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(Original Signature of Member)

118TH CONGRESS
1ST SESSION

H. R. _____

To direct the Administrator of the National Oceanic and Atmospheric Administration to establish a program to improve fire weather and fire environment forecasting, detection, and local collaboration, and for other purposes.

IN THE HOUSE OF REPRESENTATIVES

Mr. MIKE GARCIA of California introduced the following bill; which was referred to the Committee on _____

A BILL

To direct the Administrator of the National Oceanic and Atmospheric Administration to establish a program to improve fire weather and fire environment forecasting, detection, and local collaboration, 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 ''Fire Weather Development Act of 2023''.

SEC. 2. FIRE WEATHER FORECASTING AND DETECTION.

(a) ESTABLISHMENT.—The Administrator of the National Oceanic and Atmospheric Administration, shall establish a program (in this Act referred to as the ''Program'') to improve fire weather and fire environment forecasting, detection, and delivery of products or services through collaboration with Federal and State agencies or departments, local emergency mangers, and relevant entities.

(b) GOALS.—The goals of the Program shall be to develop and improve accurate fire weather and fire environment forecasts and warnings in order to reduce loss of life, reduce injuries, protect property, and reduce damage to the economy from wildfires. The Program shall seek to improve the assessment of fire weather and fire environments, the understanding and prediction of wildfires, and the communications regarding such assessments with State and local emergency officials in a timely and streamlined fashion, with a focus on improving the following:

(1) The prediction of ignition, intensification and spread of wildfires.

(2) The observation and monitoring of fire weather and fire environments.

(3) The forecast and communication of smoke dispersion from wildfires.

(4) Information dissemination and risk communication to develop more effective watch and warning products relating to wildfires.

(5) The early detection of wildfires, including pre-ignition analysis and ground condition characterizations.

(6) The development, testing, and deployment of novel tools and techniques related to understanding, monitoring, and predicting fire weather and fire environments.

(7) The understanding and association of climate change and its impacts on fire weather and fire environments.

(8) The unique characteristics, including observation or modeling requirements, related to fires at the wildland-urban interface.

(9) The forecasting and understanding of the impacts of prescribed burns (as such term is defined in section 2 of the Prescribed Burn Approval Act of 2016 (16 U.S.C. 551c-1 note)).

(c) COLLABORATION WITH STAKEHOLDERS.—In developing the Program required under this section, the Administrator of the National Oceanic and Atmospheric Administration shall solicit and take into consideration input from the weather industry, such academic entities as the

Administrator considers appropriate, and other relevant stakeholders.

(d) ACTIVITIES.—To achieve the goals specified in subsection (b), the Administrator of the National Oceanic and Atmospheric Administration may conduct research, development, testing, demonstration, and operational transition activities related to fire weather and fire environments, including regarding the following:

(1) Tools and services to inform, support, and complement active land management, local emergency personnel, the United States Forest Service, and State, local, and Tribal entities during their response and mitigation efforts.

(2) Sensing technologies, such as infrared, microwave, and active sensors suitable for potential deployment on spacecraft, aircraft, and unmanned aircraft systems, to improve the monitoring and forecasting of fire fuel and active wildfires, wildfire behavior models and forecasts, mapping efforts, and the prediction of wildfires and the impacts of such.

(3) Grid-based assessments and outlooks of fuel moisture and danger levels.

(4) Social and behavior sciences related to fire weather and fire environment warning products.

(5) Advanced satellite detection products coupled with atmosphere and fire weather modeling systems.

(6) Education and training to expand the number of students and researchers in areas of study and research related to wildfires, fire weather, and fire environments.

(7) Modeling systems to link long-term climate predictions to localized or general land management decisions.

(8) Communication and outreach to communities, energy utilities, owners and operators of critical infrastructure, and other relevant stakeholders regarding fire weather and fire environment risk.

(9) Stewardship and dissemination, to the extent practicable, of National Oceanic and Atmospheric Administration scientific data and related products and services in formats meeting shared standards to enhance the interoperability, usability, and accessibility of such data in order to better meet the needs of the National Oceanic and Atmospheric Administration, other Federal agencies, and relevant stakeholders.

(10) Improvement of spatial and temporal resolution observations.

(11) Any other topic or activity the Administrator determines relevant.

(e) NOVEL TOOLS FOR MONITORING AND PREDICTION.—The Administrator of the National Oceanic and Atmospheric Administration, in consultation with the heads of the agencies specified in section 3, or other appropriate stakeholders, including commercial partners, shall develop novel tools and technologies to support the activities of the Program and which may be applied to broader wildland fire research, monitoring, and mitigation activities, as practicable and appropriate.

(f) EXTRAMURAL RESEARCH.—The Administrator of the National Oceanic and Atmospheric Administration shall collaborate with and support the non-Federal wildland fire research community, which includes institutions of higher education, private sector entities, nongovernmental organizations, and other relevant stakeholders, by making funds available through competitive grants, contracts, and cooperative agreements.

(g) COMMERCIAL DATA.—

(1) IN GENERAL.—Not later than one year after the date of the enactment of this Act, the Administrator of the National Oceanic and Atmospheric Administration, in consultation with the heads of other Federal agencies and relevant stake-

holders, may enter into contracts with one or more private sector entities to obtain additional airborne and space-based data and observations that may enhance or supplement the understanding, monitoring, and prediction, of fire weather and fire environments, and the relevant Program activities under this section.

(2) CONSULTATION.—In carrying out activities under paragraph (1), the Administrator of the National Oceanic and Atmospheric Administration shall consult with private sector entities through the National Advisory Committee on Wildfires under section 4 to identify needed tools and data that can be best provided by National Oceanic and Atmospheric Administration satellites and are most beneficial to wildfire and smoke detection and monitoring.

(h) NONDUPLICATION.—To the maximum extent practicable, the Administrator of the National Oceanic and Atmospheric Administration shall consult with the National Interagency Fire Center, including the Joint Fire Science Program, to avoid duplication of activities under this section and ensure the Administration's focus on unique research activities best suited for transition to operations.

(i) UNMANNED AIRCRAFT SYSTEMS.—

(1) IN GENERAL.—The Administrator of the National Oceanic and Atmospheric Administration shall—

(A) assess the role and potential benefits of unmanned aircraft systems to improve data collection in support of fire weather and fire environment modeling, meteorological observations, predictions, and forecasts;

(B) identify objectives for testing such systems' use for obtaining fire weather and fire environment observations, and other relevant activities; and

(C) transition unmanned aircraft systems technologies from research to operations as the Administrator considers appropriate.

(2) BRIEFING.—Not later than 270 days after the date of enactment of the Act, the Administrator of the National Oceanic and Atmospheric Administration shall brief the appropriate committees of Congress on the activities under paragraph (1).

(3) PILOT PROGRAMS.—Not later than 18 months after the date of the enactment of this Act, the Administrator of the National Oceanic and Atmospheric Administration may conduct pilot programs of unmanned aircraft systems for fire weather

and fire environment observations, including relating to the following:

(A) Testing of unmanned aircraft systems in approximations of real-world scenarios.

(B) Assessment of the utility of meteorological data collected from fire response and assessment aircraft.

(C) Input into appropriate models of collected data to predict fire behavior, including coupled atmosphere and fire models.

(D) Collection of best management practices for deployment of unmanned aircraft systems for fire weather and fire environment observations.

(4) PROHIBITION.—

(A) IN GENERAL.—Except as provided under subparagraphs (B) and (C), the Administrator of the National Oceanic and Atmospheric Administration may not procure any unmanned aircraft system that is manufactured or assembled by an entity in a foreign country of concern.

(B) EXEMPTION.—The prohibition under subparagraph (A) shall not apply to the Administrator of the National Oceanic and Atmos-

pheric Administration if the Administrator determines, in consultation with the Secretary of Homeland Security, that the procurement of an unmanned aircraft system is necessary for the sole purpose of marine or atmospheric science or management.

(C) WAIVER.—The Administrator of the National Oceanic and Atmospheric Administration may waive the prohibition under subparagraph (A) on a case-by-case basis—

(i) with the approval of the Secretary of Homeland Security; and

(ii) upon written or electronic notification to appropriate committees of Congress not later than 30 days after any such waiver.

(5) AUTHORIZATION OF APPROPRIATIONS.—From amounts made available for Procurement, Acquisition, and Construction of the National Oceanic and Atmospheric Administration, there is authorized to be appropriated $5,000,000 for fiscal year 2024 to carry out this section.

(j) DEFINITIONS.—In this section:

(1) APPROPRIATE COMMITTEES OF CONGRESS.—The term ''appropriate committees of Con-

gress'' means the Committee on Science, Space, and Technology and the Committee on Homeland Security of the House of Representatives and the Committee on Commerce, Science, and Transportation and the Committee on Homeland Security and Governmental Affairs of the Senate.

(2) CRITICAL INFRASTRUCTURE.—The term ''critical infrastructure'' has the meaning given such term in section 1016(e) of Public Law 107–56 (42 U.S.C. 5195c(e)).

(3) FOREIGN COUNTRY OF CONCERN.—The term ''foreign country of concern'' has the meaning given such term in section 9901 of the William M. (Mac) Thornberry National Defense Authorization Act for Fiscal Year 2021 (15 U.S.C. 4651).

(4) INSTITUTION OF HIGHER EDUCATION.—The term ''institution of higher education'' has the meaning given such term in section 101 of the Higher Education Act of 1965 (20 U.S.C. 1001).

(5) UNMANNED AIRCRAFT SYSTEM.—The term ''unmanned aircraft system'' has the meaning given such term in section 44801 of title 49, United States Code.

(6) WEATHER INDUSTRY.—The term ''weather industry'' has the meaning given such term in sec-

tion 2 of the Weather Research and Forecasting Innovation Act of 2017 (15 U.S.C. 8501).

SEC. 3. INTERAGENCY COORDINATING COMMITTEE ON WILDFIRES.

(a) ESTABLISHMENT.—Not later than 90 days after the date of the enactment of this Act, the Director of the Office of Science and Technology Policy shall establish an interagency coordinating committee to be known as the ''Interagency Coordinating Committee on Wildfires'' (in this section referred to as the ''Committee''). The chair of the Committee shall be the Administrator of the National Oceanic and Atmospheric Administration.

(b) PURPOSE.—The Committee shall coordinate the development of accurate and timely wildfire forecasting, detection, monitoring, and delivery of related products or services that best assist State and local emergency officials while avoiding duplication of activities.

(c) MEMBERSHIP.—In addition to the chair, the Committee shall be composed of the heads or appropriate designees of the following program agencies:

(1) The Federal Emergency Management Agency.

(2) The United States Fire Administration.

(3) The United States Forest Service.

(4) The National Aeronautics and Space Administration.

(5) The Department of the Interior.

(6) The Department of Agriculture.

(7) The United States Geological Survey.

(8) The Office of Science and Technology Policy.

(9) Any other Federal department or agency the Director of the Office of Science and Technology Policy considers appropriate.

(d) STRATEGIC PLAN.—Not later than one year after the date of the enactment of this Act, the Committee shall submit to Congress a strategic plan for the Program that includes the following:

(1) A description of short-term, mid-term, and long-term objectives to achieve the purpose specified in subsection (b).

(2) A description of how agencies specified in subsection (c) will collaborate with stakeholders and take into account stakeholder needs and recommendations in developing such objectives.

(3) A description of existing and new observational and data infrastructure needed to accomplish such objectives.

(4) A description of the role of each such agency in achieving such objectives.

(5) Guidance regarding how the Committee's recommendations are best used in climate adaptation planning for Federal, State, local, Tribal, and territorial entities.

(e) INTERAGENCY AGREEMENTS.—The heads of agencies specified in subsection (c) may enter into one or more interagency agreements providing for cooperation and collaboration in the development of wildfire forecasting, detection, and monitoring tools, instruments, technologies, and research to accomplish the purpose described in subsection (b).

(f) COLLABORATION.—The head of each agency specified in subsection (c) shall, to the extent practicable, increase engagement and cooperation with international, academic, State, and local communities regarding the infrastructure, data, and scientific research necessary to best advance the forecasting, detection, and monitoring of and preparation for wildfires.

SEC. 4. NATIONAL ADVISORY COMMITTEE ON WILDFIRES.

(a) ESTABLISHMENT.—

(1) IN GENERAL.—Not later than 90 days after the submission of the strategic plan required by section 3(d), the Director of the Office of Science and

Technology Policy shall establish a national advisory committee to be known as the ''National Advisory Committee on Wildfires'' (in this section referred to as the ''Advisory Committee''). The Advisory Committee shall consist of not fewer than seven and not more than 15 members who are qualified to provide advice regarding wildfire forecasting, detection, monitoring, and delivery of related products or services, including from the following entities:

(A) Research and academic institutions.

(B) Public communication or broadcast entities.

(C) Emergency management agencies.

(D) State, local, or Tribal governments.

(E) The National Association of State Foresters.

(F) Business communities.

(G) Other entities as designated by the Director of the Office of Science and Technology Policy.

(2) PROHIBITION.—Members of the Advisory Committee may not be employees of the Federal Government.

(b) ASSESSMENT.—The Advisory Committee shall offer assessments and recommendations relating to the following:

(1) Tailored forecasting, detection, and monitoring products and tools.

(2) Communication and delivery methods of wildfire forecasting, detection, and monitoring information.

(3) Opportunities to streamline Federal forecasting, monitoring, and detection information to local emergency personnel and communities.

(4) The management, coordination, implementation, and activities of the Interagency Coordinating Committee on Wildfires under section 3.

(5) The effectiveness of the Interagency Coordinating Committee on Wildfires in meeting its purposes.

(c) COMPENSATION.—Members of the Advisory Committee shall serve without compensation.

(d) REPORTS.—Not less frequently than biennially, the Advisory Committee shall report to the Director of the Office of Science and Technology Policy on the assessments carried out under subsection (b) and its recommendations for ways to improve the coordination and

dissemination of wildfire forecasts, warnings, and detection and monitoring information.

(e) CHARTER.—Notwithstanding section 1013(b)(2) of title 5, United States Code, the Advisory Committee shall not be required to file a charter subsequent to its initial charter, filed under section 1008(c) of such title, before the termination date specified in subsection (f) of this section.

(f) TERMINATION.—The Advisory Committee shall terminate on September 30, 2028.

(g) CONFLICT OF INTEREST.—An Advisory Committee member shall recuse himself or herself from any Advisory Committee activity in which he or she has an actual pecuniary interest.

SEC. 5. ESTABLISHMENT OF FIRE WEATHER TESTBED.

(a) IN GENERAL.—The Administrator of the National Oceanic and Atmospheric Administration shall establish a fire weather testbed to enable engagement across the Federal Government, State and local governments, academia, private and federally funded research laboratories, the private sector, and end-users in order to evaluate the accuracy and usability of technology, models, fire weather products and services, and other research to accelerate the implementation, transition to operations, and use of new capabilities by the National Oceanic and Atmos-

pheric Administration, Federal and land management agencies, and other relevant stakeholders.

(b) RESOURCES.—In carrying out this section, the Administrator of the National Oceanic and Atmospheric Administration may not transfer or reprogram any funds, detail any personnel, or make use of any infrastructure from cooperative institutes of the National Oceanic and Atmospheric Administration in existence as of the date of the enactment of this Act for the fire weather testbed established under subsection (a).

(c) AUTHORIZATION OF APPROPRIATIONS.—From amounts made available for Procurement, Acquisition, and Construction of the National Oceanic and Atmospheric Administration, there is authorized to be appropriated $15,000,000 for fiscal year 2024 to carry out this section.

SEC. 6. INCIDENT METEOROLOGIST WORKFORCE.

Not later than six months after the date of the enactment of this Act, the Administrator of the National Oceanic and Atmospheric Administration shall submit to the Committee on Science, Space, and Technology of the House of Representatives and the Committee on Commerce, Science, and Transportation of the Senate the results of an assessment of National Weather Service workforce and training challenges for Incident Meteorologists, and a roadmap for overcoming such challenges. Such as-

sessment shall take into consideration information technology support, logistical and administrative operations, anticipated weather and climate conditions, and feedback from relevant stakeholders, and shall include, to the maximum extent practicable, an identification by the National Weather Service of the following:

(1) The expected number of Incident Meteorologists needed over the next five years.

(2) Potential hiring authorities necessary to overcome any identified workforce and training challenges.

(3) Alternative services or assistance options the National Weather Service could provide to meet operational needs.

SEC. 7. DEFINITIONS.

In this Act:

(1) FIRE ENVIRONMENT.—The term ''fire environment'' means—

(A) the environmental conditions, such as soil moisture, vegetation, topography, snowpack, atmospheric temperature, moisture, and wind, that influence—

(i) fuel and fire behavior; and

(ii) smoke dispersion and transport; and

(B) the associated environmental impacts occurring during and after fire events.

(2) FIRE WEATHER.—The term ''fire weather'' means the weather conditions that influence the start, spread, character, or behavior of wildfires or fires at the wildland-urban interface and relevant meteorological and chemical phenomena, including air quality, smoke, and meteorological parameters such as relative humidity, air temperature, wind speed and direction, and atmospheric composition and chemistry, including emissions and mixing heights.