



Highlights of [GAO-09-323](#), a report to congressional requesters

## Why GAO Did This Study

The Department of Commerce's National Oceanic and Atmospheric Administration (NOAA), with the aid of the National Aeronautics and Space Administration (NASA), plans to procure the next generation of geostationary operational environmental satellites, called the Geostationary Operational Environmental Satellite-R series (GOES-R). GOES-R is to replace the current series of satellites, which will likely begin to reach the end of their useful lives in approximately 2014. This series is considered critical to the United States' ability to maintain the continuity of data required for weather forecasting through the year 2028.

GAO was asked to (1) determine the status of the GOES-R program, (2) evaluate whether plans for the acquisition address problems experienced on similar programs, and (3) determine whether NOAA's plan will be adequate to support current data requirements. To do so, GAO analyzed contractor and program data and interviewed officials from NOAA and NASA.

## What GAO Recommends

GAO is recommending that the program take steps to improve management and oversight and determine whether and how to recover certain capabilities that were removed from the program. In commenting on a draft of this report, the Acting Secretary of Commerce agreed with GAO's recommendations and stated that the agency plans to implement them.

To view the full product, including the scope and methodology, click on [GAO-09-323](#). For more information, contact David A. Powner, (202) 512-9286, [pownerd@gao.gov](mailto:pownerd@gao.gov).

# GEOSTATIONARY OPERATIONAL ENVIRONMENTAL SATELLITES

## Acquisition Is Under Way, but Improvements Needed in Management and Oversight

### What GAO Found

NOAA has made progress on the GOES-R acquisition, but the program's cost, schedule, and scope have changed. The GOES-R program has moved into the development phase of its acquisition life cycle. It has awarded development contracts for the instruments and plans to award contracts for the spacecraft and ground segments by mid-2009. However, after reconciling program and independent cost estimates, the program established a new cost estimate of \$7.67 billion—a \$670 million increase from the prior \$7 billion estimate. The program also reduced the number of products the satellites will produce from 81 to 34 and slowed the delivery of these products in order to reduce costs. More recently, the program also delayed key milestones, including the launch of the first satellite, which was delayed from December 2014 to April 2015. Such delays could lead to gaps in satellite coverage if NOAA experiences problems with its current operational satellites before a backup satellite is in orbit.

GOES-R has taken steps to address lessons from other satellite programs, but important actions remain to be completed. NOAA has made progress in its efforts to address prior lessons by taking steps to ensure technical readiness on key components, using an acceptable cost estimating approach, implementing techniques to enhance contractor oversight, and regularly briefing agency executives. However, technical challenges remain on both the ground segment and the instruments. In addition, the program did not perform a comprehensive review after rebaselining a critical instrument, and it has not documented all of the reasons for cost overruns. Until these issues are addressed, NOAA faces an increased risk that the GOES-R program will repeat the same mistakes that have plagued other satellite programs.

NOAA has a plan to meet some, but not all, data requirements. An instrument that was originally planned as part of the GOES-R satellite was to meet requirements for 15 products that are currently produced, as well as 11 new, technically advanced, products. When NOAA removed this instrument from the GOES-R satellite program, it arranged to obtain the current products from another instrument. However, the agency has not developed plans or a timeline to address the requirements for the new products. Doing so would include justifying the funding for any new initiatives within the agency's investment decision process. Until a decision is made on whether and how to proceed in providing the advanced products, key system users, such as weather forecasters, will not be able to meet their goals for improving the accuracy of severe weather warnings. Further, climate research organizations will not obtain the data they need to enhance the science of climate, environmental, and oceanic observations.