

118TH CONGRESS
2D SESSION

S. 4462

To provide for the establishment of a National Interagency Seed and Restoration Center, and for other purposes.

IN THE SENATE OF THE UNITED STATES

JUNE 5, 2024

Ms. HIRONO introduced the following bill; which was read twice and referred to the Committee on Environment and Public Works

A BILL

To provide for the establishment of a National Interagency Seed and Restoration Center, 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 “National Interagency
5 Seed and Restoration Center Establishment Act”.

6 **SEC. 2. DEFINITIONS.**

7 In this Act:

8 (1) CENTER.—The term “Center” means the
9 National Interagency Seed and Restoration Center
10 established under section 3(a)(1).

1 (2) DEPARTMENT.—The term “Department”
2 means the Department of the Interior.

3 (3) ECOREGION.—The term “ecoregion” means
4 a land area varying in size and having a unified cli-
5 mate, geology, topography, soil, potential natural
6 vegetation, and predominant land use.

7 (4) FEDERAL INTERAGENCY PARTNER.—The
8 term “Federal interagency partner” means—

9 (A) the Secretary of Agriculture;

10 (B) the Secretary of Transportation; and

11 (C) the Secretary of Defense.

12 (5) GENETICALLY APPROPRIATE.—The term
13 “genetically appropriate plant”, with respect to a
14 plant, means—

15 (A) a native plant species that is locally
16 adapted to target site conditions, such as a
17 plant with effective establishment, vigor, and
18 reproductive capabilities;

19 (B) a native plant species that is suffi-
20 ciently genetically diverse to respond and adapt
21 to changing climate and environment condi-
22 tions;

23 (C) a native plant species that is un-
24 likely—

1 (i) to cause genetic contamination;

2 and

3 (ii) to undermine—

4 (I) local adaptations;

5 (II) community interactions; and

6 (III) the function of native spe-
7 cies within the ecosystem;

8 (D) a plant that is not likely—

9 (i) to become an invasive species; and

10 (ii) to displace other native species;

11 (E) a plant that is not likely to be a source
12 of nonnative invasive pathogens; and

13 (F) a plant that is likely to maintain crit-
14 ical connections with pollinators.

15 (6) INDIAN TRIBE.—The term “Indian Tribe”
16 means any Indian or Alaska Native tribe, band, na-
17 tion, pueblo, village, or community individually iden-
18 tified (including parenthetically) in the list published
19 most recently as of the date of enactment of this Act
20 pursuant to section 104 of the Federally Recognized
21 Indian Tribe List Act of 1994 (25 U.S.C. 5131).

22 (7) INVASIVE SPECIES.—The term “invasive
23 species”, with respect to a particular ecosystem,
24 means a non-native organism, including the seed,
25 spores, or other biological material of the organism,

1 the introduction of which causes or is likely to cause
2 economic or environmental harm or harm to human,
3 animal, or plant health.

4 (8) **LOCALLY ADAPTED.**—The term “locally
5 adapted”, with respect to a plant, means a plant
6 from an area geographically near a planting site that
7 is environmentally adapted and likely to establish
8 and persist.

9 (9) **NATIONAL SEED STRATEGY.**—The term
10 “National Seed Strategy” means—

11 (A) the National Seed Strategy for Reha-
12 bilitation and Restoration 2015-2020; and

13 (B) the National Seed Strategy Business
14 Plan 2015-2020.

15 (10) **NATIVE HAWAIIAN ORGANIZATION.**—The
16 term “Native Hawaiian organization” has the mean-
17 ing given the term in section 2 of the Native Amer-
18 ican Graves Protection and Repatriation Act (25
19 U.S.C. 3001).

20 (11) **NATIVE PLANT SPECIES.**—The term “na-
21 tive plant species” means a plant species that occurs
22 naturally in a particular region, State, Tribal land
23 ecosystem, or habitat without direct or indirect
24 human action.

1 (12) NOXIOUS WEED.—The term “noxious
2 weed” means any plant or plant product that can di-
3 rectly or indirectly injure or cause damage to crops
4 (including nursery stock or plant products), live-
5 stock, poultry, or other interests of agriculture, irri-
6 gation, navigation, the natural resources of the
7 United States, public health, or the environment.

8 (13) PLANT CONSERVATION ALLIANCE.—The
9 term “Plant Conservation Alliance” means the pub-
10 lic-private collaboration established in 1994 among
11 Federal agency members and non-Federal coopera-
12 tors that share the objective of protecting native
13 plant species by ensuring that native plant species
14 populations and communities are maintained, en-
15 hanced, and restored.

16 (14) PLANT MATERIAL.—The term “plant ma-
17 terial” means a seed, spore, part of a plant, or whole
18 plant, including seedlings and container stock.

19 (15) PLANT MATERIAL SPECIALIST.—The term
20 “plant material specialist” includes a plant ecologist,
21 botanist, geneticist, seed scientist, or restoration
22 practitioner or ecologist with relevant expertise, in-
23 cluding local, Indigenous, and traditional ecological
24 knowledge, qualified to develop and recommend re-
25 vegetation, rehabilitation, and restoration plans, in-

1 including site preparation, species and source selec-
2 tion, and seeding and planting specifications and
3 monitoring protocols.

4 (16) REHABILITATION.—The term “rehabilita-
5 tion” means the reparation of ecosystem processes,
6 productivity, and services based on functioning pre-
7 existing or existing ecosystems that allow for adapta-
8 tion of sites to specific current or future uses.

9 (17) RESTORATION.—The term “restoration”
10 means assisting the recovery of an ecosystem that
11 has been degraded, damaged, or destroyed, including
12 the reestablishment of the preexisting biotic integrity
13 in terms of species composition and community
14 structure.

15 (18) REVEGETATION.—The term “revegeta-
16 tion” means the reestablishment of plants on a site.

17 (19) SECRETARY.—The term “Secretary”
18 means the Secretary of the Interior.

19 (20) SEED TRANSFER GUIDELINES.—The term
20 “seed transfer guidelines” means recommendations
21 for protecting the integrity of the natural pattern of
22 adaptive variation of wild populations by restricting
23 seed transfers to areas within which seeds may be
24 moved about freely with the expectation that the
25 seeds would—

1 (A) grow and reproduce successfully; and

2 (B) produce no adverse genetic effects.

3 (21) TRIBAL LAND.—The term “Tribal land”

4 means—

5 (A) land located within the exterior bound-
6 aries of an Indian reservation;

7 (B) land to which title is held by a depend-
8 ent Indian community; and

9 (C) land held in trust for Native Hawai-
10 ians by the State of Hawaii pursuant to the
11 Hawaiian Homes Commission Act, 1920 (42
12 Stat. 108, chapter 42) or section 4 of Public
13 Law 86–3 (73 Stat. 5) (commonly known as
14 the “Hawaii Statehood Admissions Act, 1959”).

15 **SEC. 3. NATIONAL INTERAGENCY SEED AND RESTORATION**

16 **CENTER.**

17 (a) ESTABLISHMENT.—

18 (1) IN GENERAL.—The Secretary, in coordina-
19 tion with the Federal interagency partners, the
20 Plant Conservation Alliance, Indian Tribes, and Na-
21 tive Hawaiian organizations, shall establish a Na-
22 tional Interagency Seed and Restoration Center to
23 provide leadership and oversight with respect to—

1 (A) the research, development, coordina-
2 tion, and distribution of native plant species;
3 and

4 (B) the conduct of ecological restoration,
5 revegetation, and rehabilitation projects across
6 ecoregions throughout the United States.

7 (2) PURPOSE.—The purpose of the Center is to
8 facilitate the national coordination of all aspects of
9 native plant species plant materials development
10 process, including ecological restoration, by—

11 (A) enhancing research on—

12 (i) the development and use of native
13 plant seeds and native plants for native
14 plant species community restoration, in-
15 cluding for use as food and medicine;

16 (ii) the restoration of native plant spe-
17 cies communities—

18 (I) in response to natural disas-
19 ters; or

20 (II) as part of mitigation of nox-
21 ious weed and invasive species remov-
22 als or treatments to prevent and deter
23 further invasion or for other purposes;

24 (iii) the propagation and storage and
25 distribution of native plant materials; and

1 (iv) any other research needs identi-
2 fied by the National Seed Strategy;

3 (B) providing land managers with—

4 (i) appropriate, locally adapted or ge-
5 netically appropriate plant materials in a
6 timely, efficient, and cost-effective manner;
7 and

8 (ii) the guidance, tools, and training
9 necessary for the reclamation, restoration,
10 and rehabilitation of landscapes using na-
11 tive plant species;

12 (C) creating resilient native plant species
13 communities to withstand multiple uses and cli-
14 mate change;

15 (D) enhancing interagency coordination to
16 implement the National Seed Strategy through
17 the Federal Committee of the Plant Conserva-
18 tion Alliance; and

19 (E) coordinating shared use and enhance-
20 ment of infrastructure for native plant material
21 development.

22 (b) INTERAGENCY COORDINATION.—

23 (1) IN GENERAL.—In coordinating activities of
24 the Center with the Federal interagency partners,

1 the Center shall focus on the coordination of activi-
2 ties relating to—

3 (A) wildland seed and plant material col-
4 lection and storage, including long-term
5 germplasm or cryopreservation to preserve wild
6 genomes;

7 (B) native plant materials research, devel-
8 opment, and production;

9 (C) providing ecoregional liaisons, includ-
10 ing agricultural producers and natural resource
11 managers, with native plant materials;

12 (D) the assessment, improvement, and de-
13 livery of incentive programs and risk manage-
14 ment tools to encourage production of native
15 plant seed and native plant materials on private
16 land and Tribal land;

17 (E) the development and coordination of
18 seed procurement mechanisms, such as forward
19 contracting, blanket purchase agreements, or
20 other procurement vehicles for seed production
21 across ecoregions;

22 (F) coordination with State seed testing
23 and seed certification agency partners;

24 (G) revegetation, restoration, and rehabili-
25 tation of landscapes and reporting results of the

1 revegetation, restoration, and rehabilitation to
2 the Center;

3 (H) fostering and improving communica-
4 tion, education, information sharing, and train-
5 ing, including any employment, training, or re-
6 lated services that serve Tribally determined
7 goals consistent with the policy of self-deter-
8 mination;

9 (I) information technology and geospatial
10 coordination;

11 (J) restoring native plant species commu-
12 nities critical to Indigenous foodways and Indig-
13 enous medicines pursuant to Tribal and Native
14 Hawaiian organization direction; and

15 (K) ensuring adequate budget and con-
16 tracting with respect to the conduct of activities
17 described in subparagraphs (A) through (J).

18 (2) EXISTING NETWORKS.—In coordinating ac-
19 tivities of the Center with the Federal interagency
20 partners, the Secretary shall leverage programs and
21 expertise through existing networks such as—

22 (A) the Federal Committee of the Plant
23 Conservation Alliance;

24 (B) Plant Conservation Alliance non-Fed-
25 eral cooperators;

1 (C) the Bureau of Land Management
2 Plant Conservation and Restoration Program
3 and the interagency Ecoregional Native Plant
4 Programs;

5 (D) the United States Geological Survey
6 Climate Adaptation Science Centers and Water
7 Science Centers;

8 (E) the Department of Agriculture Climate
9 Hubs, Plant Materials Centers, and Germplasm
10 Resources Information Network of the Depart-
11 ment of Agriculture;

12 (F) the Indigenous SeedKeepers Network
13 of the Native American Food Sovereignty Alli-
14 ance;

15 (G) the National Academies of Sciences,
16 Engineering, and Medicine;

17 (H) the United States Fish and Wildlife
18 Service National Seed Strategy Implementation
19 Team and Center for Pollinator Conservation;

20 (I) the Office of Wildland Fire of the De-
21 partment; and

22 (J) the Inventory and Monitoring Net-
23 works, Invasive Plant Management Teams, and
24 ecoregional plant hubs of the National Park
25 Service.

1 (c) RESEARCH.—

2 (1) IN GENERAL.—To support the activities of
3 the Center, the Secretary, in coordination with the
4 Federal Committee of the Plant Conservation Alli-
5 ance and other Federal interagency partners, Native
6 Hawaiian organizations, and Indian Tribes, shall
7 support a robust and dedicated program of intra-
8 mural and extramural botanical science research
9 that is relevant and appropriate to the native seed
10 development process, including collection, germina-
11 tion, agricultural production, genetics, seed banking,
12 seed storage, equipment for planting, distribution,
13 and restoration techniques to support the land man-
14 agement responsibilities of the Federal Government.

15 (2) AREAS OF EMPHASIS.—Research activities
16 authorized under this subsection shall focus on the
17 following:

18 (A) Effective approaches to restoring eco-
19 systems that incorporate the use of appropriate
20 locally adapted native plant materials.

21 (B) Effective methods for developing—

22 (i) locally adapted and genetically ap-
23 propriate native seed and plant materials;
24 and

1 (ii) seed transfer guidelines for native
2 plant species and land management activi-
3 ties.

4 (C) Effective restoration strategies for
5 using native seed and plant species—

6 (i) to reduce—

7 (I) the risk of wildfire; and

8 (II) the likelihood of wildfire af-
9 fecting native ecosystems not adapted
10 to fire;

11 (ii) to manage invasive species and
12 noxious weeds, including restoration activi-
13 ties to prevent reintroduction of invasive
14 species;

15 (iii) to rehabilitate, restore, and re-
16 vegetate ecosystems after catastrophic
17 events, such as wildfires, flooding, drought
18 events, or hurricanes; and

19 (iv) to restore degraded native eco-
20 systems following habitat modification,
21 such as hazardous substances releases or
22 introduction of invasive species.

23 (D) Effective methods to use native seed
24 and native plant materials in response to the

1 impacts of long- and medium-term environ-
2 mental changes, such as changes in—

- 3 (i) moisture levels;
4 (ii) temperature;
5 (iii) landscape fragmentation;
6 (iv) invasive species;
7 (v) human activity; and
8 (vi) other features due to climate
9 change.

10 (E) Effective methods to use native seed
11 and native plant materials to restore habitat
12 and promote the recovery of threatened and en-
13 dangered native plant species and animal spe-
14 cies.

15 (F) Economic or social issues relating to
16 effective methods for collaborating with private
17 and commercial sector partners to increase the
18 availability of native plant material such as na-
19 tive seed grower incentives.

20 (G) Restoration of native plant species
21 communities critical to Indigenous foodways,
22 Indigenous foods, and Indigenous medicines, in-
23 cluding the protection of intellectual property of
24 Tribal and Indigenous seeds pursuant to Indig-
25 enous requests.

1 (H) Addressing the feasibility of seed
2 banking and storage of native species—

3 (i) to support ex situ collections; and

4 (ii) to provide robust seed supply for
5 habitat restoration.

6 (I) Monitoring strategies for efficacy of
7 treatment.

8 (3) EXTRAMURAL RESEARCH.—As determined
9 to be appropriate by the Secretary, in coordination
10 with the Federal interagency partners, research con-
11 ducted under this subsection may be carried out
12 through competitively awarded grants, contracts,
13 contracts established under the Indian Self-Deter-
14 mination and Education Assistance Act (25 U.S.C.
15 5301 et seq.) or cooperative agreements, to be
16 awarded in accordance with applicable requirements
17 established by the Secretary.

18 (d) USE OF EXISTING SEED INFRASTRUCTURE.—
19 The Center shall coordinate the use of existing seed infra-
20 structure of the Department and the Department of Agri-
21 culture for the purpose of carrying out this Act.

22 (e) ECOREGIONAL HUBS.—

23 (1) IN GENERAL.—The Secretary, in coordina-
24 tion with the Federal interagency partners, Native
25 Hawaiian organizations, and Indian Tribes, shall,

1 using and based on existing Bureau of Land Man-
2 agement Ecoregional Native Plant Programs, estab-
3 lish interagency ecoregional hubs available to each
4 State and territory of the United States that consist
5 of—

6 (A) an Ecoregional Native Plant Coordi-
7 nator;

8 (B) Tribal, Native Hawaiian organization,
9 and other plant material specialists;

10 (C) regional seed collection teams;

11 (D) seed and plant material warehouses
12 for local storage and seed cleaning facilities;

13 (E) plant production centers; and

14 (F) any other necessary subject matter ex-
15 perts placed at offices throughout the applicable
16 region to support the ecoregional hub.

17 (2) PURPOSES.—The purposes of an
18 ecoregional hub are—

19 (A) to assess the native plant material
20 needs of the applicable ecoregion; and

21 (B) to coordinate and facilitate the use of
22 appropriate native plant materials in local res-
23 toration, rehabilitation, and reclamation
24 projects.

1 (3) HIRING.—The Center may hire such staff
2 as are necessary to carry out the duties of the
3 ecoregional hubs.

4 (f) OTHER PARTNERSHIPS.—The Center shall co-
5 ordinate with Indian Tribes, States, territories, units of
6 local government, Alaska Native organizations, Native
7 Hawaiian organizations, institutions of higher education,
8 botanic gardens, and local stakeholders to assess, and pro-
9 vide expertise to address, local community revegetation,
10 rehabilitation, and restoration needs.

11 (g) STATEMENT OF POLICY.—It shall be the policy
12 of the Department and the Federal interagency partners
13 that—

14 (1) genetically appropriate plant materials shall
15 be preferentially used for land revegetation, rehabili-
16 tation, and restoration; and

17 (2) if the use of genetically appropriate plant
18 materials is not feasible, as determined by the Sec-
19 retary or the Federal interagency partners, as appli-
20 cable, preference shall be given to the use of native
21 plant species that meet the requirements of subpara-
22 graphs (C) and (D) of section 2(5).

23 (h) ADDITIONAL ACTIVITIES.—In addition to the co-
24 ordination and research activities otherwise authorized

1 under this section, the Center may carry out the following
2 activities to develop and use native plant materials:

3 (1) Identifying, evaluating, and protecting rare
4 plants on public land managed by the Secretary and
5 the Federal interagency partners.

6 (2) Developing an understanding of the effects
7 of human activity on native plant species and native
8 plant species communities on public land managed
9 by the Federal interagency partners.

10 (3)(A) Supporting efforts to develop genetically
11 appropriate and locally adapted native plant mate-
12 rials for restoring, rehabilitating, and revegetating
13 ecosystems.

14 (B) Monitoring the use and effectiveness of the
15 plant materials developed under subparagraph (A).

16 (4) Ensuring that the needs of the Department
17 and the Federal interagency partners for native
18 plant materials are met.

19 (5) Supporting public-private partnerships to
20 conduct research on the development of seed trans-
21 fer guidelines.

22 (6) Supporting public-private partnerships to
23 catalogue and store plant materials.

24 (7) Coordinating a national network of seed
25 cleaning facilities and seed storage warehouses.

1 (8) Implementing ecological restoration, reha-
2 bilitation, and revegetation on a landscape scale.

3 (9) Supporting public-private efforts and volun-
4 teer efforts to support native plant species conserva-
5 tion.

6 (10) Supporting and working with Indian
7 Tribes and Native Hawaiian organizations on efforts
8 to restore native plant communities critical to Indig-
9 enous foodways, including edible and medicinal na-
10 tive plant species, and protecting Tribal intellectual
11 property with respect to Indigenous seeds.

12 (11) Providing technical assistance (including
13 tools and training) on selection of appropriate plant
14 materials used for restoration.

15 (12) Supporting programs that provide finan-
16 cial and technical assistance and risk management
17 tools for producers of native plant materials.

18 (13) Facilitating native seed needs planning
19 based on historic and project needs.

20 (i) REPORTS.—

21 (1) INITIAL REPORT.—Not later than 1 year
22 after the date of enactment of this Act, the Sec-
23 retary, in consultation with the Federal Committee
24 of the Plant Conservation Alliance, shall submit to
25 the Committee on Energy and Natural Resources of

1 the Senate and the Committee on Natural Resources
2 of the House of Representatives a report identi-
3 fying—

4 (A) ecoregional needs and recommenda-
5 tions for the establishment of ecoregional hubs,
6 including—

7 (i) recommended locations;

8 (ii) recommended service areas;

9 (iii) recommended investments in na-
10 tive plant materials capacity, including
11 workforce, infrastructure, and research to
12 support hubs; and

13 (iv) estimated budgets (including esti-
14 mated budgets for infrastructure and staff-
15 ing needs) to carry out this Act;

16 (B) a list of partners for—

17 (i) the Center; and

18 (ii) each ecoregional hub established
19 in accordance with subparagraph (A); and

20 (C) scenarios requiring the use of plants
21 that are not native.

22 (2) ADDITIONAL REPORTS.—Not later than 5
23 years after the date of enactment of this Act and
24 every 5 years thereafter, the Secretary, in coordina-
25 tion with the Federal interagency partners, shall

1 submit to the Committee on Energy and Natural
2 Resources of the Senate and the Committee on Nat-
3 ural Resources of the House of Representatives a re-
4 port identifying—

5 (A) the adequacy of native seed inventories
6 for post-disaster restoration, rehabilitation, and
7 revegetation;

8 (B) the adequacy of native seed collection,
9 processing, and storage programs in light of
10 current and anticipated post-disaster restora-
11 tion, rehabilitation, and revegetation needs; and

12 (C) the adequacy of native seed and plant
13 material capacity and distribution for post-dis-
14 aster restoration, rehabilitation, and revegeta-
15 tion.

16 (j) AUTHORIZATION OF APPROPRIATIONS.—There is
17 authorized to be appropriated to the Secretary to carry
18 out this Act, including necessary infrastructure,
19 \$100,000,000 for each of fiscal years 2025 through 2029.

○