

113TH CONGRESS  
1ST SESSION

# S. 1528

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

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IN THE SENATE OF THE UNITED STATES

SEPTEMBER 19, 2013

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.

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;

1           (2) it is estimated that approximately 410,000  
2 children born each year in the United States are ex-  
3 posed to levels of mercury in the womb that are high  
4 enough to impair neurological development;

5           (3) the Centers for Disease Control and Preven-  
6 tion have found that 6 percent of women in the  
7 United States of childbearing age have blood mer-  
8 cury levels in excess of values determined to be safe  
9 by the Environmental Protection Agency;

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

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

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

23          (7) a comprehensive national mercury moni-  
24 toring network to accurately quantify regional and  
25 national changes in atmospheric deposition, eco-

1 system contamination, and bioaccumulation of mer-  
2 cury in fish and wildlife in response to changes in  
3 mercury emissions would help policy makers, sci-  
4 entists, and the public to better understand the  
5 sources, consequences, and trends in United States  
6 mercury pollution.

7 **SEC. 3. DEFINITIONS.**

8 In this Act:

9 (1) ADMINISTRATOR.—The term “Adminis-  
10 trator” means the Administrator of the Environ-  
11 mental Protection Agency.

12 (2) PROGRAM.—The term “program” means  
13 the national mercury monitoring program estab-  
14 lished under section 4.

15 (3) ADVISORY COMMITTEE.—The term “Advi-  
16 sory Committee” means the Mercury Monitoring Ad-  
17 visory Committee established under section 5.

18 (4) ANCILLARY MEASURE.—The term “ancillary  
19 measure” means a measure that is used to under-  
20 stand the impact and interpret results of measure-  
21 ments under the program.

22 (5) ECOREGION.—The term “ecoregion” means  
23 a large area of land and water that contains a geo-  
24 graphically distinct assemblage of natural commu-

1 nities, including similar land forms, climate, ecologi-  
2 cal processes, and vegetation.

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

8 (7) MERCURY FLUX.—The term “mercury flux”  
9 means the rate of transfer of mercury between eco-  
10 system components (such as between water and air),  
11 or between portions of ecosystem components, ex-  
12 pressed in terms of mass per unit of time or mass  
13 per unit of area per time.

14 (8) SURFACE SEDIMENT.—The term “surface  
15 sediment” means sediment in the uppermost 2 centi-  
16 meters of a lakebed or riverbed.

17 **SEC. 4. MONITORING PROGRAM.**

18 (a) ESTABLISHMENT.—

19 (1) IN GENERAL.—The Administrator, in con-  
20 sultation with the Director of the United States Fish  
21 and Wildlife Service, the Director of the United  
22 States Geological Survey, the Director of the Na-  
23 tional Park Service, the Administrator of the Na-  
24 tional Oceanic and Atmospheric Administration, and  
25 the heads of other appropriate Federal agencies,

1 shall establish a national mercury monitoring pro-  
2 gram.

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

5 (A) long-term trends in atmospheric mer-  
6 cury concentrations and deposition; and

7 (B) mercury levels in watersheds, surface  
8 water, and fish and wildlife in terrestrial, fresh-  
9 water, coastal, and marine ecosystems in re-  
10 sponse to changing mercury emissions over  
11 time.

12 (3) MONITORING SITES.—

13 (A) IN GENERAL.—In carrying out para-  
14 graph (1), not later than 1 year after the date  
15 of enactment of this Act and in coordination  
16 with the Advisory Committee, the Adminis-  
17 trator shall select multiple monitoring sites rep-  
18 resenting multiple ecoregions and associated  
19 coastal waters of the United States.

20 (B) LOCATIONS.—Locations of monitoring  
21 sites shall include National Parks, National  
22 Wildlife Refuges, National Estuarine Research  
23 Reserve units, and sensitive ecological areas in  
24 which substantive changes are expected from  
25 reductions in domestic mercury emissions.

1           (C) COLOCATION.—Monitoring sites shall  
2           be colocated with sites from other long-term en-  
3           vironmental monitoring programs, where prac-  
4           ticable, including sites associated with the Na-  
5           tional Ecological Observatory Network, the  
6           Long-Term Ecological Research Network, and  
7           the National Atmospheric Deposition Program.

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

14          (4) INTERNATIONAL COOPERATION.—To the  
15          maximum extent practicable, the program shall be  
16          compatible with similar international efforts, includ-  
17          ing the Global Mercury Observation System and the  
18          Global Earth Observation System of Systems.

19          (5) DATA COLLECTION AND DISTRIBUTION.—  
20          Not later than 1 year after the date of enactment  
21          of this Act, the Administrator, in coordination with  
22          the Advisory Committee, shall establish a centralized  
23          database for existing and newly collected environ-  
24          mental mercury data that can be freely accessed on

1 the Internet once data assurance and quality stand-  
2 ards established by the Administrator are met.

3 (b) FUNCTIONS.—

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

10 (2) AIR AND WATERSHEDS.—The program shall  
11 monitor long-term changes in mercury levels and im-  
12 portant ancillary measures in the air, including—

13 (A) the measurement and recording of wet  
14 and estimation of dry mercury deposition, mer-  
15 cury flux, and mercury export;

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

20 (C) the measurement of sulfur species and  
21 ancillary measurements to fully understand the  
22 cycling of mercury through the ecosystem.

23 (3) WATER AND SOIL CHEMISTRY.—The pro-  
24 gram shall monitor long-term changes in mercury  
25 and methyl mercury levels and important ancillary

1 measures in the water and soil or sediments, includ-  
2 ing—

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

5 (B) measurement and recording of total  
6 mercury and methyl mercury concentration, and  
7 percent methyl mercury in surface sediments;

8 (C) measurement and recording of total  
9 mercury and methyl mercury concentration in  
10 surface water; and

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

14 (4) AQUATIC AND TERRESTRIAL ORGANISMS.—

15 The program shall monitor long-term changes in  
16 mercury and methyl mercury levels and important  
17 ancillary measures in marine, freshwater, and terres-  
18 trial organisms, including—

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

22 (i) invertebrates;

23 (ii) yearling or lower trophic level fish;

24 and



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

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

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

7 (ii) measurement and recording of  
8 total mercury concentrations in selected  
9 insect- and fish-eating mammals.

10 **SEC. 5. ADVISORY COMMITTEE.**

11 (a) ESTABLISHMENT.—The Administrator, in con-  
12 sultation with the Director of the United States Fish and  
13 Wildlife Service, the Director of the United States Geo-  
14 logical Survey, the Director of the National Park Service,  
15 the Administrator of the National Oceanic and Atmos-  
16 pheric Administration, and the heads of other appropriate  
17 Federal agencies, shall establish a scientific advisory com-  
18 mittee, to be known as the “Mercury Monitoring Advisory  
19 Committee”, to advise the Administrator and those Fed-  
20 eral agencies on the establishment, site selection, measure-  
21 ment, recording protocols, and operation of the national  
22 mercury monitoring program.

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

- 1           (1) 3 scientists appointed by the Administrator;
- 2           (2) 2 scientists appointed by the Director of the
- 3           United States Fish and Wildlife Service;
- 4           (3) 2 scientists appointed by the Director of the
- 5           United States Geological Survey;
- 6           (4) 2 scientists appointed by the Director of the
- 7           National Park Service; and
- 8           (5) 2 scientists appointed by the Administrator
- 9           of the National Oceanic and Atmospheric Adminis-
- 10          tration.

11 **SEC. 6. REPORTS AND PUBLIC DISCLOSURE.**

12          (a) **REPORTS.**—Not later than 2 years after the date

13 of enactment of this Act and every 2 years thereafter, the

14 Administrator shall submit to Congress a report on the

15 program, including trend data.

16          (b) **ASSESSMENT.**—At least once every 4 years, the

17 report required under subsection (a) shall include an as-

18 sessment of mercury deposition rates that need to be

19 achieved in order to prevent adverse human and ecological

20 effects.

21          (c) **AVAILABILITY OF DATA.**—The Administrator

22 shall make all data obtained under this Act available to

23 the public through a dedicated website and on written re-

24 quest.

1 **SEC. 7. AUTHORIZATION OF APPROPRIATIONS.**

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

4           (1) \$37,000,000 for fiscal year 2014;

5           (2) \$29,000,000 for fiscal year 2015; and

6           (3) \$29,000,000 for fiscal year 2016.

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