

The South Florida Water Management District and Google Earth Enterprise



“Traditional Geographic Information Systems (GIS) tools are often slow and difficult to use. Google Earth Enterprise provides access to SFWMD GIS data for users with a business need for spatial data but, in some cases, very little GIS experience.”

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ABOUT GOOGLE EARTH ENTERPRISE

Google Earth Enterprise connects geographic data to your people, work and processes by providing a fast and simple to use interface for non-specialist users to explore and interact with massive datasets of your own geospatial data. Asset tracking, marketing properties and site surveying are a few examples of the business processes that Google Earth Enterprise simplifies. Data only gets used if people can find and consume it – and there's not a better way to finding and visualizing it than with Google Earth!

For more information, visit <http://earth.google.com/products.html>.

Business

The South Florida Water Management District (SFWMD) is a regional agency of the state of Florida, and is charged with managing and protecting water resources of the region by balancing and improving water quality, flood control, natural systems and water supply in 16 counties with a population of more than 7 million. SFWMD's boundaries extend from central Florida to Lake Okeechobee, and from coast to coast, from Fort Myers to Fort Pierce, south through the sprawling Everglades to the Florida Keys and Florida Bay. SFWMD operates in some of the most challenging territory of any water district, working on issues of national as well as international interest, such as restoring natural systems like the Everglades and Kissimmee River, and managing water resources in one of the fastest growing parts of the nation. The agency is nationally recognized for its innovative methods in a wide variety of technical and scientific specialties, most needing to use spatial data in some form.

Business Need

A recent survey identified over 420 SFWMD staff that expressed the need for 3D spatial data viewing capabilities. Information Technology staff researched potential technology solutions that could be implemented to meet the core needs identified in the survey in a fast, cost-effective manner. As a result, implementation of the Google Earth Enterprise System solution was selected.

The Google Earth Enterprise System solution will meet the SFWMD's overall business needs. The combination of being able to apply an easy-to-use interface that enables 3D viewing capabilities on SFWMD spatial data is a unique capability in the marketplace. This will allow many more SFWMD staff to access spatial layers and aerial photography directly, reducing dependence and workload impacts on trained GIS personnel.

Scope of Work

Google provided support to install Google Earth Server Software and configure and prepare the initial database, i.e. “flyable world” for the SFWMD's Google Earth Enterprise solution. (The “flyable world” is the globe that you see displayed in the Google Earth client.) Configuration activities took place at both Google's site and the SFWMD Data Center.

The SFWMD was responsible for procuring the hardware and installing the operating systems. Google was assisted with loading the Google Earth server software and initial data.

The Google Earth Enterprise system enables 3D interaction with District-wide spatial layers and aerial photography through a user interface available to personnel on the district network. The system leveraged the SFWMD investment in spatial data while capitalizing on the unique and intuitive Google Earth client interface.

The system enables staff to access a subset of District datasets stored in the SFWMD Enterprise GIS Data Library using the Google Earth Enterprise Client. In addition, users can incorporate output from Google Earth in presentations and documents. Movies can be generated and presented in electronic form for distribution and on websites. Screen captures and prints can be generated and presented electronically and in hard copy.

Results

The South Florida Water Management District has implemented a Google Earth Enterprise system to bring 3D spatial data to the enterprise. The Google Earth Enterprise configuration uses SFWMD aerial photography and vector layers. SFWMD users see layers from the District Enterprise GIS Data Library including structures, canals, District-owned lands, water use permits and environmental monitoring stations – instead of the shopping, dining and other layers in the Google free database. The system sits behind the District's firewalls and is composed of a development and a production server – and provides access to 500 desktop clients.

SFWMD's primary standard GIS technology toolset is provided by ESRI. Spatial data to be delivered via SFWMD's Google Earth Enterprise system is housed in production ArcSDE/Oracle databases. The Google Earth database is a subscriber to that repository. All data in the Google Earth system is documented in the GIS Data Catalog, and the data documentation is available from the Google Earth Client. SFWMD data maintenance procedures provide data from the Enterprise GIS Data Library to the Google Earth System.

About the Google Earth Enterprise Solution

Google Earth Enterprise is designed for users who have their own imagery, terrain, and/or vector data, and would like to distribute this to multiple users simultaneously. Google Earth's technology makes it easy for non-specialist users to interact with massive quantities of satellite/aerial imagery and GIS data, to quickly get to the information that could make a critical difference in water resource management in the region spanning central and southern Florida.

