

112TH CONGRESS
1ST SESSION

S. _____

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;

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 con-
11 sumption of contaminated fish, but fish and shellfish
12 are important sources of dietary protein, and a
13 healthy fishing resource is important to the economy
14 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) computer models and other assessment tools
19 provide varying effectiveness in predicting mercury
20 concentrations in fish, and broad-scale data sets are
21 insufficient to test model predictions; and

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

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

6 **SEC. 3. DEFINITIONS.**

7 In this Act:

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

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

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

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

21 (5) ECOREGION.—The term “ecoregion” means
22 a large area of land and water that contains a geo-
23 graphically distinct assemblage of natural commu-
24 nities, including similar land forms, climate, ecologi-
25 cal processes, and vegetation.

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

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

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

15 **SEC. 4. MONITORING PROGRAM.**

16 (a) ESTABLISHMENT.—

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

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

3 (A) long-term trends in atmospheric mer-
4 cury concentrations and deposition; and

5 (B) mercury levels in watersheds, surface
6 water, and fish and wildlife in terrestrial, fresh-
7 water, and coastal ecosystems in response to
8 changing mercury emissions over time.

9 (3) MONITORING SITES.—

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

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

23 (C) COLOCATION.—Monitoring sites shall
24 be colocated with sites from other long-term en-
25 vironmental monitoring programs, where prac-

1 ticable, including sites associated with the Na-
2 tional Ecological Observatory Network, Long-
3 Term Ecological Research Network, and the
4 National Atmospheric Deposition Program.

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

11 (4) DATA COLLECTION AND DISTRIBUTION.—
12 Not later than 1 year after the date of enactment
13 of this Act, the Administrator, in coordination with
14 the Advisory Committee, shall establish a centralized
15 database for existing and newly collected environ-
16 mental mercury data that can be freely accessed on
17 the Internet once data assurance and quality stand-
18 ards established by the Administrator are met.

19 (b) FUNCTIONS.—

20 (1) IN GENERAL.—Under the program, the Ad-
21 ministrator, in consultation with the appropriate
22 Federal agencies and the Advisory Committee, shall
23 at a minimum carry out monitoring described in
24 paragraphs (2) through (4) at the locations selected
25 under subsection (a)(3).

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

4 (A) the measurement and recording of wet
5 and estimation of dry mercury deposition, mer-
6 cury flux, and mercury export;

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

11 (C) the measurement of sulfur species and
12 ancillary measurements to fully understand the
13 cycling of mercury through the ecosystem.

14 (3) WATER AND SOIL CHEMISTRY.—The pro-
15 gram shall monitor long-term changes in mercury
16 and methyl mercury levels and important ancillary
17 measures in the water and soil or sediments, includ-
18 ing—

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

21 (B) measurement and recording of total
22 mercury and methyl mercury concentration, and
23 percent methyl mercury in surface sediments;

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

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

7 (4) AQUATIC AND TERRESTRIAL ORGANISMS.—
8 The program shall monitor long-term changes in
9 mercury and methyl mercury levels and important
10 ancillary measures in the aquatic and terrestrial or-
11 ganisms, including—

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

15 (i) zooplankton and other inverte-
16 brates;

17 (ii) yearling fish; and

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

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

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

1 (ii) measurement and recording of
2 total mercury concentrations in selected
3 insect- and fish-eating mammals.

4 **SEC. 5. ADVISORY COMMITTEE.**

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

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

20 (1) 3 scientists appointed by the Administrator;

21 (2) 2 scientists appointed by the Director of the
22 United States Fish and Wildlife Service;

23 (3) 2 scientists appointed by the Director of the
24 United States Geological Survey;

1 (4) 2 scientists appointed by the Director of the
2 National Park Service; and

3 (5) 2 scientists appointed by the Administrator
4 of the National Oceanic and Atmospheric Adminis-
5 tration.

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

7 (a) REPORTS.—Not later than 2 years after the date
8 of enactment of this Act and every 2 years thereafter, the
9 Administrator shall submit to Congress a report on the
10 program, including trend data.

11 (b) ASSESSMENT.—At least once every 4 years, the
12 report required under subsection (a) shall include an as-
13 sessment of the reduction in mercury deposition rates that
14 are required to be achieved in order to prevent adverse
15 human and ecological effects.

16 (c) AVAILABILITY OF DATA.—The Administrator
17 shall make all data obtained under this Act available to
18 the public through a dedicated website and on written re-
19 quest.

20 **SEC. 7. AUTHORIZATION OF APPROPRIATIONS.**

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

23 (1) \$37,000,000 for fiscal year 2012;

24 (2) \$29,000,000 for fiscal year 2013; and

25 (3) \$29,000,000 for fiscal year 2014.