

## Eyes and Ears of the City

City of Oxnard, CA uses mobile GIS technology to bring situational awareness to City managers and officials

The City of Oxnard is a coastal city in California. Regular monitoring of City waterways, including storm drainage canals is an important municipal operation that involves regular field inspection and reporting by mobile City employees.



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Grace Hoffman  
Deputy City Manager, City of Oxnard, CA  
City of Oxnard

The City of Oxnard, CA is leveraging new technology to improve situational awareness and help employees and volunteers act as “the eyes and ears of the city,” as David Endelman puts it.

Endelman is Oxnard’s GIS Coordinator, and was instrumental in putting BlackBerry® smartphones into the hands of mobile city workers in an effort to document and clear debris in storm draining channels throughout the City.

Using the BlackBerry smartphones, workers take photographs of any problems in the storm channels, and record their findings in an easy-to-navigate form that collects critical data about the event.

Once the data is entered and the photograph taken, the information is immediately uploaded to the City’s ESRI ArcGIS® server, giving managers, staffers, and (in the future) elected officials virtually instant insight into what’s going on in their City.

“It’s the integration of three technologies that makes this work,” Endelman explains. “GPS-enabled BlackBerry smartphones, our ESRI ArcGIS server, and Freeance™ Mobile, the software that ties it all together.”

The Freeance Mobile software allows governments and businesses to, as Endelman puts it, “Get more out of the existing investment in BlackBerry and GIS, to really enjoy the best of both worlds.”

### More Useful, Accurate Data

Endelman says inspecting segments of the City infrastructure, such a storm drains, using the traditional pen and paper approach limits the amount of information one can practically collect. Consistency is also a challenge because everyone records information in his or her own way. Paper forms also initiate a series of labor-intense procedures downstream.

“Handwritten notes have to be transcribed manually before the data is usable, which is a tedious and time-consuming task,” says Endelman. All of this delays the communication of information to City managers and officials, which can hinder their ability to respond quickly, or completely, to problems.

“With Freeance Mobile, now our workers can take photographs of the problem with GPS coordinates automatically attached to the photograph and field notes. Back at the office, we have a much clearer understanding of what’s happening, and how we can respond or correct the issues,” says Endelman.

In the case of storm drain debris, this means identifying areas of potential problems in advance, and also getting a more complete picture of the debris situation to help determine where the trash might be coming from.

Endelman believes the initiative is a good example of how technology can be used to make more efficient use of taxpayer money.

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- David Endelman, GIS Coordinator, City of Oxnard, CA, City of Oxnard

## Up and Running Quickly



“Our technology team was very pleased with how quickly the Freeance application was up and running,” says Grace Hoffman, Oxnard’s Deputy City Manager.

Endelman concurs, saying he was pleasantly surprised at the short time frame required in order to get the entire debris collection initiative operational. “The whole operation was in motion in a matter of weeks, which is not often the case when deploying GIS technology. There was simply no big technology learning curve, for anyone involved in this project. Using the Freeance application, we created the custom Data Collector form, created the map views, and trained the data collectors, all without issue or setbacks.”

The data collectors for the storm debris operation are members of City Corps, a combination paid and volunteer workforce that utilizes the city’s youth in community service activities. “These young volunteers were proficient with the software after about an hour of training; evidence of the user-friendly nature of the smartphone and the Freeance software.”

In contrast to the relative simplicity of this deployment, the City had attempted to use standalone GPS units in the past, but abandoned that effort. “Those devices have too high of a learning curve to be used only every few weeks, or once a month. Freeance on BlackBerry is much more intuitive in every respect.”

Endelman says the inspection of the storm channels will become part of Oxnard’s monthly operations. “It’s helping us keep waterways and surrounding areas safer,” he says.

## More Opportunities for Local Government

Endelman says Oxnard’s storm channel clean up is representative of a whole new world of opportunity in terms of time and cost savings for local government. “From an efficiency standpoint, Freeance Mobile certainly has the potential to eliminate a lot of paper-based processes within local governments. This faster data flow certainly speeds up decision making on operational issues, but it also offers tremendous value as a public safety tool,” he says.

Oxnard’s future plans include deploying BlackBerry smartphones to city inspectors, for use in disaster situations. As a coastal town, earthquakes are always a threat. Freeance on BlackBerry will allow inspectors to be anywhere in the city, documenting potential hazards or building damage with photographs and GPS coordinates.

“A picture is worth a thousand words because situations get captured in vivid color and communicated instantly. This translates into almost instant situational awareness at the office and, ultimately, better decision making,” Endelman explains.

Summarizing his experience with Freeance on BlackBerry, Endelman says, “It’s enabled us to make improvements in how we collect and handle data. Better consistency, integration of live images and GPS coordinates, elimination of manual tasks and paper, acceleration of data flow; the list is long.”

Hoffman adds, “We’re pleased with the Freeance solution on every level. In the storm channel clean up initiative, it matched our needs perfectly, and it’s a great example of a technology that has introduced a new level of efficiency in terms of how a local government can operate.”

Technology Profile	
Freeance Software	Freeance Mobile 2.2 - Pro Edition
BlackBerry Solution	BlackBerry Enterprise Server v. 4.1 5 BlackBerry Tour 9630 smartphones
ESRI Software	ArcGIS Server 9.3.1 Standard - Enterprise Edition
Wireless Carrier(s)	Verizon
Database Software	SQL Server 2000

