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S.L.C.

S. 2586
Wicker - ANS (modified)

AMENDMENT NO._____ Calendar No._____

Purpose: In the nature of a substitute.

IN THE SENATE OF THE UNITED STATES—119th Cong., 2d Sess.

S. 2586

To require the Administrator of the National Oceanic and Atmospheric Administration to establish an assessment program for commercial-scale offshore aquaculture through demonstration projects, to establish Aquaculture Centers of Excellence, to support aquaculture workforce development and working waterfronts, and for other purposes.

Referred to the Committee on _____ and ordered to be printed

Ordered to lie on the table and to be printed

Amendments In the Nature of a Substitute intended to be proposed by Mr. WICKER (for himself and Mr. SCHATZ)

Viz:

Amend the title so as to read: "To require the Administrator of the National Oceanic and Atmospheric Administration to establish an assessment program for commercial-scale offshore aquaculture through demonstration projects, to support aquaculture workforce development, and for other purposes.".

Strike all after the enacting clause and insert the following:

SECTION 1. SHORT TITLE; TABLE OF CONTENTS.

(a) SHORT TITLE.—This Act may be cited as the "Marine Aquaculture Research for America Act of 2026" or the "MARA Act of 2026".

(b) TABLE OF CONTENTS.—The table of contents for this Act is as follows:

Sec. 1. Short title; table of contents.
Sec. 2. Purposes.
Sec. 3. Definitions.

TITLE I—OFFICE OF AQUACULTURE

Sec. 101. Office of Aquaculture.

TITLE II—COMMERCIAL-SCALE DEMONSTRATION PROJECTS

Sec. 201. Assessment program for offshore aquaculture.
Sec. 202. Permits for demonstration projects for offshore aquaculture facilities.
Sec. 203. Coordination of permit reviews for demonstration projects.
Sec. 204. Reporting by assessment program participants.
Sec. 205. Rule of construction; savings provisions.

TITLE III—WORKFORCE DEVELOPMENT, FINANCING, AND OTHER SUPPORT

Sec. 301. General support for industry.

TITLE IV—STUDIES AND REPORTS

Sec. 401. Study on offshore aquaculture by Ocean Studies Board of the National Academies of Sciences, Engineering, and Medicine.
Sec. 402. Report on offshore aquaculture by Government Accountability Office.

SEC. 2. PURPOSES.

The purposes of this Act are—

(1) to authorize the National Oceanic and Atmospheric Administration to establish and study commercial-scale demonstration projects to answer scientific questions needed to safely and sustainably regulate offshore aquaculture in the United States;

(2) to commission a study and report to assess the environmental and regulatory viability of a United States offshore aquaculture industry;

(3) to support aquaculture workforce development and working waterfronts by creating new jobs and to support existing jobs and businesses within the seafood industry of the United States, including jobs and businesses for traditional participants in the fishing industry;

(4) to reduce the United States seafood trade deficit by expanding the domestic supply of seafood through the production of sustainable offshore aquaculture; and

(5) to support the development of offshore aquaculture in a manner that minimizes conflicts with recreational, subsistence, Tribal treaty, and commercial fishing access and uses.

SEC. 3. DEFINITIONS.

In this Act:

(1) ADMINISTRATION.—The term "Administration" means the National Oceanic and Atmospheric Administration.

(2) ADMINISTRATOR.—The term "Administrator" means the Administrator of the Administration.

(3) APPROPRIATE COMMITTEES OF CONGRESS.—The term "appropriate committees of Congress" means—

(A) the Committee on Commerce, Science, and Transportation, the Committee on Environment and Public Works, and the Committee on Agriculture, Nutrition, and Forestry of the Senate; and

(B) the Committee on Natural Resources, the Committee on Agriculture, and the Committee on Transportation and Infrastructure of the House of Representatives.

(4) AQUACULTURE.—The term "aquaculture"—

(A) means any activity involved in the propagation, rearing, or attempted propagation or rearing, of cultured species, including the capture of wild individuals for rearing as broodstock; and

(B) does not include the practice of—

(i) capturing juvenile finfish to rear to maturity in an aquaculture facility for subsequent commercial sale, commonly referred to as ranching; or

(ii) rearing and releasing cultured species for the purpose of enhancing wild populations.

(5) AQUACULTURE STAKEHOLDER.—The term "aquaculture stakeholder" means—

(A) an owner or operator of an offshore aquaculture facility or a land or coastal-based facility supporting offshore operation, including hatcheries and nurseries;

(B) a Regional Fishery Management Council established under section 302(a) of the Magnuson-Stevens Fishery Conservation and Management Act (16 U.S.C. 1852(a));

(C) a Marine Fisheries Commission, as defined by section 3 of that Act (16 U.S.C. 1802);

(D) a nongovernmental organization, including a conservation organization;

(E) a commercial and recreational fishery participant, including a fisheries association;

(F) a State or county government;

(G) an Indian Tribe;

(H) a Native Hawaiian organization;

(I) a Federal, State, or Tribal agency with interests in aquaculture; or

(J) any other interested party.

(6) COASTAL STATE.—The term "coastal State" has the meaning given the term "coastal state" in section 304(4) of the Coastal Zone Management Act of 1972 (16 U.S.C. 1453(4)).

(7) CULTURED SPECIES.—The term "cultured species"—

(A) means any species propagated and reared for marine aquaculture;

(B) includes marine shellfish species intended for propagation that self-recruit to aquaculture structures in the offshore environment; and

(C) excludes any member of the class Aves, Reptilia, or Mammalia.

(8) ESCAPE.—The term "escape" means the escape from an offshore aquaculture facility or land- or coastal-based hatchery, nursery, or associated facility of—

(A) juvenile or adult cultured species;

(B) fertilized eggs spawned by cultured species; or

(C) viable gametes of a finfish species that the Administrator determines, based on the best scientific information available, could result in

reproduction or genetic mixing with a wild population.

(9) EXCLUSIVE ECONOMIC ZONE.—The term "exclusive economic zone" has the meaning given that term in section 3 of the Magnuson-Stevens Fishery Conservation and Management Act (16 U.S.C. 1802).

(10) FISHERY STAKEHOLDERS.—The term "fishery stakeholders" means any person, group, or organization that has an interest in, or is affected by, how a fishery and its marine and coastal environment are managed and used, including—

(A) subsistence fishery participants and their dependents;

(B) commercial fishermen;

(C) seafood processing and distribution workers;

(D) recreational fishery stakeholders, including charter operators and fishery participants;

(E) Indian Tribes;

(F) Treaty fishery participants; and

(G) territorial fishing communities, including such communities in Hawaii, American Samoa, Guam, the Commonwealth of the

Northern Mariana Islands, Puerto Rico, and the United States Virgin Islands.

(11) GENETICALLY MODIFIED ORGANISM; GENETICALLY MODIFIED.—The terms "genetically modified organism" and "genetically modified" mean any organism whose genetic material (DNA) has been altered using technology in a way that does not occur naturally by conventional breeding or natural processes and results in permanent, heritable changes, with the exception of sterilization.

(12) INDIAN TRIBE.—The term "Indian Tribe" has the meaning given that term in section 4 of the Indian Self-Determination and Education Assistance Act (25 U.S.C. 5304).

(13) INSTITUTION OF HIGHER EDUCATION.—The term "institution of higher education" has the meaning given that term in section 101 of the Higher Education Act of 1965 (20 U.S.C. 1001).

(14) NATIVE HAWAIIAN ORGANIZATION.—The term "Native Hawaiian organization" has the meaning given that term in section 6207 of the Elementary and Secondary Education Act of 1965 (20 U.S.C. 7517) and includes the Department of Hawaiian Home Lands and the Office of Hawaiian Affairs.

(15) NATIONAL SEA GRANT COLLEGE PROGRAM.—The term "national sea grant college program" means the program maintained under section 204(a) of the National Sea Grant College Program Act (33 U.S.C. 1123(a)).

(16) OFFSHORE AQUACULTURE.—The term "offshore aquaculture" means aquaculture conducted in Federal waters of the exclusive economic zone.

(17) OFFSHORE AQUACULTURE FACILITY.—The term "offshore aquaculture facility" means—

(A) an installation or structure used, in whole or in part, for offshore aquaculture; or

(B) an area of the seabed or water column used for offshore aquaculture.

(18) STATE.—The term "State" means each of the several States, the District of Columbia, the Commonwealth of Puerto Rico, American Samoa, the Virgin Islands, Guam, and any other Commonwealth, territory, or possession of the United States.

(19) TRIBAL LAND AND WATERS.—The term "Tribal land and waters" means land and waters that are subject to the jurisdiction of an Indian Tribe, including—

(A) land located within the exterior boundaries of an Indian reservation;

(B) land or an interest in land held in trust by the United States for the benefit of an Indian Tribe;

(C) land or an interest in land held by an Indian Tribe subject to a restriction against alienation under Federal law;

(D) waters located on, within, or appurtenant to land described in subparagraphs (A) through (C); and

(E) waters in which an Indian Tribe possesses fishing, gathering, access, or other rights reserved or protected by treaty, statute, executive order, or other Federal law.

SEC. 4. PRIVACY.

The Administrator shall maintain information submitted under this Act in a manner that safeguards personally identifiable information and confidential business information and promotes transparency to the public, to the extent practicable and consistent with other applicable law.

TITLE I—OFFICE OF AQUACULTURE

SEC. 101. OFFICE OF AQUACULTURE.

(a) ESTABLISHMENT.—There is established within the headquarters of the National Marine Fisheries Service of the Administration the Office of Aquaculture (in this section referred to as the "Office").

(b) RESOURCES.—The Administrator shall ensure the Office is provided with sufficient resources to provide representation and carry out the duties of the Office under subsections (c) and (d), subject to available appropriations.

(c) REPRESENTATION AT REGIONAL FISHERIES OFFICES.—

(1) IN GENERAL.—The Administrator shall provide for representation of the Office in each of the regional fisheries offices of the Administration.

(2) MINIMUM PRESENCE.—In carrying out paragraph (1), the Administrator—

(A) shall provide for the placement of at least one regional aquaculture coordinator from the Office in each regional fisheries office;

(B) shall otherwise ensure that the representation of the Office at a regional fisheries office is, at a minimum, sufficient to permit the

Office to fulfill the duties of the Office under subsection (d); and

(C) may increase that representation to the extent warranted by the activity and interest of aquaculture stakeholders in the region.

(d) DUTIES.—The Office shall—

(1) coordinate the implementation of this Act, including administration of—

(A) the offshore aquaculture assessment program established under section 201; and

(B) activities to support the issuance of permits under section 202;

(2) coordinate regulatory, scientific, outreach, and international issues related to aquaculture within the Administration;

(3) coordinate regulatory oversight and enforcement of demonstration projects, including site inspections conducted under section 202(m);

(4) collaborate with and leverage existing efforts by the Administrator, including the national sea grant college program—

(A) to conduct outreach, education, extension services, and training efforts for aquaculture and offshore aquaculture;

(B) to engage with aquaculture stakeholders and, periodically, convene conferences or workshops for aquaculture stakeholders to exchange information and ideas; and

(C) to engage with Cooperative Institutes, as appropriate;

(5) develop recommendations for best management practices for offshore aquaculture operations that, at a minimum—

(A) encourage development of offshore aquaculture in a manner that complies with environmental law;

(B) are based on the best scientific information available;

(C) take into account traditional knowledge of Tribal and Indigenous communities as appropriate to the region;

(D) are adaptive to offshore aquaculture developments, such as updates in technology and different environmental conditions;

(E) prioritize species that are native or naturalized to the region;

(F) evaluate and, where appropriate, incorporate practices that promote the sourcing and use of sustainable aquaculture feed ingredients,

including any potential alternatives to wild fish, consistent with the best scientific information available and the availability of such sources; and

(G) prioritize the health of cultured species;

(6) coordinate and conduct research and scientific monitoring, and evaluate data, to support the implementation of this Act, including by leveraging, as appropriate, the existing scientific capacity of the Fisheries Science Centers, the National Centers for Coastal Ocean Science, the national sea grant college program, Cooperative Institutes, and other programs of the Administration;

(7) administer support for industry under section 301;

(8) administer the contract to conduct the study described in section 401; and

(9) coordinate the engagement of the Administration with the Comptroller General of the United States as the Comptroller General prepares the report required by section 402.

(e) BUDGET REQUEST.—The Administrator shall include, in the budget justification materials submitted to Congress in support of the budget of the President for

a fiscal year pursuant to section 1105 of title 31, United States Code, a request for funding for the Office as a separate line item within the National Marine Fisheries Service.

(f) RULES OF CONSTRUCTION.—

(1) NO REDIRECTION OF FUNDS.—Nothing in this Act shall be construed to require a Regional Fishery Management Council, interstate fisheries commission, or other governmental or advisory body to expend or redirect funds, personnel, or other resources designated for responsibilities under other applicable law to carry out activities under this Act.

(2) NO DIVERSION OF FUNDS.—Nothing in this Act shall be construed to require the Administrator to divert funds, personnel, or other resources made available to the National Marine Fisheries Service Line Office and Programs, including for fisheries science, fisheries management, conservation, protected resources, or fisheries enforcement, to carry out this Act, except to the extent necessary to carry out duties required under other applicable law.

TITLE II—COMMERCIAL-SCALE DEMONSTRATION PROJECTS

SEC. 201. ASSESSMENT PROGRAM FOR OFFSHORE AQUACULTURE.

(a) ESTABLISHMENT OF PROGRAM.—Not later than 180 days after the date of the enactment of this Act, the Administrator shall establish an assessment program (in this section referred to as the "assessment program") with the objective of assessing the viability of offshore aquaculture—

(1) considering changing circumstances and advances in technology; and

(2) using the best available science, information from aquaculture stakeholders, and information developed from demonstration projects for which permits are issued under section 202.

(b) ELEMENTS.—At a minimum, the assessment program shall examine the following in order to determine the viability of offshore aquaculture:

(1) The ability of different commercial-scale facility designs and operational methods—

(A) to survive various atmospheric and ocean conditions, including high wind speeds or high-energy ocean conditions associated with severe weather, or tidal or tsunami activity, while

preventing, to the extent practicable and applicable—

(i) escapes;

(ii) loss of or damage to infrastructure; or

(iii) wildlife entanglement resulting from lost or damaged infrastructure;

(B) to prevent adverse wildlife impacts, to the extent practicable, including entanglements of whales, sea turtles, and other species protected under—

(i) the Endangered Species Act of 1973 (16 U.S.C. 1531 et seq.); and

(ii) the Marine Mammal Protection Act of 1972 (16 U.S.C. 1361 et seq.);

(C) to prevent, to the extent practicable, adverse impacts on the marine environment, including impacts to habitat, water chemistry, and wildlife; and

(D) to comply with the requirements of the United States Coast Guard and the Department of Defense, including the Army Corps of Engineers, in preventing adverse impacts on navigation and safety due to offshore aquaculture facilities, including requirements for op-

erations, navigation, and transit associated with such facilities.

(2) The ability of different technologies to provide reliable and timely data on offshore aquaculture facilities, including visual data and other relevant data types, on a regular basis to enable the Administrator to monitor—

(A) the compliance of demonstration projects for which permits are issued under section 202 with the requirements under subsection (e) of such section;

(B) impacts on the marine environment; and

(C) interference with existing uses of the water bodies in which demonstration projects for which permits are issued under section 202 are located.

(3) The relative risks, benefits, and costs of various types of offshore aquaculture, including different cultured species, in different geographies and under varying environmental conditions.

(c) REPORT REQUIRED.—Not later than 5 years after the date on which the Administrator establishes the assessment program, the Administrator shall publish, make available to the public, and submit to the National

Academy of Sciences and the Comptroller General of the United States, a report that includes the following:

(1) A description of each demonstration project for which a permit is issued under section 202, including documentation supporting the issuance of the permit and summary of information submitted to the Administrator for each demonstration project.

(2) A description of the progress made toward meeting the objective described in subsection (a).

(d) DATA FROM STATE AND TRIBAL AQUACULTURE.—The Administrator may work with States and Tribes to collect data and information regarding aquaculture conducted in State or Tribal land and waters in order to further the assessment program established in this section.

(e) RULE OF CONSTRUCTION.—Nothing in this section shall be construed to require the development of new assessment frameworks where existing ecosystem-based assessment tools of the Administrator, including Integrated Ecosystem Assessments, are sufficient to meet the requirements of the assessment program under this section.

SEC. 202. PERMITS FOR DEMONSTRATION PROJECTS FOR OFFSHORE AQUACULTURE FACILITIES.

(a) ISSUANCE OF PERMITS.—After the Administrator establishes the assessment program under section 201, the Administrator shall issue permits for commercial-scale demonstration projects for proposed offshore aquaculture facilities in furtherance of the assessment program.

(b) LIMITATION ON PERMITS.—

(1) LIMITED NUMBER.—The Administrator may issue permits under this section for not more than 30 offshore aquaculture projects.

(2) EXPIRATION OF AUTHORITY TO ISSUE INITIAL PERMITS.—The authority of the Administrator to issue an initial permit under this section shall terminate on the date that is 10 years after the date on which the first permit is issued under this section. The termination of such authority shall not affect the validity of a permit issued before such date for the remainder of the term of the permit, or the renewal of a permit issued before such date.

(c) ELIGIBILITY REQUIREMENTS.—To be eligible for the issuance of a permit under subsection (a), a demonstration project is required to—

(1) advance the objective described in section 201(a);

(2) cultivate only native or naturalized species that pose a minimal threat of harm to wildlife and the ecosystem in which the project is located;

(3) ensure that there will be no intentional culture, propagation, or release of genetically modified organisms if such organisms present a material risk of harmful ecological, genetic, or disease impacts that is greater than such risk associated with conventional stock;

(4) incorporate design and operational practices that minimize the risk of escape, adverse wildlife impacts (including entanglement), adverse impacts to navigation, and adverse pollution impacts;

(5) develop an escape response and infrastructure loss or damage plan that minimizes the impact of any escapes or infrastructure loss or damage on the marine environment, including wild populations and fishery resources, and on other uses of the water body in which the project is located;

(6) demonstrate evidence of financial assurance, which may include insurance, a surety bond, letter of credit, escrow account, or other financial instrument approved by the Administrator, in an amount sufficient to ensure the owner or operator is able to carry out—

(A) emergency response and mitigation required under paragraph (5);

(B) remediation of environmental damage caused by the demonstration project; and

(C) decommissioning and removal of the offshore aquaculture facility and associated infrastructure;

(7) develop a plan for decommission and removal of the offshore aquaculture facility and associated infrastructure to occur not later than the expiration of permitted activities under this Act with respect to the demonstration project;

(8) comply with all applicable requirements, including those under—

(A) the Federal Water Pollution Control Act (33 U.S.C. 1251 et seq.) (commonly referred to as the "Clean Water Act");

(B) the Endangered Species Act of 1973 (16 U.S.C. 1531 et seq.);

(C) the Marine Mammal Protection Act of 1972 (16 U.S.C. 1361 et seq.); and

(D) the National Environmental Policy Act of 1969 (42 U.S.C. 4321 et seq.);

(9) maximize compatibility with, and prevent or minimize displacement of, existing uses and users of

the marine environment in areas that may reasonably be expected to be directly or indirectly affected by the demonstration project; and

(10) conform to best practices to minimize the use of therapeutants and pharmaceuticals, including antibiotics, and minimize the release of such substances into the environment.

(d) AUTHORIZED ACTIVITIES.—A permit holder for a demonstration project issued under subsection (a) may conduct offshore aquaculture for commercial sale consistent with this Act, including regulations promulgated by the Administrator to carry out this Act.

(e) APPLICATIONS.—An application submitted to the Administrator for a permit for a demonstration project shall specify—

(1) the proposed location of the offshore aquaculture facility and the location of on-shore facilities used for propagation or rearing of cultured species, such as hatcheries, nurseries, or research operations;

(2) the proposed type of aquaculture gear that will be used at facilities described in paragraph (1);

(3) the cultured species to be propagated or reared, or both, at the offshore aquaculture facility;

(4)(A) the source of eggs, larvae, or juvenile cultured species that will be used in offshore aquaculture operations;

(B) an analysis of the likely ecosystem impacts of such operations, such as the risk of escapes, adverse wildlife impacts, risk of pollution, and spread of pathogens; and

(C) the information upon which the analysis was based;

(5) a baseline environmental survey, or equivalent site-specific information, sufficient to characterize environmental conditions at the proposed project location before the commencement of in-water operations and to support evaluation of the impacts of the demonstration project under sections 201 and 204, except that the Administrator may accept existing site-specific data that the Administrator determines are current, reliable, and sufficient;

(6) plans to respond to—

(A) a natural disaster;

(B) an escape;

(C) disease;

(D) loss or damage to infrastructure;

(E) entanglements; and

(F) other circumstances designated by the Administrator;

(7) a certification that planned aquaculture facilities will not for the duration of the permit period be owned and operated by a foreign entity of concern, as defined in section 10612 of Public Law 117–167 (commonly known as the "CHIPS and Science Act of 2022") (42 U.S.C. 19221(a)); and

(8) such other design, construction, and operational information as the Administrator may require to ensure the integrity of the operations and contingency planning.

(f) NOTICE, PUBLIC COMMENT, AND RECOMMENDATIONS.—

(1) IN GENERAL.—Not later than 90 days after receiving an application under this section, the Administrator shall—

(A) conduct a preliminary review to determine whether the application is complete and complies with the requirements of this Act and other applicable Federal law;

(B) for each application that the Administrator has determined is incomplete or does not comply with the requirements of this Act and other applicable Federal law, provide to the ap-

plicant a notice that specifies modifications to the application and the opportunity for resubmission;

(C) for each complete application that the Administrator has determined complies with the requirements of this Act and other applicable Federal law under subparagraph (A), publish in the Federal Register, and provide to the Governor, Indian Tribe, or Native Hawaiian organization of each specially affected coastal jurisdiction, the application; and

(D) for a period of 60 days, invite and consider all public comments, and recommendations to modify the application or to deny the permit from any Governor, Indian Tribe, or Native Hawaiian organization of a specially affected coastal jurisdiction designated under this subsection, on applications for permits described in subparagraph (C).

(2) SPECIALLY AFFECTED COASTAL JURISDICTION.—In this subsection, the term "specially affected coastal jurisdiction" means any coastal State, Indian Tribe, or Native Hawaiian organization—

(A) the land, Tribal land, waters, or usual and accustomed fishing areas of which—

(i) are adjacent to or overlapping within the Federal waters in which the project will be conducted; and

(ii) are used, or are scheduled to be used, as a support base for the project;

(B) for which there is a reasonable probability of significant effect on uses of land, Tribal land, or water from the project; or

(C) the land, Tribal land, waters, or usual and accustomed fishing areas of which are in areas that may reasonably be expected to be directly or indirectly affected by the offshore and land sites proposed for a demonstration project.

(3) DESIGNATION OF A SPECIALLY AFFECTED COASTAL JURISDICTION.—Consistent with paragraph (2), the Administrator shall identify and designate, with respect to each application for a demonstration project received under this section, the adjacent specially affected coastal jurisdiction or jurisdictions.

(g) PRIORITY CONSIDERATION.—In considering applications for permits for demonstration projects under this section, the Administrator shall give priority consideration to applications for demonstration projects—

(1) owned or operated by applicants who can demonstrate that the demonstration project will di-

rectly benefit individuals who are already participating in the agricultural, wild-caught fishery, or aquaculture industries who have been negatively impacted by the COVID–19 pandemic, natural disasters, or major disasters declared under section 401 of the Robert T. Stafford Disaster Relief and Emergency Assistance Act (42 U.S.C. 5170); or

(2) sited within an Aquaculture Opportunity Area identified by the Secretary of Commerce in accordance with section 7 of Executive Order 13921 (16 U.S.C. 1801 note; relating to promoting American seafood competitiveness and economic growth).

(h) SOCIOECONOMIC DATA.—In considering applications for permits for demonstration projects under this section, and to support the study described in section 401, the report required by section 402, and the assessment program established under section 201, the Administrator shall collect quantitative and qualitative socioeconomic data associated with the owner or operator of, and communities employed or otherwise affected by, each demonstration project.

(i) TREATMENT OF FEDERAL WATERS ADJACENT TO CERTAIN STATES.—

(1) WRITTEN OBJECTION.—Not later than 270 days after the date of enactment of this Act, the

Governor of a coastal State may submit to the Administrator an initial written objection to the issuance of any permit (including any license, lease, or other authorization) for offshore aquaculture operations and related activities under this Act in Federal waters adjacent to that State for—

(A) finfish offshore aquaculture operations;

(B) marine offshore aquaculture operations other than finfish aquaculture operations; or

(C) all offshore aquaculture operations.

(2) EFFECT OF OBJECTION.—Upon receipt of a written objection under paragraph (1) or (5), the Administrator shall not issue a permit under this Act for an offshore aquaculture operation that is located in Federal waters adjacent to the respective coastal State and in a category described in subparagraphs (A) through (C) of paragraph (1), as identified in the objection, for a period of 10 years beginning on the date of receipt of the objection, unless the objection is modified or withdrawn in accordance with paragraph (4).

(3) PUBLICATION.—Not later than 30 days after receipt of a written objection under paragraph (1), the Administrator shall publish such objection in the Federal Register.

(4) MODIFICATION OR WITHDRAWAL OF OBJECTION.—

(A) PROCESS.—

(i) IN GENERAL.—The Administrator shall establish a process by which the Governor of a coastal State may subsequently request—

(I) the withdrawal of a written objection submitted under paragraph (1) or (5); or

(II) the modification of such objection to narrow the categories of offshore aquaculture operations subject to the objection.

(ii) NO EXPANSION OF CATEGORIES.—A modification under clause (i)(II) may not expand the categories of offshore aquaculture operations subject to the objection.

(B) REQUIREMENTS.—The process established under subparagraph (A) shall, at a minimum—

(i) require the Governor to submit a written request to modify or withdraw the objection;

(ii) require the Administrator to publish such written request in the Federal Register;

(iii) provide a period of not less than 60 days for public comment on the requested modification or withdrawal;

(iv) require consultation with aquaculture stakeholders in the coastal State adjacent to the Federal waters affected by the requested modification or withdrawal;

(v) require consultation with Indian Tribes; and

(vi) require the Administrator, after completion of the public comment period required under clause (iii) and consultations required under clauses (iv) and (v), to publish in the Federal Register the notice of such modification or withdrawal.

(C) CONTINUED EFFECT OF OBJECTION.—A written objection submitted under paragraph (1) or (5) shall remain in effect for the applicable 10-year period under paragraph (2), unless and until the Administrator publishes a final determination under clause (vi) of subparagraph (B) giving effect to a modification or

withdrawal. A modification under this paragraph shall not extend or restart the applicable 10-year period.

(5) SUBSEQUENT OBJECTIONS.—After the expiration of the initial 10-year objection period, the Governor of a coastal State may submit to the Administrator another written objection to the issuance of permits under this Act in Federal waters adjacent to that State for another 10-year period in accordance with paragraph (1).

(6) FEDERAL REGISTER REQUIREMENT.—Each notice, request, proposed action, and final determination made under this subsection shall be published in the Federal Register.

(7) FEDERAL WATERS ADJACENT TO A STATE.—In this subsection, the term "Federal waters adjacent to a State" means waters of the exclusive economic zone extending seaward from the seaward boundary of the State to the outer boundary of the exclusive economic zone, within the lateral boundaries of the State extended seaward.

(8) LIMITATION.—An objection under this subsection shall apply only to permits issued under this Act and shall not affect the issuance or validity of

any permit, license, lease, or other authorization under any other Federal law.

(j) DECISIONS WITH RESPECT TO ISSUANCE, DEFERRAL, OR DENIAL.—

(1) IN GENERAL.—Not later than 90 days after the conclusion of the period for public comments under subsection (f) with respect to an application for a permit for a demonstration project under this section, the Administrator shall—

(A) issue the permit, if the Administrator determines the application complies with the requirements of this Act and other applicable law;

(B) if the Administrator determines that the application does not comply with the requirements of this Act and other applicable law, or if the Administrator approves recommendations for modifications under subsection (f), and the application can be modified to comply with those requirements—

(i) defer the decision on the permit; and

(ii) provide to the applicant a notice that specifies modifications to the proposed demonstration project needed for a permit to be issued and a timeline for resubmis-

sion and additional agency review and public comment;

(C) if the Administrator determines that the application does not comply with the requirements of this Act and other applicable law, and that the application cannot be modified to comply with such requirements, or if the Administrator has approved a recommendation to deny the permit under subsection (f), deny the permit and provide a justification for the denial; and

(D) if the Administrator has received a written objection in accordance with subsection (i), deny the permit.

(2) FAILURE TO ACT.—

(A) BRIEFING REQUIRED.—If the Administrator does not issue or deny a permit under this section before the date that is 90 days after the date on which the applicable public comment period under subsection (f)(1)(D) ends, the Administrator shall provide an in-person briefing to the Committee on Commerce, Science, and Transportation of the Senate and the Committee on Natural Resources of the House of Representatives—

(i) not later than 10 days after such date; and

(ii) not less frequently than once every 30 days thereafter until the date on which the Administrator issues or denies the permit.

(B) CONTENTS.—A briefing required under subparagraph (A) shall—

(i) identify the reasons the Administrator has not issued or denied the permit;

(ii) describe any outstanding information, consultation, review, or other matter preventing the Administrator from issuing or denying the permit; and

(iii) the estimated date by which the Administrator will issue or deny the permit.

(C) PUBLICATION.—Not later than 10 days after providing a briefing under subparagraph (A), the Administrator shall make publicly available on a website of the Administration a written explanation of—

(i) the reasons the Administrator has not issued or denied the permit; and

(ii) the date by which the Administrator has estimated under subparagraph (B)(iii) that the Administrator will issue or deny the permit.

(k) EFFECTIVE PERIOD.—A permit for a demonstration project issued under this section—

(1) shall be in effect during the 10-year period beginning on the date on which the project begins in-water operations; and

(2) may be renewed as provided by subsection (l).

(l) RENEWAL.—

(1) IN GENERAL.—The Administrator may, in accordance with this subsection, renew a permit that has not been revoked not more than once, for a demonstration project issued under this section for a single additional 10-year period after the 10-year period described in subsection (k)(1) if—

(A) the owner or operator of the project submits to the Administrator a proposal for renewal of the permit by a date determined by the Administrator; and

(B) the Administrator determines that the permit, as modified by the proposal, remains in

compliance with the requirements described in subsection (c)(1).

(2) NOTICE AND PUBLIC COMMENT.—The Administrator shall—

(A) publish in the Federal Register a notice summarizing each proposal received under paragraph (1) with respect to the renewal of a permit;

(B) invite public comments for a period of not less than 60 days regarding each such proposal; and

(C) consider such comments in determining whether to approve the renewal of the permit.

(3) RENEWAL DETERMINATION.—Not later than 90 days after the conclusion of the period for public comments under subsection (f) with respect to an application for a renewal permit for a demonstration project under this section, the Administrator shall—

(A) issue the renewal permit, if the Administrator determines the application complies with the requirements of this Act and other applicable law;

(B) if the Administrator determines that the application does not comply with the requirements described in subparagraph (A), and the application can be modified to comply with those requirements—

(i) defer the decision on the renewal permit; and

(ii) provide to the applicant a notice that specifies modifications to the proposed demonstration project needed for a permit to be issued and a timeline for resubmission and additional agency review; or

(C) if the Administrator determines that the application does not comply with the requirements described in subparagraph (A) and that the application cannot be modified to comply with such requirements, deny the permit and provide a justification for the denial.

(m) INSPECTIONS.—

(1) ONSITE INSPECTIONS.—The Administrator shall conduct scheduled onsite inspections, unscheduled onsite inspections, or both, of a facility subject to a permit issued under this section for the purpose of determining compliance with this Act, regulations

promulgated under this Act, and the terms and conditions of the permit.

(2) DUTY OF PERMIT HOLDER.—It shall be the duty of a holder of a permit issued under this section to—

(A) allow prompt access, at the site of any operation conducted pursuant to the permit, to the Administrator or an authorized representative of the Administrator for the purpose of determining compliance with this Act, regulations promulgated under this Act, and the terms and conditions of the permit; and

(B) provide such documents and records pertinent to determining such compliance as may be requested by the Administrator or an authorized representative of the Administrator.

(n) AUTHORITY TO MODIFY OR TERMINATE PARTICIPATION OF DEMONSTRATION PROJECTS AND ORDER REMOVAL OF FACILITIES.—

(1) IN GENERAL.—The Administrator may, for cause as described in paragraph (2), require modifications to a demonstration project for which a permit is issued under this section, terminate such a permit, or order the removal of an offshore aqua-

culture facility authorized to operate under such a permit, in accordance with this subsection.

(2) CAUSE.—Any of the following circumstances shall constitute sufficient cause for requesting a modification to a permit, terminating a permit, or ordering the removal of an offshore aquaculture facility under paragraph (1):

(A) The project incurs an incident involving a death or serious personal injury and the Administrator determines that negligence of the project operator was the cause of or a contributing factor to the incident.

(B) Operation of the project results in take of endangered species or marine mammals in excess of take authorized pursuant to—

(i) the Endangered Species Act of 1973 (16 U.S.C. 1531 et seq.); or

(ii) the Marine Mammal Protection Act of 1972 (16 U.S.C. 1361 et seq.).

(C) The owner or operator of the project fails to comply with all of the terms and conditions of—

(i) the permit;

(ii) a modification required by the Administrator under this subsection; or

(iii) the inspection and access requirements under subsection (m).

(D) The Administrator determines that operation of the demonstration project would be unsafe or result in unacceptable negative impacts to—

(i) the marine environment;

(ii) nearby human communities; or

(iii) other users of the water body in which the project is located.

(3) PROCESS.—Before requiring a modification to the demonstration project, terminating the permit, or ordering the removal of the offshore aquaculture facility, the Administrator shall—

(A) provide a warning notice to the owner or operator of the project; and

(B) give the owner or operator a reasonable opportunity to address the Administrator's concerns.

(o) COASTAL ZONE MANAGEMENT ACT REVIEW.—The submission of an application for a permit for a demonstration project under this section shall trigger the right of review by a coastal State under the Coastal Zone Management Act of 1972 (16 U.S.C. 1451 et seq.).

(p) FISHING ACCESS AND COORDINATION.—

(1) IN GENERAL.—In carrying out this section, the Administrator shall consider the effects of offshore aquaculture facilities on fishing access and opportunities in adjacent public waters and, to the maximum extent practicable consistent with applicable law, seek to minimize unnecessary adverse impacts on fishing access and use.

(2) COORDINATION.—The Administrator shall coordinate, as appropriate, with the Commandant of the Coast Guard and other relevant Federal agencies regarding navigational safety measures associated with offshore aquaculture facilities authorized under this section.

(3) ADMINISTRATIVE RECORD.—The Administrator shall include in the administrative record for a permit issued under this section a description of any known fishing access impacts and any measures identified to avoid or minimize such impacts.

(4) PROHIBITION.—In carrying out this section, the Administrator shall not permit an offshore aquaculture facility in a usual and accustomed fishing area of an Indian Tribe or Indian Tribes without explicit approval of such Indian Tribe or Indian Tribes.

SEC. 203. COORDINATION OF PERMIT REVIEWS FOR DEMONSTRATION PROJECTS.

(a) IN GENERAL.—

(1) LEAD AGENCY.—The Administration shall serve as the lead Federal agency for purposes of providing information on Federal permitting requirements for demonstration projects under section 202.

(2) COORDINATION.—The Administrator shall coordinate with the Secretary of the Interior, the Secretary of Agriculture, the Administrator of the Environmental Protection Agency, the Chief of the Army Corps of Engineers, the Commissioner of the Food and Drug Administration, and the head of the department in which the Coast Guard is operating, and any other agency the Administrator considers appropriate to simplify the Federal permitting process for demonstration projects under section 202.

(b) RELATION TO CURRENT LAW.—Nothing in this section shall be construed in derogation of law in effect on the date of enactment of this Act that is applicable to offshore aquaculture operations, and the unified permitting and review process established under this section shall not affect the timelines or standards established under other laws.

(c) UNIFIED PERMITTING AND REVIEW PROCESS.—Not later than 1 year after the date of enactment of this

Act, the Secretaries of Commerce, Interior, Agriculture, Health and Human Services, and the department in which the Coast Guard is operating, the Administrator of the Environmental Protection Agency, and the Chief of Engineers shall, through the Secretary of Commerce, initiate, subject to the requirements of subsection (a), a rulemaking for all permits administered by such agency heads relating to demonstration projects under section 202 for a unified process, public notice, and public comment for—

(1) initial issuance of permits;

(2) renewal of permits; and

(3) transfer of permits.

(d) INFORMAL CONSULTATIONS.—The Administrator shall convene representatives of the Department of Agriculture, the Environmental Protection Agency, the Army Corps of Engineers, the Department in which the Coast Guard is operating, and any other agency the Administrator deems appropriate to provide prospective applicants for permits for demonstration projects under section 202 an opportunity for informal consultation with such agencies. Nothing in this subsection shall preclude an applicant or a prospective applicant from contacting Federal agencies directly.

(e) ENVIRONMENTAL ANALYSIS.—To the extent allowable under the National Environmental Policy Act of

1969 (42 U.S.C. 4321 et seq.), any environmental analysis or environmental impact statement required under that Act for offshore aquaculture activities proposed to be carried out under a demonstration project under section 202 shall be conducted through a single, consolidated environmental review and the Administration, through the Office of Aquaculture established by section 101, shall serve as the lead Federal agency.

(f) COORDINATION OF PERMIT REVIEWS.—To the extent practicable under this Act and all other applicable laws, including regulations, Federal agencies with permitting requirements applicable to offshore aquaculture activities proposed to be carried out under a demonstration project under section 202 shall coordinate their review processes in order to provide a timely response to an applicant not later than 240 days after the submission of the application.

(g) MARINE MAMMAL PROTECTION ACT OF 1972.—The conduct of offshore aquaculture shall be considered commercial fishing operations for purposes of the Marine Mammal Protection Act of 1972 (16 U.S.C. 1362).

SEC. 204. REPORTING BY ASSESSMENT PROGRAM PARTICIPANTS.

(a) IN GENERAL.—Not later than 1 year after the date on which a demonstration project for which a permit

is issued under section 202 commences, and annually thereafter until the demonstration project terminates, the owner or operator of the demonstration project shall submit to the Office, in accordance with guidance provided by the Administrator a report containing the following:

(1) Production data.

(2) Information on interactions with wild species, mitigation measures taken, and the results of such interactions and measures.

(3) Information on technology and operational practices used to measure and monitor—

(A) effluent;

(B) integrity of cage materials and other gear; and

(C) health of the cultivated species.

(4) Information on environmental and ecosystem impacts.

(5) Information on feed sourcing, including an estimate of the concentration of wild-caught marine ingredients (fishmeal and fish oil) in a feed relative to the original wild fish, the species and geographic origin of such forage, any planned changes to feed formulations, and any other relevant information.

(6) Data necessary for the Ocean Studies Board of the National Academies of Sciences, Engi-

neering, and Medicine to complete the study described in section 401.

(7) Owner, operator, and employee demographic data and other relevant data as determined appropriate by the Administrator for purposes of assessing—

(A) the direct benefits of the demonstration project to fishery and aquaculture stakeholders; and

(B) the quantifiable economic and social impacts of the demonstration project for nearby coastal communities and any specially affected coastal jurisdictions.

(8) Information on navigation and safety impacts to existing ocean users.

(9) Such additional information as the Administrator requires to fulfill the goals and objectives of the assessment program established under section 201.

(b) TECHNICAL ASSISTANCE.—The Administrator shall, upon request, provide technical assistance to owners and operators of demonstration projects for which permits are issued under section 202 to comply with the reporting requirements of this section.

(c) EMERGENCY REPORTING.—

(1) REPORTING BY PROJECT OPERATORS.—The Administrator shall establish an emergency reporting process for each owner or operator of a demonstration project for which a permit is issued under section 202 to immediately report suspected or known interactions between project facilities or vessels and whales, sea turtles, or other species protected under the Endangered Species Act of 1973 (16 U.S.C. 1531 et seq.) or the Marine Mammal Protection Act of 1972 (16 U.S.C. 1361 et seq.).

(2) NOTIFICATION.—Upon receiving a report under paragraph (1), the Administrator shall, as soon as practicable, notify—

(A) the Governor and Indian Tribe of each coastal State designated as a specially affected coastal jurisdiction under section 202(f) with respect to the demonstration project; and

(B) the appropriate committees of Congress.

(3) RELATIONSHIP TO OTHER LAW; COORDINATION OF REPORTING.—

(A) ADDITIONAL REPORTING.—The reporting requirements under this subsection are in addition to, and shall not be construed to alter or supersede, any reporting or other require-

ment under the Endangered Species Act of 1973, the Marine Mammal Protection Act of 1972, or other applicable law.

(B) COORDINATION OF REPORTING.—To the maximum extent practicable and consistent with applicable law, the Administrator shall coordinate and harmonize reporting processes, forms, timelines, and information requirements under this subsection with reporting requirements under such laws to minimize duplicative reporting and administrative burden. Information submitted to satisfy a reporting requirement under another applicable law may be used to satisfy a corresponding requirement under this subsection if the Administrator determines that the information is sufficient for that purpose.

(d) AVAILABILITY OF REPORTS.—Subject to the requirements of section 4, the Administrator shall—

(1) not later than 90 days after receiving a report under subsection (a), make the report publicly available, in a searchable format, on the website of the Administration; and

(2) make available to the National Academies of Science, Engineering, and Mathematics, and the

General Accountability Office, the reports required in subsection (a) and (c).

SEC. 205. RULE OF CONSTRUCTION; SAVINGS PROVISIONS.

(a) STATUTORY CONSTRUCTION.—A permit for a demonstration project issued under section 202 shall not supersede or substitute for any other permit, authorization, or other requirement under Federal or State law.

(b) RIGHTS OF INDIAN TRIBES; CONSULTATIONS.—Nothing in this Act shall be construed to diminish or infringe upon—

(1) the rights of any Indian Tribe; or

(2) any government-to-government consultation that is unrelated to this Act.

(c) RULE OF CONSTRUCTION.—Nothing in this Act may be interpreted to diminish or infringe upon the jurisdiction or authority of the Department of Defense, the Department of the Interior, or any other Federal agency.

TITLE III—WORKFORCE DEVELOPMENT, FINANCING, AND OTHER SUPPORT

SEC. 301. GENERAL SUPPORT FOR INDUSTRY.

(a) MARKETING AND PROMOTION GRANTS.—The Administrator and relevant Federal agencies, in consultation with private sector aquaculture stakeholders, shall—

(1) support the sale and public perception of cultured species domestically and internationally; and

(2) support and promote relevant existing grant programs, such as the national sea grant college program.

(b) REGIONAL NETWORKS.—The Administrator, through each regional fisheries office of the Administration, shall organize a network of professionals in offshore aquaculture and aquaculture conducted in State or Tribal waters to enable the sharing of expertise, best practices, new developments in the field, and other matters of interest. Such network shall include—

(1) regional, State, local and Tribal experts and Federal agency contacts, in coordination with relevant organizations, including the national sea grant college program, the Regional Aquaculture Centers of the Department of Agriculture, institutions of higher education, and the Cooperative Extension System of the Department of Agriculture, to provide technical expertise and extension services for offshore aquaculture and information on Federal permit requirements for offshore aquaculture; and

(2) individuals and businesses interested in aquaculture operations and products to facilitate

professional development, marketing, mentoring opportunities, and agency outreach and education on aquaculture.

(c) TECHNICAL ASSISTANCE PROGRAMS FOR OPERATORS.—

(1) IN GENERAL.—The Administrator, through the Office of Aquaculture established by section 101 and the regional aquaculture coordinators described in such section, shall organize a program in each regional fisheries office of the Administration to provide technical assistance to owners or operators of demonstration projects for which permits are issued under section 202. Such program shall, subject to the availability of appropriations, also provide technical assistance to owners or operators of aquaculture facilities in State or Tribal land and waters.

(2) TAILORING.—The programs required by paragraph (1) shall be tailored to meet the unique needs of each region.

(3) CONSULTATIONS.—Under each program required by paragraph (1), the regional aquaculture coordinators described in section 101 may conduct consultations with the operator of each offshore aquaculture facility in the region concerned on a regular basis—

(A) to assess the status of the operator's business; and

(B) if appropriate, to identify available resources to support the operator, such as regional experts, university extension agents, and grant opportunities.

SEC. 302. OUTREACH REGARDING SUSTAINABLE OFFSHORE AQUACULTURE.

(a) IN GENERAL.—Subject to available appropriations, the Administrator shall conduct outreach activities regarding sustainable offshore aquaculture, in order to promote understanding, science-based decisionmaking, and commercial adoption of sustainable offshore aquaculture.

(b) ENGAGEMENT.—In carrying out subsection (a), the Administrator shall use appropriate means to engage—

(1) the general public;

(2) community leaders;

(3) governmental officials;

(4) the business community;

(5) the academic community; and

(6) the nonprofit sector.

TITLE IV—STUDIES AND REPORTS

SEC. 401. STUDY ON OFFSHORE AQUACULTURE BY OCEAN STUDIES BOARD OF THE NATIONAL ACADEMIES OF SCIENCES, ENGINEERING, AND MEDICINE.

(a) IN GENERAL.—The Administrator shall seek to enter into a contract with the Ocean Studies Board of the National Academies of Sciences, Engineering, and Medicine (in this section referred to as the "Board") under which the Board shall, not later than 5 years after the date on which the Administrator establishes the assessment program under section 201—

(1) complete a study to develop the scientific basis for efficient and effective regulation of offshore aquaculture; and

(2) submit to Congress and make publicly available the results of the study.

(b) ELEMENTS.—The study completed pursuant to subsection (a) shall, with respect to offshore aquaculture—

(1) identify—

(A) optimal methods of operation of offshore aquaculture facilities to limit adverse ef-

fects on the environment, wildlife, and human well-being, including—

(i) considerations to guide siting decisions of such facilities;

(ii) appropriate stocking densities; and

(iii) opportunities for selective breeding;

(B) a science-based definition of "responsible offshore aquaculture feed or other inputs", including guidance on sourcing feed or other inputs to address long- or short-term concerns, including the availability and scalability of such inputs;

(C) potential adverse effects on the environment, wildlife, and human well-being, including from—

(i) the use of antibiotics and other pharmaceuticals by offshore aquaculture facilities, including through analyses necessary to establish acceptable rates, impact levels, and risk thresholds, such as analyses of organism antibiotic consumption or metabolization versus excretion to the surrounding environment;

(ii) pollution originating from offshore aquaculture facilities, including such effect on marine organisms and the environment, including the potential for assimilation;

(iii) abandoned, lost, damaged, or otherwise discarded gear or equipment;

(iv) harmful interactions with wildlife, such as impacts from artificial light, entanglements or other injury to seabirds, or other harmful interactions;

(v) genetic mixing between cultured species and wild marine species;

(vi) the transfer of disease between cultured species and wild species;

(vii) the collection and removal of brood stock for offshore aquaculture operations, and hatcheries and prestocking rearing operations that are specific to offshore aquaculture;

(viii) large-scale cultivation of filter-feeding bivalve organisms and seaweed;

(ix) offshore aquaculture facilities acting as aggregating devices for wild fisheries and wildlife populations;

(x) predator control devices and methods; and

(xi) the use of non-sustainable sources of feed or other inputs, including the use of globally limited marine resources for feed ingredients, and scalability of alternatives, including—

(I) novel ingredients (for example, insect, single cell protein, and algae);

(II) traditional ingredients (for example, soya); and

(III) other inputs;

(D) potential methods and technologies to mitigate adverse effects, including the effects identified under subparagraph (C);

(E) potential methods to identify conflicts between offshore aquaculture facilities and other users of the offshore environment, and rubrics for developing solutions to mitigate such conflicts;

(F) the types of quantitative data and qualitative information necessary for the optimal operation of offshore aquaculture facilities

and appropriate methods of procuring such data and information, including from—

(i) citizen science (as defined in section 402(c) of the Crowdsourcing and Citizen Science Act (15 U.S.C. 3724(c)));

(ii) the traditional knowledge of Tribal and Indigenous communities; and

(iii) offshore aquaculture operators;

(G) best practices for offshore aquaculture siting and operations to manage and plan for predicted changes in global atmospheric and oceanographic conditions;

(H) economic impacts and contributions of offshore aquaculture to local, State, regional, and national economies;

(I) the business profitability potential and market opportunities for offshore aquaculture enterprises; and

(J) potential benefits from offshore aquaculture operations at the local, State, and national levels, including social, cultural, economic, and environmental ecosystem services;

(2) include an analysis of information from the reports made available to the Board under section 204; and

(3) provide recommendations for legislative or administrative action with respect to—

(A) methods of operation identified under paragraph (1)(A);

(B) mitigating adverse effects identified under paragraph (1)(C);

(C) environmental standards, control rules, or reference points that build on the existing public and private standards or best practices for the sustainability of offshore aquaculture; and

(D) ensuring that operators of offshore aquaculture facilities adhere to international standards for social responsibility, public health, and equitable labor practices, including with respect to sourcing inputs for such facilities.

SEC. 402. REPORT ON OFFSHORE AQUACULTURE BY GOVERNMENT ACCOUNTABILITY OFFICE.

(a) IN GENERAL.—Not later than 5 years after the date on which the Administrator establishes the assessment program under section 201, the Comptroller General of the United States shall submit to the appropriate committees of Congress a report examining the permitting, monitoring, and regulation of offshore aquaculture that

covers the 15-year period prior to the program's establishment and the time period since the program's establishment.

(b) BASES OF REPORT.—The Comptroller General shall base the report required by subsection (a) on available literature, case studies, aquaculture stakeholder input, and the reports made available under section 204.

(c) ELEMENTS OF REPORT.—The report required by subsection (a) shall—

(1) assess the feasibility and potential positive and negative implications of designating a lead agency to issue permits for offshore aquaculture operations in a timely manner;

(2) identify lessons learned during the period described in subsection (a) with respect to—

(A) the effect of offshore aquaculture type, location, and regulatory framework on the success of offshore aquaculture projects;

(B) the degree of involvement of coastal or adjacent States, Indian Tribes, and Native Hawaiian organizations in consultations for, planning for, or operations of offshore aquaculture;

(C) safety protocols and risk mitigation measures for the permitting and oversight processes for offshore aquaculture, including—

(i) escape prevention measures;

(ii) emergency event response planning;

(iii) compliance monitoring, particularly in remote locations;

(iv) compliance with Federal laws;

(v) mechanisms for reporting to appropriate Federal authorities; and

(vi) vessel navigation aids to ensure navigational safety;

(D) the effect of incentives to reduce adverse effects or disparate impacts from offshore aquaculture operations;

(E) building and optimizing synergies between offshore aquaculture and wild-caught fishing activities, or offshore, nearshore, and onshore aquaculture activities, including market development, increasing seafood consumption, and shared infrastructure;

(F) the environmental effects of offshore aquaculture operations, including mechanisms to prevent harm to the environment, wildlife, or human well-being;

(G) the net economic and social impacts of offshore aquaculture projects, particularly for

nearby communities, specially affected coastal jurisdictions as defined in section 202(f), and aquaculture and fishery stakeholders, based on project size, regulatory structures, and financing structures;

(H) the impact of introducing offshore aquaculture products to the marketplace on supply and demand for wild-capture fisheries products, and methods for ensuring resiliency and growth for both offshore aquaculture and wild-capture fisheries products;

(I) mechanisms to enhance capital investment, workforce development, and equitable opportunity requirements or assistance programs in the permitting process for offshore aquaculture, or to diversify permit applicants;

(J) outstanding needs for continued research, development, education activities, programs, and funding regarding—

(i) offshore aquaculture projects; and

(ii) development of the domestic workforce and entrepreneurship related to offshore aquaculture;

(K) the economic potential for both large- and small-scale offshore aquaculture operations

to generate a positive return on investment under various regulatory and financing structures;

(L) the applicability and sufficiency of existing regulatory systems for offshore aquaculture; and

(M) existing local, State, Federal, and foreign regulatory standards that may serve as models for efficient and effective regulation of offshore aquaculture; and

(3) include such recommendations as the Comptroller General may have with respect to future offshore aquaculture operations, including with respect to—

(A) regulatory processes necessary for permitting, monitoring, and oversight, including processes and techniques related to siting, deployment, operations, and decommissioning;

(B) potential safeguards, data collection, or monitoring required to minimize disparate impacts on specially affected coastal jurisdictions (as defined in section 202(f)), fishery stakeholders, local economies, marine environments, and existing domestic economic sectors;

(C) mechanisms for optimizing coordination among Federal agencies with a role in permitting or supporting offshore aquaculture without compromising the goals of such permitting;

(D) methods for effectively involving aquaculture stakeholders, including—

(i) specially affected coastal jurisdictions (as defined in section 202(f));

(ii) local communities;

(iii) regional offshore waters users and management groups, including regional fishery management councils; and

(iv) users of local, State, Tribal, and Federal waters and coastal resources;

(E) best practices for incorporating local knowledge, including from Indian Tribes and Native Hawaiian organizations;

(F) capabilities of Federal agencies that are necessary for effective regulation of the offshore aquaculture sector; and

(G) how creating private rights of action or waiving sovereign immunity would affect the development of offshore aquaculture projects and the acceptance of such projects by nearshore

and offshore waters user groups and coastal communities.

SEC. 403. IMPROVEMENTS; FOLLOW-UP REPORT.

(a) IMPROVEMENTS.—After the publication of the report required in section 201(c) and the reports required in this title, the Administrator shall consider recommendations from all such reports, and make appropriate adjustments to the implementation of this Act.

(b) FOLLOW-UP REPORT.—Not later than 5 years after the publication of the last report described in subsection (a), the Administrator shall publish and make available to the public a report that includes the following:

(1) The appropriate adjustments undertaken to improve the implementation of this Act based on the reports described in subsection (a).

(2) The results of having made such adjustments.

(3) Other relevant matters.