

August 27, 2021

National Oceanic and Atmospheric Administration (NOAA) FY2022 Budget Request and Appropriations

The National Oceanic and Atmospheric Administration's (NOAA's) mission is to understand and predict changes in weather, climate, oceans, and coasts; to share that information with others; and to conserve and manage coastal and marine ecosystems and resources. NOAA's work is divided among six line offices: National Environmental Satellite, Data, and Information Service (NESDIS); National Marine Fisheries Service (NMFS); National Ocean Service (NOS); National Weather Service (NWS); Office of Oceanic and Atmospheric Research (OAR); and Office of Marine and Aviation Operations (OMAO). NOAA also has an overall Mission Support (MS) office, which provides planning, administrative, financial, information technology, and other services to NOAA's line offices.

Congress provides NOAA, an agency of the Department of Commerce (DOC), with mandatory and discretionary appropriations. Mandatory appropriations generally form a small percentage of total NOAA funding and are disbursed to a variety of funds that support programs in NOS, NMFS, and OMAO. Discretionary appropriations typically are included in the annual Commerce, Justice, Science (CJS), and Related Agencies Appropriations Act. Discretionary appropriations support two broad accounts—operations, research, and facilities (ORF) and procurement, acquisition, and construction (PAC)—and a few smaller accounts. This CRS product focuses on NOAA's requested FY2022 discretionary funding for ORF and PAC and will be updated if either chamber passes a CJS appropriations bill. (The House Appropriations Committee reported H.R. 4505 containing discretionary appropriations for NOAA.) The product also explores potential issues for Congress, including NOAA's proposed climate-related activities, marine and aviation fleet support, and satellite operations.

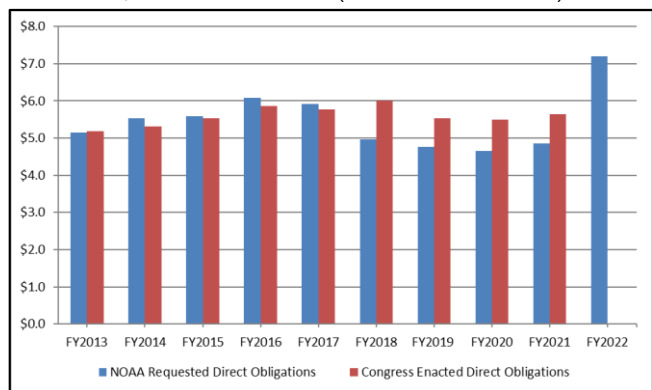
Agency Funding

NOAA requested a total of \$7.19 billion in discretionary direct obligations for ORF and PAC for FY2022, including \$6.92 billion in appropriations (**Table 1**). Direct obligations include annual appropriations, transfers, and recoveries from prior year obligations. Under P.L. 116-260, Congress provided \$5.65 billion for ORF and PAC discretionary direct obligations in FY2021, including \$5.37 billion in appropriations. The NOAA FY2022 request is \$1.54 billion above the FY2021 enacted level and \$1.41 billion over the FY2022 base level. (NOAA calculates the FY2022 base level as equal to the FY2021-enacted amount plus expected "Adjustments-To-Base," such as certain inflationary adjustments.)

Over the last 10 years, enacted NOAA ORF and PAC direct obligations (in nominal dollars) peaked in FY2018 (**Figure**

1). Since FY2013, the direct obligation amounts enacted in the PAC account have ranged from about 27% to 41% of the total enacted direct obligations (e.g., for FY2021, PAC was 27.4% of the enacted amount).

Figure 1. NOAA Direct Obligations for ORF and PAC Accounts, FY2013-FY2022 (\$ in billions, nominal)



Sources: CRS, from NOAA budget justifications and congressional explanatory statements.

Notes: ORF = operations, research, and facilities; PAC = procurement, acquisition, and construction. Direct obligations include annual appropriations, transfers, and recoveries from prior year obligations. Amounts do not include supplemental appropriations.

Issues for Congress

According to NOAA's FY2022 budget summary, the requested budget would expand investments in climate-related activities (research, observations, and forecasting; restoration and resilience; offshore wind; and equity), marine and aviation fleet support, and satellite operations (including observational satellites and space weather activities).

Climate-Related Activities

For FY2022, NOAA has requested increases to existing activities and proposed new activities to implement Executive Order 14008, "Tackling the Climate Crisis at Home and Abroad." According to the agency, the requested climate-related increases and new expenditures total \$855.1 million over FY2022 base levels. Of that total, NOAA has requested \$321.3 million for grants, subsidies, and contributions, or GSC (i.e., grants to states and territorial governments, academic institutions, etc.). Most of the GSC request would go toward NOS (\$143.8 million) and OAR (\$106.2 million) to support nonfederal efforts in coastal resilience and observing systems. The Trump Administration had proposed decreases or terminations to most of these activities each year; instead, Congress largely retained level funding or increased GSC amounts.

Table 1. NOAA Direct Obligations and Appropriations for ORF and PAC Accounts, by Line Office
(\$ in millions, nominal)

Line Offices	FY2021 Enacted	FY2022 Base Level ^a	FY2022 Budget Request
NESDIS	1,518.5	1,521.6	2,029.0
NMFS	964.9	985.3	1,099.3
NOS	628.2	632.9	862.4
NWS	1,204.4	1,269.4	1,328.7
OAR	614.1	618.9	815.7
OMAO	373.7	393.5	605.1
Mission Support	345.8	354.5	450.7
Total Direct Obligations^b	5,649.5	5,776.1	7,191.0
Total Appropriations^c	5,372.9	5,501.1	6,916.4

Sources: CRS, using explanatory statement accompanying P.L. 116-260; and NOAA, *Budget Estimates Fiscal Year 2022, Congressional Submission*, pp. Control Table-8–Control Table-12.

Notes: ORF = operations, research, and facilities; PAC = procurement, acquisition, and construction.

- NOAA calculated the FY2022 base level as equal to the FY2021-enacted amount plus expected “Adjustments-To-Base,” such as certain inflationary adjustments.
- “Total Direct Obligations,” or total program or funding level, include annual appropriations, transfers, and recoveries from prior year obligations but exclude any supplemental appropriations. Components may not sum to totals shown due to rounding.
- “Total Appropriations” are a part of the total direct obligations. Total Appropriations include annual appropriations but exclude any supplemental appropriations.

Marine and Aviation Fleet Support

NOAA, through OMAO and its Commissioned Officer Corp (NOAA Corps), maintains a variety of specialized ships and aircraft that gather oceanographic, atmospheric, hydrographic, and fisheries data to support the agency’s missions. For FY2022, the agency has requested additional funds (\$101 million) over the FY2022 base level to support the maintenance, repair, and construction of existing and new vessels and aircraft. Congress has previously expressed concern with maintenance of the marine and aviation fleets. For example, in the explanatory statement accompanying the FY2021 appropriations law (P.L. 116-260), Congress expressed its “frustration” over the lack of an agency request for maintenance funding for the NOAA Ship *Ronald H. Brown* and directed NOAA to allocate appropriations toward maintenance.

OMAO also provides coordination, support, and guidance for uncrewed marine and aircraft systems (UxS) across NOAA. NOAA currently uses UxS for seafloor and habitat mapping, ocean exploration, marine mammal and fishery assessments, emergency response, and at-sea observations. The agency requested and Congress approved the establishment of the NOAA UxS Operations Center (UxSOC) in FY2020. NOAA has requested an increase of \$1.5 million above base level for UxSOC in FY2022. In the explanatory statement accompanying P.L. 116-260, Congress directed the agency to allocate appropriations toward UxS extramural partnerships and commercial data acquisition.

Satellite Operations

NOAA, through NESDIS, manages three portfolios of environmental satellites and data acquisition: low-earth orbiting (LEO), geostationary (GEO), and space weather (SW). NOAA requested a net increase of \$507.5 million over the FY2022 base level in ORF and PAC funding for some activities under these portfolios. NOAA’s largest proposed increase is \$455.0 million for the GEO Extended Observations program, which contributes data to weather forecasts and detects and monitors environmental hazards (e.g., wildfires, smoke, fog). NOAA’s largest proposed decrease is \$252.8 million for planned reductions in Polar Weather Satellite activities.

NOAA proposed and Congress approved satellite budget structure changes in FY2020 and FY2021. For FY2022, NOAA has requested to create two new subactivities (LEO and space weather) to focus on portfolios of satellites and “maintain a flat overall budget.” Congress has previously expressed concern over satellite acquisition and construction costs. For example, in the explanatory statement accompanying P.L. 116-260, Congress noted “with exasperation the continuing trend of NOAA underestimating the costs,” and directed the Government Accountability Office to conduct an audit of NOAA’s cost estimation procedures and provide recommendations. Congress also appropriated funding to the DOC Office of Inspector General in FY2021 to carry out investigations and audits related to satellite acquisition and construction.

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