

**COMMITTEE ON SCIENCE, SPACE, AND TECHNOLOGY  
SUBCOMMITTEE ON ENVIRONMENT  
U.S. HOUSE OF REPRESENTATIVES  
HEARING CHARTER**

***A Review of the National Oceanic and Atmospheric Administration’s FY2020  
Budget Request***

Tuesday, April 30, 2019  
10:00 a.m.  
2318 Rayburn House Office Building

**PURPOSE**

On Tuesday, April 30, 2019 at 10:00 am, the House Committee on Science, Space, and Technology’s Subcommittee on Environment will hold a hearing to examine the President’s Fiscal Year (FY) 2020 budget request for the National Oceanic and Atmospheric Administration (NOAA) and associated issues.

**WITNESS**

**The Honorable Neil Jacobs, Ph.D.**, Assistant Secretary of Commerce for Environmental Observation and Prediction, performing the duties of Under Secretary of Commerce for Oceans and Atmosphere, National Oceanic and Atmospheric Administration.

**OVERARCHING QUESTIONS**

- What would be the impact of the proposed budget on NOAA’s ability to carry out its mission?
- What analysis did the Administration use in deciding what programs to prioritize and what to eliminate?
- Does this budget proposal support a consistent plan for NOAA in the long term?
- What would be the impact of the proposed budget on U.S. leadership in cutting edge oceanic and atmospheric research, remote-sensing, in-situ observations, weather forecasting and climate prediction, and the continued protection of life and property?

**BACKGROUND**

***Overview of FY 2020 Budget Request for NOAA***

The President’s FY 2020 budget request for NOAA is \$4.5 billion in discretionary appropriations, an almost 18% decrease from the FY 2019 enacted levels. NOAA’s mission is “to understand and predict changes in climate, weather, oceans and coasts; to share that

knowledge and information with others; and to conserve and manage coastal and marine ecosystems and resources.”<sup>1</sup>

NOAA conducts research in atmospheric, coastal, and ocean sciences, climate and air quality, ecosystems, and fisheries and marine mammals. NOAA’s National Ocean Service (NOS) provides navigation support services and is responsible for mapping and charting coastal areas. Additionally, NOAA operates a constellation of satellites that provide critical data for weather and space weather forecasting, climate prediction, and earth and ocean science research through the National Environmental Satellite Data Information Service (NESDIS).

Table 1 shows the six primary NOAA line offices and Mission Support. All of the line offices, except for the National Marine Fisheries Service, as well as Mission Support services, fall within the House Science, Space, and Technology Committee’s jurisdiction. The Administration proposed cuts across the entire agency with decreases for individual line offices ranging from 0.7% to 41% below the FY 2019 enacted budget.

**Table 1: NOAA FY 2020 Budget Request\***

<b>Program</b>	<b>FY 2019 Enacted<sup>2</sup> (\$M)</b>	<b>FY 2020 Request<sup>3</sup> (\$M)</b>	<b>FY\$ Change (\$M)</b>	<b>FY 2020 Request % over FY 2019 Enacted (%)</b>
National Ocean Service**	585.5	371.2	-214.2	-36.6%
National Marine Fisheries Service***	989.2	812.0	-177.2	-17.9%
Oceanic & Atmospheric Research	566.1	335.1	-230.9	-40.8%
National Weather Service	1,162.6	1,081.9	-80.7	-6.9%
National Environmental Satellite, Data, and Information Service	1,698.5	1472.7	-225.8	-13.3%
Mission Support	292.2	266.2	-26.0	-8.9%
Office of Marine and Aviation Operations	327.2	324.9	-2.4	-0.7%
<b>TOTAL NOAA Discretionary</b>	<b>5,434.3</b>	<b>4,466.5</b>	<b>- 967.8</b>	<b>-17.8%</b>

\*Numbers may not add up due to rounding

\*\*NOS programs are shared jurisdiction with the House Natural Resources Committee or not within the jurisdiction of the Committee on Science, Space, and Technology.

\*\*\* National Marine Fisheries Service (NMFS) line office of NOAA is not within the jurisdiction of the Committee on Science, Space, and Technology

<sup>1</sup> NOAA mission and vision, <https://www.noaa.gov/our-mission-and-vision>

<sup>2</sup> Fiscal Year 2019 Consolidated Appropriations Act, 2019. (P.L. 116-6)

<sup>3</sup> NOAA Fiscal Year 2020 Congressional Justification and Blue Book, <http://www.corporateservices.noaa.gov/nbol/>

### National Ocean Service (NOS)

The National Ocean Service (NOS) enables safe, sustainable, and efficient use of marine and coastal resources through science-based products and services to support coastal communities and economies. NOS collects oceanographic data and maintains services such as navigation charts. NOS priorities include safe and efficient transportation and commerce; preparedness and risk reduction; and stewardship, recreation, and tourism. The FY 2020 request would reduce overall funding for NOS programs by \$214 million, or 37%, compared to the FY 2019 enacted budget. This includes significant reductions to extramural grants.

The proposed budget for the FY 2020 NOS Operations, Research and Facilities (ORF) accounts have a proposed net decrease of \$216.7 million from the FY 2019 enacted budget. The Navigation, Observations, and Position activity has proposed net reduction of \$36.5 million. This includes reductions in Integrated Ocean Observing System (IOOS) Regional Observation Grants. The Coastal Science and Assessment activity has a net decrease of \$42.4 million, which includes the termination of the National Centers for Coastal Ocean Science (NCCOS), as well as an elimination of the NCCOS competitive research program. The Ocean and Coastal Management and Services activity has a net decrease of \$138 million in program changes which includes the elimination of: Coastal Zone Management Grants, grants that support operations of the National Estuarine Research Reserve System (NERRS), federal funding support for Title IX of the National Oceans and Coastal Security Act, and the Regional Geospatial Monitoring Grant Program. The NOS Procurement, Acquisitions, and Constructions (PAC) request is \$1.5 million, a reduction \$2.4 million from FY 2019 enacted in program changes for NOS Construction Activity.

### Office of Oceanic and Atmospheric Research (OAR)

NOAA's Office of Oceanic and Atmospheric Research (OAR) provides the research foundation for NOAA's activities in climate, weather, and oceans. OAR conducts the scientific research, environmental studies, and technology development necessary to improve NOAA's operations. OAR is key in improving weather forecasting through the transition of research to operations (R2O) related to weather models. Currently, OAR activities are carried out at seven NOAA laboratories, and through extramural research activities at 33 National Sea Grant colleges and universities in coastal states and territories. The FY 2020 budget request for OAR is \$335.1 million, which is a \$231 million, or almost 41%, decrease, from the FY 2019 enacted levels. The Administration's proposed budget would effectively dismantle NOAA's Climate Program Office, eliminate NOAA's funding support for the National Climate Assessment, close OAR's Air Resources Laboratory, terminate the National Sea Grant College Program, and severely reduce funding for, or eliminate, much of the critical climate, weather, atmospheric, and oceanographic research conducted at NOAA.

The FY 2020 OAR ORF budget request is \$309.2 million, which is a net decrease of \$221.6 million from the FY 2019 enacted budget. The program changes include: a \$67 million decrease in climate research including long-term observing, monitoring, research, and modeling capabilities; a \$34.1 million net decrease in Weather and Air Chemistry research which supports NOAA's efforts for

community-driven enhancements to weather models and accelerates the transition from research into forecasting at NWS; and a \$120.5 million net decrease in Ocean, Coastal and Great Lakes Research. The net decreases in the Weather and Air Chemistry Research activity and Ocean, Coastal and Great Lakes Research activity account for increased funding for the Earth Prediction Innovation Center (EPIC), and the Interagency National Oceanographic Partnership Program (NOPP) respectively. The Administration has requested a \$12.2 million for the Innovative Research and Technology activity to accelerate the adoption and transition of advance computing and technology throughout NOAA.

Some of the proposed OAR ORF program and activity eliminations, terminations, and reductions include: elimination of Arctic research within the Climate Laboratories and Cooperative Institutes and within the Regional Climate Data and Information activity; elimination of climate competitive research activities within the Regional Climate Data and Information activity which terminates the Regional Integrated Sciences and Assessments (RISA) program, and eliminates NOAA's portion of funding for the National Climate Assessment; elimination of Climate Competitive Research Subactivity which will terminate all research programs within the Climate Program Office, with the exception of the National Integrated Drought Information System (NIDIS), and would also reduce competitive grants to Cooperative Institutes, universities, NOAA laboratories and other partners; termination of the Vortex-Southeast (VORTEX-SE) program that works to improve tornado forecasts in the Southeastern U.S.; termination of R&D to improve severe weather detection with new airborne phased array radar (APAR); decreased funding for Climate Laboratories, Weather Laboratories, and Oceans, Coasts & Great Lakes Laboratories; decreased funding for Cooperative Institutes; decreased funding for the U.S. Weather Research Program; and decreased funding for the Joint Technology Transfer Initiative. Additional OAR ORF program and activity eliminations, terminations, and reductions, along with specific details and funding levels can be found in NOAA's [FY 2020 Budget Bluebook](#).

The total FY 2020 OAR PAC Budget is \$26 million, a decrease of \$15 million from the FY 2019 enacted budget which accounts for the termination of NOAA's computing partnership with Mississippi State University.

### *National Weather Service (NWS)*

The National Weather Service (NWS) is responsible for providing weather forecasts, watches, and warnings in order to protect life and property, and enhance the U.S economy. The FY 2020 request for NWS is \$1.082 billion, a reduction of \$80.7 million, or 6.9%, from the FY 2019 enacted level. Given the increase in severe weather events experienced across the United States in recent years, it is critical to ensure that NWS funding is sufficient to cover all operational and maintenance requirements for current weather forecasting equipment.

The FY 2020 request for the NWS ORF budget is \$989.3 million, a decrease of \$77.3 million from FY 2019 enacted budget. This includes a net decrease of \$17 million in Observations activities, a net decrease of \$12.2 million in the Central Processing activity; a net decrease of \$35.2 million for the Analyze, Forecast, and Support activity; a net decrease of \$0.4 million in Dissemination activity, which includes an increase of \$0.2 million for systems administration support at the National Center for Environmental Protection (NCEP) office; a net decrease of \$12.5 million for

Science and Technology Integration, which includes a \$1.3 million increase to restore grants for the Collaborative Science, Technology, and Applied Research (CSTAR) program and a \$2 million increase to test and make improvements to the National Blend of Models (NBM) as part of NWS's Collaborative Forecast Process (CFP).

The FY 2020 NWS ORF budget request proposes the elimination of the following programs and activities: elimination of the Tsunami Research and Operation Warning Program and merging the Pacific Tsunami Warning Center in Hawaii and the National Tsunami Warning Center in Alaska; termination of support for the NOAA Water Level Observation Network (NWLON) and the U.S. Geologic Survey Seismic network; and termination of aviation science research and development and research to operations (R2O) transition efforts. The Administration has provided support within the NWS ORF account for ship observation data buys and to realign the National Ice Center (NIC) from NESDIS to NWS.

The FY 2020 NWS PAC budget request of \$92.6 million is a net decrease of \$24.3 million from the FY 2019 enacted budget. The net decrease for the overall PAC budget is comprised of a reduction of \$10.4 million for Construction activity that supports repairs and renewal of forecast offices and other pieces of government owned weather infrastructure, and a reduction of \$13.9 million for Systems Acquisitions activity. The net decrease of the NWS PAC budget includes two planned reductions of the Service Life Extension Program (SLEP) for Next Generation Weather Radar (NEXRAD), and the SLEP for the Automated Surface Observing System (ASOS) infrastructure.

#### *National Environmental Satellite, Data, and Information Service (NESDIS)*

NOAA's National Environmental Satellite, Data, and Information Service (NESDIS) develops, launches, and operates a constellation of satellites that provide critical earth and space observations that are used to generate forecasts for terrestrial and space weather. NESDIS also manages, distributes, and archives satellite and environmental data from NOAA and other partner satellites. The FY 2020 budget requests \$1.5 billion for NESDIS, a \$226 million, or 13%, reduction below the FY 2019 enacted budget.

The FY 2020 NESDIS ORF budget request is \$271.6 million, an \$8.6 million decrease from the FY 2019 enacted budget. The NESDIS ORF budget is divided into two accounts: Environmental Satellite Observing Systems and NOAA's National Centers for Environmental Information (NCEI). The Environmental Satellite Observing Systems account contains programmatic funding for management, processing, analyzing, and archiving the data received from all of NOAA's weather monitoring equipment, both in-situ and space-based. NOAA's NCEI is responsible for hosting and providing public access to its archives of environmental data.

The Environmental Satellite Observing Systems activity request for FY 2020 is \$215 million, a net decrease of \$3.9 million from the FY 2019 enacted budget, to provide continued support to satellite systems. The NCEI account funds data processing and analyses at NOAA's major data centers located in Asheville, NC, Boulder, CO, Silver Spring, MD, and Stennis Space Center, MS. The FY 2020 NCEI budget request of \$56.6 million is a decrease of \$4.6 million from the FY 2019

enacted budget. The NESDIS ORF budget includes a proposal to eliminate the Regional Climate Centers (RCCs) that provide climate services specific to the regions in which they are located.

The NESDIS PAC budget is primarily focused on acquisitions for NOAA's weather satellite systems: the polar weather satellites that orbit the earth and provide information for medium to long-range weather forecasts; and the geostationary operational environmental satellites (GOES) which gather data above a fixed position on the earth's surface and provide information for short-range warnings and current weather conditions. To maintain continuity of weather forecasting data as older satellites retire, a new series of satellites is being developed for both systems. Changes in the NESDIS PAC account reflect the different phases of satellite acquisition. The FY 2020 NESDIS PAC budget request is \$1.2 billion, reflecting a net decrease of \$210.3 million from the FY 2019 enacted budget. The NESDIS PAC budget is broken into the Systems Acquisition activity and the Construction Activity. The Systems Acquisition activity has a request of \$1.2 billion, a net decrease of \$210 million below FY 2019 enacted, which includes an increase of \$2.3 million for joint venture partnership allowing for NOAA's to leverage and partner with NASA's Earth Science and Heliophysics programs, and an increase of \$10 million to conduct industry studies and analysis to optimize ways to meet future needs for a geostationary orbit which was informed by the results of NOAA's Satellite Observing System Architecture (NSOSA) study. The Construction activity is flat funded at \$2.5 million.

Following the successful launch of the Joint Polar Satellite System-1 (JPSS-1, now NOAA-20) in 2017, and the launch of the GOES-17 (formerly GOES-S, now operationally GOES-West) in 2018, the FY 2020 NESDIS PAC budget had a planned decrease for the polar weather satellites and GOES-R series, among other planned satellite decreases. These planned budget decreases include: polar weather satellite decrease of \$103 million, GOES-R series decrease of \$104.3 million, Metop decrease of \$9.3 million, Cooperative Data and Rescue Services (CDARS) decrease of \$11.7 million. The FY 2020 request for the NESDIS PAC budget also reduces funding for space weather and the commercial weather data pilot, and transitioning to common products and services for ground systems support for NOAA satellites. NESDIS is also currently restructuring its PAC budget down to eight subactivities to better align with future architecture and observing system implementation.

#### Mission Support (MS)

Mission Support (MS) provides services that support NOAA's execution of its mission which includes corporate services and agency management. MS includes the Office of the Chief Information Officer, the Acquisition and Grants Office, and the Office of Human Capital Services. The MS request for FY 2020 is \$266.2 million, a net decrease of \$26 million, or 9%, from the FY 2019 enacted levels.

The MS ORF budget for FY 2020 is \$261.2 million, a net decrease of \$17.5 million. This includes an increase of \$0.74 million for Executive Leadership activity, and an increase of \$4.3 million for the Mission Services and Management activity which includes funds for the consolidation of NOAA's presences at the Silver Spring Metro Center Campus, and support for critical upgrades to NOAA's Commerce Business System for financial hardware and software. The IT Security activity request for FY 2020 is a \$4.97 million increase over the FY 2019 enacted levels to support

bureau-level oversight of cybersecurity at all six NOAA line offices to establish an enterprise-wide Internal Risk Mitigation capability within its Cyber Security Program. An increase of \$8.5 million was requested for FY 2020 for NOAA's payment to the DOC Working Capital Fund activity for a total of \$62.1 million. The FY 2020 request nearly eliminates NOAA's Office of Education with a net decrease of \$20 million from FY 2019 enacted levels, providing a total funding level for Office of Education programs of \$1.0 million for FY 2020. This includes the elimination of funding for the Competitive Educational Grants Program, and the Educational Partnership Program for Minority Serving Institutions, and a reduction in the remaining funds for the Office of Education by \$1.0 million. NOAA's Office of Education would remain the primary point of contact for the National Science and Technology Council's (NSTC)'s Committee on STEM for NOAA and the Department of Commerce. Additionally, the FY 2020 budget proposes the elimination of NOAA's Bay-Watershed Education and Training (B-WET) Regional Program. The MS PAC request for FY 2020 of \$5.0 million includes a net decrease of \$20 million from the FY 2019 enacted levels in the NOAA Construction activity to reflect completion of construction of the Mukilteo Research Station in Washington State.

#### *Office of Marine and Aviation Operations (OMAO)*

The Office of Marine and Aviation Operations (OMAO) manages and operates NOAA's active fleet of 16 research and survey ships and nine specialized aircraft that gather oceanic, atmospheric, hydrographic, and fisheries data to support the agency's mission. OMAO is made up of officers of the NOAA Commissioned Officer Corps, one of the seven uniformed services of the United States, as well as civilians. The FY 2020 request for OMAO of \$327.2 million is a reduction of \$2.4 million, or 0.7%, from the FY 2019 enacted budget.

The OMAO ORF account is primarily responsible for operations and maintenance of OMAO's fleet of ships and aircraft, and the FY 2020 budget saw a net increase of \$1.1 million over the FY 2019 enacted budget. The Marine Operations and Maintenance activity has a net decrease of \$1.8 million. The Aviation Operations and Aircraft Services activity has a net decrease of \$1.1 million. The FY 2020 budget establishes a new budget line for the Unmanned System Operations activity, funded at \$4 million. The OMAO PAC budget, which supports OMAO's fleet recapitalization plan, had a proposed decrease of \$7.7 million in the Marine and Aviation Capital Investments activity.