

.....  
(Original Signature of Member)

116TH CONGRESS  
1ST SESSION

# H. R.

---

To direct the Administrator of the Federal Emergency Management Agency to carry out a plan for the purchase and installation of an earthquake early warning system for the Cascadia Subduction Zone, and for other purposes.

---

## IN THE HOUSE OF REPRESENTATIVES

Mr. DEFAZIO introduced the following bill; which was referred to the Committee on \_\_\_\_\_

---

# A BILL

To direct the Administrator of the Federal Emergency Management Agency to carry out a plan for the purchase and installation of an earthquake early warning system for the Cascadia Subduction Zone, 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; DEFINITION.**

4 (a) SHORT TITLE.—This Act may be cited as the  
5 “Pacific Northwest Earthquake Preparedness Act of  
6 2019”.

1 (b) CASCADIA SUBDUCTION ZONE DEFINED.—In  
2 this Act, the term “Cascadia Subduction Zone” means the  
3 landward-dipping fault that is approximately 684 miles  
4 long, separates the Juan de Fuca and North America  
5 plates, and stretches along a portion of the western coast  
6 of the United States beginning off Cape Mendocino, Cali-  
7 fornia, along the State of Oregon, the State of Wash-  
8 ington, to Northern Vancouver Island, British Columbia.

9 **SEC. 2. EARTHQUAKE EARLY WARNING SYSTEM FOR**  
10 **CASCADIA SUBDUCTION ZONE.**

11 (a) PLAN FOR PURCHASE AND INSTALLATION.—

12 (1) DEVELOPMENT AND FUNDING.—The Ad-  
13 ministrator of the Federal Emergency Management  
14 Agency shall—

15 (A) develop a plan for the purchase and in-  
16 stallation of an earthquake early warning sys-  
17 tem for the Cascadia Subduction Zone; and

18 (B) identify the funds necessary for imple-  
19 mentation of the plan.

20 (2) SUBMISSION TO CONGRESS.—Not later than  
21 90 days after the date of enactment of this Act, the  
22 Administrator shall submit to the appropriate com-  
23 mittees of Congress a copy of the plan.

24 (b) REPORT TO CONGRESS.—Not later than 1 year  
25 after the date of enactment of this Act, the Administrator

1 shall submit to the appropriate committees of Congress  
2 a report that summarizes the actions taken to implement  
3 the plan.

4 (c) DEFINITIONS.—In this section, the following defi-  
5 nitions apply:

6 (1) APPROPRIATE COMMITTEES OF CON-  
7 GRESS.—The term “appropriate committees of Con-  
8 gress” means the Committee on Transportation and  
9 Infrastructure of the House of Representatives and  
10 the Committee on Homeland Security and Govern-  
11 mental Affairs of the Senate.

12 (2) EARTHQUAKE EARLY WARNING SYSTEM.—  
13 The term “earthquake early warning system” in-  
14 cludes—

15 (A) improvements to regional and geodetic  
16 networks that support building a capability for  
17 an earthquake early warning system; and

18 (B) seismometers, Global Positioning Sys-  
19 tem receivers, and associated infrastructure.

20 **SEC. 3. EARTHQUAKE AND TSUNAMI TASK FORCE.**

21 (a) IN GENERAL.—The President shall establish an  
22 Earthquake and Tsunami Task Force for the purpose of  
23 developing a comprehensive strategy and recommenda-  
24 tions on how the Nation should prepare and plan for, miti-  
25 gate against, respond to, recover from, and more success-

1 fully adapt to a covered event in the Cascadia Subduction  
2 Zone.

3 (b) TASK FORCE.—

4 (1) MEMBERSHIP.—The membership of the  
5 Task Force shall include a cross section of subject  
6 matter experts representing the following:

7 (A) Relevant Federal agencies.

8 (B) The States of Oregon, Washington,  
9 and California.

10 (C) Indian tribes, local governments, and  
11 private sector representatives that may be im-  
12 pacted by a covered event in the Cascadia  
13 Subduction Zone.

14 (D) Universities, academia, and research  
15 institutions with expertise in topics relevant to  
16 the work of the Task Force.

17 (2) CHAIRPERSON.—The Administrator (or the  
18 Administrator's designee) shall serve as the chair-  
19 person of the Task Force.

20 (3) DETAILED EMPLOYEES.—Members of the  
21 Task Force may detail employees to assist the Ad-  
22 ministrator (or the Administrator's designee) in ful-  
23 filling the responsibilities of the Task Force.

24 (c) COMPREHENSIVE STRATEGY.—

1           (1) STRATEGY.—The comprehensive strategy to  
2           be developed under subsection (a) shall include the  
3           following:

4                   (A) A description of how Federal agencies  
5                   will coordinate to develop the ability to prepare  
6                   and plan for, mitigate against, respond to, re-  
7                   cover from, and more successfully adapt to the  
8                   impacts of a covered event in the Cascadia  
9                   Subduction Zone.

10                   (B) A strategy to ensure collaboration be-  
11                   tween the Department of Transportation, the  
12                   Department of Energy, the Coast Guard, the  
13                   Corps of Engineers, and other Federal agencies,  
14                   as appropriate, for purposes of—

15                           (i) completing a needs assessment of  
16                           Federal facilities in need of hardening for  
17                           a covered event; and

18                           (ii) developing a strategic plan to  
19                           mitigate and retrofit Federal, State, tribal,  
20                           and local critical assets for freight, energy,  
21                           and transit purposes to withstand a cov-  
22                           ered event and to help save lives during  
23                           and immediately after a covered event.

24                   (C) A strategy—

1 (i) to assist State, tribal, and local  
2 governments in developing and imple-  
3 menting a coordinated and comprehensive  
4 plan to prioritize Federal, State, tribal,  
5 local, and private investments and activi-  
6 ties to develop the ability to prepare and  
7 plan for, mitigate against, respond to, re-  
8 cover from, and more successfully adapt to  
9 the impacts of a covered event in the  
10 Cascadia Subduction Zone; and

11 (ii) to link any existing statewide miti-  
12 gation plan with such a coordinated and  
13 comprehensive plan.

14 (D) With respect to the strategy described  
15 in subparagraph (C), an examination of the fea-  
16 sibility of the public sector, the private sector,  
17 and individuals to acquire earthquake insur-  
18 ance.

19 (E) An identification of funding opportuni-  
20 ties to implement the comprehensive strategy  
21 and any recommendations made by the Task  
22 Force, including—

23 (i) existing funding opportunities  
24 across Federal agencies and other sources;  
25 and

1 (ii) potential new funding opportuni-  
2 ties.

3 (F) An identification of barriers to obtain-  
4 ing funding for the implementation of the com-  
5 prehensive strategy and recommendations on  
6 how to remove the barriers.

7 (G) A strategy for appropriate Federal  
8 agencies to collaborate with and assist State,  
9 tribal, and local governments in developing rec-  
10 ommendations for cost-effective mitigation al-  
11 ternatives for aging State, tribal, and locally  
12 owned critical infrastructure.

13 (H) A strategy for assisting State, tribal,  
14 and local governments in developing a recovery  
15 plan prior to a covered event in the Cascadia  
16 Subduction Zone that addresses how State,  
17 tribal, and local governments may want to re-  
18 build after the event.

19 (I) An identification of the steps taken to  
20 date to develop an onshore and offshore earth-  
21 quake early warning system and a description  
22 of the purpose and scope of such a system.

23 (J) An evaluation of the types of offshore  
24 earthquake early warning systems and rec-  
25 ommendations and a cost estimate for an earth-

1           quake early warning system appropriate for the  
2           Cascadia Subduction Zone.

3           (K) Recommendations on how an earth-  
4           quake early warning system should operate, in-  
5           cluding whether and how the system should  
6           interface with the private sector.

7           (L) A description of appropriate roles and  
8           responsibilities for Federal, State, local, and  
9           tribal governments, including who should oper-  
10          ate and maintain an earthquake early warning  
11          system, the cost of the system, and possible  
12          funding sources for the system.

13          (M) A plan on how to integrate an earth-  
14          quake early warning system into existing and  
15          new public alert warning systems and tech-  
16          nologies, including mobile systems.

17          (2) USE OF EXISTING PLANS.—In developing  
18          the comprehensive strategy, the Task Force may use  
19          existing plans, studies, and other resources.

20          (d) RECOMMENDATIONS.—The recommendations to  
21          be developed by the Task Force under subsection (a) shall  
22          include recommendations on—

23               (1) potential administrative or legislative  
24               changes required to implement the comprehensive  
25               strategy;

1           (2) the funding required to implement the com-  
2           prehensive strategy and the recommendations; and

3           (3) the order of priority for implementation of  
4           the comprehensive strategy.

5           (e) NATIONAL ACADEMIES.—

6           (1) COLLABORATION.—The Task Force shall  
7           work simultaneously and collaboratively with the Na-  
8           tional Academies.

9           (2) AGREEMENT.—The Task Force shall enter  
10          into an agreement with the National Academies  
11          under which the National Academies shall develop  
12          recommendations for a Federal research strategy to  
13          advance scientific understanding of a Cascadia  
14          Subduction Zone earthquake and resulting tsunami  
15          preparedness, including the following:

16                 (A) Geologic conditions, ground motions,  
17                 and tsunami hazards.

18                 (B) Implications of an effective automated  
19                 early warning system.

20                 (C) Effects of mega-earthquake and tsu-  
21                 nami events on the built and natural environ-  
22                 ment.

23                 (D) Social and behavioral factors for effec-  
24                 tive disaster preparedness and response.

1 (E) Cost-effective mitigation alternatives  
2 for legacy and aging infrastructure.

3 (F) Strategic planning for freight, energy,  
4 and transit network robustness.

5 (G) Tools that help communities invest  
6 their resources for the greatest benefit.

7 (H) Any other topics identified as nec-  
8 essary by the Task Force or the National Acad-  
9 emies.

10 (f) REPORT.—Not later than 18 months after the  
11 date of enactment of this Act, the Administrator shall sub-  
12 mit to the Committee on Transportation and Infrastruc-  
13 ture of the House of Representatives and the Committee  
14 on Homeland Security and Governmental Affairs of the  
15 Senate a report of the Task Force that includes the fol-  
16 lowing:

17 (1) The comprehensive strategy to be developed  
18 under subsection (a).

19 (2) The recommendations to be developed under  
20 subsections (a), (d), and (e).

21 (g) DEFINITIONS.—In this section, the following defi-  
22 nitions apply:

23 (1) ADMINISTRATOR.—The term “Adminis-  
24 trator” means the Administrator of the Federal  
25 Emergency Management Agency.

1           (2) COVERED EVENT.—The term “covered  
2           event” means an earthquake, tsunami, or combined  
3           earthquake and tsunami event.

4           (3) TASK FORCE.—The term “Task Force”  
5           means the Federal interagency task force to be es-  
6           tablished under subsection (a).

7   **SEC. 4. NATIONAL PREPARATION AND RESPONSE EFFORTS**  
8                           **RELATING TO EARTHQUAKES AND TSUNAMIS.**

9           The Administrator of the Federal Emergency Man-  
10          agement Agency shall be responsible for the Nation’s ef-  
11          forts to reduce the loss of life and property, and to protect  
12          the Nation, from an earthquake, tsunami, or combined  
13          earthquake and tsunami event by developing the ability  
14          to prepare and plan for, mitigate against, respond to, re-  
15          cover from, and more successfully adapt to such an event.