Sault Ste. Marie Hosts Canada GIS in Healthcare Day

The Sault Ste. Marie Innovation Centre (SSMIC) and ESRI Canada hosted the first GIS in Healthcare Day for northern Ontario at Algoma University College in Sault Ste. Marie, Canada, on May 1. The agenda was packed with a mix of guest speakers, expert demonstrations, and illustrated examples of GIS maps containing health-related information.


“Health care can benefit greatly from GIS, and our work here is increasing awareness among the health care community that GIS can improve service delivery and support decision making,” said Paul Beach, project manager at SSMIC.

SSMIC operates the Community Geomatics Centre (CGC), a unique group in Canada that promotes and establishes the partnerships and technological means to efficiently share geospatial data, tools, technology, and knowledge among community organizations. Its goal is to create a safer, healthier, and more prosperous community.

SSMIC has collaborated with local health and social agencies to improve community health by adding health and social issues data to the community’s extremely comprehensive municipal GIS dataset. As a result, it has tackled problems in the areas of early childhood development, handicapped accessibility, public safety, and environmental health. Early results indicate improvements in public safety, reductions in municipal liabilities, and more effective use of budgetary resources.

For most health- and social issue-related organizations, data is abundant but hard to analyze when in a list, spreadsheet, or database format. Usually, these organizations are looking at numbers, such as number of low-birth-weight babies, low kindergarten test results, or domestic dispute calls, and not at where these events are occurring. GIS technology provides a tool to analyze these issues geographically. So far, the resulting maps indicate that most health and social problems occur in specific pockets. By viewing the data spatially, and with the ability to overlay different agencies’ data, health- and social issue-related organizations can now look for combining factors that may be causing a problem. That allows them to better target programs.

A portion of the proceeds from the GIS in Healthcare Day was donated to Child Care Algoma, a local, nonprofit agency that supports healthy early childhood development. Child Care Algoma has already realized some of the benefits of using spatial analysis to examine factors influencing early childhood development including tracking low birth weights, smoking habits during pregnancy, and exposure to domestic violence.

During the event, ESRI Canada presented SSMIC with an Award of Excellence for its work in GIS solutions and, more specifically, for its advancement of technology that supports health and human services in the community.

“ESRI Canada is very proud to present the Sault Ste. Marie Innovation Centre with this award for its success in building a GIS solution that enables the understanding of issues ranging from medical epidemiology to health care access that can enhance research, save money, and improve service delivery,” said John Houweling, Ontario region manager, ESRI Canada.

A map showing Sault Ste. Marie school locations includes a red circle drawn around schools that have tobacco vendors located within 250 meters.

Prenatal smoking and birth weight data overlaid on a Sault Ste. Marie municipal map helps health researchers see possible correlations among place of residence, women’s smoking habits, and health of newborns.

continued on page 11
Health and Human Services Events

GIS Workshop for National Associations
Staff of the Association of State and Territorial Health Officials (ASTHO), National Association of County and City Health Officials (NACCHO), and National Association of Counties (NACo) gathered on March 28 at the ESRI 1 training facility in Vienna, Virginia, for a one-day workshop on GIS and Public Health. Brad Tatham (from ESRI business partner Scientific Technologies Corporation [STC]) and Chris Kinabrew (ESRI public health specialist) designed the training specifically for staff of national organizations with significant responsibility for programmatic areas of health and human services. Areas included environmental health, health policy, immunization, informatics, maternal and child health, public health preparedness, and member services. Participants learned basic GIS concepts and completed several hands-on exercises.

Staff members of the national associations that participated in the workshop recognize that GIS is a useful tool in their work. “NACCHO serves as the national voice of local public health,” said Pat Libbey, executive director of NACCHO. “NACCHO staff has decided to use ESRI ArcView software and 2005 population estimates to increase geographic intelligence and better serve members, programs, and partners.”

STC president Mike Popovich commented, “STC and its partners have been offering GIS courses for more than 10 years. We enjoyed working with ESRI to offer this unique program.”

For more information on STC, visit www.stchome.com.

Hurricane Model Presented at New Orleans Conference
Dr. Ivor van Heerden, director of the Louisiana State University Center for the Study of Public Health Impacts for Hurricanes (CSPH IH), was the guest lunch speaker during the Ninth Annual Distributed Medical Intelligence (DMI) Conference in New Orleans, Louisiana. During the presentation, van Heerden used the Advanced Circulation Model for Coastal Ocean Hydrodynamics tool to demonstrate storm surge prediction models for future hurricane scenarios in coastal Louisiana. According to Kate Strova, a research associate with CSPHIH, “An archive of models with various tracks and intensities will be evaluated through an interactive GIS database using ESRI ArcIMS. This will allow developers and planners to see models of potential flooding risk across coastal Louisiana including New Orleans.”

For more information on CSPHIH, visit www.publichealth.hurricane.lsu.edu and www.hurricane.lsu.edu/forecast. For more information on the conference, visit www.dmi9.org.

GIS Training Addresses Mosquito Control
The ESRI Health and Human Services industry group was one of several sponsors for recent GIS training during the American Mosquito Control Association (AMCA) 2006 annual meeting in Detroit, Michigan. Christina Hailey, GIS coordinator and trainer for Harris County Public Health and Environmental Services in Texas, organized the training with Dr. William Dees, professor of medical entomology at McMeece State University in Lake Charles, Louisiana. More than 65 people attended the two sessions, where they received hands-on training using field data from mosquito control efforts and ArcGIS software. According to Hailey, AMCA plans to offer the GIS training again in 2007. Hailey also urged ESRI software users interested in vector control to visit a new vector control GIS forum at http://health.groups.yahoo.com/group/vector_control_gis. Information on AMCA is available at www.mosquito.org. For information on Harris County Health and Environmental Services, visit www.harriscountyhealth.com.

For information on Dees, visit www.moneese.edu/comstem/contact_dees.htm.

ESRI on the Road

2006 ESRI Health GIS Conference
October 23–26, Denver, Colorado
www.esri.com/hug

2006 ESRI Homeland Security GIS Summit
October 23–26, Denver, Colorado
www.esri.com/hss

Association of American Medical Colleges (AAMC) Annual Meeting
October 27–November 1, Seattle, Washington
www.aamc.org

American Public Health Association (APHA) Annual Meeting
November 5–8, Boston, Massachusetts
www.apha.org

American Medical Informatics Association (AMIA) Annual Symposium
November 11–15, Washington, D.C.
www.amia.org

GIS Day 2006
November 15, Worldwide
www.gisday.com

2007 ESRI International User Conference
In 2007, the ESRI International User Conference will be held earlier than usual, June 18–22, San Diego, California
www.esri.com/uc

For registration and information about ESRI-sponsored events, visit www.esri.com/events.

continued from page 9
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Canada. “As a result, staff members are able to discover trends and analyze conditions and results. That makes it much easier for the community health and social service organizations to plan and respond to emergencies.”

“This is our second award of excellence from ESRI Canada; however, we are particularly proud this time because it is in recognition of our role in community health and human services,” said Tom Vair, executive director, SSMIC. “The city of Sault Ste. Marie has already realized some immediate benefits, and additional benefits will be realized in the coming years that will lead to an improved community.”