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

IN THE SENATE OF THE UNITED STATES

Ms. Collins (for herself and Mr. Carper) introduced the following bill; which was read twice and referred to the Committee on

A BILL

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

1 Be it enacted by the Senate and House of Representa-
2 tives of the United States of America in Congress assembled,
3 SECTION 1. SHORT TITLE.
4 This Act may be cited as the “Comprehensive Na-
5 tional Mercury Monitoring Act”.
6 SEC. 2. FINDINGS.
7 Congress finds that—
8 (1) mercury is a potent neurotoxin of signifi-
9 cant ecological and public health concern;
(2) it is estimated that approximately 410,000 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) the Centers for Disease Control and Prevention have found that 6 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;

(4) exposure to mercury occurs largely by consumption of contaminated fish, but fish and shellfish are important sources of dietary protein, 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) computer models and other assessment tools provide varying effectiveness in predicting mercury concentrations in fish, and broad-scale data sets are insufficient to test model predictions; and

(7) a comprehensive national mercury monitoring network to accurately quantify regional and national changes in atmospheric deposition, ecosystem contamination, and bioaccumulation of mer-
cury 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 in United States mercury pollution.

SEC. 3. DEFINITIONS.

In this Act:

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

(2) PROGRAM.—The term “program” means the national mercury monitoring program established under section 4.

(3) ADVISORY COMMITTEE.—The term “Advisory Committee” means the Mercury Monitoring Advisory Committee established under section 5.

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

(5) 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.
(6) MERCURY EXPORT.—The term “mercury export” means mercury flux from a watershed to the corresponding water body, or from one water body to another water body (such as a lake to a river), generally expressed as mass per unit of time.

(7) 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.

(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 water, 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 shall select multiple monitoring sites representing multiple ecoregions of the United States.

(B) LOCATIONS.—Locations of monitoring sites shall include National Parks, National Wildlife Refuges, National Estuarine Research Reserve units, and 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 prac-
ticable, including sites associated with the Na-
tional Ecological Observatory Network, 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 under this Act.

(4) 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 environ-
mental mercury data that can be freely accessed on
the Internet once data assurance and quality stand-
ards established by the Administrator are met.

(b) FUNCTIONS.—

(1) IN GENERAL.—Under the program, the Ad-
ministrator, 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 shall monitor long-term changes in mercury levels and important ancillary measures in the air, 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 to fully understand the cycling of mercury through the ecosystem.

(3) 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, including—

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

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

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

(4) 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, including—

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

(i) zooplankton and other invertebrates;

(ii) yearling 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) measurement and recording of total mercury concentrations in 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 national mercury monitoring 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) $37,000,000 for fiscal year 2012;
(2) $29,000,000 for fiscal year 2013; and
(3) $29,000,000 for fiscal year 2014.