



CIVIL GPS OVERVIEW

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What is GPS?

The Global Positioning System (GPS) is a constellation of at least 24 U.S. Government satellites providing positioning, navigation, and timing (PNT) services to civilian and military users on a continuous, worldwide basis -- free of direct user fees. The system provides highly accurate location and time information to anyone equipped with a GPS receiver. GPS provides a precise, common location and time reference to a limitless number of users in all weather, day and night, anywhere in the world.

GPS Civil Applications

GPS technology is now woven into the fabric of American society, from cars and planes to cell phones and wristwatches. It improves productivity and efficiency in many areas of commerce. For example, today's construction, farming, mining, shipping, surveying, and traffic management systems have become dependent on GPS. The technology enhances public safety by preventing transportation accidents and by reducing the response times of ambulances, firefighters, and other emergency services. GPS also furthers scientific aims such as weather forecasting, earthquake prediction, and environmental protection. Furthermore, the precise GPS time signal, derived from atomic clocks, is embedded in critical economic activities such as synchronizing communication networks, managing power grids, and authenticating electronic transactions.

National Policy

The U.S. Space-Based PNT Policy provides guidance to federal departments and agencies on the management of GPS, its augmentations, and related activities. The policy extends a long-standing, bipartisan commitment to civil GPS service dating back to the 1980s.

The national policy gives the Secretary of Defense primary responsibility for providing resources for GPS development, acquisition, operation, sustainment, and modernization. The policy also states that the Secretary of Transportation shall provide resources to the Secretary of Defense for assessment, development, acquisition, implementation, operation, and sustainment of additional designated GPS civil capabilities beyond the second and third civil signals. These include the new L1C signal designed for international interoperability and some civil aspects of the next-generation operational control segment.

FY 2012 Civil GPS Funding Request Profile

To implement the national policy, the Department of Transportation began budgeting for civil-unique GPS capabilities in FY 2008. The current DOT funding profile for civil GPS is presented below:

Civil GPS	FY08	FY09	FY10	FY11	FY12	FY13	Total
Total	\$7.2	\$20.7	\$43.4	\$58.5	\$50.3	\$55.3	\$235.5

Totals in millions of U.S. dollars

Conclusion

Fully funding the civil GPS program in the Transportation Appropriations bill each fiscal year is critical to ensure the development and modernization of the next generation GPS satellites and to provide new civil capabilities. To maintain our global leadership in space-based PNT, the United States must continue to maintain and improve GPS, its augmentations, and backup capabilities to meet growing national security, homeland security, economic security, civil, and scientific demands.