AMENDMENT NO. ________    Calendar No._____

Purpose: In the nature of a substitute.


S. 2290

To improve wildfire management operations and the safety of firefighters and communities with the best available technology.

Referred to the Committee on ________________ and ordered to be printed

Ordered to lie on the table and to be printed

AMENDMENT IN THE NATURE OF A SUBSTITUTE intended to be proposed by ____________

Viz:

1    Strike all after the enacting clause and insert the fol-
2    lowing:

3  SECTION 1. SHORT TITLE.

4    This Act may be cited as the “Wildfire Management
5    Technology Advancement Act of 2018”.

6  SEC. 2. PURPOSE.

7    The purpose of this Act is to promote the use of the
8    best available technology to enhance the effective and cost-
9    efficient response to wildfires—

10   (1) to meet applicable protection objectives; and

11   (2) to increase the safety of—
SEC. 3. DEFINITIONS.

In this Act:

(1) SECRETARIES.—The term “Secretaries” means—

(A) the Secretary of Agriculture; and

(B) the Secretary of the Interior.

(2) SECRETARY CONCERNED.—The term “Secretary concerned” means—

(A) the Secretary of Agriculture, with respect to activities under the Department of Agriculture; and

(B) the Secretary of the Interior, with respect to activities under the Department of the Interior.

SEC. 4. UNMANNED AIRCRAFT SYSTEMS.

(a) DEFINITIONS.—In this section, the terms “unmanned aircraft” and “unmanned aircraft system” have the meanings given those terms in section 331 of the FAA Modernization and Reform Act of 2012 (49 U.S.C. 40101 note; Public Law 112–95).

(b) ESTABLISHMENT OF PROGRAM.—Not later than 180 days after the date of enactment of this Act, the Secretary of the Interior, in consultation with the Secretary
of Agriculture, shall establish a research, development, and testing program, or expand an applicable existing program, to assess unmanned aircraft system technologies, including optionally piloted aircraft, across the full range of wildland fire management operations in order to accelerate the deployment and integration of those technologies into the operations of the Secretaries.

(c) Expanding Use of Unmanned Aircraft Systems on Wildfires.—Not later than 1 year after the date of enactment of this Act, the Secretaries, in coordination with State wildland firefighting agencies and other relevant Federal agencies, shall enter into an agreement under which the Secretaries shall develop consistent protocols and plans for the use on wildland fires of unmanned aircraft system technologies, including for the development of real-time maps of the location of wildland fires.

SEC. 5. LOCATION SYSTEMS FOR WILDLAND FIREFIGHTERS.

(a) In General.—Not later than 1 year after the date of enactment of this Act, subject to the availability of appropriations, the Secretaries, in coordination with State wildland firefighting agencies, shall jointly develop and operate a tracking system (referred to in this section as the “system”) to remotely locate the positions of fire resources, including, at a minimum, any fire resources as-
signed to Federal type 1 wildland fire incident management teams.

(b) REQUIREMENTS.—The system shall—

(1) use technology available to the Secretaries to remotely track the location of an active resource, such as a Global Positioning System;

(2) depict the location of each fire resource on the applicable maps developed under section 4(c);

and

(3) operate continuously during the period for which any firefighting personnel are assigned to the applicable Federal wildland fire.

(c) OPERATION.—The Secretary concerned shall—

(1) before commencing operation of the system—

(A) conduct not fewer than 2 pilot projects relating to the system; and

(B) review the results of those pilot projects; and

(2) conduct training, and maintain a culture, such that an employee, officer, or contractor shall not rely on the system for safety.

SEC. 6. WILDLAND FIRE DECISION SUPPORT.

(a) PROTOCOL.—To the maximum extent practicable, the Secretaries shall ensure that wildland fire manage-
ment activities conducted by the Secretaries, or conducted jointly by the Secretaries and State wildland firefighting agencies, achieve compliance with applicable incident management objectives in a manner that—

(1) minimizes firefighter exposure to the lowest level necessary; and

(2) reduces overall costs of wildfire incidents.

(b) WILDFIRE DECISION SUPPORT SYSTEM.—

(1) IN GENERAL.—The Secretaries, in coordination with State wildland firefighting agencies, shall establish a system to track and monitor decisions made by the Secretaries or State wildland firefighting agencies in managing wildfires.

(2) COMPONENTS.—The system established under paragraph (1) shall be able to alert the Secretaries if—

(A) unusual costs are incurred;

(B) an action to be carried out would likely—

(i) endanger the safety of a firefighter; or

(ii) be ineffective in meeting an applicable suppression or protection goal; or

(C) a decision regarding the management of a wildfire deviates from—
(i) an applicable protocol established by the Secretaries, including the requirement under subsection (a); or

(ii) an applicable spatial fire management plan or fire management plan of the Secretary concerned.

SEC. 7. SMOKE PROJECTIONS FROM ACTIVE WILDLAND FIRES.

The Secretaries shall establish a program, to be known as the “Interagency Wildland Fire Air Quality Response Program”, under which the Secretary concerned—

(1) to the maximum extent practicable, shall assign a team of air resource advisors to a type 1 incident management team managing a wildland fire; and

(2) may assign a team of air resource advisors to a type 2 incident management team managing a wildland fire.

SEC. 8. FIREFIGHTER INJURIES DATABASE.

(a) IN GENERAL.—Section 9(a) of the Federal Fire Prevention and Control Act of 1974 (15 U.S.C. 2208(a)) is amended—

(1) in paragraph (2), by inserting “, categorized by the type of fire” after “such injuries and deaths”; and

(2) by inserting “

(b) CATEGORIZATION OF FIREFIGHTER INJURIES AND DEATHS.—In any report under section 9 of the Federal Fire Prevention and Control Act of 1974 (15 U.S.C. 2208), the Secretaries shall include a description of any injuries or deaths of a member of a type 1 or type 2 wildland firefighting team, categorized by the type of fire, for the previous calendar year in the report.
(2) in paragraph (3), by striking “activities;” and inserting the following: “activities, including—

“(A) all injuries sustained by a firefighter and treated by a doctor, categorized by the type of firefighter;

“(B) all deaths sustained while undergoing a pack test or preparing for a work capacity;

“(C) all injuries or deaths resulting from vehicle accidents; and

“(D) all injuries or deaths resulting from aircraft crashes;”.

(b) USE OF EXISTING DATA GATHERING AND ANALYSIS ORGANIZATIONS.—Section 9(b)(3) of the Federal Fire Prevention and Control Act of 1974 (15 U.S.C. 2208(b)(3)) is amended, by inserting “, including the Center for Firefighter Injury Research and Safety Trends” after “public and private”.

(c) MEDICAL PRIVACY OF FIREFIGHTERS.—Section 9 of the Federal Fire Prevention and Control Act of 1974 (15 U.S.C. 2208) is amended by adding at the end the following:

“(e) MEDICAL PRIVACY OF FIREFIGHTERS.—The collection, storage, and transfer of any medical data collected under this section shall be conducted in accordance with—
“(1) the privacy regulations promulgated under section 264(e) of the Health Insurance Portability and Accountability Act of 1996 (42 U.S.C. 1320d–2 note; Public Law 104–191); and

“(2) other applicable regulations, including parts 160, 162, and 164 of title 45, Code of Federal Regulations (as in effect on the date of enactment of this subsection).”

SEC. 9. RAPID RESPONSE EROSION DATABASE.

(a) IN GENERAL.—The Secretaries, in consultation with the Administrator of the National Aeronautics and Space Administration, shall establish and maintain a database, to be known as the “Rapid Response Erosion Database” (referred to in this section as the “Database”).

(b) OPEN-SOURCE DATABASE.—

(1) AVAILABILITY.—The Secretaries shall make the Database (including the original source code)—

(A) web-based; and

(B) available without charge.

(2) COMPONENTS.—The Database shall provide for—

(A) the automatic incorporation of spatial data relating to vegetation, soils, and elevation into an applicable map created by the Secretary concerned that depicts the changes in land-
cover and soil properties caused by a wildland
fire; and

(B) the generation of a composite map
that can be used by the Secretary concerned to
model the effectiveness of treatments in the
burned area to prevent flooding, erosion, and
landslides under a range of weather scenarios.

(c) Use.—The Secretary concerned shall use the
Database, as applicable, in developing recommendations
for emergency stabilization treatments or modifications to
drainage structures to protect values-at-risk following a
wildland fire.

(d) Coordination.—The Secretaries may share the
Database, and any results generated in using the Data-
base, with any State or unit of local government.

SEC. 10. PREDICTING WHERE WILDFires WILL START.

(a) In General.—The Secretaries, in consultation
with the Administrator of the National Aeronautics and
Space Administration and the Secretary of Energy,
through the capabilities and assets located at the National
Laboratories, shall establish and maintain a system to pre-
dict the locations of future wildfires for fire-prone areas
of the United States.

(b) Cooperation; Components.—The system es-
tablished under subsection (a) shall—
(1) be based on, and enhance, similar systems in existence on the date of enactment of this Act, including the Fire Danger Assessment System; and

(2) use a combination of soil moisture levels, precipitation patterns, topography, fuels growth and availability, ignition risks, and temperatures to calculate probabilities of wildfires igniting or burning in fire-prone areas of the United States.

(e) Use in Forecasts.—Not later than 1 year after the date of enactment of this Act, the Secretaries shall use the system established under subsection (a), to the maximum extent practicable, for purposes of developing any wildland fire potential forecasts.

(d) Coordination.—The Secretaries may share the system established under subsection (a), and any results generated in using the system, with any State or unit of local government.

SEC. 11. STUDY ON AIRCRAFT OPERATING AT NIGHT.

(a) Study.—Not later than 1 year after the date of enactment of this Act, subject to the availability of appropriations, the Secretaries shall conduct a study to determine the feasibility of operating aircraft at night when managing wildland fires.

(b) Partnerships.—In conducting the study under subsection (a), the Secretaries may enter into a partner-
ship with any State center of excellence with experience relating to aerial firefighting.

SEC. 12. TERMINATION OF AUTHORITY.

The authority provided by this Act terminates on the date that is 10 years after the date of enactment of this Act.