



THE COASTLINES & FISHERIES
TEAM PRESENTS

H.R. 1196 THE DON YOUNG RESTORATION GRANTS FOR COASTLINES & FISHERIES ACT

WORKSHOP IN APPLIED EARTH SYSTEMS MANAGEMENT
MPA IN ENVIRONMENTAL SCIENCE AND POLICY
FALL 2023 FINAL REPORT



ACKNOWLEDGEMENTS

This report is a culmination of a semester-long simulation where our team gained firsthand experience strategically planning and implementing a public program. Over the past twelve weeks, each team member had the opportunity to lead an output and address the complex problems that managers face when carrying out a legislative mandate with limited resources. The following chapters were a collective effort, and offer a summary of the group's work.

We'd like to extend our gratitude to Professor Ryshelle McCadney, who offered us valuable support and guidance throughout this process.

Contributions

The Coastlines & Fisheries Team:

Radhika Ajayan

Kate McCarthy

Christina Morano

Greg Porter

Cristina Rocca

Christina Van Dyke

Mikelison Womack

Simon Yacher

Yawen Zhang

Deputy Manager

Abby Jordan

Manager

Abby Austin

Faculty Advisor

Professor Ryshelle McCadney

SENTINEL COAST

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01. EXECUTIVE SUMMARY

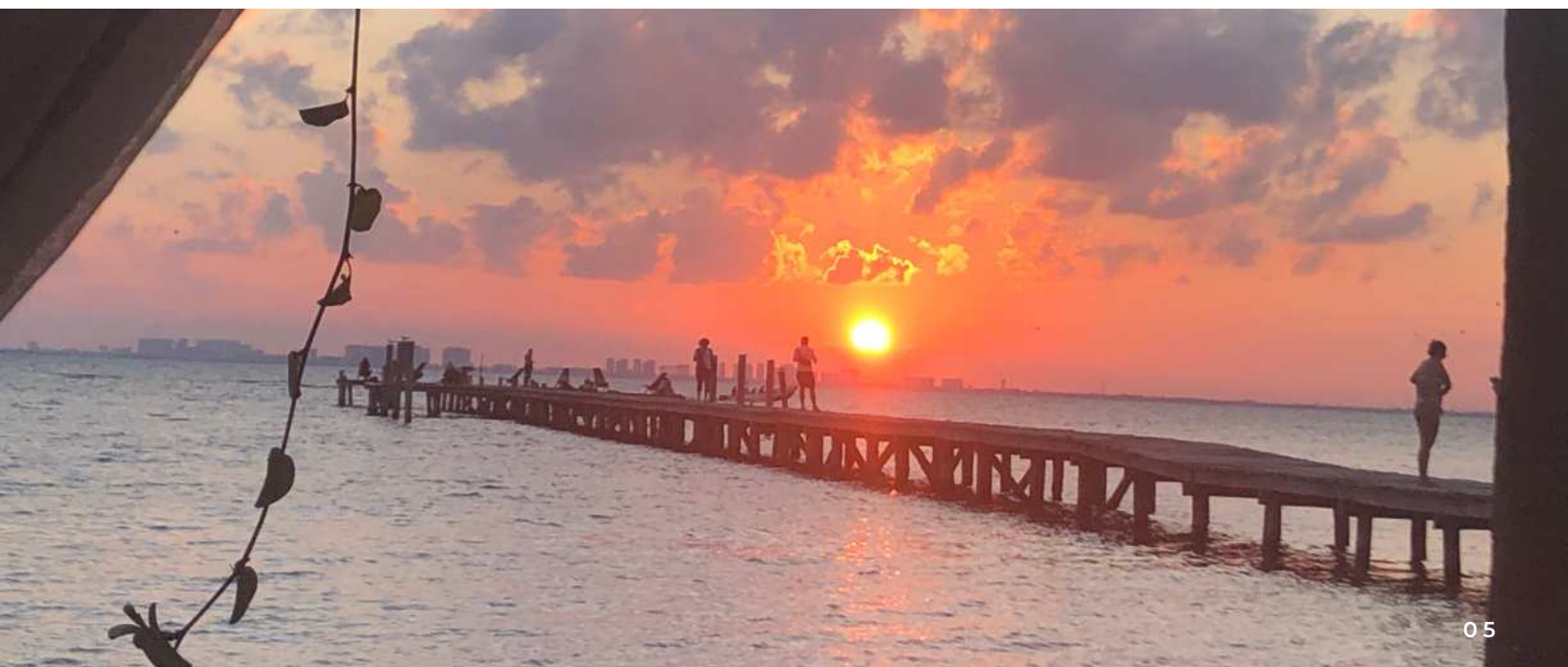
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04

Though the problems facing U.S. aquatic ecosystems are formidable, the Don Young Restoration Grants for Coastlines and Fisheries Act represents a significant step forward in addressing these challenges. It establishes a multi-billion dollar grant program through which the National Oceanic and Atmospheric Administration (NOAA) will fund organizations to execute effective solutions to the problems plaguing the U.S.'s coastlines and waterways.

For the purposes of this simulation, we assumed that the Don Young Restoration Grants for Coastlines and Fisheries Act of 2023 was passed and that work can begin to build out a grant program. This report outlines our team's management decisions, including program design, staffing, budgeting, performance metrics, and implementation plan. It names NOAA's Acquisition and Grants Office (AGO) as the main office responsible for implementing the grant program. Our program design also follows current federal guidelines to address environmental justice and community resilience, as outlined in the Biden Administration's Justice40 Initiative.

Our report details a Year 1 Program Implementation Plan for NOAA to follow during the first phase of program creation to meet and address the challenges of implementing a nationally ambitious initiative of significant regional size and financial scope. Program implementation includes recruitment and training, strategic planning, criteria development, program monitoring and measuring success of grant recipients.





02.

INTRODUCTION

The United States' coastlines and its territories are suffering a range of environmental damages. Overfishing is devastating populations within U.S. waters, water pollution is contaminating waterways and coasts with deleterious health effects, and general coastal degradation due to excessive storms and urban development is wreaking havoc on ecosystems.

While many of these challenges lie within NOAA's jurisdiction, the agency doesn't have the capacity to solve nearly as much as is required. Therefore, the Don Young Restoration Grants for Coastlines and Fisheries Act strives to address this gap by enlisting the aid of local, state, and national organizations.

Congress allocates \$1 billion a year for 10 years to NOAA so that they might award the funds through a grant program to organizations applying for project funding. By funding local entities who have more direct experience with the intricacies of the land and surrounding communities, NOAA is ensuring that those most impacted by climate change and anthropogenic degradation receive the help they need.

The problems plaguing our coasts are daunting and multi-faceted. Much must be done to ensure these issues are addressed holistically and equitably. Our proposed implementation of the Act's grant program strives to address these environmental challenges in ways that benefit both the ecosystems that have been devastated and the communities that are struggling to stay afloat.



Plastic in the ocean
Source: The Ocean Cleanup Project



03.

BILL SUMMARY

A. INTRODUCTION TO H.R. 1196 AND POLICY OBJECTIVES

The Don Young Restoration Grants for Coastlines and Fisheries Act is a bipartisan piece of legislation introduced in the 118th Congress as H.R. 1196. This federal bill authorizes NOAA to create a grant program to fund projects that restore and protect aquatic ecosystems, as well as support adaptation and resilience measures for the climate crisis. Funded projects will seek to support fisherfolk, remove marine debris, improve natural infrastructure, and/or increase coastal resilience to climate change. H.R. 1196 highlights six different priority dimensions, which include projects that i) stimulate the economy, ii) employ fishermen that have been adversely affected, iii) can begin work within 90 days, iv) have completed preliminary studies and obtained permits, v) support marginalized communities including ethnic minorities and rural communities, and vi) are implemented within protected areas.

B. ELIGIBLE PROJECTS AND SELECTION PRIORITIES

The bill details two categories of eligible projects. The first outlines projects that seek to restore marine, estuarine, coastal, or Great Lakes habitats, while the second refers to climate change adaptation projects. Restoration projects could include:

- i) habitat restoration to protect or recover a threatened species
- ii) removal of marine debris (including plastics)
- iii) enhancement and provision of benefits for wildlife and ecosystems

Included in climate change adaptation projects are those that:

- iv) sequester and store carbon
- v) protect ecological features or infrastructure to safeguard communities from sea-level rise and flooding.



Bill Priorities

STIMULATE
THE ECONOMY

EMPLOY
FISHERFOLK

PROTECT WILDLIFE
AREAS

UNDERSERVED
COMMUNITIES

SHOVEL-READY

PERMITS
IN PLACE

Image Source: RA Cook

C. PRIORITIES

In considering the awarding of grants, the bill directs NOAA's Administrator to prioritize projects that:

1. Stimulate the Economy: Projects which support the creation of jobs for local fisherfolk and community members.

- Creating jobs and generating net economic benefits is an important facet of this bill. The benefits identified, both economic and environment, must outweigh the proposed costs in every accepted project.

2. Shovel Ready: Projects that demonstrate that work can begin within 90 days of receiving the grant.

- The funding received should not be used on preliminary studies such as research, investigation, or grant application.

3. Employ Fisherfolk: Projects that support the employment, or compensated use of the vessels, of fisherfolk who have been negatively impacted by financial hardship.

- The stipulation that the project must benefit fisherfolk "negatively impacted by financial hardship" excludes large corporate fishing entities from receiving grants. The diminished availability of fish negatively impact local fisherfolk who do not have the means to expand their range or diversify their products.

4. Permits in Place: Projects which already have any preliminary study or permits required or are in process and can be completed shortly after an award is made.

- Preliminary environmental studies and permits can take years to acquire, especially if a project's potential impact on endangered species needs to be determined. NOAA will want to ensure that they do not award grant money to a project that cannot begin work for an extended period of time because they do not have the required authorization.

5. Underserved Communities: Projects that prioritize communities which rely on estuarine and coastal ecosystem services and may not have adequate resources. Underserved communities may be low-income, made up of minority groups, as well as tribal and indigenous people.

- These communities have often been disproportionately impacted by deteriorating coastal and marine ecosystems. Moreover, they may face challenges navigating the wide range of federal grant programs or they may lack resources to make their proposal competitive enough to receive federal funding (GAO, 2023).

6. Protect Wildlife Areas: Projects happening within National Wildlife Refuges, National Parks, and Marine Protected Areas (MPAs), such as National Marine Sanctuaries.

- Wildlife Refuges, National Parks, and MPAs are often home to endangered species and given the bill's emphasis on the protection of such species, any project that benefits these areas is to be given priority.
- Moreover, the National Park Service (NPS) is chronically underfunded, relying on Congressional appropriations for most of its budget. Therefore, having another federal revenue stream would benefit the NPS enormously. These areas are also important symbolically as representations of American heritage.



Image Description: NPS Administered Channel Islands National Park in California would be an ideal grant candidate with over 249.8 shoreline miles and 120,588 marine water acres of protected wildlife area. Source: The National Park Service.

D. EXPLICIT ADMINISTRATIVE INSTRUCTIONS VS. AGENCY DISCRETION

Once the bill is passed, NOAA will delegate the assigned funds to the Restoration Center, which manages grants for restoration projects. As determined by the bill, the Restoration Center would cooperate with the NOAA Office of Habitat Conservation, Office for Coastal Management, Office of Response & Restoration, and Office of National Marine Sanctuaries to determine grant selection criteria.

The bill requires NOAA to fund grants to state, local, and tribal governments, as well as non-profit organizations, businesses, and institutions of higher education. NOAA will establish the grant-making process, specifically the time, place, and manner.

From there, it will select viable projects based on criteria of its own design, in consultation with relevant offices such as the Office of Habitat Conservation, the Office for Coastal Management, the Office of Response and Restoration, and the Office of National Marine Sanctuaries. Moreover, section 2(b) regarding Project Proposal leaves discretion for the time, place, and manner of submission.



E. POLITICAL CONTEXT AND FEASIBILITY

The bill was introduced in February 2023, in the 118th session of the U.S. Congress by Rep. Stacey Plaskett (D-U.S. Virgin Islands) and Rep. Maria Salazar (R-Florida) in March 2023. The sponsors are a bipartisan group of legislators, from regions in the U.S. severely impacted by climate change and coastal degradation. The sponsors support vulnerable communities especially indigenous groups that wish to preserve their way of life and customs (Herz, N., 2022).



.Support for climate-related issues in the legislature began to split down party lines in the 1990s, and partisanship on the issue has since increased. In 1997, almost equal numbers of Democrats and Republicans said the effects of global warming had begun, and by 2007, the issue had a 34% margin, with 76% of Democrats versus 42% of Republicans saying the effects of global warming had begun (Kamarck, 2019).

Despite increases in awareness, public sentiment is mixed as well. According to one poll, from 2017 to 2019 the number of Americans who said they were “very concerned” with climate change did not reach 50% (Kamarck, 2019). Garnering support for climate-related legislation is challenging, often receiving resistance from elected officials and interest groups who do not support legislation related to climate change--especially those bills like H.R. 1196 which create multi-billion dollar, decade-long programs. Based on previous legislation, resistance may also come from environmentalists. In 2018 when the House passed a different Young-supported fishing bill, the Pew Charitable Trust and Representative Jared Huffman expressed concerns that the bill would not properly mitigate overfishing (Goldfarb, B. 2019).



04. PROGRAM DESIGN



INTRODUCTION AND KEY CONSIDERATIONS

While H.R. 1196 includes some explicit directions for project eligibility and selection criteria, it leaves other areas up to the discretion of NOAA's Administrator. The broad scope of the bill left many unanswered questions on which direction to take this program. In our program design process, we made informed choices rooted in a comprehensive understanding of NOAA's current grant administration process.

A few decisions, though, notably diverged from this precedent:

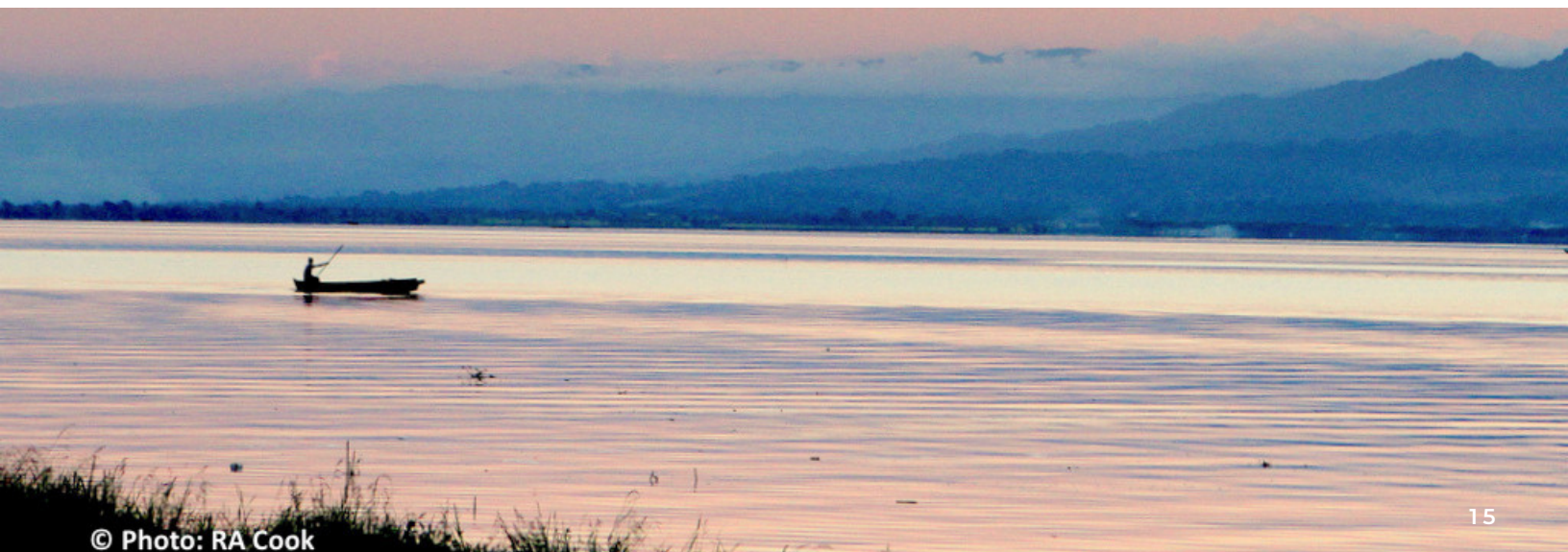
1. Staffing to allow for robust outreach and technical assistance
2. Splitting coastlines into six unique regions
3. Adjustable budget targets for each delineated region

These choices will be further explained in subsequent sections. Beyond the bill's language, another key federal policy informing our program design is the Biden Administration's Justice40 Initiative.

JUSTICE40

The Justice40 Initiative is a national commitment ensuring that at least forty percent of certain federal investments flow to disadvantaged communities (The White House, 2022). Codified when President Biden signed Executive Order 14008, it covers grant spending categories such as climate change, clean energy, affordable housing, workforce development, pollution reduction, and clean water infrastructure (The White House, 2022). As such, the Don Young Restoration Grants for Coastlines and Fisheries program would likely qualify as a covered program.

In order to comply with Justice40, our grant program will need to ensure that 40% of eligible spending goes toward disadvantaged communities. "Disadvantaged" is defined as communities that are marginalized, underserved, and overburdened by pollution. Agencies can utilize the new Climate and Economic Justice Screening Tool to identify qualifying communities (Council on Environmental Quality, 2022).



ORGANIZATIONAL STRUCTURE AND STAFFING

NOAA's grant programs are currently handled by the AGO, which is situated within NOAA's Corporate Services Department. The AGO is responsible for planning, soliciting, awarding, administering, and closing out existing grant programs ("Acquisition and Grants Office," n.d.). At present, the office handles three educational grant programs and a financial assistance program (NOAA, n.d.).

As of Fiscal Year 2022-23, the AGO distributed a total of \$2.8 billion in grants and financial assistance ("Acquisition and Grants Office," n.d.). We believe that the AGO is the appropriate office to administer the Don Young Restoration Grants for Coastlines and Fisheries, but significant staffing increases will need to be made to meet new capacity demands. Assuming the full \$1 billion per year is appropriated to NOAA by Congress, the AGO will experience a roughly 36% increase in funding distribution ("Acquisition and Grants Office," n.d.).

To assist with the grant program's development, execution, and oversight, we've created a staffing plan that calls for thirty-four new hires. The total expected cost for these new positions is just above \$2.6 million. Breakdowns of each role's expected salary per the federal government's 2023 General Schedule can be found in Appendix A.

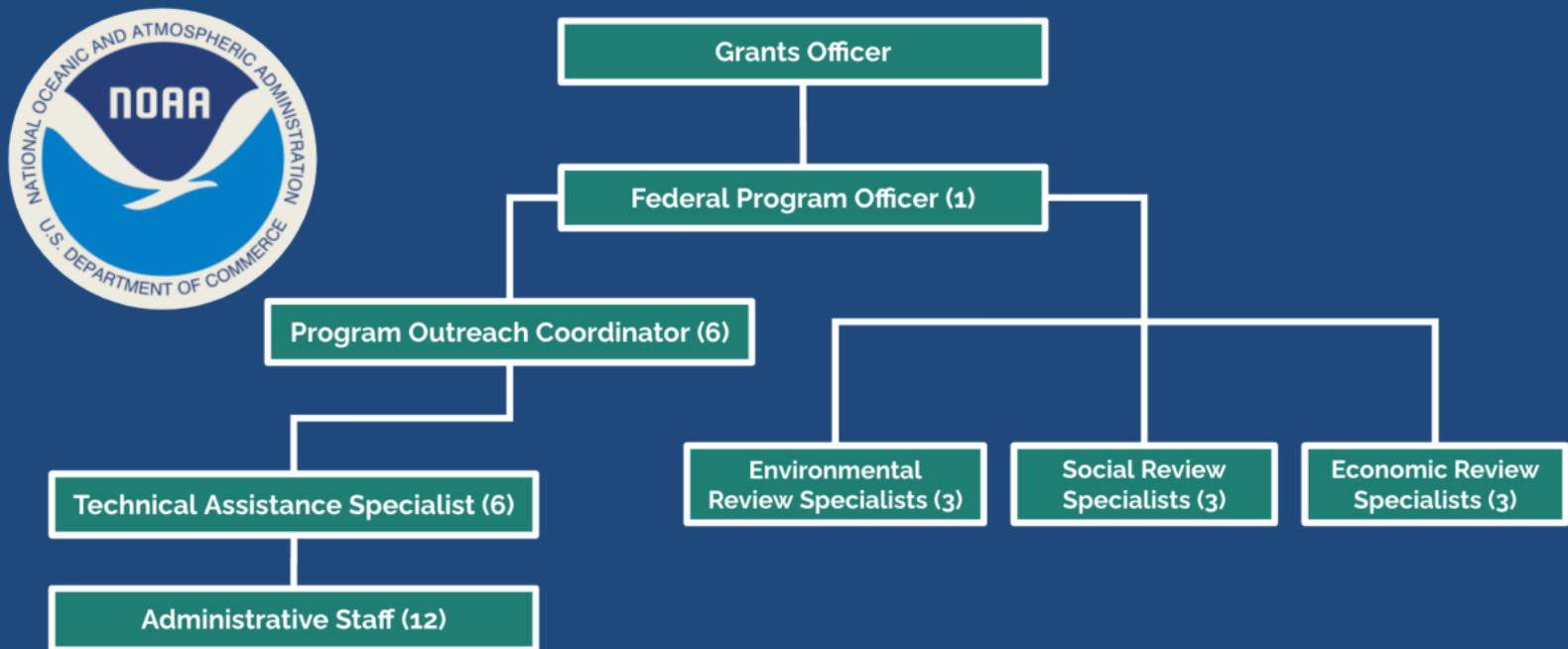


Figure 1: Staffing Hierarchy

TOP MANAGEMENT

Under H.R. 1196, responsibility for the administration of the grant program is given to the NOAA Administrator, Dr. Richard Spinrad. While Dr. Spinrad would have the ultimate say over the program's design and administration, he is simultaneously responsible for the agency's strategic direction and 12,000 employees (NOAA Leadership, 2023).

Because of this, additional oversight is needed and will follow a similar hierarchy to that of NOAA's Acquisition and Grants Office (AGO). The Don Young program will be mostly situated within the AGO's Grants Management department which is currently headed by a Grants Officer. The Grants Officer will work directly with Dr. Spinrad to oversee the administration of the program.

The Grants Officer will also oversee a new hire, the Federal Program Officer (FPO). This individual will be a solo hire that will serve as a liaison between the Grants Officer and the rest of the Don Young staff. It is expected that the FPO will be more in tune with the program needs and specifications, so they will need to collaborate with the Grant Officer who will then make recommendations to Richard Spinrad. The FPO will also be responsible for sifting through applications and distributing the applications to their respective Review Specialists.

OUTREACH AND TECHNICAL ASSISTANCE

Providing one of the most important services of our program design, six Program Outreach Coordinators and six Technical Assistance Specialists will offer robust services with the intention of making the Don Young Restoration Grants for Coastlines and Fisheries program as accessible as possible. Each Outreach Coordinator will cover a unique region where they will be responsible for hosting information sessions, conducting outreach, marketing the grant program, and ensuring that program criteria, qualifications, and expectations are clear to potential applicants. These roles will be hybrid, with coordinators based in their respective regions to facilitate easier travel. Five years of relevant experience and a strong understanding of environmental justice initiatives will be required for these full-time positions.

When a prospective applicant is identified, the Outreach Coordinator will pass the case to their Technical Assistance Specialist, another hybrid regional role. The Technical Assistance Specialist will work with the applicant throughout the application process, as well as once an award has been announced. These individuals will ensure that any required expertise is offered during the duration of the project.

REVIEW SPECIALISTS

Given the project criteria outlined in the bill, it's crucial that the grant application's design and review have personnel involved with expertise in relevant priority areas. We plan to ensure these skills are covered by hiring three Environmental Review Specialists, three Social Review Specialists, and three Economic Review Specialists. This team of nine will allow for application design to specifically consider environmental, social, and economic factors. Incoming applications can then be reviewed and graded by each sub-team before ultimate recommendations are discussed by the entire team. These staff members will also liaise with experts in NOAA's line offices when additional input is needed. Below are sample areas of responsibility over application scoring:

- Environmental Reviewers: ecological benefits, habitat restoration, resiliency
- Social Reviewers: level of benefit going toward underserved populations
- Economic Reviewers: benefit to local economies, opportunities for job creation, long-term economic impact

ADMINISTRATIVE STAFF

Our project budget also includes salaries and benefits for twelve additional administrative staff. These individuals will support the other employees by performing critical duties like data entry, filing, application processing, and other related tasks.

REGIONAL ADMINISTRATIVE STRUCTURE

While our staffing plan is designed to offer robust outreach, technical assistance, and complex consideration of environmental, social, and economic grant criteria, we also want to ensure that grant recipients span the diversity of geographies eligible under the legislation. To do this, we decided to split eligible states and territories into six regions. Our regional allocations reflect NOAA's typical regional groupings apart from a few minor changes (NOAA, 2022).

The first adjustment we made to NOAA's standard regions was making Hawaii and island territories their own region. Typically, NOAA groups the Caribbean with the Southeast region, but we believe that this warranted reassessment based on the unique environmental problems that island populations face. Islands are uniquely vulnerable to climate consequences in ways that continental coastlines are not: their populations cannot move inland like our coastal populations can when retreat becomes necessary.

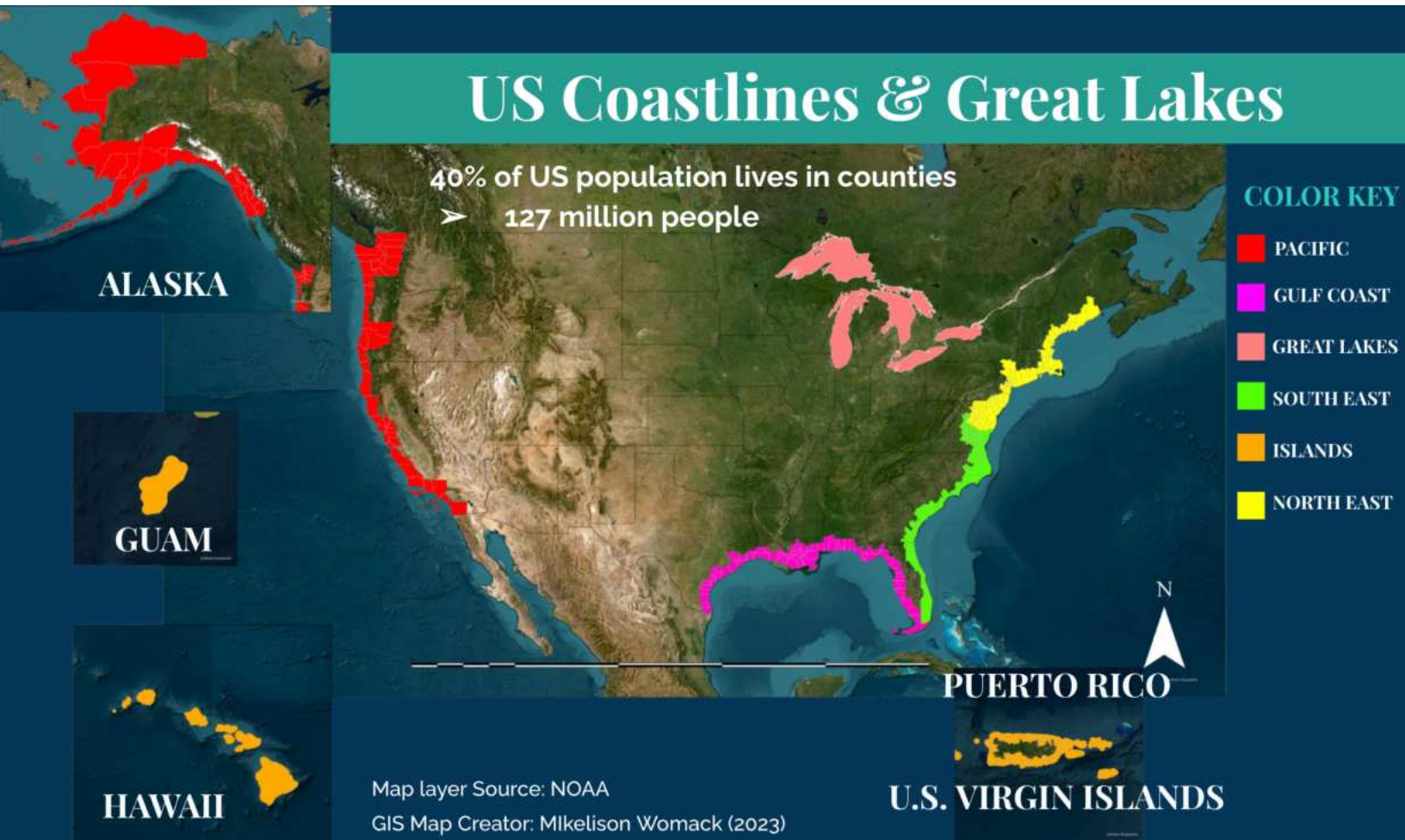


Figure 2: U.S. Coastlines and Great Lakes map depicting the six regions

The second adjustment we made was grouping Alaska with the Pacific Region rather than leaving it as its own region. While Alaska is in many ways geographically unique, many of the environmental problems and solutions it faces are similar to the West Coast. Further, in recognizing the socioeconomic components of this bill, it wasn't practical for the third least-populated state to have its own region.

Our regional divisions will allow outreach staff to focus their attention on specific geographies, facilitating long-term relationship building with key communities who may not otherwise be aware of NOAA's grant programs. The regions will also enable the grant team to develop target allocation amounts at the beginning of each fiscal year. This will allow program staff to monitor disbursements and measure them against the allocation targets that were set at the beginning of that fiscal year. While these allocations are certainly flexible, we hope that the process of setting them will require program staff to thoughtfully discuss the equitable distribution of grant funding.

FIRST YEAR BUDGET

The total budget for the first fiscal year of the grant program is \$1 billion. Administrative costs, including staffing, supplies, and travel, amount to \$2.72 million, leaving \$997.28 million for grant distribution.

The distribution is as follows: Pacific Region (23.8%) receives \$237.97 million, Gulf Coast Region (11.1%) gets \$111.11 million, Southeast Region (22.1%) is allocated \$220.73 million, Northeast Region (19.4%) receives \$194.38 million, Great Lakes Region (15.1%) gets \$151.09 million, and Islands/Territories Region (8.2%) is allotted \$82.03 million. These allocations aim to address regional needs equitably and efficiently within the specified percentages. For a more in-depth understanding of the reasoning behind these allocations, please refer to Appendix B. Detailed breakdown of the budget is shown in the adjacent table.

Category	Expense (\$)
Staffing	2,636,352
Supplies	54,400
Travel	32,960
Total Administrative Costs	2,723,712
Total Leftover Distribution	997,276,288
Pacific Region (23.8%)	237,970,027
Gulf Coast Region (11.1%)	111,105,510
Southeast Region (22.1%)	220,733,397
Northeast Region (19.4%)	194,376,611
Great Lakes Region (15.1%)	151,085,754
Islands/Territories Region (8.2%)	82,034,045
Total	1,000,000,000

Table 1. Detailed breakdown of budget distribution



**TOTAL BUDGET FOR THE
FIRST FISCAL YEAR
\$1,000,000,000**



05. MEASURING PROGRAM SUCCESS

To assess the execution and effects of the program design, we will institute a performance measurement system. This system will facilitate continuous monitoring and transparency throughout the implementation phase.

The performance management system is structured around four key objectives:

- **Measurement:** Specify the metrics employed to assess the program's implementation.
- **Collection:** Outline the methodology for collecting these metrics.
- **Reporting:** Identify the recipients and format for reporting these measurements.
- **Feedback:** Establish a coherent feedback mechanism to inform the decision-making processes.

PROGRAM GOALS

KEY PERFORMANCE INDICATORS (KPI)

Considering the wide scope of the bill, it is necessary to delineate the specific outcomes encapsulated in the bill in order to identify program goals. To ensure the program's efficacy, we work around the following objectives drawn from the bill: i) Habitat Restoration, ii) Protection of Aquatic Resources, iii) Climate Change-induced Hazard Mitigation, and iv) Stimulation of the Economy. These objectives further translate into three distinct program goals.

Firstly, the program seeks to enhance fish and wildlife habitats. This can be measured through environmental metrics such as the number of protected species with stable population levels. Second, it aims to rejuvenate, expand, and fortify natural infrastructure that bolsters climate resilience. The measurement metrics for this goal will encompass the percentage of U.S. coastal states and territories demonstrating annual improvement in resilience capacity to weather and climate hazards. Third, it looks to enhance the resilience of coastal communities affected by climate change, such as the number of StormReady communities serving socially vulnerable populations.



MEASUREMENT AND COLLECTING PROCEDURES

We focus on four dimensions of metrics:

- Operational and Administrative,
- Environmental
- Economic
- Social Goals

The objectives highlighted are basic examples and could provide the foundation for additional metrics in each category, depending on the specific project type. Metrics for both the operationality of the grant program and individual grant projects are found below. These different metrics require distinct data collection and reporting, as is reflected in the method, frequency, and responsible parties outlined in the following table.

Table 2. Detailed breakdown of KPI areas, objectives, measurements and collection methods for the four dimensions of metrics.

MEASUREMENT AND COLLECTING PROCEDURES

Areas	Objective	Measurement	Collection
Operational and Administrative Goals	1. Review and respond to all grant proposals	1. Number of grant applications reviewed and	The data for this metric will be available through the internal database owned and maintained by the Grant Management Team
	2. Recruit the additional members of the Grant Management Team within 6 months	2. Number of new recruitment	The data for this metric will be available through the internal database owned and maintained by the Grant Management Team
	3. Execute 100% of the budget efficiently	3. Amount of resources distributed in the fiscal year	The data for this metric will be available through the internal database owned and maintained by the Grant Management Team

MEASUREMENT AND COLLECTING PROCEDURES

Areas	Objective	Measurement	Collection
Environmental Measures	2.(d) 1. Restore a marine, estuarine, coastal, or Great Lake habitat	2.(d) 1. 1. Number of threatened species recovered	2.(d) 1. 1. Data obtained by monitoring complex physical, biological, geochemical processes, and the effectiveness of restoration technique. All data collected from the field will be submitted to the Grant Management Team by the grantees. The environmental review specialist will then provide the analysis based on the data received.
		2. (d) 1. 2. Number of coastal habitat acres protected, enhanced, or restored	2. (d) 1. 2. Data will be provided by the grantee in the semi-annual interim report, and to be verified by the Grant Management Team through audits
		2. (d) 1. 3. Number of acres cleared of marine debris	2. (d) 1. 3. Fund monitoring for the subset of project types & choose sites that represent commonly found habitats. Data will be provided by the grantee, and to be verified by the Grant Management Team through audits.
	2. (d) 2. Provide adaptation to climate change	2.(d) 2. 1. Number of hazard resilience practices adopted to prepare for and respond to/ minimize coastal hazardous events	2.(d) 2. 1. The impact of hazard resilience practices will be analyzed by the Environmental Review Specialists using the raw data received from the field through the semi-annual interim reports submitted by the grantees.
		2.(d) 2. 2. Number of acres protected, enhanced, or restored of dunes; coral reefs; oyster reefs; floodplains	2.(d) 2. 2. Data will be provided by the grantee in the semi-annual interim report, and to be verified by the Grant Management Team through audits

MEASUREMENT AND COLLECTING PROCEDURES

Areas	Objective	Measurement	Collection
Social Measures	2.(e) 5. Grant includes communities that may not have adequate resources including low-income, tribal, indigenous, rural, and communities of color	2.(e) 5. 1. Number of grants allocated to assist underserved communities	2.(e) 5. 1. The data for this metric will be available through the internal database owned and maintained by the Grant Management Team. The social impact analysis will be done by the Social Review Specialists.
		2.(e) 5. 2. Number of communities that adopt/implement sustainable, and economically viable fishing practices as part of grant-related programs	2.(e) 5. 2. The raw data for this metric will be provided by the grantees in the interim/annual reports. The social impact analysis will be carried out by Social Review Specialists
Economic Measures	2. (e) 1. Proposed project that would stimulate the economy	2 (e). 1. 1. Build an index that weighs into data on visitors, and accommodations, consumption of food and beverage, guided tours in counties covered by the grant program	2 (e). 1. 1. The index is to be built by Economic Review Specialists, using data collected from the field by grantees as well as data published by responsible local government bodies.
	2. (e) 2. Proposed projects that will employ fishermen who have been negatively impacted by financial hardship	2 (e). 2. 1. Comparison of current employment versus predicted employment in communities assisted by grant-related programs	2 (e). 2. 1. The analysis will be done by Economic Review Specialists, using data collected from the field by grantees as well as data published by responsible local government bodies.
		2 (e). 2. 2. Number of new jobs created in the fishing sector following the execution of the program	2 (e). 2. 2. Data to be provided by the grantees in the interim/annual reports

REPORTING AND FEEDBACK STRUCTURE

The reporting and feedback mechanisms rely on the accurate and complete reporting of the grant recipient, then the proper translation of the progress as gleaned from their reports throughout the chain of command in NOAA up to Congress. To ensure a solid foundation of data, our program design prioritizes technical assistance to support grantees throughout the lifecycle of the project, including monitoring and reporting.

In addressing the second component of our feedback/reporting mechanism, the following steps, actors, and offices will be considered in the process:

1. Performance metrics will be initially presented to program and grant officers. All grant recipients must submit semiannual financial and technical reports through the Federal Subaward Reporting System (FSRS) (NOAA, VI. 2022).
2. Financial reports should be directed to the Grant Officer, while technical reports should be directed to the Program Officer (NOAA, AGO/GMD. 2019). Interim reports submitted through the portal will then be forwarded to NOAA's Acquisition and Grant Office's Grant Management Division (GMD). → The GMD is responsible for overseeing and concluding financial assistance awards under NOAA and other Department of Commerce (DOC) bureaus' missions, as well as ensuring compliance with audit-related grant requirements. (NOAA, AGO. 2021)
3. All reports directed to the Office of the Chief Financial Officer are then available for review by the NOAA Administrator.
4. Subsequently, these reports are assessed by NOAA's Office of the Chief Financial Officer, which reviews annual budgets as part of the annual Blue Book and Congressional Justifications process. (NOAA, CFO. 2023)
5. These materials are then made available for congressional review, allowing Congress to evaluate the grant program's continuation based on the assessments so far.
6. The feedback loop initiates within the Grant Management Division of AGO, where performance metrics-driven feedback can be conveyed to the grant/program officer, who in turn can disseminate it to the grant recipients.

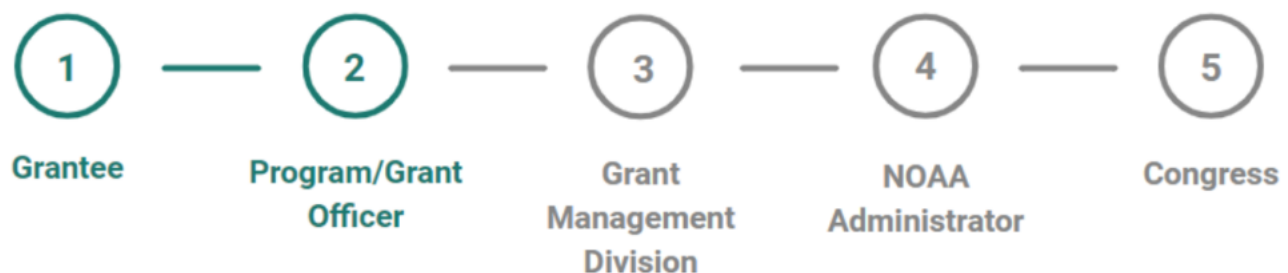
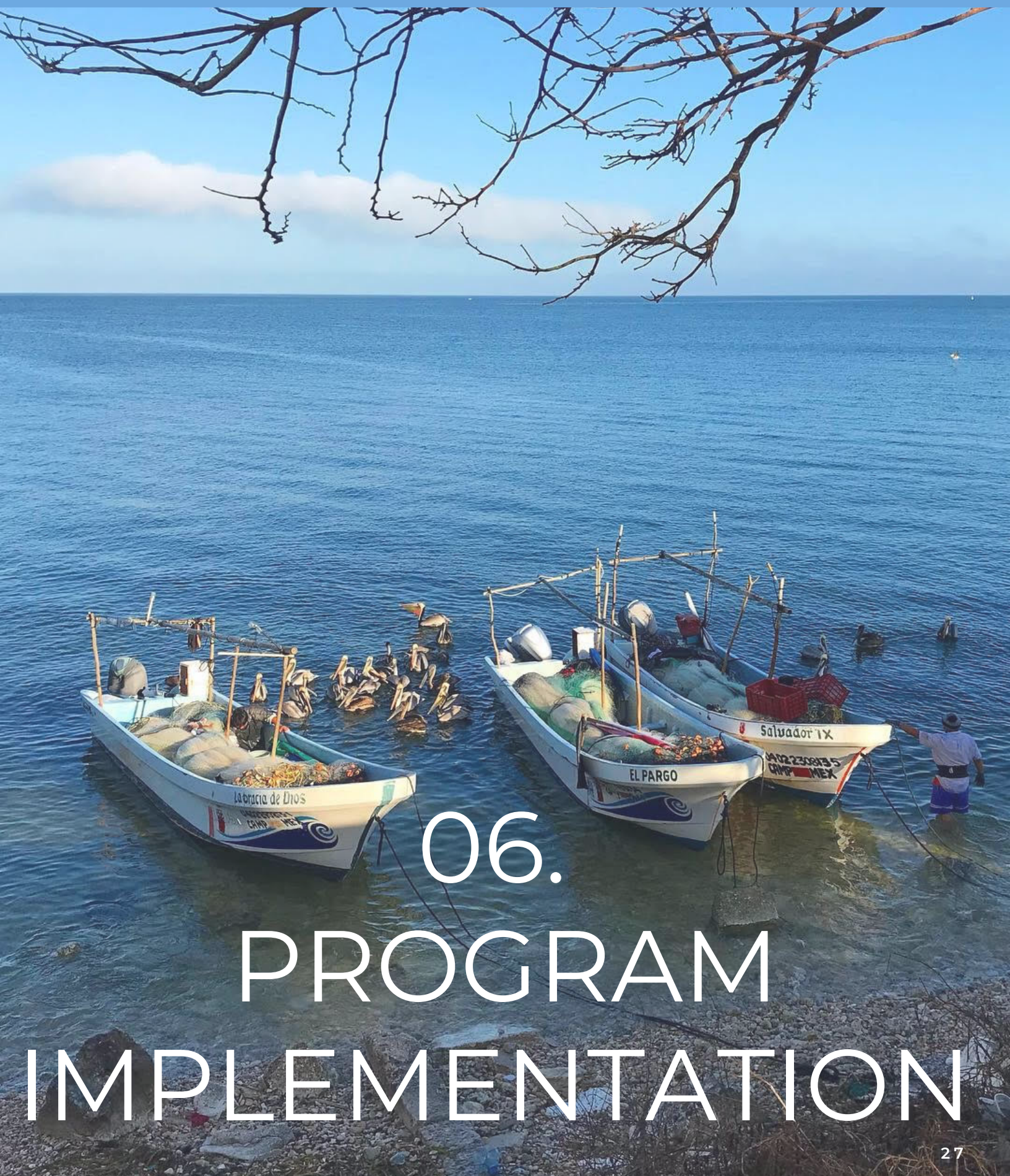


Figure 3. Reporting and Feedback Loop



Program implementation is structured through the master calendar. The program calendar will follow NOAA's fiscal year calendar, which operates from October to September. Year 1 and 2 are planned below by quarter, concluding with a 10 year outlook. The allocation of funds, 40% of which is allocated to disadvantaged communities, is outlined by region in the figure below. These regional allocations are subject to change after year 1, pending evaluation. At the end of each quarter, the Review Specialists will conduct a review that will cover whether these tasks were accomplished within the established timeline, and what possible adjustments will need to be made to the following quarter. They will report these findings and assessments to the Program Officer.

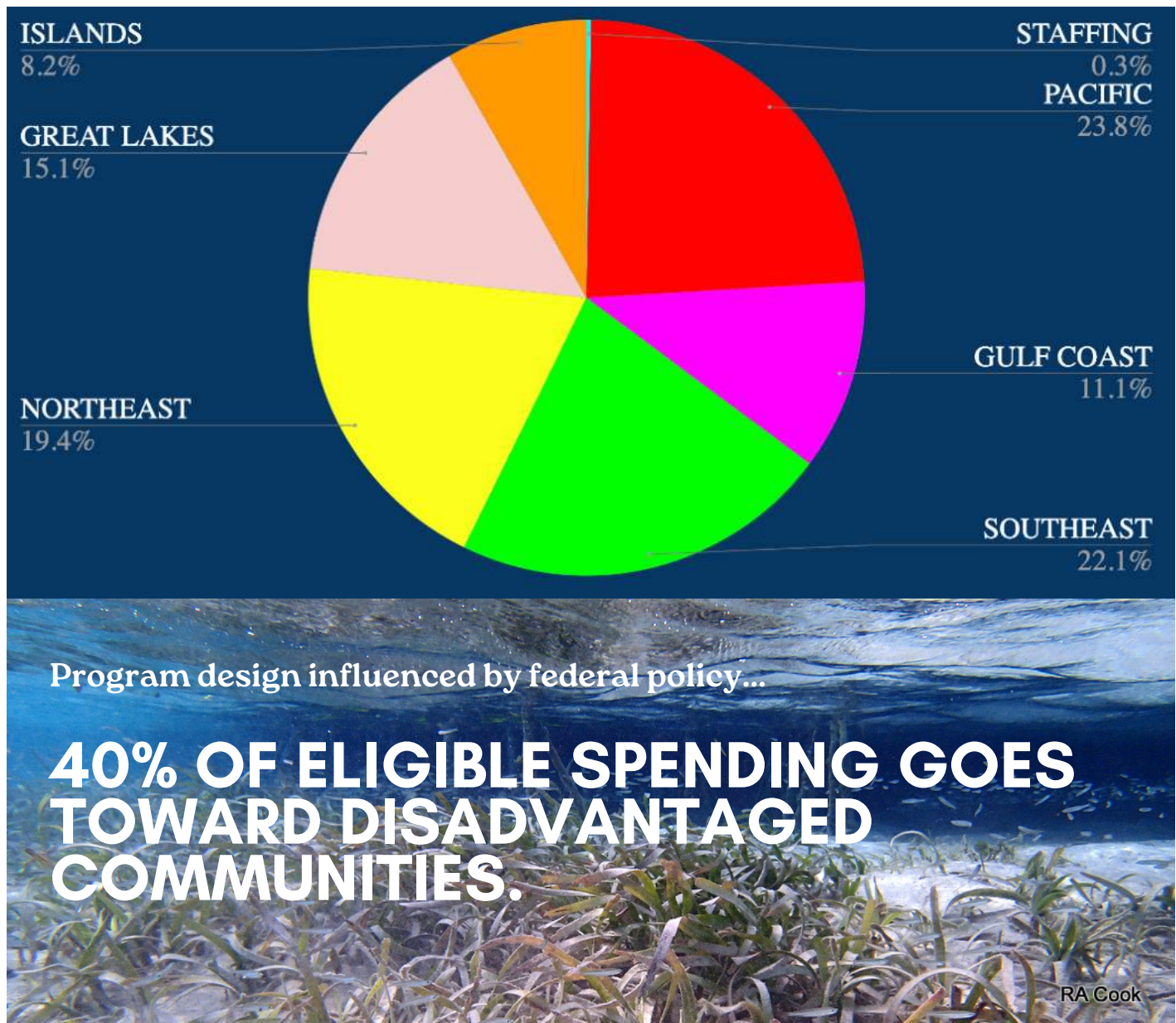
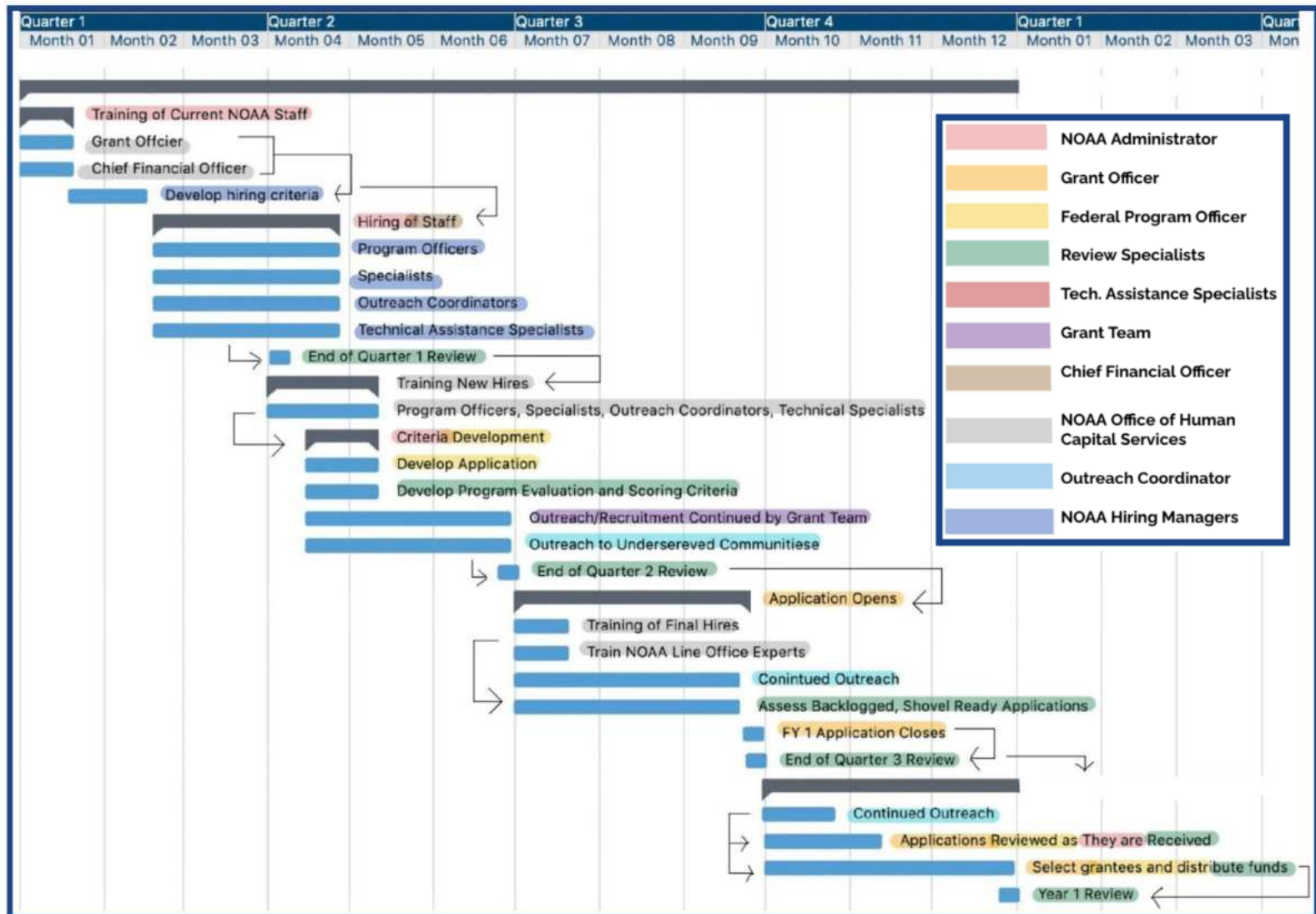


Figure 4: Budget coordinated and color coded across the six regions

FIRST YEAR MASTER CALENDAR

The first fiscal year of the program will predominantly be hiring, training, and development.



FIRST YEAR CALENDAR

In Quarter 1 (October-December), the NOAA Administrator will be charged with overseeing the NOAA Office of Human Capital Services' training of the Grant Officer and Financial Officer positions in accordance with the requirements of the Don Young program. The NOAA Hiring Managers will incorporate the program criteria outlined by the Administrator and Grant Officer to develop the hiring criteria for the remaining staff. These include the program officers, environmental, social, and economic review specialists, outreach coordinators and technical assistance specialists, whose hiring requires final approval by the Administrator and Chief Financial Officer of NOAA. Then, all staff will begin reaching out to their networks and solidifying existing relationships they will utilize during the future outreach phases.

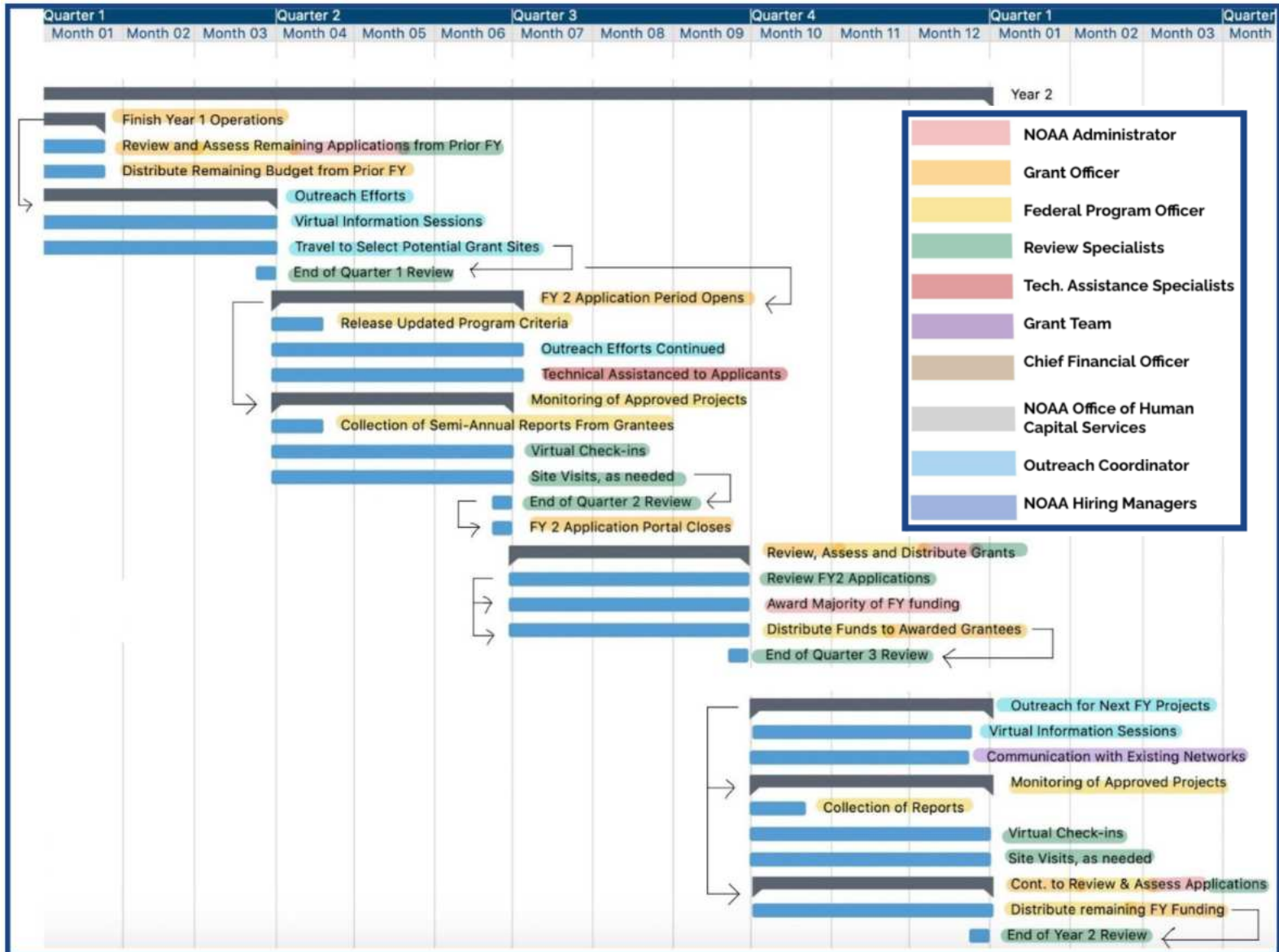
Quarter 2 (January-March) will focus on the development of criteria and training of new staff. The grant selection and scoring criteria will be approved by the Administrator and Federal Program Officer after being developed by the Review Specialists. The Federal Program Officer will also oversee the training of new hires (Review Specialists, Outreach Coordinators, Technical Assistance Specialists) by NOAA Office of Human Capital Services. The Review Specialists and Program Officer will then develop the application criteria and finalize the application itself, to be approved by the Administrator. It is at this stage that outreach begins. This task is assigned to the Outreach Coordinator who will prioritize outreach to underserved communities, leveraging existing communication channels. This outreach will include formal communication channels, online features on websites, webinars, and newspaper articles publicizing the program.

The tasks that are scheduled for Quarter 3 (April-June) center on outreach, continued training, and application assessment. The grant applications will open at the outset of the quarter, and close at the end of the quarter. The Technical Assistance Specialists will be available for assistance during the application process. During this time, outreach will continue. As they await the arrival of applications, Review Specialists will assess NOAA's backlogged grant applications that fall under the criteria of H.R. 1196, specifically projects that are shovel-ready. The training process for the final hirees will be completed at the beginning of this quarter, as will the training of Line Office experts, by the NOAA Office of Human Capital Services. By the end of the quarter, the progress reporting criteria for grantees' semi-annual metric reports will be solidified.

Quarter 4 (July-September) tasks will focus on application reviews and distribution of funds. Applications will be reviewed and scored on a rolling basis, and the review period will conclude in August. September will be spent reviewing the highest scored applications, and the remaining fiscal year budget will be allocated to projects by the Grant Officer, Federal Program Officer, and Review Specialists.

SECOND YEAR MASTER CALENDAR

In the second year, program implementation will shift to grant administration and monitoring.



SECOND YEAR CALENDAR

In Quarter 1 (October-December), the Grant Officer, Federal Program Officer, Review Specialists, and Technical Assistance Specialists will review and assess applications submitted before the prior year's deadline if there are remaining applications. If there are funds from the remaining fiscal year that rolled over into this year, surplus funds will be allocated to the awarded projects that were left over from the previous year, per the bill's stipulation that funds remain available until expended. Funding allocation should consider regional budget allocations. The Outreach Coordinator will initiate Fiscal Year 2 (FY 2) outreach efforts, including virtual information sessions and messaging, as well as visiting potential grant sites to increase public awareness of the program, prioritizing environmental justice communities. This quarter's end of year review will also an internal review of the grant program and evaluation criteria, and whether shovel-ready projects and underserved communities were prioritized.

The start of Quarter 2 (January-March) will mark the start of the FY 2 application period, which will close at the end of this quarter. If needed, updated program criteria will be released with the application. The Outreach Coordinator will continue outreach efforts, and Technical Assistance Specialists will provide application assistance for the duration of the quarter. The monitoring of approved projects will be overseen by the Grant Officer and Federal Program Officer, who will receive financial and technical reports from grantees semi-annually. These reports will then be evaluated by NOAA's Office of Chief Financial Officer who evaluates yearly budgets within the annual Blue Book and Congressional Justifications. The blue books are then available for Congress to review and, if needed, Congress can evaluate whether the grant program should be continued based on evaluations so far. The reports will also be utilized by the review specialists for their quarterly and yearly reviews. The Federal Program Officer will also oversee virtual check-ins and site visits, as needed, which will be conducted by review specialists.

Quarter 3 (April-June) will begin with the review and assessment of applications, prioritizing shovel-ready projects and those in underserved communities. This will include the awarding of a majority of the year's allocated funds. During this time, the Grant Officer and Federal Program Officer will continue to oversee the monitoring of approved projects via virtual check-ins by the Review Specialist team.

In Quarter 4, (July-September) the final application reviews will take place for the year, and the remaining fiscal year funds will be distributed. The Outreach Coordinator will continue to develop their network for future project outreach during this time. Previously approved projects will be monitored by the Grant Officer and Federal Programs Officer, who will receive financial and technical reports from grantees semi-annually. Review Specialists will also conduct virtual check-ins and site visits to approved projects as needed.

10 YEAR OUTLOOK

The Don Young grant program will be administered over the course of ten years. To monitor whether the program goals (habitat restoration, protection of aquatic resources, climate change-induced hazard mitigation, economic growth) are being accomplished, the Grant Officer will oversee a 5-year program evaluation and a 10-year program evaluation. These will evaluate grant project operational, environmental, economic, and social progress by region, assess the efficiency of fund distribution, and determine whether adjustments should be made to the program administration to improve the achievement of the goals outlined in H.R. 1196.

Data from the grantees' semi-annual reports will be utilized to answer questions, including:

- Have the operational and administrative objectives been accomplished – were all applications evaluated, was 100% of the budget awarded?
- Have the semi-annual reports been submitted on time by grantees?
- Is the grant team providing enough support to grantees, and is the team efficiently reporting results through the chain of command?
- Have grants been serving underserved communities?
- Have projects stimulated local economies?
- Is fisherfolk employment improving in grant communities?

The 5-year evaluation will provide changes that need to be made to the program administration for the next 5 years. The 10-year evaluation will reflect on the success of the program for NOAA's administration of grants in the future.

Measuring Program Success



OPERATIONAL



ENVIRONMENTAL



ECONOMIC



SOCIAL

ANNUAL REVIEWS & 5-YEAR EVALUATIONS

Coastal Wetlands in Wrightsville Beach, North Carolina

Source: Hank Carter for NOAA

07. CASE STUDIES

CASE STUDIES

There is no better way to illustrate the types of grant projects we anticipate will be funded through the Coastlines and Fisheries Act than to highlight example projects. These case studies represent past, present, and future initiatives that are either already funded by NOAA or have been identified for their future pipeline of projects (though funding is not necessarily secured). The sample projects presented below not only help address the environmental problems plaguing our coastlines and aquatic resources, but also confront the socio-economic issues that have made coastal communities increasingly vulnerable.

Underscoring these components of holistic impact, we identify the outcomes that we would expect in environmental, economic, and social dimensions for each project. The following case studies come from diverse parts of the US and its territories, from Virginia to the Virgin Islands to the Hawaiian Islands. Given the resources authorized by H.R. 1196, such initiatives could potentially be scaled to other places along the US's nearly 100,000 miles of shoreline.





Middle Peninsula Habitat Focus Area

RE-ACQUISITION OF TRIBAL LANDS ON MATTAPONI RIVER, VIRGINIA

In a first-of-its-kind project, NOAA supported the reclamation and restoration of lands for the Upper Mattaponi Tribe along Virginia's Mattaponi River. This re-acquisition project will protect and restore 853 acres of land previously used as a gravel and sand mine. Beyond the significant ecological benefits this project will have, it also empowers members of the Mattaponi Tribe to work as stewards of their land. By applying indigenous knowledge and practices, the Tribe will be able to heal their homelands, cultivating the native flora and fauna. \$1 million in funding was given to this project as part of a larger program for Coastal Zone Management Habitat Protection and Restoration Grants (NOAA, 2023).

Virginia's Middle Peninsula, consisting of the Mattaponi River, York River, Piankatank River, and Mobjack Bay, faces high rates of sea level rise, which causes an overflow of water to be pushed from the rivers and bay, damaging the ecosystem in the process. This seawater overflow continues to increasingly flood coastal wetlands and marshes, affecting the local fishing industry and oyster population. Other threats to the Middle Peninsula and its communities, such as the Mattaponi Tribe, include coastal and floodplain degradation, shoreline erosion, and marsh loss (NOAA Fisheries, 2022).

Projects will address the aforementioned problems by enhancing coastal infrastructure and aquatic ecosystems, while building community resilience to climate change. As a Habitat Focus Area, the anticipated outcomes of projects in the Middle Peninsula include:

1. Restore aquatic habitats, especially reefs to increase fish and shellfish productivity
2. Increase resiliency through wetlands restoration and living shoreline projects
3. Support local communities to implement restoration projections through capacity building and developing a shared understanding of the ecosystem



*Scientist diving to monitor coral reef at Virgin Island National Park,
Source: Underwater Scholarship Society*

CORAL REEF RESTORATION IN ST. CROIX, USVI

Coral reefs protect vulnerable coastline communities in the US Virgin Islands from extreme weather events and flooding. Serving a barrier role, they break wave energy from the storm surges made more severe by climate change. Coral reefs also support marine ecosystems, as well as represent a main source of income for Virgin Islands fisherfolk and ecotourism markets. Unfortunately, US coral reefs are under threat from the consequences of climate change, in particular changes in seawater temperature.

Recently, NOAA awarded The Nature Conservancy \$6.6 million to restore 90 acres of coral reefs in St. Croix, plagued by coral bleaching events. Coral bleaching occurs due to rising sea temperatures creating an environment where corals expel zooxanthellae, an algae that lives within coral tissue. This causes the coral to bleach due to stress, eventually leading to mortality. The coral restoration project will use donor coral plants that were survivors of bleaching events. This will work to create more genetically diverse corals, leading to coral reef resilience to climate hazards (Viconsortium, 2023).

By restoring reefs, fish and shellfish productivity will increase, due to the enhancement of coral habitats which are home to several keystone species. This project would be able to reestablish up to five threatened coral species in the Virgin Islands, while rebuilding populations listed on the Endangered Species Act. This project will also increase coastal resilience since reefs work as a natural storm barrier, lowering risks of flooding and storm damage to coastal communities.



Stockton University student working in Marine Debris Lab, New Jersey
Source: Stockton University

MARINE DEBRIS REMOVAL IN NEW JERSEY & HAWAII

The Marine Debris program is one of NOAA's most successful initiatives, with projects of different sizes being implemented across the US. Despite the effectiveness and scalability of this program, many future marine debris projects do not have guaranteed funding. The following sample projects highlight how funds designated by the Coastlines and Fisheries Act could protect marine wildlife habitats from the threat of pollution, while also engaging and supporting the livelihoods of local fisherfolk.

Marine debris is a major issue, causing physical harm to wildlife via ingestion while also being a major stressor to ocean and bay water quality due to pollution and microplastics. Recently, NOAA awarded Stockton University approximately \$1.5 million to recover abandoned fishing gear and remove marine debris throughout the New Jersey Coastal Bays. Local fishermen will be contracted to remove derelict fishing gear and vessels throughout bay areas of the state, which support fishing and tourism, as well as serve as marine habitats for several critical species (NOAA, 2023). Projects like this promote both environmental and economic resilience in coastal communities.

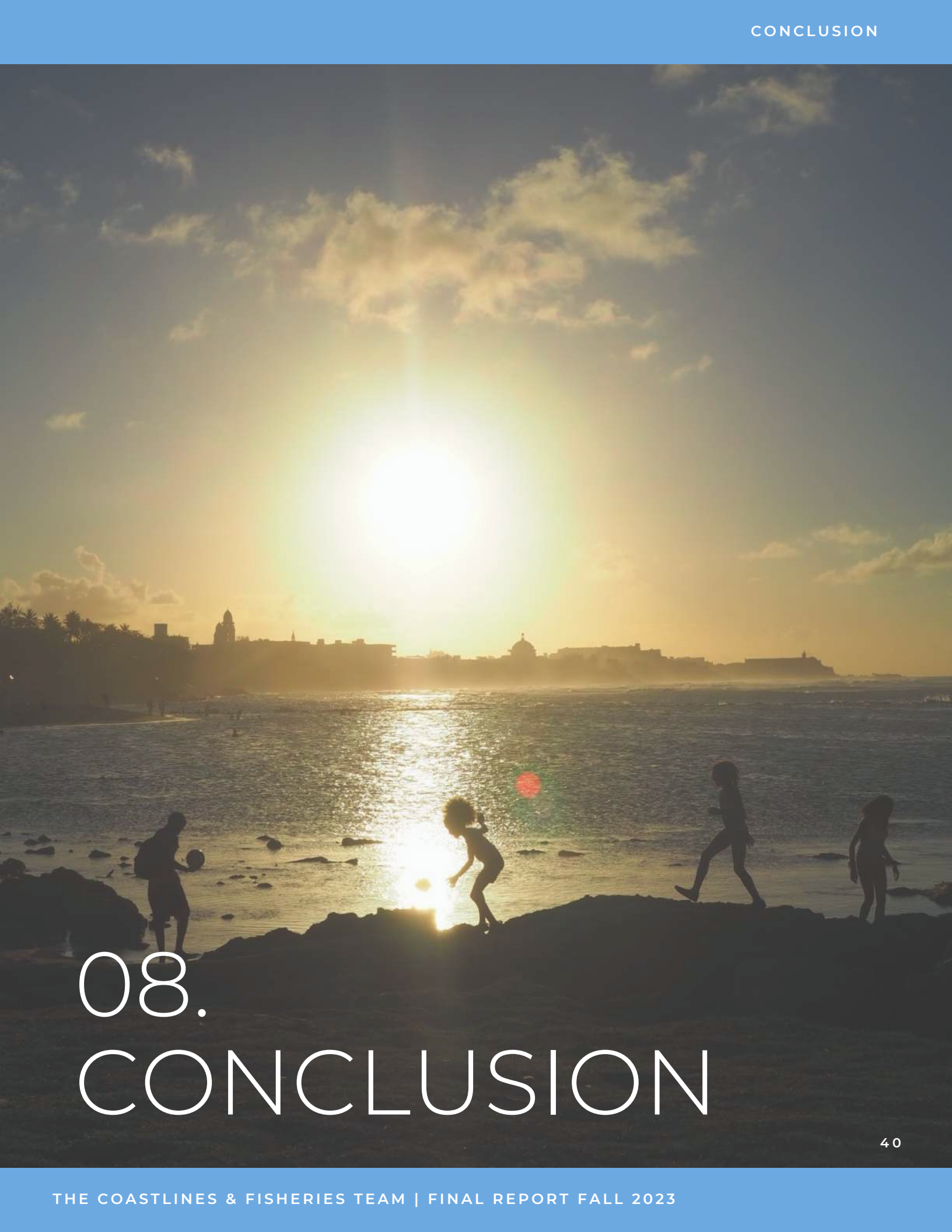


*Marine debris removal of derelict fishing gear in Hawaiian waters
Source: NOAA Fisheries & Hawaii Pacific University*

MARINE DEBRIS REMOVAL IN NEW JERSEY & HAWAII

On the other side of the US, a similar project to the one being done in New Jersey was conducted by NOAA in partnership with Hawaii Pacific University. With a \$260,000 award, teams from NOAA, as well as local fishermen, were contracted to remove derelict fishing gear and vessels from sensitive habitats around the Hawaiian Islands (NOAA, 2023). Once again, this project provides a solution which addresses both environmental and socio-economic dimensions.

The anticipated outcomes of Marine Debris projects include i) the enhancement of aquatic habitats and resources, which have both ecological and economic benefits for tourism and fishing, and ii) the involvement and compensation of community members, particularly fisherfolk. Incorporating multiple priority areas such as protecting wildlife areas and employing fisherfolk, marine debris projects should be highly effective in meeting the objectives laid out in H.R. 1196, as well as our grant program framework.



08. CONCLUSION

Overfishing, water pollution, and coastal degradation afflict large swaths of the United States' coastlines and territories. The Don Young Restoration Grants for Coastlines and Fisheries Act represents a step forward in solving these seemingly insurmountable issues. Practical implementation of the Don Young Act requires participation and coordination across NOAA, from individual Line Offices up to the Administrator. To account for the breadth of proposed projects across so many different regions, such involvement across NOAA's offices is imperative for success.

Implementing the grant program necessitated more than following established precedent--aspects like the regional breakdown and the staffing plan required innovative solutions to meet the Act's needs. While the Don Young Act does not purport to solve every problem along the nation's coastlines, our design represents one possible organization of the program that would prove effective in addressing the myriad issues on our coastlines and in our fisheries.



09. REFERENCES

- "About AGO." NOAA, 7 Jun. 2021. www.noaa.gov/acquisition-grants/about-ago
- "About ProTech." NOAA. 20 Apr. 2023. <https://www.noaa.gov/acquisition-grants/protech/about-protech>
- "Acquisition." NOAA, 2023. <https://www.noaa.gov/organization/acquisition-grants/acquisition>
- "Administrative Standard Award Conditions for NOAA Financial Assistance Awards U.S. Department of Commerce." NOAA, 18 Feb. 2021, www.noaa.gov/sites/default/files/legacy/document/2021/Mar/Administrative%20Standard%20Award%20Conditions%20for%20NOAA%20Financial%20Assistance%20Awards%2002.18.2021.pdf
- "Annual Report Guidance to Sea Grant Programs" NOAA, Jan. 2022. <https://seagrant.noaa.gov/wp-content/uploads/2023/07/Annual-Report-Guidance-2018-2023.pdf>
- "Atlantic and Gulf Coasts Recreation Area Survey (Summary of Findings and Recommendations)." NATIONAL PARK SERVICE. https://www.nps.gov/parkhistory/online_books/rec_area_survey. Accessed 23 Oct. 2023.
- "Award Administration Information - Reporting." NOAA, 11 Apr. 2022. www.noaa.gov/vi-award-administration-information-reporting.
- Baldera, A., et al. "Selecting indicators to monitor outcomes across projects and multiple restoration programs in the Gulf of Mexico." *Ecological Indicators*, 89, 559–57, 2018. <https://doi.org/10.1016/j.ecolind.2018.01.025>
- "Biden-Harris Administration announces \$2.6 billion framework through Investing in America agenda to protect coastal communities and restore marine resources." NOAA, 6 Jun. 2023. <https://www.noaa.gov/news-releases/noaa-ira-framework-2023>
- "Blue Book Budget Summary FY 2023." NOAA, 1 May 2022. www.noaa.gov/sites/default/files/2022-05/508_Compliant_Final_FY23_NOAA_Blue_Book_Budget_Summary.pdf
- "Budget Summary FY2023." NOAA. https://www.noaa.gov/sites/default/files/2022-05/508_Compliant_Final_FY23_NOAA_Blue_Book_Budget_Summary.pdf Accessed 31 Oct. 2023.
- "Chapter 4: Sea Level Rise and Implications for Low-Lying Islands, Coasts and Communities – Special Report on the Ocean and Cryosphere in a Changing Climate." IPCC, 2015. <https://www.ipcc.ch/srocc/chapter/chapter-4-sea-level-rise-and-implications-for-low-lying-islands-coasts-and-communities/>
- "Climate Impacts in the Southeast." City of Chicago. <https://climatechange.chicago.gov/climate-impacts/climate-impacts-southeast>. Accessed 23 Oct. 2023.
- "Climate Resilience Regional Challenge: Technical Assistance." NOAA, coast.noaa.gov/funding/ira/resilience-challenge/technical-assistance.html. Accessed 4 Oct. 2023.
- "Communities Rely on Federal Grants, But May Have Challenges Accessing Them." U.S. GAO, 7 Jun. 2023. <https://www.gao.gov/blog/communities-rely-federal-grants-may-have-challenges-accessing-them>

Coastal Management: Performance Measures." NOAA, coast.noaa.gov/czm/performance/. Accessed 4 Oct. 2023.

"Congressional Scorecard." *League of Conservation Voters*. <https://www.lcv.org/work/congressional-scorecard/>. Accessed 4 Oct. 2023.

Dune-Engineered Core Design Schematics COST Overview of Technique Materials." *Northeast Ocean Council*, https://www.northeastoceancouncil.org/wp-content/uploads/2019/01/Living-Shoreline-Profile_Dune_Engineered-Core-1.pdf. Accessed 23 Oct. 2023.

Etienne, K. "Building a Line Item Budget" *SoFi*, 10 Mar. 2023. <https://www.sofi.com/learn/content/building-line-item-budget/>.

"Explanation of User Roles." NOAA, 1 Jul. 2019, www.noaa.gov/sites/default/files/legacy/document/2020/Apr/GrantsOnline_User_Roles_Explanations_only.pdf.

"FAQ ProTech." NOAA, 20 Jul. 2022. <https://www.noaa.gov/acquisition-grants/protech/about-protech/faq-protech#Q2>.

"Financial Assistance" NOAA. <https://www.noaa.gov/organization/acquisition-grants/financial-assistance>. Accessed 11 October 2023.

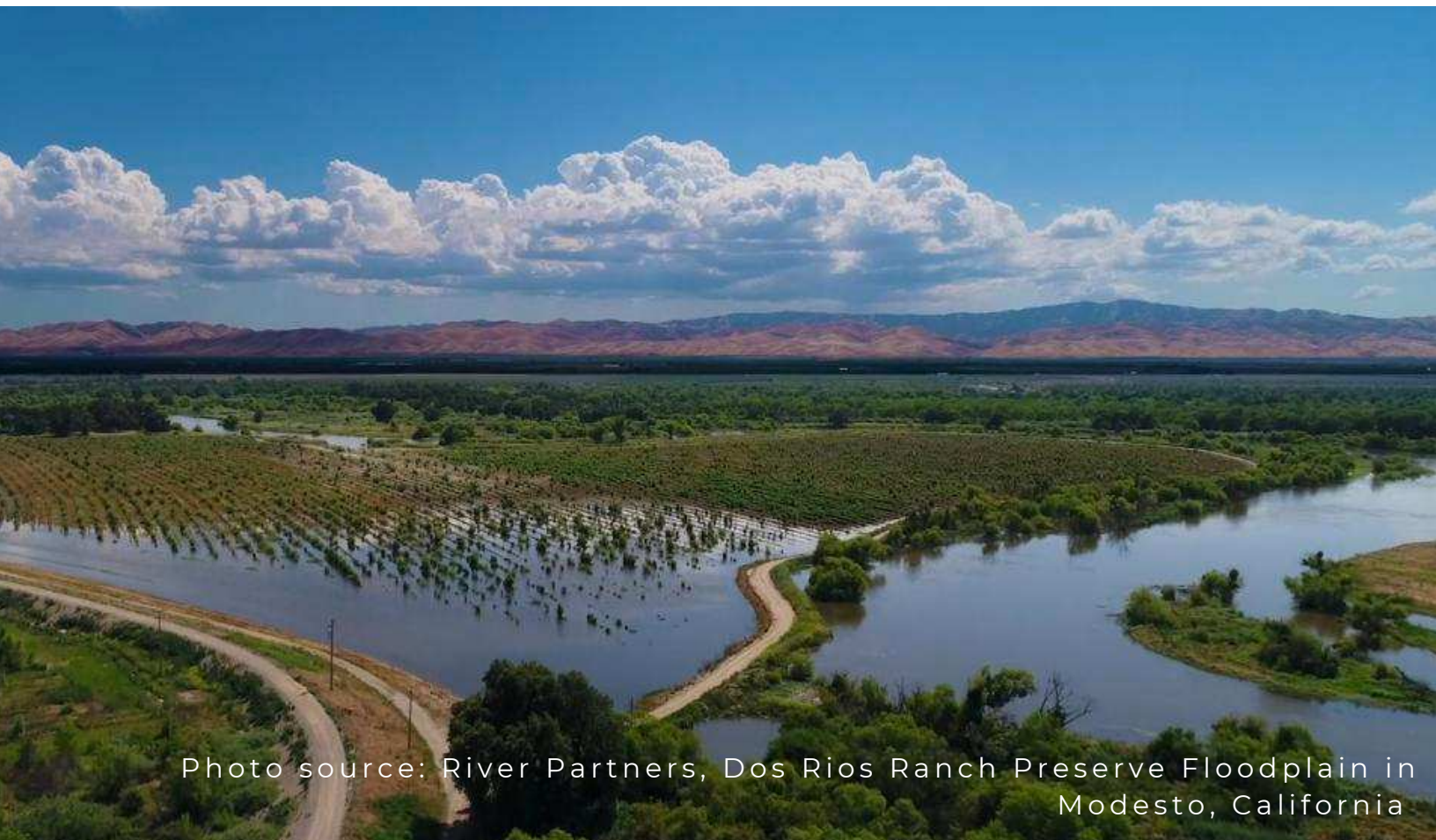


Photo source: River Partners, Dos Rios Ranch Preserve Floodplain in Modesto, California

"Financial and Performance Progress Reports Reference Guide for Grantees." NOAA. <https://www.corporateservices.noaa.gov/grantsonline/Documents/Quick%20Reference%20Guides/Financial%20and%20Performance%20Reports%20for%20Grantees%20uploaded%203.10.06.pdf> Accessed 31 Oct. 2023.

"Financial Reports: Grants Management HelpFul Hints." NOAA, 1 Jul. 2019. www.noaa.gov/sites/default/files/legacy/document/2019/Jul/Grants%20Management%20-%20Financial%20Report.pdf

"Find. apply. succeed." GRANTS.GOV. <https://www.grants.gov/>. Accessed 11 Oct. 2023.

Glick, P., et al. "Assessing the Vulnerability of Alaska's Coastal Habitats to Accelerating Sea-level Rise Using the SLAMM Model." *National Wildlife Federation*, 2010. <https://www.nwf.org/~media/PDFs/Regional/Alaska/Alaska%20SLAMM%20Summary%20Report.ashx>

Goldfarb, B. "Why a new fisheries bill is being dubbed the "Empty Oceans Act."" *Mother Jones*, 19 Aug. 2018. <https://www.motherjones.com/environment/2018/08/why-a-new-fisheries-bill-is-being-dubbed-the-empty-oceans-act/>

"Grants." NOAA, 2023. <https://www.noaa.gov/office-education/elp/grants>

"Grants Online Program Management Office: Grants Technology." NOAA, 26 Sep. 2023, www.noaa.gov/information-technology/grants-online.

"Great Lakes Restoration: Funding" *Great Lakes Restoration Initiative*. <https://www.glri.us/funding>. Accessed 23 Oct. 2023.

"GS-10 Pay Federal GS Payscale." *FederalPay*, 2023. <https://www.federalpay.org/gs/2023/GS-10> Accessed 23 Oct. 2023.

Hansen, L., et al. "US Department of Agriculture Targeting Investments To Cost Effectively Restore and Protect Wetland Ecosystems: Some Economic Insights." United States Department of Agriculture. *USDA*, 2015. https://www.ers.usda.gov/webdocs/publications/45347/51895_err183.pdf

Herz, N. "Mary Peltola ran as pro-fish and anti-bycatch: Here's what her agenda could look like in Congress." *Alaska Beacon*, 12 Dec. 2022. <https://alaskabeacon.com/2022/12/12/mary-peltola-ran-as-pro-fish-and-anti-bycatch-heres-what-her-agenda-could-look-like-in-congress/>

"H.R. 7387 Shovel-Ready Restoration Grants for Coastlines and Fisheries Act of 2020." *TrackBill*. <https://trackbill.com/bill/us-congress-house-bill-7387-shovel-ready-restoration-grants-for-coastlines-and-fisheries-act-of-2020/1929494/>. Accessed 11 Sep. 2023.

“In Committee.” *United States House of Representatives*. <https://www.house.gov/the-house-explained/the-legislative-process/in-committee>. Accessed 11 Sep. 2023.

Jellinek, S., et al. “Modeling the benefits of habitat restoration in socio-ecological systems.” *Biological Conservation*, 169, 60–67, 2014. <https://doi.org/10.1016/j.biocon.2013.10.023>

Kamarek, Elaine. “The Challenging Politics of Climate Change.” *Brookings*, 20 July 2023, www.brookings.edu/articles/the-challenging-politics-of-climate-change/

Kite-Powell, H. L., et al. “Estimating production cost for large-scale seaweed farms.” *Applied Phycology*, 3(1), 435–445, 2022. <https://doi.org/10.1080/26388081.2022.2111271>.

“Laws & Policies: Magnuson-Stevens Act Fisheries.” NOAA, 2023. <https://www.fisheries.noaa.gov/topic/laws-policies/magnuson-stevens-act>

“Legislative Hearing on H.R. 3764 (Grijalva, D-AZ) and twelve additional bills contained within H.R. 3764.” *U.S. House Natural Resources Committee*. 21 Jun. 2021. https://naturalresources.house.gov/uploadedfiles/06-22-2021_full_committee_legislative_hearing_memo.pdf

“Monitoring and Evaluation for Restoration Projects.” NOAA, 23 Mar. 2022. <https://www.fisheries.noaa.gov/national/habitat-conservation/monitoring-and-evaluation-restoration-projects>

“NOAA Climate Resilience Regional Challenge.” NOAA, 2022. <https://coast.noaa.gov/funding/ira/resilience-challenge/>

“NOAA Grants Management Division Budget Narrative Guidance.” NOAA, 2023. <https://coastalscience.noaa.gov/about/funding-opportunities/requirements/>

“NOAA’s Largest Wetland Restoration Project Underway in Louisiana.” NOAA, 2 Sep. 2022. <https://www.fisheries.noaa.gov/feature-story/noaas-largest-wetland-restoration-project-underway-louisiana>

“NOAA Organization Chart.” NOAA, <https://www.noaa.gov/about/organization/noaa-organization-chart>. Accessed 11 October 2023.

“NOAA Performance Dashboard.” NOAA. <https://performance.commerce.gov/stories/s/NOAA-Performance-Dashboard/2trz-rf9e>. Accessed 31 Oct. 2023.

"Office of Education grants." NOAA, <https://www.noaa.gov/office-education/grants>. Accessed 11 October 2023.

"Office of the Chief Financial Officer: Budget and Reports." NOAA, 15 Jun. 2023. www.noaa.gov/organization/budget-finance-performance/budget-and-reports

"Performance Progress Report Instructions." NOAA, media.fisheries.noaa.gov/dam-migration/performance-progress-report-instructions.pdf. Accessed 4 Oct. 2023.

"Plaskett introduces bipartisan bill to increase development of coastlines and fisheries." U.S. Representative Stacey E. Plaskett, 28 Feb. 2023. <https://plaskett.house.gov/news/documentsingle.aspx?DocumentID=4253>

"Progress Reports." NOAA. https://coast.noaa.gov/data/coralreef_noaa.gov/conservation/resources/Grants-Management-Progress-Reports-CRCP.pdf Accessed 31 Oct. 2023.

Reba, L. "Is Coastal Conservation Paying Off? Powering the New Engineer." *University of Florida*, 24 Aug. 2018.

<https://www.eng.ufl.edu/newengineer/news/is-coastal-conservation-paying-off/#:~:text=Research%20on%2088%20specific%20projects>

"Red Tide: *Karenia Brevis*." *Thompson Earth Systems Institute*, 15 Jul. 2018. <https://www.floridamuseum.ufl.edu/earth-systems/blog/red-tide-karenia-brevi/>

"Regions." NOAA, 2022. <https://www.noaa.gov/regions/regional-collaboration-regions>

Report to the Thirty-First Legislature State of Hawai'i 2022 Regular Session Budgetary and Other Issues Regarding Invasive Species." *Hawai'i Department of Land and Natural Resources Division of Forestry and Wildlife*, 17 Nov. 2021. https://www.capitol.hawaii.gov/sessions/session2022/bills/DC74_.pdf



Great Egret standing on marsh grass
Source: Ferenc Tibodi, Pexels

- “Restoring habitat for migratory Fish: A look back at the Recovery Act.” NOAA. 27 May 2021. <https://www.fisheries.noaa.gov/feature-story/restoring-habitat-migratory-fish-look-back-recovery-act-part-2>
- “Restoring Habitat to Support Coastal Communities: A Look Back at the Recovery Act—Part 1.” NOAA, 24 May 2021. <https://www.fisheries.noaa.gov/feature-story/restoring-habitat-support-coastal-communities-look-back-recovery-act-part-1#:~:text=Through%20the%20American%20Recovery%20and%20Reinvestment%20Act%20of%202009%2C%20NOAA,of%20the%20projects%20we%20funded.>
- “Return to the River: The Upper Mattaponi Tribe reclaim their ancestral lands.” NOAA, 27 Nov. 2023. <https://www.noaa.gov/stories/return-to-river-upper-mattaponi-tribe-reclaim-their-ancestral-lands>
- "Richard W. Spinrad, Ph.D." NOAA, 26 Jun. 2023. www.noaa.gov/our-people/leadership/richard-w-spinrad-phd.
- Roni, P., et al. “Monitoring the effectiveness of floodplain habitat restoration: A review of methods and recommendations for future monitoring.” *WIREs Water*, 6(4), 2019. <https://doi.org/10.1002/wat2.1355>
- Samonte, Giselle., et al. “Socioeconomic benefits of habitat restoration.” *US National Marine Fisheries Service, Office of Habitat Conservation*, 2017. <https://repository.library.noaa.gov/view/noaa/15030>
- “Search Grants” GRANTS.GOV. <https://www.grants.gov/web/grants/search-grants.html?keywords=NOAA%22> Accessed 24 Oct. 2023.
- “Seaweed Aquaculture” NOAA, 28 Sep. 2020. <https://www.fisheries.noaa.gov/national/aquaculture/seaweed-aquaculture>
- “Seaweed Aquaculture for Food Security, Income Generation and Environmental Health in Tropical Developing Countries.” *World Bank Group*, 24 Aug. 2016. <https://documents1.worldbank.org/curated/en/947831469090666344/pdf/107147-WP-REVISED-Seaweed-Aquaculture-Web.pdf>
- Slimak, N. “Quantifying the Economic Costs of Red Tide.” *Gulf of Mexico Coastal Ocean Observing System*, 17 Mar. 2022. <https://gcoos.org/red-tide-costs/>
- “Social Indicators Tool.” NOAA, 2023. <https://www.st.nmfs.noaa.gov/data-and-tools/social-indicators/>
- “Summary of 2018 -2023 National Performance Measures and Metrics Definitions Guide.” NOAA, <https://seagrant.noaa.gov/wp-content/uploads/2023/07/Measure-Metric-Definitions-2018-2023-2.pdf> Accessed 31 Oct. 2023.



Swasey, J. H., et al. "The fisheries governance tool: A practical and accessible approach to evaluating management systems." *PLOS ONE*, 16(7), e0253775, 2021. <https://doi.org/10.1371/journal.pone.0253775>

"Text - H.R.1196 - 118th Congress (2023-2024): Don Young Restoration Grants for Coastlines and Fisheries Act of 2023." *Congress.gov, Library of Congress*, 22 Mar. 2023, <https://www.congress.gov/bill/118th-congress/house-bill/1196/text>.

"Text - H.R.660 - 117th Congress (2021-2022): Shovel-Ready Restoration Grants for Coastlines and Fisheries Act of 2021." *Congress.gov, Library of Congress*, 22 Jun. 2021, <https://www.congress.gov/bill/117th-congress/house-bill/660>

"The NOAA Marine Debris Program Awards Funding to 6 New Projects to Remove Marine Debris." NOAA, 1 Aug. 2018. marinedebris.noaa.gov/noaa-marine-debris-program-awards-funding-new-projects-remove-marine-debris#:~:text=Recovering%20Large%20Debris%20and%20Expanding.

"Transformational Habitat Restoration and Coastal Resilience Projects Recommended for Funding." NOAA, 21 Apr. 2023. www.fisheries.noaa.gov/national/habitat-conservation/transformational-habitat-restoration-and-coastal-resilience-projects

"US HB 1196 2023-2024 118th Congress." *LegiScan*, 22 Mar 2023. <https://legiscan.com/US/bill/HB1196/2023>

"USVI To Receive Over \$14 Million For Coastal Resilience And Coral Reef Restoration." *Viconsortium.com*, 22 Apr. 2023. <https://viconsortium.com/vi-environment/virgin-islands-usvi-to-receive-over-14-million-for-coastal-resilience-and-coral-reef-restoration#:~:text=This%20project%20will%20focu>

“Virginia’s Middle Peninsula Is the Newest NOAA Habitat Focus Area.” NOAA, 3 May 2023.

<https://www.fisheries.noaa.gov/feature-story/virginias-middle-peninsula-newest-noaa-habitat-focus-area>

Watson, J., & Baumann, L. “California seeks federal help for salmon fishers facing ban.” *AP News*, 7 Apr. 2013.

<https://apnews.com/article/salmon-fishing-ban-chinook-west-coast-fd818fb1489834d5f8f9371818178b11>

“Welcome to NOAA Sea Grant.” NOAA, 2017. <https://seagrant.noaa.gov/>

“Work with us.” NOAA, 21 Feb. 2023. <https://www.noaa.gov/work-with-us>

“2009 American Recovery and Reinvestment Act.” *Energy.gov*. <https://www.energy.gov/oe/2009-american-recovery-and-reinvestment-act>. Accessed 11 Oct. 2023.

“2024 BUDGET SUMMARY” NOAA, 16 Mar. 2023.

https://www.noaa.gov/sites/default/files/2023-05/NOAA_Blue_Book_2024.pdf



Source: Kelsey Williamson, The Coral Gardeners,
United Nations Educational, Scientific and Cultural Organization (UNESCO)

10. APPENDIX



Photo: RA

APPENDIX A: STAFFING BUDGET

The following staffing budget is proposed per federal guidelines (Federal Pay, 2023):

Role	Number Hired	Base Wage	Total Salary (Wages + Benefits)	Total Expense per year
Federal Program Officer (GS-13)	1	\$93,000	\$128,340	\$128,340
Technical Support Specialist (GS-10)	6	\$59,300	\$81,834	\$491,004
Environmental Review Specialist (GS-11)	3	\$65,200	\$89,976	\$269,928
Economic Review Specialist (GS-11)	3	\$65,200	\$89,976	\$269,928
Social Review Specialist (GS-11)	3	\$65,200	\$89,976	\$269,928
Administrative Staff	12	\$35,000	\$48,300	\$579,600
Program Outreach Coordinator (GS-12)	6	\$75,800	\$104,604	\$627,624
Total	34	\$458,700	\$633,006	\$2,636,352

APPENDIX B: REGIONAL ALLOCATION CALCULATIONS

Allocating money to each region was not a simple process of equal distribution. Economic and climatic factors are far too variable across U.S. states and territories to justify a blanket amount divided equally among six regions. Instead, each region's top two environmental concerns related to coastlines and fisheries were noted. Then, projects were selected which were most likely to be proposed under the Don Young program in addressing these particular issues.

The costs of implementing the selected solutions across a wide area were calculated. Below is an example of an extreme project and the budgetary framework it would need:

- Cost of Establishing Wetlands Along Oregon and Washington Coastlines
 - Oregon and Washington combined have 4436 miles of coastline
 - Assume wetlands restoration will stretch 2 miles inland
 - Assume \$2400 per acre (Hansen et al., 2015)
 - Multiply 4436 mi x 2 mi to get 8872 sq miles
 - Convert 8872 sq miles to 5,678,080 acres
 - 5,678,080 x \$2400 per acre = \$13,627,392,000 for wetland restoration along entire Washington and Oregon coastlines
 - Run Equivalent Annual Cost analysis:
 - Assume 2% discount rate (ideally, it would be lower, but this is most likely to be federally approved under Biden admin)
 - $A(t,r) = (1 - 1/(1+.02)^{10})/.02$
 - Where '10' refers to length of Don Young program (in years) and '.02' refers to discount rate
 - $A(t,r) = 8.98$
 - Equivalent Annual Cost = $(13,627,392,000 / 8.98) = \$1,517,526,949$ per year

This project as calculated is far from feasible. But calculating costs at their extremities allows an accounting for varying project implementation degrees. Some wetlands restoration projects will restore a few acres, some many miles. Doing calculations at an extreme beyond feasibility removes that inestimable variable of project types and results in a number which can be used purely for percentage allocation purposes within the \$1 billion budget.

APPENDIX B CONTINUED

Once an Equivalent Annual Cost (EAC) for a particular solution was derived, it was then added to the other EACs calculated for other solutions in that region. The sum total of EACs for a particular region was then turned into a percentage allocation and funds awarded based on that percentage.

There are, of course, limitations to this methodology. Calculations used tend to favor larger geographies and don't take into account the unique demands of poverty-stricken coastal communities. 40% of each region's budget is earmarked for communities with incomes of under \$50,000, but this is a blanket policy and does not account for the greater needs of some communities over others. Climate vulnerability, especially as it pertains to islands, is very difficult to quantify based on the available data so is not factored into the calculations as such.

It should be noted that these regional allocations are not set in stone. They are projections for the first year and corresponding percentages provide a target for NOAA to aim toward. Some years may demand more money for the Islands/Territories region at the expense of the other five. Numbers year over year will depend on grant proposals received.

APPENDIX C. REGIONAL ALLOCATION CALCULATIONS TABLE

Below is a program budget detailing first-year regional allocations:

Region	Low-Income Allocation (\$)	Expenses (\$)
Pacific	59,492,507	237,970,027
Gulf Coast	27,776,378	111,105,510
Southeast	55,183,349	220,733,397
Northeast	48,594,153	194,376,611
Great Lakes	37,771,439	151,085,754
Islands/Territories	20,508,511	82,034,045
Total	249,326,337	997,305,346



Note regarding images: Unless otherwise cited, photos are sourced from photography taken by the Coastlines & Fisheries Team.





THANK YOU FROM OUR TEAM
FALL 2023

THE DON YOUNG RESTORATION GRANTS
FOR COASTLINES & FISHERIES ACT OF 2023



THE COASTLINES & FISHERIES TEAM
COLUMBIA UNIVERSITY
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