



# Report In Brief

U.S. Department of Commerce Office of Inspector General

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## Why We Did This Review

Our objective for this audit was to assess the adequacy of NOAA's JPSS development and acquisition activities intended to maintain continuity of data obtained from polar orbit, including the completeness of pre-launch development and testing, the impact of development modifications (such as changes to test schedules), and preparations for post-launch data production. We also examined activities at the JPSS programmatic level that had ramifications for the long-term continuity of polar satellite coverage.

## Background

NOAA's environmental satellite operations and weather forecasting are designated *primary mission-essential functions* of the Department of Commerce because they directly support government functions the President has deemed necessary to lead and sustain the nation during a catastrophic emergency. But NOAA's current constellation of polar and geostationary operational environmental satellites is aging, and its capabilities will degrade over time. As a result, the risk of gaps in critical satellite data is increasing.

The JPSS program is the result of a 2010 restructuring of the NPOESS program, which had a long history of delays and cost overruns. As a result of these delays, the NPP satellite, which was originally intended to demonstrate new instruments, will now be used operationally to maintain data continuity.

## National Oceanic and Atmospheric Administration

### ***Audit of the Joint Polar Satellite System (JPSS): Challenges Must Be Met to Minimize Gaps in Polar Environmental Satellite Data (OIG-11-034-A)***

## What We Found

1. While the National Polar-orbiting Operational Environmental Satellite System (NPOESS) Preparatory Project (NPP) remains on track for an October 2011 launch, late development of the ground system (equipment for controlling the satellites and receiving and processing satellite data) has delayed the schedule for post-launch data production. In addition, NPP's ground system is not as robust as a typical operational system, increasing the risk of data loss and disruptions to satellite control during severe weather events.
2. Our examination of program-level activities confirms a coverage gap that NOAA expects to occur between NPP's end of life and the operational date of the first JPSS satellite. This gap will result in degraded weather forecasts and a break in the climate record.
3. The process for defining JPSS' operational baseline of capabilities, costs, and schedule has been prolonged, resulting in uncertain life-cycle cost estimates and budget requirements during a period when decision makers needed clarity in these areas.
4. The transition of instrument contracts from the control of the NPOESS program to JPSS has just been completed, but delays in finalizing the contracts could lead to further cost increases and schedule degradation.

## What We Recommended

1. NOAA should take steps to mitigate risks of using NPP data operationally by determining the availability of additional resources to support preparations for post-launch data production. Management should determine the feasibility of establishing an alternate mission management center and an additional station to which satellite data may be transmitted.
2. NOAA should also adequately oversee planning and coordination between the JPSS program and external entities to ensure the adequacy of JPSS development activities.
3. NOAA should coordinate efforts from across its line offices to minimize the degradation of weather and climate forecasting during gaps in satellite coverage.
4. To more efficiently manage the JPSS program under continued budget uncertainty, NOAA should provide decision makers with data illustrating the consequences of limiting satellite observational capabilities. NOAA should prioritize all of JPSS' requirements and develop a plan for making adjustments in response to funding shortfalls.
5. To fully transition from NPOESS to JPSS, contracts with instrument vendors must be finalized.