Report In Brief

SEPTEMBER 27, 2012

Background

NOAA, in partnership with NASA, is acquiring and developing the next generation of polar-orbiting satellites for its Joint Polar Satellite System (JPSS). JPSS components currently envisioned for the system comprise the Suomi National Polar-orbiting Partnership (Suomi NPP), JPSS-1, JPSS-2, and two free flyer satellites. NASA launched Suomi NPP on October 28, 2011. JPSS satellites will provide data for weather prediction and climate research. The free flyer satellites will also collect and locate environmental data, as well as detect and relay signals from emergency search and rescue beacons. Suomi NPP is a research and risk-reduction satellite; however, because of program delays in launching JPSS-1, NOAA must rely on Suomi NPP for key data used in weather forecasting. We are predicting a 10–16-month gap in weather forecasting data between the end of Suomi NPP's design life and the time when JPSS data will be operational.

Why We Did This Review

In our September 2011 report, *Challenges Must Be Met to Minimize Gaps in Polar Environmental Satellite Data,* we addressed the need for JPSS baseline capabilities, costs, and schedule to be finalized, because uncertain baselines translate to uncertain budget requirements. In this audit, we further examined the determination of program requirements and NOAA's process for estimating the program's life-cycle cost. Our objectives were to (1) assess the adequacy of JPSS formulation activities and (2) monitor the program's efforts to maintain continuity of polar satellite data.

NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

Audit of the Joint Polar Satellite System: Continuing Progress in Establishing Capabilities, Schedules, and Costs Is Needed to Mitigate Data Gaps

OIG-12-038-A

WHAT WE FOUND

NOAA must clearly define JPSS capabilities, schedule, and cost. By defining the program and refining its cost-estimating process, NOAA can ensure that the estimate for JPSS is reliable; the program's artificially flattened budget profile needs to be independently validated. Also, Suomi NPP data validation and ground system improvements are needed for operational use. Finally, a 10–16-month gap between Suomi NPP and JPSS-1 operational data is expected.

WHAT WE RECOMMEND

The Deputy Secretary for Operations should ensure that

1. Sufficient resources and attention are given to finalizing JPSS high-level requirements and completing system definition.
2. The program's acquisition strategy for JPSS-3 and JPSS-4 is determined, documented, and shared with the Department, OMB, and Congress.
3. The National Environmental Satellite, Data, and Information Service (NESDIS) and the JPSS program quantify cost savings while determining how to efficiently process environmental data records.
4. NESDIS determines whether an enterprise approach to developing and maintaining data products from its environmental satellites could achieve economies of scale.
5. Sufficient resources and attention are given to permanently filling key management positions.
6. A policy that requires major system acquisition programs to adhere to cost-estimating best practices is developed.
7. Cost-estimating best practices are more closely adhered to in the JPSS program and other major system acquisitions.
8. An independent cost estimate adequately tests the viability of the program's funding profile.
9. Stakeholders are sufficiently informed of unplanned schedule and capability trade-offs, if needed, to meet surges in effort necessary for launches.