

# G-MAP passes the test in Arma

Those who attended November's Annual Meeting of the KMEA Member Cities heard firsthand about the beta test Arma conducted in October for KMEA's G-MAP program.

A Powerpoint presentation by Kirk Larson, Operations Manager, Midland GIS Solutions, Maryville, Mo., took viewers through the G-MAP process, step by step, from the program's rationale to the actual implementation in Arma. The presentation was followed by comments from KMEA G-MAP Committee members who took questions from the audience.

By providing GIS (Geographic Information System) data on electric system components of participating member cities, G-MAP will help municipalities plan, manage and maintain their electric systems. Even more important, the Agency-wide data will improve worker safety and enhance responses to power emergencies by providing digital and printed locations for all electrical components in a standardized format. It will also provide crucial information for FEMA if a disaster is declared.

"The G-MAP program will help cities 'establish damage' when there is a FEMA claim," according to Diann Burress, KMEA Director of Member Services. "The GIS data will provide an accurate record of where electrical components were located prior to the event."

And, because KMEA has negotiated a special group rate with Midland GIS Solutions, participating member cities will receive all these benefits of the GIS mapping services at a substantially discounted price.

A city of 1,500 with 735 housing units, Arma decided to embark on the G-MAP beta test in August, at a cost of approximately \$9,600, because maps of their electrical system were virtually non-existent, according to John Gorentz, Arma Director of Public Works and member of the G-MAP Committee.

"We had a pencil drawing of where some of the switches and three-phase wire went, but it hadn't been updated since probably the 1960s," John said. "In the case of a tornado or other emergency when someone would have to come in and help us, we would have nothing to give them to tell them where any power components had been."

Certainly all cities are feeling the pinch of the current economic downturn, but John said the benefits of G-MAP far outweighed the costs for Arma, who mapped the location of poles, transformers, pad

mount transformers, phasing switches, substations and critical points through G-MAP.

"If we have workers coming in to help us after an emergency, they will now know where components were previously located," explained John. "That's why we want to get the program to all KMEA members, in a standard format, so that everybody's maps look the same. That would make it so much easier for Mutual Aid rescue workers."

John said his city also plans to identify software that would enable linemen to complete work orders from the mapping system so that each time they completed work, they would log in and provide information about the work performed at that location. With this information, patterns would emerge over a period of time, patterns that would help the city prioritize upgrades. In addition, John said he hopes to add additional mapping layers to locate water and sewer functions.

To prepare for the mapping, John ordered vinyl adhesive numbers, which he affixed to each of the 537 transformers in town. Then, two Midland GIS technicians arrived on the scene. In just four days, with just a map in hand, they located every pole, transformer, phasing switch and substation in town.

"They went through each section of town, painting pink fluorescent paint at the base of each pole they had located," John said. "Then they got a GPS position and assigned the pole a number and recorded the transformer number. Pad transformers were marked, as well. Within a couple of weeks, we had a rough draft of the whole project."

Once Midland has secured aerial photography from the county, they will produce an oversized wall map, along with 11 x 17 truck maps of the town, divided into 7-9 sections. The system will also allow Arma to produce customized reports and access information on the Web, through KMEA's password-protected Web site. All city mapping will be stored at KMEA, with a backup at Midland GIS. Cities can perform their own G-MAP data updates using handheld devices provided by KMEA.

To other cities considering the program, John says, "Go for it, especially if you are in the position we were, with virtually no mapping. Plus, we are part of Mutual Aid. If we are called out to help after an emergency, I would sure like to be able to read the maps of the city we are helping."

