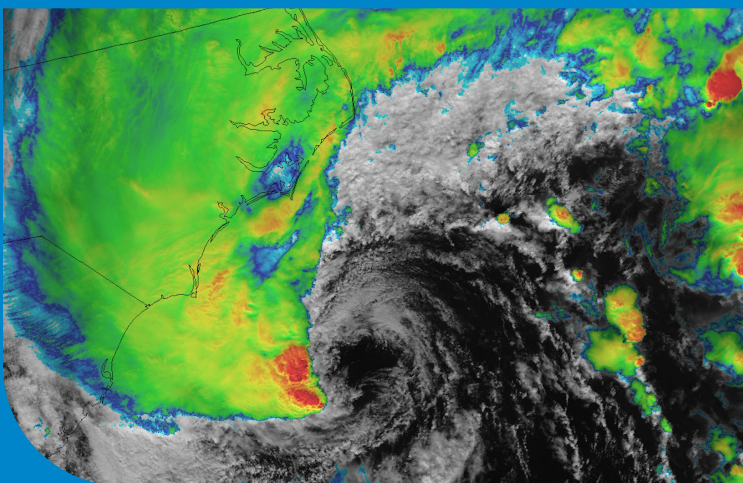
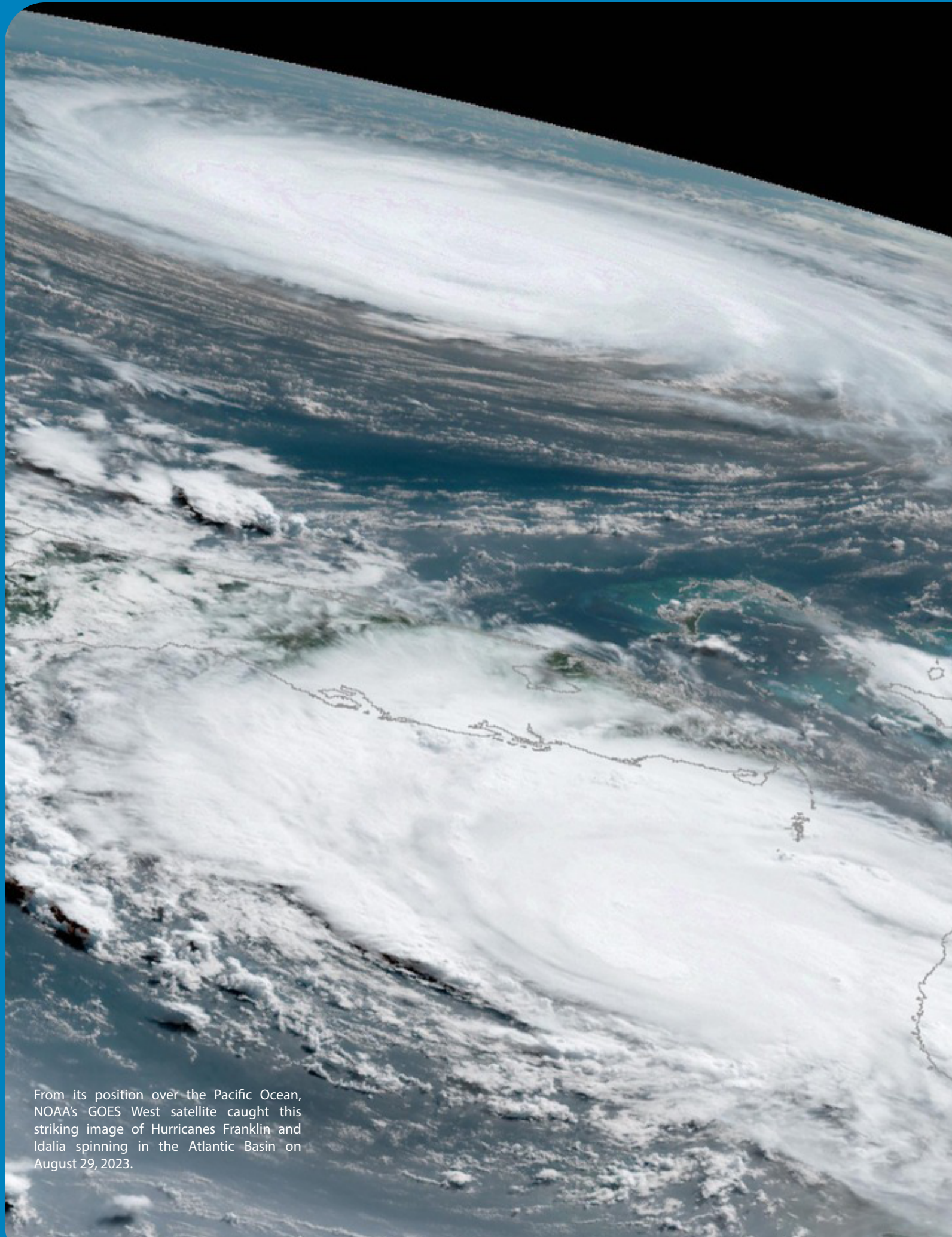




2025 NOAA Budget Summary





From its position over the Pacific Ocean, NOAA's GOES West satellite caught this striking image of Hurricanes Franklin and Idalia spinning in the Atlantic Basin on August 29, 2023.

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Photo Acknowledgment: Many of the photos appearing in this publication were taken by NOAA employees, usually during the normal conduct of NOAA activities (unless otherwise noted). Their contribution to this report is gratefully acknowledged.



A small boat crew follows the DriX uncrewed surface vehicle closely during a test launch from NOAA Ship *Oscar Dyson* off the coast of Alaska.

Letter from the Administrator

Dear NOAA Partners,

A momentous past year has demonstrated the opportunities, challenges, and progress to date across NOAA's mission, operations, and issues portfolio. Building on continued implementation of the Bipartisan Infrastructure Law (BIL) and Inflation Reduction Act (IRA), NOAA is driving progress and innovation to safeguard our shared economic and climate futures.

In 2023, the United States experienced a record 28 weather and climate disasters that each exceeded \$1 billion in loss and damage, and such billion-dollar disasters have caused over \$1 trillion in direct costs over the past seven years. The devastating impacts of weather, climate, and environmental events on life and property are a reminder of the urgency of environmental intelligence: accurate, reliable data and forecasting to better protect lives and livelihoods.

This is why I'm pleased to share NOAA's FY 2025 budget request of \$6.6 billion, which will allow our agency to extend and improve existing critical services and capabilities while investing in new data and services to better serve the American people.

The FY25 request prioritizes significant investments in NOAA's observational infrastructure underscoring NOAA's commitment to ensuring that the Nation's next-generation satellite systems expand essential earth system observations to meet the evolving needs of the American public. It will give NOAA the tools and resources to continue our work forging a climate-ready nation in which communities, individuals, and industries have timely, authoritative, actionable information and insights to address and mitigate climate and environmental impacts.

This request will support data-driven sustainable economic development, especially in the New Blue Economy. Our team is eager to engage across sectors to support economic and job growth.

Further, across all our programs and priorities, NOAA will continue to act on our commitment to better integrate equity into our work and organization by improving capabilities, knowledge sharing, and product devel-



Richard Spinrad, Ph.D., Under Secretary of Commerce for Oceans and Atmosphere and NOAA Administrator

opment and service delivery in tribal and underserved communities, ensuring NOAA's products and services are accessible and useful to all Americans.

NOAA's mission has never been more vital and urgent, even as we face the challenge of a constrained budget environment. This FY25 request will equip our team to pursue its mission while meeting the requirements of the Fiscal Responsibility Act of 2023.

As we look ahead to a new fiscal year, NOAA remains absolutely committed to our mission and to bolstering our efforts to provide environmental science, information, and services to protect lives, and livelihoods for all Americans.

Sincerely,
Dr. Rick Spinrad



A monk seal swims over a coral reef bottom in the Northwest Hawaiian Islands.

Terminology

The reader should be aware of the specific meaning of several terms as they are used throughout this budget summary:

FY 2023 Enacted

Fiscal Year (FY) 2023 Consolidated Appropriations Act, 2023 (P.L. 117–328)

FY 2024 Annualized Continuing Resolution (CR)

FY 2024 Extension of Continuing Appropriations and Other Matters Act, 2024 (P.L. 118–40)

Adjustments-to-Base

Includes the estimated FY 2025 civilian pay raise of 2.0 percent and military pay raise of 4.5 percent. Program totals will provide inflationary increases for labor and non-labor activities, including service contracts, utilities, field office lease payments, and rent charges from GSA. In addition, ATBs include unique/technical adjustments to the base program, for example transfers of base resources between budget lines.

FY 2025 Base

FY 2024 CR plus Adjustments-To-Base.

Program Change

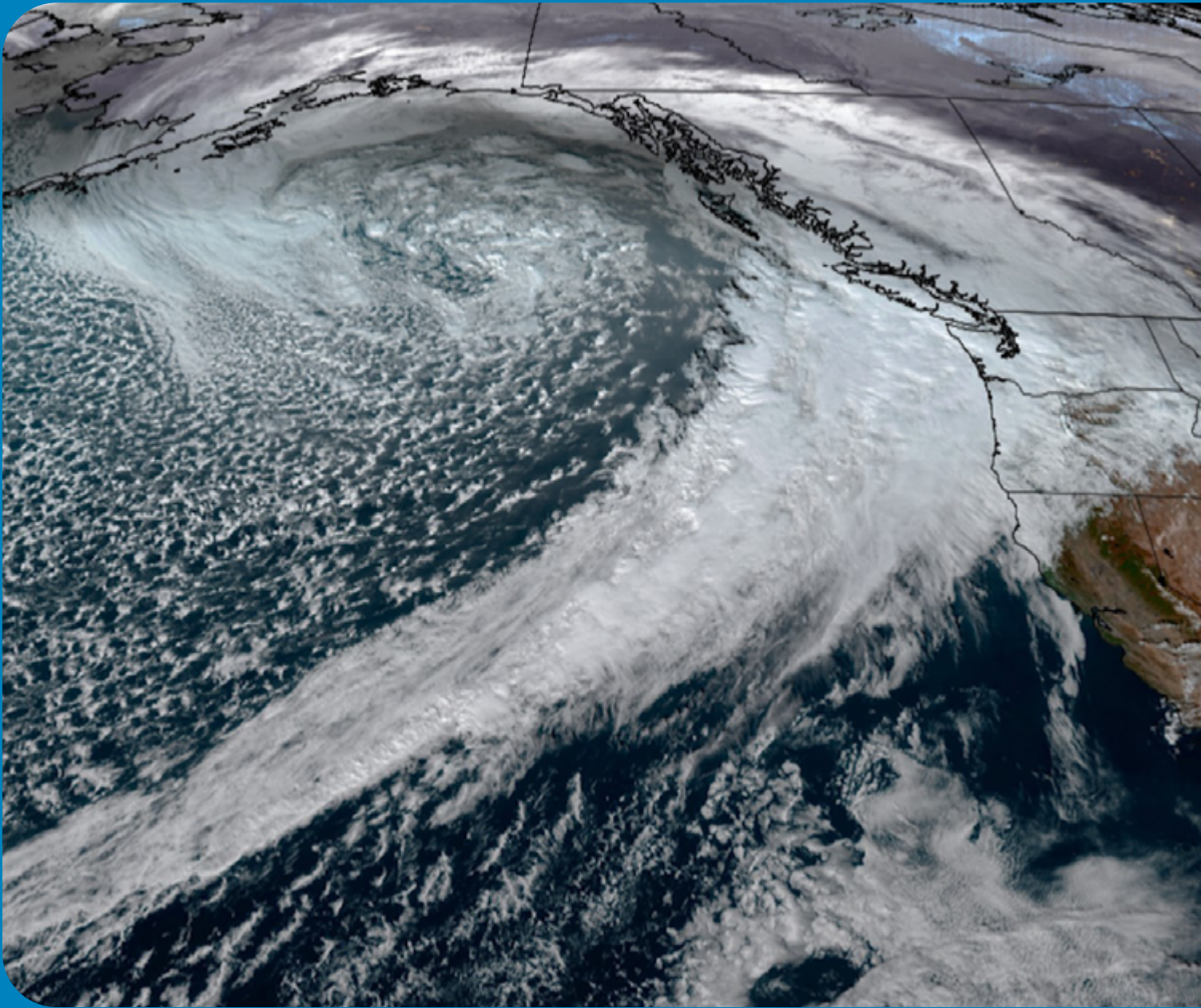
Requested increase or decrease over the FY 2025 base.

FY 2025 Request

FY 2025 base plus Program Changes.

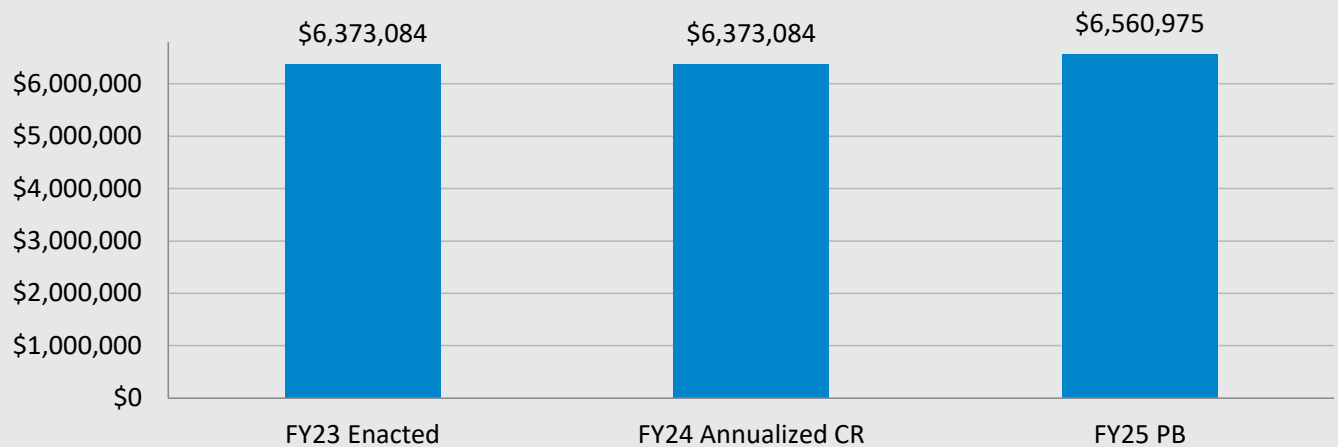
Chapter 1

Introduction



The Advanced Baseline Imager instrument onboard NOAA's GOES West monitored an atmospheric river flowing towards the Pacific Northwest on December 4, 2023. The U.S. West Coast endured over 40 atmospheric river events in 2023 that resulted in severe flooding events, but also helped increase surface water, snow pack, and reservoir levels from multi-year droughts.

NOAA Discretionary Budget Trends (\$ in thousands)



For Fiscal Year (FY) 2025, NOAA proposes a budget of \$6.6 billion in discretionary appropriations, an increase of \$187.9 million from the FY 2024 Annualized Continuing Resolution. The FY 2025 budget builds on investments from the Inflation Reduction Act (IRA) (P.L. 117–169) and Bipartisan Infrastructure Law (BIL) (P.L. 117–58) for climate resilience, climate science, data, and services, environmental observations, and fisheries and protected resources.

The FY 2025 request will prioritize investments in the critical operational and infrastructure activities that support NOAA’s ability to carry out its mission. These substantial investments, along with other targeted increases, will allow NOAA to: maintain its next generation satellite program and collect the observations and data that enable improved forecasts, economic growth, and environmental stewardship; support the deployment of renewable wind energy and advance climate resilience across the Nation through expansion of usable products and services; and protect and restore our natural resources for the benefit and enjoyment of future generations.

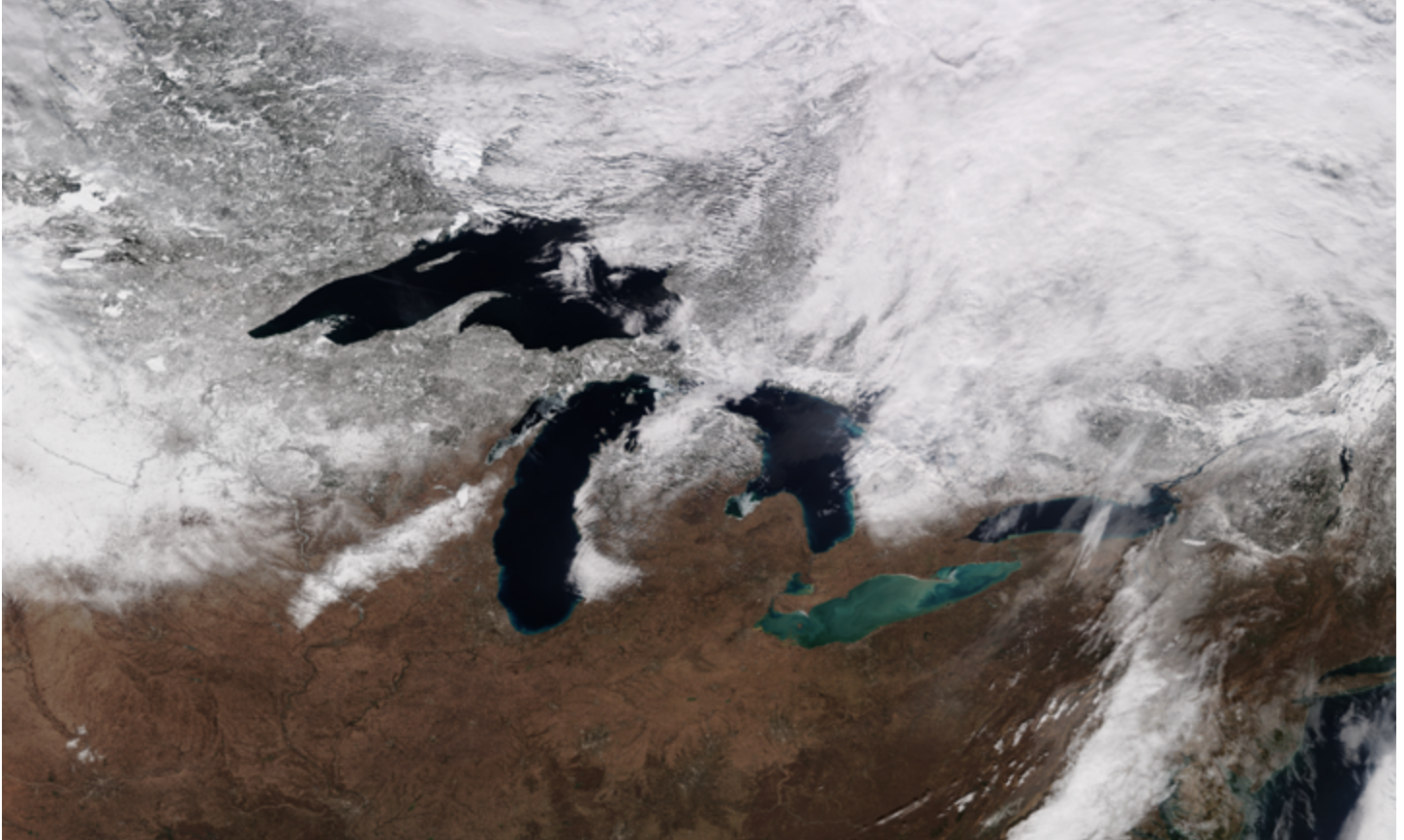
NOAA satellites are critical for NOAA’s mission, as well as the security, safety, and prosperity of the Nation. Data from these satellites provide essential support to all segments of the U.S. economy. In FY 2025, NOAA requests an additional \$773.2 million for significant investments in NOAA’s observational infrastructure, underscoring NOAA’s commitment to making crucial, time-sensitive,

and cost-effective investments to ensure that the Nation’s next-generation satellite systems expand delivery of essential earth system observations to meet the evolving needs of the American public. The FY 2025 budget will help NOAA better observe environmental phenomena connected to climate change-related impacts and patterns, and deliver products, information, and climate services to inform decision makers.

NOAA’s current satellite constellation has proven its worth and will continue to do so into the 2030s. However, NOAA must concurrently invest in the next generation of environmental satellites with the needs of user communities in mind. FY 2025 funding for future geostationary, low earth orbit, and space weather observations will ensure critical data continuity from legacy systems, while providing significant improvements in data and products to meet the complex societal and environmental needs of the Nation. NOAA will partner with National Aeronautics and Space Administration (NASA) and industry to develop and deploy next-generation remote sensing technologies. to maintain and advance NOAA’s mission.

The value of NOAA’s world-class data is enhanced by NOAA applications and accessibility for users. The FY 2025 budget supports much-needed improvements to NOAA’s data infrastructure that will ensure that the data collected are preserved for the future. The request includes funding to transition NOAA from on-premise systems to a cloud-based environment for data ingest,





On February 13, 2023, NOAA-20 captured the unusually low ice cover on the Great Lakes, lowest of any year since 1973 when satellite-based record-keeping began. This information is important for forecasting the magnitude of “lake effect snow.” Lack of ice cover provides moisture to winter storms that produce record snowfall for major cities in its path.

processing, dissemination, and archiving, which will expand the size and diversity of NOAA user communities and data applications. In addition, NOAA will continue to implement vulnerability management against IT Security threats on satellite ground systems to lower the operational risk, which ensures continuity of critical satellite data flow to key customers such as NOAA’s NWS.

The FY 2025 budget in conjunction with investments in BIL and IRA and in collaboration with other Federal agencies will address the climate crisis and strengthen resilience. In FY 2025, NOAA requests an additional \$135.2 million to implement Executive Order (EO) 14008 on *Tackling the Climate Crisis at Home and Abroad*. Establishing an end-to-end value chain for climate and weather data and services starts with investing in observational infrastructure and culminates in delivering comprehensive services to meet a diverse set of missions. Therefore, NOAA will support observational infrastructure, decision support tools, service delivery, and conservation.

NOAA provides timely and actionable environmental observations on global, national, and regional scales from satellites, radar, surface systems, atmospheric greenhouse gas sampling stations, ocean buoys, uncrewed systems, aircraft, and ships. With the funding requested in FY 2025, in addition to the funding provided through the Inflation Reduction Act, NOAA will continue the

acquisition of a second G-550 for its high-altitude jet program. NOAA will invest in Days at Sea and Flight Hours to support critical mission requirements, and the NOAA Corps officers needed to safely and effectively operate ships and aircraft.

NOAA’s weather and climate predictions and information must be reliably delivered to users to inform decision making. Forty percent of the U.S. population lives and works in coastal counties,¹ making a disproportionate segment of our society and economy at increasing risk to hazards such as hurricanes and coastal inundation. Therefore, the FY 2025 request will transform the Advanced Weather Interactive Processing System (AWIPS) into a modern, extensible cloud-based framework. By moving AWIPS to a cloud infrastructure, the exponentially increasing amount of observational data (e.g. satellite and radar data) and model data can be stored and processed in the cloud relieving the need to have complex local computing systems at each NWS local office and allow forecasters to access data and tools from anywhere. In addition, a cloud-based AWIPS will also have benefits to other Federal agencies and academic institutions who utilize AWIPS operationally or for research. NOAA will maintain investments to optimize the NWS Integrated Dissemination Program to ensure the reliable

¹ NOAA Office for Coastal Management, Fast Facts, Economics and Demographics, <https://coast.noaa.gov/states/fast-facts/economics-and-demographics.html> (accessed February 9, 2024)



and timely provision of weather and climate predictions, forecasts, and warnings to the public, emergency management partners, and the U.S. weather enterprise.

Planners and decision makers face challenges when seeking Federal data to support resilience-building efforts. In FY 2025, NOAA will enhance the accessibility and usability of Federal climate data through the Climate Resilience Information System and Climate Mapping for Resilience and Adaptation, a publicly accessible, interoperable architecture that makes it easy for people to find and use Federal agencies' decision-relevant data to support climate adaptation and mitigation planning. NOAA will support this enhancement and expansion to include information specific to additional environmental hazards, integrate stakeholder feedback, and improve the systems' functionality.

NOAA will also invest in increasing conservation and protection in an expanded sanctuary system, which is an integral part of NOAA's implementation of the America the Beautiful initiative that includes the goal to conserve at least 30 percent of U.S. lands and waters by 2030. NOAA's FY 2025 request will enhance NOAA's sanctuary management capacity as new sanctuaries are designated. NOAA will work to identify gaps in marine protection, train the next generation of Marine Protected Area professionals, and expand technology use in sanctuaries to support management priorities.

NOAA will continue to foster environmental stewardship and optimize advances in science and technology to create value-added, data-driven sustainable economic development, with a particular focus on the New Blue Economy: supporting development framed around an information and knowledge-based approach to support fisheries, transportation, shipping, renewable energy, recreation, and livelihoods. In 2023, the Bureau of Economic Analysis, in partnership with NOAA, released the official Marine Economy statistics that the U.S. marine economy contributed about \$432.4 billion, or 1.9 percent, to the Nation's gross domestic product. An increase from 1.7 percent, or \$363.2 billion² and supports 2.3 million jobs annually.³ In FY 2025, NOAA requests an additional \$50.8 million in support of the expansion of offshore wind energy, salmon populations of the Columbia River basin and beyond, and improvements in our tsunami and space regulatory infrastructure.

² Bureau of Economic Analysis, Marine Economy Satellite Account, 2021, <https://www.bea.gov/news/2023/marine-economy-satellite-account-2021> (accessed January 22, 2024)

³ Bureau of Economic Analysis and NOAA, Marine Economy, <https://coast.noaa.gov/states/fast-facts/marine-economy.html> (accessed January 25, 2024)

In support of the Administration's goal to deploy 30 gigawatts of offshore wind energy by 2030, in FY 2025, NOAA will continue to work closely with the Department of the Interior's Bureau of Ocean Energy Management (BOEM), the lead Federal agency for offshore wind siting and permitting, and others to maximize the benefits of offshore wind, minimize the effects of offshore energy projects on protected marine resources, fisheries, and important habitats, and mitigate impacts to NOAA assets, fisheries surveys, and other activities.

NOAA will support the production of 42 million hatchery fish, about 30 percent of the total hatchery salmon and steelhead released in the Columbia River Basin, and associated monitoring programs. Salmon smolts from hatchery programs funded through the Mitchell Act translate into the harvest of about 250,000 fish that add to commercial, recreational, and Tribal fisheries. Fish from the Columbia River Basin also reflect an important component of Canadian and Alaskan ocean fisheries. These funds will augment the \$60 million in IRA funds for Mitchell Act hatchery deferred maintenance and repair.

In FY 2025, NOAA will support the multi-agency National Strategy to Develop Statistics for Environmental-Economic Decisions. This request is part of a multi-agency initiative, and will further develop statistics to measure the contribution of environmental resources and environmental-economic activities to the U.S. as valuable efforts that directly support employment, income, productivity, and growth. As a result of this work NOAA will develop the methodology to expand the Marine Economy Satellite Account to include a natural capital component that builds toward a comprehensive



In support of the nation's clean energy goal of deploying 30 gigawatts of offshore wind energy by 2030, NOAA partnered with BOEM this year to designate two Wind Energy Areas in the Gulf of Mexico. Pictured here are wind turbines off the coast of Block Island, Rhode Island.

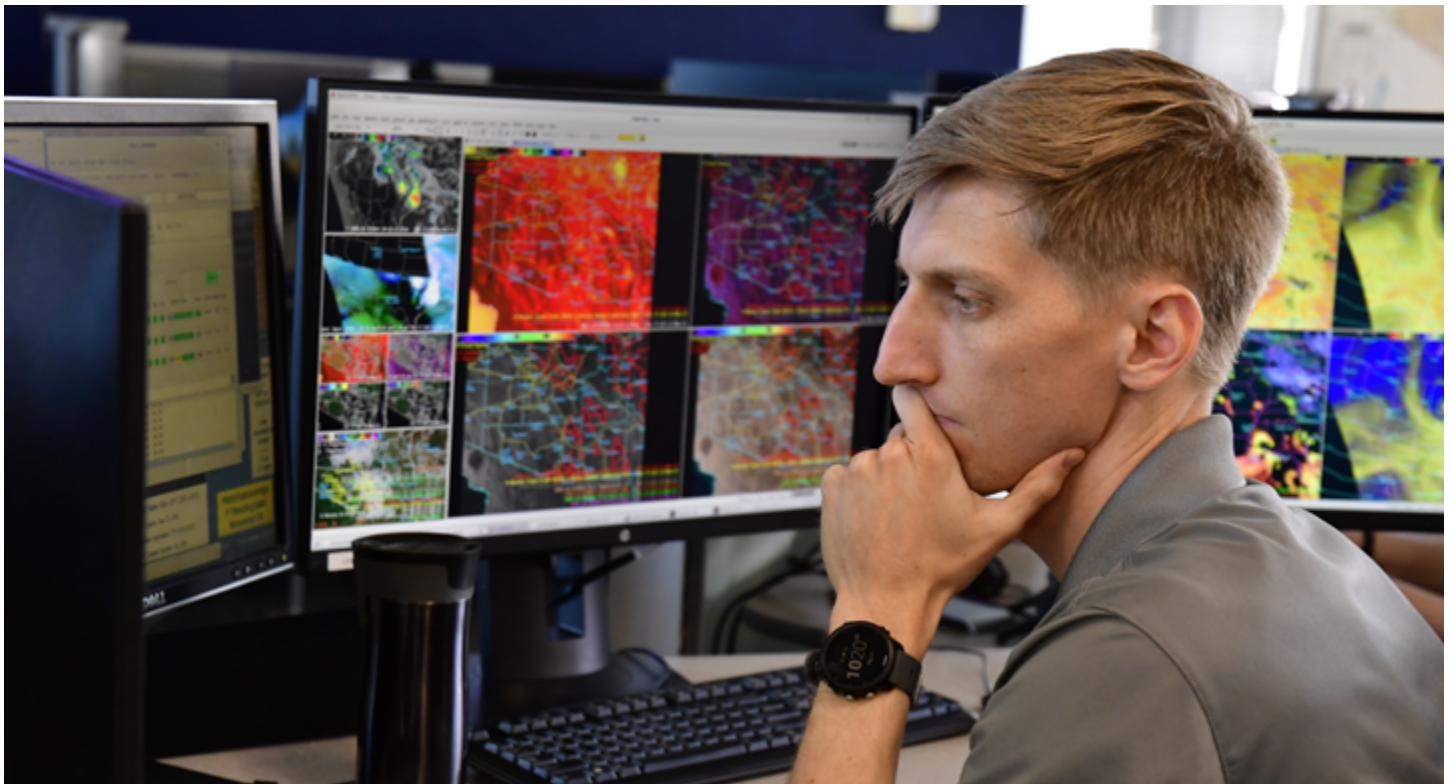
and integrated accounting of ecosystem usage by industry, contributing to ocean intelligence. NOAA will further address tsunamis' unpredictability and potentially disastrous consequences to life and property along vulnerable U.S. coastlines, NOAA will provide a common framework that supports the National Tsunami Warning Center, located in Alaska, and Pacific Tsunami Warning Center, located in Hawai'i. Funding will ensure continuity of operations by eliminating discontinuities within existing systems, and providing consistent guidance to all users, independent of location.

NOAA will foster the conditions for the economic growth and technological advancement of the U.S. commercial space industry. This request will allow the Office of Space Commerce to develop and maintain a new online information system to enhance commercial space companies' experience obtaining regulatory approvals, by enabling "self-service" licensing activities and facilitating streamlined Department of Commerce consultation with inter-agency partners for faster regulatory decision-making. The information system also will provide a simple method to disseminate information regarding U.S. space activity regulation, standards, and best practices. NOAA will also provide necessary staffing to implement Department of Commerce responsibilities under the U.S. Novel Space Activities Authorization and Supervision Framework (December 2023) and legislative reforms proposed by the

Biden Administration. The personnel will implement an expanded regulatory program beyond remote sensing for licensing and monitoring compliance of in-space activities. Providing necessary resources for the Office's expanded roles is critical to meeting U.S. international obligations, ensuring U.S. economic competitiveness in commercial space, and maintaining space sustainability.

Summary

NOAA is working hand-in-hand with partners locally and sharing best practices globally. People know they can turn to NOAA for reliable climate and extreme weather information to help make informed decisions that help save lives and livelihoods. In FY 2025, NOAA will invest in its world class satellite program; expand climate products and services to build a climate-ready Nation; foster environmental stewardship and economic development by optimizing advances in science and technology with a focus on the New Blue Economy; integrate equity across the organization and in our work; and support ongoing investments in NOAA's aircraft, ships, and facilities. NOAA will be well-positioned to help support the communities we serve, particularly those most vulnerable to climate change and its impacts. Through this budget, NOAA will support the whole-of-government effort to address the climate crisis, boost resilience, and promote economic growth.



Meteorologist Kevin Strongman works on the day's forecast at NWS forecast office in Tucson, AZ on May 11, 2023. NWS Tucson serves six counties in southeast Arizona covering roughly 26,000 square miles, a long stretch of the U.S./Mexico border, and a population of roughly 1.28 million people.

Increase Lists

Satellites

Budget Program	PPA	Program Change Title	Program Change	Page Number
NESDIS	U.S. Group on Earth Observations (USGEO)	U.S. Group on Earth Observations (USGEO)	250	42
NESDIS	Polar Weather Satellites	Polar Weather Satellites	158,910	43
NESDIS	Common Ground Services (CGS)	Data-source Agnostic Common Services (DACS)	15,478	43
NESDIS	Geostationary Earth Orbit (GEO)	Geostationary Extended Observations	513,400	43
NESDIS	Space Weather Next	Space Weather Next	85,148	43
Total, Satellites			773,186	

Expanding NOAA's Climate Products and Services

Budget Program	PPA	Program Change Title	Program Change	Page Number
NOS	Sanctuaries and Marine Protected Areas	Increasing Conservation and Protection Across the National Marine Sanctuary System	17,740	18
OAR	Regional Climate Data & Information	Building Climate Resilience with Readily Available, Integrated Data and Information	7,000	31
NWS	Observations	AWIPS in the Cloud—Data Flows	4,500	36
NWS	Central Processing	AWIPS in the Cloud—System Engineering/Architecture	1,500	36
NWS	Dissemination	Integrated Dissemination Program Implementation	11,447	37
NWS	Dissemination	AWIPS in the Cloud—Networking	5,000	37
OMAO	Marine Operations and Maintenance	Enhanced Fleet Operations	41,488	53
OMAO	Aviation Operations and Aircraft Services	Flight Hours in Support of Cross NOAA Climate Objectives	6,629	53
OMAO	NOAA Commissioned Officer Corps	Grow the NOAA Corps	22,881	54
OMAO	Aircraft Recapitalization and Construction	Second Aircraft to meet National Weather Research and Forecasting Needs	17,000	54
Total, Expanding NOAA's Climate Products and Services			135,185	

Providing Science and Data to Inform Economic Development

Budget Program	PPA	Program Change Title	Program Change	Page Number
NOS	Coastal Science, Assessment, Response and Restoration	Foundational Information for Expansion of Offshore Wind Energy	6,219	17
NOS	Coastal Zone Management and Services	Natural Capital Accounting	1,000	18
NMFS	Marine Mammals, Sea Turtles, and Other Species	Wind Energy: Protected Species Environmental Reviews and Science	5,545	23
NMFS	Fisheries and Ecosystem Science Programs and Services	Wind Energy: Fisheries Science and Technical Reviews	6,257	24
NMFS	Fisheries Data Collections, Surveys, and Assessments	Wind Energy: Scientific Survey Mitigation	9,990	24
NMFS	Fisheries Management Programs and Services	Wind Energy: Fisheries Management	2,812	24
NMFS	Salmon Management Activities	Mitchell Act Hatcheries	10,000	24
NWS	Central Processing	Tsunami Warning Center Alignment—Common Analytic System	1,750	36
NWS	Analyze, Forecast and Support	Tsunami Warning Center Alignment—Addressing Information Security Risks	2,250	37
MS	Office of Space Commerce	Space Portal	3,000	48
MS	Office of Space Commerce	Mission Authorization and Supervision	2,000	49
Total, Providing Science and Data to Inform Economic Development			50,823	

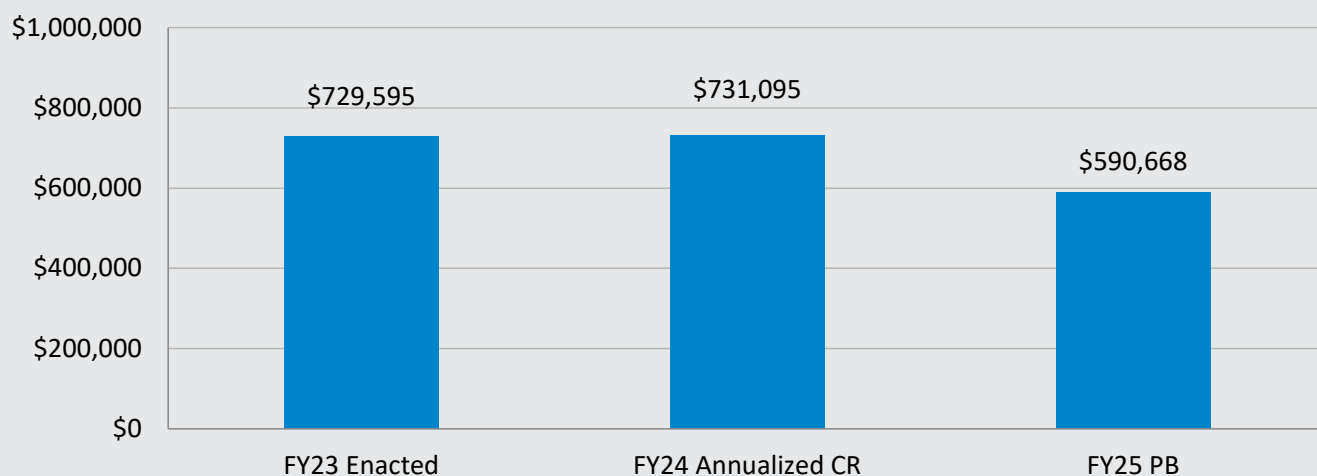
Chapter 2

National Ocean Service



Natalie Dornan, a Nancy Foster Scholar, studies kelp forest health and conducted much of her research in NOAA's Channel Islands National Marine Sanctuary. Here, Natalie stands on the back of the NOAA research vessel Shearwater holding a large piece of kelp.

NOS Discretionary Budget Trends (\$ in thousands)



NOAA's National Ocean Service (NOS) enables safe, sustainable, and efficient use of marine and coastal resources. It does so by gathering oceanographic observations and providing data to users; conducting and applying research for sustainable management, protection, and restoration of ocean and coastal resources; and using place-based approaches to achieve sound resource management. NOS's science-based products and services support coastal economic activity, reduce risk to life and property, improve effective protection and use of coastal resources, and facilitate adaptation to change.

FY 2023 Accomplishments

In FY 2023, NOS finalized its NOS Strategic Plan for 2024–2028, laying out strategies, objectives, and outcomes within four priority areas: *Increase Coastal Resilience in the U.S.*; *Make Equity Central to Our Mission*; *Accelerate Growth of the Ocean Enterprise and the Blue Economy*; and *Conserve, Restore, and Connect*. Guided by this plan, NOS will assume a larger role providing data, products, and services that protect our ocean, coastal, and Great Lakes ecosystems, providing resilience in response to future climatic and economic conditions.

NOS advanced efforts to protect coastal communities from climate impacts at local, state, regional, and national scale and improve high tide flooding products and coastal flooding predictions. In response to user feedback, NOS replaced its Seasonal High Tide Bulletin

with a more frequent Monthly Outlook, which was integrated into NOAA's Coastal Inundation Dashboard with the upgraded Annual Outlook. This improvement allows users to conveniently access a comprehensive range of tidally-driven flooding information in one database, better preparing communities for incoming coastal hazards.

NOS enhanced safe and efficient marine navigation to support a growing Blue Economy. FY 2023 marked the completion of gravity data collection over the entire U.S., including the Aleutian Islands and the Pacific Islands. Data from this 15-year-long Gravity for the Redefinition of the Vertical Datum (GRAV-D) project will improve the model used for measuring accurate heights, a metric that is essential in floodplain mapping, coastal resource management, insurance, and emergency evacuation planning. Once the GRAV-D project is complete, height measurements are expected to be accurate to within an inch, aiding in community planning for improved infrastructure in a changing coastal zone and around the country. In FY 2023, NOS also augmented its real-time oceanographic and navigation products by establishing the 38th Physical Oceanographic Real-time System (PORTS®) in Freeport, Texas, bringing real-time oceanographic data to this region. In addition, 11 new water level stations, sensors, and supporting oceanographic and meteorological instruments were installed in the Gulf of Mexico, Hawaiian Islands, Pacific Northwest, Northeast, Southeast Atlantic, and Alaska, helping more



mariners safely navigate busy seaports in highly variable ocean conditions.

In FY 2023, NOS conserved and restored coastal and marine ecosystems through monitoring, forecasting, and advancements in data innovation. NOS invested over \$16 million for Harmful Algal Bloom (HAB) mitigation research and monitoring to establish a U.S. HAB Control Technology Incubator, enhance detection of toxins, improve forecasts, and investigate the economic impacts of HABs and their interaction with ocean acidification. NOS upgraded all four Operational Forecast Systems covering all five Great Lakes. With enhanced model resolution, more accurate forecasts are available for water temperature and currents and improved predictions for ice coverage, thickness, and velocity across all Great Lakes.

Finally, with funding from BIL and IRA, NOS advanced initiatives to address climate risks. NOS awarded \$109

million for restoration and conservation projects, in partnership with tribes, through the National Coastal Zone Management Program and National Estuarine Research Reserve System. The National Coastal Resilience Fund invested approximately \$144 million in projects addressing coastal flooding and storm preparedness. With \$575 million provided through IRA, NOS unveiled the Climate Resilience Regional Challenge, for transformative climate adaptation projects emphasizing resilience to extreme weather events and hazards.

FY 2025 Request \$624,010,000

NOAA requests a total of \$624,010,000 in discretionary and mandatory funds for NOS mission functions. This total includes Operations, Research, and Facilities (ORF); Procurement, Acquisition, and Construction (PAC); and other mandatory accounts. It is a net decrease of \$148,808,000 in FY 2025 program changes.

NOAA will provide actionable environmental information that is the basis of smart policy and decision-making to build climate resilience. In FY 2025, NOS will advance its capacity for conservation and protection across the National Marine Sanctuary System. NOAA will increase engagement with communities of color, underrepresented groups, and indigenous and native peoples, in conservation, planning, and outreach across the system to identify gaps in marine protection, and train the next generation of Marine Protected Area (MPA) professionals. NOAA will also increase its restoration and conservation activities inside existing national marine sanctuaries and other Marine Protected Areas.

NOAA will also optimize advances in science and technology to create value-added, data-driven economic opportunities and solutions to pressing societal needs. In FY 2025, NOS will support responsible offshore wind development by advancing and sustaining dynamic operational models that incorporate new spatial data and changing ocean and socioeconomic conditions, including data collected by NOS, NMFS, and other NOAA line offices, to inform planning and siting of offshore wind energy. These efforts will significantly contribute to the Administration's goal to deploy 30 gigawatts of offshore wind energy by 2030. NOS will also implement the Marine Natural Capital component of the National Strategy to Develop Statistics for Environmental-Economic Decisions (also known as the National Natural Capital Accounting Strategy). NOAA will engage in this multi-agency initiative to further develop statistics to measure the contribution of environmental resources and environmental-economic activities to the U.S. As a result of this work NOAA will develop the methodology



Application of antibiotic paste to affected corals has shown to be successful in stopping or slowing the progression of stony coral tissue loss disease lesions in Florida. *Photo Credit: Joe Synder*

to expand the Marine Economy Satellite Account (MESA) to include a natural capital component that will build towards a comprehensive and integrated accounting of ecosystem usage by industry, contributing to ocean intelligence.

NOAA also will continue to implement its BIL and IRA programs, ensuring they support and enhance NOS activities. NOS will execute \$232.5 million in BIL funds in FY 2025, with activities including but not limited to, ocean observations, habitat restoration, coastal resilience, and marine debris prevention and removal.

Program change increases are highlighted below. A list of program change decreases by Line Office is located in Appendix 1 and summary of funding by Subactivity is located in Appendix 3. Detailed descriptions of the program changes below are located in the NOAA FY 2025 Congressional Justification.

FY 2025 ORF Budget Summary

NOAA requests a total of \$583,666,000 to support the ORF activities of the NOS, reflecting a net decrease of \$141,810,000 in FY 2025 program changes.

NAVIGATION, OBSERVATIONS AND POSITIONING \$207,657,000

NOAA requests a decrease of \$56,198,000 in program changes for a total of \$207,657,000 in the Navigation, Observations, and Positioning activity. Funds in this activity provide the foundational navigational, geodetic, and oceanographic data to the public and private sectors to inform decisions that protect life, property and the environment, and ensures the flow of commerce to support growth of America's Blue Economy. The resulting data and services support applications across many NOAA mission areas, including safe and efficient navigation and transportation, coastal resilience, climate readiness, infrastructure, emergency planning and response, place-based conservation and restoration, recreation and tourism, and living marine resource management, among others.

COASTAL SCIENCE AND ASSESSMENT \$106,117,000

NOAA requests a net decrease of \$14,800,000 in program changes for a total of \$106,117,000 in the Coastal Science and Assessment activity. Funds will be directed towards applied research, delivery of scientific information for disasters and pollution emergency response and the management, protection, and restoration of ocean and coastal resources and communities. Activities will



This U.S. Coast Guard Lighted Buoy 6 near the Port Freeport entrance channel in Texas has a current meter installed which feeds the Freeport, Texas Physical Oceanographic Real-time System (PORTS®) and will support navigation into and out of Port Freeport.

support America's Blue Economy by developing tools for siting offshore wind energy. Activities will also support critical science to better quantify marine debris impacts to ecosystem services and coastal resilience. Program change increases include:

Coastal Science, Assessment, Response and Restoration: Foundational Information for the Expansion of Offshore Wind Energy: NOAA requests an increase of \$6,219,000 to develop additional social and ecological science to inform responsible offshore wind energy development in support of the Administration's goal to deploy 30 gigawatts of offshore wind energy by 2030. This investment will advance and sustain dynamic operational models that incorporate new spatial data and changing ocean and socioeconomic conditions which inform siting and other decisions, protecting biodiversity and promoting ocean co-use. This request will build upon funds appropriated in FY 2023 for a total of \$8,719,000 in NOS and \$43,854,000 in NMFS, for a NOAA total of \$52,573,000 to support offshore wind energy development and mitigate potential impacts of offshore wind energy projects.

OCEAN AND COASTAL MANAGEMENT AND SERVICES \$269,892,000

NOAA requests a net decrease of \$33,139,000 in program changes for a total of \$269,892,000 in the Ocean and Coastal Management and Services activity. Funds in

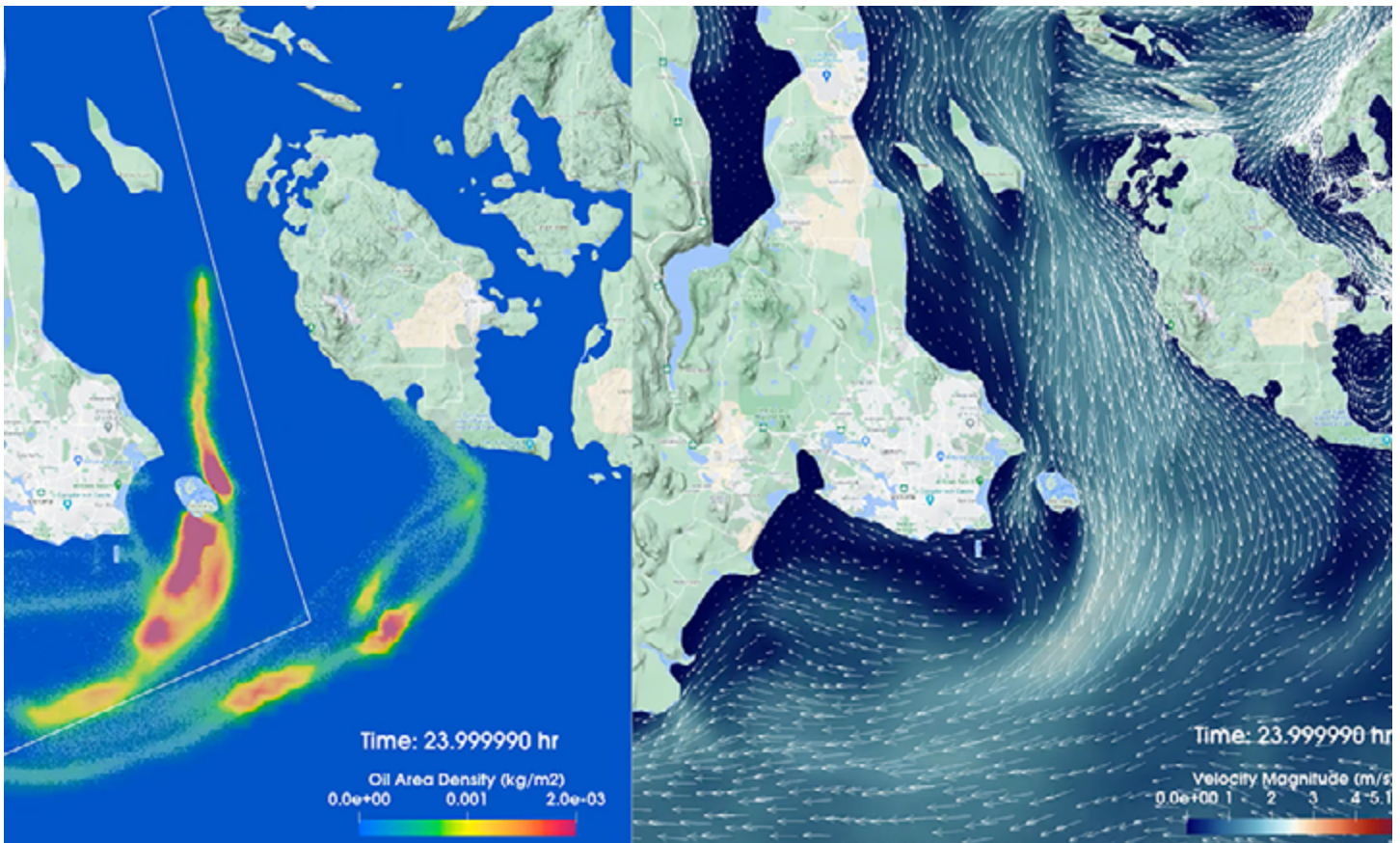
this activity will support place-based, community, and regional approaches to effectively manage coastal and marine resources. They will also support the empowerment of coastal states and communities with actionable information and resources needed to understand risk and increase resilience of coastal ecosystems and communities, with an emphasis on collaborations and partnerships across multiple levels of public and private organizations. Program change increases include:

Coastal Zone Management and Services: Natural Capital Accounting: NOAA requests an increase of \$1,000,000 in program changes to support the implementation of the Marine Natural Capital component of the National Strategy to Develop Statistics for Environmental-Economic Decisions (also known as the National Strategy). This request is part of a multi-agency initiative, and will further develop statistics to measure the contribution of environmental resources and environmental-economic activities to the U.S. as valuable efforts that directly support employment, income, productivity, and growth.

Sanctuaries and Marine Protected Areas: Increasing Conservation and Protection Across the National Marine Sanctuary System: NOAA requests an increase of \$17,740,000 to strengthen conservation in U.S. waters by increasing capacity for protection, conservation, and stewardship in an expanded National Marine Sanctuary System. These funds will enhance NOAA's sanctuary management capacity as new sanctuaries are designated, and support the conservation and restoration of key habitats that support wildlife populations, key ecosystem parameters and key cultural or heritage assets.

FY 2025 PAC Budget Summary

NOAA requests a total of \$7,002,000 to support the PAC activities of the NOS, reflecting a decrease of \$6,998,000 in FY 2025 program changes. These funds will support construction and acquisition in the National Estuarine Research Reserve System and the National Marine Sanctuary System. This includes construction and land acquisition projects for the National Estuarine Research Reserves, and capital costs to maintain the Sanctuary System's facilities and small boat fleet.



A model simulates the trajectory of a hypothetical oil spill and associated wind patterns in Haro Strait, Washington. Accessible ocean and coastal models provide useful information to inform decisions around oil spill response, public health, climate adaptation and resilience, and ecological management.



Crew from the Papahānaumokuākea Marine Debris Project free a green sea turtle from a derelict fishing net. *Photo Credit:* Papahānaumokuākea Marine Debris Project

Mandatory Funds

DAMAGE ASSESSMENT AND RESTORATION REVOLVING FUND

The Damage Assessment and Restoration Revolving Fund was established in 1990 under Section 1012(a) of the Oil Pollution Act to facilitate (1) natural resources damage assessments and (2) restoration, replacement, or acquisition of injured or lost natural resources, including resources of National Marine Sanctuaries and National Estuarine Research Reserves, tidal wetlands, and other habitats for which NOAA is a trustee. The fund receives proceeds from claims against responsible parties as determined through court settlements or agreements.

SANCTUARIES ENFORCEMENT ASSET FORFEITURE FUND

The Sanctuaries Enforcement Asset Forfeiture Fund receives proceeds from civil penalties and forfeiture claims against responsible parties, as determined through court settlements or agreements, for violations of NOAA sanctuary regulations. Penalties received are spent on resource protection within a sanctuary in which the violation occurred.

GULF COAST ECOSYSTEM RESTORATION SCIENCE, OBSERVATION, MONITORING, AND TECHNOLOGY FUND

The Gulf Coast Ecosystem Restoration Science, Observation, Monitoring, and Technology Fund provides funding for the NOAA RESTORE Science Program. The purpose of this program is to initiate and sustain an integrative, holistic understanding of the Gulf of Mexico ecosystem and support restoration efforts and the long-term sustainability of the ecosystem.

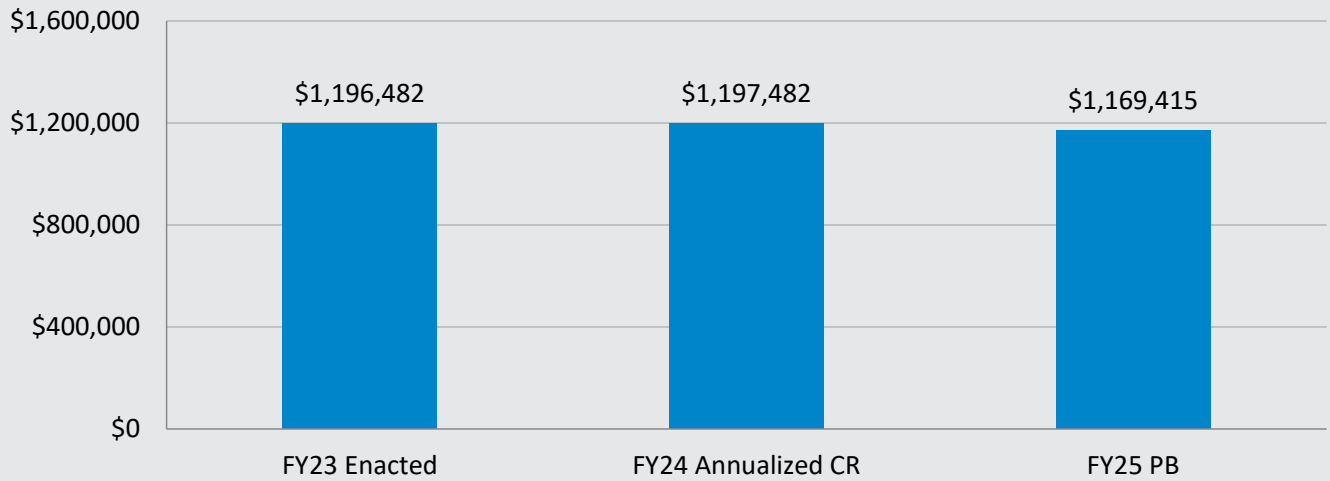
Chapter 3

National Marine Fisheries Service



A coral reef in Tres Palmas, Puerto Rico. Threats such as climate change, stony coral tissue loss disease, bleaching, and coral-killing algae have dramatically decreased coral cover in Puerto Rico and the Caribbean. In response, NOAA's Office of Habitat Conservation awarded nearly \$40 million in FY 2023 to its coral restoration partners in the region through the BIL and IRA.

NMFS Discretionary Budget Trends (\$ in thousands)



NOAA's National Marine Fisheries Service (NMFS) is responsible for the stewardship of the Nation's marine fisheries, protected resources, and their habitats. NMFS provides vital services for the Nation, which ensure: productive and sustainable fisheries, safe sources of seafood, the recovery and conservation of protected resources, and healthy coastal habitats—all backed by sound science and an ecosystem-based approach to management. NMFS manages 492 marine and anadromous fish stocks within the U.S. Exclusive Economic Zone (EEZ), as well as invertebrates, sea turtles, marine mammals, and other marine and coastal species and their habitats. The work of NMFS and our partners promotes trade, jobs, indigenous food security, and industry growth in commercial and recreational fisheries, aquaculture, tourism, renewable energy, and resource use, while protecting various marine species from extinction. U.S. commercial and recreational saltwater fishing provides significant contributions to our economy, which include 1.7 million jobs, \$253 billion in sales impacts, \$73 billion in income impacts, and \$117 billion in value-added impacts to the U.S. economy.¹ The U.S. aquaculture industry produced \$1.5 billion worth of seafood in 2020, which equals about 24 percent of total U.S. seafood production by value.²

¹ National Marine Fisheries Service, Fisheries Economics of the United States, 2020. U.S. Dept. of Commerce, NOAA Tech. Memo. NMFS-F/SPO-236, 231 p., February 2023. <https://www.fisheries.noaa.gov/national/sustainable-fisheries/fisheries-economics-united-states> (accessed February 5, 2024).

² National Marine Fisheries Service, Fisheries of the United States, 2020. U.S. Department of Commerce, NOAA Current Fishery Statistics No. 2020, May 2022. <https://www.fisheries.noaa.gov/national/sustainable-fisheries/fisheries-united-states> (accessed February 5, 2024).

FY 2023 Accomplishments

NMFS supports the Administration's goal of deploying 30 GW of offshore wind (OSW) by 2030. In FY 2023, we made significant progress on authorizations and consultations for 13 projects, including completion of Endangered Species Act (ESA) and Essential Fish Habitat consultations for five projects, issuance of proposed Marine Mammal Protection Act (MMPA) regulations for six



Plates of tuna crudo, halibut ceviche tacos, and eastern oysters.

projects, and final MMPA regulations for one project. We also provided substantive data, technical information, and applicable regulatory review to inform offshore wind leasing activities in three ocean regions. In addition, the Bureau of Ocean Energy Management (BOEM) and NMFS announced a Federal Survey Mitigation Strategy to address impacts of OSW development on NMFS' scientific surveys. This strategy will serve as a model to address the impacts of OSW on NMFS surveys in other regions. The agencies received and addressed extensive public input, making key progress toward informing protection and promoting recovery of endangered North Atlantic right whales while responsibly developing offshore wind energy.

NMFS expanded efforts in FY 2023 to halt the current North Atlantic right whale population decline and recover the species, as outlined in the *North Atlantic Right Whale Road to Recovery*. NMFS also provided the National Fish and Wildlife Foundation with \$18.3 million in grants to support the development and use of innovative fishing gear that reduces the risk of gear entanglement for North Atlantic right whales. The grants support 18 projects that provide critical resources to aid fishermen in innovative fishing gear deployment, advancing promising technologies that remove the need to rely upon vertical buoy and gear marking lines in the water.

In FY 2023, NMFS launched a new Climate Vulnerability Assessment Tool. NMFS conducts Climate Vulnerability Assessments on fish stocks, protected species, habitats, and fishing communities. Scores are derived by experts to determine how much a particular species is exposed to a changing environment, and how sensitive it is to these changes. This can help broaden understanding for decision making related to management and protection. This new tool provides ready access for scientists, academia, and decision-makers to find vulnerability information in one location on nearly 400 marine-related species and habitats.

Aligned with NOAA efforts to integrate equity across the organization and hone product development and service delivery in underserved communities, NMFS released its first Equity and Environmental Justice Strategy in FY 2023. NMFS' science, conservation, and management activities serve a diverse array of communities across the U.S. and Territories, including those historically underserved. This strategy highlights NMFS' commitment to advancing equity and environmental justice, for all people and communities, while building on continuing efforts with underserved and underrepresented communities. For example, NMFS implemented three new island-based fishery management plans for Puerto Rico, St. Thomas and St. John, and St. Croix, replacing U.S.

Caribbean region-wide fishery management plans. This island-based approach to management facilitates a more responsive and nuanced fishery management framework and provides the foundation for an ecosystem-based approach to managing fisheries in the U.S. Caribbean region.

NMFS awarded nearly \$480 million for 109 habitat-related projects through BIL and IRA in FY 2023. This included 23 fish passage projects, 13 Tribal fish passage projects, 38 habitat restoration and coastal resilience projects, and 35 habitat restoration and coastal resilience projects for underserved communities. These projects will help restore access to healthy fish habitats and provide capacity-building and funding for on-the-ground restoration that advance the coastal habitat restoration priorities of Tribes and underserved communities and contribute to species recovery.

FY 2025 Request \$1,228,531,000

NOAA requests a total of \$1,228,531,000 in discretionary and mandatory funds to continue and enhance the operation of NMFS. This total includes Operations, Research, and Facilities (ORF) and other accounts, and is a net decrease of \$45,939,000 in FY 2025 program changes.

NOAA will optimize advances in science and technology to create value-added, data-driven economic opportunities and solutions to pressing societal needs. In FY 2025, NMFS will support an information and knowledge-based approach to support fisheries, transportation, shipping, renewable energy, recreation, and other ocean-based businesses. In support of the Administration's goal of deploying 30 GW of offshore wind energy by 2030, NMFS will expand the capacity for assessing and minimizing the impacts of offshore wind activities on marine species and habitats; minimize adverse economic and other impacts to the fishing industry, tribal treaty and trust responsibilities, and coastal communities; and mitigate impacts to fisheries surveys. NMFS will support offshore wind development through expanded data collection for NOAA trust resources, while working closely with communities, setting quotas for commercial and recreational fishermen, and monitoring and assessing the recovery and conservation programs for protected species and essential fish habitat. Offshore wind development is rapidly expanding and represents a new use of our marine waters requiring substantial scientific and regulatory review. In addition, NMFS will support hatchery programs and operations funded through the Mitchell Act, as well as address hatchery maintenance needs. The production of hatchery fish adds to the economic value of commercial, recreational, and Tribal fisheries in the





A small fishing vessel near wind turbines. *Photo Credit: Bob Brewer, Unsplash*

Columbia river basin and these fish also represent an important component of Canadian and Alaskan ocean fisheries. These activities support the Administration's priority to advance the conservation of salmon and steelhead fishery resources in the Columbia river basin.

NOAA also will continue to implement its BIL and IRA programs, ensuring they support and enhance NMFS activities. NMFS will execute \$213.8 million in BIL funds in FY 2025, with activities including but not limited to, habitat restoration, consultations and permitting, and fish passage.

Program change increases are highlighted below. A list of program change decreases by Line Office is located in Appendix 1 and summary of funding by Subactivity is located in Appendix 3. Detailed descriptions of the program changes below are located in the NOAA FY 2025 Congressional Justification.

FY 2025 ORF Budget Summary

NOAA requests a total of \$1,104,066,000 to support the ORF activities of NMFS, reflecting a net decrease of \$45,639,000 in FY 2025 program changes.

PROTECTED RESOURCES SCIENCE AND MANAGEMENT \$256,738,000

NOAA requests a net decrease of \$8,926,000 in program changes for a total of \$256,738,000 in the Protected Resources Science and Management activity. These funds will support activities to assess, understand, and protect the health of protected species, the ecosystems that sustain them, and the communities that value and depend on them. Program change increases include:

Marine Mammals, Sea Turtles, and Other Species: Wind Energy: Protected Species Environmental Reviews and Science:

NOAA requests an increase of \$5,545,000 to assess the effects of planned offshore wind energy activities on ESA listed species and critical habitat, coordinate MMPA incidental take authorizations, and conduct review of environmental impact statements analyzing the impacts to living marine resources and affected communities under the National Environmental Policy Act (NEPA). NOAA is requesting a total of \$43,854,000 in four complementary areas within NMFS and \$8,719,000 within NOS for a total of \$52,573,000 to support offshore wind energy development and mitigate potential impacts of offshore wind energy projects.

FISHERIES SCIENCE AND MANAGEMENT

\$714,152,000

NOAA requests a net increase of \$9,723,000 in program changes for a total of \$714,152,000 in the Fisheries Science and Management activity. These funds will support scientific and management activities to ensure the sustainability of the Nation's marine fishery resources. Program change increases include:

Fisheries and Ecosystem Science Programs and Services: Wind Energy: Fisheries Science & Technical Reviews: NOAA requests an increase of \$6,257,000 to assess the effects of planned offshore wind energy activities on fish, fisheries, and ecosystems. Funds will support the regulatory review process for offshore energy assessment and advance scientific understanding of the interaction of offshore wind on NOAA trust resources. NOAA is requesting a total of \$43,854,000 in four complementary areas within NMFS and \$8,719,000 within NOS for a total of \$52,573,000 to support offshore wind energy development and mitigate potential impacts of offshore wind energy projects.

Fisheries Data Collections, Surveys, and Assessments: Wind Energy: Scientific Survey Mitigation: NOAA requests an increase of \$9,990,000 to support a national program to mitigate the effects of planned offshore wind energy activities on NMFS scientific

surveys. This investment will enable NMFS to identify and develop new survey approaches and data streams for scientific surveys that will be disrupted by offshore wind energy development. NOAA is requesting a total of \$43,854,000 in four complementary areas within NMFS, and \$8,719,000 within NOS, for a total of \$52,573,000 to support offshore wind energy development and mitigate potential impacts of offshore wind energy projects.

Fisheries Management Programs and Services: Wind Energy: Fisheries Management: NOAA requests an increase of \$2,812,000 to conduct the environmental reviews necessary to assess the effects of planned offshore wind energy activities on fisheries, living marine resources, and affected communities. Funds will allow NMFS to efficiently and effectively carry out increased fisheries environmental reviews, including Essential Fish Habitat (EFH) consultations and review of environmental impact statements, associated with new offshore wind energy activities. NOAA is requesting a total of \$43,854,000 in four complementary areas within NMFS and \$8,719,000 within NOS for a total of \$52,573,000 to support offshore wind energy development and mitigate potential impacts of offshore wind energy projects.

Salmon Management Activities: Mitchell Act Hatcheries: NOAA requests an increase of \$10,000,000 to prioritize full funding for annual operations for the 60



Albacore Tuna Fishing Boat. Photo Credit: Natalie Webster, American Albacore Fishing Association

Mitchell Act hatchery programs at the current facilities, which support the production of 42 million hatchery fish annually. This translates into a harvest of about 250,000 fish that adds to commercial, recreational, and Tribal fisheries. This request also supports the hatchery maintenance backlog to enhance fisheries in the Columbia River Basin, along the West Coast, and in Alaska and advances the Administration's priority to conserve salmon and steelhead fishery resources in the Columbia River Basin.

ENFORCEMENT \$82,455,000

NOAA requests a decrease of \$950,000 in program changes for a total of \$82,455,000 in the Enforcement activity. These funds support the work of NOAA's Office of Law Enforcement in enforcing NOAA's natural resource protection laws and promoting compliance with Federal regulations to conserve and protect our Nation's living marine resources and their natural habitat and to combat illegal, unreported, and unregulated fishing.

HABITAT CONSERVATION AND RESTORATION \$50,721,000

NOAA requests a decrease of \$7,000,000 for a total of \$50,721,000 in the Habitat Conservation and Restoration activity. These funds will support NOAA's programs that protect and restore habitat to sustain fisheries, recover protected species, and maintain resilient coastal ecosystems and communities.

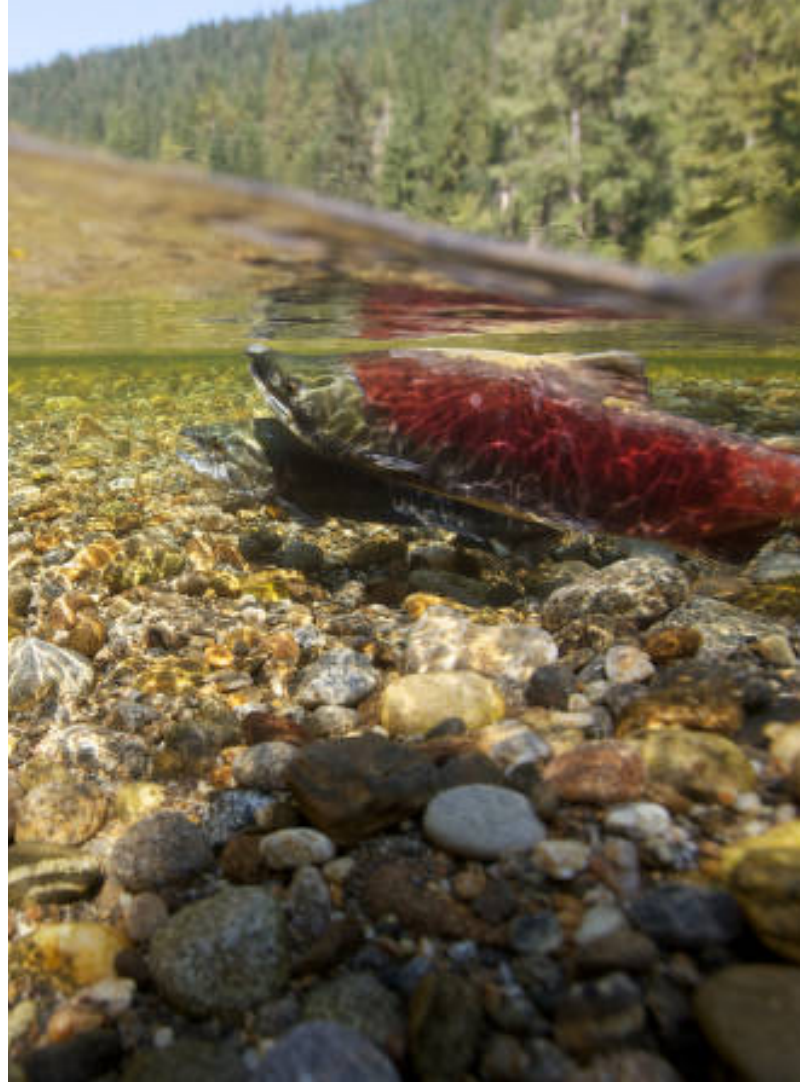
Discretionary Funds

PACIFIC COASTAL SALMON RECOVERY FUND

The Pacific Coastal Salmon Recovery Fund was established by Congress in FY 2000 to protect, restore, and conserve Pacific salmon and steelhead and their habitats through competitive funding to states and Tribes. NOAA requests \$65,000,000 for this program in FY 2025.

FISHERIES DISASTER ASSISTANCE FUND

Fisheries Disaster Assistance provides support for addressing the economic and social effects of a commercial fishery failure, for activities to restore the fishery or prevent a similar failure in the future, and for assisting fishing communities. Congress passed and the President signed a new law on fisheries disasters in December 2022 (Fishery Resource Disasters Improvement Act, P.L. 117-328, Division S, Title II). As a result, the Magnuson-Stevens Fishery Conservation and Management Act has been revised and provides the authority for fishery disaster assistance. If the Secretary of Commerce determines that a fishery disaster has occurred, Con-



Sockeye salmon are one of nearly 400 species included in NMFS Climate Vulnerability Assessments. *Photo Credit: Ryan Hagerty, U.S. Fish and Wildlife Service*

gress may appropriate funds for disaster assistance, which are administered by the Secretary. The FY 2025 Budget includes a reduction of \$300,000, which will eliminate annual appropriations for program support in the Fisheries Disaster Assistance Fund. NOAA will continue to use this account to provide fisheries disaster assistance as fishery disaster determinations are made and funds are available. The Fishery Resource Disasters Improvement Act provides NOAA the authority to direct up to three percent of fishery disaster assistance funds to administrative expenses, so a separate appropriation is no longer necessary.

FISHERMEN'S CONTINGENCY FUND

The Fishermen's Contingency Fund allows NOAA to compensate U.S. commercial fishermen for damage or loss of fishing gear, vessels, or revenues caused by oil and gas-related obstructions in any area of the Outer Continental Shelf. The funds are derived from fees collected annually by the Secretary of the Interior.

FOREIGN FISHING OBSERVER FUND

The Foreign Fishing Observer Fund is financed through fees collected from owners and operators of foreign fishing vessels fishing within the U.S. EEZ. The fund is used by NOAA to pay salaries, administrative costs, data editing and entry costs, and other costs incurred for observers.

FISHERIES FINANCE PROGRAM ACCOUNT

The Fisheries Finance Program is a national loan program that makes long-term, fixed-rate financing available to U.S. citizens who otherwise qualify for financing or refinancing for the reconstruction, reconditioning, or the purchasing of fishing vessels, shoreside processing, aquaculture or mariculture facilities, or individual fishing quota. Additionally, the Fisheries Finance Program can provide loans for fisheries investments of Western Alaska Community Development Quota (CDQ) groups.

MARINE MAMMAL UNUSUAL MORTALITY EVENT FUND

An unusual mortality event is defined under the Marine Mammal Protection Act as “a stranding that is unexpected; involves a significant die-off of any marine mammal population; and demands immediate response.” This fund supports efforts to examine carcasses and live stranded animals allowing understanding of threats and stressors and the ability to determine when a situation is “unusual.”

Mandatory Funds

PROMOTE AND DEVELOP AMERICAN FISHERY PRODUCTS & RESEARCH PERTAINING TO AMERICAN FISHERIES FUND

NOAA will transfer \$377,363,000 from the Promote and Develop account to offset the appropriations in the ORF account for fisheries activities. The transfer to ORF will support data collection, data management, and fisheries stock assessment production within the Fisheries Data Collections, Surveys, and Assessments PPA, the Fisheries Management Programs and Services PPA, the Observers and Training PPA, and the Interjurisdictional Fisheries Grants PPA. With this transfer, there will be no funds remaining for the Saltonstall-Kennedy program in FY 2025. The Promote and Develop account funds are derived from a transfer of thirty percent of duties on imported fisheries products from the Department of Agriculture (USDA).

FISHERIES FINANCE PROGRAM ACCOUNT

The mandatory component of the Fisheries Finance Program Account authority is subject to the Federal

Credit Reform Act of 1990 (FCRA) (2 U.S.C. 661). The FCRA requires estimated loan costs to be appropriated in cash when Congress authorizes annual credit ceilings.

FEDERAL SHIP FINANCING FUND

This account manages the loan guarantee portfolio that existed prior to the enactment of the FCRA.

ENVIRONMENTAL IMPROVEMENT AND RESTORATION FUND

The Environmental Improvement and Restoration Fund was created by the Department of the Interior and Related Agencies Appropriations Act of 1998 for the purpose of carrying out marine research activities in the North Pacific.

LIMITED ACCESS SYSTEM ADMINISTRATION FUND

Under the authority of the Magnuson-Stevens Fishery Conservation and Management Act (MSA) Section 304(d) (2)(A), NMFS must collect a fee to recover incremental costs of management, data collection, and enforcement of Limited Access Privilege programs. Fees are deposited into the Limited Access System Administration Fund. Fees shall not exceed three percent of the ex-vessel value of fish harvested under any such program.



Two short-finned pilot whales spy hop at researchers on a small boat, launched from the NOAA Ship *Oscar Elton Sette* (in the background) during the Hawaiian Islands Cetacean and Ecosystem Assessment Survey (HICEAS). The HICEAS survey is a ship-based, line-transect survey designed to estimate the abundance of cetaceans in the Exclusive Economic Zone around Hawai'i.

WESTERN PACIFIC SUSTAINABLE FISHERIES FUND
MSA Section 204(e) authorizes the establishment of the Western Pacific Sustainable Fisheries Fund to allow foreign fishing within the U.S. EEZ in the Western Pacific through a Pacific Insular Area Fishery Agreement.

FISHERIES ASSET FORFEITURE FUND
MSA Section 311(e)(1) authorizes the Secretary of Commerce to pay certain enforcement-related expenses from fines, penalties, and forfeiture proceeds received for violations of the MSA, Marine Mammal Protection Act, National Marine Sanctuaries Act, or any other marine resource law enforced by the Secretary. NOAA has established a Civil Monetary Penalty/Asset Forfeiture Fund.

NORTH PACIFIC OBSERVER FUND
The North Pacific Groundfish Observer Program places all vessels and processors in the groundfish and halibut fisheries off Alaska into one of two observer coverage categories: (1) a full coverage category, or (2) a partial coverage category. In the partial coverage category, landings from all vessels will be assessed a 1.25 percent fee on standard ex-vessel prices of the landed weight

of groundfish and halibut. Money generated by this fee will pay for observer coverage in the partial coverage category in the following year.

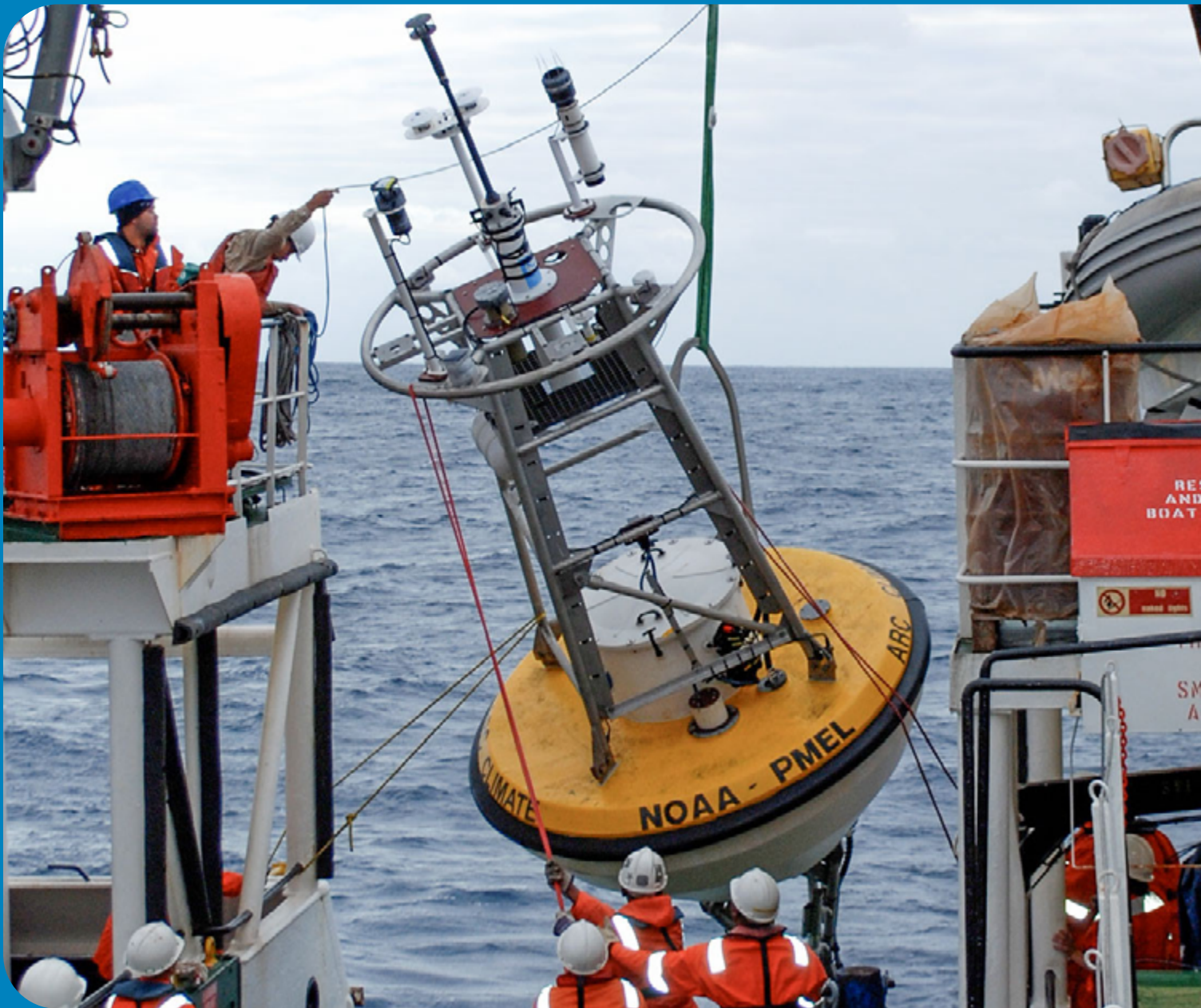
SEAFOOD INSPECTION PROGRAM TRUST REVOLVING FUND
The Seafood Inspection Program (SIP) is a fee-for-service program within NMFS, authorized under the Agricultural Marketing Act of 1946 (7 USC Section 1622(h)). It provides inspection and auditing services to domestic seafood processors and distributors in order to provide health and catch certification for export of fish and fishery products to foreign countries, ensure compliance with food safety regulations, evaluate product quality and grading, and evaluate facility and systems compliance. The Seafood Inspection Program Trust Revolving Fund was established in 2022 to credit receipts and collections for fees assessed to users of the SIP to cover the cost of services provided. SIP costs funded through the trust revolving fund include all salary and benefits, travel, operation and maintenance of core business applications, rent, utilities, supplies, transportation, shipping, equipment, contractual services, and administrative overhead.



With \$1.2 million in funding from the BIL and IRA, NOAA is amplifying local efforts in New Orleans' Lower Ninth Ward and St. Bernard Parish to restore wetlands and revitalize communities. Pictured here, the Lower 9th Ward Center for Sustainable Engagement and Development is leading outreach efforts for the replanting work and design project in the Bayou Bienvenue Wetlands Triangle. The center helps educate residents about the environment so they can contribute to restoration work and advocate for projects that address their needs. *Photo Credit:* Center for Sustainable Engagement and Development

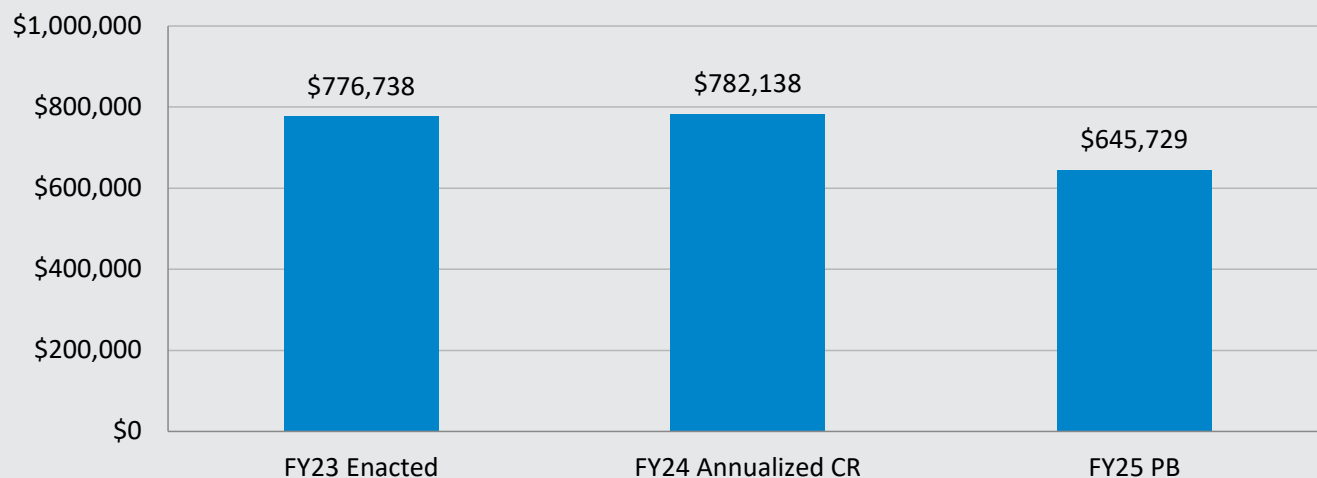
Chapter 4

Office of Oceanic and Atmospheric Research



The Pacific Marine Environmental Laboratory had its 50 year anniversary in November 2023. Since creation it has evolved into one of the world's leading ocean research institutes, specializing in observing ocean conditions from tsunamis to changes in climate and ocean chemistry with the aid of innovative instrumentation and measurement strategies often developed by the lab.

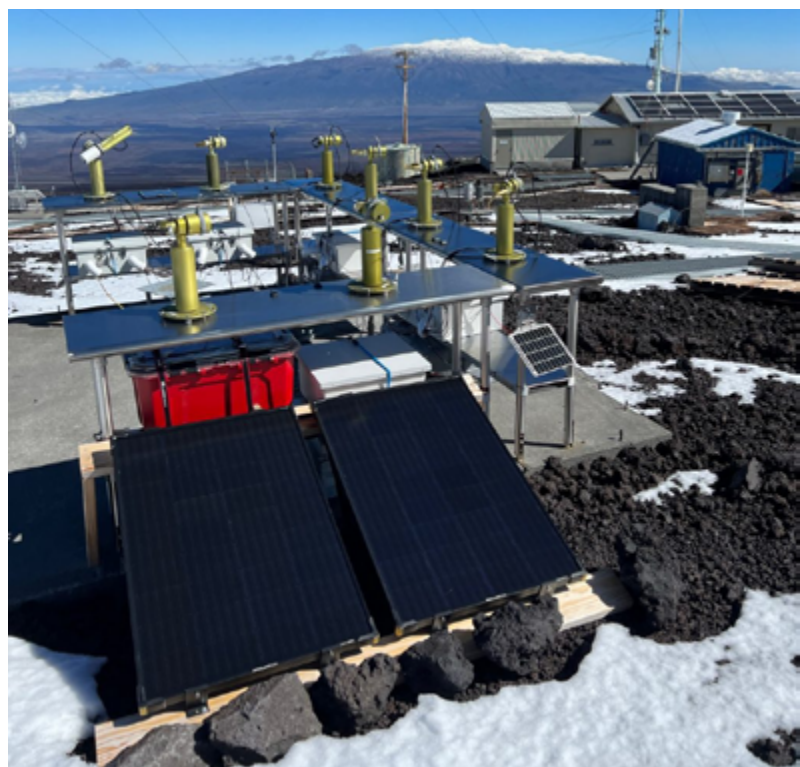
OAR Discretionary Budget Trends (\$ in thousands)



NOAA's Office of Oceanic and Atmospheric Research (OAR) conducts and integrates research across NOAA. OAR's interdisciplinary research promotes better understanding of the Earth, and its scientific results, improves NOAA science and services and strengthens decision-making across the country. OAR research improves the accuracy of weather forecasts; enables communities to plan for and respond to short and long-term weather-related events, such as tornadoes and drought; and enhances the protection and management of the Nation's coastal and ocean resources.

FY 2023 Accomplishments

OAR's mission of improving the understanding of changes in Earth's environment becomes more vital to the Nation's ability to protect lives and property as threats from the changing climate and extreme events become more frequent. In 2023, there were 28 confirmed weather/climate billion-dollar disaster events, another historic year in the United States. Published in 2023, OAR research supported the Fifth National Climate Assessment (NCA5), the preeminent source of information on risks, impacts, and responses to climate change. It includes examples of how communities, including those at greatest risk from a changing climate, are increasing their resiliency. Some key findings related to climate include, actions taken to accelerate net emissions reductions can reduce risks; social inequities for underserved communities are exacerbated; costs to the nation are an estimated \$150 billion



Mauna Loa Observatory solar battery system.

each year and expected to increase; action can result in near-term benefits that outweigh costs; and commercial marine fisheries are impacted in every region.

OAR's weather research is key to advancing NOAA's ability to protect against extreme weather events. To



A test flight packed with sensitive instruments takes off from Ellington Field, in Houston, Texas. To inform evaluations of future efforts to slow global warming, NOAA embarked on its most ambitious stratospheric research mission yet, SABRE (Stratospheric Aerosol processes, Budget and Radiative Effects).

better understand deadly storms in the southeastern United States, scientists continued a second year of research in one of the most comprehensive severe storm field projects to date. Storms in this region can pose higher risks to people and property than in other parts of the country because they are challenging to predict in advance and develop and evolve rapidly. The PERiLS (Propagation, Evolution, and Rotation in Linear Storms) campaign deployed dozens of instruments to measure the atmosphere near and inside storms across seven states. Forecasters in the region will have access to the experimental data to use in real-time and aid in developing forecasts and issuing watches and warnings.

The record snowpack in southwestern Colorado in the 2022–2023 winter allowed NOAA scientists to collect data for a study, SPLASH (Study of Precipitation, the Lower Atmosphere and Surface for Hydrometeorology), to be analyzed alongside data from an adjacent study by the Department of Energy and the Lawrence Berkeley National Laboratory. The 22 year megadrought has depleted the flow of the Colorado River, and flows are

projected to be reduced by another 10 to 50 percent in the next few decades. The drought has added urgency to efforts to improve precipitation estimation and runoff forecasts for the six basin states because there is not enough water in the Colorado River to satisfy all uses. The study’s findings will help improve NOAA models, including the Unified Forecast System, Rapid Refresh Forecast System, and National Water Model, to more accurately forecast weather and river flows in watersheds critical to the southwestern U.S. water supply.

To inform evaluations of future efforts to slow global warming, NOAA embarked on its most ambitious stratospheric research mission yet, SABRE (Stratospheric Aerosol processes, Budget and Radiative Effects). The project is one element of NOAA’s Earth’s Radiation Budget research program. Flights into the stratosphere gathered extensive measurements of trace gases and aerosols in an undersampled region of the atmosphere to generate baseline information to assess future changes in the stratosphere which can lead to changes in climate at the Earth’s surface.



New winter-ready buoy on the ice, surrounded by sand from the shore of Lake Michigan. NOAA's Great Lakes Environmental Research Laboratory has been working to develop new tools like this that may provide a fresh glimpse into what happens under the ice of the Great Lakes each winter.

FY 2025 Request \$645,729,000

NOAA requests a total of \$645,729,000 to support OAR's continued and sustained operations. This total includes Operations, Research, and Facilities (ORF) and Procurement, Acquisition, and Construction (PAC) accounts. It is a net decrease of \$142,533,000 in FY 2025 program changes.

NOAA will provide actionable environmental information that is the basis of smart policy and decision-making to build climate resilience. In FY 2025, OAR will invest additional resources to significantly enhance the accessibility and usability of Federal climate data to build resilience. Planners and decision makers face challenges when seeking Federal data to support their planning and resilience-building efforts. These resources will help address those challenges by making Federal climate data readily available and will efficiently integrate Federal and local data to inform local decision-making.

NOAA also will continue to implement its BIL and IRA programs, ensuring they support and enhance OAR activities. OAR will execute \$36.6 million in BIL funds in FY 2025, with activities including but not limited to, ocean and Great Lakes observations, marine debris prevention and removal and high performance computing.

Program change increases are highlighted below. A list of program change decreases by Line Office is located in Appendix 1 and summary of funding by Subactivity is located in Appendix 3. Detailed descriptions of the program changes below are located in the NOAA FY 2025 Congressional Justification.

FY 2025 ORF Budget Summary

NOAA requests a total of \$577,229,000 to support the ORF activities of OAR, reflecting a net decrease of \$111,033,000 in FY 2025 program changes.

CLIMATE RESEARCH \$212,466,000

NOAA requests a net decrease of \$13,815,000 in program changes for a total of \$212,466,000 in the Climate Research activity. This total advances the long-term observing, monitoring, research, and modeling capabilities performed in OAR's Climate Research. It provides the science to understand how, where, and when Earth's conditions are changing. Program change increases include:

Regional Climate Data and Information: Building Climate Resilience with Readily Available, Integrated Data and Information: NOAA requests an increase of \$7,000,000 to support the Climate Resilience Information System (CRIS) and Climate Mapping for Resilience and Adaptation (CMRA). This increase will significantly enhance the accessibility and usability of Federal climate data for building resilience. Planners and decision makers face challenges when seeking Federal data to support their planning and resilience-building efforts. This increase will help address those challenges by making the data readily available and will efficiently integrate Federal and local data to inform local decision-making. This increase will enable CRIS to be a publicly accessible, interoperable architecture that makes it easy for people to find and use Federal agencies' decision-relevant data to equitably support climate adaptation and mitigation planning. CMRA will be enhanced and expanded to include information specific to additional environmental hazards, integrate stakeholder feedback, and improve the systems functionality.

WEATHER & AIR CHEMISTRY RESEARCH \$139,492,000

NOAA requests a decrease of \$28,746,000 for a total of \$139,492,000 in the Weather and Air Chemistry Research activity. This total supports NOAA's efforts to advance community-developed enhancements to weather models and to provide the resources needed to advance

and accelerate transition of the most promising research activities into operations in the National Weather Service.

OCEAN, COASTAL & GREAT LAKES RESEARCH

\$205,881,000

NOAA requests a decrease of \$47,631,000 in program changes for a total of \$205,881,000 in the Ocean, Coastal, and Great Lakes Research activity. This total includes research activities to better understand the ocean and Great Lakes, their natural resources, and the influence they have on the Earth's weather and climate through technological advancements in modeling, computing, observing, and information dissemination.

INNOVATIVE RESEARCH & TECHNOLOGY

\$19,390,000

NOAA requests a total of \$19,390,000 in the Innovative Research & Technology activity. This total includes continued support for advanced cloud and traditional high performance computing and technology throughout

NOAA, as well as research and evaluation for operational readiness of a full spectrum of uncrewed systems. There are no program changes in this activity.

FY 2025 PAC Budget Summary

NOAA requests a total of \$68,500,000 to support the PAC activities for OAR, reflecting a decrease of \$31,500,000 in FY 2025 program changes.

SYSTEMS ACQUISITION \$68,500,000

NOAA requests a decrease of \$31,500,000 in program changes for a total of \$68,500,000 in the Systems Acquisition activity. This total supports NOAA's efforts to provide sustained capability to the NOAA Research and Development (R&D) High Performance Computing System (HPC) and the acquisition and management of large scale research infrastructure in order to deliver the science and technology that establishes the basis of NOAA's climate, weather, and ocean products and services.



Researchers prepare to launch an experimental weather balloon near a storm in Greenville, Alabama.

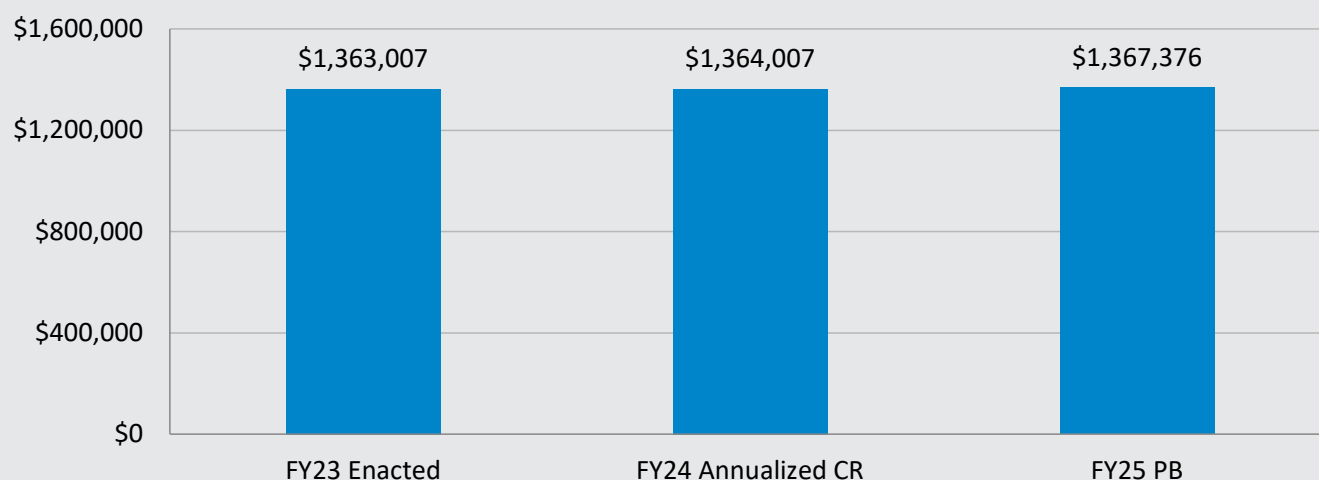
Chapter 5

National Weather Service



Meteorologists from NWS New York, NY work with partners on the ground at Times Square to provide Impact Based Decision Support Services to the City of New York for New Year's Eve events on December 31, 2023. *Photo Credit: New York City Emergency Management.*

NWS Discretionary Budget Trends (\$ in thousands)



NOAA's National Weather Service (NWS) provides weather, water and climate data, forecasts, warnings, and impact-based decision support services (IDSS) for the protection of life and property and enhancement of the national economy. NWS is transforming into a more nimble, flexible, and mobile agency that works eye-to-eye with critical decision makers to provide IDSS and life-saving products and services to the emergency management community and the public as they prepare for and respond to oncoming weather, water and climate events. With 122 Weather Forecast Offices, 13 River Forecast Centers, nine National Centers, and other support offices, the NWS collects and analyzes over 6.3 billion observations per day and releases about 1.5 million forecasts and 50,000 warnings each year. NWS's information infrastructure collects and publicly disseminates life-saving watches, warnings, advisories, data, and products to the American people, government agencies, the private sector, and the global community.

FY 2023 Accomplishments

In FY 2023, NWS provided life-saving IDSS for a record 19 severe storms with billion-dollar consequences, including thunderstorms, tornado outbreaks, and a derecho which tracked from Missouri to Indiana. NWS's warnings for 52 EF3 or greater tornadoes had 92 percent accuracy and a 17-minute average lead time, exceeding Government Performance and Results

Act (GPRA) targets by 4 minutes. During a particularly significant January outbreak in Birmingham, Alabama, the NWS provided 98 percent warning accuracy for 20 tornadoes. NWS's targeted IDSS to school administrators, leading schools to hold students past the regular dismissal time, in order to keep them safe inside. Investments in Warn-on-Forecast storm-scale modeling and prediction; ProbSevere storm tracking including uncertainty information; research in human factors; combined with severe weather training has given forecasters improved tools to provide more actionable IDSS.

In California, atmospheric rivers dumped record-breaking rain and mountain snow, causing widespread flooding from late December 2022 into March 2023. NWS forecasts and outlooks captured the pattern and amounts of extreme precipitation and flooding likelihood with more than one week lead time. NWS provided eye-to-eye support to emergency operations centers, local, state, and federal agencies, the military, and the Governor of California. Based on NWS accurate forecasts, warnings, and IDSS, communities deployed resources to mitigate impacts to life and property, including road closures and evacuations.

From June to September, NWS issued 2,117 heat warnings and advisories and provided IDSS for unrelenting heat and compounding severe weather hazards that occurred across the Continental United States and

Puerto Rico. Heat was the deadliest weather hazard in 2022¹, and results in approximately 1,220 deaths annually², with mortality disproportionately affecting vulnerable populations. NWS Extreme Temperature key messages provided weeks of advanced notice of the enduring and deadly heat. NWS' advanced messaging days and weeks in advance and partner and media engagement triggered decisions to mobilize resources and services, including identifying local financial support, outreach to the homeless, and opening cooling shelters to protect at-risk populations.

Leveraging appropriations and Bipartisan Infrastructure Law (BIL) funding, NWS delivered the first phase of Flood Inundation Mapping (FIM) services to 30 million people in eastern Texas, New York, and Pennsylvania, areas chosen based on flooding potential and vulnerable populations. Massive inundation events, such as those from hurricanes, riverine flooding and extreme precipitation, result in \$4–5B loss annually. FIM neighborhood level visualizations show where and how deep the water will be in near real-time. This actionable information enables emergency and water resource managers to reposition people and resources ahead of flood events, and allows businesses and the public to take actions to protect their lives and property.

NWS successfully prototyped the Advanced Weather Interactive Processing System (AWIPS) in the cloud environment, the first step in ensuring future forecasters have greater flexibility in where and how they deliver IDSS when severe weather threatens. Leveraging FY 2022 BIL funding, NWS deployed a limited-use version of AWIPS in the cloud to incident meteorologists (IMET), who provide IDSS on the frontlines of wildfires. This more responsive capability allows IMETs ready access to satellite imagery, radar data, the latest observations, and model data for situational awareness on location at wildfire incident command, thus keeping firefighters safe.

FY 2025 Request \$1,367,376,000

NOAA requests a total of \$1,367,376,000 to focus on NWS' core mission, which is to provide weather, water and climate data, forecasts, warnings, and impact-based decision support services for the protection of life and property. This total includes Operations, Research, and Facilities (ORF) and Procurement, Acqui-

¹ NWS Weather Related Fatality and Injury Statistics, <https://www.weather.gov/hazstat/> (accessed February 9, 2024)

² Centers for Disease Control and Prevention, Extreme Heat, <https://www.cdc.gov/disasters/extremeheat/index.html> (accessed February 9, 2024)

sition, and Construction (PAC) accounts and includes a net decrease of \$20,077,000 in program changes.

NOAA will provide actionable environmental information that is the basis of smart policy and decision-making to improve readiness. NWS will begin the work of transforming the AWIPS to a cloud framework which will give forecasters efficient, secure remote access to the system to provide in-person IDSS to decision makers anytime, anywhere. In addition, the Integrated Dissemination Program (IDP) investment in FY 2025 will provide necessary resources to maintain 24x7 support to continue to reliably and quickly deliver critical observations, model guidance, forecasts, and watch and warning information to NWS meteorologists, emergency management partners, the Weather Enterprise, and the public.

NOAA will optimize advances in science and technology to create value-added, data-driven economic opportunities and solutions to pressing societal needs. In FY 2025, NWS will address critical improvements needed to its Tsunami Warning Program to ensure mission delivery. Tsunamis are unpredictable and have an extremely high impact with potentially disastrous consequences to life and property along the already vulnerable U.S. coastlines. NWS will focus on the alignment of its Tsunami Warning Centers (TWCs) through a Common Analytic System to ensure seamless Continuity of Operations and mitigate risk of operational failure, as well as Information Technology / Information Security investments to meet rigorous FISMA (High) Information Security requirements.

NOAA also will continue to implement its BIL and IRA programs, ensuring they support and enhance NWS activities. NWS will execute \$50.5 million in BIL funds in FY 2025, with activities including but not limited to, continued improvements in flood inundation mapping and observations.

Program change increases are highlighted below. A list of program change decreases by Line Office is located in Appendix 1 and summary of funding by Subactivity is located in Appendix 3. Detailed descriptions of the program changes below are located in the NOAA FY 2025 Congressional Justification.

FY 2025 ORF Budget Summary

NOAA requests a total of \$1,263,176,000 to support the ORF activities of the NWS, reflecting a net decrease of \$14,928,000 in program changes.





Vehicles became inundated with water while trying to use a road which was flooded by Tropical Storm Hilary to bypass traffic on Interstate 10 near Thousand Palms, CA on August 21, 2023.

OBSERVATIONS \$254,964,000

NOAA requests a net decrease of \$637,000 in program changes for a total of \$254,964,000 in the Observations activity. This request is used to operate and maintain all NWS observing systems, evaluate observational requirements, engineer technical solutions, perform system development and testing, and purchase additional observational data from select third-party vendors. Program change increases include:

Observations: AWIPS in the Cloud—Data Flows: NOAA requests an increase of \$4,500,000 in the Observations Portfolio for a total increase of \$11,000,000 across Observations, Central Processing, and Dissemination to transform the AWIPS, and the underlying infrastructure into a modern, extensible framework by utilizing cloud-based technologies. This request will support the development and deployment of a mobile AWIPS cloud framework which will give forecasters efficient, secure remote access to the system when providing IDSS in embedded partner locations. Funding specific to the Observations Portfolio will migrate the flow of data from observational platforms to the new AWIPS in the Cloud architecture.

CENTRAL PROCESSING \$112,754,000

NOAA requests a net increase of \$641,000 in program changes for a total of \$112,754,000 in the Central Processing activity. Program change increases include:

Central Processing: Tsunami Warning Center Alignment—Common Analytic System: NOAA requests an increase of \$1,750,000 in the Central Processing Portfolio for a total of \$4,000,000 in Central Processing and Analyze, Forecast, and Support for the alignment of the TWCs operation procedures at the analytic level, thereby ensuring product consistency and 24/7 backup capabilities. Funding specific to Central Processing will complete a technology refresh of the TWCs to replace all end of life equipment to mitigate existing operational security risk and enable consistent operational processes for backup capabilities between TWCs.

Central Processing: AWIPS in the Cloud—System Engineering/Architecture: NOAA requests an increase of \$1,500,000 in the Central Processing Portfolio for a total increase of \$11,000,000 across Observations, Central Processing, and Dissemination to transform the AWIPS,

and the underlying infrastructure into a modern, extensible framework by utilizing cloud-based technologies. This request will support the development and deployment of a mobile AWIPS cloud framework which will give forecasters efficient, secure remote access to the system when providing IDSS in embedded partner locations. Funding specific to the Central Processing Portfolio will implement the architecture for AWIPS in the Cloud with professional support, technical assistance, and training to ensure that the defined architecture is implemented in a timely manner to support operational needs.

ANALYZE, FORECAST, AND SUPPORT \$599,741,000

NOAA requests a net decrease of \$3,750,000 in program changes for a total of \$599,741,000 in the Analyze, Forecast, and Support activity. Program change increases include:

Analyze, Forecast, and Support: Tsunami Warning Center Alignment—Addressing Information Security Risks:

NOAA requests an increase of \$2,250,000 in the Analyze, Forecast, and Support Portfolio for a total of \$4,000,000 in Central Processing and Analyze, Forecast, and Support for the alignment of the TWCs operation procedures at the analytic level, thereby ensuring product consistency and 24/7 backup capabilities. Funding specific to Analyze, Forecast, Support will

ensure seamless continuity of operations by eliminating discontinuities within existing systems, and providing the same guidance to all users, independent of location between the two locations of the National Tsunami Warning Center located in Palmer, Alaska, and Pacific Tsunami Warning Center, located in Honolulu, Hawai'i. They currently operate independent tsunami detection, analysis and forecasting systems, and use different analytic techniques and methodologies.

DISSEMINATION \$134,573,000

NOAA requests an increase of \$16,447,000 in program changes for a total of \$134,573,000 in the Dissemination activity. Program change increases include:

Dissemination: Integrated Dissemination Program Implementation:

NOAA requests an increase of \$11,447,000 to optimize and upgrade both the National Dissemination on-premise IT infrastructure and applications, and to build the public cloud framework. This investment will provide the necessary resources to recompute the contract needed for 24x7 support of the IDP.

Dissemination: AWIPS in the Cloud—Networking:

NOAA requests an increase of \$5,000,000 in the Dissemination Portfolio for a total increase of \$11,000,000 across Observations, Central Processing, and Dissemination to transform the AWIPS, and the underlying infrastructure into a modern, extensible framework by utilizing cloud-based technologies. This request will support the development and deployment of a mobile AWIPS cloud framework which will give forecasters efficient, secure remote access to the system when providing IDSS in embedded partner locations. Funding specific to the Dissemination Portfolio will implement the architecture for AWIPS in the Cloud by procuring the necessary network equipment and circuits to ensure adequate and reliable connectivity between operational forecasters and the new AWIPS in the Cloud infrastructure.

SCIENCE AND TECHNOLOGY INTEGRATION

\$161,144,000

NOAA requests a decrease of \$20,364,000 in program changes for a total of \$161,144,000 in the Science and Technology Integration activity. This request will allow NWS to continue engaging with partners in research focused outreach efforts, support targeted research and development efforts, improve a suite of forecast guidance models and post-processing, continuously train the workforce on scientific advances, and infuse new science along with social, behavioral, and economic sciences into operations.



NWS Incident Meteorologists trainee Cody Ledbetter briefs local media on expected weather conditions and how it could help firefighting efforts at the Matt's Creek Wildfire near Natural Bridge, Virginia on November 21, 2023. Incident Meteorologists rely heavily on AWIPS in the Cloud to generate forecasts to support wildland firefighters. The cloud based system can be used more effectively in remote locations.

FY 2025 PAC Budget Summary

NOAA requests a total of \$104,200,000 to support the PAC activities of the NWS, reflecting a decrease of \$5,149,000 in program changes.

SYSTEMS ACQUISITION \$94,200,000

NOAA requests a decrease of \$1,649,000 in program changes for a total of \$94,200,000 in the Systems Acquisition activity. This total provides continued support for the Nation's weather radar and surface weather observing network, ensures the uninterrupted flow of information from the collection of observations, to central guidance production, to local applications of all essential weather and climate data products, and continuity of public watches and warnings, and development of a reliable and scalable NWS dissemination infrastructure to sustain 24x7 mission operations.

Construction

Facilities Construction and Major Repairs \$10,000,000

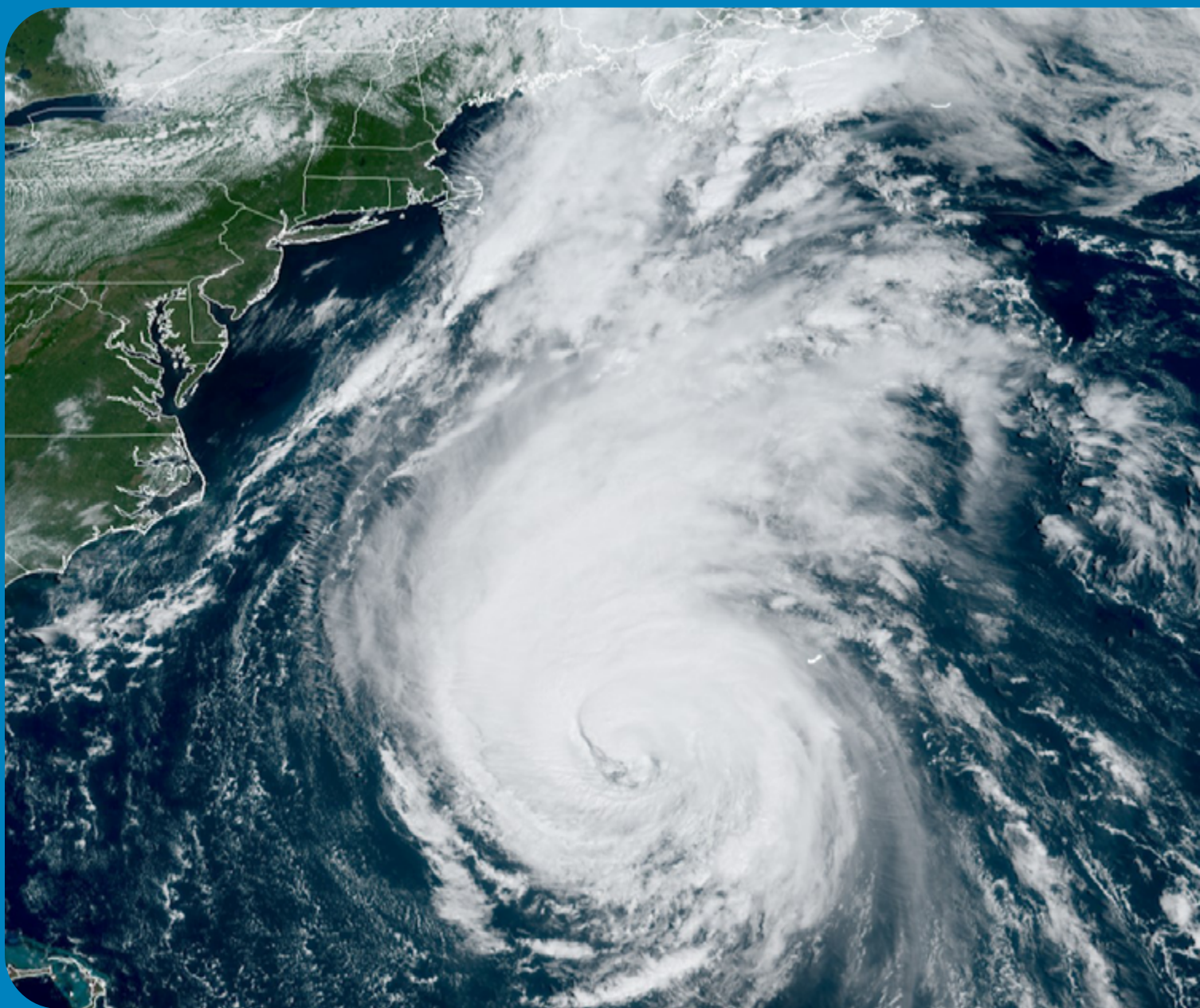
NOAA requests a decrease of \$3,500,000 in program changes for a total of \$10,000,000 in the Construction Activity. This total supports repairs and renewal of forecast offices and other government owned weather facilities that contain critical infrastructure; maintain structural integrity through capital improvements.



Snow blankets the La Sal Mountains in Utah as afternoon clouds move into Arches National Park. The area is covered by the NWS Grand Junction Weather Forecast office which consists of a staff of 25 meteorologists and support personnel who serve the people of western Colorado and eastern Utah.

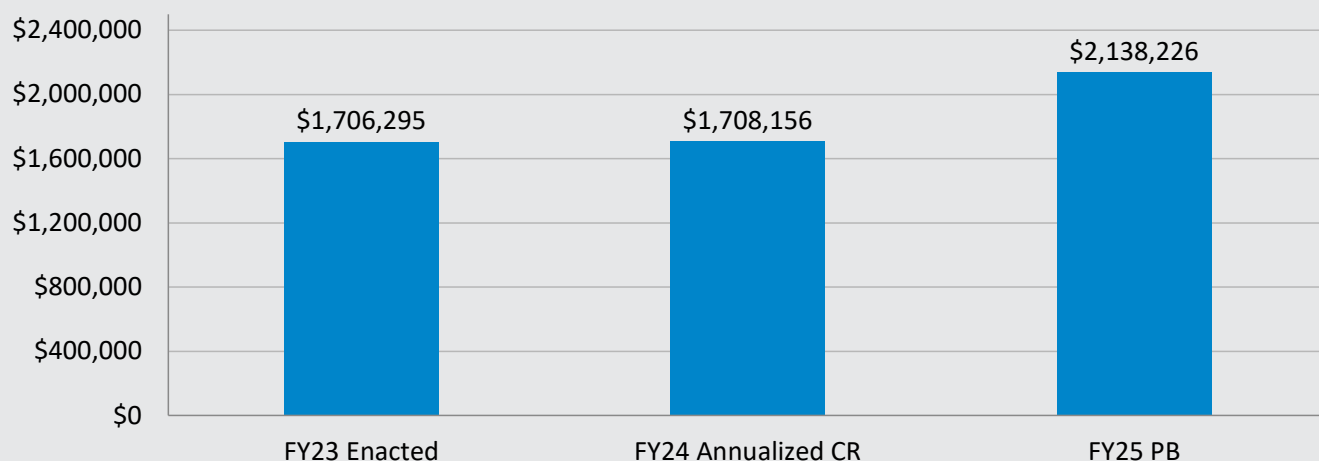
Chapter 6

National Environmental Satellite, Data, and Information Service



Hurricane Lee impacted the East Coast of the U.S. and Southeastern Canada on September 14, 2023. NOAA's GOES-East tracked the development and movement of the storm in near real-time. Impacts included strong winds and rain, coastal flooding, beach closures, and rip tides.

NESDIS Discretionary Budget Trends (\$ in thousands)



The National Environmental Satellite, Data, and Information Service (NESDIS) has the unique role of providing timely access to global environmental space-based and ground-based data, products, and services, 24/7. These data and end user products promote, protect, and enhance the Nation's economy, security, environment, and quality of life. Along with developing, launching, and operating NOAA's satellites, NESDIS manages the product development and distribution of NOAA and partner satellite data, archives environmental data, and provides numerous environmental and resource reports for commercial, state, tribal, regional, national, and global users. NOAA satellites support the national weather and space weather forecasting enterprise by providing timely, high quality data for model outputs and publicly disseminated weather forecasts and warnings. The next generation of satellites are being developed to avoid gaps in satellite coverage that could affect NOAA's ability to support national responsibilities for weather forecasting and environmental monitoring. These next-generation satellite systems will launch in the next decade to further protect people and property in an increasingly complex weather- and climate-sensitive environment.

FY 2023 Accomplishments

In FY 2023, NOAA achieved important milestones to advance its next-generation satellite systems and instruments to better forecast weather and environmental

conditions on Earth and in space, and to provide essential products and services. NOAA's Geostationary Extended Observations (GeoXO) program and QuickSounder project completed their Milestone 2 reviews in December 2022, which baselined the programs' cost, schedule, and performance parameters. Now in their development phase, major instrument development contracts have been awarded for the GeoXO imager, GeoXO hyperspectral sounder, and QuickSounder microwave sounder. The Space Weather Next L1 Series completed its joint NOAA-NASA Key Decision Point A review in September 2023, which affirmed the program's mission concept is feasible and meets the needs of the user community.

In FY 2023, several vital observational assets entered into service. On October 7, 2022, NOAA's Argos-4 instrument was launched aboard its commercial host satellite, General Atomics' GAZelle. In July 2023, Argos-4 was integrated into the wider Argos Data Collection System Network and will help track wildlife, gather environmental data, assist with maritime security, and enable industries to comply with environmental regulations. On November 10, 2022, NOAA's Joint Polar Satellite System (JPSS) launched the JPSS-2 satellite from Vandenberg Space Force Base. JPSS-2 was renamed NOAA-21 once in orbit and it became operational in November 2023. NOAA-21 provides continuous global observations that improve weather models and provide data that are essential for preparing for extreme weather events and climate change. On January 4, 2023, NOAA's GOES-18 entered



service as GOES West, and serves as NOAA's primary geostationary satellite for detecting and monitoring Pacific weather events and environmental phenomena such as atmospheric rivers, coastal fog, wildfires, and volcanic eruptions.

NOAA's Commercial Data Program continued to purchase commercial data to support operational needs and to evaluate other commercially available capabilities. In July 2023, NOAA awarded two contracts for radio occultation data. The operational delivery of radio occultation data will be processed into products to help inform NOAA's weather forecasts and space weather systems, and climate, weather, and atmospheric research. Further, in September 2023, NOAA awarded its first pilot study on ocean surface wind data. The pilot study data will be used to improve upon NOAA's derived wind speed products and investigate the use of derived wind speed products developed by commercial vendors.

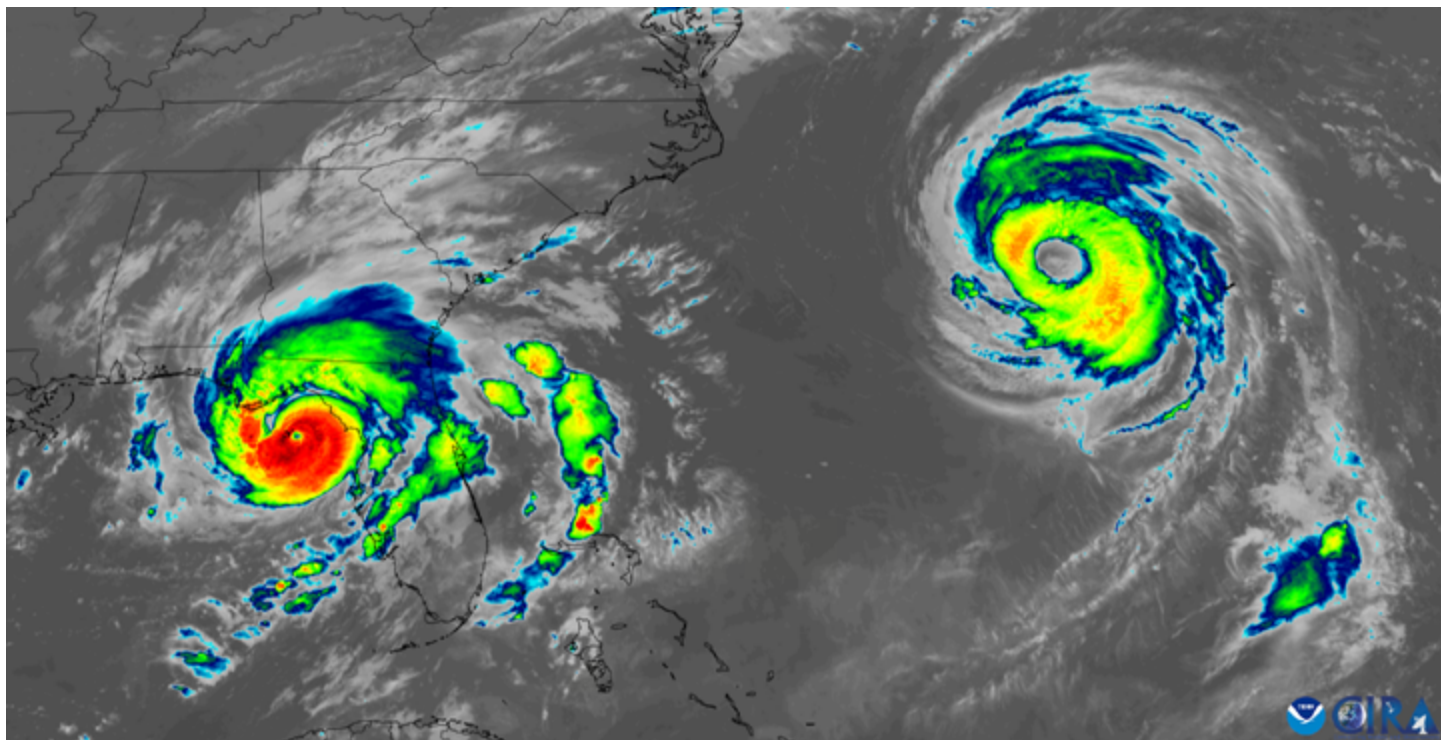
During FY 2023, NOAA's Office of Common Services continued to develop and operationalize the NESDIS Common Cloud Framework (NCCF), more than doubling the operational product capacity. The Regional Hourly Advanced Baseline Imager and Visible Infrared Imaging Radiometer Suite Emissions (RAVE) algorithms are the first to be fully developed in the NCCF. The RAVE products improve weather prediction models that forecast air quality and smoke, allowing NOAA to better forecast

smoke emissions and plumes. Use of the NCCF reduced development times of the RAVE algorithms from three years to one year demonstrating the immense value of the NCCF in accelerating product development to operations.

FY 2025 Request \$2,138,226,000

NOAA requests a total of \$2,138,226,000 to support the continuation and enhancement of NESDIS operations. This total includes Operations, Research, and Facilities (ORF) and Procurement, Acquisition, and Construction (PAC) accounts, and is a net increase of \$423,412,000 in FY 2025 program changes.

NOAA will continue investments in future geostationary, low Earth orbit, and space weather observations to ensure continuity of critical data from legacy systems while providing significant improvements in data and products. In FY 2025, NOAA will continue the development of the Geostationary Extended Observations program, advancing NOAA's weather, ocean, and climate observational capabilities to support U.S. forecasting and prediction operations. NOAA will return to the resource level required for Polar Weather Satellites, supporting operations of on-orbit polar satellites and maintain development schedule of JPSS-3 and -4, and support Space Weather Next and the execution of a comprehen-



On August 30, 2023, NOAA's GOES-East captured an infrared image of Hurricane Idalia as the storm approached Florida (left), while Hurricane Franklin (right) swirled in the Atlantic Ocean near the island of Bermuda. GOES satellites provide new observations every 15 minutes to support critical nowcasting of weather events.



An Argos-tagged green sea turtle is released by the New York Marine Rescue Center off Long Island. Argos instruments onboard NOAA, U.S. commercial, European, and Indian polar-orbiting satellites collect a variety of data from both stationary and mobile transmitters from around the world for environmental monitoring and wildlife tracking. *Photo Credit: Christopher Paparo*

sive space weather program, including a Lagrange point 1 Series continuity project and a partnership project to Lagrange point 5. Further, through the Data-source Agnostic Common Services initiative, NOAA will support the NCCF, which enables enhanced satellite data products to meet NOAA's needs and deliver a common cloud platform that will scale to meet NOAA's data holding growth while expanding data access, enhancing data innovation capability and allowing for improved products and services. Crucial, time-sensitive investments in satellites reinforce NOAA's commitment to ensuring the Nation's next-generation satellite systems better deliver essential earth system information to address emerging environmental challenges, improve health outcomes, save lives, support the New Blue Economy, and meet the needs of the American public.

NOAA will continue to foster environmental stewardship and economic development by optimizing advances in science and technology to support fisheries, agriculture, transportation, shipping, renewable energy, hazard mitigation, recreation, and other critical needs across the Nation. In FY 2025, NESDIS will continue to ensure that satellite-derived data are provided to users and to support NOAA's ability to better observe environmental phenomena connected to climate change-related impacts and patterns that devastate communities, local economies, and critical infrastructure. These products and services help people make informed decisions as well as identify climate service needs of traditionally underserved communities and populations.

NOAA also will continue to implement its BIL and IRA programs, ensuring they support and enhance NOAA activities. NESDIS will execute \$5.7 million in BIL funds in FY 2025, for activities including, but not limited to, data support and integration for a range of products such as flood mapping and coastal modeling.

Program changes are highlighted below. A summary of funding by Program, Project, and Activity is located in Appendix 2. Detailed descriptions of the program changes below are located in the NOAA FY 2025 Congressional Justification.

FY 2025 ORF Budget Summary

NOAA requests a total of \$397,510,000 to support the ORF activities of NESDIS, reflecting a net decrease of \$3,750,000 in FY 2025 program changes.

ENVIRONMENTAL SATELLITE OBSERVING SYSTEMS \$324,220,000

NOAA requests a net decrease of \$1,250,000 for a total of \$324,220,000 in the Environmental Satellite Observing Systems activity. This total provides continued support for satellite operations, and the development of new products that leverage global observing system capabilities to bring to reality, improved forecasts and warnings that protect lives and property. Program change increases include:

U.S. Group on Earth Observations (USGEO): NOAA requests an increase of \$250,000 to the GEO Trust Fund for the operations of the GEO Secretariat and to support the efforts of AmeriGEO in the Americas.

NATIONAL CENTERS FOR ENVIRONMENTAL INFORMATION (NCEI) \$73,290,000

NOAA requests a total of \$73,290,000 in the NCEI activity. This total provides continued support for aligning science and stewardship requirements, products aimed to address regional and local challenges, and resources to ensure return on investments from data collected by NOAA space-, ground-, oceanic-, and air-based observation systems. There are no program changes in this activity.

FY 2025 PAC Budget Summary

NOAA requests a total of \$1,740,716,000 to support the PAC activities for NESDIS, reflecting a net increase of \$427,162,000 in FY 2025 program changes.

SYSTEMS ACQUISITION \$1,738,266,000

NOAA requests a net increase of \$427,162,000 for a total of \$1,738,266,000 in the Systems Acquisition activity. This total provides continued support for the development of NOAA's next generation satellite architecture, deployment, and sustainment of flight and ground assets that meet the Nation's needs for observations and measurements, and to lead and manage the NESDIS system architecture, enterprise engineering, and advanced planning efforts to deliver sustainable, robust, and adaptive systems and services that meet NESDIS customer needs. Program change increases include:

Polar Weather Satellites (PWS): NOAA requests an increase of \$158,910,000 to return to the resource level necessary to continue operations for the on-orbit Suomi NPP, NOAA-20, and NOAA-21 satellites, as well as maintain schedule in the development of the JPSS-3 and JPSS-4 satellites.

Total PWS Request (BUDGET AUTHORITY IN \$K)

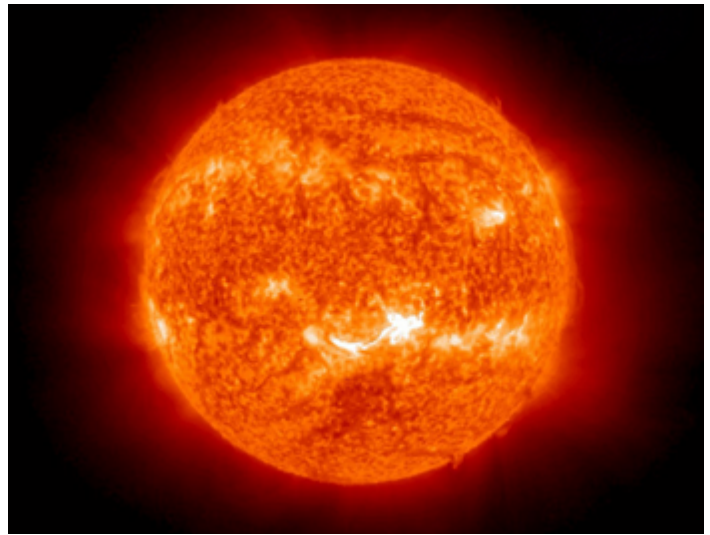
FY 2025 Request	342,410
FY 2026	342,410
FY 2027	342,410
FY 2028	342,410
FY 2029	292,410
CTC	1,789,432
Total	16,778,585

Common Ground Services: Data-source Agnostic

Common Services (DACS): NOAA requests an increase of \$15,478,000 to realize the full functionality of the NCCF. This provides a cost-effective solution to continue leveraging partner and commercial observations, deliver enhanced products and services, and improve capabilities for data discoverability and access.

Total DACS Request (BUDGET AUTHORITY IN \$K)

FY 2025 Request	45,500
FY 2026	45,500
FY 2027	45,500
FY 2028	45,500
FY 2029	45,500
CTC	N/A
Total	N/A



On April 21, 2023, the Solar Ultraviolet Imager instrument on board NOAA's GOES East detected the beginning of a coronal mass ejection, which caused a geomagnetic storm affecting Earth on April 23. With this advanced warning, NOAA's Space Weather Prediction Center was able to issue forecasts, predictions, and alerts.

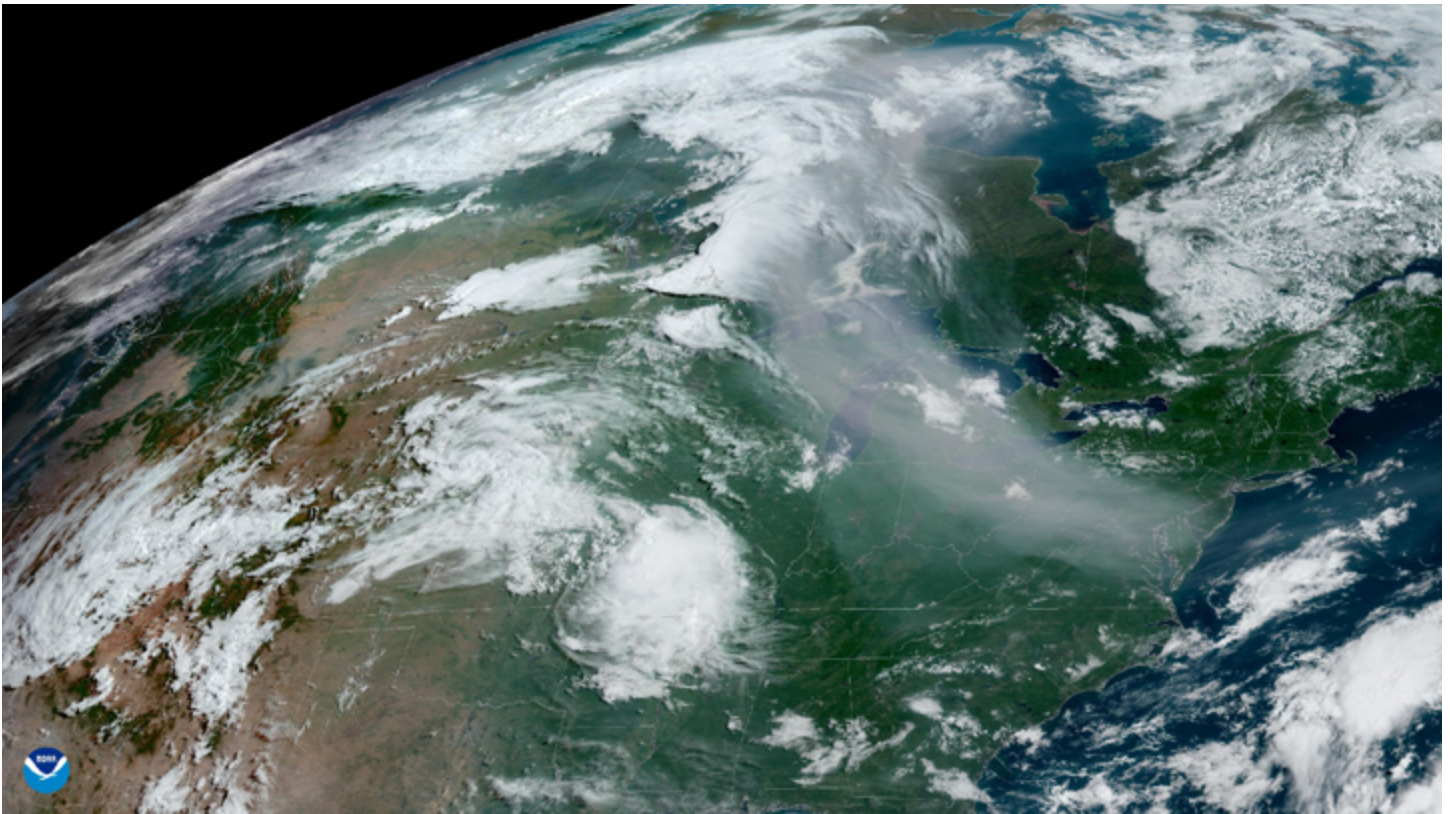
Geostationary Earth Orbit (GEO): Geostationary

Extended Observations: NOAA requests an increase of \$513,400,000 to continue the development of the GeoXO program, NOAA's next generation operational geostationary satellite system. The combined capabilities of GeoXO instruments will improve overall weather forecasting and nowcasting of severe weather conditions; provide real-time monitoring of air quality conditions; and improve ocean forecasting and fisheries management.

Total GeoXO Request (BUDGET AUTHORITY IN \$K)

FY 2025 Request	798,400
FY 2026	691,500
FY 2027	1,320,000
FY 2028	1,320,000
FY 2029	1,320,000
CTC	13,465,069
Total	19,644,389

Space Weather Next (SW Next): NOAA requests an increase of \$85,148,000 to develop and deploy operational space weather observational capabilities. SW Next is NOAA's next generation space weather observation program required by the National Weather Service's Space Weather Prediction Center to provide critical data used for warnings of space weather phenomena and the protection of lives, property, and critical infrastructure such as electrical grids, telecommunications, and on-orbit satellite systems.



During the 2023 summer months, smoke from unprecedented Canadian wildfires affected major populations in the Midwest and East Coast of the United States. NOAA's GOES-East aided by detecting wildfire hotspots and continually monitoring the path of smoke in near real time.

Total SW Next Request (BUDGET AUTHORITY IN \$K)	
FY 2025 Request	236,754
FY 2026	231,200
FY 2027	231,200
FY 2028	231,200
FY 2029	231,200
CTC	TBD
Total	TBD

CONSTRUCTION \$2,450,000

NOAA requests a total of \$2,450,000 in the Construction activity. This total supports repairs and renews its 24x7 operations facilities that house critical billion-dollar electronic systems; maintains structural integrity through capital improvements; and ensures availability of power and cooling necessary for NOAA's satellite ground system. There are no program changes in this activity.

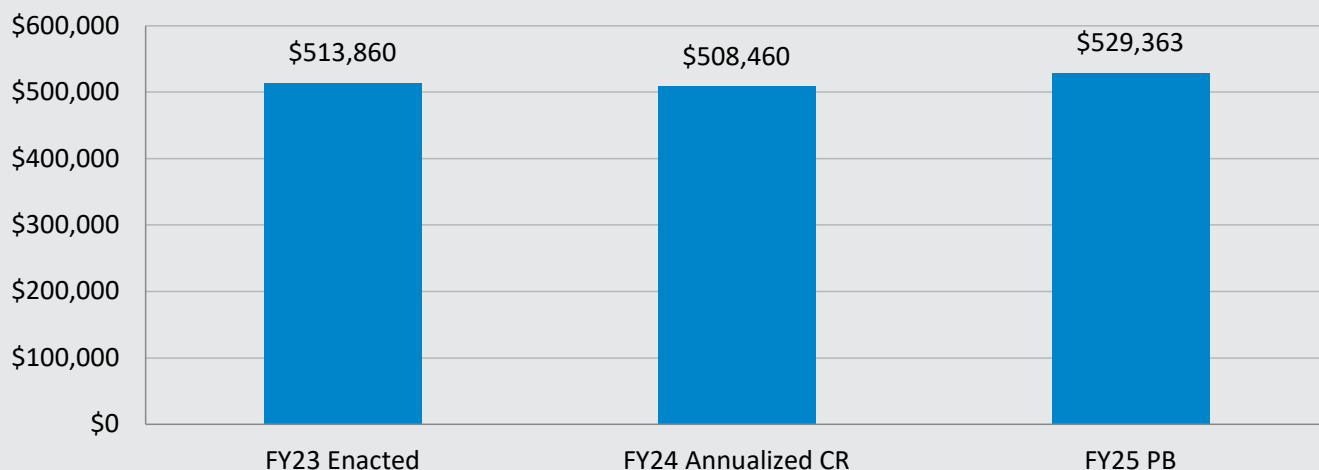
Chapter 7

Mission Support



NWS Sterling Weather Forecast Office the night of April 4, 2023. The forecast area includes 44 counties in eastern West Virginia, northern and central Virginia, the majority of the state of Maryland, as well as the city of Washington, D.C.

MS Discretionary Budget Trends (\$ in thousands)



NOAA's Mission Support services are the backbone of NOAA's programs and mission. These activities ensure that NOAA staff have the proper work environment, the necessary tools and equipment, and vital personnel and finance services which, in turn, allow them to provide the finest possible service to the American people, the economy, and the environment.

FY 2023 Accomplishments

In FY 2023, the Staff Offices of Mission Support provided numerous services in support of the NOAA mission. NOAA's Acquisitions and Grants Office (AGO) provides high-value services to NOAA Line and Staff Offices, compliant with laws and regulations, on time, and at the best value to the government through the planning, solicitation, award, administration, and closeout of more than 23,000 acquisition and financial assistance transactions annually. NOAA's ability to accomplish its mission and achieve its goals depends significantly on AGO's ability to process over \$4 billion annually in accordance with statutory and regulatory requirements. In FY 2023, AGO obligated over \$2.4 billion and managed over 4,600 active contracts valued at over \$6 billion.

NOAA's Office of Human Capital Services (OHCS) achieved the greatest number of Federal personnel hiring actions it's had since 2008. OHCS led and coordinated 1,802 hiring actions by NOAA hiring

managers including 1,650 actions serviced by a support contractor, and the hiring of 27 Senior Executives- SES/ST/SL and 125 Wage Mariners. Of those total hiring actions, 31 percent (557) were made using Direct Hire or Special Appointment authorities. This emphasizes the importance of these mechanisms and reflects OHCS utilization of them which enables hiring managers to make best-qualified and timely personnel selections. Overall, NOAA exceeded the FY 2023 hiring goal by 12.6 percent (202) thus providing an infusion of critical talent.

NOAA's Office of Chief Information Officer (OCIO), NOAA Open Data Dissemination (NODD) increased its data holdings from 23 petabytes to 38 petabytes, a 60 percent increase. This represents increased public access to NOAA's open data on commercial cloud platforms through public-private partnerships removing obstacles to the public use of NOAA data. The team also improved services by implementing Customer Relationship Management software to better track and address customer inquiries and NODD Office Hours which brings together NOAA scientists, data experts, cloud partners, and customers to give better insight into NOAA data and its use generally, as well as on the platform.

NOAA's Office of Chief Administrative Officer had an official ribbon cutting in FY 2023 signifying the completion of the new pier in Ketchikan, AK providing NOAA

Ship *Fairweather* a safe and operable homeport. OCAO also awarded a construction contract for a new pier at Charleston, SC to support a permanent homeport for NOAA Ships *Ronald H. Brown* and *Nancy Foster*.

NOAA's Office of Space Commerce (OSC), made significant progress on the implementation of the Traffic Coordination System for Space (TraCSS) program to support space situational awareness (SSA). TraCSS will ingest unclassified data from Department of Defense and integrate commercial SSA data and services to promote spaceflight safety, space sustainability, and international coordination. In FY 2023, the OSC developed a distinct procurement strategy for TraCSS, awarded a cloud utility contract, and is progressing on major procurements.

FY 2025 Request \$529,363,000

NOAA requests a total of \$529,363,000 to position NOAA's Mission Support programs for more effective execution of NOAA's diverse missions. This total includes Operations, Research, and Facilities (ORF) and Procurement, Acquisition, and Construction (PAC) accounts and includes a net increase of \$300,000 in FY 2025 program changes.

NOAA will continue to foster environmental stewardship and optimize advances in science and technology to create value-added, data-driven sustainable and equitable economic development. In FY 2025, OSC will provide commercial operators with space situational awareness products and services to enhance the safety and security of their on-orbit operations. A new information system will allow companies to perform "self-service" licensing activities for more rapid regulatory decision-making and an enhanced licensee experience. OSC will effectively implement an expanded regulatory and advocacy program with responsibilities for licensing and monitoring compliance of in-space activities beyond remote sensing.

NOAA also will continue to implement its BIL and IRA programs, ensuring they support and enhance NOAA's mission. MS will execute \$ 8.0 million in BIL funds in FY 2025 in support of activities including but not limited to, grants management, acquisition, and hiring.

Program change increases are highlighted below. A list of program change decreases by Line Office is located in Appendix 1 and summary of funding by Subactivity is located in Appendix 3. Detailed descriptions of the program changes below are located in the NOAA FY 2025 Congressional Justification.



Ellie Madigan, a 2022 NOAA Hollings scholar, drove a boat out to her field site, Big Marco Pass Critical Wildlife Area, on Marco Island, Florida, during her summer internship at Rookery Bay National Estuarine Research Reserve. *Photo Credit: Zach Matchinski*

FY 2025 ORF Budget Summary

NOAA requests a total of \$439,363,000 to support the ORF activities of Mission Support, reflecting a net increase of \$300,000 in FY 2025 program changes.

EXECUTIVE LEADERSHIP \$32,476,000

NOAA requests a total of \$32,476,000 in the Executive Leadership activity. These funds will support NOAA's centralized executive management as well as policy formulation and direction. There are no program changes in this activity.

MISSION SERVICES AND MANAGEMENT \$186,785,000

NOAA requests a total of \$186,785,000 for the Mission Services and Management activity. These funds will support the planning, administrative, financial, procurement, information technology, human resources, and infrastructure services that are essential to the safe and successful performance of NOAA's mission. There are no program changes in this activity.



Patrick Cullis, a scientist at NOAA Boulder, prepares a weather balloon for launch at the 2023 Take Your Child To Work Day event, captivating young minds with the magic of science.

IT SECURITY \$16,596,000

NOAA requests a total of \$16,596,000 in the IT Security activity. These funds defend NOAA's data, networks, equipment, intellectual property and personnel against a wide variety of adversaries ranging from nation states to lone-wolf attackers. There are no program changes in this activity.

PAYMENT TO DOC WORKING CAPITAL FUND \$85,673,000

NOAA requests a total of \$85,673,000 for the Payment to the DOC Working Capital Fund activity. There are no program changes in this activity.

FACILITIES MAINTENANCE \$6,594,000

NOAA requests a total of \$6,594,000 in the Facilities Maintenance activity. In FY 2025, NOAA will continue to reduce the backlog of deferred maintenance and repair across the NOAA facilities portfolio, provide project and program management, and begin pre-planning for Silver

Spring Metro Center lease requirements. There are no program changes in this activity.

OFFICE OF SPACE COMMERCE \$75,638,000

NOAA requests an increase of \$5,000,000 in program changes for a total of \$75,638,000 in the Office of Space Commerce activity. These funds will strengthen the Office as the principal unit for space commerce policy activities within the Department of Commerce. Program change increases include:

Office of Space Commerce: Space Portal: NOAA requests an increase of \$3,000,000 to develop and maintain a new information system. This new information system will enhance the customer experience for commercial space companies needing regulatory approvals, by enabling "self-service" licensing activities and by facilitating streamlined secure Department of Commerce consultation with interagency partners for faster regulatory decision-making. The Portal will provide a simple method by which the U.S. Government can

disseminate information regarding U.S. space activity regulation, standards, and best practices. The new information system also acts as a data repository for U.S. and global commercial space information to assist new and established space entrepreneurs.

Office of Space Commerce: Mission Authorization and Supervision:

NOAA requests an increase of \$2,000,000 to provide necessary staffing to implement Department of Commerce responsibilities under the U.S. Novel Space Activities Authorization and Supervision Framework (December 2023) and legislative reforms proposed by the Biden Administration. The personnel will provide program management, administrative, and operational support to implement an expanded regulatory program with responsibilities for licensing and monitoring compliance of in-space activities beyond remote sensing, lead the interagency steering group on novel space activities, work with the private sector to establish standards and best practices, run an expanded Federal Advisory Committee for commercial space activities, provide support to US commercial industry, and maintain awareness of US and global commercial space activities. Providing the necessary resources to effectively manage mission authorization functional requirements is critical to meeting U.S. international obligation and ensuring U.S. economic competitiveness in the commercial space sector.

OFFICE OF EDUCATION \$35,601,000

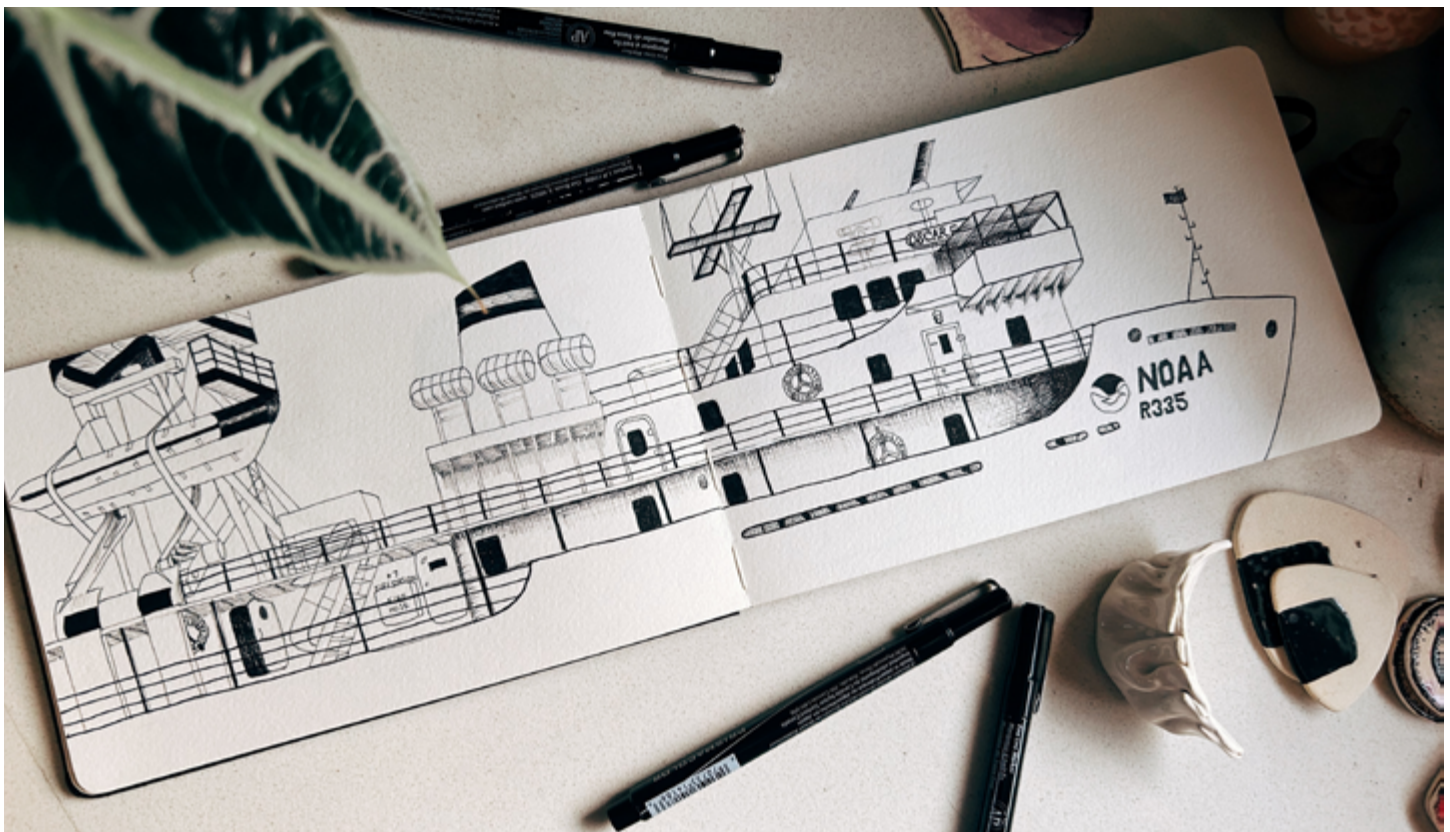
NOAA requests a total of \$35,601,000 in the Office of Education activity. These funds will support a centralized Office of Education focused on coordinating and improving the performance of NOAA’s numerous activities in STEM education. There are no program changes in this activity.

FY 2025 PAC Budget Summary

NOAA requests a total of \$90,000,000 to support the PAC activities of Mission Support:

NOAA CONSTRUCTION \$90,000,000

NOAA requests a total of \$90,000,000 in the NOAA Construction activity. NOAA’s facilities portfolio constitutes a significant capital investment with over 620 facilities across 160 markets and 6,965,592 total Usable Square Feet, including over 400 owned properties with an estimated replacement exceeding \$3 billion in value. Investment areas include: deferred maintenance and repair projects, leasehold improvements, strategic facilities planning and design, and outfitting and occupancy. There are no program changes in this activity.



NOAA Teacher at Sea, Gail Tang, sailed on a Cetacean and Ecosystem Assessment Survey in the Hawaiian Islands. This is her rendition of the ship she sailed on, NOAA Ship *Oscar Elton Sette*. Gail teaches mathematics at the University of La Verne in La Verne, California.

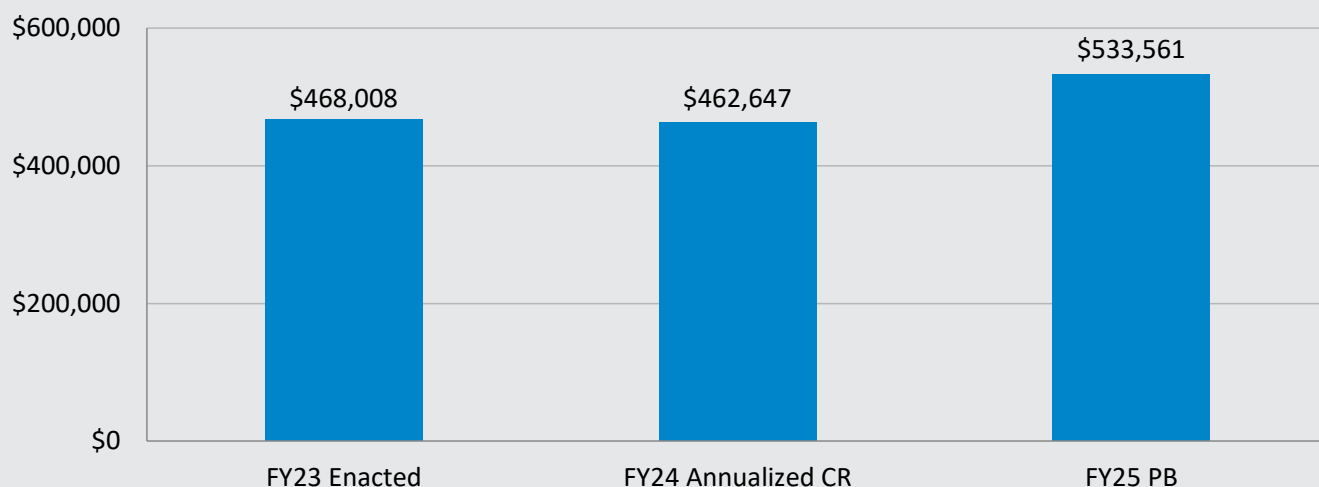
Chapter 8

Office of Marine and Aviation Operations



NOAA Lockheed WP-3D Orion N43RF, nicknamed "Miss Piggy," taking off from Lakeland Linder International Airport.

OMAO Discretionary Budget Trends (\$ in thousands)



NOAA's Office of Marine and Aviation Operations (OMAO) manages an array of specialized ships and aircraft that gather oceanographic, atmospheric, hydrographic, and fisheries data in support of NOAA's public safety, environmental stewardship, and scientific missions. OMAO also provides centralized coordination, support, and guidance for uncrewed systems (UxS) across NOAA. OMAO includes civilians, mariners, and officers of the NOAA Commissioned Officer Corps (NOAA Corps), one of the eight uniformed services of the United States.

FY 2023 Accomplishments

In 2023, NOAA Hurricane Hunter aircraft flew over 500 hours for hurricane research and reconnaissance. This includes 300 hurricane flight hours in less than 30 days for Hurricanes Franklin, Idalia, Lee, and Nigel on NOAA's two WP-3D Orions (P-3s), heavy, lower-altitude aircrafts that fly into storms gathering data, and the G-IV jet, a heavy higher-altitude aircraft that flies over the storms gathering data. From 2020 to 2023, these aircraft flew 40 percent more missions than they flew in 2016–2019. These observations improve hurricane intensity forecasts by 10–15 percent and track forecasts by 15–20 percent. In addition, NOAA deployed its G-IV jet to Hawaii and flew over 150 hours to gather data on atmospheric rivers. The data collected by the aircraft provides forecasters, water managers, and the public with up to five days advance notice of intense precipitation events along the

West Coast and helps protect lives and property. These efforts meet a growing demand for severe weather observations. In Fall 2023, NOAA awarded a pre-production contract to Lockheed Martin to secure procurement for two C-130J aircraft with the \$328 million received in the Disaster Relief Supplemental Appropriations Act, 2023 (PL 117–328) to replenish the aging Hurricane Hunter fleet.

NOAA's vessels are also undergoing recapitalization to support their continued missions on the water. *Oceanographer* and *Discoverer*, two oceanographic research vessels, are currently under construction and on schedule for delivery in 2025 and 2026, respectively. In July 2023, OMAO awarded construction of two additional cutting-edge research vessels, with an option to purchase two more. The new ships, with expected delivery dates of 2027 and 2028, will benefit from the latest technologies and design that will maximize mission accomplishments and energy efficiency. The recently awarded vessels will focus primarily on ocean mapping and nautical charting as part of NOAA's mission to deliver tools and information to help mariners safely navigate the nation's ports and harbors. In 2020, waterborne shipping carried more tonnage and value, more than \$1.5 trillion, in U.S. trade than any other mode of transportation¹ and relied on navigation charts to do so safely.

¹ Department of Transportation, Bureau of Transportation Statistics, <https://www.bts.gov/data-spotlight/national-maritime-day-and-every-day-us-economy-relies-waterborne-shipping> (accessed February 9, 2024)



In 2023, NOAA Ship *Thomas Jefferson* completed a series of surveys in the Great Lakes, the first since the 1990s. NOAA Ship *Thomas Jefferson* aids maritime commerce, improves coastal resilience, and understanding of the marine environment. NOAA cartographers use the data collected to create and update the nation's nautical charts with ever-increasing data richness and precision. *Thomas Jefferson's* side scan sonar collects imagery of the sea floor, which can identify obstructions or wrecks that could be navigational hazards. In total, the ship surveyed 450 square nautical miles of lake bottom in Lake Erie, an economically important and ecologically sensitive region, and 274 square nautical miles in Lake Ontario. In both lakes, there were 42 confirmed and new shipwrecks. NOAA deployed the DriX, an Unmanned Surface Vessel (USV,) in tandem with NOAA ship *Thomas Jefferson* to increase the efficiency in gathering data to meet NOAA hydrographic missions. Uncrewed surface vehicles, like the DriX, help NOAA gather critical hydrographic data that informs nautical charts and other mapping products that allow for safe navigation of waterways for recreation, commerce, and other purposes.

FY 2025 Request \$568,559,000

NOAA requests a total of \$568,559,000 in discretionary and mandatory funds to support the continued operations of OMAO. This total includes Operations, Research, and Facilities (ORF); Procurement, Acquisition, and Construction (PAC); and other accounts and includes a net increase of \$62,307,000 in FY 2025 program changes.

NOAA will provide actionable environmental information that is the basis of smart policy and decision-making to build climate resilience. In FY 2025, OMAO will continue investment in NOAA's observational data collection capabilities at sea and in air, improving the ability of the NOAA fleet to inform weather predictions and climate science, while investing in NOAA's workforce. In FY 2025, NOAA's fleet will grow with the addition of the new G-550 high-altitude jet and the new NOAA Ship *Oceanographer* and in FY 2026 NOAA Ship *Discoverer*. Both the NOAA Fleet Plan and the Aircraft Plan have put NOAA on a steady path toward a more reliable fleet that supports NOAA's science needs. OMAO continues to grow the NOAA Corps to safely and effectively operate the new



A DriX uncrewed surface vehicle as it transited to a survey site as seen from the NOAA R/V *Gloria Michelle*.



Lt. Hayley Betker and Lt. Cmdr. Colleen Conley at the controls of a NOAA Beechcraft King Air during a coastal mapping mission.

ships and aircraft, increase efficiencies to maximize days at sea and flight hours, and harness UxS and NOAA platforms to meet the growing demand for NOAA data nationwide.

NOAA also will continue to implement its BIL and IRA programs, ensuring they support and enhance OMAO activities. OMAO will execute \$2.9 million in BIL funds in FY 2025, with activities including but not limited to, days at sea and flight hours to support flood inundation mapping.

Program change increases are highlighted below. A list of program change decreases by Line Office is located in Appendix 1 and summary of funding by Subactivity is located in Appendix 3. Detailed descriptions of the program changes below are located in the NOAA FY 2025 Congressional Justification.

FY 2025 ORF Budget Summary

NOAA requests a total of \$407,591,000 to support the ORF activities of the OMAO, reflecting a net increase of \$70,307,000 in FY 2025 program changes.

MARINE OPERATIONS AND MAINTENANCE \$250,074,000

NOAA requests a net increase of \$41,288,000 in program changes for a total of \$250,074,000 in the Marine Operations and Maintenance activity. These funds allow NOAA to provide ships capable of meeting prioritized, geographical and temporal, at-sea NOAA requirements and will advance maintenance and operations for NOAA's diverse fleet of vessels. NOAA ships range from large oceanographic research vessels capable of exploring the

world's deepest oceans to smaller ships responsible for charting the shallow bays and inlets of the United States. Program change increases include:

Marine Operations and Maintenance: Enhanced Fleet Operations: NOAA requests an increase of \$41,488,000 to deliver 2,840 days at sea or at-sea data collection and other critical mission requirements, such as increased staffing, enhanced ship operations and maintenance, and mission and safety system improvements. Funds will also allow for preparation activities for NOAA's new ships, which are critical to fulfilling NOAA's diverse and growing mission needs, including fishery surveys, marine ecosystem assessments, and hydrographic surveys.

AVIATION OPERATIONS AND AIRCRAFT SERVICES \$48,438,000

NOAA requests an increase of \$6,629,000 in program changes for a total of \$48,438,000 in the Aviation Operations and Aircraft Services activity. These resources will support capable, mission-ready aircraft and professional crews to safely meet NOAA's scientific mission by assisting with coastal mapping, flood prediction, hurricane and atmospheric river prediction modeling, marine mammal population assessments, coastal erosion surveys, oil spill investigations and air quality studies. Program change increases include:

Aviation Operations and Aircraft Services: Flight Hours in Support of Cross NOAA Climate Objectives: NOAA requests an increase of \$6,629,000 to support 6,283 flight hours, to meet airborne data priorities. This request will maintain NOAA's ability to meet current de-



The crew of NOAA Ship *Nancy Foster* handle a remotely operated vehicle.

mands for airborne data as the Nation works to adapt to and mitigate the impacts of climate change. Flight hours will support surveys to better manage water resources in the face of climate-induced flooding and droughts, activities to better understand climate impacts on marine resources, and monitoring of shoreline changes. Funds will also support preparation activities for NOAA's new aircraft to support NOAA's growing mission needs.

AUTONOMOUS UNCREWED TECHNOLOGY OPERATIONS \$21,298,000

NOAA requests a decrease of \$491,000 in program changes for a total of \$21,298,000 for the Autonomous Uncrewed Technology Operations activity. This total allows OMAO to continue providing centralized coordination, support, and guidance for unmanned marine and aircraft systems across NOAA, manage unmanned systems acquisitions, and determine cost-effective opportunities to carry out NOAA mission-critical activities.

NOAA COMMISSIONED OFFICER CORPS \$87,781,000

NOAA requests an increase of \$22,881,000 in program changes for a total of \$87,781,000 in the NOAA Commissioned Officer Corps activity. This budget line supports NOAA Corps Officers that operate NOAA ships, fly aircraft, operate uncrewed systems, conduct diving operations, and serve in NOAA staff positions to fulfill NOAA's mission priorities.

NOAA Commissioned Officer Corps: Grow the NOAA Corps: NOAA requests an increase of \$22,881,000 to allow the NOAA Corps to grow to keep pace with a larger fleet and support NOAA's scientific missions and grow from 328 officers to 374 in FY 2025. In FY 2025, OMAO will increase targeted retention efforts such as bonuses in order to keep attrition low.

FY 2025 PAC Budget Summary

NOAA requests a total of \$124,000,000 to support the PAC activities of the OMAO, reflecting a net decrease of \$8,000,000 in FY 2025 program changes.

MARINE AND AVIATION CAPITAL INVESTMENTS \$124,000,000

NOAA requests a net decrease of \$8,000,000 for a total of \$124,000,000 in the Marine and Aviation Capital Investments activity. These resources will enable OMAO to bring a specialized high-altitude G-550 Hurricane Hunter jet online and to continue to maintain its vessels and aircraft, ensuring the health of NOAA's vessel and aircraft fleet and providing the sustained technology refresh that plays a critical role in the *in situ* collection of oceanographic, atmospheric, hydrographic, and fisheries data in support of NOAA's missions. Program change increases include:

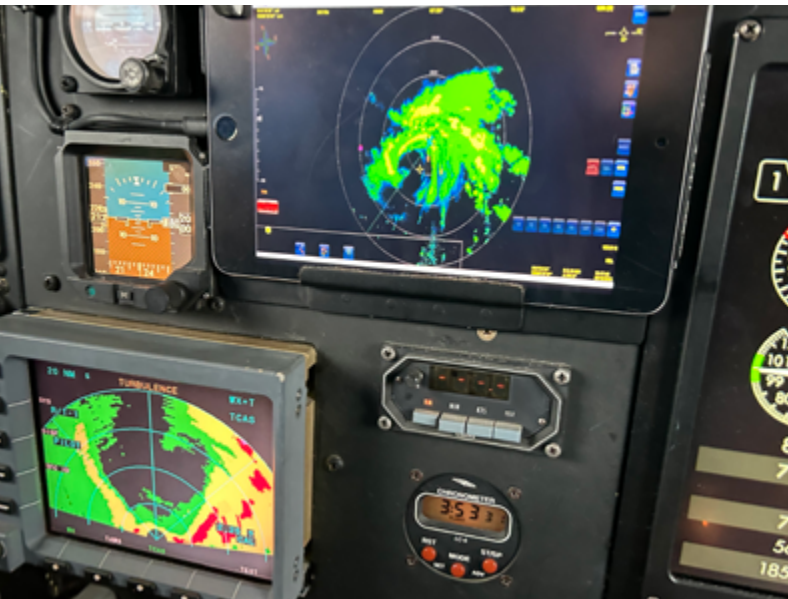
Aircraft Recapitalization and Construction: Second Aircraft to meet National Weather Research and Forecasting Needs:

NOAA requests an increase of \$17,000,000 for a total of \$21,000,000 to bring a second specialized high-altitude G-550 Hurricane Hunter jet online to meet national needs as outlined in the Weather Research and Forecasting Innovation Act of 2017. The Act requires that NOAA have redundant capabilities for the high-altitude jet aircraft that fly through and around hurricanes, delivering data in near real-time for accurate track and intensity forecasts. The increasing severity and frequency of hurricanes coupled with NOAA's unique ability to collect data that cannot be obtained by any other means has placed increasing reliance and importance on NOAA's aircraft.

Discretionary Funds

MEDICARE-ELIGIBLE RETIREE HEALTHCARE FUND CONTRIBUTION

The FY 2003 Department of Defense Authorization Act requires all uniformed services, including NOAA, to participate in an accrual fund for Medicare-eligible retirees. Payments into this accrual fund will cover the future



Radar displays on the flight deck of a NOAA WP-3D Orion hurricane hunter aircraft during a flight into Tropical Storm Tammy.



NOAA Corps Basic Officer Training Class 142 with NOAA Corps pilots and a NOAA Beechcraft King Air aircraft

healthcare benefits of present, active-duty NOAA officers and their dependents and annuitants. FY 2025 payments to the accrual fund are estimated to be \$1,970,000.

Mandatory Funds

NOAA CORPS COMMISSIONED OFFICERS RETIREMENT

The retirement system for the uniformed services provides a measure of financial security after release from active duty for service members and their survivors. It is an important factor in the choice of a career in the uniformed services and is mandated by Federal statutes under Title 10, United States Code. NOAA transfers retirement pay funds to the U.S. Coast Guard, which handles the payment function for retirees and annuitants. Healthcare funds for non-Medicare eligible retirees, dependents, and annuitants are transferred to the U.S. Public Health Service, which administers the health care program.

Appendix One

Decrease List

Appropriation	Budget Program	PPA	Program Change Title	Program Change
ORF	NOS	NOAA Community Project Funding/NOAA Special Projects	Terminate NOAA Community Project Funding/ NOAA Special Projects	(37,673)
ORF	NOS	Navigation, Observations and Positioning	Terminate the Center of Excellence for Operational Ocean and Great Lakes Mapping	(10,000)
ORF	NOS	Navigation, Observations and Positioning	Terminate Geospatial Modeling Grants	(8,000)
ORF	NOS	Navigation, Observations and Positioning	Reduce NOAA Support for Joint Hydrographic Centers for Coastal and Ocean Mapping	(4,698)
ORF	NOS	Navigation, Observations and Positioning	Enterprise Infrastructure Solutions (EIS) Decrease	(1,000)
ORF	NOS	IOOS Regional Observations	Decrease IOOS Regional Observations	(32,500)
ORF	NOS	Coastal Science, Assessment, Response and Restoration	Decrease Disaster Preparedness Program (DPP) Funding	(1,603)
ORF	NOS	Coastal Science, Assessment, Response and Restoration	Terminate NCCOS Support to NOAA's Cooperative Institute for Research to Operations in Hydrology	(1,020)
ORF	NOS	Coastal Science, Assessment, Response and Restoration	Enterprise Infrastructure Solutions (EIS) Decrease	(900)
	NOS	Competitive Research	Decrease Competitive Research	(17,496)
	NOS	Coastal Zone Management and Services	Terminate Funding Support for Existing Regional Ocean Data Portals	(2,500)
ORF	NOS	Coastal Zone Management and Services	Enterprise Infrastructure Solutions (EIS) Decrease	(300)
ORF	NOS	National Oceans and Coastal Security Fund	Terminate Base Funding for the National Coastal Resilience Fund	(34,000)
	NOS	Coral Reef Program	Reduce Support for Coral Reef Conservation Program Grants	(14,279)
ORF	NOS	Sanctuaries and Marine Protected Areas	Enterprise Infrastructure Solutions (EIS) Decrease	(800)
PAC	NOS	National Estuarine Research Reserve Construction	Reduce National Estuarine Research Reserve Construction	(5,498)
PAC	NOS	Marine Sanctuaries Construction	Reduce Marine Sanctuaries Construction	(1,500)
ORF	NMFS	NOAA Community Project Funding/NOAA Special Projects	Terminate NOAA Community Project Funding/NOAA Special Projects	(38,486)
ORF	NMFS	Marine Mammals, Sea Turtles, and Other Species	Prescott Grant Program	(4,517)
ORF	NMFS	Marine Mammals, Sea Turtles, and Other Species	Marine Mammal Projects Reduction	(2,690)
ORF	NMFS	Species Recovery Grants	Species Recovery Grants Program	(7,264)
ORF	NMFS	Fisheries and Ecosystem Science Programs and Services	Enterprise Infrastructure Solutions (EIS) Decrease	(200)
ORF	NMFS	Fisheries Data Collection, Surveys, and Assessments	Cooperative Research Program	(9,831)
ORF	NMFS	Fisheries Data Collections, Surveys, and Assessments	Fisheries Data Collection Projects Reduction	(1,200)

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Decrease List, Continued

Appropriation	Budget Program	PPA	Program Change Title	Program Change
ORF	NMFS	Fisheries Management Programs and Services	Bycatch Reduction Engineering Program	(2,875)
ORF	NMFS	Fisheries Management Programs and Services	Fisheries Management Projects Reduction	(1,850)
ORF	NMFS	Interjurisdictional Fisheries Grants	Inderjurisdictional Fisheries Grants	(3,380)
ORF	NMFS	Enforcement	Enforcement Projects Reduction	(950)
ORF	NMFS	Habitat Conservation and Restoration	Habitat Restoration Program	(7,000)
FDAF	NMFS	Fisheries Disaster Assistance Fund	Fisheries Disaster Assistance	(300)
ORF	OAR	NOAA Community Project Funding/ NOAA Special Projects	Terminate NOAA Community Project Funding/NOAA Special Projects	(20,841)
ORF	OAR	Climate Laboratories & Cooperative Institutes	Climate Laboratories & Cooperative Institutes Grants Decrease	(10,198)
ORF	OAR	Climate Competitive Research	Climate Competitive Research Grants Decrease	(7,617)
ORF	OAR	Climate Competitive Research	Water in the West Decrease	(3,000)
ORF	OAR	Weather Laboratories & Cooperative Institutes	Weather Laboratories & Cooperative Institutes Grants Decrease	(8,413)
ORF	OAR	U.S. Weather Research Program	U.S. Weather Research Program Grants Decrease	(8,013)
ORF	OAR	Joint Technology Transfer Initiative	Joint Technology Transfer Initiative (JTII) Grants Decrease	(12,320)
ORF	OAR	Ocean Laboratories and Cooperative Institutes	Ocean Laboratories and Cooperative Institutes Grants Decrease	(2,937)
ORF	OAR	National Sea Grant College Program	National Sea Grant College Program Decrease	(8,056)
ORF	OAR	Sea Grant Aquaculture Research	Sea Grant Aquaculture Research Termination	(14,080)
ORF	OAR	Ocean Exploration and Research	Ocean Exploration and Research Grants Decrease	(21,033)
ORF	OAR	National Oceanographic Partnership Program	National Oceanographic Partnership Program Decrease	(1,525)
PAC	OAR	Research Supercomputing	Research and Development (R&D) High Performance Computing (HPC)	(1,500)
PAC	OAR	Research Acquisitions and Management	Phased Array Radar Research and Development Follow-On Plan	(30,000)
ORF	NWS	NOAA Community Project Funding / NOAA Special Projects	Terminate NOAA Community Project Funding/NOAA Special Projects	(7,265)
ORF	NWS	Observations	Reduce National Mesonet Program	(5,137)
ORF	NWS	Central Processing	Eliminate Advanced Hydrologic Prediction Services System Expansion	(2,609)
ORF	NWS	Analyze, Forecast and Support	Terminate Tsunami Grant Program	(6,000)
ORF	NWS	Science and Technology Integration	Reduce the Cooperative Institute for Research to Operations in Hydrology	(19,050)
ORF	NWS	Science and Technology Integration	Suspend COASTAL Act	(1,314)
PAC	NWS	Central Processing	Slow cloud readiness studies	(1,649)

table continues to next page



Decrease List, Continued

Appropriation	Budget Program	PPA	Program Change Title	Program Change
PAC	NWS	Facilities Construction & Major Repairs	Reduce Radar Relocations	(3,500)
ORF	NESDIS	NOAA Community Project Funding/NOAA Special Projects	Terminate NOAA Community Project Funding/NOAA Special Projects	(2,500)
ORF	NESDIS	Office of Satellite and Product Operations	Enterprise Infrastructure Solutions (EIS) Decrease	(1,500)
PAC	NESDIS	Geostationary Systems-R	GOES-R Series	(200,097)
PAC	NESDIS	Space Weather Follow On	Space Weather Follow On	(95,000)
PAC	NESDIS	Common Ground Services (CGS)	Office of Common Services Decrease	(10,784)
PAC	NESDIS	Low Earth Orbit (LEO)	Near Earth Orbit Network	(9,893)
PAC	NESDIS	Low Earth Orbit (LEO)	Polar Operational Environmental Satellites (POES) Extension	(10,000)
PAC	NESDIS	Systems/Services Architecture and Engineering (SAE)	Joint Venture	(20,000)
ORF	MS	NOAA Community Project Funding/NOAA Special Projects	Terminate NOAA Community Project Funding/NOAA Special Projects	(4,700)
ORF	OMAO	Marine Operations and Maintenance	Enterprise Infrastructure Solutions Decrease	(200)
ORF	OMAO	Autonomous Uncrewed Technology Operations	Reduce research and external partnerships	(491)
PAC	OMAO	Vessel Recapitalization and Construction	New Vessel Construction Decrease	(20,000)
PAC	OMAO	Aircraft Recapitalization and Construction	P-3 Service Depot Level Maintenance Completed	(5,000)
Total, Decreases				(830,532)

Appendix Two

Technical Transfers

Account	Line Office	PPA	NESDIS Operational Phase Transfers	Total PPA Technical ATB
ORF	NESDIS	Office of Satellite and Product Operations	13,815	13,815
ORF	NESDIS	Product Development, Readiness & Application	2,350	2,350
ORF	NESDIS	National Centers for Environmental Information	400	400
PAC	NESDIS	Geostationary Systems-R	(17,400)	(17,400)
PAC	NESDIS	Space Weather Follow On	(1,465)	(1,465)
PAC	NESDIS	Low Earth Orbit (LEO)	(8,100)	(8,100)
PAC	NESDIS	Common Ground Services (CGS)	10,400	10,400
Total			0	0

* The total PPA Technical ATB column aligns with the amounts for each PPA in the Technical ATBs column of the FY 2025 President's Budget Control Table as reflected in the CJ.

**Note that the FY 2025 Total ATBs column in the Blue Book Control Table includes both Calculated (Inflationary) ATBs and Technical ATBs so it includes the amounts in the table above but does not match these amounts for all PPAs.

Appendix Three

Control Table

National Ocean Service (\$ in Thousands)

FY 2025 Proposed Operating Plan	FY 2024 Estimate	Total FY 2025 ATBs	FY 2025 Base	FY 2025 Program Changes	FY 2025 President's Budget
Navigation, Observations and Positioning					
Navigation, Observations and Positioning	184,702	3,990	188,692	(23,698)	164,994
Hydrographic Survey Priorities/Contracts	32,500	163	32,663	0	32,663
IOOS Regional Observations	42,500	0	42,500	(32,500)	10,000
Total, Navigation, Observations and Positioning	259,702	4,153	263,855	(56,198)	207,657
Coastal Science and Assessment					
Coastal Science, Assessment, Response and Restoration	96,500	1,890	98,390	2,696	101,086
Competitive Research	22,500	27	22,527	(17,496)	5,031
Total, Coastal Science and Assessment	119,000	1,917	120,917	(14,800)	106,117
Ocean and Coastal Management and Services					
Coastal Zone Management and Services	51,220	854	52,074	(1,800)	50,274
Coastal Zone Management Grants	81,500	0	81,500	0	81,500
National Oceans and Coastal Security Fund	34,000	0	34,000	(34,000)	0
Coral Reef Program	33,500	210	33,710	(14,279)	19,431
National Estuarine Research Reserve System	32,500	0	32,500	0	32,500
Sanctuaries and Marine Protected Areas	68,000	1,247	69,247	16,940	86,187
Total, Ocean and Coastal Management and Services	300,720	2,311	303,031	(33,139)	269,892
NOAA Community Project Funding/NOAA Special Projects	37,673	0	37,673	(37,673)	0
Total, NOS — Discretionary ORF	717,095	8,381	725,476	(141,810)	583,666
Total, NOS — Discretionary PAC	14,000	0	14,000	(6,998)	7,002
Total, NOS — Other Discretionary Accounts	0	0	0	0	0
Discretionary Total — NOS	731,095	8,381	739,476	(148,808)	590,668
Total, NOS — Other Mandatory Accounts	178,162	(144,820)	33,342	0	33,342
GRAND TOTAL NOS	909,257	(136,439)	772,818	(148,808)	624,010



National Marine Fisheries Service (\$ in Thousands)

FY 2025 Proposed Operating Plan	FY 2024 Estimate	Total FY 2025 ATBs	FY 2025 Base	FY 2025 Program Changes	FY 2025 President's Budget
Protected Resources Science and Management					
Marine Mammals, Sea Turtles, and Other Species	175,255	2,612	177,867	(1,662)	176,205
Species Recovery Grants	7,250	14	7,264	(7,264)	0
Atlantic Salmon	6,750	116	6,866	0	6,866
Pacific Salmon	72,000	1,667	73,667	0	73,667
Total, Protected Resources Science and Management	261,255	4,409	265,664	(8,926)	256,738
Fisheries Science and Management					
Fisheries and Ecosystem Science Programs and Services	161,500	3,091	164,591	6,057	170,648
Fisheries Data Collections, Surveys, and Assessments	203,851	2,902	206,753	(1,041)	205,712
Observers and Training	58,383	684	59,067	0	59,067
Fisheries Management Programs and Services	137,750	2,459	140,209	(1,913)	138,296
Aquaculture	19,000	244	19,244	0	19,244
Salmon Management Activities	65,250	220	65,470	10,000	75,470
Regional Councils and Fisheries Commissions	44,297	1,418	45,715	0	45,715
Interjurisdictional Fisheries Grants	3,377	3	3,380	(3,380)	0
Total, Fisheries Science and Management	693,408	11,021	704,429	9,723	714,152
Enforcement					
Enforcement	82,000	1,405	83,405	(950)	82,455
Total, Enforcement	82,000	1,405	83,405	(950)	82,455
Habitat Conservation and Restoration					
Habitat Conservation and Restoration	56,684	1,037	57,721	(7,000)	50,721
Total, Habitat Conservation & Restoration	56,684	1,037	57,721	(7,000)	50,721
NOAA Community Project Funding/NOAA Special Projects	38,486	0	38,486	(38,486)	0
Total, NMFS—Discretionary ORF	1,131,833	17,872	1,149,705	(45,639)	1,104,066
Total, NMFS—Discretionary PAC	0	0	0	0	0
Total, NMFS—Other Discretionary Accounts	65,649	0	65,649	(300)	65,349
Discretionary Total—NMFS	1,197,482	17,872	1,215,354	(45,939)	1,169,415
Total, NMFS—Mandatory Accounts	76,596	(17,480)	59,116	0	59,116
GRAND TOTAL NMFS	1,274,078	392	1,274,470	(45,939)	1,228,531



Office of Oceanic and Atmospheric Research (\$ in Thousands)

FY 2025 Proposed Operating Plan	FY 2024 Estimate	Total FY 2025 ATBs	FY 2025 Base	FY 2025 Program Changes	FY 2025 President's Budget
Climate Research					
Climate Laboratories & Cooperative Institutes	104,102	1,264	105,366	(10,198)	95,168
Regional Climate Data & Information	47,932	335	48,267	7,000	55,267
Climate Competitive Research	72,116	532	72,648	(10,617)	62,031
Total, Climate Research	224,150	2,131	226,281	(13,815)	212,466
Weather & Air Chemistry Research					
Weather Laboratories & Cooperative Institutes					
Weather Laboratories & Cooperative Institutes	93,156	1,378	94,534	(8,413)	86,121
Subtotal, Weather Laboratories and Cooperative Institutes	93,156	1,378	94,534	(8,413)	86,121
Weather and Air Chemistry Research Programs					
U.S. Weather Research Program (USWRP)	39,100	247	39,347	(8,013)	31,334
Tornado Severe Storm Research / Phased Array Radar	20,916	120	21,036	0	21,036
Joint Technology Transfer Initiative	13,244	77	13,321	(12,320)	1,001
Subtotal, Weather and Air Chemistry Research Programs	73,260	444	73,704	(20,333)	53,371
Total, Weather and Air Chemistry Research	166,416	1,822	168,238	(28,746)	139,492
Ocean, Coastal, and Great Lakes Research					
Ocean Laboratories and Cooperative Institutes					
Ocean Laboratories and Cooperative Institutes	39,500	615	40,115	(2,937)	37,178
Subtotal, Ocean Laboratories and Cooperative Institutes	39,500	615	40,115	(2,937)	37,178
National Sea Grant College Program					
National Sea Grant College Program	80,000	448	80,448	(8,056)	72,392
Sea Grant Aquaculture Research	14,000	80	14,080	(14,080)	0
Subtotal, National Sea Grant College Program	94,000	528	94,528	(22,136)	72,392
Ocean Exploration and Research	46,000	353	46,353	(21,033)	25,320
Integrated Ocean Acidification	17,000	133	17,133	0	17,133
Sustained Ocean Observations and Monitoring	52,500	368	52,868	0	52,868
National Oceanographic Partnership Program	2,500	15	2,515	(1,525)	990
Total, Ocean, Coastal, and Great Lakes Research	251,500	2,012	253,512	(47,631)	205,881

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Office of Oceanic and Atmospheric Research, Continued (\$ in Thousands)

FY 2025 Proposed Operating Plan	FY 2024 Estimate	Total FY 2025 ATBs	FY 2025 Base	FY 2025 Program Changes	FY 2025 President's Budget
Innovative Research & Technology					
High Performance Computing Initiatives	18,231	147	18,378	0	18,378
Uncrewed Systems	1,000	12	1,012	0	1,012
Total, Innovative Research & Technology	19,231	159	19,390	0	19,390
NOAA Community Project Funding/NOAA Special Projects	20,841	0	20,841	(20,841)	0
Total, OAR—Discretionary ORF	682,138	6,124	688,262	(111,033)	577,229
Total, OAR—Discretionary PAC	100,000	0	100,000	(31,500)	68,500
Discretionary Total—OAR	782,138	6,124	788,262	(142,533)	645,729
GRAND TOTAL OAR	782,138	6,124	788,262	(142,533)	645,729

National Weather Service (\$ in Thousands)

FY 2025 Proposed Operating Plan	FY 2024 Estimate	Total FY 2025 ATBs	FY 2025 Base	FY 2025 Program Changes	FY 2025 President's Budget
Observations	251,462	4,139	255,601	(637)	254,964
Central Processing	110,500	1,613	112,113	641	112,754
Analyze, Forecast and Support	589,500	13,991	603,491	(3,750)	599,741
Dissemination	116,979	1,147	118,126	16,447	134,573
Science and Technology Integration	178,952	2,556	181,508	(20,364)	161,144
NOAA Community Project Funding/NOAA Special Projects	7,265	0	7,265	(7,265)	0
Total, NWS—Discretionary ORF	1,254,658	23,446	1,278,104	(14,928)	1,263,176
Total, NWS—Discretionary PAC	109,349	0	109,349	(5,149)	104,200
Discretionary Total—NWS	1,364,007	23,446	1,387,453	(20,077)	1,367,376
GRAND TOTAL NWS	1,364,007	23,446	1,387,453	(20,077)	1,367,376



National Environmental Satellite, Data, and Information Service (\$ in Thousands)

FY 2025 Proposed Operating Plan	FY 2024 Estimate	Total FY 2025 ATBs	FY 2025 Base	FY 2025 Program Changes	FY 2025 President's Budget
Environmental Satellite Observing Systems					
Office of Satellite and Product Operations	245,915	18,065	263,980	(1,500)	262,480
Product Development, Readiness & Application	57,500	3,240	60,740	0	60,740
U.S. Group on Earth Observations (USGEO)	750	0	750	250	1,000
Total, Environmental Satellite Observing Systems	304,165	21,305	325,470	(1,250)	324,220
National Centers for Environmental Information					
National Centers for Environmental Information	71,372	1,918	73,290	0	73,290
Total, National Centers for Environmental Information	71,372	1,918	73,290	0	73,290
NOAA Community Project Funding/NOAA Special Projects	2,500	0	2,500	(2,500)	0
Total, NESDIS—Discretionary ORF	378,037	23,223	401,260	(3,750)	397,510
Total, NESDIS—Discretionary PAC	1,330,119	(16,565)	1,313,554	427,162	1,740,716
Discretionary Total—NESDIS	1,708,156	6,658	1,714,814	423,412	2,138,226
GRAND TOTAL NESDIS	1,708,156	6,658	1,714,814	423,412	2,138,226

Mission Support (\$ in Thousands)

FY 2025 Proposed Operating Plan	FY 2024 Estimate	Total FY 2025 ATBs	FY 2025 Base	FY 2025 Program Changes	FY 2025 President's Budget
Mission Support Services					
Executive Leadership	31,743	733	32,476	0	32,476
Mission Services and Management	182,375	4,410	186,785	0	186,785
IT Security	16,393	203	16,596	0	16,596
Payment to the DOC Working Capital Fund	71,299	14,374	85,673	0	85,673
Facilities Maintenance	6,500	94	6,594	0	6,594
Office of Space Commerce	70,000	638	70,638	5,000	75,638
Total, Mission Support Services	378,310	20,452	398,762	5,000	403,762
Office of Education					
Office of Education	35,450	151	35,601	0	35,601
Total, Office of Education	35,450	151	35,601	0	35,601
NOAA Community Project Funding/NOAA Special Projects	4,700	0	4,700	(4,700)	0
Total, MS—Discretionary ORF	418,460	20,603	439,063	300	439,363
Total, MS—Discretionary PAC	90,000	0	90,000	0	90,000
Discretionary Total—MS	508,460	20,603	529,063	300	529,363
GRAND TOTAL MS	508,460	20,603	529,063	300	529,363

Office of Marine and Aviation Operations (\$ in Thousands)

FY 2025 Proposed Operating Plan	FY 2024 Estimate	Total FY 2025 ATBs	FY 2025 Base	FY 2025 Program Changes	FY 2025 President's Budget
Marine Operations and Maintenance	204,000	4,786	208,786	41,288	250,074
Aviation Operations and Aircraft Services	40,500	1,309	41,809	6,629	48,438
Autonomous Uncrewed Technology Operations	21,677	112	21,789	(491)	21,298
NOAA Commissioned Officer Corps	62,500	2,400	64,900	22,881	87,781
Total, OMAO—Discretionary ORF	328,677	8,607	337,284	70,307	407,591
Total, OMAO—Discretionary PAC	132,000	0	132,000	(8,000)	124,000
Total, OMAO—Other Discretionary Accounts	1,970	0	1,970	0	1,970
Discretionary Total—OMAO	462,647	8,607	471,254	62,307	533,561
Total, OMAO—Other Mandatory Accounts	34,998	0	34,998	0	34,998
GRAND TOTAL OMAO	497,645	8,607	506,252	62,307	568,559



ORF Summary (\$ in Thousands)

FY 2025 Proposed Operating Plan	FY 2024 Estimate	Total FY 2025 ATBs	FY 2025 Base	FY 2025 Program Changes	FY 2025 President's Budget
National Ocean Service	717,095	8,381	725,476	(141,810)	583,666
National Marine Fisheries Service	1,131,833	17,872	1,149,705	(45,639)	1,104,066
Office of Oceanic and Atmospheric Research	682,138	6,124	688,262	(111,033)	577,229
National Weather Service	1,254,658	23,446	1,278,104	(14,928)	1,263,176
National Environmental Satellite, Data and Information Service	378,037	23,223	401,260	(3,750)	397,510
Mission Support	418,460	20,603	439,063	300	439,363
Office of Marine and Aviation Operations	328,677	8,607	337,284	70,307	407,591
SUBTOTAL LO DIRECT DISCRETIONARY ORF OBLIGATIONS	4,910,898	108,256	5,019,154	(246,553)	4,772,601

ORF Adjustments (\$ in Thousands)

FY 2025 Proposed Operating Plan	FY 2024 Estimate	Total FY 2025 ATBs	FY 2025 Base	FY 2025 Program Changes	FY 2025 President's Budget
SUBTOTAL ORF DIRECT OBLIGATIONS	4,910,898	108,256	5,019,154	(246,553)	4,772,601
FINANCING					
Deobligations	(23,000)	0	(23,000)	0	(23,000)
Total ORF Financing	(23,000)	0	(23,000)	0	(23,000)
SUBTOTAL ORF BUDGET AUTHORITY	4,887,898	108,256	4,996,154	(246,553)	4,749,601
TRANSFERS					
Transfer from P&D to ORF	(344,901)	(32,462)	(377,363)	0	(377,363)
Total ORF Transfers	(344,901)	(32,462)	(377,363)	0	(377,363)
SUBTOTAL ORF APPROPRIATION	4,542,997	75,794	4,618,791	(246,553)	4,372,238

Procurement, Acquisition, and Construction (\$ in Thousands)

FY 2025 Proposed Operating Plan	FY 2024 Estimate	Total FY 2025 ATBs	FY 2025 Base	FY 2025 Program Changes	FY 2025 President's Budget
NOS					
Acquisition/Construction					
National Estuarine Research Reserve Construction	8,500	0	8,500	(5,498)	3,002
Marine Sanctuaries Construction	5,500	0	5,500	(1,500)	4,000
Subtotal, NOS Construction	14,000	0	14,000	(6,998)	7,002
Total, NOS—PAC	14,000	0	14,000	(6,998)	7,002
Total, NMFS—PAC	0	0	0	0	0
OAR					
Systems Acquisition					
Research Supercomputing/ CCRI	70,000	0	70,000	(1,500)	68,500
Research Acquisitions and Management	30,000	0	30,000	(30,000)	0
Subtotal, OAR Systems Acquisition	100,000	0	100,000	(31,500)	68,500
Total, OAR—PAC	100,000	0	100,000	(31,500)	68,500
NWS					
Systems Acquisition					
Observations	16,200	0	16,200	0	16,200
Central Processing	69,649	0	69,649	(1,649)	68,000
Dissemination	10,000	0	10,000	0	10,000
Subtotal, NWS Systems Acquisition	95,849	0	95,849	(1,649)	94,200
Construction					
Facilities Construction and Major Repairs	13,500	0	13,500	(3,500)	10,000
Subtotal, NWS Construction	13,500	0	13,500	(3,500)	10,000
Total, NWS—PAC	109,349	0	109,349	(5,149)	104,200
NESDIS					
Systems Acquisition					
Geostationary Systems-R	301,000	(17,400)	283,600	(200,097)	83,503
Polar Weather Satellites	183,500	0	183,500	158,910	342,410
Space Weather Follow On	136,200	(1,465)	134,735	(95,000)	39,735
Common Ground Services (CGS)	105,433	10,400	115,833	4,694	120,527
Geostationary Earth Orbit (GEO)	285,000	0	285,000	513,400	798,400
Low Earth Orbit (LEO)	96,430	(8,100)	88,330	(19,893)	68,437
Space Weather Next	151,606	0	151,606	85,148	236,754
Systems/Services Architecture and Engineering (SAE)	68,500	0	68,500	(20,000)	48,500
Subtotal, NESDIS Systems Acquisition	1,327,669	(16,565)	1,311,104	427,162	1,738,266

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Procurement, Acquisition, and Construction, Continued (\$ in Thousands)

FY 2025 Proposed Operating Plan	FY 2024 Estimate	Total FY 2025 ATBs	FY 2025 Base	FY 2025 Program Changes	FY 2025 President's Budget
Construction					
Satellite CDA Facility	2,450	0	2,450	0	2,450
Subtotal, NESDIS Construction	2,450	0	2,450	0	2,450
Total, NESDIS—PAC	1,330,119	(16,565)	1,313,554	427,162	1,740,716
Mission Support					
Construction					
NOAA Construction	90,000	0	90,000	0	90,000
Subtotal, Mission Support Construction	90,000	0	90,000	0	90,000
Total, Mission Support—PAC	90,000	0	90,000	0	90,000
OMAO					
Marine and Aviation Capital Investments					
Fleet Capital Improvements & Tech Infusion	28,000	0	28,000	0	28,000
Vessel Recapitalization and Construction	95,000	0	95,000	(20,000)	75,000
Aircraft Recapitalization and Construction	9,000	0	9,000	12,000	21,000
Subtotal, Marine and Aviation Capital Investments	132,000	0	132,000	(8,000)	124,000
Total, OMAO—PAC	132,000	0	132,000	(8,000)	124,000
GRAND TOTAL PAC DISCRETIONARY OBLIGATIONS	1,775,468	(16,565)	1,758,903	375,515	2,134,418

PAC Adjustments (\$ in Thousands)

FY 2025 Proposed Operating Plan	FY 2024 Estimate	Total FY 2025 ATBs	FY 2025 Base	FY 2025 Program Changes	FY 2025 President's Budget
SUBTOTAL PAC DIRECT OBLIGATIONS	1,775,468	(16,565)	1,758,903	375,515	2,134,418
FINANCING					
Deobligations	(13,000)	0	(13,000)	0	(13,000)
Total PAC Financing	(13,000)	0	(13,000)	0	(13,000)
SUBTOTAL PAC BUDGET AUTHORITY	1,762,468	(16,565)	1,745,903	375,515	2,121,418
TRANSFERS					
Total PAC Transfers	0	0	0	0	0
SUBTOTAL PAC APPROPRIATION	1,762,468	(16,565)	1,745,903	375,515	2,121,418

Other Accounts Discretionary (\$ in Thousands)

FY 2025 Proposed Operating Plan	FY 2024 Estimate	Total FY 2025 ATBs	FY 2025 Base	FY 2025 Program Changes	FY 2025 President's Budget
NMFS					
Fishermen's Contingency Fund Obligations	349	0	349	0	349
Fishermen's Contingency Fund Budget Authority	349	0	349	0	349
Fishermen's Contingency Fund Appropriations	349	0	349	0	349
Promote and Develop Fisheries Obligations	0	0	0	0	0
Promote and Develop Fisheries Budget Authority	(344,901)	(32,462)	(377,363)	0	(377,363)
Promote and Develop Fisheries Appropriation	0	0	0	0	0
Pacific Coastal Salmon Recovery Fund Obligations	65,000	0	65,000	0	65,000
Pacific Coastal Salmon Recovery Fund Budget Authority	65,000	0	65,000	0	65,000
Pacific Coastal Salmon Recovery Fund Appropriation	65,000	0	65,000	0	65,000
Marine Mammal Unusual Mortality Event Fund Obligations	0	0	0	0	0
Marine Mammal Unusual Mortality Event Fund Budget Authority	0	0	0	0	0
Marine Mammal Unusual Mortality Event Fund Appropriation	0	0	0	0	0
Fisheries Disaster Assistance Fund Obligations	300	0	300	(300)	0
Fisheries Disaster Assistance Fund Budget Authority	300	0	300	(300)	0
Fisheries Disaster Assistance Fund Appropriation	300	0	300	(300)	0
Subtotal, NMFS Other Discretionary Direct Obligations	65,649	0	65,649	(300)	65,349
Subtotal, NMFS Other Discretionary Budget Authority	(279,252)	(32,462)	(311,714)	(300)	(312,014)
Subtotal, NMFS Other Discretionary Appropriation	65,649	0	65,649	(300)	65,349
OMAO					
Medicare Eligible Retiree Healthcare Fund Obligations	1,970	0	1,970	0	1,970
Medicare Eligible Retiree Healthcare Fund Budget Authority	1,970	0	1,970	0	1,970
Medicare Eligible Retiree Healthcare Fund Appropriation	1,970	0	1,970	0	1,970
Subtotal, OMAO Other Discretionary Direct Obligations	1,970	0	1,970	0	1,970
Subtotal, OMAO Other Discretionary Budget Authority	1,970	0	1,970	0	1,970
Subtotal, OMAO Other Discretionary Appropriation	1,970	0	1,970	0	1,970
TOTAL, OTHER DISCRETIONARY DIRECT OBLIGATIONS	67,619	0	67,619	(300)	67,319
TOTAL, OTHER DISCRETIONARY BUDGET AUTHORITY	(277,282)	(32,462)	(309,744)	(300)	(310,044)
TOTAL, OTHER DISCRETIONARY APPROPRIATION	67,619	0	67,619	(300)	67,319

Grand Total Summary Discretionary Appropriations (\$ in Thousands)

FY 2025 Proposed Operating Plan	FY 2024 Estimate	Total FY 2025 ATBs	FY 2025 Base	FY 2025 Program Changes	FY 2025 President's Budget
Operations, Research, and Facilities	4,542,997	75,794	4,618,791	(246,553)	4,372,238
Procurement, Acquisition, and Construction	1,762,468	(16,565)	1,745,903	375,515	2,121,418
Fisherman's Contingency Fund	349	0	0	0	349
Pacific Coastal Salmon Recovery Fund	65,000	0	65,000	0	65,000
Fisheries Disaster Assistance Fund	300	0	300	(300)	0
Medicare Eligible Retiree Health Care Fund	1,970	0	1,970	0	1,970
GRAND TOTAL DISCRETIONARY APPROPRIATION	6,373,084	59,229	6,431,964	128,662	6,560,975

Summary Of Discretionary Resources (\$ in Thousands)

FY 2025 Proposed Operating Plan	FY 2024 Estimate	Total FY 2025 ATBs	FY 2025 Base	FY 2025 Program Changes	FY 2025 President's Budget
Direct Discretionary Obligations					
ORF Direct Obligations	4,910,898	108,256	5,019,154	(246,553)	4,772,601
PAC Direct Obligations	1,775,468	(16,565)	1,758,903	375,515	2,134,418
OTHER Direct Obligations	67,619	0	67,619	(300)	67,319
TOTAL Direct Discretionary Obligations	6,753,985	91,691	6,845,676	128,662	6,974,338
Discretionary Budget Authority					
ORF Budget Authority	4,887,898	108,256	4,996,154	(246,553)	4,749,601
PAC Budget Authority	1,762,468	(16,565)	1,745,903	375,515	2,121,418
OTHER Budget Authority	(277,282)	(32,462)	(309,744)	(300)	(310,044)
TOTAL Discretionary Budget Authority	6,373,084	59,229	6,432,313	128,662	6,560,975
Discretionary Appropriations					
ORF Appropriation	4,542,997	75,794	4,618,791	(246,553)	4,372,238
PAC Appropriation	1,762,468	(16,565)	1,745,903	375,515	2,121,418
OTHER Appropriation	67,619	0	67,619	(300)	67,319
TOTAL Discretionary Appropriation	6,373,084	59,229	6,432,313	128,662	6,560,975

Other Accounts Mandatory (\$ in Thousands)

FY 2025 Proposed Operating Plan	FY 2024 Estimate	Total FY 2025 ATBs	FY 2025 Base	FY 2025 Program Changes	FY 2025 President's Budget
NOS					
Damage Assessment and Restoration Revolving Fund Obligations	166,484	(148,484)	18,000	0	18,000
Damage Assessment and Restoration Revolving Fund Budget Authority	7,884	116	8,000	0	8,000
Damage Assessment and Restoration Revolving Fund Appropriation	0	0	0	0	0
Sanctuaries Enforcement Asset Forfeiture Fund					
Sanctuaries Enforcement Asset Forfeiture Fund Obligations	1,287	(637)	650	0	650
Sanctuaries Enforcement Asset Forfeiture Fund Budget Authority	1,277	(637)	640	0	640
Sanctuaries Enforcement Asset Forfeiture Fund Appropriation	1,300	(700)	600	0	600
Gulf Coast Ecosystem Restoration Fund					
Gulf Coast Ecosystem Restoration Fund Obligations	10,391	4,301	14,692	0	14,692
Gulf Coast Ecosystem Restoration Fund Budget Authority	0	0	0	0	0
Gulf Coast Ecosystem Restoration Fund Appropriation	0	0	0	0	0
Subtotal, NOS Other Mandatory Direct Obligations					
	178,162	(144,820)	33,342	0	33,342
Subtotal, NOS Other Mandatory Budget Authority					
	9,161	(521)	8,640	0	8,640
Subtotal, NOS Other Mandatory Appropriation					
	1,300	(700)	600	0	600
NMFS					
Promote and Develop Fisheries Obligations	31,621	(31,621)	0	0	0
Promote and Develop Fisheries Budget Authority	376,522	841	377,363	0	377,363
Promote and Develop Fisheries Appropriation	0	0	0	0	0
Fisheries Finance Program Account					
Fisheries Finance Program Account Obligations	202	(202)	0	0	0
Fisheries Finance Program Account Budget Authority	202	(202)	0	0	0
Fisheries Finance Program Account Appropriation	202	(202)	0	0	0
Environmental Improvement & Restoration Fund					
Environmental Improvement & Restoration Fund Obligations	8,448	6,616	15,064	0	15,064
Environmental Improvement & Restoration Fund Budget Authority	8,448	6,616	15,064	0	15,064
Environmental Improvement & Restoration Fund Appropriation	8,959	7,016	15,975	0	15,975
Limited Access System Administration Fund					
Limited Access System Administration Fund Obligations	14,133	295	14,428	0	14,428
Limited Access System Administration Fund Budget Authority	14,133	295	14,428	0	14,428
Limited Access System Administration Fund Appropriation	14,089	360	14,449	0	14,449
Western Pacific Sustainable Fisheries Fund					
Western Pacific Sustainable Fisheries Fund Obligations	750	0	750	0	750
Western Pacific Sustainable Fisheries Fund Budget Authority	750	0	750	0	750
Western Pacific Sustainable Fisheries Fund Appropriation	750	0	750	0	750

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Other Accounts Mandatory, Continued (\$ in Thousands)

FY 2025 Proposed Operating Plan	FY 2024 Estimate	Total FY 2025 ATBs	FY 2025 Base	FY 2025 Program Changes	FY 2025 President's Budget
Fisheries Enforcement Asset Forfeiture Fund Obligations	2,298	(4)	2,294	0	2,294
Fisheries Enforcement Asset Forfeiture Fund Budget Authority	2,298	(4)	2,294	0	2,294
Fisheries Enforcement Asset Forfeiture Fund Appropriation	2,294	0	2,294	0	2,294
North Pacific Observer Fund Obligations	4,674	26	4,700	0	4,700
North Pacific Observer Fund Budget Authority	4,674	26	4,700	0	4,700
North Pacific Observer Fund Appropriation	4,700	0	4,700	0	4,700
Seafood Inspection Program Trust Fund	14,470	7,410	21,880	0	21,880
Seafood Inspection Program Trust Fund	0	0	0	0	0
Seafood Inspection Program Trust Fund	0	0	0	0	0
Subtotal, NMFS Other Mandatory Direct Obligations	76,596	(17,480)	59,116	0	59,116
Subtotal, NMFS Other Mandatory Budget Authority	407,027	7,572	414,599	0	414,599
Subtotal, NMFS Other Mandatory Appropriation	30,994	7,174	38,168	0	38,168
OMAO					
NOAA Corps Commissioned Officers Retirement Obligations	34,998	0	34,998	0	34,998
NOAA Corps Commissioned Officers Retirement Budget Authority	34,998	0	34,998	0	34,998
NOAA Corps Commissioned Officers Retirement Appropriation	34,998	0	34,998	0	34,998
Subtotal, OMAO Other Mandatory Direct Obligations	34,998	0	34,998	0	34,998
Subtotal, OMAO Other Mandatory Budget Authority	34,998	0	34,998	0	34,998
Subtotal, OMAO Other Mandatory Appropriation	34,998	0	34,998	0	34,998
TOTAL, OTHER MANDATORY DIRECT OBLIGATIONS	289,756	(162,300)	127,456	0	127,456
TOTAL, OTHER MANDATORY BUDGET AUTHORITY	451,186	7,051	458,237	0	458,237
TOTAL, OTHER MANDATORY APPROPRIATION	67,292	6,474	73,766	0	73,766

NOAA Summary (\$ in Thousands)

FY 2025 Proposed Operating Plan	FY 2024 Estimate	Total FY 2025 ATBs	FY 2025 Base	FY 2025 Program Changes	FY 2025 President's Budget
TOTAL Direct Obligations (Discretionary & Mandatory)	7,043,741	(70,609)	6,973,132	128,662	7,101,794
TOTAL Budget Authority (Discretionary & Mandatory)	6,824,270	66,280	6,890,550	128,662	7,019,212
TOTAL Appropriation (Discretionary & Mandatory)	6,440,376	65,703	6,506,079	128,662	6,634,741
Reimbursable Financing	496,389	(254,389)	242,000	0	242,000
TOTAL OBLIGATIONS (Direct & Reimbursable)	7,540,130	(324,998)	7,215,132	128,662	7,343,794
Offsetting Receipts	(19,000)	6,759	(12,241)	0	(12,241)
TOTAL OBLIGATIONS (Direct, Reimbursable & Offsetting Receipts)	7,521,130	(318,239)	7,202,891	128,662	7,331,553

Line Office Summary (\$ in Thousands)

FY 2025 Proposed Operating Plan	FY 2024 Estimate	Total FY 2025 ATBs	FY 2025 Base	FY 2025 Program Changes	FY 2025 President's Budget
National Ocean Service					
ORF	717,095	1,298	725,476	(141,810)	583,666
PAC	14,000	1	14,000	(6,998)	7,002
OTHER	178,162	32	33,342	0	33,342
TOTAL, NOS	909,257	1,331	772,818	(148,808)	624,010
National Marine Fisheries Service					
ORF	1,131,833	3,306	1,149,705	(45,639)	1,104,066
PAC	0	0	0	0	0
OTHER	142,245	171	124,765	(300)	124,465
TOTAL, NMFS	1,274,078	3,477	1,274,470	(45,939)	1,228,531
Oceanic and Atmospheric Research					
ORF	682,138	875	688,262	(111,033)	577,229
PAC	100,000	4	100,000	(31,500)	68,500
TOTAL, OAR	782,138	879	788,262	(142,533)	645,729
National Weather Service					
ORF	1,254,658	4,366	1,278,104	(14,928)	1,263,176
PAC	109,349	32	109,349	(5,149)	104,200
TOTAL, NWS	1,364,007	4,398	1,387,453	(20,077)	1,367,376
National Environmental Satellite, Data and Information Service					
ORF	378,037	623	401,260	(3,750)	397,510
PAC	1,330,119	353	1,313,554	427,162	1,740,716
TOTAL, NESDIS	1,708,156	976	1,714,814	423,412	2,138,226
Mission Support					
ORF	418,460	861	439,063	300	439,363
PAC	90,000	2	90,000	0	90,000
OTHER	0	0	0	0	0
TOTAL, Mission Support	508,460	863	529,063	300	529,363
Office of Marine and Aviation Operations					
ORF	328,677	1,175	337,284	70,307	407,591
PAC	132,000	69	132,000	(8,000)	124,000
OTHER	36,968	0	36,968	0	36,968
TOTAL, OMAO	497,645	1,244	506,252	62,307	568,559

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Line Office Summary, Continued (\$ in Thousands)

FY 2025 Proposed Operating Plan	FY 2024 Estimate	Total FY 2025 ATBs	FY 2025 Base	FY 2025 Program Changes	FY 2025 President's Budget
DIRECT OBLIGATIONS					
ORF	4,910,898	12,504	5,019,154	(246,553)	4,772,601
PAC	1,775,468	461	1,758,903	375,515	2,134,418
OTHER	357,375	203	195,075	(300)	194,775
TOTAL, DIRECT OBLIGATIONS	7,043,741	13,168	6,973,132	128,662	7,101,794
ORF Adjustments (Deobligations/Rescissions)	(23,000)	0	(23,000)	0	(23,000)
ORF Transfers	(344,901)	0	(377,363)	0	(377,363)
PAC Adjustments (Deobligations/Rescissions)	(13,000)	0	(13,000)	0	(13,000)
PAC Transfers	0	0	0	0	0
OTHER Discretionary Adjustments	0	0	0	0	0
Mandatory Accounts Excluded	(289,756)	(200)	(127,456)	0	(127,456)
TOTAL, DISCRETIONARY APPROPRIATIONS	6,373,084	12,968	6,432,313	128,662	6,560,975

National Ocean Service

www.oceanservice.noaa.gov

National Marine Fisheries Service

www.fisheries.noaa.gov

Office of Oceanic and Atmospheric Research

www.research.noaa.gov

National Weather Service

www.weather.gov

National Environmental Satellite, Data, and Information Service

www.nesdis.noaa.gov

Office of Marine and Aviation Operations

www.oma.noaa.gov



United States Department of Commerce

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Cover Caption: NOAA is an agency that enriches life through science. Our reach goes from the surface of the sun to the depths of the ocean floor as we work to keep the public informed of the changing environment around them.

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