September 2010

AVIATION WEATHER

Agencies Need to Improve Performance Measurement and Fully Address Key Challenges

GAO Highlights

Accountability • Integrity • Reliability

Highlights of GAO-10-843, a report to congressional requesters

Why GAO Did This Study

The National Weather Service's (NWS) weather products are a vital component of the Federal Aviation Administration's (FAA) air traffic control system. In addition to providing aviation weather products developed at its own facilities, NWS also provides on-site staff at each of FAA's en route centers—the facilities that control high-altitude flight outside the airport tower and terminal areas. NWS's on-site staff is called a center weather service unit. For several years, NWS and FAA have been exploring options for improving the aviation weather services provided at en route centers.

GAO agreed to (1) determine the status of the agencies' efforts to restructure aviation weather services, (2) assess the agencies' progress in establishing performance baselines in order to measure the effect of any changes, and (3) evaluate plans to address key challenges. To do so, GAO evaluated agency progress and plans and compared agency efforts with leading practices.

What GAO Recommends

GAO recommends that the Departments of Commerce and Transportation define their agreements, refine performance management processes, and address key challenges. In commenting on a draft of this report, Commerce agreed with GAO's recommendations and identified plans to address them; Transportation agreed to consider the recommendations.

View GAO-10-843 or key components.
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What GAO Found

After developing and shelving four proposals for restructuring the center weather service units over the last 5 years, in July 2010, senior NWS and FAA officials agreed to continue the current center weather service units at each of the 21 en route centers through September 2011 and to take immediate steps to improve aviation weather services by (1) having the service units provide forecasts for 10 key FAA terminal radar facilities and (2) having nearby weather forecast offices support FAA's en route centers when the service units are closed for the night. In addition, the agencies agreed to establish a joint team to baseline current capabilities and develop firm requirements for aviation weather services supporting air traffic flow management. While this agreement is important, the details have not been fully defined. Thus, it is not yet clear what will happen to the 21 service units after September 2011, when the immediate improvements in services will be in place, whether there are any costs associated with these steps, and who will pay for them. Until the two agencies further define their plans, the risk remains that the agencies will misjudge their responsibilities and not fulfill their agreements.

FAA and NWS have made progress in identifying performance measures for the weather service units located at FAA en route centers, and NWS is beginning to track its service units' performance. However, NWS has not yet tracked, established baselines for, and reported to FAA on all applicable performance measures. Specifically, of seven possible performance measures, NWS is tracking performance for three of the measures and partially tracking a fourth measure. Of these four measures, the agency has established a sound baseline and reported on two of these measures and has made partial progress on two others. The agency is not tracking performance, documenting baselines, or reporting on three of the measures because it has not yet determined how to track them. Without an understanding of the current level of performance of the identified measures, the agencies will be limited in their ability to evaluate what progress has been made. In addition, until NWS regularly reports on its performance, the agencies lack the information they need to determine what is working well and what needs to be improved.

In September 2009, GAO identified three challenges in modifying NWS's aviation weather services provided at FAA's en route centers: achieving interagency collaboration, defining requirements, and aligning changes with the Next Generation Air Transportation System (NextGen)—a long-term initiative to increase the efficiency of the national airspace system. The agencies have not yet fully addressed these challenges. Specifically, while senior agency officials recently agreed on how to proceed, work remains to be done to refine requirements, develop and execute an implementation plan, and to ensure that improvements are aligned with the long-term vision for NextGen. Until these fundamental challenges are addressed, the agencies are unlikely to achieve significant improvements in the aviation weather services provided at en route centers.