

AIMS Coordinators Meeting Minutes

September 9, 2010

Host: WaterOne

Location: WaterOne Board Room

Announcements:

ESRI will be hosting the upcoming KCAIUG meeting on Tuesday, September 14, at the ESRI office in Leawood (8700 State Line Road). The meeting will start at 10:00 AM. There will be two hours of content followed by complimentary BBQ lunch provided by Jack Stack BBQ. Space is limited for this event, so please register at

<http://events.esri.com/info/index.cfm?fuseaction=showSeminar&shownumber=13912>. Agenda includes 2010 ESRI User Conference Recap, ArcGIS 10 New Features, and Innovative Uses For ArcGIS.

Presentations:

Cliff Middleton

The National Recreation and Parks Association (NRPA) has recently developed a data model for parks, trails, and recreation facilities (e.g., facilities in parks, sports facilities, courts, playgrounds). Cliff is proposing that Johnson County migrate its data on parks, trails, and recreation facilities to this model. Cliff has already begun the migration process and has made significant progress. He still needs to work with the various cities to adopt the NRPA model and to complete/improve their data.

A PowerPoint of Cliff's presentation can be found at

<http://aims.jocogov.org/resources/mtgnotes/presentations/2010/Sept/NRPADataModel.pptx>

Steve Voelker

Steve provided an overview of WaterOne's current GIS efforts. He highlighted two projects in particular: Geodatabase Redesign, and GIS Analysis for Laboratory Management Information System (LIMS).

Geodatabase Redesign: WaterOne designed their geodatabase nearly 15 years ago. Over time, the limitations of that design have been revealed through constraints to workflow and analysis. Currently they are examining domain values for validity, accuracy, and meaning. They are also evaluating whether each attribute field is needed. They are considering restructuring feature datasets and feature classes, and are also attempting to reduce their use of annotation.

GIS Analysis for LIMS: The Total Coliform Rule (TCR) and Lead Copper Rule (LCR) of the Safe Drinking Water Act requires regular sampling of water across their distribution system (TCR requires 210 samples per month, LCR requires 100 samples every six months from single family dwellings built between 1983-87). GIS was used to help select a well-balanced spatial distribution of sampling sites. GIS has also been used to help monitor complaints regarding taste and odor with the goal of being able to trace these complaints to a particular treatment plant.

A PowerPoint of Steve's presentation can be found at

<http://aims.jocogov.org/resources/mtgnotes/presentations/2010/Sept/GISAtWaterOne.pptx>

Stu Brownlee

Stu presentation was entitled "Geodatabase Redesign of Production and Distribution Datasets". WaterOne originally loaded their *entire* water system from paper maps and AutoCAD into their geodatabase. Since then WaterOne came to realize that there would be advantages to separating data about its "Water Distribution" system (from treatment plants to customers) from data about its "Water Production" system (from river/intake to/through treatment plant). Chief among those advantages were efficiencies in data maintenance and isolation of the correct valve when a broken water main occurs (to ensure that the isolated valve is a production valve, not a transmission valve). WaterOne used the ESRI Water Treatment Plant data model to help design their dataset for Production Water Facilities.

A PowerPoint of Stu's presentation can be found at

<http://aims.jocogov.org/resources/mtgnotes/presentations/2010/Sept/GDBRedesign.pptx>

Simon Willis

Simon walked us through WaterOne's workflow for obtaining GPS coordinates on their 31,000 valves. The process involves downloading shapefiles to their Trimble GeoXT units, field updates to points, docking of unit, python automation to append to an "inventory" layer, and editing various feature classes (valves, mains, anno) based on more accurate coordinates. They have made significant progress toward obtaining GPS coordinates on their valves, and are beginning to think about what features to GPS next (perhaps hydrants or meters).

Simon presented his thought process through some interesting spatial analysis he has conducted recently. He has examined the spatial correlation between meter density and water consumption density, and then water consumption density and main break density. Using a weighted overlay he combined areas of high water consumption with areas of high main breaks with the hope of identifying priority areas for replacement of water mains.

A PowerPoint of Simon's presentation can be found at

http://aims.jocogov.org/resources/mtgnotes/presentations/2010/Sept/GPS_SpatialAnalysis.pptx

Tom Price

Tom described his very recent efforts with ArcGIS Mobile as a way to bring significant efficiencies to the convoluted GPS workflow that Simon discussed earlier. Thus far his proof-of-concept is going well and it appears that he may be successful not only with regard to workflow improvements, but to also be able to expand the use of GPS by WaterOne field staff.