

Why GAO Did This Study

Radio frequency spectrum enables vital wireless communications services used by the federal government, businesses, and consumers. Spectrum capacity is necessary for wireless broadband (high-speed Internet access) and broadband deployment will boost the nation's capabilities in many important areas. As the demand for spectrum continues to increase, there is concern about adequate access to meet future needs. This requested report examines (1) how the National Telecommunications and Information Administration (NTIA) is managing spectrum needs of federal agencies, (2) how federal agencies are using and managing assigned spectrum, and (3) what steps NTIA has taken to meet recent initiatives aimed at making spectrum available for broadband. GAO reviewed NTIA's spectrum management documents; surveyed the 19 federal agencies comprising the Interdepartment Radio Advisory Committee; and interviewed NTIA officials and industry and academic experts.

What GAO Recommends

NTIA should develop an updated strategic plan, examine its assignment review processes to determine if the current approach can be improved, and establish internal controls to ensure the accuracy of agency-reported data. The Department of Commerce concurred with GAO's recommendation to examine the review processes and, citing competing priorities, partially concurred with the remaining two.

View [GAO-11-352](#) or key components. For more information, contact Mark Goldstein at (202) 512-2834 or goldsteinm@gao.gov

SPECTRUM MANAGEMENT

NTIA Planning and Processes Need Strengthening to Promote the Efficient Use of Spectrum by Federal Agencies

What GAO Found

NTIA is responsible for governmentwide federal spectrum management, but its efforts in this area have been limited. In 2003, the President directed NTIA to develop plans identifying federal and national (both federal and nonfederal) spectrum needs, and in 2008, NTIA issued the federal plan. GAO found this plan has several limitations, does not identify governmentwide spectrum needs, and does not contain key elements and best practices of strategic planning. NTIA has yet to issue the national plan. Furthermore, NTIA's primary spectrum management operations do not focus on governmentwide needs. Instead NTIA depends on agency self-evaluation of spectrum needs and focuses on interference mitigation, with limited emphasis on holistic spectrum management. Lacking a strategic vision, NTIA cannot ensure that spectrum is being used efficiently by federal agencies. Additionally, NTIA's data management system is antiquated and lacks internal controls to ensure the accuracy of agency-reported data, making it unclear if decisions about federal spectrum use are based on reliable data. NTIA is developing a new data management system, but full implementation of the system is years away.

Federal agencies use spectrum for many purposes such as emergency communications and national defense, and NTIA requires the agencies to periodically evaluate their current and future spectrum needs. Agencies are supposed to ensure spectrum assignments fulfill established mission needs; however, NTIA does not have specific requirements for agencies to justify their spectrum assignments or validate data used for these evaluations. Consequently, NTIA has limited assurance that the data used to make spectrum management decisions are accurate. Federal agencies rely heavily on their program offices to obtain data for the required evaluations and often face challenges, such as resource constraints and staff turnover, when coordinating with field program staff. Given that validating spectrum assignments could require significant agency resources, it would be beneficial for NTIA to consider options for a different approach to obtain and validate critical spectrum assignment information from the agencies, such as requiring agencies to conduct site surveys or attest to the accuracy of data they submit.

In response to recent initiatives, NTIA has taken steps to identify spectrum that could be made available for broadband use. First, NTIA evaluated various spectrum bands and identified 115 megahertz of spectrum that could be made available for broadband within the next 5 years based on criteria it developed. Second, NTIA developed an initial plan and timetable for evaluating and repurposing additional spectrum for broadband use in 10 years. Affected federal agencies—that is, those agencies operating devices in the spectrum bands being evaluated—encountered difficulties providing NTIA with the necessary data and analyses during the most recent evaluation. For example, according to the affected agencies, they were required to analyze and submit a significant amount of detailed impact analyses that were not readily available. Agencies will likely continue to face challenges providing such analyses to NTIA in the future as NTIA begins evaluating a larger number of spectrum bands for possible broadband use in the next 10 years.