111TH CONGRESS
1ST SESSION

S. 2913

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

IN THE SENATE OF THE UNITED STATES

DECEMBER 18, 2009

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

(B) exposure to mercury occurs largely by consumption of contaminated fish;

(C) children and women of childbearing age who consume large quantities of fish are at high risk of adverse effects;

(D) it is estimated that more than 630,000 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; and

(E) the Centers for Disease Control and Prevention have found that 8 percent of women in the United States of childbearing age have blood mercury levels in excess of values determined to be safe by the Environmental Protection Agency;

(2)(A) as of 2006, 3,080 fish consumption advisories due to mercury contamination have been issued for 48 States, including 23 statewide advisories for freshwater and 12 statewide advisories for coastal waters;

(B) that is a 26 percent increase over the number of advisories issued in 2004;

(C) those advisories represent more than 22,000 square miles of lakes and 882,000 miles of rivers;

(D) however, fish and shellfish are an important source of dietary protein, and a healthy fishing resource is important to the economy of the United States; and

(E) the extent of fish consumption advisories underscores the extensive human and ecological health risk posed by mercury pollution;

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

(B) the cycling of mercury in the environment and resulting accumulation in biota are not fully understood; and

(C) computer models and other assessment tools provide varying effectiveness in predicting mercury concentrations in fish, and no broad-scale data sets exist to test model predictions;

(4)(A) on September 14 through 17, 2003, the Environmental Protection Agency cosponsored a Society of Environmental Toxicology and Chemistry workshop involving more than 30 international experts to formulate a system to quantify and document mercury changes in the various environment fields resulting from anticipated reductions in mercury emissions in the United States; and

(B) the resulting plan proposes a holistic, multimedia, long-term mercury monitoring program that is documented in 2 sources—

(i) on January 1, 2005, the article entitled ''Monitoring the Response to Changing Mercury Deposition'' was published in the journal Environmental Science and Technology; and

(ii) in 2008, the book entitled ''Ecosystem Responses to Mercury Contamination: Indicators of Change'' was published by CRC Press;

(5) as of the date of enactment of this Act, many regulations limiting mercury emissions from different sources have gone into effect or will be implemented, but ongoing monitoring programs are not adequately measuring the environmental benefits and effectiveness of mercury emission controls;

(6) on May 15, 2006, the Office of Inspector General of the Environmental Protection Agency issued a report entitled, ''Monitoring Needed to Assess Impact of EPA's Clean Air Mercury Rule (CAMR) on Potential Hotspots'', Report No. 2006–P–0025, which states, in part—

(A) ''Without field data from an improved monitoring network, EPA's ability to advance mercury science will be limited and 'utility-at-

tributable hotspots' that pose health risks may occur and go undetected''; and

(B) ''We recommend that the EPA develop and implement a mercury monitoring plan to assess the impact of CAMR, if adopted, on mercury deposition and fish tissue and evaluate and refine mercury estimation tools and models'';

(7)(A) on January 1, 2007, the articles entitled ''Biological Mercury Hotspots in the Northeastern U.S. and Southeastern Canada'' and ''Contamination in Remote Forest and Aquatic Ecosystems in the Northeastern U.S.: Sources, Transformations and Management Options'' were published in the journal BioScience; and

(B) the authors of the articles—

(i) identified 5 biological mercury hotspots and 9 areas of concern in the northeastern United States and southeastern Canada associated primarily with atmospheric mercury emissions and deposition;

(ii) located an area of particularly high mercury deposition adjacent to a coal-fired utility in southern New Hampshire; and

(iii) concluded that local impacts from mercury emissions should be closely monitored

in order to assess the impact of Federal and State policies; and

(8)(A) building on previous efforts in 2003, on May 5 through 7, 2008, the Environmental Protection Agency coconvened a workshop with experts from the United States Geological Survey, the National Oceanic and Atmospheric Administration, the United States Fish and Wildlife Service, the National Park Service, State and tribal agencies, the BioDiversity Research Institute, the National Atmospheric Deposition Program, industry, and other institutions;

(B) more than 50 workshop scientists participated and agreed on a goal and major design elements for a national mercury monitoring program, including a national distribution of approximately 20 intensive sites to understand the sources, consequences, and trends in United States mercury pollution;

(C) the consortium found that ''policy makers, scientists and the public need a comprehensive and integrated mercury monitoring network to accurately quantify regional and national changes in atmospheric deposition, ecosystem contamination, and bio-

accumulation of mercury in fish and wildlife in response to changes in mercury emissions.''; and

(D) the workshop findings are published in a report of the Environmental Protection Agency (430–K–09–001).

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.

(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 flux from a watershed to the corresponding water body, or from 1 water body to

another water body (such as a lake to a river), generally expressed as mass 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 between portions of ecosystem components, expressed in terms of mass per unit of time or mass per unit of area per time.

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

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

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 waters, and fish and wildlife in terrestrial, freshwater, and coastal 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, after consultation with the heads of Federal agencies described in paragraph (1) and considering the requirement for reports under section 6, shall select multiple monitoring sites representing multiple ecoregions of the United States.

(B) LOCATIONS.—Locations of monitoring sites shall include national parks, wildlife refuges, National Estuarine Research Reserve units, and other sensitive ecological areas that include long-term protection and in which sub-

stantive changes are expected from reductions in domestic mercury emissions.

(C) COLOCATION.—If practicable, monitoring sites shall be colocated with sites from other long-term environmental monitoring programs.

(4) 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 under this Act.

(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 centralized database for existing and newly collected environmental mercury data that can be freely accessed once data assurance and quality standards established by the Administrator are met.

(b) AIR AND WATERSHEDS.—

(1) IN GENERAL.—The program shall monitor long-term changes in mercury levels and important ancillary measures in the air at locations selected under subsection (a)(3).

(2) MEASUREMENTS.—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 determine appropriate measurements, including—

(A) the measurement and recording of wet and estimation of dry mercury deposition, mercury flux, and mercury export;

(B) the measurement and recording of the level of mercury reemitted from aquatic and terrestrial environments into the atmosphere; and

(C) the measurement of sulfur species and ancillary measurements at a portion of locations selected under subsection (a)(3) to fully understand the cycling of mercury through the ecosystem.

(c) WATER AND SOIL CHEMISTRY.—The program shall monitor long-term changes in mercury and methyl mercury levels and important ancillary measures in the water and soil or sediments at locations selected under

subsection (a)(3) that the Administrator, in primary consultation with the Director of the United States Geological Survey, determines to be appropriate, including—

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

(2) measurement and recording of total mercury and methyl mercury concentration, and percent methyl mercury in surface sediments;

(3) measurement and recording of total mercury and methyl mercury concentration in surface water; and

(4) measurement and recording of total mercury and methyl mercury concentrations throughout the water column and sediments.

(d) AQUATIC AND TERRESTRIAL ORGANISMS.—The program shall monitor long-term changes in mercury and methyl mercury levels and important ancillary measures in the aquatic and terrestrial organisms at locations selected under subsection (a)(3) that the Administrator, in primary consultation with the Director of the United States Fish and Wildlife Service and the Administrator of the National Oceanic and Atmospheric Administration, determines to be appropriate, including—

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

(A) zooplankton and other invertebrates;

(B) yearling fish; and

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

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

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

(B) measurement and recording of total mercury concentrations in selected insect- and fish-eating mammals.

SEC. 5. ADVISORY COMMITTEE.

(a) ESTABLISHMENT.—There shall be established a scientific advisory committee, to be known as the ''Mercury Monitoring Advisory Committee'', to advise the Administrator and Federal agencies described in section 4(a)(1), on the establishment, site selection, measurement and 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 trend data.

(b) ASSESSMENT.—At least once every 4 years, the report required under subsection (a) shall include an assessment of the reduction in mercury deposition rates that are required 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) for fiscal year 2011 to—

(A) the Environmental Protection Agency $15,000,000;

(B) the United States Fish and Wildlife Service $9,000,000;

(C) the United States Geological Survey $5,000,000;

(D) the National Oceanic and Atmospheric Administration $4,000,000; and

(E) the National Park Service $4,000,000;

(2) for fiscal year 2012 to—

(A) the Environmental Protection Agency $12,000,000;

(B) the United States Fish and Wildlife Service $7,000,000;

(C) the United States Geological Survey $4,000,000;

(D) the National Oceanic and Atmospheric Administration $3,000,000; and

(E) the National Park Service $3,000,000;

(3) for fiscal year 2013 to—

(A) the Environmental Protection Agency $12,000,000;

(B) the United States Fish and Wildlife Service $7,000,000;

(C) the United States Geological Survey $4,000,000;

(D) the National Oceanic and Atmospheric Administration $3,000,000; and

(E) the National Park Service $3,000,000; and

(4) such sums as are necessary for each of fiscal years 2014 through 2016 to—

(A) the Environmental Protection Agency;

(B) the United States Fish and Wildlife Service;

(C) the United States Geological Survey;

(D) the National Oceanic and Atmospheric Administration; and

(E) the National Park Service.

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