

117TH CONGRESS
1ST SESSION

H. R. 2533

IN THE SENATE OF THE UNITED STATES

MAY 19, 2021

Received; read twice and referred to the Committee on Commerce, Science,
and Transportation

AN ACT

To provide for a study by the National Academies of Sciences, Engineering, and Medicine examining the impact of ocean acidification and other stressors in estuarine environments.

1 *Be it enacted by the Senate and House of Representa-*
2 *tives of the United States of America in Congress assembled,*

1 **SECTION 1. SHORT TITLE.**

2 This Act may be cited as the “National Estuaries and
3 Acidification Research Act of 2021” or the “NEAR Act
4 of 2021”.

5 **SEC. 2. FINDINGS.**

6 Congress finds the following:

7 (1) Ocean acidification impacts human health,
8 natural resources, and the environmental, economic,
9 and recreational uses of the coastline.

10 (2) The current understanding of ocean acidifi-
11 cation impacts on estuarine ecosystems is inadequate
12 to fully prepare and manage for changing environ-
13 mental conditions in nearshore locations.

14 (3) While pH can be measured with high preci-
15 sion and accuracy in open ocean environments, more
16 understanding of the carbonate system in estuarine
17 ecosystems is needed for precise and accurate meas-
18 urements and observations.

19 (4) The interaction of multiple stressors, includ-
20 ing salinity, pH, temperature, sea level rise, and nu-
21 trient input, within estuarine ecosystems is inad-
22 equately understood for managing the health, eco-
23 nomic, recreational, and environmental impacts driv-
24 en by these interactions.

1 (5) A better understanding is needed of how
2 anthropogenic influences in coastal environments af-
3 fect estuarine ecosystems.

4 (6) More integration and coordination is needed
5 among regional, national, and global environmental
6 observations in estuarine environments, supporting
7 prior investments in related topics such as nutrient
8 loading, hypoxia, ocean acidification, and harmful
9 algae bloom research and observational systems.

10 **SEC. 3. STUDY EXAMINING THE IMPACT OF OCEAN ACIDIFI-**
11 **CATION AND OTHER ENVIRONMENTAL**
12 **STRESSORS ON ESTUARINE ENVIRONMENTS.**

13 (a) IN GENERAL.—Not later than 60 days after the
14 date of enactment of this Act, the Secretary of Commerce
15 shall make appropriate arrangements with the National
16 Academies of Sciences, Engineering, and Medicine (re-
17 ferred to in this Act as the “National Academies”) under
18 which the National Academies shall conduct a study
19 that—

20 (1) examines the existing science of ocean acidi-
21 fication in estuarine environments;

22 (2) examines the challenges to studying ocean
23 acidification and ocean acidification’s interactions
24 with other environment stressors in estuarine envi-
25 ronments;

1 (3) provides recommendations for improving fu-
2 ture research with respect to ocean acidification in
3 estuarine environments; and

4 (4) identifies pathways for applying science in
5 management and mitigation decisions relating to
6 ocean acidification in estuarine environments.

7 (b) CONTENTS OF STUDY.—The study described
8 under subsection (a) shall include—

9 (1) the behavior of the carbonate system within
10 estuarine environments;

11 (2) the interactions of the carbonate system
12 with other biotic and abiotic characteristics of estua-
13 rine ecosystems;

14 (3) how environmental and anthropogenic
15 changes or disturbances could affect abiotic and bi-
16 otic processes within estuaries;

17 (4) how estuarine biotic and abiotic processes
18 will be affected under predicted environmental
19 changes;

20 (5) the current state of data collection, inter-
21 pretation, storage, and retrieval and observational
22 infrastructure of abiotic and biotic parameters in es-
23 tuarine ecosystems;

(d) AUTHORIZATION OF APPROPRIATIONS.—There are authorized to be appropriated to carry out this section \$1,000,000.

Attest: CHERYL L. JOHNSON,
Clerk.