



Sarpy County GIS
1210 Golden Gate Drive
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MEMORANDUM

To: County Board
From: Eric Herbert, GIS Coordinator
Subject: March 9, 2010 Quarterly Report
Date: March 4, 2009

On March 9, 2010 during the Administration Briefing, I will be presenting the quarterly report for Geographic Information Systems, which accompanies this memo. If you have any questions or would like any further details, please contact me at 593-2274.

Geographic Information Systems Quarterly Report

Administration Briefing
March 9, 2010

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I General Information

I.A Administration

I.A.1 Coalition

The GIS Coalition has continued to meet quarterly to discuss current and future projects and development needs. The most recent meeting occurred February 11, which provided the opportunity to communicate the status of the current projects and identify any current issues and future priorities.

By far, the project drawing the most interest is the NIROC aerial photography project which is detailed in section II. The NIROC project requires an amendment to the GIS Coalition interlocal agreement, which will be presented to the board in the near future. The amendment will increase the funding shares for each city in the agreement appropriately, based on the geographic size of their jurisdiction.

While most of the department's projects are a cooperative effort providing benefit to the cities and the county, the department has also worked to assist individual member's needs. Some of these miscellaneous coalition projects included:

- Map book creation and district map creation for Gretna Fire Department
- Database design and creation for land use mapping in Papillion
- GPS configuration for La Vista Public Works
- Response zone and hydrant mapping for Papillion Fire and Bellevue Fire

II Current Projects:

II.A Data

II.A.1 NIROC 2010

MAPA has signed the contract with Pixxures for the collection and processing of the aerial photography project scheduled for this spring. Sary County project deliverables include:

- ❖ 6" color orthophotos
- ❖ LiDAR (topography)
- ❖ Updated building footprints
- ❖ 12" 4-way obliques
- ❖ 6" 4-way obliques

The current snow-covered ground conditions are a cause for concern. Ideally, the aerial photo capture would take place early March through mid April when there is no snow on the ground and before leaves have grown on the trees. If snow cover or standing water conditions remain problematic through the first week of April, the NIROC committee will discuss options with Pixxures to either allow for expansion of the flight window into late April or possibly allowing photography to be collected an extra one to two hours each day. These options would reduce the overall quality of the aerials, but they may help ensure that the project moves forward this year.

II.A.2 Election Maps

Over the last few weeks, the GIS staff has been working with the election office to create updated maps that would be easily accessible. Precinct, ward, commissioner district, and legislative district maps have been completed and printed to an electronic 'PDF' format. These files have been placed on the election office's website, where anyone with internet access can retrieve them. Complementing the PDF's, all of the currently mapped districts are available as viewable layers on SIMS20. Links to the PDF's are included in many of the layers and will be continually updated as new PDF's are created.

To further assist candidates and any other individuals interested in obtaining hard copy maps, the election office intends to handle all requests. Upon receiving a request for a large map, the election office staff will notify GIS. GIS staff will perform the plotting of the maps and then turn them over to the election office, who in turn will handle the rest of the transaction including the delivery of the map to the appropriate individual.

II.A.3 Census – Addresses & Boundary Updates

The department completed another request by the Census pertaining to the Boundary and Annexation Survey (BAS). Nikki Lampe, who has been the lead for the Census-related projects, has submitted the current boundary data and annexation information for what we understood to be the final request for the BAS. The BAS submission was executed February 25, 2010.

Related to the BAS, the Census also requested that the county verify its current boundary, which the GIS staff reviewed. The existing boundary noted on the document was accepted. The form was signed and mailed Friday, February 12, 2010.

Running parallel to the boundary project, the local update of the census addresses (LUCA) has also been underway. January 21, 2010 the staff submitted an update to the address records that included all new addresses from the point of last submission. All addresses outside of corporate limits were included in the study.

Maintenance of the master address list will continually require attention from staff. The addition of the Capehart housing addition information was recently completed. Identified as a need, the properties that include multiple addresses on common grounds will be more thoroughly inventoried and included in the master address list when time allows.

Plans for the creation of a simple web application that will provide the ability to check the validity of an address within the county are still in development. Although the master address list is not 100% complete, the application will assist users in several departments determine whether or not a given address is a valid and assigned Sarpy County address. Once the multiple address properties are incorporated into the master address database, the application should be able to provide a very thorough validation mechanism. Development of the tool is scheduled to begin mid-March.

II.B Applications

II.B.1 SIMS 2.0

The second version of the Sarpy Internet Map Service (SIMS 2.0) was released at the end of October. Since that time, the staff has made a concerted effort to address a number of requested modifications to the application and maps. Much of the effort was directed at improving the performance of the new system.

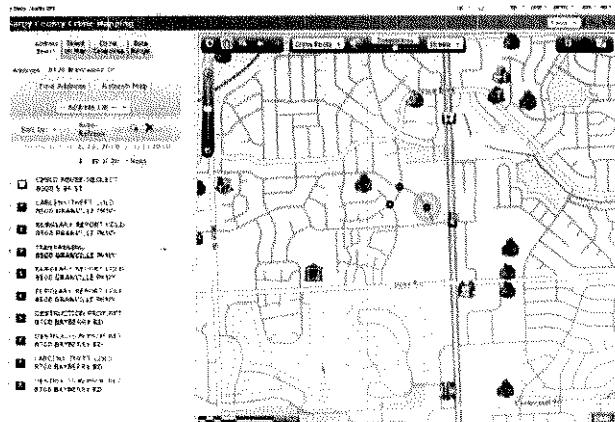
To improve the performance of SIMS20, a new web server was created for the department. The server will house all of the county's GIS web applications. By isolating the GIS applications on the server, the department is able to make appropriate adjustments and modifications to the applications without impacting other county websites and applications (i.e. web email). The GIS staff is currently working to finish shutting down the applications on the principal server and directing traffic to the new location.

Part of the process for making business information available via the web requires database copying procedures. As the amount of information the department maps and stores has increased over time, the copying procedures have become more complicated. GIS staff is currently implementing new replication methods that should improve the procedure and require less daily machine time to execute.

SIMS 2.0 may be accessed by visiting maps.sarpy.com/sims20.

II.B.2 Crime Mapping Web Application

Leveraging the software that powers SIMS 2.0, the GIS department has worked with WebGIS Solutions to develop a crime reporting website. The application will include the information that is currently displayed on crimereports.org, but it can include county-wide crime information. The development of the project is split into multiple phases, with the first phase consisting of the crime mapping component. Second, a basic set of analytic tools will be added to the crime mapping application. The third phase will include the expansion of the program to allow for multiple applications (crime mapping, sex offender mapping, etc) to be used for the law enforcement community.



Phase I of the website application is complete, with a basic version of the application online. Currently, the basic application can be viewed by visiting <http://maps.sarpy.com/sarpycrime/default.html>.

Phase II, the development of the analytic tools and graphs, is currently underway and is expected to be complete mid to late April.

II.B.3 Section Corner Tie Research Application

Working with the IS development staff, the section corner tie database application will be redesigned to provide better access for the users in Survey as well as the public. The current application has become difficult for the Surveyor's Office to maintain and make available for the engineering and surveying consultants to use. The redesign of the application will allow the office to maintain the data easily and let the users search online for section corner ties quickly via basic searches and a map-based interface. The development staff is currently reviewing the existing application to determine the best method for developing the new program. GIS staff will cooperate in the development of the end product, providing a map-based interface for searching corner ties.

III Upcoming Projects

III.A Situational Awareness Toolkit/Common Operating Picture

Providing a map-based application that could be used during an emergency to help pull information from a variety of sources has been a request for the GIS department to investigate. After researching the needs, plans to develop such an application have been developed. The goal of the project will be to provide a simple application that can provide a dashboard of current events/incidents with the inclusion of a number of different data feeds. Possible feeds include weather data, streaming video, vehicle locations, etc. By pulling information from all of these resources the 'common operational picture' is created with the goal of providing situational awareness.

Coordinating with Douglas County GIS staff and emergency managers, a plan was developed for the implementation of the project and submitted as part of the 2008 Tri-County homeland security grant application. It is our understanding that the project has been approved by the state and will receive funding grant when the funds are released.

Here are a few of the project highlights:

Highlights:

- ④ Leverages existing investment in GIS systems & services
- ④ Supports multi-agency and jurisdictional collaboration & communication across multiple organizations
- ④ Enables information sharing with agencies outside of the metropolitan area
- ④ Visualize various City of Omaha, Sarpy, Douglas & Washington County agency content through a single view
- ④ Distill complex, disparate information into actionable intelligence
- ④ Integrates live data into the common operational picture