverse populations, inspiring action, and sustaining engagement.

Data show that climate change and strategies to prepare, adapt, and mitigate its health effects disproportionately impact already vulnerable populations, including rural communities, people experiencing low income, youth, older adults, people of color, those who work outdoors, migrant workers, and individuals with pre-existing health conditions. As such, we encourage the MCC to advance strategies that advance health equity and assure – proactively – that vulnerable communities are not unfairly burdened with the health, economic, and social consequences associated not just with climate change, but also with the state's response efforts. Further, we support the inclusion of these populations in decision-making, particularly as they pertain to their own communities.

In the spirit of these considerations, we propose these revised and new strategies that advance community resilience in Maine:

Recommendations:
Strategy F – Build Healthy and Resilient Communities

- (Existing) Empower local and regional community resilience efforts (5 New & 1 Modified Actions Proposed)
- (New) Enhance the ability of the State of Maine to facilitate timely and effective natural hazard assessment, planning, mitigation, response, and recovery (7 New Actions Proposed)
- (Existing) Emphasize resilience through land-use planning and legal tools (6 New Actions Proposed)
- (New) Explore options for "getting out of harm's way" (3 New Actions Proposed)
- (Existing) Strengthen public health monitoring, education, and prevention (4 New & 1 Modified Actions Proposed)

Strategy G – Invest in Climate-Ready Infrastructure

- (Existing) Assess climate vulnerability, provide design guidance, and prioritize infrastructure improvements posing threats to public health (1 New & 1 Modified Actions Proposed)
- (New) Accelerate financing for climate mitigation and adaptation projects and resilient infrastructure (5 New Actions Proposed)
- (New) Ease and improve resilience project applications for applicants and reviewers (8 New Actions Proposed)
- (New) Develop a comprehensive, long-term funding plan and investment strategy to support the implementation of *Maine Won't Wait* (7 New Actions Proposed)
- (NEW) Establish a Maine framework for measuring the effectiveness of adaptation and resilience actions across social, economic, governance, built, and natural systems (6 New Actions Proposed)

Strategy H – Engage with Maine people and communities about climate impacts and program opportunities

- (New) Create a Climate Psychology Task Force to provide resources for climate leaders, service providers, public officials, activists and others involved in climate work on best practices for addressing mental health, psychological resilience, climate communications and engagement (7 New Actions Proposed)
- (New) Prioritize awareness and action on mental health impacts of climate-related adverse experiences, especially in youth and other vulnerable populations (4 New Actions Proposed)
- (New) Offer programming and education on psychological resilience strategies to encourage hope, foster agency and support collective action (3 New Actions Proposed)
- (New) Increase knowledge and skills for climate leaders, activists, public officials and others on effectively engaging and communicating around climate change to help encourage more local participation (2 New Actions Proposed)

We are proud to present these strategies for your consideration. We recognize there is still much work to do to sort through and prioritize recommendations from across all the Working Groups; as such, please let us know if you have any questions or require additional information.

Thank you,

Rebecca Boulos, MPH, PhD, Executive Director, Maine Public Health Association
Co-Chair, Community Resilience Working Group

Judy East, MSc, Bureau Director, Resource Information and Land Use Planning, Department of Agriculture, Conservation, and Forestry
Co-Chair, Community Resilience Working Group

Anne Fuchs, MS-SSEM, CEM, Director, Mitigation and Recovery, Maine Emergency Management Agency
Co-Chair, Community Resilience Working Group

Attachment: Community Resilient Working Group Deliverable

COMMUNITY RESILIENCE WORKING GROUP DELIVERABLE TO THE MAINE CLIMATE COUNCIL

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INTRODUCTION

The Community Resilience Working Group (CRWG) proposes updates to *Maine Won't Wait* with a focus on Strategies F (Build Healthy and Resilient Communities), G (Invest in Climate-Ready Infrastructure), and H (Engage with Maine People and Communities). Within each Strategy, we

offer updates and additions to many recommendations and associated actions completed or underway in the areas of funding, community engagement, and technical assistance. We also propose new actions that anchor adaptation goals and their metrics in three related areas of inquiry: psychological resilience, more robust integration of resilience planning into emergency incident response and beginning the complex conversations around "getting out of harm's way."

The examination of how and whether we are meeting Maine's resilience goals was conducted in the context of eight federal disaster declarations in 2023 and 2024, which affected the entire state with impacts from multiple concurrent threats from extremes of precipitation, winter snowmelt, wind, storm surge, and high tides associated with sea level rise. Metrics to define how and whether resilience is achieved are complex given that resilience can be defined as a disaster averted. Metrics also vary according to whether we are looking at social, economic, governance, built environment, or natural systems; achieving community resilience relies on integration of all these systems. Resilience metrics are thus relevant to all strategies in *Maine Won't Wait* and we propose a framework for their development and, where they are already identified, refinement into a cohesive adaptation and resilience plan.

The CRWG called upon the expertise of its members in three sub-groups and from individuals and guests to give presentations of their work and engagement of the entire working group in refining their recommendations. The significance and importance of communication runs throughout our analysis and is emphasized in many of our new and modified recommendations. Indeed, the Climate Council may choose to identify a new strategy and associated actions to capture the role of communication as well as related concepts of hope and agency, which arise in our analysis of mental health resilience to climate impacts.

The scientific and tangible impacts of climate change are well-understood, if not universally accepted, and receive extensive resources and attention. However, no less impactful but significantly less understood or resourced are the resilience and mental health impacts of climate change. If we are to be successful in achieving our goals and mitigating harm, we must address such factors as resilience, mental health, hope, engagement, communications, and leadership.

In that vein, we also provide recommendations for *how* to address those factors, including authentic engagement and effective communications. Indeed, psychologically sound strategies of communication and engagement are critically necessary for achieving all climate goals. These strategies include fostering hope, reaching diverse audiences, connecting with community values and priorities, and promoting action and agency. Such crucial omissions explain many of the difficulties climate leaders encounter in reaching diverse populations, inspiring action, and sustaining engagement.

The mental health impacts from climate change are real and will only increase in severity. According to the American Psychiatric Association, climate change is known to exacerbate

mental illness symptoms for the nearly 20% of the population with pre-existing mental illness diagnosis; furthermore, it is known to cause extensive and damaging psychological impacts for otherwise high functioning individuals, including anxiety, depression, PTSD, suicidal ideation, substance abuse, addictions, stress, violence, anger and aggression, apathy, and denial, while also eroding social cohesion and community connection. The risk for these debilitating psychological impacts is even more pronounced for at-risk and vulnerable populations, like younger people and those who are hit hardest by climate impacts. According to the American Psychological Association, "resilience" is defined as "the process and outcome of successfully adapting to difficult or challenging life experiences, especially through mental, emotional, and behavioral flexibility and adjustment to external and internal demands." Psychologically resilient individuals are shown to be healthier, happier and better able to navigate life's challenges and adversities (see Reference List below).

We examined a more robust integration of resilience planning into emergency incident response by coupling the expertise of those with experience as first responders and in emergency management with others whose experience lies in land use planning, program administration, geospatial analysis, research, education, and other disciplines. This group sought to address existing shortfalls and gaps in state and local agencies' response to disasters, incorporating lessons learned from recent storms. Somewhat contrary to past practice at the federal level, this group developed recommendations that will ensure the full range of current *and* projected future natural hazards are considered during hazard mitigation planning and risk assessment. Similar to recommendations in the mental health resilience field, a more seamless approach to hazard mitigation planning is needed between public and NGO partners, ensuring top-down and bottom-up sources of information are given due consideration. Throughout all deliberations, our recommendations seek to place agencies and local governments in a position to maximize available federal funding and to ensure that priority populations are considered throughout the process, that they have authentic opportunities to meaningful engage, and that they receive appropriate communications and assistance to reduce the impacts of natural disasters and climate change.

As the climate continues to change, increased flooding poses a growing risk to communities statewide. Shifting precipitation patterns, sea level rise, shoreline erosion, and stronger, more frequent storms exacerbate the risk of flooding in riverine, coastal, and lakefront communities throughout Maine, impacting lives and livelihoods, property and infrastructure, economies and ecosystems, and more. Resilience strategies for responding to these impacts include actions to:

- Avoid (e.g., phasing out development in vulnerable areas through zoning and land acquisition)
- Protect (e.g., stabilizing or buffering vulnerable areas using nature-based solutions)
- Accommodate (e.g., adapting to more water by elevating buildings and infrastructure)
- Retreat (e.g., "getting out of harm's way" by removing/relocating people, property, and infrastructure from hazardous areas)

Thanks in large part to the Community Resilience Partnership program, communities in Maine are actively pursuing a suite of strategies across the categories of avoid, protect, and accommodate. Although there are limited examples of retreat strategies being pursued in the state, the CRWG identified the concept of "getting out of harm's way" as a cross-cutting issue while drafting the 2020 *Maine Won't Wait Climate Action Plan*. Given the magnitude of the issues before the Climate Council in 2020, the working group did not make specific strategy recommendations related to retreat/relocation at that time. Rather, it raised a series of questions to use in the future focused on the implications of "getting out of harm's way," including how communities are impacted, how financial trade-offs are weighed, and how decisions are made. The CRWG picks up where the previous working group left off, with the recognition that there is necessary work to be done to bring retreat/relocation into the fold with the other resilience strategies.

Recent events have made it clear that a strategy dedicated to exploring options for "getting out of harm's way" in the updated Climate Action Plan is warranted. In particular, the devastating storm events in December 2023 and January 2024 highlight the need to begin conversations about "getting out of harm's way" now. Maine Emergency Management Agency (MEMA) reports growing interest from property owners in the option of buyouts as a hazard mitigation strategy, and service providers from the Community Resilience Partnership are receiving requests to facilitate community conversations about retreat strategies.

Finally, climate change is already increasing the costs of insuring homes and businesses in Maine. *Maine Won't Wait* has adopted the advice of the Scientific and Technical Subcommittee to plan for sea level rise (SLR) of 1.5 feet by 2050. SLR of 1 foot intensifies the impact of coastal storms tenfold. According to Charles Soltan, an attorney and CRWG member and, since 2003, an active member of the Maine Fire Protection Services Commission, Maine continues to have some of the lowest rates in personal and commercial lines in the country.[1] Given the series of devasting storms in the winter of 2023-2024, the insurance industry has had back-to-back years of unprofitability, in significant part from weather-related events. Across the U.S., natural and other disasters are driving the costs of coverage. Insurers secure reinsurance (insurance to cover losses over certain claim and monetary thresholds); as such they also face increased costs in this changing market. The combination of more frequent and extreme weather events, nationwide, is driving up costs across the insurance market, including for insurers, and for home and business owners.

The impacts of climate change, together with unprecedented labor shortages and material cost increases since the pandemic, are driving increases in Maine homeowner's insurance in 2024. By one estimate, the rate is around 19%, with approximately 24% of carriers seeking increases.

[1]Charles Soltan to Judy East, personal communication May 2024.

Even so, Maine's homeowner insurance rates are lower than the national average ($1,700 vs. $2,500, respectively) and many other states (e.g., the average in Florida is nearly $11,800).[2]

It is imperative that policymakers work with the federal government, through programs like the NFIP, as well as state regulators and planners, and the private insurance market to ensure a robust and thoughtful approach to the increasing cost of responding to and insuring lives and property in the face of a changing climate.

SUMMARY OF STRATEGIES AND ACTIONS

RECOMMENDATION	ACTION
STRATEGY F - (EXISTING) Build Healthy and Resilient Communities	
STRATEGY F. Recommendation 1 – *(MODIFIED) Empower local and regional community resilience efforts*	i. (MODIFIED) Invest in robust technical assistance and ongoing funding to communities and regional agencies to support local and regional long-term planning and implementation across the full spectrum of resilience strategies (Avoid, Protect, Accommodate/Adapt, and Retreat/Relocate). ii. (NEW) Increase opportunities for qualified personnel to assist with natural disaster response, and natural hazards planning and recovery. Expand outreach, technical assistance and training for 1) Maine Climate Corps 2) county, state and local employees, 3) first responders, 4) Community Emergency Response Teams (CERTs), 5) volunteers, and 6) the consulting community. iii. (NEW) Educate communities, including county and local governments, about the full range of natural hazards that may impact them, risks associated with the location of home heating oil tanks, and how hazards may affect residents disproportionately based on heightened social vulnerability. iv. (NEW) Create, update and improve usability of natural hazards and health hazard data for

[2]Rosanes M. Rising home insurance rates predicted in 2024. *Insurance Business*. April 2, 2024. Figure based on Insurify's Home Insurance Projection Report: https://insurify.com/homeowners-insurance/knowledge/average-cost-of-homeowners-insurance/.

RECOMMENDATION	ACTION
	counties and communities to consider when creating or updating Hazard Mitigation Plans (HMPs) or similar plans. HMPs should be readily available, easily interpreted with limited jargon, and used to help build support for climate action, emphasizing maps and visual storytelling. v. (NEW) Provide training and support for community leaders, social service organizations and others in effective facilitation and engagement strategies to build capacity for community conversations. vi. (NEW) Work with formal and informal networks and trusted community partners to disseminate information on disaster preparedness, response, and recovery to those who may not be reached by traditional media, and to learn more about community needs.
STRATEGY F. Recommendation 2 – (*NEW) Enhance the ability of the State of Maine to facilitate timely and effective natural hazard mitigation planning, response, and recovery*	i. (NEW) Ensure that state agencies have adequate staff and resources to maximize external funding opportunities and provide technical assistance. Maximize cooperation between and within state agencies to share data and resources. ii. (NEW) Collaborate with Volunteer Maine to evaluate opportunities for funding or otherwise facilitate volunteer management and leadership training and to support recruitment of volunteers. iii. (NEW) Provide regional resources and technical assistance to engage in asset mapping to build relationships across sectors and reduce communication barriers. iv. (NEW) Assist municipalities in establishing consistent and effective emergency communications before, during and, immediately following extreme natural hazard events. v. (NEW) Enhance cooperation, communication, and collaboration among state, regional and local governments.

RECOMMENDATION	ACTION
	vi. (NEW) Promote, bolster, and enable economic security and opportunity for all Maine households in recognition that economic security is a necessary foundation for climate resilience. vii. (NEW) Actively promote community enrollment in the National Flood Insurance Program and support for communities to participate in the Community Rating System to lower insurance community-wide insurance rates.
STRATEGY F. Recommendation 3 – *(MODIFIED) Emphasize resilience through land-use planning and legal tools*	i. (NEW) Maintain current Hazard Mitigation Plans (HMPs) and other applicable natural hazard risk assessments. Facilitate the inclusion of locally significant hazards and mitigation priorities into County HMPs. HMPs and similar plans should rank projects by the number of potential co-benefits, including to frontline and disadvantaged communities. ii. (NEW) Require communities to reference applicable HMPs, existing climate vulnerability assessments, or other natural hazards plans when creating or updating Comprehensive Plans and land use ordinances and avoid development in areas identified as having high risks for natural hazards. iii. (NEW) Require that the assessment of natural hazards within HMPs be based on available quantitative and/or geospatial data in addition to the feedback and experience of community leaders and first responders. iv. (NEW) Consider potential risks from natural hazards and climate change to existing natural infrastructure, such as wetlands and floodplains that provide climate resiliency in their natural form, and when planning to significantly modify, expand, or build new public facilities, or when creating or reviewing plans for infrastructure built or funded using state resources. v. (NEW) Establish a collaborative, consensus-building forum to review recommended climate-related changes in statute or rule and

RECOMMENDATION	ACTION
	implement strategies through developing new internal and external guidance, and regulatory and statutory revisions that enable and incentivize resilient designs with an emphasis on nature-based solutions. vi. (NEW) Advance nature-based solutions and coastal bluff management through community-led projects and municipal ordinance updates.
STRATEGY F. Recommendation 4 – (*NEW) Explore options for "getting out of harm's way"*	i. (NEW) Conduct a feasibility study to explore a voluntary, state-level buyout and acquisition program, including potential funding mechanisms, administrative and institutional structures, and the social, ecological, economic, cultural implications. ii. (NEW) Develop a framework for, and identify funding to support, facilitated community conversations for collaborative learning, dialogue, and deliberation around the full spectrum of resilience choices (Avoid, Protect, Accommodate/Adapt, and Retreat/Relocate). iii. (NEW) Balance and integrate the strategy to "get out of harm's way" with measures to secure working waterfront access and to conserve land that supports marine fisheries, blue carbon sequestration, allows for marsh migration, and reduces hydraulic extremes in inland watersheds.
STRATEGY F. Recommendation 5 – *(MODIFIED) Strengthen public health monitoring, education, and prevention*	i. (MODIFIED) Assess, educate, and respond to air quality exposures and health outcomes throughout the state, especially in low-income and rural communities, with attention to a) limiting impacts of poor air quality on human health from mold following water damage, and from wildfire smoke in homes lacking forced air heating and cooling, b) ensuring there is at least one air quality monitoring station in each of Maine's 16 counties, c) providing financial and technical assistance for home weatherization and mold abatement, and d) promoting Maine DEP's air quality alert system and other air quality education and monitoring resources.

RECOMMENDATION	ACTION
	ii. (NEW) Create mechanisms within existing heating assistance programs to increase heating efficiency and improve indoor air quality, allowing the programs to stretch their funding further and decrease future demand. iii. (NEW) Maintain and expand opportunities for financial, technical, and workforce assistance for urban forestry, especially in underserved and disadvantaged communities exposed to extreme heat. iv. (NEW) Assess the potential spread of vector-borne illnesses and invasive species that cause illnesses in marine, freshwater, and public drinking water systems. Improve public health monitoring and education regarding these illnesses, particularly those exacerbated by climate change, and expand and improve efforts to monitor the quality of public water supplies, especially following severe storm events v. (NEW) Increase education and technical assistance regarding the designation, establishment, and use of community warming, cooling, and/or clean air centers during times of severe heat, cold, smoke, or other inclement weather.
STRATEGY G -- (EXISTING) Invest in Climate-Ready Infrastructure ***NOTE: Consider renaming to NEW Strategy I for Investment: Climate Investment Strategy for Maine***	
STRATEGY G. Recommendation 1 – *(MODIFIED) Assess climate vulnerability, provide design guidance, and prioritize infrastructure improvements posing threats to public health.*	i. (MODIFIED) Expand climate vulnerability assessment to include physical and social infrastructure and develop design and location standards that support nature-based solutions, anticipate change, and respond to local conditions. ii. (NEW) Retain focus and funding priority on public and private wastewater infrastructure that poses the most severe threats to public health.
STRATEGY G. Recommendation 2 – *(NEW) Accelerate financing for*	i. (NEW) Conduct a feasibility study to explore establishing a state resilience bank to ensure

RECOMMENDATION	ACTION
climate mitigation and adaptation projects and resilient infrastructure.	sustainable funding streams for climate resilience. ii. (NEW) Assess existing state financing mechanisms/institutions[3] and opportunities to leverage private capital. iii. (NEW) Explore capacity development and financial resources available through the federal Greenhouse Gas Reduction Fund's National Clean Investment Fund to expand state and local green banks. iv. (NEW) Ensure any new state financing institution prioritizes climate resilience in evaluation criteria for funding. v. (NEW) Invest in staffing specific to the successful development and management of a Safeguarding Tomorrow State Revolving Loan Fund for hazard mitigation assistance that builds upon existing revolving loan platforms and leverages available federal resources from FEMA.
STRATEGY G. Recommendation 3 – *(NEW) Ease and improve resilience project applications for applicants and reviewers.*	i. (NEW) Coordinate across agencies to create a common portal for funding applications with links to procurement, subject matter experts, technical assistance providers, application status, reporting on project implementation, and financial drawdowns. a. (NEW) Standardize forms required from applicants which are currently distinct across different sources of state support. b. (NEW) Request consistent and obtainable applicant data and demographic information (provide this data directly where applicable, e.g. social resilience scores). c. (NEW) Pursue a uniform application process for climate resilience projects, allowing communities to apply to multiple sources of

[3] For example, Maine Municipal Bond Bank, Finance Authority of Maine, Efficiency Maine Green Bank, Clean Water State Revolving Fund, Drinking Water State Revolving Fund DC, other financing arms of state agencies such as the Department of Economic Development, Maine State Housing Authority, etc.

RECOMMENDATION	ACTION
	funds and support with a single project application. 1. (NEW) Explore alternatives to grant deadlines such as rolling applications that can reduce missed opportunities for project support requests and decrease the burden of review processes. 2. (NEW) Establish mechanisms to relay technical assistance needs identified in project applications to the available support from multiple agencies, service centers, and partner organizations. d. (NEW) Provide targeted support to under-resourced communities that may exceed a least-cost procurement strategy in recognition of the additional costs associated with reaching rural and remote communities. e. (NEW) Pursue formats of project reporting which serve as case-studies and communications products for broader audiences.
Strategy G. Recommendation 4 – *(NEW) Develop a comprehensive, long-term funding plan and investment strategy to support the implementation of Maine Won't Wait.*	i. (NEW) Adopt a portfolio-based model that encompasses various tactics, plans, and policies across all areas of climate action, such as greenhouse gas mitigation, hazard mitigation, and adaptation. ii. (NEW) Prioritize climate investment across strategies (greenhouse gas mitigation, hazard mitigation, and adaptation). iii. (NEW) Adopt diverse capital stack (hierarchy of funding sources), including public (local, state, and federal), private, quasi-public, and philanthropic to ensure the strategy's robustness. iv. (NEW) Reassess traditional cost/benefit analyses and criteria with equity considerations, as work with priority populations may require more time and resources.

RECOMMENDATION	ACTION
	v. (NEW) Adopt and support the development of performance metrics (e.g., codes, land use regulations, conservation, climate-smart). vi. (NEW) Improve community engagement, particularly with communities that have been resistant to seeking (and thus receiving) financial support to help with climate resiliency. vii. (NEW) Solicit feedback from municipalities on supports needed to help with local capacity to apply for funding and to shift limited resources to support climate resiliency efforts.
Strategy G. Recommendation 5 – *(NEW) Establish a Maine framework for measuring the effectiveness of adaptation and resilience actions across social, economic, governance, built and natural systems.*	i. (NEW) Convene a task force from all levels of climate resilience governance, grounded in equity across leadership, process, and investment, to establish Maine adaptation and resilience goals, indicators, and metrics across all MWW strategies. ii. (NEW) Examine national and state frameworks (see Reference List for examples) for adaptation to Maine climate risks as established by the MCC Science and Technical Sub-committee. iii. (NEW) Identify climate resilience within an interdependent framework to build capacities across affected communities, address structural issues within communities, and strengthen natural and built systems. iv. (NEW) Establish adaptation and resilience goals and indicators for reaching them; distinguish among outputs, outcomes, and metrics; identify existing data sources and needs/costs for data assembly. v. (NEW) Review metrics recommended by MCC working groups and regional partners for inclusion and/or refinement into statewide framework. vi. (NEW) Ensure process for metrics to adapt over time as climate risk changes.

RECOMMENDATION	ACTION
STRATEGY H – (EXISTING) Engage with Maine People and Communities about Climate Impacts and Program Opportunities	
STRATEGY H. Recommendation 1 – *(NEW) Create a Climate Psychology Task Force to provide resources for climate leaders, service providers, public officials, activists and others involved in climate work on best practices for addressing mental health, psychological resilience, climate communications and engagement.*	i. (NEW) Charge the Task Force with overseeing, coordinating, implementing and procuring funding for subsequent recommendations within Strategy H. ii. (NEW) Provide equitable mental health resilience education, assessments, and training on multiple levels: individual, communal, institutional and statewide. iii. (NEW) Provide information and programming in climate education curricula and service-learning for high school students in developmentally appropriate ways that support youth resilience, agency and hope. iv. (NEW) Conduct a Community Preparedness Assessment among community members to aid leaders in gauging their ability to provide resources to support mental health resilience. v. (NEW) In clinical, healthcare and therapy settings, offer: a. Provider Preparedness Assessment to gauge understanding and confidence in supporting climate-related mental health resilience. b. Pre-care assessment to equitably evaluate individual need for mental health resilience support.
STRATEGY H. Recommendation 2 – *(NEW) Prioritize awareness and action on mental health impacts of climate-related adverse experiences, especially in youth and other vulnerable populations.*	i. (NEW) Provide individuals, emergency responders, and care and social service providers and social service providers with trainings, practices, strategies, and skills sets to respond to both emergent and slow-moving climate impacts for mental health and healing. Tailor offerings according to audience with particular focus and engagement with youth. ii. (NEW) Require disaster management and emergency response plans to incorporate mental health considerations and services. iii. (NEW) Expand investment in mental healthcare and related services, in general; the need will grow.

RECOMMENDATION	ACTION
	iv. (NEW) Conduct assessments of mental health preparedness within communities (especially for those experiencing disruption), among emergency responders and social service providers responding to those experiencing climate-related disruption and providing referral services, and within state agencies and programs.
STRATEGY H. Recommendation 3 – *(NEW) Offer programming and education on psychological resilience strategies to encourage hope, foster agency and support collective action.*	i. (NEW) Provide information and programming in climate education curricula and service-learning for high school students in developmentally appropriate ways that support youth resilience, agency and hope. ii. (NEW) Provide "Top-Down" programs for clinicians, healthcare professionals, emergency responders and managers, educators, community leaders and organizations, faith leaders, etc. (e.g., "Train the Trainer"). iii. (NEW) Provide "Bottom-Up" Resources: Peer counseling, community listening sessions, support groups, volunteer engagement, etc. to supplement mental health services and normalize support practices.
STRATEGY H. Recommendation 4 – *(NEW) Increase knowledge and skills for climate leaders, activists, public officials and others on effectively engaging and communicating around climate change to encourage more local participation.*	i. (NEW) Develop a framework for, and identify funding to support, facilitated community conversations for collaborative learning, dialogue, deliberation, and long-term planning around the full spectrum of resilience strategies. ii. (NEW) Develop and deliver trainings and educational materials about effective strategies for connecting with and adapting to individuals and communities for whom climate change and corresponding language and implications may not be relatable.

ANALYSIS AND SUPPORTING INFORMATION

STRATEGY F: BUILD HEALTHY AND RESILIENT COMMUNITIES

RECOMMENDATIONS:

I. **(EXISTING) Empower local and regional community resilience efforts**
   a. New Actions Proposed: 5
   b. Modified Actions Proposed: 1
II. **(NEW) Enhance the ability of the State of Maine to facilitate timely and effective natural hazard assessment, planning, mitigation, response, and recovery**
   a. New Actions Proposed: 7
   b. Modified Actions Proposed: 0
III. **(EXISTING) Emphasize resilience through land-use planning and legal tools**
   a. New Actions Proposed: 6
   b. Modified Actions Proposed: 0
IV. **(NEW) Explore options for "getting out of harm's way"**
   a. New Actions Proposed: 3
   b. Modified Actions Proposed: 0
V. **(EXISTING) Strengthen public health monitoring, education, and prevention**
   a. New Actions Proposed: 4
   b. Modified Actions Proposed: 1

Impacts

(EXISTING) Empower local and regional community resilience efforts

(NEW) Enhance the ability of the State of Maine to facilitate timely and effective natural hazard assessment, planning, mitigation, response, and recovery

(EXISTING) Emphasize resilience through land-use planning and legal tools

The recommendation to "Empower Local and Regional Community Resilience Efforts" under Strategy F is a continuation of the existing recommendation from the State's 2020-2024, climate action plan supported by one modified action and five new actions. The recommendation to "Emphasize Resilience Through Land-Use Planning and Legal Tools" is another existing recommendation under Strategy G from the State's 2020-2024, climate action plan that is supported by six new actions. The recommendation to "Enhance the ability of the State of Maine to facilitate timely and effective natural hazard assessment, planning, mitigation, response, and recovery" is a new recommendation strongly supported by the Working Group with six new proposed actions. As the impacts across all three recommendations are considered to be similar, they will all effectively be evaluated consecutively within this section.

While these three recommendations do not directly reduce greenhouse gas emissions, the actions within enhance the capabilities of state and partner entities to prepare for, mitigate

against, respond to, and recover from costly natural disaster events. While reduction in emissions would be considered a secondary benefit, the primary benefits associated with these recommendations include the wholistic strengthening of the risk and capability assessment, enhanced preparedness across all stakeholders (i.e., planning, training, and exercise), improved communications and accessibility of information to all parties including priority populations, continued and expanded access to federal mitigation grant dollars, and the overall decreased risk from climate hazards.

Estimated costs and emissions reduction estimates cannot feasibly be calculated, since actual costs would vary widely based on the degree to which actions are implemented by different state and local agencies. Many of the actions could be accomplished by utilizing or expanding upon existing programs and staffing within state and volunteer agencies, however, current barriers of capacity across all levels limit the amount of outreach and data gathering that state partner agencies are able to conduct. To effectively carry out these actions, additional staff in state agencies such as MEMA and the Municipal Planning Assistance Program (MPAP), and the Floodplain Management Program are required to better support the demand for increased subject matter expertise and technical assistance in support of local entities.

Funding and financing are increasingly available across a variety of sources and can be utilized to support and expand upon the state's current investment in climate initiatives. Federal grants across entities such as the Federal Emergency Management Agency (FEMA), National Oceanic and Atmospheric Administration (NOAA), US Forest Service (USFS), and other federal agencies allow eligible entities to support natural hazards planning, project scoping, and project initiatives often with a generous cost share to the applicant. Furthermore, building out the volunteer workforce only leverages the ability of entities to enhance mitigation, preparedness, response, and recovery efforts.

Improved investment in hazard mitigation, disaster preparedness (i.e., planning, training, and exercise), response and recovery will also reduce secondary impacts on the natural environment. Natural co-benefits and nature-based solutions, such as wetland retention or restoration, are a result of an effective Hazard Mitigation Planning process that purposely targets the identification of strategies that reduce the risks of hazards. Through effective and comprehensive natural hazards planning, development in at-risk areas such as floodplains and natural habitats can be avoided. This recommendation can also help to identify vulnerable infrastructure and essential service needs as identified by priority populations in any given jurisdiction.

The recommendations would not increase climate risks or burdens for any Maine people. These recommendations, however, would create a healthier living environment and improve quality of life by enhancing cooperation between and among state agencies and improving disaster

planning, response, and recovery. All the proposed actions are feasible with today's technology, and effectively modeled across other states either though practice or through statute.[4]

(NEW) Explore options for "getting out of harm's way"

The recommendation to "Explore Options for 'getting out of harm's way'" under Strategy F is a new recommendation supported by three new actions.

We want to emphasize that every aspect of the proposed "getting out of harm's way" strategy is geared toward responding to the needs of communities and providing them with the information and support needed for informed decision-making. We are neither proposing for the state to identify or designate areas for retreat / relocation, nor are we suggesting that the state should approach property owners to ask them to get out of harm's way. Rather, we believe that getting out of harm's way should be a viable option that is available to individuals and communities when and if they are ready to pursue it, they - for their safety - need to pursue it, and that the state should be there to support them in doing so. In order for planned retreat / relocation to be just and equitable, it must be community-driven and widely available (e.g., not on a first come, first served" basis) The actions that we have identified are intended to help foster and facilitate community-led processes for getting out of harm's way.

Moving people, property, and infrastructure out of harm's way in a strategic and coordinated fashion may be a promising option for reducing climate risks. We also acknowledge that doing so raises challenging questions about the social, cultural, political, economic, and legal aspects of resilience. There are several concerns related to justice and equity as well. Questions about whether, when, how, and where relocation happens are complex, and questions about equity - including who participates in decision-making - are critical. On a more human level, we acknowledge that people are deeply connected to many of the places in Maine that are most vulnerable. These places are intertwined with history, identity, culture, traditions, memories, and more. This makes the prospect of leaving or losing access to a place deeply emotional.

"Getting out of harm's way" does not decrease the likelihood of climate hazards; rather, the goal is to reduce the harm from climate hazards to individuals, homeowners, businesses, and infrastructure. Exploring options for planned retreat / relocation as a hazard mitigation strategy is fundamentally tied to the goal of increasing resilience in Maine. Ensuring that retreat / relocation strategies are pursued in ways that are responsive to local needs and inclusive of community voices can also help in achieving equity through Maine's climate responses. The recommended actions would not shift climate risks to others nor expand access to essential services, though pursuing retreat / relocation through a buyout program could have potential co-benefits (and risks) to natural systems as well as communities further inland or upland. For example, a buyout program could be used in concert with a nature-based solution strategy that allows for sand dune accretion and upland marsh migration. Both actions could improve

[4] California statute provides a list of natural hazards and mitigation options that communities are required to consider when updating the Safety Element of their General Plan. https://opr.ca.gov/docs/OPR_C4_final.pdf

shoreline resilience, absorb storm surge and flooding associated with SLR and cyclical high-water events, and support habitat creation and connectivity. Additionally, by providing information, funding, technical assistance, and other types of support to communities who are ready to start talking about and planning for retreat / relocation, the recommended strategy helps to build community capacity. There are considerations, though, about increased services and infrastructure needed for the "receiving communities" and how to adapt and respond to these needs (e.g., housing, education, employment).

Barriers to implementation may include factors that are psychological (e.g., emotional responses, place attachment, optimism bias), institutional (e.g., subsidized risk, authority mismatch, lack of fit), and practical (e.g., coordinating logistics, lack of affordable housing, impacts on local economies). A key component of the recommended strategy, particularly the buyout program feasibility study, is to assess and minimize the impacts of displacement of residents or small businesses. Such programs and strategies beg questions such as: What are the estimated fiscal costs and other costs to carry out this recommended strategy and its associated actions? To the state? To municipalities? What resources do you anticipate needing to inform Mainers about the strategy and the opportunity/costs of the strategy? Where would financing likely come from? Finally, the recommended strategy incorporates considerations about justice and equity into all associated actions, including potential impacts on low income and communities of color, especially Tribal communities. People are deeply connected to many of the places in Maine that are most vulnerable. These places are intertwined with history, identity, culture, traditions, memories, and more. Retreating or relocating away from these places may reduce physical risk to communities but the experience will be emotional and potentially traumatic for those involved. A great deal of empathy as well as expertise in mental health resilience and trauma-informed practices will be required to develop and implement an equitable "getting out of harm's way" strategy.

The **first recommended action** for a "getting out of harm's way" strategy is to comprehensively foster long-term, coordinated resilience initiatives by developing or strengthening policies, regulations, funding mechanisms, and technical assistance programs that support communities in taking coordinated actions across the full spectrum of resilience choices (Avoid, Protect, Accommodate/Adapt, and Remove/Relocate). Maine has more than 5,000 miles of tidally influenced coastline, thousands of miles of rivers and streams, and lakes covering more than one-million acres of the State.

A history of development along Maine's shorelines makes our infrastructure susceptible to flooding, made worse by SLR and increases in storm frequency and intensity. Shoreline armoring is becoming the dominant response for landowners to address storm damage; however, these designs can degrade ecosystems and cause further site instability, which is counterproductive to environmental and public safety goals. Accommodation and protection are often reactional strategies that can exacerbate erosional forces and seek to solve flooding impacts without using the full toolbox of available options. Areas of repeated inundation and damage can be returned to natural states as wetlands, marshes, beaches, and dune systems that provide protection for more inland infrastructure.

Retreating from shorelines is also costly and often contentious. Some communities may choose to do nothing or have a patchwork approach (home by home, business by business). A void of planning ahead can lead to unmanaged or unplanned retreat, which can result in inequitable outcomes. Shoreline retreat is a multidisciplinary issue that involves geology, climate sciences, state and municipal government, environmental science, environmental regulation, business and insurance, land use and transportation planning, communication and behavior change theory, and many other areas of potential study.

Solutions to this issue are also multifaceted. While we have started to identify some of the responses, there is need for further discussion - legislation, changes to regulations and local ordinances, establishment of funding sources and institutional structures, and improved community engagement processes. These solutions necessarily involve identifying which land uses are appropriate along Maine's shorelines, and how to balance local needs and interests against long-term protection and cost-savings. They also require cross-cutting land use conversations - compact development, determining where people will go (receiving areas) and keeping those in town who want to stay, as well as keeping local tax base. Some communities will prioritize a phased approach with relocation as a longer-term strategy that comes after protecting and accommodating. Some communities may decide to relocate on a nearer-term timeline and skip/expedite protection or accommodation steps. To help communities facilitate these discussions, information about costs that elected leaders will need, would help contextualize the effect on the community tax base. Costs of various practices based on what has been funded at the federal, state and local levels has generated a well of information to draw from and synthesize.

Opening the toolbox to the full suite of resilience options will support Maine’s communities to determine transitional infrastructure changes (e.g., protect, accommodate) as well as transformational changes (e.g., avoid, retreat). Choices can be phased in over time, some as nearer-term, no-regret implementation measures (e.g., land use regulations that prevent development), as well as land acquisition in undeveloped flood-prone areas; or using natural design solutions, such as marsh restoration or living shorelines when armoring so designs provide infrastructure resilience with environmental benefit.

The **second recommended action** is to assess mechanisms for “getting out of harm’s way” by conducting a feasibility study to explore a voluntary, state-level buyout and acquisition program, including potential funding mechanisms, its administrative and institutional structure, and its social, economic, and cultural implications. Currently in the US, property buyouts and acquisition programs are almost universally voluntary. The government works with willing property owners to purchase homes located in floodplains that have been damaged by floods and that are at-risk for future flooding. In most cases, the federal government provides much of the funding (~75%) for buyouts through agencies like FEMA or HUD, while state or local entities administer the programs and provide a percentage of matching funds (~25%). Homeowners typically receive the pre-storm / pre-damage, fair market value for their homes. Under most circumstances, homes are demolished, and the land is returned to a state of natural, open space

in perpetuity, meaning the property cannot be redeveloped. Several buyout programs exist in response to growing climate threats, including in California, Hawai'i, New Jersey, New York, New Hampshire, Texas, and Washington. A Maine-specific feasibility study[5] will support our understanding of the distinct impacts, implications, and prerequisites of a voluntary buyout program.

The **third recommended action** is to support participation in long-term resilience planning and decision-making by developing a framework and identifying funding to support facilitated community conversations for collaborative learning, dialogue, and deliberation around retreat / relocation strategies – for communities ready to have those conversations. Skillfully facilitated community conversations that engage people in meaningful and empowering ways is critical to gaining a holistic understanding of how getting out of harm's way could affect communities, especially priority populations who face distinct social and cultural impacts. Community participation in planning and decision-making allows for the inclusion of different types of knowledge and expertise, including local and Indigenous knowledge as well as lived experience, which helps to ensure that resilience strategies are chosen according to how well they fit a community's needs, values, and aspirations. Active engagement in shaping plans also gives communities more agency over their own future and increases the likelihood of support for the outcome of a planning process. Facilitated community conversations are essential to navigating competing interests and priorities. Moreover, community conversations can strengthen connections and cohesion among community members, which can help to build social resilience and help community members support each other during times of crisis, including during climate disasters and potential displacement. Examples of participatory, community-led relocation efforts are tied to more just and equitable outcomes.

The following questions related to retreat / relocation were identified by the Community Resilience Planning Subgroup during the drafting of the 2020 *Maine Won't Wait* plan. These questions remain integral to all aspects of the "getting out of harm's way" strategy that we are proposing:

- What are the **community impacts** associated with relocation?
    - For example, availability of alternate housing, loss of municipal tax base, reduction in user/ratepayer base for municipal utilities, loss of population to neighboring communities, impact on community culture, historic properties, neighborhoods, and others?
- What are the **infrastructure impacts** associated with more frequent and intense flooding events?
    - How many times and at what cost threshold do we repair before we rebuild?

[5] Buyout programs are in place and functioning well in several other states. Research conducted by a Georgetown University Law student (see Coscia 2022) analyzed the strategies used in other states (NJ, VA, SC, NC; there are others since this research was completed) to establish the authority, funding options, use of purchased land to build resilience, and equity considerations of their buyout programs. It suggests recommendations for a Maine-specific program within the Land for Maine's Future program in collaboration with MEMA, and identifies leverage opportunities, future sustainable funding sources, post-buyout strategies, and equity considerations. Annex 4 summarizes some of the paper highlights as well as some additional research on programs covered.

    - How many times and at what cost threshold do we repair before we relocate?
    - Do we repair when near the end of asset life?
        - If so, how near and by what criteria?
    - Are such criteria based on how many people are affected, trapped, or forced to detour, or by what services are rendered less or inaccessible?
    - How does the system (bridge, bridge approaches, peninsula cut-offs) act together to provide protection?
    - How do we factor in the cost of installing a temporary bridge and a new bridge as the risk dynamics change?
    - What is the impact of catastrophic failure relative to the cost of repair and hardening?
        - For instance, if a wastewater treatment plant failure extends shellfish closure beyond a mandated permanent closure area to those that are normally open, have we reached an **unacceptable damage threshold**?
- Who is affected at the regional and statewide level and **who pays when risk is allowed to continue**?
- **What process do we use to discuss these issues**?
    - What is the public process for projects that cross jurisdictional boundaries?

(EXISTING) Strengthen public health monitoring, education, and prevention

The recommendation to "Strengthen public health monitoring, education, and prevention" under Strategy F is a continuation of existing recommendation from the State's 2020-2024, Climate Action Plan, and is supported by five new actions. The proposed actions are distinctly tailored to increase resilience for all people in Maine who are and will be affected by climate change, and especially for the most at-risk and disproportionately impacted populations. The proposed actions are cross-cutting, serving priority populations struggling with climate impacts, mental illness, limited agency, and lack of access to healthcare and mental health services. Moreover, these proposals will support those communities struggling with governance challenges as they face climate impacts with minimal capacity to address them. The recommendation and suggested actions are intended to boost communities' capacity to engage and serve those most in need, through both traditional channels of education, care and training, and to empower "bottom up" processes to reach those who might not otherwise be served by or engaged with climate-related programs.

Strengthening public health monitoring, education, and prevention would not directly or indirectly reduce greenhouse gas emissions, although expanding urban tree cover may decrease heating and cooling energy use and thus decrease some greenhouse gas emissions. The recommended strategy does decrease the likelihood of climate hazards by helping communities to consider and plan for potential public health hazards. Through the planning process, communities may make proactive decisions that reduce the likelihood of climate hazards, especially those caused by invasive species, vector-borne diseases, or extreme temperature or air quality events. Better tracking and utilization of data on public health hazards (e.g., poor air quality, poor water quality, extreme temperature, vector-borne illnesses) and utilization of

information in mitigation strategies will create a healthier living environment and improved quality of life by decreasing risk from climate hazards.

Climate risks or burdens for any populations in Maine will not increase by this recommendation, however the recommended actions would expand access to essential services like community centers for heating, cooling, and clean air, and may also expand access to services needed to operate these centers (e.g., transportation services, providing food or basic medical care at community centers). Many of the actions in this recommendation are specifically targeted to address low-income and fixed income residents, including those in need of extra assistance to remediate mold issues and those who may not have access to clean air or adequate heating/cooling in their homes during times of poor air quality or severe weather. Additionally, by targeting urban forestry expansion and maintenance in communities lacking in adequate tree cover, many public health benefits can be achieved including reduced heat stress and improved air quality and mental health, at no direct cost to residents.

This recommendation would help to support public health by supporting educational resources for local governments, community organizations, and the public, providing increased monitoring and data to support decision-making, and creating investments in home weatherization, indoor air quality, and urban forestry. Certain actions may create jobs in urban forestry and the expansion of training opportunities depending on the degree of implementation.

State agencies, along with local and federal partners, would develop, refine, and/or amplify education tools and provide the recommended additional public health, technical and financial assistance information. Communication could be accomplished through existing media channels (e.g., radio, television, print, social). Communications in multiple forms of media, in languages other than English, and through trusted community networks are also necessary to reach the intended priority populations. Financing would likely come from a variety of sources, including by accessing existing state, federal, and local funding and grants, securing additional federal and community grants, and working with nonprofits and community partners for implementation.

The actions proposed are varied and would include the cooperation of many federal, state, local, and nonprofit agencies and programs, making an estimate of costs unfeasible. Many of these actions, however, have been implemented successfully in parts of Maine and in other states. It is worth acknowledging that the state of California has been developing options for communities to utilize clean air centers to help vulnerable populations in times of severe wildfire smoke.

All the proposed recommendations and actions are feasible with today's technology; however, the largest barrier to many of the recommended actions is likely insufficient capacity (e.g., funding, staff time, and expertise) and community readiness (e.g., prioritization, buy-in).

Cross-over

Does the recommended strategy involve other working groups/sectors? *Select all which apply.*
How did the Working Group coordinate with others around these overlaps?

- ☒ Transportation
- ☒ Buildings, Infrastructure, and Housing
- ☐ Energy
- ☐ Community Resilience
- ☒ Coastal and Marine
- ☒ Natural and Working Lands
- ☐ Other (please describe)

Each of the actions associated with the "getting out of harm's way" strategy has cross-over with all other working groups. The spectrum of responses – avoid, protect, accommodate/adapt, remove/relocate – will have varying implications depending on the response. The choice to avoid or protect can support habitat protection and restoration, a consideration within the Natural and Working Lands Working Group, while the choice to accommodate/adapt can grant time to understand and plan for any necessary future scenarios to remove/relocate. Such time can allow the state and communities to realize/maximize the full life cycle of existing infrastructure investments (e.g., roads, bridges, water and wastewater systems), a consideration within the Transportation, Coastal and Marine, and the Buildings, Infrastructure, and Housing Working Groups.

A feasibility study of a buyout program has implications for all the other working groups. The water-dependent facilities, businesses, and infrastructure associated with Maine's working waterfront may not benefit directly from a buyout program. However, the feasibility study should include an analysis of how a buyout program could a) remove shore hardening structures that threaten the working waterfront that remains, b) compensate working waterfront owners who cannot afford to rebuild in vulnerable locations, and c) ensure that any working waterfront lost to a buyout program is not conveyed for redevelopment for non-working waterfront purposes.

A feasibility study for buying out residential and business properties will need to consider the implications of any "stranded infrastructure" and the remaining properties who choose not to accept a voluntary buyout option. These are considerations in the Transportation and Buildings, Infrastructure, and Housing Working Groups. The property tax and ratepayer structure within municipalities and among various utilities are an essential part of a feasibility study.

The emphasis of community conversations to explore the implications of removal/relocation would require information related to most, if not all, of the other working groups. We anticipate that the Equity Subcommittee will be a critical partner in establishing a framework for community conversations about relocation that elevates all voices, including those of priority populations. We recognize that such community conversations must be grounded in trauma-

informed practices and consider the readiness of communities and individuals to talk about climate change and strategize to act.

The recommendation to establish a task force to develop a framework for adaptation and resilience metrics has crossover to the Science and Technical Sub-Committee so that goals, indicators and metrics are grounded in the climate impacts that Maine faces, and an understanding of what data exist to measure progress. A framework for adaptation and resilience goals, indicators and metrics intersects with all the Council Working Groups. Each working group was asked to identify metrics for their strategies, and these should be reviewed in the context of a statewide framework for adaptation and resilience.

A subset of the CRWG and the Coastal and Marine Working Group met in early May to review our draft recommendations. We later shared our respective deliverable templates and provided specific feedback on one another's strategies and actions. This effort informed each Working Group of where our recommendations are in alignment and ensured we were not missing or duplicating efforts.

Priority Populations

- *POPULATIONS: Identify any priority populations impacted or affected by this recommended strategy.*

For purposes of brevity and efficiency, it doesn't make sense to identify every demographic within the priority populations for whom our recommendations and proposals are relevant. Everyone in Maine is impacted by climate change. The toll of that impact, emotional and physical, will vary. The intention behind focusing on mental health resiliency and trauma-informed communications and support, is to provide resources for people and communities based on "where they are' – both mentally and physically. We also aim to improve agency, hope, and outreach since research shows that when people have greater decision latitude, they experience less stress, even if they can't control the source of their stress.

Through various assessments, we recommend identifying geographic and other demographic needs for mental health resilience, resources, and agency. Additional mental health resources, while oriented to a climate change context, will benefit constituents' health, well-being, agency, and efficacy. A lack of resilience resources for key populations requires sustained investment for implementation. An unintended consequence of additional outreach may be that some individuals, especially undocumented individuals, migrant workers, and New Mainers, may be hesitant to communicate or share information with government entities, even if it is through trusted partners; these relationships take time and consistent effort to build trust. Different people and communities will need different resources, support and strategies. Proposed training and resources can better support people across the state. The cross-cutting and statewide nature of these strategies and actions have the potential to impact most, if not all, the priority populations identified by the Equity Subcommittee.

A feasibility study must assess the impacts of a buyout program among several priority populations, including low-income households and communities, some of which are rural and with low municipal capacity, mobile home residents, older adults, climate frontline communities within flood zones, commercial fishing businesses, and businesses that are small, and minority- or women-owned. Conveners and facilitators of community conversations would need training and to ensure the community members from priority populations are included (if they are not, themselves, leading the conversation), which would require identifying which priority populations are present in the municipality or region and conducting concentrated outreach and trust building.

- *IMPACTS: Using the Equity Sub-Committee analysis **(see Annex 3)** from March 2023 as a starting place, consider both potential positive outcomes and any unintended consequences/byproducts. Describe these potential impacts/benefits.*

Positive impacts to priority geographic areas and communities would include additional technical, capacity, and (potentially) financial assistance to support improved understanding and engagement in hazard mitigation, disaster preparedness (i.e., planning, training, and exercise), and response and recovery, all collectively leading to the reduction of risk and protection of life and property. Priority communities, especially local governments, would benefit from increased public health information and resources to distribute, since tracking and planning for the public health hazards are beyond the scope of most local jurisdictions. Increased technical assistance and resources from state agencies would better support community action to protect public health (e.g., by operating warming/cooling/clean air centers).

A strengthening of public health monitoring, education, and prevention will benefit priority individuals and households because many of them face barriers to health that are independent of climate change (but connected to the impacts of climate change on their health), including lack of insurance coverage, economic insecurity, outdated or poorly maintained housing (especially rental housing) or lack of housing, lack of access to health care, pre-existing conditions, lack of transportation, and/or other challenges. It is not within the scope of the Maine Climate Council to address all barriers to positive health outcomes in the state, but it is within the scope to address health outcomes made worse by climate change. Providing additional public health data, including of vector-borne illnesses, water quality, and air quality, can help the state to better track and address these issues, educate members of the public on their impacts, and set trigger points for action (e.g., opening a clean air center in a community if the Air Quality Index is predicted to exceed a certain threshold).

There are a variety of concerns about justice and equity as they relate to relocating people and property out of harm's way. Indeed, the impacts of a voluntary buyout program on the individuals, communities, and businesses noted above have far-reaching equity considerations. Although this recommendation aims to reduce physical risks associated with climate hazards, relocation does not guarantee relocation to safe locations, and may amplify social risks (e.g., loss of community and sense of place, decreased local tax revenue, loss of affordable housing,

increased gentrification). More specifically, the cost of relocation may exceed the funds they receive (especially for those with low-income) and will likely not cover the intangible loss of community. There may be no affordable alternative housing available, particularly in the current housing crisis. Losses can extend into future employment options for those in water-dependent industries, like commercial fishing and tourism.

While buyouts offer a pathway forward for responding to increased flooding risk, there are shortcomings in many programs that can have unintended consequences. For example, buyouts are only available to property owners, meaning they are not an option for those who rent or do not have established property rights. Additionally, buyout programs typically provide funding to individual homeowners and thus are not well suited to or equipped for collective community relocation (e.g., neighbors moving with and staying next to neighbors in the new location), which may be a preference or priority in certain situations or cultures. Another concern is that, in many cases, buyout programs are implemented only after a disaster has already occurred. Thus, buyouts are almost exclusively reactive measures in that they respond to – rather than anticipate – disaster, meaning that some level of devastation must occur before they are available. There is evidence to suggest that when buyouts take place, they tend to be concentrated in lower-income neighborhoods where social vulnerability is higher, which raises the concern that such communities may be disproportionately impacted by or even a target for buyout programs. All these potential impacts would need to be explored and addressed in a feasibility study (see below).

Governance is a key mediator of whether or to what extent the risks of relocation, as well as the benefits of resilience strategies, are equitably distributed across populations. To identify and overcome the challenges associated with developing equitable governance strategies, it is critical to understand the social, cultural, and historical context in which relocation may take place. This is where our recommendations on authentic community engagement and training for conveners (the "how") are helpful to consider. Furthermore, a feasibility study would address the equity considerations of relocation assistance, affordable housing, mortgage forgiveness (public/private partnerships with banks and lenders), sustainable funding sources beyond single-event disaster recovery, loss of property tax base and infrastructure ratepayer base, and the need for state and local case managers within a permanent program to build expertise and establish trust. A feasibility study should also explore growth scenarios to reflect potential receiving areas for relocation and in-migration to Maine.

Another equity concern related to relocation centers around community participation (or lack thereof) in decision-making processes. Top-down, technocratic approaches to relocation, such as property buyout programs in Staten Island following Hurricane Sandy and community-wide relocation efforts in Louisiana and Alaska, have resulted in confusion, conflict, and inequitable outcomes. Resistance to relocation strategies and resulting conflicts stem, in part, from a lack of authentic community engagement and participation in planning and decision-making processes, and relatedly, from people feeling like their local knowledge and lived experiences are ignored. To move toward just governance systems that foster and facilitate community-led processes, relocation planning must involve high levels of ongoing, meaningful community

participation and shared decision-making powers. Our recommended action focused on community conversations lays the groundwork for this path forward.

Ensuring that the processes and outcomes of relocation are fair, just and equitable requires both mitigating future adverse impacts on frontline communities; and acknowledging and actively working to redress past harms inflicted on communities through discriminatory practices, such as redlining and involuntary relocation. These historical injustices are often the underlying drivers of social vulnerabilities that priority populations experience. To address these dynamics, underlying drivers of harm and inequity must be considered in all aspects of a "getting out of harm's way" strategy. For example, rather than just stating that a priority population may be impacted by a voluntary buyout and acquisition program, a feasibility analysis should identify, and articulate previous policies enacted, decisions made, or other social determinants that put these communities at higher risk. Additionally, to understand who may be most impacted by a "getting out of harm's way" strategy, the following questions should be embedded in the design, development, and implementation of all recommended actions:

- What group(s) may benefit from this policy, procedure, program, or project?
- What group(s) may be marginalized, hindered, or harmed by this policy, procedure, program, or project?
- Are there potential negative impacts on groups who have been historically restrained, excluded, silenced, or oppressed?
- Would this policy, procedure, program, or project provide benefits to one group at the expense of another group?
- Would this policy, procedure, program, or project create barriers to any demographic group?
- What steps can be taken to address disproportionate impacts, both harms and benefits?

To borrow from the Equity Assessment of the Maine Climate Council's work, "The creation of Maine's Climate Action Plan offers an opportunity for transformational change." We must find ways to direct investments with a climate lens, so we are increasing resilience with our growth. Investments in resilience should result in avoided damage to infrastructure, buildings, businesses, and natural resources that underpin local economies and livelihoods.

- *SOURCES OF INFORMATION: Describe how you know what groups are impacted/affected. Cite relevant data sources and/or formal conversations (MCC-organized panels, focus groups, etc.) with priority populations.*

The group drew from a large body of literature and resources (see References), including the results of the Equity Subcommittee Report (2023).

- *RESULT OF ENGAGEMENT: Describe any consultation or engagement with these priority population (either by the Working Group or through GOPIF's community engagement contractor). Describe how the Working Group's recommendations have changed as a result of these conversations.*

Work by GOPIF's community engagement contractor is ongoing, and preliminary results were presented to members of the CRWG in late May 2024. Our recommendations consider the results of the Equity Subcommittee Report (2023), along with experiences of Working Group members and information provided by presenters and attendees at the CRWG meetings. The Working Group's recommendations are tailored to acknowledge that traditional methods of sharing and soliciting information do not necessarily serve all populations, and our proposed actions are tailored to better promote two-way sharing of information and outreach to communities that may have been excluded from this process in the past.

- *IMPLEMENTATION*: *How might the recommended strategy be implemented in consultation with priority populations? Do priority populations have the resources and capacity necessary to implement or access this recommended strategy? How might you make recommendations to improve equitable access to resources and capacity-building? You might consider planning capacity, financial capacity, programmatic capacity, human capital, and other.*

Most of the proposed actions address the state's capacity to operate effectively and to assist priority populations; as such, implementation should be coordinated with regional and local partners to determine the types of assistance most needed and the ways in which state resources or coordination of volunteer resources could best address these needs. Special attention should be paid to rural, inland, and otherwise under-resourced communities. For asset mapping, priority populations should be consulted, compensated for their time (if possible), given deliverables in exchange for the information they provide, and have their boundaries respected in terms of unwillingness to publicly share the locations of certain historically or culturally significant sites.

Capacity in these priority communities could be further augmented through some of the proposed actions in this strategy, including assistance provided by Maine Climate Corps volunteers and enhanced training and response capabilities. Barriers to engaging with priority populations include potential language or cultural barriers, and lack of access to technology, education, trust, time/prioritization, and capacity to engage. Specific barriers will vary and would be best addressed by trusted partners (e.g., county EMAs, local nonprofits).

The only way for a "getting out of harm's way" strategy to be equitable, ethical, and effective is if it is carried out with on-going, meaningful engagement with affected communities generally and priority populations specifically. The feasibility study should consider relocation assistance (e.g., funding, staff to assist with securing housing) over and above fair market value and include tenant relocation. Community engagement and participation is critical for listening to community concerns and recognizing that a range of solutions may be necessary based on community differences. Clear descriptions of a potential buyout program would need to be produced in multiple languages and formats to describe available options, the means of establishing value, the voluntary nature of the decision, and the assistance available for relocation.

Effective communication strategies stress the importance of communicating in a way that addresses the values, interests, and worldviews of the audience and is not fear-invoking or simply the dissemination of scientific facts. Bonanno and colleagues (2021) describe this as framing communications across commonly held values, such as providing an opening statement, "resilient communities work together to protect the people and places that matter to them," using metaphors and clear explanations rather than jargon, and engaging in individual actions that are achievable.

Timeframe

What is the timeframe for this strategy and its actions?

	Short-term (2025)	Mid-term (2030)	Long-term (2050+)
To implement	X	X	
To realize outcomes	X	X	X

Implementation Next Steps

What types of next steps would be required to implement the strategy?

☒ Legislation, rules/regulation, internal program guidance changes
☒ Establishment of a new program or a fund,
☒ Conduct additional research
☒ Provide education or training
☒ Coordinate with other parties/agencies/states
☐ Other (please describe)

- **Measuring Outcomes** - How will you know the recommended strategy is effective? *Are outcomes measurable using current monitoring/data collection? Are there benchmarks or short-term indicators of success?*

See full discussion of metrics for all CRWG recommendations below, pursuant to Strategy G, Recommendation 5: Establish a Maine framework for measuring the effectiveness of adaptation and resilience actions across social, economic, governance, built and natural systems.

Other – Additional Rationale/Background Information

Pertaining to "Enhance the ability of the State of Maine to facilitate timely and effective natural hazard mitigation planning, response, and recovery," language approved in the most recent round of executive branch contract negotiations (in the most recent Tentative Agreement that was accepted) now allows salaried Department of Agriculture, Conservation and Forestry

(DACF) employees to be deployed on wildfire response and receive overtime, which is paid for separately than the source of their normal salary. This enhances opportunities for salaried DACF employees to respond to major wildfires with the Maine Forest Service both in- and out-of-state, but limits opportunities for interested salaried employees from other state agencies to do the same.

Pertaining to "Emphasize resilience through land-use planning and legal tools," actions were created in response to the observation that some existing county Hazard Mitigation Plans rely too heavily on qualitative data to be useful when supporting grant applications based around specific natural hazards. These plans sometimes print the testimony of town leaders verbatim and do not appear to attempt to interpret, verify, or challenge the information if it is incorrect. The testimony of community leaders and first responders is important to include and consider in the hazard mitigation process, but such testimony should be verified and supported by data whenever possible. Printing contradictory statements from leaders of neighboring towns in a Hazard Mitigation Plan creates confusion and does little to support use of the plan to leverage additional grant funding or to implement specific projects across town boundaries.

STRATEGY G: INVEST IN CLIMATE READY INFRASTRASTRUCTURE

RECOMMENDATIONS:

I. **(MODIFIED) Assess climate vulnerability, provide design guidance, and prioritize infrastructure improvements posing threats to public health**
    a. New Actions Proposed: 1
    b. Modified Actions Proposed: 1
II. **(NEW) Accelerate financing for climate mitigation and adaptation projects and resilient infrastructure**
    a. New Actions Proposed: 5
    b. Modified Actions Proposed: 0
III. **(NEW) Ease and improve resilience project applications for applicants and reviewers**
    a. New Actions Proposed: 8
    b. Modified Actions Proposed: 0
IV. **(NEW) Develop a comprehensive, long-term funding plan and investment strategy to support the implementation of *Maine Won't Wait***
    a. New Actions Proposed: 7
    b. Modified Actions Proposed: 0
V. **(NEW) Establish a Maine framework for measuring the effectiveness of adaptation and resilience actions across social, economic, governance, built and natural systems.**
    a. New Actions Proposed: 6
    b. Modified Actions Proposed: 0

Impacts

Describe the recommended strategy and its actions and how they address Maine's four climate goals – *reducing greenhouse gas emissions, increasing resilience, creating economic opportunity, and achieving equity through Maine's climate response.* Use the questions in Annex 1 of this document to guide the analysis of impacts.

- Mitigation
- Adaptation & Resilience
- Workforce & Economic Opportunity
- Achieving Equity
- Additional Costs
- Proven Strategy & Feasibility
- Other Criteria (optional)

The recommendation to "Assess climate vulnerability, provide design guidance, and prioritize infrastructure improvements posing threats to public health," under Strategy G, is a modified recommendation put forward with one new action proposal and one modified action proposal. Four new recommendations (and supporting actions) have been added for consideration: "Accelerate financing for climate mitigation and adaptation projects for resilient infrastructure," "Ease and improve resilience project applications for applicants and reviewers," "Develop a comprehensive, long-term funding plan and investment strategy to support the implementation of *Maine Won't Wait*," and "Establish a Maine framework for measuring the effectiveness of adaptation and resilience actions across social, economic, governance, built and natural systems." These recommendations are important and timely as the state of Maine has experienced a historic seven Presidentially declared disasters and one emergency declaration in the last 24 months alone, resulting in $105.6 million in public infrastructure damages across 15 counties. With mitigation measures saving up to $13 per $1 invested,[6] now, more than ever, the state would realize the cost savings associated with building back better and stronger.

The recommendation to "Accelerate financing for climate mitigation and adaptation projects for resilient infrastructure" is aimed at accelerating financing for climate mitigation and adaptation projects along with resilient infrastructure. The recommended actions include conducting a feasibility study for establishing a state resilience bank, assessing state financing mechanisms, exploring federal resources, and ensuring that any new financing institution prioritizes climate resilience. Collectively, this recommendation adds cohesion to the multifaceted landscape of current climate funding initiatives. These actions address Maine's goals by potentially reducing greenhouse gas emissions through the funding of mitigation projects, increasing resilience through the funding of adaptation projects, and creating economic opportunities through investment in resilient infrastructure.

[6] National Institute of Building Sciences. Mitigation Save 2020 Report. https://www.nibs.org/files/pdfs/ms_v4_overview.pdf.

The recommendation to "Ease and improve resilience project applications for applicants and reviewers" focuses on easing and improving the application process for climate mitigation and adaptation funding. Actions include standardizing application forms, pursuing a uniform application process, exploring alternatives to grant deadlines, and establishing mechanisms to relay technical assistance needs. These actions address Maine's goals by potentially reducing greenhouse gas emissions and increasing resilience through more efficient allocation of funding for mitigation and adaptation projects. They also contribute to supporting equity in Maine's climate response by lowering bureaucratic barriers and making the application process more accessible to a diverse range of applicants.

The recommendation to "Develop a comprehensive, long-term funding plan and investment strategy to support the implementation of *Maine Won't Wait*" recommends the development of a Climate Investment Strategy for Maine – a comprehensive, sustainable funding strategy that would ensure the state has the resources necessary to address Maine's four climate goals in a comprehensive manner.

The recommendation to "Establish a Maine framework for measuring the effectiveness of adaptation and resilience actions across social, economic, governance, built and natural systems" is placed within the overall investment strategy to ensure our metrics reflect a positive Return on Investment (ROI). Preliminary metrics are provided in the "Measuring Outcomes" section below for all the CRWG strategies. The actions call for convening a diverse task force to adapt federal and state frameworks for adaptation and resilience metrics specific to Maine's climate risks as identified by the Science and Technical Subcommittee. The task force would assemble the metrics recommended by all MCC Working Groups into a coherent framework.

While these five recommendations do not directly reduce greenhouse gas emissions, the associated actions enhance the capabilities of state and partner entities to increase the resilience of infrastructure in a systemic, systematic, and cost-effective manner. While emissions reductions would be considered a secondary benefit, the primary benefits associated with these recommendations include continued and expanded access to federal mitigation grant dollars, increased state investment, and overall decreased risk from climate hazards.

Estimated costs and emissions reduction estimates cannot be feasibly calculated, since actual costs vary widely based on the degree to which actions are implemented. Many of the actions could be accomplished through the use or expansion of existing programs and staffing within state and volunteer agencies, however, current capacity barriers across all levels limit the ability of state agencies to expand grant programs and revolving loan fund opportunities. As noted for Strategy F above, to carry out these actions effectively, additional staff in state agencies, such as MEMA, the Municipal Planning Assistance Program (MPAP) and Floodplain Management Program, are required to better support the demand for increased subject matter expertise and technical assistance in support of increased interest in resilience and hazard mitigation funding streams. Decreased federal funding in support of emergency management and flat funding for floodplain management in particular limit the State's ability to support mitigation and planning

programs given the growing demand for resiliency planning, project scoping, and project initiatives.

Cross-over

Does the recommended strategy involve other working groups/sectors? *Select all which apply.* How did the Working Group coordinate with others around these overlaps?

- ☒ Transportation
- ☒ Buildings, Infrastructure, and Housing
- ☒ Energy
- ☐ Community Resilience
- ☒ Coastal and Marine
- ☒ Natural and Working Lands
- ☐ Other (please describe)

How did the Working Group coordinate with others around these overlaps?

These strategies inherently involve multiple sectors. The Funding and Finance Subgroup has not coordinated with other working groups beyond understanding that they, too, are likely to recommend strategies that regard the capital investment, fundraising, financing, and allocation strategies for funding Maine's initiatives on climate change and community, environmental, and economic resilience.

Priority Populations

Consider the priority populations impacted or affected by this recommended strategy. A list of priority populations is contained in **Annex 2** of this document.

- *POPULATIONS: Identify any priority populations impacted or affected by this recommended strategy*.

The recommendations to "Accelerate financing for climate mitigation and adaptation projects for resilient infrastructure" and "Develop a comprehensive, long-term funding plan and investment strategy to support the implementation of *Maine Won't Wait*" will have impacts across priority populations if the recommendations lead to the creation of funds specifically dedicated to these populations.

The recommendation to "Ease and improve resilience project applications for applicants and reviewers" is likely to affect low-income and rural communities, small towns with limited municipal capacity, and otherwise disadvantaged communities as it aims to intentionally ease the process of applying for funding by improving application processes so that they require less time, offer greater flexibility in terms of application deadlines, and connect priority populations to technical assistance providers for support. This recommendation further proposes a funding process that is more accessible, attainable, and efficient so communities – especially those with limited capacity – can be positioned to access funding for both their short- and long-term goals.

Establishing a Maine framework for measuring the effectiveness of adaptation and resilience actions across social, economic, governance, built and natural systems will provide a guide by which the state can ensure it is achieving its equity goals in terms of priority population engagement in decision-making, and ensuring they benefit from adaptation and resilience investments whether in dollars, technical assistance, community engagement, or built and natural systems.

These recommendations also support the Governor's executive order (Signed 5/21/24) to create the Commission on Infrastructure Rebuilding and Resilience.

- *IMPACTS: Using the Equity Sub-Committee analysis **(see Annex 3)** from March 2023 as a starting place, consider both potential positive outcomes and any unintended consequences/byproducts. Describe these potential impacts/benefits.*

These recommendations, and associated actions, have potential to benefit all priority populations. By accelerating financing for climate mitigation and adaptation projects, communities most at risk from climate change impacts receive the necessary resources for community development and resilience. Further, the focus on resilient infrastructure can improve facilities in under-resourced areas, enhancing their ability to withstand adverse climate events. Finally, the emphasis on improving the application process can contribute to achieving equity by providing communities with limited capacity better opportunities to secure funding for climate response initiatives.

Altogether, these strategies aim to provide a more equitable distribution of resources, which is crucial for marginalized communities. The establishment of a state resilience bank and the assessment of state financing mechanisms could potentially lead to the creation of funds specifically allocated for these demographics. This could facilitate their access to capital, enabling them to implement climate resilience measures, which they might not have been able to afford otherwise.

Moreover, the exploration of alternatives to grant deadlines and the establishment of mechanisms to relay technical assistance needs could make the application process less stressful and more manageable for these communities. This could increase their chances of securing funding and additional technical assistance. The recommended actions aim to address Maine's climate goals comprehensively. This implies a long-term commitment to both climate change mitigation and adaptation and to social justice and equity.

Finally, Maine can address past, current, and ongoing vulnerabilities in priority populations by the intentional measuring of what and where investment is made, who benefits and how, process considerations, and articulating why such investments are necessary.

- *SOURCES OF INFORMATION: Describe how you know what groups are impacted/affected. Cite relevant data sources and/or formal conversations (MCC-organized panels, focus groups, etc.) with priority populations.*

The Funding and Financing Subgroup drew on their professional experiences working with and serving diverse priority populations but did not hold any formal conversations with such populations in the development of these recommendations. For example, subgroup members from New England Environmental Finance Center and Maine Department of Environmental Protection previously collaborated on a series of workshops to help increase community access to climate resilience funding, which included participation from small towns with limited municipal capacity. Topics discussed included grant funding priorities and challenges, understanding what funders look for in grant applications, identifying support services, building relationships, and beginning the process of establishing sustainable financing sources. Observations and ideas generated during these workshops were collected in two community resilience funding guidance documents: Setting Municipalities up for Success and Setting Funders up for Impact. These documents assemble the wisdom and expertise of local municipal officials on the challenges and opportunities to fund community resilience efforts and provide guidance in the form of best practices for communities or fund managers/grant makers to act in response to identified gaps.

- *RESULT OF ENGAGEMENT: Describe any consultation or engagement with these priority population (either by the Working Group or through GOPIF's community engagement contractor). Describe how the Working Group's recommendations have changed as a result of these conversations.*

The Funding and Financing Subgroup drew on their professional experiences working with and serving diverse priority populations but did not hold any formal conversations with such populations in the development of these recommendations.

- *IMPLEMENTATION: How might the recommended strategy be implemented in consultation with priority populations? Do priority populations have the resources and capacity necessary to implement or access this recommended strategy? How might you make recommendations to improve equitable access to resources and capacity-building? You might consider planning capacity, financial capacity, programmatic capacity, human capital, and other.*

The Funding and Finance Subgroup recommends the proposed strategies/recommendations are implemented collaboratively between the State, municipalities, regional planning and finance organizations, Community Resilience Partnership Regional Coordinators and Service Providers, and community groups/non-profit organizations. This collaborative implementation also includes cross-municipal support, as the recommendation to "Ease and improve resilience project applications for applicants and reviewers" proposes grant reports to serve as case study opportunities for other communities to learn how a project was implemented.

To ensure the benefits of these proposed actions reach a broad set of priority populations, the Subgroup also recommends consideration of expanding eligibility for funding and finance

opportunities to include other groups, like community organizations, rather than just municipalities.

Timeframe

What is the timeframe for this strategy and its actions?

	Short-term (2025)	Mid-term (2030)	Long-term (2050+)
To implement	X		
To realize outcomes		X	X

Implementation Next Steps

What types of next steps would be required to implement the strategy?

☐ Legislation, rules/regulation, internal program guidance changes
☒ Establishment of a new program or a fund,
☒ Conduct additional research
☐ Provide education or training
☒ Coordinate with other parties/agencies/states
☐ Other (please describe)

Implementation of the Funding and Financing Subgroup recommendations requires state-driven action that stands to impact, and thus requires coordination with, multiple state agencies and social sectors. Therefore, we recommend that a state agency/office with a crosscutting mandate take the lead in strategy/action implementation, such as the soon-to-be formed Maine Office of Community Affairs or the Governor's Office of Policy Innovation and the Future. There may also be a role for the Maine Infrastructure Rebuilding and Resilience Commission given its multi-agency makeup and representatives with expertise in infrastructure, finance and insurance.

Implementing the recommendation to establish a Maine framework for measuring the effectiveness of adaptation and resilience actions across social, economic, governance, built and natural systems will likely require the assistance of a consultant with experience in supporting a task force, engaging a broad spectrum of stakeholders, and developing such frameworks.

MEASURING OUTCOMES

NOTE – the following applies to the measurement of outcomes across all new and updated strategies proposed by the CRWG.

The task of measuring adaptation and resilience outcomes is complicated by the challenge of measuring disaster averted, dollars not spent, lives not disrupted, livelihoods remaining intact,

natural systems absorbing high energy inputs, and infrastructure withstanding significant impact in the face of extreme weather. The academic literature on resilience metrics ranges from the technical and quantitative, such as detailed engineering analyses of materials and their structural ability to withstand external stress, to the subjective and qualitative, such as perceptions of satisfaction with inclusion of disadvantaged communities in decision-making. Methods for measuring outcomes discuss the essential steps of establishing goals specific to geographic and temporal scales. Goals and their associated indicators of success range across natural and built systems, within governance structures at all levels, and whether the individuals or communities can realize climate resiliency given their capacity to act to reduce that risk. Finally, we can measure whether policy choices allow us to resist the impacts of severe weather events or allow us to persist when we "take a hit," and/or choose an entirely different path from the one that the science of climate change tells us will happen again and with greater severity.

Given this complexity, the CRWG recommends, in Strategy G, Recommendation 5 above, that the Climate Council convene a task force to establish a Maine framework for measuring the effectiveness of adaptation and resilience actions across social, economic, governance, built and natural systems. Several high-level, statewide resilience metrics can initiate this effort. The following metrics provide a variety of statewide resilience targets and illustrate different measurement approaches:

- By 2030, 100% of Maine communities have refined any statewide or regional climate vulnerability assessments to describe their specific, local vulnerabilities.
- By 2030, 100% of public working waterfront infrastructure is designed and constructed according to standards that have the potential to withstand 1.5 feet of SLR, a 1% surge event, and associated wave action (a similar metric for private infrastructure can be developed).
- By 2030, 100% of Maine communities are enrolled in the Federal Flood Insurance Program and 50% participate in the Community Rating System; thereby realizing discounts in the cost of flood insurance.
- By 2030, 80% of undeveloped land available for coastal marsh migration is protected.

Decisions about which metrics to use must be based on available data. Where an adaptation or resilience goal is identified, with associated indicators of success, but there are no (or limited) data to measure that success, a decision is needed to adjust the metric or determine the cost and viability of assembling the data to measure progress.

What follows are draft and detailed metrics for each of the recommendations put forward by the subgroups within the CRWG. Some are indicators that need further work to define their associated metrics. Some are outputs (# of plans), some are outcomes (plans that include strategies, some highly specific, for resilience), some address process (provision of services and outreach; inclusion of those most vulnerable to climate impacts), and some address substantive change (acres of vulnerable land conserved).

Each of the Climate Council Working Groups proposed measurable outcomes in response to this question. As recommended above, this assemblage of metrics needs an organizing framework; input from each of the Working Groups, the Equity Subcommittee, and respective stakeholders; and a set of the adaptation and resilience goals for Maine, their associated indicators of success, and the metrics that reveal how and whether we are achieving our goals.

Potential metrics for a strategy to empower local and regional community resilience efforts

- Number of communities served by regional or local resilience staff.
- Number of communities with a local sustainability or climate committee.
- Number of communities in receipt of Community Action Grants to develop/implement adaptation / resilience actions.
- Number of communities with completed climate vulnerability assessments.
- Number of communities with locally adopted adaptation and resilience plans.
- Tracking affordability and access to insurance policies.

Potential metrics for a strategy on "getting out of harm's way"

- Completion of a feasibility study.
- Inclusion of equity considerations in program priorities and criteria for acquisition. NOTE: this is an example of an indicator; metrics would be the # of equity considerations in program funding criteria, or the # of acquisitions from disadvantaged populations.
- Provision of local and state case managers with community engagement skills to design community-specific responses, support individuals, households and businesses from initial outreach through final relocation.
- The amount of vulnerable land acquired or conserved.
- The number of communities / people engaged in community conversations about retreat / relocation.
- The number of local and regional plans that include retreat / relocation.
- Shifts in knowledge and perceptions about "getting out of harm's way" from (for example) pre/post surveys in community conversations.

Potential metrics for a strategy on integrating resilience and emergency management, response, and recovery planning

- Number of counties and communities engaged in direct technical assistance.
- Number of HMPs completed or updated using an updated list of hazards (inland and coastal).
- Number of community plans created prominently featuring maps and visual storytelling that could benefit a lay audience.
- Number of Maine Climate Corps members engaged by communities.
- Number of community projects completed.
- Number of individuals attending training programs.
- Number of volunteers engaged.
- Number of asset maps created and included in HMPs or similar plans.

- Tracking engagement among community members in the comprehensive planning process over time, and assessing which resources are better utilized or more effective than others.
- The number of communities enrolled in the Tree City USA program.
- The number of communities that create or update an Urban Forest Inventory and Management Plan.
- Potential metrics to strengthen public health monitoring, education, and prevention
- The number of programs supporting home weatherization, indoor air quality improvement, and/or mold abatement.
- The number of homes reached by each program.
- The number of employee or volunteer hours spent in each program.
- The financial investment provided or leveraged by each program.
- The cost savings provided by each program in terms of dollars saved from reduced heating, cooling, and/or home repair costs, and/or the dollars saved in terms of avoided negative public health outcomes.
- The number of public outreach materials created or updated to address the number and geographic distribution of cases of vector-borne illnesses in Maine that are exacerbated by climate change and the approximate number of healthcare providers and individuals reached with such materials.
- The number of communities receiving grants and/or technical assistance to support urban forestry to address heat stress.
- The number and geographic distribution of community warming, cooling, and/or clean air centers, and the approximate number of individuals using such centers.
- The number of households ensuring potentially toxic heating and cooling systems are raised above base flood elevation.

Potential Metrics for a strategy on improving mental health resilience and communication

- Core mental health needs, assets, and challenges for climate communications and engagement are identified, available and tracked among all sectors of our state, regardless of political, economic or demographic affiliation.
- Mental health resources and programming are developed, financially supported, and provided at a low cost for interested individuals, communities and groups and in multiple settings.
- Number of peer-to-peer psychological support systems.
- Curriculum available throughout school districts to support youth.
- Number of assessments conducted (e.g., community, providers).

Potential Metrics for a strategy to invest in climate ready infrastructure

- Feasibility study conducted.
- Grant application forms standardized across different sources of state support.
- See also discussion above about measuring outcomes.

Other – Additional Rationale/Background Information

With regards to the recommendation "Accelerate Financing for Climate Mitigation and Adaptation Projects for Resilient Infrastructure", there are multiple rationales for exploring a state resilience bank. It can serve as one central place for receiving and managing federal funding, acting as an umbrella institution that houses the state's multiple existing, dispersed financing mechanisms and institutions (e.g., Maine Municipal Bond Bank, Finance Authority of Maine, Efficiency Maine Green Bank, Clean Water State Revolving Fund, Drinking Water State Revolving Fund, other financing arms of state agencies such as the Department of Economic Development and Maine State Housing Authority). A resilience bank can provide efficient administrative and loan underwriting support for the state's financing programs, while ensuring technical reviews remain with the appropriate state agency staff. A key rationale for exploring a resilience bank is for its potential to generate new sources of revenue for projects by using public money to attract and leverage private capital. There are multiple relevant examples in the Northeast including the Rhode Island Infrastructure Bank, the Connecticut Green Bank, and the New Jersey Infrastructure Bank. These institutions often started with one state financing program (e.g., Clean Water & Drinking Water State Revolving Fund in RI) or focus area (e.g., energy efficiency and renewable energy in CT) and expanded to encompass multiple funding programs and priorities.

An additional rationale for exploring a Maine state resilience bank now is to take advantage of federal dollars to capitalize and/or provide capacity support to new and existing green banks through the Inflation Reduction Act's Greenhouse Gas Reduction Fund (GGRF). In April 2024, the U.S. Environmental Protection Agency announced the selection of three national green banks under the GGRF's National Clean Investment Fund. One recipient, the Coalition for Green Capital (CGC), has nearly 15 years of experience helping establish 20 state, local, and nonprofit green banks and will leverage the existing and growing national network of green banks as a key distribution channel for investment—with at least 50% of investments in low-income and disadvantaged communities. CGC also plans to deliver critical resources to the expanding network of state and local green banks as well as other community lenders across the country. This could be an opportunity for Maine to access free assistance in evaluating the feasibility of, conceptualizing, and/or capitalizing a state resilience bank. While the GGRF name suggests a focus on mitigation investments, there is strong emphasis on resiliency, and it is worth exploring whether funds can be used for adaptation investments as well.

Additional information on the GGRF:
https://www.epa.gov/newsreleases/biden-harris-administration-announces-20-billion-grants-mobilize-private-capital-and
https://www.epa.gov/greenhouse-gas-reduction-fund/ncif-selected-applicant-details
https://www.epa.gov/greenhouse-gas-reduction-fund/ncif-and-ccia-fast-facts

STRATEGY H: ENGAGE WITH MAINE PEOPLE AND COMMUNITIES

RECOMMENDATIONS:

I. **Create a Climate Psychology Task Force to provide resources for climate leaders, service providers, public officials, activists and others involved in climate work on best practices for addressing mental health, psychological resilience, climate communications and engagement**
    a. New Actions Proposed: 7
    b. Modified Actions Proposed: 0

II. **Prioritize awareness and action on mental health impacts of climate-related adverse experiences, especially in youth and other vulnerable populations.**
    a. New Actions Proposed: 4
    b. Modified Actions Proposed: 0

III. **Offer programming and education on psychological resilience strategies to encourage hope, foster agency and support collective action.**
    a. New Actions Proposed: 3
    b. Modified Actions Proposed: 0

IV. **Increase knowledge and skills for climate leaders, activists, public officials and others on effectively engaging and communicating around climate change so as to encourage more local participation**
    a. New Actions Proposed: 2
    b. Modified Actions Proposed: 0

Impacts

Describe the recommended strategy and its actions and how they address Maine's four climate goals – *reducing greenhouse gas emissions, increasing resilience, creating economic opportunity, and achieving equity through Maine's climate response.* Use the questions in Annex 1 of this document to guide the analysis of impacts.

- Mitigation
- Adaptation & Resilience
- Workforce & Economic Opportunity
- Achieving Equity
- Additional Costs
- Proven Strategy & Feasibility
- Other Criteria (optional)

The identified needs and proposed solutions by the Psychological Resilience Subgroup are distinctly tailored to increase resilience for all people in Maine who are and will be affected by climate change, and especially for our most at-risk and disproportionately impacted populations, the focus of many equity goals. By addressing mental health and resilience factors for individuals and communities, we will improve Mainers' ability to prepare for and adapt to climate impacts, mitigate climate change, and thrive into the future.

The proposals are cross-cutting, serving priority populations struggling with climate impacts, mental illness, limited agency, and lack of access to healthcare and mental health services. Moreover, these proposals support those communities struggling with governance challenges as they face climate impacts with minimal capacity to address them. The recommendations are intended to boost communities' capacity to engage and serve those most in need, through both traditional channels of education, care and training, and through alternative "bottom up" empowerment processes to reach those who might not otherwise be served by or engaged with climate-related programs.

The proposals for mental health resilience address climate impacts as well as many other pressing crises facing our state, including dearth of psychological services, substance use disorder, community violence, and access to health care. The resources, including assessments, can be used across different fields and settings with resulting opportunities for collaboration and funding, which draw upon different sectors of governance. Many providers in our state already specialize in the psychology of climate change and resilience; this creates opportunities to build on existing programs for streamlined efficiency and reduced cost while still having expansive reach.

Cross-over

Does the recommended strategy involve other working groups/sectors? *Select all which apply.* How did the Working Group coordinate with others around these overlaps?

- ☒ Transportation
- ☒ Buildings, Infrastructure, and Housing
- ☒ Energy
- ☒ Community Resilience
- ☒ Coastal and Marine
- ☒ Natural and Working Lands
- ☐ Other (please describe)

Mental health resilience and social-psychological factors are relevant to all work of the Maine Climate Council. While our recommendations for mental health resilience are primarily under the auspices of resiliency and equity, the recommendations to increase training, assessments and education for improving accessible communication, sustained behavior change, and community readiness and engagement is relevant to every initiative of the Climate Council, and all respective working groups. Moreover, supporting hope, agency and other aspects of mental health resilience among all people in Maine, as envisioned in the recommendation to promote climate action broadly, cuts across all areas. Finally, enhancing services related to mental health in emergencies will improve responses to emergencies involving transportation, energy, infrastructure, and resource-dependent industries.

Priority Populations

Consider the priority populations impacted or affected by this recommended strategy. A list of priority populations is contained in **Annex 2** of this document.

- *POPULATIONS: Identify any priority populations impacted or affected by this recommended strategy.*

The list of populations deemed "priority" by the Equity Subcommittee Report (2023) are there because of social and structural inequities that have led to, and perpetuate, health disparities. These populations are all disproportionately impacted by systemic inequities, and that includes climate change preparedness, mitigation, adaptation and response. As such, all these individuals, and indeed everyone across the state, will benefit from improved resilience – certainly in the face of a changing climate, and in response to other determinants of health, including violence, health status (e.g., chronic illness, disability), economic insecurity, social isolation, and loneliness. While this recommendation advances efforts to support health equity for all people in Maine; in particular, it serves youth and young adults, who are indeed disproportionately impacted by climate change; and certainly, there are intersectional factors – such as race, sexual orientation, gender identity, immigration status, income, and geography – which serve to augment adverse impacts of climate change. The implications of climate change are inescapable for younger people, and we must acknowledge the implications of anxiety, fatigue, and feelings of doom, as well as the compounding impacts of discrimination and social media.

- *IMPACTS: Using the Equity Sub-Committee analysis **(see Annex 3)** from March 2023 as a starting place, consider both potential positive outcomes and any unintended consequences/byproducts. Describe these potential impacts/benefits.*

The science of hope described by the Science and Technical Sub-Committee has particular relevance to younger people and offers a path toward agency rather than a simple exhortation to "be optimistic" or to "seek out joy where you can." The three components of constructive hope are goal setting, agency, and pathways thinking. All priority populations, and especially younger people, need opportunities to define meaningful goals, access information and knowledge, develop a determination that gives them confidence, and devise a plan or pathway to realize their goals. None of this will happen in a vacuum. Support is critical to understand climate change, find agency to act, and then put actions into practice.

Collectively, the CRWG recommendations provide the resources to bolster psychological resilience and mental health, while also providing avenues to develop external supports – like "getting out of harm's way" – that provide pathways to act. Indeed, the work of the Climate Council provides an opportunity for engagement, agency, and action. It will be important over the course of the MWW update, including listening sessions and plan rollout, to identify multiple opportunities for engagement and feedback.

An unintended consequence could be the increased demand for mental health support services, without the requisite providers available. Continued investment in workforce cultivation and development will be key to the success of these recommendations, and indeed, ongoing and sustainable funding is included in our proposed actions.

- *SOURCES OF INFORMATION: Describe how you know what groups are impacted/affected. Cite relevant data sources and/or formal conversations (MCC-organized panels, focus groups, etc.) with priority populations.*

The Psychological Resilience Subgroup drew on their personal and professional experiences working with and serving diverse priority populations, as well as robust literature references, including academic/peer-reviewed papers, gray literature, and other reputable reports. Direct outreach, specifically related to the CRWG's work, was not part of the process.

- *RESULT OF ENGAGEMENT: Describe any consultation or engagement with these priority population (either by the Working Group or through GOPIF's community engagement contractor). Describe how the Working Group's recommendations have changed as a result of these conversations.*

As noted above, the Psychological Resilience Subgroup drew on their personal and professional experiences working with and serving diverse priority populations. Direct engagement with priority populations, specifically in the context of the CRWG's work, was not part of the process.

- *IMPLEMENTATION: How might the recommended strategy be implemented in consultation with priority populations? Do priority populations have the resources and capacity necessary to implement or access this recommended strategy? How might you make recommendations to improve equitable access to resources and capacity-building? You might consider planning capacity, financial capacity, programmatic capacity, human capital, and other.*

Barriers to engaging with priority populations include language or cultural barriers, lack of access to technology, education, trust, familiarity, prioritization (and competing priorities), and capacity to engage. Another key barrier that the CRWG identified and discussed is beliefs about climate change (e.g., denial, skepticism). The CRWG discussed theories of behavior change, community readiness assessments, and adaptive communication, which can help "meet people where they are," and improve engagement, agency, and action. While specific barriers will vary by individual and community, working with trusted partners (e.g., churches, non-profits), trained in mental health resilience and trauma-informed practices, who have collaborated on communication and strategy options, will help improve subsequent work, relationships, and trust-building.

Timeframe

What is the timeframe for this strategy and its actions?

	Short-term (2025)	Mid-term (2030)	Long-term (2050+)
To implement	X	X	X
To realize outcomes	X	X	X

Implementation Next Steps

What types of next steps would be required to implement the strategy?

☐ Legislation, rules/regulation, internal program guidance changes
☒ Establishment of a new program or a fund,
☐ Conduct additional research
☒ Provide education or training
☒ Coordinate with other parties/agencies/states
☐ Other (please describe)

Please provide some detail around these steps. If possible, identify **specific actors** who would lead in the implementation of the strategy and actions.

Given the intersectionality of these issues, we advocate for the creation of a Climate Psychology Task Force, which would help organize, oversee and implement these recommendations and those others deemed appropriate and related by the Climate Council and other working groups. This task force would be enabled to identify pertinent and existing trainings, assessments, educational materials and funding opportunities, the process for their dissemination as well as collaboration across state agencies and non-governmental partners and oversee implementation statewide. From these initial efforts, the task force would then be further empowered to identify and establish new and additional programming and resources that are needed, as well as uplift needed policy change. This group of diverse individuals from various communities and expertise from across the state would be given preliminary funding to jumpstart these efforts.

- **Measuring Outcomes** - How will you know the recommended strategy is effective? *Are outcomes measurable using current monitoring/data collection? Are there benchmarks or short-term indicators of success?*

See discussion on metrics and example metrics above under Strategy G Analysis and Supporting materials.

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