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118TH CONGRESS
2D SESSION

S. 2991

To improve revegetation and carbon sequestration activities in the United States, and for other purposes.

IN THE SENATE OF THE UNITED STATES

SEPTEMBER 28 (legislative day, SEPTEMBER 22), 2023

Mr. MANCHIN (for himself, Mr. BARRASSO, Mr. KING, and Mr. MARSHALL) introduced the following bill; which was read twice and referred to the Committee on Energy and Natural Resources

NOVEMBER 21, 2024

Reported by Mr. MANCHIN, with an amendment

[Strike out all after the enacting clause and insert the part printed in italic]

A BILL

To improve revegetation and carbon sequestration activities in the United States, 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; TABLE OF CONTENTS.**

4 (a) ~~SHORT TITLE.~~—This Act may be cited as the
5 “America’s Revegetation and Carbon Sequestration Act of
6 2023”.

1 (b) **TITLE OF CONTENTS.**—The table of contents for
2 this Act is as follows:

See. 1. Short title; table of contents.
See. 2. Findings.
See. 3. Definitions.

TITLE I—REVEGETATION

See. 101. Climate adaptation and resilient forests and rangeland measures.
See. 102. National revegetation effort.
See. 103. Experimental forests.
See. 104. Long-term contracts for tree and seed planting.
See. 105. Tree planting for communities.
See. 106. Revegetation on abandoned mine land.
See. 107. International reforestation.

TITLE II—CARBON SEQUESTRATION THROUGH FOREST MANAGEMENT AND INNOVATION

See. 201. Forest management from carbon credits.
See. 202. Recovery and restoration treatments following stand-replacing dis-
turbances.
See. 203. Biochar and wood waste.
See. 204. Eradication of invasive grasses.

TITLE III—MASS TIMBER

See. 301. Definitions.
See. 302. Joint mass timber science and education program.
See. 303. Storing carbon in Federal buildings.

TITLE IV—RESEARCH

See. 401. Longevity of forest products.
See. 402. Forest inventory and analysis.
See. 403. Bioeconomy research.
See. 404. Insurance product to replace buffers.
See. 405. Forest health threat centers.

3 **SEC. 2. FINDINGS.**

4 Congress finds that—

5 (1) revegetation efforts can meet multiple goals,
6 including guarding against climate change, improv-
7 ing conservation and habitats, securing public water
8 supplies, and providing for economic and cultural
9 benefits;

1 (2) a range of practical constraints, including
2 cost, available infrastructure, and whether land has
3 been converted to other uses that are unlikely to be
4 abandoned, significantly limit the areas that are via-
5 ble for revegetation projects, and hence revegetation
6 projects must be targeted;

7 (3) reforestation projects should occur in areas
8 that were historically forested but have become de-
9 graded or impacted from wildfire events, wind-
10 storms, or other events, rather than other natural
11 habitats, such as grasslands;

12 (4) forests and rangelands are important for
13 storing carbon;

14 (5) established forests and native rangelands,
15 including actively managed forests and rangelands,
16 are preferable to new forests and rangelands that
17 are a result of revegetation efforts, because intact
18 forests and vegetation communities are more effec-
19 tive at sequestration and are more resilient to fire,
20 storm, and drought;

21 (6) natural regrowth of forests and rangelands
22 is cheaper and more efficient than revegetation
23 projects, as long as nonnative invasive species are
24 not adversely impacting the landscape;

1 (7) native plant development and restoration
2 generates sustainable private sector jobs in a wide
3 variety of sectors;

4 (8) selecting the appropriate species of trees
5 and of other vegetation and promoting biodiversity
6 using a mixture of species naturally found in the
7 local area, rare species, and species of economic im-
8 portance are crucial to the success of revegetation
9 efforts;

10 (9) species selected for revegetation efforts and
11 the specified planting density and structure should
12 be suitable for the local climate, taking into account
13 future climate resilience and other considerations;

14 (10) scientific knowledge should be combined
15 with local knowledge, and site conditions should be
16 taken into account, in developing revegetation
17 projects, and ideally small-scale planting trials
18 should take place before planting large numbers of
19 trees;

20 (11) partnerships with local communities are
21 key to the success of tree and vegetation planting
22 projects because local people often have the most to
23 gain from those projects;

24 (12) a successful planting project must include
25 a plan on how to source seeds or seedlings that

1 match desired species and genetics, and that plan
2 should involve working with local stakeholders;

3 ~~(13)~~ the sustainability of revegetation projects
4 is dependent on the economic impacts for all stake-
5 holders; and

6 ~~(14)~~ invasive grasses are a catalyst for wildfires
7 in forests and rangelands.

8 **SEC. 3. DEFINITIONS.**

9 In this Act:

10 ~~(1)~~ CARBON SEQUESTRATION.—The term “car-
11 bon sequestration” means the capture and long-term
12 storage of atmospheric carbon dioxide.

13 ~~(2)~~ NATIONAL FOREST SYSTEM.—The term
14 “National Forest System” has the meaning given
15 the term in section 11(a) of the Forest and Range-
16 land Renewable Resources Planning Act of 1974 (16
17 U.S.C. 1609(a)).

18 ~~(3)~~ SECRETARIES.—The term “Secretaries”
19 means the Secretary of the Interior and the Sec-
20 retary of Agriculture, acting through the Chief of
21 the Forest Service.

22 ~~(4)~~ SECRETARY.—Except in sections 103,
23 105(b), 201, 202, and 302, the term “Secretary”
24 means the Secretary of the Interior.

1 (1) FEDERAL LAND.—The term “Federal land”
2 means—

3 (A) National Forest System land, except—

4 (i) the national grasslands and land
5 utilization projects administered under title
6 III of the Bankhead-Jones Farm Tenant
7 Act (7 U.S.C. 1010 et seq.); and

8 (ii) National Forest System land east
9 of the 100th meridian; and

10 (B) land under the jurisdiction of the Sec-
11 retary.

12 (2) TASK FORCE.—The term “task force”
13 means an interagency revegetation task force estab-
14 lished under subsection (d).

15 (3) ZONE.—The term “zone” means a zone de-
16 scribed in subsection (e).

17 (b) ASSESSMENT OF REVEGETATION NEEDS.—

18 (1) FEDERAL LAND ASSESSMENT.—

19 (A) IN GENERAL.—Not later than 1 year
20 after the date of enactment of this Act, the Sec-
21 retaries shall assess, using the revegetation as-
22 sessment tool described in paragraph (2), the
23 number of acres of Federal land in need of re-
24 vegetation, including—

1 (i) acres that have experienced a
2 stand-replacing disturbance by a wildfire,
3 windstorm, or other natural event;

4 (ii) acres on which a regeneration har-
5 vest has previously taken place; and

6 (iii) acres that could benefit from ap-
7 propriate revegetation, as determined by
8 the Secretaries.

9 (B) **ECOLOGICAL FORESTRY.**—In con-
10 ducting the assessment under subparagraph
11 (A), the Secretaries shall consider the role of
12 recovery periods between disturbances for the
13 development of stand complexity.

14 (2) **REVEGETATION ASSESSMENT TOOL.**—Not
15 later than 180 days after the date of enactment of
16 this Act, the Secretaries shall jointly develop, or use
17 or expand an existing, objective revegetation assess-
18 ment tool for each zone that uses a point system or
19 rating scale—

20 (A) to consistently assess in various geo-
21 graphic areas, site classes, and forest and
22 rangeland types whether an acre of Federal
23 land is adequately occupied by well-distributed,
24 countable, ecologically appropriate trees or
25 other desirable vegetation;

1 ~~(B)~~ to rapidly assess revegetation needs on
2 Federal land; and

3 ~~(C)~~ to establish baseline conditions for
4 Federal land.

5 ~~(3)~~ FOREST AND RANGELAND COVER RESTORA-
6 TION ON NON-FEDERAL LAND.—

7 ~~(A)~~ PARTNERSHIP FOR FOREST AND
8 RANGELAND COVER RESTORATION.—The Secre-
9 taries may enter into a partnership with a non-
10 Federal entity, including Indian Tribes, with
11 data or expertise in Federal reforestation—

12 ~~(i)~~ to assess the opportunity to restore
13 forest or rangeland cover across non-Fed-
14 eral land in the United States; or

15 ~~(ii)~~ to share existing data gathered by
16 the non-Federal entity.

17 ~~(B)~~ SAVINGS CLAUSE.—Nothing in this
18 paragraph grants the Secretary concerned any
19 additional authority over or additional access to
20 non-Federal land.

21 ~~(4)~~ REPORT.—Not later than 18 months after
22 the date of enactment of this Act, the Secretaries
23 shall publish a report describing—

24 ~~(A)~~ the number of acres of—

1 (i) Federal land in need of revegeta-
2 tion; and

3 (ii) non-Federal land in the United
4 States on which forest or rangeland cover
5 can be restored and the owner of which
6 has requested to be included in a com-
7 prehensive revegetation strategy and imple-
8 mentation plan developed under subsection
9 (e)(2)(A); and
10 (B) the approximate location of the land
11 described under subparagraph (A).

12 (c) REGIONAL ZONES FOR REVEGETATION EF-
13 FORTS.—The Secretaries shall use the regions of the Na-
14 tional Forest System as the zones for revegetation efforts
15 conducted by the task forces under this section.

16 (d) INTERAGENCY TASK FORCES.—Not later than 18
17 months after the date of enactment of this Act, the Secre-
18 taries shall establish an interagency revegetation task
19 force of Federal and non-Federal members, including In-
20 dian Tribes, for each zone—

21 (1) to coordinate and carry out the activities
22 described in subsections (e), (f), and (g); and

23 (2) to maximize collaboration and shared
24 science and mapping resources among Federal and
25 non-Federal entities, including Indian Tribes, in re-

1 vegetating land in each zone, including through the
2 use of—

3 (A) Department of Agriculture climate
4 hubs;

5 (B) collaboratives formed pursuant to sec-
6 tion 4003 of the Omnibus Public Land Manage-
7 ment Act of 2009 (16 U.S.C. 7303); and

8 (C) partnerships with States developed
9 under shared stewardship agreements.

10 (e) COMPREHENSIVE REVEGETATION STRATEGY AND
11 IMPLEMENTATION PLANS.—

12 (1) DATA REVIEW.—Each task force—

13 (A) shall review the report published under
14 subsection (b)(4); and

15 (B) may modify, for the applicable zone,
16 the number of acres of land in need of revegeta-
17 tion and the approximate location of the land
18 identified in the report, as necessary.

19 (2) PLAN DEVELOPMENT.—

20 (A) IN GENERAL.—Not later than 180
21 days after the date on which a task force is es-
22 tablished, the task force shall develop a 10-year
23 comprehensive revegetation strategy and imple-
24 mentation plan—

1 (i) to revegetate not less than 25 per-
2 cent of the land identified in the report
3 published under subsection (b)(4), as
4 modified under paragraph (1)(B) (if appli-
5 cable), for the applicable zone; and

6 (ii) to achieve any additional goals or
7 targets established by the task force.

8 (B) REQUIREMENTS.—A plan developed
9 under subparagraph (A) shall—

10 (i) take into account the best available
11 science, best practices, and available de-
12 ployment tools, including climate science
13 that can inform the design of revegetated
14 areas to assure resilience;

15 (ii) be based on, to the maximum ex-
16 tent practicable, the report published
17 under subsection (b)(4);

18 (iii) identify resources and efforts
19 needed to conduct appropriate revegetation
20 treatments in the applicable zone, includ-
21 ing identifying areas in which capacity ex-
22 ists to plant vegetation or conduct seed
23 dispersal;

24 (iv) identify the desired, locally or re-
25 gionally adapted native species of vegeta-

1 tion and the types planting stock required
2 in the specific areas in the zone in need of
3 revegetation, including ecosystems that do
4 not include trees, such as sagebrush eco-
5 systems, grasslands, or rangelands;

6 (v) identify under-represented species
7 of trees and plants in each zone that can
8 be acquired and should be planted under
9 this section;

10 (vi) prioritize geographic areas in the
11 applicable zone in need of revegetation, in-
12 cluding giving priority to—

13 (I) burned areas and any other
14 destabilized land that pose heightened
15 risks to homes, roads, and public
16 water supplies if not revegetated;

17 (II) areas at high risk of estab-
18 lishing invasive species;

19 (III) mined land;

20 (IV) floodplains and riparian
21 areas; and

22 (V) land with regionally signifi-
23 cant carbon sequestration potential;

24 (vii) identify—

- 1 (I) targets or goals for the num-
2 ber of acres planted annually; and
3 (II) other implementation actions
4 and opportunities;
5 (viii) identify areas in which—
6 (I) vegetation restoration is need-
7 ed; but
8 (II) natural regeneration is the
9 most effective means of restoration;
10 (ix) identify areas in which revegeta-
11 tion efforts—
12 (I) may cause an increased risk
13 of a stand-replacing wildfire, disease,
14 or insect infestation, if not properly
15 managed; or
16 (II) would be adverse to livestock
17 grazing or use by wildlife;
18 (x) consider treatments that increase
19 the carbon sequestration capacity of for-
20 ests, rangelands, and grasslands;
21 (xi) provide for—
22 (I) consideration of palatability
23 to support grazing by wildlife and
24 livestock; and

1 (II) coordination with State wild-
2 life agencies, rangeland management
3 professionals, and ranchers;

4 (xii) incorporate the data and strategy
5 relating to nurseries and the availability of
6 planting stock described in subsection (g);

7 (xiii) for activities recommended to be
8 carried out on non-Federal land—

9 (I) identify ways to address re-
10 vegetation needs voluntarily by work-
11 ing with States, landowners, Indian
12 Tribes, and other interested persons;
13 and

14 (II) ensure that revegetation ef-
15 forts will not adversely impact existing
16 markets for timber and other forest
17 materials produced from private work-
18 ing forests;

19 (xiv) provide an explanation for any
20 land not included in the implementation
21 portion of the plan that was identified in
22 the report published under subsection
23 (b)(4), as modified under paragraph (1)(B)
24 (if applicable);

1 (xv) utilize an experimental approach,
2 where appropriate; and

3 (xvi) be consistent with any applicable
4 agency land management plans.

5 (C) EXCEPTIONS.—Notwithstanding sub-
6 paragraph (B)(iv), a task force may determine
7 that the selection and use of certain desirable,
8 noninvasive, nonnative species is appropriate in
9 certain limited circumstances, based on local-
10 ized ecological conditions, as determined by the
11 task force.

12 (3) PLAN MODIFICATIONS.—A task force may
13 modify a plan developed under paragraph (2) to ad-
14 dress new circumstances or changing conditions.

15 (f) IMPLEMENTATION OF PLANS.—

16 (1) IN GENERAL.—During the 10-year period
17 beginning on the date on which a plan for a zone is
18 completed under subsection (e)(2), the task force, in
19 coordination with applicable Federal agencies, shall
20 implement the plan.

21 (2) OUTSIDE FUNDING.—To implement a plan
22 developed under subsection (e)(2), the Secretary
23 concerned may—

1 (A) accept non-Federal funds, including
2 leveraging funding opportunities relating to vol-
3 untary carbon mitigation; and

4 (B) issue a certificate of donation, as ap-
5 propriate.

6 (3) VOLUNTARY PARTICIPATION.—In imple-
7 menting a plan under this subsection, any activities
8 carried out on non-Federal land shall be carried
9 out—

10 (A) in cooperation with the owner of the
11 non-Federal land; and

12 (B) only on a voluntary basis.

13 (4) ENTERPRISE TEAM.—The Secretary con-
14 cerned may employ a Forest Service enterprise team
15 to facilitate the implementation of a plan developed
16 under subsection (c)(2).

17 (g) CHALLENGES TO THE REFORESTATION PIPELINE
18 IN THE UNITED STATES.—

19 (1) IN GENERAL.—A task force shall—

20 (A) not later than 60 days after the date
21 on which the task force is established, conduct
22 an inventory of nurseries, an assessment of
23 nursery capacity, and a tally of available plant-
24 ing stock in the applicable zone; and

1 ~~(B)~~ based on the report published under
 2 subsection ~~(b)~~(4), as modified under subsection
 3 ~~(c)~~(1)~~(B)~~ (if applicable)—

4 (i) estimate the capacity of nurseries
 5 that would be necessary to fulfill revegeta-
 6 tion needs, including identifying the species
 7 and types of planting stock needed for re-
 8 vegetation; and

9 (ii) develop a plan for increasing the
 10 number and capacity of nurseries, in ac-
 11 cordance with the estimates under clause
 12 ~~(i)~~.

13 ~~(2) SEED COLLECTING.~~—A task force shall—

14 ~~(A)~~ assess the current capacity to locally
 15 collect and store seed; and

16 ~~(B)~~ develop a plan for increasing capacity
 17 described in subparagraph ~~(A)~~, if necessary.

18 ~~(3) PARTNERSHIPS.~~—The Secretaries may
 19 enter into a partnership with a non-Federal entity to
 20 assist a task force in meeting the requirements of
 21 this subsection.

22 ~~(h) REPORT TO CONGRESS.~~—Not later than 1 year
 23 after the date of enactment of this Act, and annually
 24 thereafter until the date on which each plan developed
 25 under subsection ~~(c)~~(2) is fully implemented, the Secre-

1 taries shall submit to the Committee on Energy and Nat-
2 ural Resources of the Senate and the Committee on Nat-
3 ural Resources of the House of Representatives, and pub-
4 lish on the website of the Department of the Interior, a
5 report that describes, with respect to the preceding year—

6 (1) whether the Secretaries have achieved com-
7 pliance with the requirements of this section;

8 (2) the total number of acres of land, reported
9 by surface ownership in each zone, in need of revege-
10 tation treatments;

11 (3) the total number of acres of land, reported
12 by surface ownership in each zone, in which revege-
13 tation treatments have been carried out;

14 (4) any other accomplishments and improve-
15 ments to carbon sequestration capacity or other co-
16 benefits as a result of implementing a plan under
17 subsection (e)(2); and

18 (5) any barriers to implementation of a plan de-
19 veloped under subsection (e)(2), including as a result
20 of legal issues, logistical issues, seed or sapling
21 shortages, or lack of funding.

22 (i) PARTNERSHIPS.—The Secretaries may enter into
23 a memorandum of agreement with any member of a task
24 force to carry out any activity described in subsection (e),
25 (f), (g), or (h).

1 (j) EFFECT.—Nothing in this section establishes new,
 2 extends existing, or otherwise affects post-fire rehabilita-
 3 tion ~~no-grazing~~ requirements.

4 (k) AVOIDANCE OF DUPLICATION.—In carrying out
 5 this section, the Secretaries shall—

6 (1) avoid duplicative efforts and, to the max-
 7 imum extent practicable, utilize existing efforts and
 8 personnel to develop and implement an activity de-
 9 scribed in subsection (e), (f), (g), or (h);

10 (2) maximize non-Federal involvement; and

11 (3) avoid using personnel who would otherwise
 12 be engaged in forest management or wildfire mitiga-
 13 tion efforts.

14 **SEC. 103. EXPERIMENTAL FORESTS.**

15 (a) PURPOSES OF THIS SECTION.—The purposes of
 16 this section are—

17 (1) to formally authorize the experimental for-
 18 ests and rangelands on National Forest System land
 19 existing on the date of enactment of this Act; and

20 (2) to require that—

21 (A) the network of those experimental for-
 22 ests and rangelands be maintained in per-
 23 petuity; and

24 (B) climate resiliency research is continu-
 25 ously conducted within the network.

1 (b) ESTABLISHMENT OF NETWORK.—The Secretary
2 of Agriculture, acting through the Chief of the Forest
3 Service (referred to in this section as the “Secretary”),
4 shall establish and manage a network of experimental for-
5 ests and ranges on National Forest System land (referred
6 to in this section as the “network”).

7 (c) MANAGEMENT PURPOSES.—The Secretary shall
8 manage the network for the purposes of—

- 9 (1) research;
- 10 (2) technology transfer; and
- 11 (3) education.

12 (d) CRITERIA.—The network shall include—

- 13 (1) each of the forest cover types that occur in
14 the United States, as defined by the Forest Cover
15 Types of the United States and Canada published by
16 the Society of American Forests;
- 17 (2) an experimental forest that contains forest
18 cover types found in the State of Hawaii; and
- 19 (3) an experimental forest that contains forest
20 cover types found in the territories of the United
21 States.

22 (e) CLIMATE RESILIENCY RESEARCH.—Within the
23 network, the Secretary shall conduct research, including
24 research on—

1 (1) seedling establishment, site suitability, and
2 tree planting designs to inform and assist efforts un-
3 dertaken in the United States to establish stands of
4 trees that are resilient in future climate conditions;
5 and

6 (2) the sources and fates of carbon to construct
7 and improve models of carbon responses to land
8 management practices.

9 (f) PUBLIC ACCESS.—All data collected and research
10 findings developed from projects undertaken on the net-
11 work shall be made readily accessible to the public.

12 (g) PARTNERS.—The Secretary may enter into an
13 agreement with a State (including a State forestry agen-
14 cy), an educational institution, or a third party to fund
15 or conduct research on the network.

16 (h) REPORT.—Not later than 18 months after the
17 date of enactment of this Act, the Secretary shall submit
18 to the Committee on Energy and Natural Resources of
19 the Senate and the Committee on Natural Resources of
20 the House of Representatives a report describing, with re-
21 spect to the network—

22 (1) the location of the network on National
23 Forest System land;

24 (2) the forest cover types included in the net-
25 work; and

1 ~~(3)~~ any additional resources needed—

2 (A) to establish or maintain infrastructure
3 in an established experimental forest; or

4 (B) to conduct the research described in
5 subsection (d).

6 (i) SAVINGS CLAUSE.—Nothing in this section—

7 (1) modifies, limits, or repeals the applicability
8 of any provision of law (including regulations) to
9 National Forest System land; or

10 (2) precludes the Secretary from authorizing
11 multiple-use activities, including livestock grazing
12 and other authorized uses on land included within
13 the network.

14 **SEC. 104. LONG-TERM CONTRACTS FOR TREE AND SEED**
15 **PLANTING.**

16 (a) IN GENERAL.—Notwithstanding the Federal Ac-
17 quisition Regulation, the Secretary concerned may enter
18 into a contract or cooperative agreement for re-estab-
19 lishing vegetation on Federal land described in subsection
20 (b).

21 (b) FEDERAL LAND.—Federal land referred to in
22 subsection (a) is—

23 (1) National Forest System land, other than—

24 (A) the national grasslands and land utili-
25 zation projects administered under title III of

1 the Bankhead-Jones Farm Tenant Act (7
2 U.S.C. 1010 et seq.); and

3 (B) National Forest System land east of
4 the 100th meridian;

5 (2) public lands (as defined in section 103 of
6 the Federal Land Policy and Management Act of
7 1976 (43 U.S.C. 1702));

8 (3) land that the Secretary holds in trust for an
9 Indian Tribe;

10 (4) a unit of the National Wildlife Refuge Sys-
11 tem;

12 (5) land administered by the Bureau of Ree-
13 lamation; and

14 (6) a unit of the National Park System.

15 (c) TERM.—A contract or cooperative agreement de-
16 scribed in subsection (a) shall be for a term of not more
17 than 10 years.

18 **SEC. 105. TREE PLANTING FOR COMMUNITIES.**

19 (a) JOB CORPS PROGRAM.—The Secretary of Labor
20 shall—

21 (1) develop a career and technical education
22 and training program focused on tree planting or
23 tree maintenance; and

24 (2) offer the program as part of the Job Corps
25 program.

1 (b) RETAIL POWER PROVIDER TREE PLANTING
2 GRANT PROGRAM.—

3 (1) ESTABLISHMENT.—The Secretary of En-
4 ergy (referred to in this subsection as the “Sec-
5 retary”), in consultation with the Secretaries, shall
6 establish a program under which the Secretary shall
7 award grants to States, Indian Tribes, local govern-
8 ments, nonprofit organizations, and retail power pro-
9 viders to conduct tree planting projects in accord-
10 ance with this subsection (referred to in this sub-
11 section as the “program”).

12 (2) APPLICATIONS.—An entity seeking to re-
13 ceive a grant under the program shall submit to the
14 Secretary an application at such time, in such form,
15 and containing such information as the Secretary
16 may require, including a description of how the
17 project to be carried out using the grant funds will
18 reduce residential energy consumption.

19 (3) PRIORITY.—In awarding grants under the
20 program, the Secretary shall give priority to tree
21 planting projects that would provide the largest po-
22 tential reduction in residential energy consumption
23 for households.

24 (4) VARIETY OF GEOGRAPHIC LOCATIONS.—In
25 awarding grants under the program, the Secretary

1 shall ensure diverse and equitable geographic rep-
 2 resentation among the grant recipients.

3 ~~(5) COST-SHARE.—~~

4 ~~(A) FEDERAL SHARE.—~~Subject to sub-
 5 paragraph (C), the Federal share of the cost of
 6 a tree planting project carried out using a grant
 7 under the program shall be not more than 50
 8 percent.

9 ~~(B) NON-FEDERAL SHARE.—~~The non-Fed-
 10 eral share of the cost of a tree planting project
 11 carried out using a grant under the program
 12 may be in the form of—

13 (i) cash or donations received directly
 14 from non-Federal sources; or

15 (ii) in-kind contributions.

16 ~~(C) WAIVER.—~~The Secretary may, on a
 17 case-by-case basis, increase the Federal share
 18 described in subparagraph (A) if a tree planting
 19 project carried out using a grant under the pro-
 20 gram is located wholly in an economically dis-
 21 tressed community.

22 **SEC. 106. REVEGETATION ON ABANDONED MINE LAND.**

23 ~~(a) PILOT PROGRAM.—~~

24 ~~(1) ESTABLISHMENT.—~~Using funding available
 25 to the Secretary, including funding provided under

1 section 40804(b)(8) of the Infrastructure Investment
2 and Jobs Act (16 U.S.C. 6592a(b)(8)), the Sec-
3 retary shall establish a pilot program to establish
4 native trees, shrubs, or grasses (referred to in this
5 section as “vegetation”) on eligible mined land de-
6 scribed in paragraph (6).

7 (2) FINANCIAL ASSISTANCE.—In carrying out
8 the pilot program established under paragraph (1),
9 the Secretary shall—

10 (A) in coordination with the Secretary of
11 Agriculture, establish vegetation on eligible
12 mined land located on Federal land;

13 (B) offer financial assistance to States to
14 establish native vegetation on eligible mined
15 land located on State land;

16 (C) offer financial assistance to Indian
17 Tribes to establish native vegetation on eligible
18 mined land located on Tribal land or land held
19 in Trust for an Indian Tribe; and

20 (D) establish vegetation or offer financial
21 assistance to States or other entities to estab-
22 lish native vegetation on eligible mined land lo-
23 cated on private land.

24 (3) COMPATIBILITY WITH EXISTING OPER-
25 ATIONS.—

1 (A) CONSULTATION.—Prior to selecting a
2 project for funding under the pilot program es-
3 tablished under paragraph (1), the Secretary
4 shall consult with, as applicable, the relevant
5 Office of Surface Mining Reclamation and En-
6 forcement abandoned mine land program office
7 to confirm that the proposed project is compat-
8 ible with any current mining, exploration, or
9 reclamation activities.

10 (B) RESTRICTION.—The Secretary shall
11 not provide financial assistance under para-
12 graph (2) to a person or entity with an ongoing
13 legal obligation to revegetate the land in a
14 project area.

15 (4) ACTIVITIES.—The following activities asso-
16 ciated with a project to establish vegetation on eligi-
17 ble mined land shall be eligible for financial assist-
18 ance under paragraph (2):

19 (A) Site preparation, including ripping
20 compacted soils and incorporating soil amend-
21 ments.

22 (B) Vegetation planting.

23 (C) Maintenance, including watering, to
24 the extent necessary to establish vegetation
25 under this section.

1 (D) Managing competing vegetation.

2 (5) PREFERENCE.—Under the pilot program
3 established under paragraph (1), the Secretary shall,
4 to the maximum extent practicable, seek to establish
5 vegetation that—

6 (A) is ecologically appropriate; and

7 (B)(i) has a high capacity to sequester and
8 store carbon;

9 (ii) serves to reconnect established land-
10 scapes or enhance habitat connectivity; or

11 (iii) would establish wildlife habitat that is
12 underrepresented in the State in which the
13 project is located.

14 (6) ELIGIBLE MINED LAND.—To be eligible for
15 financial assistance under paragraph (2), a tree
16 planting project shall be located on—

17 (A) land that was mined prior to the date
18 of enactment of this Act;

19 (B) in the case of State land or private
20 land, land that is accessible to the public for
21 not less than 1 day per year; and

22 (C) in the case of private land, land owned
23 by a person, or a nongovernmental organiza-
24 tion, that has submitted to the Secretary or the
25 State in which the land is located a request

1 seeking to participate in the pilot program
2 under this section.

3 ~~(7) TERMINATION.—~~The pilot program estab-
4 lished under paragraph ~~(1)~~ shall be in effect for the
5 8-year period beginning on the date of enactment of
6 this Act.

7 ~~(b) REPORT.—~~Not later than 5 years after the date
8 of enactment of this Act, the Secretary shall submit to
9 the Committee on Energy and Natural Resources of the
10 Senate and the Committee on Natural Resources of the
11 House of Representatives a report describing the accom-
12 plishments of the pilot program established under sub-
13 section ~~(a)(1)~~, including—

14 ~~(1)~~ jobs created or supported in rural areas;

15 ~~(2)~~ increases in the abundance of wildlife spe-
16 cies, including game species and song birds;

17 ~~(3)~~ opportunities for hunting and other compat-
18 ible outdoor recreation; and

19 ~~(4)~~ an estimate of—

20 ~~(A)~~ carbon sequestered during the 5-year
21 period beginning on the date on which the pilot
22 program is established; and

23 ~~(B)~~ projected additional carbon sequestra-
24 tion and storage during the 15-year period be-

1 gimming on the last day of the period described
2 in subparagraph (A).

3 **SEC. 107. INTERNATIONAL REFORESTATION.**

4 The Secretary of Agriculture, acting through the
5 Chief of the Forest Service, may—

6 (1) evaluate a request from another country for
7 technical assistance for tree planting activities;

8 (2) subject to the evaluation under paragraph
9 (1) and the availability of Forest Service personnel
10 and funding, provide to another country technical
11 assistance for tree planting activities, including shar-
12 ing—

13 (A) personnel; and

14 (B) knowledge through communications
15 and technical on-site instruction; and

16 (3) enter into a partnership with a nongovern-
17 mental entity that is located outside the United
18 States or that is located in the United States and
19 operates internationally—

20 (A) to engage in activities that restore
21 vegetation; and

22 (B) to promote and improve global carbon
23 sequestration through revegetation activities.

1 **TITLE II—CARBON SEQUESTRA-**
 2 **TION THROUGH FOREST MAN-**
 3 **AGEMENT AND INNOVATION**

4 **SEC. 201. FOREST MANAGEMENT FROM CARBON CREDITS.**

5 (a) DEFINITIONS.—In this section:

6 (1) CARBON CREDIT.—The term “carbon cred-
 7 it” means a carbon or greenhouse gas credit, offset,
 8 or other defined unit—

9 (A) approved by a credible, third-party en-
 10 tity; and

11 (B) as determined by the Secretary.

12 (2) CARBON CREDIT PROGRAM.—The term
 13 “carbon credit program” means a voluntary program
 14 or market that issues, assigns, trades, or sells car-
 15 bon credits.

16 (3) COVERED ACTIVITY.—The term “covered
 17 activity” means an improved forest management ac-
 18 tivity, including a hazardous fuel treatment, mechan-
 19 ical thinning, or timber harvesting project, that is—

20 (A) ecologically appropriate;

21 (B) carried out on National Forest System
 22 land;

23 (C) designed—

24 (i) to increase rates of carbon seques-
 25 tration;

1 (ii) to increase long-term carbon stor-
2 age in durable wood products; or

3 (iii) to mitigate or avoid carbon emis-
4 sions;

5 (D) carried out by—

6 (i) the Secretary; or

7 (ii) a non-Federal entity under any
8 existing authority available to the Sec-
9 retary; and

10 (E) not in competition with or adverse to
11 the issuance, assignment, trading, or selling of
12 forest carbon in the private sector.

13 (4) NATIONAL FOREST SYSTEM.—The term
14 “National Forest System” does not include—

15 (A) the national grasslands and land utili-
16 zation projects administered under title III of
17 the Bankhead-Jones Farm Tenant Act (7
18 U.S.C. 1010 et seq.); or

19 (B) National Forest System land east of
20 the 100th meridian.

21 (5) SECRETARY.—The term “Secretary” means
22 the Secretary of Agriculture, acting through the
23 Chief of the Forest Service.

24 (b) FUNDS ASSOCIATED WITH CARBON CREDITS
25 FOR FOREST MANAGEMENT.—

1 (1) IN GENERAL.—The Secretary may use to
2 support the implementation of covered activities,
3 without further appropriation or fiscal year limita-
4 tion, funds received from a non-Federal entity—

5 (A) through a carbon credit program; or

6 (B) for a carbon credit generated from Na-
7 tional Forest System land.

8 (2) SUPPLEMENT, NOT SUPPLANT.—Amounts
9 made available under paragraph (1) shall supple-
10 ment, and not supplant, any other amounts made
11 available for covered activities.

12 (c) MANAGEMENT OF CARBON CREDIT TRANS-
13 ACTIONS BY NATIONAL FOREST FOUNDATION.—

14 (1) IN GENERAL.—The National Forest Foun-
15 dation shall receive and distribute any funds received
16 under subsection (b)(1).

17 (2) OTHER PARTNERS.—The National Forest
18 Foundation may work with other entities that use
19 funds received through a carbon credit program or
20 for a carbon credit generated from National Forest
21 System land to design, manage, account for, or im-
22 plement a covered activity.

23 (3) METHODOLOGY.—For the management of
24 transactions described in this section, the National
25 Forest Foundation, in collaboration with the Sec-

1 retary, shall develop and use a methodology that cal-
2 culates the predicted increase in carbon sequestra-
3 tion or in the longevity of long-term carbon storage
4 for a project or the avoided release of carbon due to
5 reduction of the risk of high-severity fire and other
6 disturbances, by considering—

7 (A) retention of forest cover;

8 (B) carbon sequestration rates before and
9 after the implementation of a covered activity;

10 (C) reduction in the risk of tree mortality;

11 (D) restoration of historic fire regimes;

12 and

13 (E) the long-term storage of carbon in
14 long-lasting wood products.

15 (d) REPORTS TO CONGRESS.—The Secretary, in col-
16 laboration with the National Forest Foundation, shall an-
17 nually submit to Congress a report describing the status
18 of the program under this section, including—

19 (1) the extent to which additional covered ac-
20 tivities that were implemented with funding received
21 under subsection (b)(1) have been carried out; and

22 (2) any recommendations to improve or expand
23 the program, including expansion of the authorities
24 under this section to land managed by the Secretary
25 of the Interior.

1 (e) EFFECT.—Nothing in this section authorizes any
2 activity that is inconsistent with—

3 (1) any applicable forest plan; or

4 (2) any other provision of law (including regula-
5 tions).

6 **SEC. 202. RECOVERY AND RESTORATION TREATMENTS**
7 **FOLLOWING STAND-REPLACING DISTURB-**
8 **ANCES.**

9 (a) DEFINITION OF STAND-REPLACING DISTURB-
10 ANCE.—In this section, the term “stand-replacing disturb-
11 ance” means a natural disturbance event, including a
12 wildland fire or other event, that kills all or most of the
13 living overstory trees in a stand and initiates forest succes-
14 sion or regrowth on a unit of the National Forest System.

15 (b) PILOT NATIONAL FORESTS.—Not later than 1
16 year after the date of enactment of this Act, the Secretary
17 of Agriculture, acting through the Chief of the Forest
18 Service (referred to in this section as the “Secretary”),
19 shall identify units of the National Forest System that the
20 Secretary determines to be at high or very high risk of
21 experiencing a stand-replacing disturbance during the 10-
22 year period following the date of enactment of this Act.

23 (c) INTERDISCIPLINARY TEAMS.—

24 (1) IN GENERAL.—Not later than 2 years after
25 the date of enactment of this Act, the Secretary

1 shall establish an interdisciplinary post-disturbance
2 planning team (referred to in this section as the
3 “team”) to assist in carrying out the requirements
4 of this section.

5 (2) TEAMS ENTERPRISE.—The Secretary may
6 employ a Forest Service enterprise team or a re-
7 gional planning center to meet the requirement of
8 this subsection.

9 (d) MODEL LAND AND RESOURCE MANAGEMENT
10 PLAN AMENDMENT.—

11 (1) IN GENERAL.—Not later than 2 years after
12 the date of enactment of this Act, the Secretary, in
13 cooperation with the team, shall develop a model
14 land and resource management plan amendment es-
15 tablishing plan content for future site-specific
16 project-level decisions if a stand-replacing disturb-
17 ance occurs on units of the National Forest System
18 identified under subsection (b).

19 (2) CONTENT.—The model amendment required
20 under paragraph (1) shall include direction regard-
21 ing post-disturbance management, including salvage
22 logging and reforestation activities, to achieve de-
23 sired conditions, objectives, standards, guidelines,
24 suitability of lands, and other plan content, includ-
25 ing goals and monitoring provisions, of the existing

1 land and resource management plan on the applica-
2 ble unit of the National Forest System, if a stand-
3 replacing disturbance occurs.

4 (2) USE OF MODEL LAND AND RESOURCE MAN-
5 AGEMENT PLAN AMENDMENT.—The Secretary shall
6 utilize the Model Land and Resource Management
7 Plan Amendment, as adapted to the unique ecologi-
8 cal and socioeconomic setting for each unit of the
9 National Forest System identified under subsection
10 (b), in carrying out subsection (c).

11 (c) LAND AND RESOURCE MANAGEMENT PLAN
12 AMENDMENTS.—

13 (1) IN GENERAL.—As soon as practicable, but
14 not later than 10 years, after the date of enactment
15 of this Act, the Secretary, assisted by the team, shall
16 amend the applicable land and resource management
17 plan of each unit of the National Forest System
18 identified under subsection (b).

19 (2) PROCESS.—The Secretary shall comply with
20 all relevant laws in carrying out this section.

21 (3) ELECTION.—The Secretary may comply
22 with the provisions of this section by incorporating
23 the requirements of this section into an ongoing land
24 and resource management plan revision or amend-
25 ment process.

1 **SEC. 203. BIOCHAR AND WOOD WASTE.**

2 (a) **FOOD AND DRUG ADMINISTRATION BIOCHAR**
3 **PILOT PROGRAM.—**

4 (1) **IN GENERAL.—**The Commissioner of Food
5 and Drugs (referred to in this subsection as the
6 “Commissioner”); in consultation with the Secretary
7 of Agriculture and in coordination with States, shall
8 establish a pilot program to grant a nationwide food
9 use authorization of biochar as a feed additive for
10 cattle.

11 (2) **TERMS.—**The pilot program described in
12 this subsection shall be—

13 (A) for a period of not more than 5 years;
14 and

15 (B) subject to any conditions that the
16 Commissioner determines appropriate.

17 (3) **SAVINGS CLAUSE.—**The Commissioner shall
18 ensure that participation in the pilot program under
19 this subsection is voluntary.

20 (b) **USGS COMMERCIALIZATION PLAN.—**

21 (1) **IN GENERAL.—**Not later than 1 year after
22 the date of enactment of this Act, the Secretary, act-
23 ing through the Director of the United States Geo-
24 logical Survey, in coordination with any relevant
25 non-Federal entities, shall develop and publish a na-
26 tional commercialization plan for the production,

1 sale, and use of biochar as a soil amendment for
 2 plant growth improvement, including for commercial,
 3 agricultural, and residential use.

4 (2) REQUIREMENT.—The commercialization
 5 plan required under paragraph (1) shall, at a min-
 6 imum—

7 (A) identify—

8 (i) impediments to producing large
 9 quantities of biochar for agricultural, for-
 10 estry, or other commercial uses; and

11 (ii) solutions for those impediments;

12 and

13 (B) propose a framework for demonstra-
 14 tion efforts to increase consumer demand for
 15 biochar.

16 **SEC. 204. ERADICATION OF INVASIVE GRASSES.**

17 (a) DEFINITIONS.—In this section:

18 (1) ACTION PLAN.—The term “action plan”
 19 means the action plan developed under subsection
 20 (b).

21 (2) FEDERAL LAND.—The term “Federal land”
 22 means—

23 (A) National Forest System land, except—

24 (i) the national grasslands and land
 25 utilization projects administered under title

1 III of the Bankhead-Jones Farm Tenant
2 Act (7 U.S.C. 1010 et seq.); and

3 (ii) National Forest System land east
4 of the 100th meridian; and

5 (B) land under the jurisdiction of the Sec-
6 retary.

7 (3) INVASIVE GRASS.—The term “invasive
8 grass” means—

9 (A) cheatgrass;

10 (B) ventenata;

11 (C) medusahead; and

12 (D) any additional invasive, nonnative an-
13 nual grass species that the Secretaries deter-
14 mine pose a risk by—

15 (i) increasing fire vulnerability and
16 fire spread; and

17 (ii) altering fire regimes.

18 (4) TARGET TREATMENT AREA.—The term
19 “target treatment area” means a target treatment
20 area described in subsection (b)(2)(D).

21 (b) ACTION PLAN.—

22 (1) IN GENERAL.—The Secretaries shall jointly
23 develop and implement an action plan to map, treat,
24 and control invasive grass—

1 (A) to promote the resiliency, biodiversity,
2 and carbon sequestration capacity of forests,
3 rangelands, and grasslands;

4 (B) to minimize risks from wildfire; and

5 (C) to enhance the quality of forage for
6 wildlife and livestock.

7 (2) REQUIREMENTS.—The action plan shall—

8 (A) consider or incorporate existing efforts;

9 (B) take into account—

10 (i) the latest science;

11 (ii) best practices; and

12 (iii) available deployment tools;

13 (C) be prepared in coordination with State
14 and local governmental entities and the heads
15 of other Federal agencies, including the Chief
16 of the Natural Resources Conservation Service,
17 that are engaged in activities to control invasive
18 grass to leverage and maximize funding and re-
19 sources;

20 (D) identify and depict on a map target
21 treatment areas that focus on—

22 (i) areas with a large quantity of
23 invasive grass where revegetation with na-
24 tive species is most likely to succeed;

25 (ii) areas at high risk of wildfire;

- 1 (iii) areas in which invasive grass neg-
2 atively impacts livestock grazing or other
3 uses;
- 4 (iv) wildlife habitat and forage needs,
5 particularly sagebrush habitat;
- 6 (v) areas prone to infestations; or
- 7 (vi) areas deemed important by the
8 Secretaries;
- 9 ~~(E)~~ establish—
- 10 (i) specific goals;
- 11 (ii) specific implementation actions
12 that the Secretaries and partners of the
13 Secretaries will conduct over a 5-year pe-
14 riod; and
- 15 (iii) targets, including acres to be
16 treated annually in the target treatment
17 areas;
- 18 ~~(F)~~ provide for a combination of treatment
19 methods for the most effective control of an
20 invasive grass, including—
- 21 (i) mechanical treatment methods;
- 22 (ii) cultural treatment methods;
- 23 (iii) biological treatment methods,
24 which may include livestock grazing;
- 25 (iv) prescribed fire; or

1 (v) chemical treatment methods;

2 (G) identify and implement, to the extent
3 practicable, best practices, such as the use of
4 spray washing stations, to reduce the spreading
5 of invasive grass seed adjacent to infested areas
6 or into noninfested areas;

7 (H) identify methods and tools for the
8 post-treatment monitoring of target treatment
9 areas to determine the effectiveness of a treat-
10 ment and control efforts;

11 (I) initiate and expedite environmental re-
12 views for treatments, as required by applicable
13 law, including identifying—

14 (i) methods for achieving timely deci-
15 sions and implementation for treatments,
16 monitoring, and follow-up treatments
17 based on monitoring; and

18 (ii) maximizing opportunities to co-
19 operate with other Federal and State agen-
20 cies in analysis, assessments, and studies;
21 and

22 (J) establish guidelines that—

23 (i) if native, intact grasses are absent
24 within a target treatment area and the tar-

1 get treatment area is prone to high-risk
2 vectors or pathways—

3 (I) identify geographically based
4 desirable, native seed mix and seed re-
5 serves;

6 (II) prioritize reseeding the area
7 in the target treatment area; and

8 (III) monitor for the presence of
9 new invasive grass and promptly treat
10 any invasive grass present; and

11 (ii) if, after conducting a treatment,
12 desirable native grasses are established and
13 dominant in a target treatment area, pro-
14 vide for the natural restoration of native
15 grasses.

16 (3) DEADLINE TO FINALIZE ACTION PLAN.—

17 Not later than 270 days after the date of enactment
18 of this Act, the Secretaries shall finalize the action
19 plan.

20 (4) IMPLEMENTATION OF ACTION PLAN.—

21 (A) IN GENERAL.—Not later than 60 days
22 after the date on which the action plan is final-
23 ized under paragraph (3), the Secretaries shall
24 begin implementing the action plan.

1 (B) MEMORANDA OF UNDERSTANDING
2 AND AGREEMENTS.—In implementing the ac-
3 tion plan, the Secretary concerned may enter
4 into a memorandum of understanding or an
5 agreement with non-Federal entities, as appro-
6 priate, to carry out activities under the action
7 plan to control the spread of an invasive grass
8 on Federal land or land adjacent to Federal
9 land.

10 (C) COOPERATING AGENCY COORDINA-
11 TION.—The Secretary concerned shall, to the
12 extent practicable, offer to assist in the prepa-
13 ration of environmental reviews that may be
14 necessary in implementing treatment and con-
15 trol activities on non-Federal land.

16 (e) REPORTS TO CONGRESS.—Not later than 3 years
17 after the date of enactment of this Act, and annually
18 thereafter during the period in which the action plan is
19 being implemented, the Secretaries shall submit to Con-
20 gress a report assessing the effectiveness of the action
21 plan that includes a description of—

22 (1) the location of the target treatment areas;

23 (2) the number of acres within target treatment

24 areas on which treatments were conducted;

1 ~~(3)~~ the agreements or partnerships entered into
2 under subsection ~~(b)(4)(B)~~ to advance the imple-
3 mentation of the action plan;

4 ~~(4)~~ monitoring information described in sub-
5 section ~~(b)(2)(H)~~; and

6 ~~(5)~~ recommendations for studies to explore in-
7 novative methods and practices to treat and control
8 invasive grass.

9 ~~(d)~~ FUNDING.—

10 ~~(1)~~ OUTSIDE FUNDING.—The Secretary con-
11 cerned may accept non-Federal funds to implement
12 any provision of this section.

13 ~~(2)~~ OTHER FUNDING.—In addition to any fund-
14 ing received under paragraph ~~(1)~~, the Secretaries
15 may expend to carry out this section up to
16 \$30,000,000 of any funding made available to the
17 Secretary concerned for invasive species control, in-
18 cluding funding provided under section 40804(b)(6)
19 of the Infrastructure Investment and Jobs Act (16
20 U.S.C. 6592a(b)(6)).

21 ~~(3)~~ LIMITATIONS.—Of the amounts made avail-
22 able to carry out this section, not more than 10 per-
23 cent shall be used for development of the action
24 plan.

1 **TITLE III—MASS TIMBER**

2 **SEC. 301. DEFINITIONS.**

3 In this title:

4 (1) LOCAL APPROVING AGENCY.—The term
5 “local approving agency” means an agency or unit
6 of a local government that is responsible for the
7 issuance of permits for building construction.

8 (2) MASS TIMBER.—The term “mass timber”
9 includes—

- 10 (A) cross-laminated timber;
11 (B) nail laminated timber;
12 (C) glue laminated timber;
13 (D) dowel laminated timber;
14 (E) laminated strand lumber; and
15 (F) laminated veneer lumber.

16 (3) PROCURING AGENCY.—The term “procuring
17 agency” means the Department of the Interior, the
18 Forest Service, or a person that is a party to a con-
19 tract with the Department of the Interior or the
20 Forest Service, with respect to work performed
21 under such a contract.

22 (4) TALL WOOD BUILDING.—The term “tall
23 wood building” means a building designed to be—

- 24 (A) constructed with mass timber; and

1 (B)(i) if a residential building, more than
2 4 stories in height; and

3 (ii) if a commercial building, more than 5
4 stories in height.

5 **SEC. 302. JOINT MASS TIMBER SCIENCE AND EDUCATION**
6 **PROGRAM.**

7 (a) MASS TIMBER SCIENCE AND EDUCATION PRO-
8 GRAM WITH THE FOREST PRODUCTS LABORATORY.—The
9 Secretary of Agriculture, acting through the Director of
10 the Forest Products Laboratory of the Forest Service (re-
11 ferred to in this section as the “Secretary”), shall estab-
12 lish a mass timber science and education program to re-
13 spond to the emerging research needs of architects, devel-
14 opers, and the forest products industry.

15 (b) COORDINATION.—The Secretary shall work close-
16 ly with research programs at colleges and universities in
17 administering the mass timber science and education pro-
18 gram established under subsection (a) to supplement the
19 current research and educational efforts of colleges and
20 universities.

21 (c) PURPOSES.—The mass timber science and edu-
22 cation program established under subsection (a) shall have
23 the following principal purposes:

24 (1) To provide practical research responsive to
25 the needs of architects, developers, and the forest

1 products industry, including assessments of carbon
2 impacts in the originating forests and the end use of
3 mass timber in the built environment.

4 (2) To engage and listen to clients and then de-
5 velop focused, strategic lines of new research respon-
6 sive to those needs, which may include research re-
7 lating to flammability and performance during a
8 fire, structural characteristics, energy use and sav-
9 ings, acoustics, and slab construction composed of
10 hybrid materials.

11 (3) To solicit proposals from scientists who
12 compete for funding through a rigorous peer-review
13 process designed to ensure the best projects are
14 funded.

15 (4) To disseminate research findings using a
16 suite of communication tools to ensure that archi-
17 tects, developers, and the forest products industry
18 are aware of, understand, and can use the informa-
19 tion to make sound decisions and implement
20 projects.

21 (5) To develop and facilitate the adoption, on a
22 voluntary basis, of a curriculum for building struc-
23 tures using mass timber for use in schools of engi-
24 neering and architecture that includes—

25 (A) structural design; and

1 (B) the possibilities, benefits, and limita-
2 tions of using mass timber in construction.

3 (d) MASS TIMBER PLAN.—Not later than September
4 30, 2024, the Secretary shall submit to the relevant com-
5 mittees of Congress a mass timber plan that includes—

6 (1) an assessment of the current state of knowl-
7 edge about mass timber and tall wood buildings;

8 (2) an integrated approach to improve knowl-
9 edge sharing;

10 (3) an approach for project monitoring and
11 evaluation; and

12 (4) an approach for setting research priorities.

13 (e) STAKEHOLDER ADVISORY GROUP.—

14 (1) MEMBERSHIP.—The Secretary shall appoint
15 a stakeholder advisory group of technical experts
16 that consists, at a minimum, of—

17 (A) a Forest Service scientist;

18 (B) a researcher from a college or univer-
19 sity;

20 (C) a representative of a trade association;

21 (D) an architect or developer;

22 (E) a representative of a local approving
23 agency;

24 (F) a representative of a forest products
25 company; and

1 (G) a representative of a nongovernmental
2 organization with experience—

3 (i) designing or constructing tall wood
4 buildings; or

5 (ii) complying with or revising related
6 building codes.

7 (2) DUTIES.—The stakeholder advisory group
8 shall meet at least annually—

9 (A) to consider immediate and long-term
10 science needs;

11 (B) to suggest to the Secretary appropriate
12 topic areas, specific issues within those topic
13 areas, and information transfer needs for which
14 the Secretary shall solicit proposals described in
15 subsection (e)(3); and

16 (C) to assist the Secretary in drafting the
17 mass timber plan required under subsection (d).

18 (f) ASSISTANCE.—The Secretary may provide to the
19 Secretary of Transportation and to States technical assist-
20 ance relating to the use of wood in bridges when under-
21 going revisions to a State bridge design manual.

22 (g) AVAILABILITY OF APPROPRIATIONS.—From
23 amounts appropriated for Forest Service research, exclud-
24 ing funding made available for the Forest Inventory and

1 Analysis program, the Secretary may use \$4,000,000 to
2 carry out the activities described in this section.

3 **SEC. 303. STORING CARBON IN FEDERAL BUILDINGS.**

4 (a) MASS TIMBER BUILDINGS DATABASE AND
5 PLAN.—

6 (1) DATABASE.—The Secretaries, in coordina-
7 tion with any other relevant agencies, shall develop
8 and maintain a running database of mass timber
9 buildings that are owned or leased by the Federal
10 Government and are occupied primarily by employ-
11 ees of the Secretaries (referred to in this subsection
12 as the “database”).

13 (2) ASSESSMENT.—The Secretary of Agri-
14 culture, acting through the Director of the Forest
15 Products Laboratory of the Forest Service, shall
16 conduct an assessment of each mass timber building
17 included in the database, which shall include col-
18 lecting data on the embodied carbon of the materials
19 used in the construction of the mass timber build-
20 ings included in the database.

21 (3) PLAN.—

22 (A) IN GENERAL.—The Secretaries shall
23 prepare a plan to increase the quantity of car-
24 bon stored in buildings that are owned or leased

1 by the Federal Government and are occupied
2 primarily by employees of Secretaries.

3 (B) PLAN SUBMISSION.—Not later than 1
4 year after the date of enactment of this Act, the
5 Secretaries shall submit the plan under sub-
6 paragraph (A) to the Committee on Energy and
7 Natural Resources of the Senate and the Com-
8 mittee on Natural Resources of the House of
9 Representatives.

10 (C) MATERIAL NEUTRALITY.—The plan
11 submitted by the Secretaries shall be, to the
12 maximum extent practicable, material neutral,
13 and may include using mass timber, carbon
14 concrete, and any other materials.

15 (b) MINIMUM PURCHASES.—

16 (1) IN GENERAL.—Not later than September
17 30, 2027, subject to the exceptions listed in para-
18 graph (2), the Secretaries shall procure facilities,
19 buildings, or structures, including not fewer than
20 100 single-occupancy restrooms, using domestic
21 mass timber.

22 (2) EXCEPTIONS.—The Secretaries may decide
23 not to procure facilities, buildings, or structures
24 using domestic mass timber if the Secretaries deter-
25 mine that the items—

1 (A) are not reasonably available within a
2 reasonable period of time;

3 (B) fail to meet the reasonable perform-
4 ance standards of the procuring agencies;

5 (C) are not necessary to support the mis-
6 sion of the applicable agency; or

7 (D) are available only at an unreasonable
8 price.

9 (c) COORDINATION AND TECHNICAL ASSISTANCE.—

10 The Secretary of Agriculture, acting through the Director
11 of the Forest Products Laboratory of the Forest Service,
12 may coordinate with other Federal agencies and non-Fed-
13 eral partners for the purpose of improving the manage-
14 ment and efficiency of constructing mass timber buildings
15 and infrastructure.

16 **TITLE IV—RESEARCH**

17 **SEC. 401. LONGEVITY OF FOREST PRODUCTS.**

18 The Secretary of Energy, in coordination with the
19 Secretary of Agriculture, shall—

20 (1) develop more accurate and efficient methods
21 and technologies to measure and monitor the
22 amount and average lifespan of carbon stored in
23 woody biomass energy feedstocks and building mate-
24 rials;

1 (2) by not later than 2 years after the date of
 2 enactment of this Act, publish estimates of the
 3 amount and average lifespan of carbon stored in dif-
 4 ferent woody biomass energy feedstocks and building
 5 materials, including in short-lived forest products
 6 and long-lived wood products; and

7 (3) by not later than 3 years after the date of
 8 enactment of this Act, publish an estimate of the
 9 total amount of carbon stored in—

10 (A) short-lived forest products;

11 (B) building materials; and

12 (C) other long-lived wood products.

13 **SEC. 402. FOREST INVENTORY AND ANALYSIS.**

14 (a) IN GENERAL.—To bring more innovation and ef-
 15 ficiency to climate-resilient forestry actions in the United
 16 States, the Secretary of Agriculture, acting through the
 17 Chief of the Forest Service—

18 (1) shall publish a report, or expand on a re-
 19 port being published pursuant to another provision
 20 of law, that demonstrates the efforts of the Forest
 21 Service—

22 (A) to measure a consistent historical se-
 23 ries of field plots while using advanced tech-
 24 nology, including remote sensing, to improve
 25 data and information; and

1 (B) to use advanced geospatial tech-
2 nologies to improve area and volume estimates;
3 especially for sub-State regions and smaller
4 area estimates;

5 (2) may use remote sensing technologies and
6 other technologies to develop more accurate and effi-
7 cient methods and to reduce costs to facilitate the
8 measuring and monitoring of forest carbon in the
9 United States, in a manner that can—

10 (A) assess landscape-scale or regional-scale
11 carbon stocking;

12 (B) improve the quantity and quality of
13 the information available to policy makers and
14 forest managers, including with regard to forest
15 inventories and verification activities;

16 (C) empower private forest owners to par-
17 ticipate in voluntary carbon crediting opportuni-
18 ties; and

19 (D) enable—

20 (i) a policy maker to compare the con-
21 sequences of policy options to increase eli-
22 mate benefits from forests; and

23 (ii) an assessment of the effectiveness
24 of a policy implemented to increase the eli-
25 mate benefits from forests; and

1 ~~(3)~~ may accelerate, or increase the frequency of,
2 current inventories and data collection activities
3 across all forest types to ensure consistent nation-
4 wide estimates of forest carbon pools that can reflect
5 short-term changes from disturbances, such as
6 wildfires, and management activities.

7 ~~(b)~~ FUNDING.—The Secretary of Agriculture, acting
8 through the Chief of the Forest Service, may annually use
9 to carry out this section not more than \$10,000,000 of
10 any amount made available to the Forest Service for re-
11 search.

12 **SEC. 403. BIOECONOMY RESEARCH.**

13 The Secretary of Agriculture, acting through the Di-
14 rector of the Forest Products Laboratory of the Forest
15 Service, shall expand research relating to the use of
16 wood—

17 ~~(1)~~ to facilitate the establishment of new mar-
18 kets, including nontraditional markets, for material
19 produced from forest management projects that typi-
20 cally has little or no commercial value;

21 ~~(2)~~ to increase the economic viability of manu-
22 facturing products using material described in para-
23 graph ~~(1)~~; and

24 ~~(3)~~ including structural testing of hardwood
25 species for use in mass timber.

1 **SEC. 404. INSURANCE PRODUCT TO REPLACE BUFFERS.**

2 The Secretary of Agriculture, acting through the
3 Chief of the Forest Service, may—

4 (1) establish an intragovernmental revolving
5 fund to maintain adequate buffer reserves for a
6 project implementing a covered activity (as defined
7 in subsection (a) of section 201) under that section
8 to cover unforeseen losses in carbon stocks to ad-
9 dress nonpermanence; and

10 (2) transfer amounts into and out of the
11 intragovernmental revolving fund established under
12 paragraph (1) to serve as a buffer pool for covered
13 activities referred to in paragraph (1).

14 **SEC. 405. FOREST HEALTH THREAT CENTERS.**

15 The Secretary of Agriculture, acting through the
16 Chief of the Forest Service, shall—

17 (1) seek to expand the services provided by the
18 Western Wildland Environmental Threat Assessment
19 Center and the Eastern Forest Environmental
20 Threat Assessment Center such that those Centers
21 become centers of excellence to inform large-scale
22 climate-resilient forest management; and

23 (2) share the syntheses, models, and application
24 tools developed by the Western Wildland Environ-
25 mental Threat Assessment Center and the Eastern

1 Forest Environmental Threat Assessment Center
2 with—

3 (A) the Department of Agriculture climate
4 hubs; and

5 (B) the Climate Adaptation Science Cen-
6 ters managed by the Secretary, acting through
7 the Director of the United States Geological
8 Survey.

9 **SECTION 1. SHORT TITLE; TABLE OF CONTENTS.**

10 (a) *SHORT TITLE.*—*This Act may be cited as the*
11 *“America’s Revegetation and Carbon Sequestration Act of*
12 *2024”.*

13 (b) *TITLE OF CONTENTS.*—*The table of contents for*
14 *this Act is as follows:*

Sec. 1. Short title; table of contents.

Sec. 2. Definitions.

TITLE I—REVEGETATION

Sec. 101. Climate adaptation and resilient forests and rangeland measures.

Sec. 102. National revegetation effort.

Sec. 103. Experimental forests and ranges.

Sec. 104. Long-term contracts for tree and seed planting.

Sec. 105. Revegetation workforce.

Sec. 106. Revegetation on abandoned mine land.

**TITLE II—CARBON SEQUESTRATION THROUGH FOREST
MANAGEMENT AND INNOVATION**

Sec. 201. Forest management from carbon credits.

*Sec. 202. Recovery and restoration treatments following stand-replacing disturb-
ances.*

Sec. 203. Eradication of invasive grasses.

TITLE III—RESEARCH

Sec. 301. Longevity of forest products.

Sec. 302. Forest inventory and analysis.

Sec. 303. Bioeconomy research and technology transfer.

Sec. 304. Forest health threat centers.

Sec. 305. Joint mass timber science and education program.

TITLE IV—MISCELLANEOUS

Sec. 401. Designation of Patsye Crites Forest.

1 **SEC. 2. DEFINITIONS.**

2 *In this Act:*

3 (1) *CARBON SEQUESTRATION.*—*The term “car-*
 4 *bon sequestration” means the capture and long-term*
 5 *storage of atmospheric carbon dioxide.*

6 (2) *FEDERAL LAND.*—*The term “Federal land”*
 7 *means—*

8 (A) *National Forest System land; and*

9 (B) *land under the jurisdiction of the Sec-*
 10 *retary.*

11 (3) *NATIONAL FOREST SYSTEM.*—

12 (A) *IN GENERAL.*—*The term “National For-*
 13 *est System” has the meaning given the term in*
 14 *section 11(a) of the Forest and Rangeland Re-*
 15 *newable Resources Planning Act of 1974 (16*
 16 *U.S.C. 1609(a)).*

17 (B) *EXCLUSION.*—*The term “National For-*
 18 *est System” does not include any forest reserve*
 19 *not created from the public domain.*

20 (4) *SECRETARIES.*—*The term “Secretaries”*
 21 *means the Secretary of the Interior and the Secretary*
 22 *of Agriculture, acting through the Chief of the Forest*
 23 *Service.*

1 (5) *SECRETARY*.—*Except as provided in sections*
2 *103, 201, 202, 303, and 305, the term “Secretary”*
3 *means the Secretary of the Interior.*

4 (6) *SECRETARY CONCERNED*.—*The term “Sec-*
5 *retary concerned” means the Secretary of the Interior*
6 *or the Secretary of Agriculture, acting through the*
7 *Chief of the Forest Service.*

8 **TITLE I—REVEGETATION**

9 **SEC. 101. CLIMATE ADAPTATION AND RESILIENT FORESTS** 10 **AND RANGELAND MEASURES.**

11 (a) *IN GENERAL*.—*Not later than 2 years after the*
12 *date of enactment of this Act, the Secretaries shall each re-*
13 *visе applicable regulations of the Secretary concerned to re-*
14 *quire the consideration and assessment of resiliency and ad-*
15 *aptation factors in developing strategies and efforts for re-*
16 *vegetation, including reforestation and rangeland planting,*
17 *carried out by the Secretary concerned, including in select-*
18 *ing species for planting.*

19 (b) *EFFECT*.—*Nothing in this section affects—*

20 (1) *the reforestation requirements under section*
21 *3 of the Forest and Rangeland Renewable Resources*
22 *Planning Act of 1974 (16 U.S.C. 1601); or*

23 (2) *the use of the forest plan revision process to*
24 *make changes to reforestation approaches in an indi-*
25 *vidual unit of the National Forest System.*

1 **SEC. 102. NATIONAL REVEGETATION EFFORT.**

2 (a) *REFORESTATION REPORTS SUBMITTED TO ADDI-*
3 *TIONAL COMMITTEES.*—Section 70303 of the Infrastructure
4 *Investment and Jobs Act (16 U.S.C. 1601 note; Public Law*
5 *117–58) is amended, in the matter preceding paragraph*
6 *(1), by striking “Senate” and inserting “Senate, the Com-*
7 *mittee on Energy and Natural Resources of the Senate, the*
8 *Committee on Natural Resources of the House of Represent-*
9 *atives,”.*

10 (b) *REFORESTATION REPORT FROM THE DEPART-*
11 *MENT OF THE INTERIOR.*—

12 (1) *DEFINITIONS.*—*In this subsection:*

13 (A) *APPROPRIATE CONGRESSIONAL COMMIT-*
14 *TEES.*—*The term “appropriate congressional*
15 *committees” means—*

16 (i) *the Committee on Appropriations of*
17 *the Senate;*

18 (ii) *the Committee on Appropriations*
19 *of the House of Representatives;*

20 (iii) *the Committee on Energy and*
21 *Natural Resources of the Senate;*

22 (iv) *the Committee on Natural Re-*
23 *sources of the House of Representatives;*

24 (v) *the Committee on Agriculture, Nu-*
25 *trition, and Forestry of the Senate; and*

1 (vi) the Committee on Agriculture of
2 the House of Representatives.

3 (B) *FRRRPA TERMS.*—The terms “natural
4 regeneration”, “reforestation”, and “unplanned
5 event” have the meanings given those terms in
6 section 3(e)(4)(A) of the Forest and Rangeland
7 Renewable Resources Planning Act of 1974 (16
8 U.S.C. 1601(e)(4)(A)).

9 (C) *PRIORITY LAND.*—The term “priority
10 land” means historically forested land under the
11 jurisdiction of the Secretary concerned that, due
12 to an unplanned event—

13 (i) requires reforestation to meet the
14 objectives described in an applicable land
15 use plan; and

16 (ii) is unlikely to experience natural
17 regeneration.

18 (2) *REFORESTATION REPORT.*—Not later than 1
19 year after the date of enactment of this Act, the Sec-
20 retary shall prepare and submit to the appropriate
21 congressional committees a report containing esti-
22 mates of—

23 (A) the number of acres of priority land;
24 and

1 (B) *the amounts necessary to be appro-*
2 *priated, in addition to amounts available from*
3 *other sources, to implement reforestation projects*
4 *on all priority land not later than 10 years after*
5 *the date of submission of the report, including*
6 *amounts necessary—*

7 (i) *to secure seed;*

8 (ii) *to grow seedlings;*

9 (iii) *to prepare sites for reforestation;*

10 (iv) *to plant trees;*

11 (v) *to conduct thinning;*

12 (vi) *to remove deleterious growth and*
13 *underbrush;*

14 (vii) *to build fencing to exclude live-*
15 *stock and adverse wildlife from reforestation*
16 *areas; and*

17 (viii) *to otherwise establish and im-*
18 *prove growing forests.*

19 (3) *ANNUAL UPDATES.—Not later than 1 year*
20 *after the date of submission of the report under para-*
21 *graph (2), and annually thereafter for the subsequent*
22 *8 years, the Secretary shall prepare for inclusion in*
23 *the budget of the United States Government required*
24 *to be submitted by the President under section 1105*

1 of title 31, United States Code, an update to the re-
2 port required under paragraph (2).

3 (c) *SUPPORTING THE REFORESTATION PIPELINE IN*
4 *THE UNITED STATES.*—

5 (1) *IN GENERAL.*—*The Secretaries shall joint-*
6 *ly—*

7 (A) *not later than 90 days after the date on*
8 *which the report is submitted under subsection*
9 *(b)(2), conduct—*

10 (i) *an inventory of orchards and nurs-*
11 *eries capable of supporting reforestation (as*
12 *defined in section 3(e)(4)(A) of the Forest*
13 *and Rangeland Renewable Resources Plan-*
14 *ning Act of 1974 (16 U.S.C. 1601(e)(4)(A)))*
15 *on priority land (as defined in subsection*
16 *(b)(1));*

17 (ii) *an assessment of the capacity of*
18 *the orchards and nurseries listed in the in-*
19 *ventory under clause (i); and*

20 (iii) *a comparison of available plant-*
21 *ing stock in each region in which orchards*
22 *and nurseries listed in the inventory under*
23 *clause (i) are located, as determined by the*
24 *Secretaries; and*

1 (B) based on the estimates contained in the
2 report submitted under subsection (b)(2) and the
3 estimates submitted under section 3(e)(2) of the
4 *Forest and Rangeland Renewable Resources*
5 *Planning Act of 1974 (16 U.S.C. 1601(e)(2))—*

6 (i) prepare an estimate of the capacity
7 of orchards and nurseries that would be nec-
8 essary to implement reforestation projects
9 on all priority land (as defined in section
10 (b)(1)) within 10 years, including identi-
11 fying the species and types of planting stock
12 needed for that reforestation; and

13 (ii) develop a plan for increasing the
14 capacity of orchards and nurseries such
15 that the necessary capacity described in
16 clause (i) is achieved.

17 (2) *SEED COLLECTING.*—*The Secretaries shall*
18 *each—*

19 (A) assess whether the current workforce ca-
20 pacity and infrastructure capacity to locally col-
21 lect, process, and store seed is sufficient to imple-
22 ment reforestation projects on all priority land
23 within 10 years;

24 (B) if the Secretary concerned determines
25 that workforce capacity or infrastructure capac-

1 *ity is insufficient under subparagraph (A), de-*
2 *velop and carry out a plan for increasing work-*
3 *force capacity, infrastructure capacity, or both,*
4 *as applicable; and*

5 *(C) in developing and carrying out the plan*
6 *under subparagraph (B), coordinate with any*
7 *Job Corps program established under section*
8 *105(a) regarding the development and hiring of*
9 *the workforce for orchards and nurseries.*

10 *(3) AVAILABILITY OF PLANT MATERIAL.—*

11 *(A) IN GENERAL.—In carrying out a re-*
12 *vegetation project on Federal land, the Secretary*
13 *concerned may submit to the other Secretary*
14 *concerned a request for plant material pur-*
15 *chased, owned, grown, or managed by the other*
16 *Secretary concerned.*

17 *(B) PROVISION.—The Secretary concerned*
18 *to which a request is submitted under subpara-*
19 *graph (A) shall provide the requested plant ma-*
20 *terial, to the extent practicable.*

21 *(C) REIMBURSEMENT.—The Secretary con-*
22 *cerned that submits a request under subpara-*
23 *graph (A) shall reimburse the other Secretary*
24 *concerned for any plant material provided under*
25 *the request.*

1 (d) *PARTNERSHIPS.*—*The Secretary concerned may*
2 *enter into an agreement with a non-Federal entity to carry*
3 *out any activity described in subsection (b) or (c).*

4 (e) *REFORESTATION TRUST FUND.*—*Section 303 of*
5 *Public Law 96–451 (16 U.S.C. 1606a) is amended—*

6 (1) *in subsection (c), by striking “(c)(1) It shall*
7 *be” and all that follows through the period at the end*
8 *of paragraph (1) and inserting the following:*

9 “*(c) ANNUAL REPORTS; INVESTMENTS.*—

10 “*(1) ANNUAL REPORTS.*—*The Secretary of Agri-*
11 *culture, in coordination with the Secretary of the*
12 *Treasury, shall submit to Congress an annual report*
13 *that contains a description of—*

14 “*(A) the deposits in, expenditures from, and*
15 *balance of the Trust Fund;*

16 “*(B) the projects funded by the Trust Fund;*
17 *and*

18 “*(C) projected deposits in, and any pro-*
19 *jected expenditures from, the Trust fund for the*
20 *next fiscal year.”;*

21 (2) *by conforming the margins of subsection*
22 *(c)(2), and the margins of the subparagraphs within*
23 *that paragraph, accordingly; and*

24 (3) *by striking subsection (d) and inserting the*
25 *following:*

1 “(d) *OBLIGATION OF FUNDS.*—*The Secretary of Agri-*
2 *culture (referred to in this subsection as the ‘Secretary’)*
3 *may obligate such sums as are available in the Trust Fund,*
4 *including any amounts not obligated in previous fiscal*
5 *years, for—*

6 “(1) *reforestation on National Forest System*
7 *land in accordance with section 3(e) of the Forest and*
8 *Rangeland Renewable Resources Planning Act of*
9 *1974 (16 U.S.C. 1601(e));*

10 “(2) *site preparation as needed to accomplish re-*
11 *forestation described in paragraph (1);*

12 “(3) *seed collection, preparation, and storage*
13 *necessary to support appropriate seed availability;*

14 “(4) *nursery construction or activities necessary*
15 *to support appropriate seedling availability; and*

16 “(5) *properly allocable administrative costs for*
17 *the activities described in paragraphs (1) through*
18 *(4).”.*

19 “(f) *AVOIDANCE OF DUPLICATION.*—*In carrying out*
20 *this section and the amendments made by this section, the*
21 *Secretaries shall—*

22 “(1) *avoid duplicative efforts and, to the max-*
23 *imum extent practicable, utilize existing efforts and*
24 *personnel to develop and implement an activity re-*

1 *quired under this section or an amendment made by*
2 *this section; and*

3 (2) *avoid using personnel who would otherwise*
4 *be engaged in forest management or wildfire mitiga-*
5 *tion efforts.*

6 (g) *EFFECT.*—*Nothing in this section or an amend-*
7 *ment made by this section establishes new, extends existing,*
8 *or otherwise affects any requirement under Federal law pro-*
9 *hibiting or restricting grazing during post-wildfire rehabili-*
10 *tation.*

11 **SEC. 103. EXPERIMENTAL FORESTS AND RANGES.**

12 (a) *PURPOSES.*—*The purposes of this section are—*

13 (1) *to formally authorize the experimental forests*
14 *and ranges of the Secretary of Agriculture (referred to*
15 *in this section as the “Secretary”) existing on the*
16 *date of enactment of this Act; and*

17 (2) *to require the Secretary—*

18 (A) *to establish and manage a network of*
19 *experimental forests and ranges over timescales*
20 *that support long-term research; and*

21 (B) *to continuously conduct within the net-*
22 *work described in subparagraph (A) long-term*
23 *research on changes in forest and range systems,*
24 *including on the impacts of management, cli-*
25 *mate change, and other stressors.*

1 (b) *ESTABLISHMENT OF NETWORK.*—*The Secretary*
2 *shall establish and manage a network of experimental for-*
3 *ests and ranges (referred to in this section as the “network”)*
4 *on—*

5 (1) *as practicable, National Forest System land;*

6 (2) *other Federal land; or*

7 (3) *other land that may be managed by the Sec-*
8 *retary under a long-term agreement.*

9 (c) *MANAGEMENT PURPOSES.*—*The Secretary shall*
10 *manage the network for the purposes of—*

11 (1) *research;*

12 (2) *technology transfer; and*

13 (3) *education.*

14 (d) *CRITERIA.*—*The network shall include—*

15 (1) *each of the forest cover types that occur in*
16 *the United States, as defined under the forest inven-*
17 *tory and analysis program established under section*
18 *3(e) of the Forest and Rangeland Renewable Re-*
19 *sources Research Act of 1978 (16 U.S.C. 1642(e));*

20 (2) *an experimental forest that contains forest*
21 *cover types found in the State of Hawaii;*

22 (3) *an experimental forest that contains forest*
23 *cover types found in the territories of the United*
24 *States; and*

1 (4) *experimental ranges that represent rangeland*
2 *vegetation types in the United States.*

3 (e) *CLIMATE RESILIENCY RESEARCH.*—*Within the*
4 *network, the Secretary shall conduct research, including re-*
5 *search on—*

6 (1) *seedling establishment, site suitability, and*
7 *revegetation schedules and designs to inform and as-*
8 *assist efforts undertaken in the United States to estab-*
9 *lish forests and ranges that are resilient in future cli-*
10 *mate conditions;*

11 (2) *the sources, sinks, and transport mechanisms*
12 *of carbon to construct and improve models of carbon*
13 *responses to land management practices and under*
14 *changing climate conditions;*

15 (3) *vegetation changes and ecosystem conversion;*
16 *and*

17 (4) *hydrologic changes associated with vegetation*
18 *or climatic changes.*

19 (f) *TRADITIONAL ECOLOGICAL KNOWLEDGE.*—*To the*
20 *extent practicable and consistent with other Federal laws*
21 *(including regulations), the Secretary shall integrate indig-*
22 *enous perspectives and traditional ecological knowledge in*
23 *the development and research plans for forests and ranges*
24 *within the network.*

1 (g) *PUBLIC ACCESS.*—*Consistent with other laws (in-*
2 *cluding regulations), the Secretary shall make readily acces-*
3 *sible to the public any collected data and research findings*
4 *from projects within the network.*

5 (h) *PARTNERS.*—*The Secretary may enter into an*
6 *agreement with a State (including a State forestry agency),*
7 *an Indian Tribe, a Tribal organization, an educational in-*
8 *stitution, or a third party to fund or conduct research on*
9 *the network.*

10 (i) *REPORT.*—*Not later than 18 months after the date*
11 *of enactment of this Act, the Secretary shall submit to the*
12 *Committee on Energy and Natural Resources of the Senate*
13 *and the Committee on Natural Resources of the House of*
14 *Representatives a report describing, with respect to the net-*
15 *work—*

16 (1) *the location of forests and ranges;*

17 (2) *the forest cover types included in the network*
18 *and any forest cover types not included in the net-*
19 *work; and*

20 (3) *any additional resources needed—*

21 (A) *to establish or maintain infrastructure*
22 *in an established experimental forest or range;*

23 (B) *to expand the network to additional for-*
24 *est cover types not included in the network; or*

1 (C) to conduct the research described in sub-
2 section (e).

3 (j) SAVINGS CLAUSE.—Nothing in this section—

4 (1) modifies, limits, or repeals the applicability
5 of any other provision of law (including regulations)
6 to National Forest System land; or

7 (2) precludes the Secretary from authorizing
8 multiple-use activities, including livestock grazing
9 and other authorized uses on land included within the
10 network.

11 (k) AUTHORIZATION OF APPROPRIATIONS.—There are
12 authorized to be appropriated to the Secretary such sums
13 as are necessary to carry out this section.

14 **SEC. 104. LONG-TERM CONTRACTS FOR TREE AND SEED**
15 **PLANTING.**

16 (a) IN GENERAL.—The Secretary concerned may enter
17 into a contract or cooperative agreement for re-establishing
18 vegetation on Federal land under the jurisdiction of the Sec-
19 retary concerned.

20 (b) TERM.—Notwithstanding the time limit for
21 multiyear contracts in section 3903 of title 41, United
22 States Code, a contract or cooperative agreement described
23 in subsection (a) may be for a term of not more than 10
24 years.

1 **SEC. 105. REVEGETATION WORKFORCE.**

2 (a) *JOB CORPS PROGRAM.*—*The Secretary of Labor,*
3 *in coordination with the Secretaries, shall—*

4 (1) *develop a career and technical education and*
5 *training program focused on tree planting and re-*
6 *vegetation, tree maintenance, nursery management, or*
7 *seed collection; and*

8 (2) *offer the program as part of the Job Corps*
9 *program.*

10 (b) *DIRECT HIRE AUTHORITY.*—

11 (1) *IN GENERAL.*—*The Secretary concerned may*
12 *appoint, without regard to subchapter I of chapter 33*
13 *of title 5, United States Code, other than sections*
14 *3303 and 3328 of that title, a graduate of the pro-*
15 *gram developed and offered under subsection (a) di-*
16 *rectly to a position within, as applicable, the Depart-*
17 *ment of Agriculture or the Department of the Inte-*
18 *rior—*

19 (A) *for which the candidate meets Office of*
20 *Personnel Management qualification standards;*
21 *and*

22 (B) *of which the primary duties relate di-*
23 *rectly to the training the graduate received under*
24 *the program developed and offered under sub-*
25 *section (a).*

1 (2) *LIMITATION.*—*The Secretary concerned may*
2 *exercise the direct hire authority under paragraph (1)*
3 *with respect to a specific qualified candidate not later*
4 *than 1 year after the date on which the candidate*
5 *completed the program developed and offered under*
6 *subsection (a).*

7 **SEC. 106. REVEGETATION ON ABANDONED MINE LAND.**

8 (a) *PILOT PROGRAM.*—

9 (1) *ESTABLISHMENT.*—*Using funding available*
10 *to the Secretary, including funding provided under*
11 *section 40804(b)(8) of the Infrastructure Investment*
12 *and Jobs Act (16 U.S.C. 6592a(b)(8)), the Secretary*
13 *shall establish a pilot program to establish native*
14 *trees, shrubs, or grasses (referred to in this section as*
15 *“vegetation”) on eligible mined land described in*
16 *paragraph (6).*

17 (2) *FINANCIAL ASSISTANCE.*—*In carrying out*
18 *the pilot program established under paragraph (1),*
19 *the Secretary shall—*

20 (A) *in coordination with the Secretary of*
21 *Agriculture, establish vegetation on eligible*
22 *mined land located on Federal land;*

23 (B) *offer financial assistance to States to es-*
24 *tablish native vegetation on eligible mined land*
25 *located on State land;*

1 (C) offer financial assistance to Indian
2 Tribes to establish native vegetation on eligible
3 mined land located on Tribal land or land held
4 in Trust for an Indian Tribe; and

5 (D) establish vegetation or offer financial
6 assistance to States or other entities to establish
7 native vegetation on eligible mined land located
8 on private land.

9 (3) COMPATIBILITY WITH EXISTING OPER-
10 ATIONS.—

11 (A) CONSULTATION.—Prior to selecting a
12 project for funding under the pilot program es-
13 tablished under paragraph (1), the Secretary
14 shall consult with, as applicable, the relevant Of-
15 fice of Surface Mining Reclamation and Enforce-
16 ment abandoned mine land program office to
17 confirm that the proposed project is compatible
18 with any current mining, exploration, or rec-
19 lamation activities.

20 (B) RESTRICTION.—The Secretary shall not
21 provide financial assistance under paragraph (2)
22 to a person or entity with an ongoing legal obli-
23 gation to revegetate the land in a project area.

24 (4) ACTIVITIES.—The following activities associ-
25 ated with a project to establish vegetation on eligible

1 *mined land shall be eligible for financial assistance*
2 *under paragraph (2):*

3 *(A) Site preparation, including ripping*
4 *compacted soils and incorporating soil amend-*
5 *ments.*

6 *(B) Vegetation planting.*

7 *(C) Maintenance, including watering, to the*
8 *extent necessary to establish vegetation under*
9 *this section.*

10 *(D) Managing competing vegetation.*

11 *(5) PREFERENCE.—Under the pilot program es-*
12 *tablished under paragraph (1), the Secretary shall, to*
13 *the maximum extent practicable, seek to establish*
14 *vegetation that—*

15 *(A) is ecologically appropriate; and*

16 *(B)(i) has a high capacity to sequester and*
17 *store carbon;*

18 *(ii) serves to reconnect established land-*
19 *scapes or enhance habitat connectivity; or*

20 *(iii) would establish wildlife habitat that is*
21 *underrepresented in the State in which the*
22 *project is located.*

23 *(6) ELIGIBLE MINED LAND.—To be eligible for*
24 *financial assistance under paragraph (2), a tree*
25 *planting project shall be located on—*

1 (A) land that was mined prior to the date
2 of enactment of this Act;

3 (B) in the case of State land or private
4 land, land that is accessible to the public for not
5 less than 1 day per year; and

6 (C) in the case of private land, land owned
7 by a person, or a nongovernmental organization,
8 that has submitted to the Secretary a request
9 seeking to participate in the pilot program
10 under this section.

11 (7) *TERMINATION.*—The pilot program estab-
12 lished under paragraph (1) shall be in effect for the
13 8-year period beginning on the date of enactment of
14 this Act.

15 (b) *REPORT.*—Not later than 5 years after the date
16 of enactment of this Act, the Secretary shall submit to the
17 Committee on Energy and Natural Resources of the Senate
18 and the Committee on Natural Resources of the House of
19 Representatives a report describing the accomplishments of
20 the pilot program established under subsection (a)(1), in-
21 cluding—

22 (1) jobs created or supported in rural areas;

23 (2) increases in the abundance of wildlife species,
24 including game species and song birds;

1 (3) opportunities for hunting and other compat-
2 ible outdoor recreation; and

3 (4) an estimate of—

4 (A) carbon sequestered during the 5-year pe-
5 riod beginning on the date on which the pilot
6 program is established; and

7 (B) projected additional carbon sequestra-
8 tion and storage during the 15-year period be-
9 ginning on the last day of the period described
10 in subparagraph (A).

11 **TITLE II—CARBON SEQUESTRA-**
12 **TION THROUGH FOREST MAN-**
13 **AGEMENT AND INNOVATION**

14 **SEC. 201. FOREST MANAGEMENT FROM CARBON CREDITS.**

15 (a) *DEFINITIONS.*—*In this section:*

16 (1) *BUFFER POOL.*—*The term “buffer pool”*
17 *means additional sequestered carbon or greenhouse*
18 *gas held in reserve beyond the carbon or greenhouse*
19 *gas represented by a carbon credit to serve as an off-*
20 *set in the event of nonpermanence or carbon seques-*
21 *tration reversal for a carbon credit.*

22 (2) *CARBON CREDIT.*—*The term “carbon credit”*
23 *means a credit, offset, or other defined unit of carbon*
24 *or a greenhouse gas that—*

1 (A) represents additional carbon or green-
 2 house gas sequestered or carbon or greenhouse gas
 3 emissions mitigated, compared to such sequestra-
 4 tion or mitigation without the financial support
 5 embodied in the credit, offset, or other defined
 6 unit;

7 (B) is approved by a credible, third-party
 8 entity;

9 (C) is generated from the implementation or
 10 funding of a covered activity; and

11 (D) is identifiable, measurable, and trace-
 12 able.

13 (3) *CARBON CREDIT PROGRAM.*—The term “car-
 14 bon credit program” means a voluntary program or
 15 market that issues, assigns, trades, or sells carbon
 16 credits.

17 (4) *COVERED ACTIVITY.*—The term “covered ac-
 18 tivity” means a forest revegetation activity that—

19 (A) is ecologically appropriate;

20 (B) is carried out on National Forest Sys-
 21 tem land;

22 (C) is designed, in accordance with the best
 23 available science—

24 (i) to increase rates of carbon or green-
 25 house gas sequestration;

1 (ii) to increase the quantity of seques-
2 tered carbon or greenhouse gas; or

3 (iii) to mitigate or avoid carbon or
4 greenhouse gas emissions;

5 (D) to the extent practicable, is accom-
6 plished using plants native to the landscape or
7 to adjacent landscapes;

8 (E) to the maximum extent practicable, re-
9 vegetates the area in a manner and at a schedule
10 that minimizes the threat of stand-replacing
11 wildfire; and

12 (F) is carried out by—

13 (i) the Secretary; or

14 (ii) a non-Federal entity authorized by
15 the Secretary under any other provision of
16 law.

17 (5) *INTRAGOVERNMENTAL REVOLVING FUND.*—

18 The term “intragovernmental revolving fund” means
19 a Federal account that receives a portion of funds re-
20 ceived through a carbon credit program for use for
21 covered activities in the event of nonpermanence or
22 carbon sequestration reversal for a carbon credit.

23 (6) *RESILIENCE.*—The term “resilience” means
24 the ability of an area of the National Forest System
25 to retain its inherent ecological structure, composi-

1 *tion, and functional integrity in response to historical*
2 *and anticipated stresses for the forest type of the area,*
3 *at any level from the ecosystem to the landscape scale,*
4 *over the age span of the dominant trees of the area.*

5 (7) *SECRETARY.*—*The term “Secretary” means*
6 *the Secretary of Agriculture, acting through the Chief*
7 *of the Forest Service.*

8 (b) *FUNDS ASSOCIATED WITH CARBON CREDITS FOR*
9 *FOREST MANAGEMENT.*—

10 (1) *IN GENERAL.*—*The Secretary may expend*
11 *funds received from a non-Federal entity from a car-*
12 *bon credit program for a carbon credit, without fur-*
13 *ther appropriation or fiscal year limitation, to sup-*
14 *port the implementation of covered activities.*

15 (2) *SUPPLEMENT, NOT SUPPLANT.*—*Amounts*
16 *made available to the Secretary under paragraph (1)*
17 *shall supplement, and not supplant, any other*
18 *amounts made available for covered activities.*

19 (3) *EXCLUSIVE USE.*—*Amounts made available*
20 *to the Secretary under paragraph (1) shall only be*
21 *used for—*

22 (A) *the implementation of covered activities;*

23 *and*

24 (B) *any properly allocable administrative*
25 *costs.*

1 (c) *MANAGEMENT OF CARBON CREDIT TRANSACTIONS*
2 *BY NATIONAL FOREST FOUNDATION.*—

3 (1) *IN GENERAL.*—*The National Forest Founda-*
4 *tion shall receive and distribute any funds received*
5 *under subsection (b)(1).*

6 (2) *OTHER PARTNERS.*—*The National Forest*
7 *Foundation and the Secretary may work with other*
8 *entities that use funds received through a carbon cred-*
9 *it program or for a carbon credit to design, manage,*
10 *account for, implement, or monitor a covered activity.*

11 (3) *METHODOLOGY.*—*For the management of*
12 *transactions described in this section, the National*
13 *Forest Foundation and the Secretary shall jointly de-*
14 *velop and use a methodology that calculates the value*
15 *of a carbon credit, based on—*

16 (A) *the reestablishment or retention of forest*
17 *cover;*

18 (B) *carbon sequestration rates before and*
19 *after the implementation of the covered activity;*
20 *and*

21 (C) *such other considerations as are nec-*
22 *essary to accurately calculate the value of the*
23 *carbon credit.*

24 (4) *LIMITATIONS.*—*A carbon credit—*

1 (A) shall not be construed to constrain,
2 limit, or otherwise affect the authority of the Sec-
3 retary to carry out activities within the National
4 Forest System; and

5 (B) shall be limited in value to the amount
6 necessary to represent the carbon or greenhouse
7 gas sequestered by vegetation with a stand den-
8 sity index of not greater than the stand density
9 index necessary for resilience of the forest cover
10 type in the area where the carbon credit is gen-
11 erated.

12 (d) *RISK MITIGATION TOOLS.*—The Secretary may—

13 (1) establish a buffer pool, an intragovernmental
14 revolving fund, or another similar risk mitigation
15 tool for a project to carry out a covered activity under
16 this section;

17 (2) transfer amounts into and out of the buffer
18 pool, intragovernmental revolving fund, or other tool
19 established under paragraph (1); and

20 (3) develop a protocol, after providing notice and
21 an opportunity for public comment, for the manage-
22 ment of the buffer pool, intragovernmental revolving
23 fund, or other tool established under paragraph (1).

24 (e) *REPORTS TO CONGRESS.*—The Secretary, in col-
25 laboration with the National Forest Foundation, shall an-

1 nually submit to Congress a report describing the status
2 of the program under this section, including—

3 (1) the extent to which covered activities that
4 were implemented as a direct result of funding re-
5 ceived under subsection (b)(1) have been carried out;
6 and

7 (2) any recommendations to improve or expand
8 the program, including expansion of the authorities
9 under this section to land managed by the Secretary
10 of the Interior.

11 (f) *TRANSPARENCY.*—The Secretary, in collaboration
12 with the National Forest Foundation, shall make publicly
13 available on a website of the Forest Service the data relating
14 to all carbon credits issued, traded, sold, or retired under
15 this section.

16 (g) *EFFECT.*—Nothing in this section authorizes any
17 activity that is inconsistent with—

18 (1) any applicable land management plan; or

19 (2) any other provision of law (including regula-
20 tions).

21 **SEC. 202. RECOVERY AND RESTORATION TREATMENTS FOL-**
22 **LOWING STAND-REPLACING DISTURBANCES.**

23 (a) *DEFINITION OF STAND-REPLACING DISTURB-*
24 *ANCE.*—In this section, the term “stand-replacing disturb-
25 ance” means a natural disturbance event, including a

1 *wildland fire or other event, that kills all or most of the*
2 *living overstory trees in a stand and initiates forest succes-*
3 *sion or regrowth on a unit of the National Forest System.*

4 **(b) PILOT NATIONAL FORESTS.**—*Not later than 1 year*
5 *after the date of enactment of this Act, the Secretary of Ag-*
6 *riculture, acting through the Chief of the Forest Service (re-*
7 *ferred to in this section as the “Secretary”), shall identify*
8 *units of the National Forest System that the Secretary de-*
9 *termines to be at high or very high risk of experiencing a*
10 *stand-replacing disturbance during the 10-year period fol-*
11 *lowing the date of enactment of this Act.*

12 **(c) INTERDISCIPLINARY TEAMS.**—*Not later than 2*
13 *years after the date of enactment of this Act, the Secretary*
14 *shall establish an interdisciplinary post-disturbance plan-*
15 *ning team (referred to in this section as the “team”) to as-*
16 *sist in carrying out the requirements of this section.*

17 **(d) MODEL LAND AND RESOURCE MANAGEMENT PLAN**
18 **AMENDMENT.**—

19 **(1) IN GENERAL.**—*Not later than 2 years after*
20 *the date of enactment of this Act, the Secretary, in co-*
21 *operation with the team, shall develop a model land*
22 *and resource management plan amendment estab-*
23 *lishing plan content for future site-specific project-*
24 *level decisions if a stand-replacing disturbance occurs*

1 *on units of the National Forest System identified*
2 *under subsection (b).*

3 (2) *CONTENT.—The model amendment required*
4 *under paragraph (1) shall include direction regarding*
5 *post-disturbance management, including salvage log-*
6 *ging and reforestation activities, to achieve desired*
7 *conditions, objectives, standards, guidelines, suit-*
8 *ability of lands, and other plan content, including*
9 *goals and monitoring provisions, of the existing land*
10 *and resource management plan on the applicable unit*
11 *of the National Forest System, if a stand-replacing*
12 *disturbance occurs.*

13 (3) *USE OF MODEL LAND AND RESOURCE MAN-*
14 *AGEMENT PLAN AMENDMENT.—The Secretary shall*
15 *utilize the Model Land and Resource Management*
16 *Plan Amendment, as adapted to the unique ecological*
17 *and socioeconomic setting for each unit of the Na-*
18 *tional Forest System identified under subsection (b),*
19 *in carrying out subsection (e).*

20 (e) *LAND AND RESOURCE MANAGEMENT PLAN AMEND-*
21 *MENTS.—*

22 (1) *IN GENERAL.—As soon as practicable, but*
23 *not later than 10 years, after the date of enactment*
24 *of this Act, the Secretary, assisted by the team, shall*
25 *amend the applicable land and resource management*

1 *plan of each unit of the National Forest System identified under subsection (b).*

2
3 (2) *PROCESS.—The Secretary shall comply with all relevant laws in carrying out this section.*

4
5 (3) *ELECTION.—The Secretary may comply with the provisions of this section by incorporating the requirements of this section into an ongoing land and resource management plan revision or amendment process.*

10 **SEC. 203. ERADICATION OF INVASIVE GRASSES.**

11 (a) *DEFINITIONS.—In this section:*

12 (1) *ACTION PLAN.—The term “action plan” means the action plan developed under subsection (b).*

13
14 (2) *INVASIVE GRASS.—The term “invasive grass” means—*

15
16 (A) *cheatgrass;*

17 (B) *ventenata;*

18 (C) *medusahead; and*

19 (D) *any additional invasive, nonnative grass species that the Secretaries determine pose a risk by—*

20
21 (i) *increasing fire vulnerability and fire spread; and*

22 (ii) *altering fire regimes.*

23
24
25 (b) *ACTION PLAN.—*

1 (1) *IN GENERAL.*—*The Secretaries shall jointly*
2 *develop and implement an action plan to map, treat,*
3 *and control invasive grass—*

4 (A) *to promote the resiliency, biodiversity,*
5 *and carbon sequestration capacity of forests,*
6 *rangelands, and grasslands;*

7 (B) *to restore native plant species;*

8 (C) *to minimize risks from wildfire; and*

9 (D) *to enhance the quality of forage for*
10 *wildlife and livestock.*

11 (2) *REQUIREMENTS.*—*The action plan shall—*

12 (A) *consider or incorporate existing efforts;*

13 (B) *take into account—*

14 (i) *the latest science;*

15 (ii) *best practices; and*

16 (iii) *available deployment tools;*

17 (C) *be prepared in coordination with State,*
18 *Tribal, and local governmental entities and the*
19 *heads of other Federal agencies, including the*
20 *Chief of the Natural Resources Conservation*
21 *Service, that are engaged in activities to control*
22 *invasive grass to leverage and maximize funding*
23 *and resources;*

24 (D) *identify options to streamline environ-*
25 *mental review, including—*

1 (i) *the use of categorical exclusions (as*
2 *defined in section 111 of the National Envi-*
3 *ronmental Policy Act of 1969 (42 U.S.C.*
4 *4336e)), including a categorical exclusion of*
5 *another agency pursuant to section 109 of*
6 *that Act (42 U.S.C. 4336c);*

7 (ii) *the development of consultations*
8 *under section 7 of the Endangered Species*
9 *Act of 1973 (16 U.S.C. 1536) on a pro-*
10 *grammatic basis;*

11 (iii) *interagency coordination regard-*
12 *ing the validation, registration, and effec-*
13 *tive use of products to control or eradicate*
14 *invasive grass; and*

15 (iv) *maximizing opportunities to co-*
16 *operate with other Federal, Tribal, and*
17 *State agencies in analysis, assessments, and*
18 *studies;*

19 (E) *establish—*

20 (i) *specific goals;*

21 (ii) *specific implementation actions*
22 *that the Secretaries and partners of the Sec-*
23 *retaries will conduct over a 5-year period;*
24 *and*

1 (iii) targets, including acres to be
2 treated annually in target treatment areas
3 identified by the Secretaries;

4 (F) provide for a combination of treatment
5 methods for the most effective control or eradi-
6 cation of an invasive grass, including—

7 (i) manual treatment methods;

8 (ii) mechanical treatment methods;

9 (iii) cultural treatment methods, in-
10 cluding the use of wood chips or prescribed
11 fire;

12 (iv) biological treatment methods,
13 which may include livestock grazing; or

14 (v) chemical treatment methods;

15 (G) identify and implement, to the extent
16 practicable, best practices to reduce the spread-
17 ing of invasive grass seed, such as the use of
18 spray washing stations; and

19 (H) identify methods and metrics to deter-
20 mine the effectiveness of treatment and control
21 efforts.

22 (3) *DEADLINE TO FINALIZE ACTION PLAN.*—Not
23 later than 1 year after the date of enactment of this
24 Act, the Secretaries shall finalize the action plan.

25 (4) *IMPLEMENTATION OF ACTION PLAN.*—

1 (A) *IN GENERAL.*—Not later than 60 days
2 after the date on which the action plan is final-
3 ized under paragraph (3), the Secretaries shall
4 begin implementing the action plan in a manner
5 consistent with other applicable laws (including
6 regulations).

7 (B) *MEMORANDA OF UNDERSTANDING AND*
8 *AGREEMENTS.*—In implementing the action
9 plan, the Secretary concerned may enter into a
10 memorandum of understanding or an agreement
11 with non-Federal entities, as appropriate, to
12 carry out activities under the action plan to con-
13 trol the spread of an invasive grass on Federal
14 land or land adjacent to Federal land.

15 (C) *COOPERATING AGENCY COORDINA-*
16 *TION.*—The Secretary concerned shall, to the ex-
17 tent practicable, offer to assist in the preparation
18 of environmental reviews that may be necessary
19 in implementing treatment and control activities
20 on land adjacent to Federal land.

21 (c) *REPORTS TO CONGRESS.*—Not later than 3 years
22 after the date of enactment of this Act, and annually there-
23 after during the period in which the action plan is being
24 implemented, the Secretaries shall submit to Congress a re-

1 port assessing the effectiveness of the action plan that in-
2 cludes a description of—

3 (1) the location and acreage of the areas treated
4 for invasive grass;

5 (2) any memoranda of understanding or agree-
6 ments entered into under subsection (b)(4)(B) to ad-
7 vance the implementation of the action plan;

8 (3) the effectiveness of treatments and control ef-
9 forts, determined using the methods and metrics de-
10 scribed in subsection (b)(2)(H); and

11 (4) recommendations for studies to explore inno-
12 vative methods and practices to treat and control
13 invasive grass.

14 (d) FUNDING.—

15 (1) OUTSIDE FUNDING.—The Secretary con-
16 cerned may accept non-Federal funds to implement
17 any provision of this section.

18 (2) OTHER FUNDING.—In addition to any fund-
19 ing received under paragraph (1), the Secretaries
20 may expend to carry out this section up to
21 \$30,000,000 of any funding made available to the
22 Secretary concerned for invasive species control, in-
23 cluding funding provided under section 40804(b)(6) of
24 the Infrastructure Investment and Jobs Act (16
25 U.S.C. 6592a(b)(6)).

1 (3) *LIMITATIONS.*—*Of the amounts made avail-*
 2 *able to carry out this section, not more than 10 per-*
 3 *cent shall be used for development of the action plan.*

4 ***TITLE III—RESEARCH***

5 ***SEC. 301. LONGEVITY OF FOREST PRODUCTS.***

6 *The Secretary of Energy, in coordination with the Sec-*
 7 *retary of Agriculture, shall—*

8 (1) *develop accurate and efficient methods and*
 9 *technologies to measure and monitor the amount and*
 10 *average lifespan of carbon stored in woody biomass*
 11 *energy feedstocks and building materials;*

12 (2) *by not later than 2 years after the date of*
 13 *enactment of this Act, publish estimates of the carbon*
 14 *intensity of woody biomass energy feedstocks and*
 15 *building materials, including in short-lived forest*
 16 *products and long-lived wood products; and*

17 (3) *by not later than 3 years after the date of*
 18 *enactment of this Act, publish a lifecycle carbon as-*
 19 *essment, including any carbon sequestration, for—*

20 (A) *short-lived forest products;*

21 (B) *building materials; and*

22 (C) *other long-lived wood products.*

23 ***SEC. 302. FOREST INVENTORY AND ANALYSIS.***

24 (a) *IN GENERAL.*—*To bring more innovation and effi-*
 25 *ciency to climate-resilient forestry actions in the United*

1 *States, the Secretary of Agriculture, acting through the*
2 *Chief of the Forest Service—*

3 *(1) shall publish a report, or expand on a report*
4 *being published pursuant to another provision of law,*
5 *that demonstrates the efforts of the Forest Service—*

6 *(A) to measure a consistent historical series*
7 *of field plots while using advanced technology,*
8 *including remote sensing, to improve data and*
9 *information; and*

10 *(B) to use advanced geospatial technologies*
11 *to improve area and volume estimates, especially*
12 *for smaller areas;*

13 *(2) may use remote sensing technologies and*
14 *other technologies to develop more accurate and effi-*
15 *cient methods and to reduce costs to facilitate the*
16 *measuring and monitoring of forest carbon in the*
17 *United States, in a manner that can—*

18 *(A) assess landscape-scale or regional-scale*
19 *carbon stocking;*

20 *(B) improve the quantity and quality of the*
21 *information available to policy makers and for-*
22 *est managers, including with regard to forest in-*
23 *ventories and verification activities;*

1 (C) empower private forest owners to par-
 2 ticipate in voluntary carbon crediting opportu-
 3 nities; and

4 (D) enable—

5 (i) a policy maker to compare the con-
 6 sequences of policy options to increase cli-
 7 mate benefits from forests; and

8 (ii) an assessment of the effectiveness of
 9 a policy implemented to increase the cli-
 10 mate benefits from forests; and

11 (3) may accelerate, or increase the frequency of,
 12 current inventories and data collection activities
 13 across all forest types to ensure consistent nationwide
 14 estimates of forest carbon pools that can reflect short-
 15 term changes from disturbances, such as wildfires,
 16 and management activities.

17 (b) *FUNDING.*—The Secretary of Agriculture, acting
 18 through the Chief of the Forest Service, may annually use
 19 to carry out this section not more than \$10,000,000 of any
 20 amount made available to the Forest Service for research.

21 **SEC. 303. BIOECONOMY RESEARCH AND TECHNOLOGY**
 22 **TRANSFER.**

23 (a) *FOREST PRODUCTS RESEARCH.*—The Secretary of
 24 Agriculture (referred to in this section as the “Secretary”),

1 *in coordination with the Secretary of Energy, shall expand*
2 *research relating to the use of wood—*

3 *(1) to facilitate the establishment of new mar-*
4 *kets, including nontraditional markets, for material*
5 *produced from forest management projects that typi-*
6 *cally has little or no commercial value;*

7 *(2) to increase the economic viability of manu-*
8 *facturing products using material described in para-*
9 *graph (1);*

10 *(3) for the production of low-carbon renewable*
11 *fuel, including sustainable aviation fuel; and*

12 *(4) including structural testing of hardwood spe-*
13 *cies for use in mass timber.*

14 *(b) TECHNOLOGY TRANSFER OFFICE.—*

15 *(1) ESTABLISHMENT.—There is established with-*
16 *in the Forest Service an Office of Technology Transfer*
17 *(referred to this subsection as the “Office”).*

18 *(2) MISSION.—The mission of the Office shall*
19 *be—*

20 *(A) to expand the commercial impact of the*
21 *research investments of the Forest Service; and*

22 *(B) to provide for the commercialization of*
23 *technologies that support the mission of the For-*
24 *est Service.*

25 *(3) CHIEF COMMERCIALIZATION OFFICER.—*

1 (A) *IN GENERAL.*—*The Office shall be head-*
2 *ed by an officer, who shall be known as the*
3 *“Chief Commercialization Officer” and who shall*
4 *report to the Deputy Chief of the Forest Service*
5 *for Research and Development.*

6 (B) *QUALIFICATIONS.*—*An individual ap-*
7 *pointed to the position of Chief Commercializa-*
8 *tion Officer shall be an individual who, by rea-*
9 *son of professional background and experience, is*
10 *specially qualified to advise the Chief of the For-*
11 *est Service and the Deputy Chief of the Forest*
12 *Service for Research and Development on tech-*
13 *nology transfer at the Forest Service.*

14 (C) *DUTIES.*—*The Chief Commercialization*
15 *Officer shall—*

16 (i) *oversee the expenditure of funds al-*
17 *located for technology transfer within the*
18 *Forest Service;*

19 (ii) *represent the Forest Service on—*

20 (I) *the Federal Laboratory Con-*
21 *sortium for Technology Transfer estab-*
22 *lished by section 11(e) of the Steven-*
23 *son-Wydler Technology Innovation Act*
24 *of 1980 (15 U.S.C. 3710(e)); and*

1 (II) other similar interagency co-
2 ordinating entities;

3 (iii) coordinate with—

4 (I) other technology transfer and
5 commercialization offices within the
6 Department of Agriculture; and

7 (II) other similar Federal entities,
8 as appropriate;

9 (iv) oversee efforts to engage with pri-
10 vate sector entities, including venture cap-
11 ital companies, on issues relating to tech-
12 nology transfer and commercialization; and

13 (v) coordinate efforts to patent or oth-
14 erwise protect under title 35, United States
15 Code, any inventions arising from a Forest
16 Service laboratory.

17 (4) TECHNOLOGY TRANSFER WORKING GROUP.—

18 (A) ESTABLISHMENT.—The Secretary shall
19 establish within the Forest Service a Technology
20 Transfer Working Group, which shall consist
21 of—

22 (i) the Deputy Chief of the Forest Serv-
23 ice for Research and Development;

24 (ii) the Chief Commercialization Offi-
25 cer;

1 (iii) representatives from each research
2 station within the Forest Service; and

3 (iv) representatives from other Forest
4 Service entities with relevant expertise, as
5 appropriate.

6 (B) DUTIES.—The Technology Transfer
7 Working Group established under subparagraph
8 (A) shall—

9 (i) assist with the coordination of tech-
10 nology transfer and commercialization op-
11 portunities occurring at Forest Service lab-
12 oratories;

13 (ii) develop and disseminate guidance
14 to researchers at Forest Service laboratories
15 on technology transfer and commercializa-
16 tion requirements under the Stevenson-
17 Wydler Technology Innovation Act of 1980
18 (15 U.S.C. 3701 et seq.) and associated
19 agreements to implement those require-
20 ments; and

21 (iii) develop and disseminate to the
22 public and prospective technology partners
23 information about opportunities and proce-
24 dures for technology transfer with the Forest
25 Service.

1 (C) *REPORT.*—*Not later than 1 year after*
2 *the date of enactment of this Act, the Technology*
3 *Transfer Working Group established under sub-*
4 *paragraph (A) shall submit to Congress a report*
5 *that describes—*

6 (i) *the number of cooperative research*
7 *and development agreements entered into by*
8 *the Forest Service under section 12 of the*
9 *Stevenson-Wydler Technology Innovation*
10 *Act of 1980 (15 U.S.C. 3710a) during the*
11 *preceding 5 years;*

12 (ii) *the number of agreements with*
13 *partnership intermediaries entered into by*
14 *the Forest Service under section 23 of the*
15 *Stevenson-Wydler Technology Innovation*
16 *Act of 1980 (15 U.S.C. 3715) during the*
17 *preceding 5 years;*

18 (iii) *the number of licenses or other use*
19 *authorizations issued by the Forest Service*
20 *for patents held by the Forest Service dur-*
21 *ing the preceding 5 years; and*

22 (iv) *recommendations for legislative,*
23 *programmatic, or regulatory changes to*
24 *support the mission of the Office.*

1 (5) *KEY PERFORMANCE INDICATORS.*—*Beginning*
2 *with the first year after the report under paragraph*
3 *(4)(C) is submitted, and each year thereafter, the*
4 *President shall include in the budget of the United*
5 *States Government submitted to Congress under sec-*
6 *tion 1105 of title 31, United States Code—*

7 (A) *the number of cooperative research and*
8 *development agreements entered into by the For-*
9 *est Service under section 12 of the Stevenson-*
10 *Wylder Technology Innovation Act of 1980 (15*
11 *U.S.C. 3710a) during the preceding year;*

12 (B) *the number of agreements with partner-*
13 *ship intermediaries entered into by the Forest*
14 *Service under section 23 of the Stevenson-Wylder*
15 *Technology Innovation Act of 1980 (15 U.S.C.*
16 *3715) during the preceding year; and*

17 (C) *the number of licenses or other use au-*
18 *thorizations issued by the Forest Service for pat-*
19 *ents held by the Forest Service during the pre-*
20 *ceding year.*

21 (6) *AUTHORIZATION OF APPROPRIATIONS.*—
22 *There is authorized to be appropriated to the Sec-*
23 *retary to carry out this subsection \$5,000,000 for each*
24 *fiscal year.*

1 (c) *NATIONAL FOREST FOUNDATION ACTIVITIES.*—
2 *Section 402(b)(3) of the National Forest Foundation Act*
3 *(16 U.S.C. 583j(b)(3)) is amended by striking “cooperative*
4 *forestry” and inserting “technology transfer, commer-*
5 *cialization, cooperative forestry.”.*

6 (d) *SMALL BUSINESS VOUCHER PILOT PROGRAM.*—

7 (1) *ESTABLISHMENT.*—*The Secretary, in con-*
8 *sultation with the Secretary of Energy and the Ad-*
9 *ministrator of the Small Business Administration,*
10 *shall establish an innovation voucher pilot program*
11 *to accelerate product development, demonstration, and*
12 *commercialization in the forest products sector.*

13 (2) *VOUCHERS.*—*Under the pilot program estab-*
14 *lished under paragraph (1), the Secretary shall pro-*
15 *vide vouchers to small business concerns (as defined*
16 *in section 3 of the Small Business Act (15 U.S.C.*
17 *632)) to be used at research facilities of the Forest*
18 *Service for research, development, demonstration,*
19 *technology transfer, skills training and workforce de-*
20 *velopment, or commercial application activities.*

21 (3) *COST-SHARING.*—

22 (A) *BASIC RESEARCH.*—*Except as provided*
23 *in subparagraph (D), the Secretary may require*
24 *up to 20 percent of the cost of a voucher provided*
25 *under paragraph (2) for a research or develop-*

1 *ment activity that is of a basic or fundamental*
2 *nature, at the discretion of the Secretary, to be*
3 *provided by a non-Federal source.*

4 *(B) APPLIED RESEARCH.—Except as pro-*
5 *vided in subparagraphs (D) and (E), the Sec-*
6 *retary shall require not less than 20 percent of*
7 *the cost of a voucher provided under paragraph*
8 *(2) for a research or development activity that is*
9 *not of a basic or fundamental nature, at the dis-*
10 *cretion of the Secretary, to be provided by a non-*
11 *Federal source.*

12 *(C) DEMONSTRATION AND COMMERCIAL AP-*
13 *PLICATION.—Except as provided in subpara-*
14 *graph (E), the Secretary shall require not less*
15 *than 50 percent of the cost of a voucher provided*
16 *under paragraph (2) for a demonstration or*
17 *commercial application activity to be provided*
18 *by a non-Federal source.*

19 *(D) EXEMPTION FOR HIGHER EDUCATION*
20 *AND NONPROFIT INSTITUTIONS.—The cost share*
21 *requirements under subparagraphs (A) and (B)*
22 *shall not apply to an activity performed by an*
23 *institution of higher education or a nonprofit in-*
24 *stitution (as defined in section 4 of the Steven-*

1 *son-Wylder Technology Innovation Act of 1980*
2 *(15 U.S.C. 3703)).*

3 *(E) REDUCTION IN COST-SHARE.—The Sec-*
4 *retary may reduce the non-Federal share re-*
5 *quired under subparagraphs (B) and (C) if the*
6 *Secretary determines the reduction to be nec-*
7 *essary and appropriate, taking into account any*
8 *technological risk relating to the activity.*

9 *(4) TERMINATION.—The authorities provided*
10 *under this subsection (except for paragraph (5)) shall*
11 *expire on September 30, 2029.*

12 *(5) REPORT.—Not later than 180 days after the*
13 *termination of the pilot program under paragraph*
14 *(4), the Secretary shall submit to Congress a report*
15 *describing the outcomes of the pilot program, includ-*
16 *ing any recommendations to improve the pilot pro-*
17 *gram.*

18 **SEC. 304. FOREST HEALTH THREAT CENTERS.**

19 *The Secretary of Agriculture, acting through the Chief*
20 *of the Forest Service, shall—*

21 *(1) seek to expand the services provided by the*
22 *Western Wildland Environmental Threat Assessment*
23 *Center and the Eastern Forest Environmental Threat*
24 *Assessment Center such that those Centers become cen-*

1 *ters of excellence to inform large-scale climate-resilient*
 2 *forest management; and*

3 *(2) share the syntheses, models, and application*
 4 *tools developed by the Western Wildland Environ-*
 5 *mental Threat Assessment Center and the Eastern*
 6 *Forest Environmental Threat Assessment Center*
 7 *with—*

8 *(A) the Department of Agriculture climate*
 9 *hubs; and*

10 *(B) the Climate Adaptation Science Centers*
 11 *managed by the Secretary, acting through the*
 12 *Director of the United States Geological Survey.*

13 **SEC. 305. JOINT MASS TIMBER SCIENCE AND EDUCATION**
 14 **PROGRAM.**

15 *(a) DEFINITIONS.—In this section:*

16 *(1) LOCAL APPROVING AGENCY.—The term “local*
 17 *approving agency” means an agency or unit of a*
 18 *local government that is responsible for the issuance*
 19 *of permits for building construction.*

20 *(2) MASS TIMBER.—The term “mass timber” in-*
 21 *cludes—*

22 *(A) cross-laminated timber;*

23 *(B) nail laminated timber;*

24 *(C) glue laminated timber;*

25 *(D) dowel laminated timber;*

1 (E) laminated strand lumber; and

2 (F) laminated veneer lumber.

3 (3) *PROCURING AGENCY*.—The term “procuring
4 agency” means the Department of the Interior, the
5 Forest Service, or a person that is a party to a con-
6 tract with the Department of the Interior or the For-
7 est Service, with respect to work performed under
8 such a contract.

9 (4) *SECRETARY*.—The term “Secretary” means
10 the Secretary of Agriculture, acting through the Di-
11 rector of the Forest Products Laboratory of the Forest
12 Service.

13 (5) *TALL WOOD BUILDING*.—The term “tall wood
14 building” means a building designed to be—

15 (A) constructed with mass timber; and

16 (B)(i) if a residential building, more than
17 4 stories in height; and

18 (ii) if a commercial building, more than 5
19 stories in height.

20 (b) *MASS TIMBER SCIENCE AND EDUCATION PROGRAM*
21 *WITH THE FOREST PRODUCTS LABORATORY*.—The Sec-
22 retary shall establish a mass timber science and education
23 program to respond to the emerging research needs of archi-
24 tects, developers, and the forest products industry.

1 (c) *COORDINATION.*—*The Secretary shall coordinate*
2 *with research programs at colleges and universities in ad-*
3 *ministering the mass timber science and education program*
4 *established under subsection (b) to supplement the current*
5 *research and educational efforts of colleges and universities.*

6 (d) *PURPOSES.*—*The mass timber science and edu-*
7 *cation program established under subsection (b) shall have*
8 *the following principal purposes:*

9 (1) *To provide practical research responsive to*
10 *the needs of architects, developers, and the forest prod-*
11 *ucts industry, including assessments of carbon im-*
12 *pacts in the originating forests and the end use of*
13 *mass timber in the built environment.*

14 (2) *To engage and listen to clients and then de-*
15 *velop focused, strategic lines of new research respon-*
16 *sive to those needs, which may include research relat-*
17 *ing to flammability and performance during a fire,*
18 *structural characteristics, energy use and savings,*
19 *acoustics, and slab construction composed of hybrid*
20 *materials.*

21 (3) *To solicit proposals from scientists who com-*
22 *pete for funding through a rigorous peer-review proc-*
23 *ess designed to ensure the best projects are funded.*

24 (4) *To disseminate research findings using a*
25 *suite of communication tools to ensure that architects,*

1 *developers, and the forest products industry are aware*
2 *of, understand, and can use the information to make*
3 *sound decisions and implement projects.*

4 *(5) To develop and facilitate the adoption, on a*
5 *voluntary basis, of a curriculum for building struc-*
6 *tures using mass timber for use in schools of engineer-*
7 *ing and architecture that includes—*

8 *(A) structural design; and*

9 *(B) the possibilities, benefits, and limita-*
10 *tions of using mass timber in construction.*

11 *(e) MASS TIMBER PLAN.—Not later than September*
12 *30, 2025, the Secretary shall submit to the relevant commit-*
13 *tees of Congress a mass timber plan that includes—*

14 *(1) an assessment of the current state of knowl-*
15 *edge about mass timber and tall wood buildings;*

16 *(2) an integrated approach to improve knowledge*
17 *sharing;*

18 *(3) an approach for project monitoring and eval-*
19 *uation; and*

20 *(4) an approach for setting research priorities.*

21 *(f) STAKEHOLDER ADVISORY GROUP.—*

22 *(1) MEMBERSHIP.—The Secretary shall appoint*
23 *a stakeholder advisory group of technical experts that*
24 *consists, at a minimum, of—*

25 *(A) a Forest Service scientist;*

1 (B) a researcher from a college or univer-
2 sity;

3 (C) a representative of a trade association;

4 (D) an architect or developer;

5 (E) a representative of a local approving
6 agency;

7 (F) a representative of a forest products
8 company; and

9 (G) a representative of a nongovernmental
10 organization with experience—

11 (i) designing or constructing tall wood
12 buildings; or

13 (ii) complying with or revising related
14 building codes.

15 (2) *DUTIES.*—*The stakeholder advisory group*
16 *shall meet at least annually—*

17 (A) to consider immediate and long-term
18 science needs;

19 (B) to suggest to the Secretary appropriate
20 topic areas, specific issues within those topic
21 areas, and information transfer needs for which
22 the Secretary shall solicit proposals described in
23 subsection (d)(3); and

24 (C) to assist the Secretary in drafting the
25 mass timber plan required under subsection (e).

1 (g) *ASSISTANCE.*—*The Secretary may provide to the*
2 *Secretary of Transportation and to States technical assist-*
3 *ance relating to the use of wood in bridges when undergoing*
4 *revisions to a State bridge design manual.*

5 (h) *AVAILABILITY OF APPROPRIATIONS.*—*From*
6 *amounts appropriated for Forest Service research, exclud-*
7 *ing funding made available for the Forest Inventory and*
8 *Analysis program, the Secretary may use \$4,000,000 to*
9 *carry out the activities described in this section.*

10 ***TITLE IV—MISCELLANEOUS***

11 ***SEC. 401. DESIGNATION OF PATSYE CRITES FOREST.***

12 (a) *DESIGNATION.*—*On acquisition by the United*
13 *States, the approximately 2,693.31 acres of land within the*
14 *Monongahela National Forest identified on the map pre-*
15 *pared by the Forest Service entitled “Blackwater Canyon”*
16 *and dated August 5, 2024, shall be known and designated*
17 *as the “Patsye Crites Forest”.*

18 (b) *REFERENCES.*—*Any reference in a law, map, regu-*
19 *lation, document, paper, or other record of the United*
20 *States to the land acquired under subsection (a) shall be*
21 *deemed to be a reference to the “Patsye Crites Forest”.*

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2^D SESSION

S. 2991

A BILL

To improve revegetation and carbon sequestration activities in the United States, and for other purposes.

NOVEMBER 21, 2024

Reported with an amendment