II

115TH CONGRESS
2D SESSION

S. 3394

To establish a national mercury monitoring program, and for other purposes.

IN THE SENATE OF THE UNITED STATES

AUGUST 28, 2018

Ms. COLLINS (for herself and Mr. CARPER) introduced the following bill; which was read twice and referred to the Committee on Environment and Public Works

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A BILL

To establish a national mercury monitoring program, 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 ''Comprehensive National Mercury Monitoring Act''.

SEC. 2. FINDINGS.

Congress finds that—

(1) mercury is a potent neurotoxin of significant ecological and public health concern;

(2) it is estimated that approximately 200,000 children born each year in the United States are exposed to levels of mercury in the womb that are high enough to impair neurological development;

(3) based on estimates from the Centers for Disease Control and Prevention, between 2000 and 2010, between 2 and 6 percent of women in the United States of childbearing age have exceeded blood mercury levels determined to be safe by the Environmental Protection Agency;

(4) exposure to mercury occurs largely by the consumption of contaminated fish, but fish and shellfish are important sources of dietary protein and micronutrients, and a healthy fishing resource is important to the economy of the United States;

(5) in many locations, the primary route for mercury input to aquatic ecosystems is atmospheric emissions, transport, and deposition;

(6) existing broad-scale data sets are important but insufficient to track changes in mercury levels in the environment over time, test model predictions, and assess the impact of changing mercury emissions and deposition; and

(7) a comprehensive national mercury monitoring network to accurately quantify regional and

national changes in atmospheric mercury deposition, ecosystem contamination, and bioaccumulation of mercury in fish and wildlife in response to changes in mercury emissions would help policy makers, scientists, and the public to better understand the sources, consequences, and trends of mercury pollution in the United States.

SEC. 3. DEFINITIONS.

In this Act:

(1) ADMINISTRATOR.—The term ''Administrator'' means the Administrator of the Environmental Protection Agency.

(2) ADVISORY COMMITTEE.—The term ''Advisory Committee'' means the Mercury Monitoring Advisory Committee established under section 5(a).

(3) ANCILLARY MEASURE.—The term ''ancillary measure'' means a measure that is used to understand the impact and interpret results of measurements under the program.

(4) ECOREGION.—The term ''ecoregion'' means a large area of land and water that contains a geographically distinct assemblage of natural communities, including similar land forms, climate, ecological processes, and vegetation.

(5) MERCURY EXPORT.—The term ''mercury export'' means mercury transport from a watershed to the corresponding body of water, or from 1 body of water to another body of water (such as from a lake to a river), generally expressed as—

(A) mass per unit of time; or

(B) mass per unit of watershed or body of water area per unit of time.

(6) MERCURY FLUX.—The term ''mercury flux'' means the rate of transfer of mercury between ecosystem components (such as between water and air or land and air) or between portions of ecosystem components, expressed in terms of—

(A) mass per unit of time; or

(B) mass per unit of area of land or water per unit of time.

(7) PROGRAM.—The term ''program'' means the national mercury monitoring program established under section 4(a).

(8) SURFACE SEDIMENT.—The term ''surface sediment'' means sediment in the uppermost 2 centimeters of a lakebed, riverbed, estuary, or coastal area.

SEC. 4. MONITORING PROGRAM.

(a) ESTABLISHMENT.—

(1) IN GENERAL.—The Administrator, in consultation with the Director of the United States Fish and Wildlife Service, the Director of the United States Geological Survey, the Director of the National Park Service, the Administrator of the National Oceanic and Atmospheric Administration, and the heads of other appropriate Federal agencies, shall establish a national mercury monitoring program.

(2) PURPOSE.—The purpose of the program is to track—

(A) long-term trends in atmospheric mercury concentrations and deposition; and

(B) mercury levels in watersheds, surface water, and fish and wildlife in terrestrial, freshwater, coastal, and marine ecosystems in response to changing mercury emissions over time.

(3) MONITORING SITES.—

(A) IN GENERAL.—In carrying out paragraph (1), not later than 1 year after the date of enactment of this Act and in coordination with the Advisory Committee, the Administrator shall select multiple monitoring sites rep-

resenting multiple ecoregions and associated coastal waters of the United States.

(B) LOCATIONS.—Locations of monitoring sites shall include—

(i) units of the National Park System;

(ii) units of the National Wildlife Refuge System;

(iii) units of the National Estuarine Research Reserve System; and

(iv) sensitive ecological areas in which substantive changes are expected from reductions in domestic mercury emissions.

(C) COLOCATION.—Monitoring sites shall be colocated with sites from other long-term environmental monitoring programs, where practicable, including sites associated with the National Ecological Observatory Network, the Long Term Ecological Research Network, and the National Atmospheric Deposition Program.

(D) MONITORING PROTOCOLS.—Not later than 1 year after the date of enactment of this Act, the Administrator, in coordination with the Advisory Committee, shall establish and publish standardized measurement protocols for the program.

(4) INTERNATIONAL COOPERATION.—To the maximum extent practicable, the program shall be compatible with similar international efforts, including the Arctic Monitoring and Assessment Programme, the Global Earth Observation System of Systems, and the monitoring associated with the effectiveness evaluation of the Minamata Convention on Mercury, adopted October 10, 2013 (TIAS 17–816), which entered into force on August 16, 2017.

(5) DATA COLLECTION AND DISTRIBUTION.—Not later than 1 year after the date of enactment of this Act, the Administrator, in coordination with the Advisory Committee, shall establish—

(A) a centralized database for existing and newly collected environmental mercury data that can be freely accessed on the Internet; and

(B) assurance and quality standards for the database under subparagraph (A).

(b) FUNCTIONS.—

(1) IN GENERAL.—Under the program, the Administrator, in consultation with the appropriate Federal agencies and the Advisory Committee, shall at a minimum carry out monitoring described in paragraphs (2) through (4) at the locations selected under subsection (a)(3).

(2) AIR AND WATERSHEDS.—The program, in association with the National Atmospheric Deposition Program, shall monitor long-term changes in mercury levels and important ancillary measures in the air, including—

(A) the measurement and recording of wet mercury deposition;

(B) an estimation of—

(i) dry mercury deposition (such as litter mercury deposition);

(ii) mercury flux; and

(iii) mercury export; and

(C) the measurement of mercury isotopes and ancillary measurements to fully understand the transport, cycling, and transformations of mercury through ecosystems.

(3) WATER AND SOIL CHEMISTRY.—The program, in association with the WaterWatch Program established by the United States Geological Survey, shall monitor long-term changes in mercury and methyl mercury levels and important ancillary measures in the water and soil or sediments, including—

(A) extraction and analysis of soil and sediment cores;

(B) measurement and recording of total mercury and methyl mercury concentration in surface sediments; and

(C) measurement and recording of total mercury and methyl mercury concentration in surface waters.

(4) AQUATIC AND TERRESTRIAL ORGANISMS.—The program, in association with the United States Fish and Wildlife Service and the Inventory and Monitoring Division of the National Park Service, shall monitor long-term changes in mercury and methyl mercury levels and important ancillary measures in marine, freshwater, and terrestrial organisms, including—

(A) measurement and recording of total mercury and methyl mercury concentrations in—

(i) invertebrates;

(ii) yearling or lower trophic level fish; and

(iii) commercially, recreationally, or conservation relevant fish; and

(B) measurement and recording of total mercury concentrations in—

(i) selected insect- and fish-eating birds; and

(ii) selected insect- and fish-eating mammals.

SEC. 5. ADVISORY COMMITTEE.

(a) ESTABLISHMENT.—The Administrator, in consultation with the Director of the United States Fish and Wildlife Service, the Director of the United States Geological Survey, the Director of the National Park Service, the Administrator of the National Oceanic and Atmospheric Administration, and the heads of other appropriate Federal agencies, shall establish a scientific advisory committee, to be known as the ''Mercury Monitoring Advisory Committee'', to advise the Administrator and those Federal agencies on the establishment, site selection, measurement, recording protocols, and operation of the program.

(b) MEMBERSHIP.—The Advisory Committee shall consist of scientists who are not employees of the Federal Government, including—

(1) 3 scientists appointed by the Administrator;

(2) 2 scientists appointed by the Director of the United States Fish and Wildlife Service;

(3) 2 scientists appointed by the Director of the United States Geological Survey;

(4) 2 scientists appointed by the Director of the National Park Service; and

(5) 2 scientists appointed by the Administrator of the National Oceanic and Atmospheric Administration.

SEC. 6. REPORTS AND PUBLIC DISCLOSURE.

(a) REPORTS.—Not later than 2 years after the date of enactment of this Act and every 2 years thereafter, the Administrator shall submit to Congress a report on the program, including data on relevant temporal trends and spatial gradients in mercury contamination in the environment.

(b) ASSESSMENT.—Not less frequently than once every 4 years, the report required under subsection (a) shall include an assessment of mercury deposition rates that need to be achieved in order to prevent adverse human and ecological effects.

(c) AVAILABILITY OF DATA.—The Administrator shall make all data obtained under this Act available to the public through a dedicated website and on written request.

SEC. 7. AUTHORIZATION OF APPROPRIATIONS.

There are authorized to be appropriated to carry out this Act—

(1) $37,000,000 for fiscal year 2019;

(2) $29,000,000 for fiscal year 2020; and

(3) $29,000,000 for fiscal year 2021.

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