



Agenda Report

20-868

Agenda Date: 11/17/2020

INFORMATIONAL REPORT TO COUNCIL

SUBJECT

Informational Report Regarding Bi-yearly Project Status Report of the GIS Services Program

COUNCIL PILLAR

Deliver and Enhance High Quality Efficient Services and Infrastructure

BACKGROUND

Council has requested a bi-yearly project status report of GIS services. The first report was submitted on March 9, 2020. This is the second report. On October 29, 2019, Arini Geographics was awarded a contract for Enterprise GIS Consulting Services. The contract was awarded as a three-year professional services agreement for the initial term of the contract, with the option of one additional two-year renewal term. Despite challenges encountered by shelter-in-place regulations, there is significant progress for the current reporting period.

DISCUSSION

The City's Enterprise GIS Program is focused on both steady state operations and projects. Critical data updates and quality assurance is constantly being performed on some of the most critical systems such as:

- City Enterprise GIS Basemap, a specialized mapping system keeping track of the City's map layers (addresses, streets, parcels, ownership, underground electric utility easements, general plan and zoning designations, flooding and noise delineations, multiyear aerial imagery) and key-related attributes. From November 1, 2019 thru September 20, 2020, over 15,000 address updates have been captured in the Enterprise GIS Database, ensuring that residents, businesses, developers, and government officials have the most current data.
- infoMap, a web-based mapping application, provides easy access to the City's Enterprise GIS where assets are digitized, modeled and mapped, currently upwards of 2.5 million data points and 6,000 specific attributes. On a daily basis, City departments leverage over 150 unique maps and services to improve operational efficiency, increase quality of service, make better decisions, respond to emergencies, improve citizen access to information, maintain environmental compliance, and engage the community. In addition, workflow-driven map queries are run to obtain structured reports and data. For example, using the radius tool, legally required maps and mailing lists for community development are produced on demand. Similarly, through the "City Council Tool" and the "Planning Commission Tool" parcels owned by the Council/Commission members are identified. Furthermore, some of the services that infoMap uses serve department-specific information systems such as 911 dispatch and routing, citywide permitting and document management. On a yearly basis GIS has facilitated and provided location context to over 50,000 permit queries and nearly 40,000 address

searches.

The application is being upgraded to v.3.0 due to technology obsolescence and to be accessible on both desktop computers and mobile devices for increased field access. The upgrade will also deliver improvements such as the ability for maps to be saved and shared online with improved level of access control. With the upgrade to v.3.0, it is anticipated usage will significantly increase.

- MapSantaClara, a web-based application which provides tailored access and reporting functionality to the public at large: <https://map.santaclaraca.gov>. During the 101,535 visits made to MapSantaClara between November 1, 2019 and September 20, 2020, over 18,000 reports were created, 8,000 address searches completed, and 5,000 maps printed.
- Open Data Geospatial Portal, a web-based repository that provides the business community, other agencies, City contractors and the public at large with up-to-date common GIS data layers such as streets, addresses, parcels, voting districts, census blocks, etc. without the need to request such information, saving City staff time and enabling applications to direct-read and process GIS information: <https://map.santaclaraca.gov/data>
- Story Maps, six publicly-available, web-based applications that facilitate information dissemination and increase the level of service to the public, including Development Projects and Live Traffic Cameras: <http://santaclaraca.gov/devprojects> and <http://santaclaraca.gov/trafficcam>

More stats and information related to the steady-state Enterprise GIS activities can be found in the attached infographic (Attachment 1), indicating the number of updates done to the City Basemap in the past six months and the dynamic number of records in the Enterprise Geospatial Repository (EGR) by department. Enterprise GIS Web-based Applications, infoMap and MapSantaClara, usage statistics are also shown both by functionality and geography.

Public safety remains one of the City's top priorities and has many GIS interconnections. Dedicated datasets, maps, map services, applications and integrations, for both Fire and Police Departments, are being maintained and map updates to the Computer-Aided Dispatch (CAD) system are being done at scheduled intervals. The Common Operational Picture (COP), which provides real-time situational awareness for public safety, remains available as needed.

A key focus area is Enterprise Asset Management (EAM) enabling more effective management of City's assets to improve their utilization and performance, reduce capital costs, reduce asset-related operating costs, extend asset life and subsequently, increase return on assets and quality of service. EAM also helps improve environmental compliance as well as meet occupational safety regulations. Additionally, EAM serves as a decision-making platform for data-driven urban investment, design and development. City's EAM consists of a tight integration between the Enterprise GIS, the repository of asset inventories, and the Work Order Management System that keeps track of the maintenance work that is being done on those assets. Currently, the IT and GIS staff, in collaboration with each respective City Department, are working on streamlining the processes through which existing asset classes (water, wastewater, recycled water, storm drain, parks and recreation, city facilities) are being kept up to date, as well as new assets that are being mapped and tracked.

Highlighted achievements during this reporting timeframe:

- Completed location validation of 2015-2019 citywide water usage data for the Department of Public Works, used to calibrate the sewer hydraulic model based on changes in usage (habits, fixtures, etc.) over time.
- Traffic sign inventory completed for over 50% of City streets.
- Completed the Enterprise GIS integration with the Enterprise Document Management and continuing with operationalization of location components. This organizes City documents by location and facilitates quick access to those documents anywhere.

Planned activities over the next six months:

- Upgrade of the City Enterprise GIS Viewer, infoMap 2.0 to infoMap 3.0, to support usage across multiple web browsers and devices.
- Complete citywide streets signs inventory, which will provide the first ever dataset of this kind for the City.
- Begin inventory of trees lining the City streets, providing the first ever comprehensive dataset of trees maintained by DPW.
- Initiate Enterprise GIS integration and location validation for new records management system (RMS) for the Police Department.
- Deploy Multi-Source map for Mobile Data Computers on-board first responders' vehicles, synchronized with the Computer Aided Dispatch system.

Currently the Enterprise GIS Program at the City of Santa Clara is an organization-wide framework (people, process, technology) ensuring that the geospatial and asset data owned by each department is integrated into a single enterprise system, with high quality assurance standards, which then provides location intelligence and asset inventory across all departments, and serves as a data-driven decision-making support citywide.

ENVIRONMENTAL REVIEW

This is an informational report only and no action is being taken by the City Council and no environmental review under the California Environmental Quality Act ("CEQA") is required.

FISCAL IMPACT

There is no cost to the City associated with this report other than administrative time and expense.

PUBLIC CONTACT

Public contact was made by posting the Council agenda on the City's official-notice bulletin board outside City Hall Council Chambers. A complete agenda packet is available on the City's website and

in the City Clerk's Office at least 72 hours prior to a Regular Meeting and 24 hours prior to a Special Meeting. A hard copy of any agenda report may be requested by contacting the City Clerk's Office at (408) 615-2220, email clerk@santaclaraca.gov [<mailto:clerk@santaclaraca.gov>](mailto:clerk@santaclaraca.gov).

RECOMMENDATION

Note and file the Informational Report regarding the Bi-yearly Project Status Report of the GIS Services Program.

Reviewed by: Gaurav Garg, Director of Information Technology/CIO

Approved by: Deanna J. Santana, City Manager

ATTACHMENTS

1. Infographic - Enterprise Geospatial Program Activity