

GAO Highlights

Highlights of [GAO-24-107044](#), a report to congressional committees

Why GAO Did This Study

NSF supports the design, construction, and operations of various research infrastructure projects, such as telescopes and research vessels. These projects include major facilities that cost over \$100 million to construct and mid-scale projects that cost from \$20 million to \$100 million. NSF funds construction, acquisition, and commissioning of major facilities and mid-scale research infrastructure projects through its Major Research Equipment and Facilities Construction account.

As of March 2024, NSF has 18 research infrastructure projects in design, construction, or implementation that are either funded or proposed for funding from the major research facilities account. Building these projects on time and within budget helps support the scientific community's ability to conduct research and advance U.S. scientific goals.

The Consolidated Appropriations Act 2023 includes provisions for GAO to review projects funded from NSF's major research facilities account. This report, the seventh in a series, describes the cost and schedule performance of NSF's research infrastructure projects. To do this study, GAO reviewed NSF documents, examined NSF policies to manage and oversee projects, and interviewed NSF officials.

View [GAO-24-107044](#). For more information, contact Candice N. Wright at (202) 512-6888 or WrightC@gao.gov.

JUNE 2024

NATIONAL SCIENCE FOUNDATION

Five Major Facilities Projects Experienced Delays

What GAO Found

The National Science Foundation (NSF) continues to make progress on its major facilities projects in construction, major facilities projects in design, and mid-scale research infrastructure projects. However, NSF's project management data show schedule increases for all major facilities projects in construction relative to estimates from June 2023. NSF officials also anticipate additional increases in schedule for both the Rubin Observatory and Antarctic Infrastructure Modernization for Science (AIMS), but estimates will not be available until NSF completes a Rubin Observatory supplemental funding request in late Spring 2024 and an AIMS construction review in July 2024. Additionally, NSF completed the re-baseline for both Large Hadron Collider High Luminosity Upgrade projects in August 2023, which formalized the cost and schedule increases that resulted from prior events, such as the pandemic.

Examples of National Science Foundation Major Facilities Projects



The Rubin Observatory (left), a Regional Class Research Vessel (middle), and the Antarctic Infrastructure Modernization for Science's Vehicle Equipment and Operations Center (right).

Source: Rubin Obs/NSF/AURA (B. Stalder, left); National Science Foundation (middle); National Science Foundation (right). | GAO-24-107044

Both the Regional Class Research Vessels (RCRV) and AIMS have reported staffing shortages, each with unique causes, that are resulting in ongoing construction delays. NSF officials said that a lack of skilled labor is affecting the RCRV project at the shipyard in Louisiana. Workforce recovery after Hurricane Ida has been hindered by scarce housing, and reconstruction remains a challenge. In contrast, NSF officials said the shortage of skilled labor for the AIMS project, based in Antarctica, is due to U.S. demand for construction workers and heavy equipment operators. The lower availability of domestic labor has increased reliance on non-American workers, and the process for obtaining background checks for these workers is causing delays. The contractor is working with its primary subcontractor to develop a mitigation plan to hire and onboard the necessary staff.

For the major facilities projects in design, two of the five progressed through their respective design phases and are nearing entry into the construction stage. A third project recently entered the design stage, and two other projects are awaiting NSF decisions to advance to later design phases. Finally, NSF has progressed on the implementation of the eight previously awarded mid-scale projects.