116TH CONGRESS
2D SESSION

S. _____

To reduce the health risks of heat by authorizing the National Integrated Heat Health Information System Interagency Committee to improve extreme heat preparedness and response, requiring a study, and establishing a grant program to address heat effects, and for other purposes.

IN THE SENATE OF THE UNITED STATES

Mr. MARKEY introduced the following bill; which was read twice and referred to the Committee on _____

A BILL

To reduce the health risks of heat by authorizing the National Integrated Heat Health Information System Interagency Committee to improve extreme heat preparedness and response, requiring a study, and establishing a grant program to address heat effects, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

SECTION 1. SHORT TITLE.

This Act may be cited as the ''Preventing Health Emergencies And Temperature-related Illness and Deaths Act of 2020'' or the ''Preventing HEAT Illness and Deaths Act of 2020''.

SEC. 2. DEFINITIONS.

In this Act:

(1) EXTREME HEAT.—The term ''extreme heat'' means heat that exceeds local climatological norms in terms of any combination of the following:

(A) Duration.

(B) Intensity.

(C) Seasonality.

(D) Frequency.

(2) HEAT.—The term ''heat'' means any combination of the parameters associated with modulating human thermoregulation and perceived temperature, such as temperature, humidity, solar exposure, and wind speed.

(3) HEAT EVENT.—The term ''heat event'' means an occurrence of extreme heat that may have heat-health implications.

(4) HEAT-HEALTH.—The term ''heat-health'' means health effects to humans from heat, including from vulnerability and exposure, or the risk of such effects.

(5) PLANNING.—The term ''planning'' means activities performed on multiple time scales (including days, weeks, months, and years) with scenario-based or probabilistic information to identify and take actions to proactively mitigate heat-health risks

from increased heat waves and increased ambient temperature.

(6) PREPAREDNESS.—The term ''preparedness'' means activities performed with probabilistic or deterministic information to manage risk in advance of a heat event.

SEC. 3. FINDINGS.

Congress makes the following findings:

(1) Extreme heat events have been the leading cause of weather-related death in the United States over the last 30 years, according to the Centers for Disease Control and Prevention and the National Weather Service.

(2) The fourth National Climate Assessment, mandated by the Global Change Research Act of 1990 (15 U.S.C. 2921 et seq.) finds that average annual temperature over the contiguous United States has increased over the past century, and that recent decades are the warmest of the past 1.5 millennia. The National Climate Assessment projects that the frequency and intensity of extreme high temperature events will increase in the future as global temperature increases.

(3) Exposure to extreme heat can also cause acute heat-related illnesses, such as heat stroke,

which result in more than 65,000 emergency room visits each year and exacerbate respiratory and cardiovascular illnesses.

(4) Heat poses the greatest health risks for adults older than 65 years of age, young children, low-income communities, urban communities, communities with low air conditioning prevalence, socially isolated individuals, people with mental or physical disabilities, workers without sufficient access to cooling, athletes, people with pre-existing conditions, incarcerated individuals, people experiencing homelessness, and military personnel.

(5) Heat is a threat to the health and safety of workers, particularly outdoor workers, such as construction workers, farmworkers, and landscapers, who are at an elevated risk of heat illness. Between 1992 and 2017, across all occupations, heat was estimated to be responsible for an average of 2,700 serious injuries and 30 deaths per year in the United States. Those figures are likely underestimated due to underreporting.

(6) Nursing homes, mental health facilities, and other locations with populations on medication are especially vulnerable to extreme heat, as medications can lower the threshold for heat-health incidents.

(7) Heat exposure is an issue of environmental justice, as people living in low-income communities, communities of color, and Tribal communities face a number of interacting factors that render them more vulnerable to extreme heat.

(8) The COVID–19 pandemic has led to closure of many public cooling centers or rendered such centers inaccessible to individuals concerned about contracting the highly contagious disease.

(9) People in living in low-income communities, communities of color, and Tribal communities are affected by disproportionately high rates of underlying medical conditions, such as diabetes, asthma, and hypertension, and a greater risk of contracting COVID–19 or experiencing serious complications if infected with COVID–19. Those medical conditions, among others, can be exacerbated by extreme heat and lead to more serious illness and death if not treated immediately.

(10) The impacts of heat on human health are more severe in urban areas where land surface properties create an ''urban heat island'' phenomenon, particularly in neighborhoods with limited availability of or access to green spaces, shade, and tree

cover, higher density of building structures, and more vehicular traffic.

(11) Limited availability of tree cover and higher temperatures are correlated with low-income neighborhoods in urban areas. In Richmond, Virginia, Baltimore, Maryland, and Washington, D.C., researchers found that heat risk is disproportionately distributed to communities of color in patterns associated with segregation and redlining.

(12) Researchers have found that few communities in the United States have sufficient resources for heat planning, preparedness, and response.

(13) Researchers have found that long-term, scenario-based planning as well as heat early warning systems can result in behavior changes that lower morbidity and mortality, but individuals unaware of heat risks or with low risk perception of heat are less likely to take appropriate precautions.

(14) The risks associated with extreme heat have complex interactions and impacts, and the management of those risks requires an interdisciplinary approach.

(15) Regions and communities that face the greatest health consequences of extreme heat often may experience the lowest heat risk perceptions or

have access to the fewest resources for responding to extreme heat.

SEC. 4. NATIONAL INTEGRATED HEAT HEALTH INFORMATION SYSTEM INTERAGENCY COMMITTEE.

(a) ESTABLISHMENT OF COMMITTEE.—There is established a committee, to be known as the ''National Integrated Heat Health Information System Interagency Committee'' (in this section referred to as the ''Committee'').

(b) FOCUS.—The Director of the Office of Science and Technology Policy shall require the Committee to focus on research and actions for the reduction of health risks of heat over multiple time scales (including days, weeks, months, and years).

(c) MEMBERSHIP.—

(1) IN GENERAL.—In order to achieve and carry out the focus described in subsection (b), the Committee shall include not fewer than 1 representative from each of the following:

(A) From the Department of Commerce, the following:

(i) The National Weather Service.

(ii) The Office of Oceanic and Atmospheric Research, including the Climate Program Office.

(iii) The National Institute of Standards and Technology.

(B) From the Department of Health and Human Services, the following:

(i) The Centers for Disease Control and Prevention, including the National Institute for Occupational Safety and Health.

(ii) The Office of the Assistant Secretary of Health and Human Services for Preparedness and Response.

(iii) The Substance Abuse and Mental Health Services Administration.

(iv) The National Institutes of Health.

(C) From the Department of the Interior, the following:

(i) The Bureau of Indian Affairs.

(ii) The Bureau of Land Management.

(D) From the Environmental Protection Agency, the following:

(i) The Office of Environmental Justice.

(ii) The Office of Air and Radiation, if the Administrator of the Environmental Protection Agency determines appropriate.

(iii) The Office of Research and Development, if the Administrator determines appropriate.

(E) The Federal Emergency Management Agency.

(F) The Department of Defense.

(G) The Occupational Safety and Health Administration.

(H) The Department of Agriculture.

(I) The Department of Housing and Urban Development.

(J) Such other Federal agencies as the Director considers appropriate.

(2) SELECTION OF REPRESENTATIVES.—The head of an agency specified in paragraph (1) shall, in appointing representatives of the agency to the Committee, select representatives—

(A) from components of the agency that are most relevant to the responsibilities of the Committee; or

(B) who have expertise in areas relevant to such responsibilities, such as weather and cli-

mate prediction, health impacts, environmental justice, behavioral science, public health hazard preparedness and response, or mental health services.

(3) CO-CHAIRS.—

(A) IN GENERAL.—The members of the Committee shall select 2 members to serve as co-chairs of the Committee, subject to the approval of the Director.

(B) TERMS.—Each co-chair shall serve for a term of not more than 3 years.

(C) SELECTION.—One co-chair shall be from the National Oceanic and Atmospheric Administration, and one co-chair shall be from the Centers for Disease Control and Prevention.

(D) RESPONSIBILITIES OF CO-CHAIRS.—The co-chairs of the Committee shall—

(i) determine the agenda of the Committee, in consultation with other members of the Committee;

(ii) direct the work of the Committee;

(iii) convene meetings of the Committee not less frequently than once each fiscal quarter; and

(iv) if necessary, establish a coordination office for the Committee within the National Oceanic and Atmospheric Administration.

(d) ADMINISTRATIVE SUPPORT.—The National Oceanic and Atmospheric Administration shall provide technical and administrative support to the Committee, using amounts authorized to be appropriated to the Administration before the date of the enactment of this Act and available for obligation as of such date.

(e) CONSULTATION.—

(1) IN GENERAL.—The Committee shall consult with relevant regional, State, Tribal, and local government agencies, research institutions, nongovernmental organizations, and medical experts with expertise in emergency response, environmental health, or community engagement.

(2) ADVISORY COUNCIL.—Such consultation may occur through an advisory council established by the Committee that convenes regularly.

(f) RESPONSIBILITIES.—In carrying out the focus described in subsection (b), the Committee shall, in consultation with the entities described in subsection (e)(1), promote an integrated, Federal Government-wide approach to reducing health risks and impacts of heat, including by—

(1) identifying and harmonizing existing agency capabilities related to understanding heat risk, prediction, information, warnings, planning, preparedness, and response (including common communication mechanisms for coordinated Federal information needed to manage and reduce health risks from heat);

(2) building and sustaining networks across climate, health, medical, and related disciplines and decision makers—

(A) that support continuous engagement with Federal, State, local, and Tribal governments to identify decision-maker and information needs, take action, and evaluate effectiveness; and

(B) that support engagement with international government and nongovernmental organizations and other partners to harmonize research and information and knowledge production and enhance effective action;

(3) enhancing actionable information to reduce health-related heat risks on multiple time scales by—

(A) enhancing heat-health risk management forecasts and information based on user needs and epidemiological requirements;

(B) providing seamless, integrated heat-health heat projections and predictions on all time scales; and

(C) building capacity across climate, public health, medical, and related communities to define and deliver research, observations, prediction, vulnerability assessments, health surveillance, and other information needed to support planning and preparedness on heat-health;

(4) enhancing understanding of heat-related health risks, vulnerabilities, and risk reduction through—

(A) supporting improved understanding of the role of drivers of climate variability and change in extreme heat;

(B) building mechanistic understanding of heat-health, from epidemiological, physiological, economical, and sociological disciplines; and

(C) enhancing understanding of the impacts of and risk management actions for extreme heat events across multiple time scales,

including the modeling of future risk of extreme heat;

(5) developing timely, locally relevant, and accessible communication tools to inform preparedness and adaptation, including heat early-warning systems and heat-health action plans that include planning and preparedness on multiple time scales;

(6) providing a suite of decision support services for the reduction of heat-related illness and mitigation of other effects of extreme heat;

(7) identifying, coordinating, and disseminating Federal grants and other funding opportunities for non-Federal entities—

(A) to improve climate, weather, and health research and analytics to improve heat preparedness and response for vulnerable and disadvantaged communities; and

(B) to support longer-term sustained engagement of multisector and interdisciplinary networks to conduct research and co-produce knowledge and actionable information;

(8) promoting principles of environmental justice, including providing guidance for projects and programs that benefit historically disadvantaged

communities or communities with significant heat disparities associated with race or income; and

(9) carrying out such other activities as the Committee considers appropriate.

(g) STRATEGIC PLAN.—

(1) IN GENERAL.—Not later than 1 year after the date of the enactment of this Act, the Committee shall submit to Congress a 3-year integrated strategic plan that outlines the goals and projects of the Committee, including how the Committee will—

(A) improve and coordinate interagency Federal actions to address health risks of heat;

(B) conduct the study required by section 5(a)(1); and

(C) administer the grant program described in section 6.

(2) UPDATES.—Not later than 3 years after the submission of the strategic plan required by paragraph (1), and every 3 years thereafter, the Committee shall submit to Congress an update of the plan, which shall include progress made toward goals in the plan and new priorities that emerge.

(3) PUBLIC AVAILABILITY.—The Committee shall make the strategic plan required by paragraph (1) and updates to the plan required by paragraph

(2) available to the public on an internet website of the National Oceanic and Atmospheric Administration, with clear visuals indicating progress toward goals.

SEC. 5. EXAMINATION OF EXTREME HEAT INFORMATION AND RESPONSE.

(a) STUDY.—

(1) IN GENERAL.—Not later than 1 year after the date of the enactment of this Act, and after consultation with the entities described in section 4(e)(1), the National Integrated Heat Health Information System Interagency Committee (in this section referred to as the ''Committee'') shall complete a study on opportunities for improving data collection, warning communications, resilience of vulnerable populations, and response capacity for current and future heat-affected communities.

(2) ELEMENTS.—The study required by paragraph (1) shall—

(A) identify policy and research gaps, such as—

(i) regions of the United States with the largest gaps between awareness, preparedness, and capacity to address extreme heat;

(ii) heat-related gaps in data, such as—

(I) the number of schools, prisons, and other public facilities that lack air conditioning;

(II) the number of energy blackouts that occur in the United States as a result of extreme heat; and

(III) the demographic breakdown of people affected by heat events, including by race, age, gender, occupation, and income;

(B) consider the feasibility of enhancing existing nationwide data collection on heat-related illnesses and mortalities to improve and ensure consistent collection of national-level heat illness data across all 50 States, territories, and local jurisdictions;

(C) evaluate mechanisms for financing heat preparedness;

(D) evaluate the effectiveness of county- or local-level heat awareness and communication tools, preparedness plans, or mitigation; and

(E) consider such other subjects as the Committee finds appropriate.

(3) POLICY RECOMMENDATIONS.—

(A) IN GENERAL.—The study required by paragraph (1) shall include policy recommendations for communicating warnings to and promoting resilience of populations vulnerable to extreme heat.

(B) STRATEGIES.—The recommendations required by subparagraph (A) may include strategies for—

(i) effectively distributing extreme heat warnings, including to individuals with limited English proficiency and individuals who are socially isolated or with other established barriers to such information;

(ii) implementing alternatives to public cooling centers given concerns related to COVID–19 and spread of disease in indoor spaces;

(iii) designing such warnings to convey the urgency and severity of heat events and achieve behavior changes that reduce the mortality and morbidity of extreme heat effects, without creating warning fa-

tigue or confusion with other types of weather disaster warnings;

(iv) addressing data gaps identified under paragraph (2)(A)(ii);

(v) promoting community resilience to heat events and incorporating principles of environmental justice in community response to heat waves;

(vi) regulating against utility companies shutting off power during heat waves; and

(vii) establishing labor and other standards for workers and heat.

(b) REPORT.—Not later than 90 days after completing the study required by subsection (a)(1), the Committee shall—

(1) make available to the public on an internet website of the National Oceanic and Atmospheric Administration a report on the findings and conclusions of the study; and

(2) submit the report to—

(A) the Committee on Commerce, Science, and Transportation of the Senate;

(B) the Committee on Health, Education, Labor, and Pensions of the Senate;

(C) the Committee on Science, Space, and Technology of the House of Representatives;

(D) the Committee on Energy and Commerce of the House of Representatives; and

(E) the Committee on Education and Labor of the House of Representatives.

SEC. 6. FEDERAL ASSISTANCE GRANTS TO ADDRESS EXTREME HEAT AND HEALTH RISKS.

(a) ESTABLISHMENT.—Not later than 180 days after the date of the enactment of this Act, the National Integrated Heat Health Information System Interagency Committee (in this section referred to as the ''Committee'') shall establish and administer a community heat resilience grant program to provide Federal grants to ameliorate human health impacts of extreme heat events.

(b) ELIGIBLE PROJECTS.—Projects eligible to receive a grant under this section may include the following:

(1) Projects for cool roofs, cool pavements, urban forestry or tree plantings, the provision of shade, cooling centers that abide by applicable guidelines of the Centers for Disease Control and Prevention relating to COVID–19, building retrofitting for cooling, and high-efficiency air conditioning acquisitions or upgrades.

(2) Projects—

(A) to expand public awareness of heat risks;

(B) to communicate risks and warnings to isolated communities; and

(C) to educate such communities about how to respond to extreme heat events.

(3) Other projects that the Committee determines will achieve a significant reduction in heat exposure or resilience to extreme heat events.

(c) PROJECT PROPOSALS.—To be eligible to receive a grant under this section, an entity shall—

(1) demonstrate that the entity has any permits or other authorizations from local, State, Federal, and Tribal government agencies necessary to carry out the project or provide evidence demonstrating general support from such agencies;

(2) demonstrate community engagement and partnerships;

(3) provide to the Committee environmental and demographic information, using EJSCREEN data or a similar environmental justice mapping and screening tool, for the community in which the project is located; and

(4) provide to the Committee any other information the Committee determines appropriate.

(d) PROJECT SELECTION.—

(1) DEVELOPMENT OF CRITERIA.—

(A) IN GENERAL.—The Committee shall develop criteria for the selection of entities to receive grants under this section for proposed projects.

(B) CONSIDERATIONS.—In developing criteria under subparagraph (A), the Committee shall take into account the following:

(i) Extent of heat risk reduction, including temperature difference or number of people affected.

(ii) Risk reduction for the most vulnerable groups, including low-income communities, communities of color, Tribal communities, elderly individuals, and individuals on medications.

(iii) Cost-effectiveness.

(iv) Efforts to ensure that projects do not contribute to gentrification.

(v) Equitable distribution of heat mitigation benefits.

(vi) Co-benefits such as other climate, health, or environmental benefits such as

air quality improvement, energy efficiency, or reduced energy use.

(2) PRIORITIES.—In selecting entities to receive grants under this section, the Committee shall prioritize projects that provide the following:

(A) Benefits for historically disadvantaged communities and communities with significant heat disparities associated with race or income.

(B) Benefits to regions identified in the study under section 5(a)(2)(A)(i) as having large preparedness gaps.

(e) USE OF FUNDS.—A grant awarded under this section to an entity to carry out a project may be used by the entity only—

(1) to carry out the project, including administration, design, permitting, entry into negotiated indirect cost rate agreements, and construction; and

(2) to monitor, collect, and report data on the performance (including performance over time) of the project.

(f) COST-SHARING.—

(1) IN GENERAL.—Except as provided in paragraph (2), an entity that receives a grant under this section to carry out a project shall provide, from non-Federal sources, funds or other resources (such

as in-kind matching from private entities) valued at not less than 25 percent of the total cost, including administrative costs, of the project.

(2) REDUCED MATCHING REQUIREMENT FOR CERTAIN COMMUNITIES.—The Committee may reduce or waive the matching requirement under paragraph (1) for an entity representing a community or nonprofit organization if—

(A) the entity submits to the Committee in writing—

(i) a request for such a reduction or waiver and, in the case of a request for a reduction, the amount of the reduction; and

(ii) a justification for why the entity cannot meet the matching requirement; and

(B) the Committee agrees with the justification.

(g) LIMITATION ON GRANT QUANTITY AND SIZE.—In carrying out this section, the Committee may not award to an entity—

(1) more than 1 grant for which the entity is the lead applicant; or

(2) a grant that is in an amount that is more than $2,500,000.

(h) REPORTING.—The Committee shall require each entity receiving a grant under this section to, not later than 1 year after the date on which the entity receives the grant, and annually thereafter until the completion of the project, submit to the Committee a report on—

(1) the activities carried out under the project; and

(2) the effectiveness of the project in reducing heat risk or promoting heat awareness and response.

SEC. 7. AUTHORIZATION OF APPROPRIATIONS.

(a) NATIONAL INTEGRATED HEAT HEALTH INFORMATION SYSTEM INTERAGENCY COMMITTEE; EXAMINATION OF EXTREME HEAT INFORMATION AND RESPONSE.—There are authorized to be appropriated to the National Oceanic and Atmospheric Administration to carry out sections 4 and 5, including for any administrative costs for the National Integrated Heat Health Information System Interagency Committee, the following:

(1) For fiscal year 2021, $20,000,000.

(2) For fiscal year 2022, $20,000,000.

(3) For fiscal year, 2023, $18,000,000.

(4) For fiscal year 2024, $18,000,000.

(5) For fiscal year 2025, $18,000,000.

(b) FEDERAL ASSISTANCE GRANTS TO ADDRESS EXTREME HEAT AND HEALTH RISKS.—There are authorized to be appropriated to the National Oceanic and Atmospheric Administration to carry out section 6 the following:

(1) For fiscal year 2021, $10,000,000.

(2) For fiscal year 2022, $10,000,000.

(3) For fiscal year, 2023, $20,000,000.

(4) For fiscal year 2024, $30,000,000.

(5) For fiscal year 2025, $30,000,000.