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District dedicates a day to geography awareness

By Lacey Justinger, Honolulu District Public Affairs

(FORT SHAFTER, HI NR 32-09) The Technical Integration Branch (TIB) at the U.S. Army Corps of Engineers, Honolulu District, celebrated Geography Awareness Week (GAW) with a day dedicated to exploring geographic information systems (GIS).

District employees explored geospatial tools, maps and global positioning systems (GPS), and databases like the Navigation and Coastal Data Bank. They received demonstrations on how to incorporate the new technologies into their daily activities and hands-on training with GPS units.

"This is a way to present data in a more comprehensive way," said Tristin Matsuki, a Honolulu District GIS technician.

The TIB uses GIS to help manage natural resources data, to predict natural disaster damage, and to create plans and build structures that withstand or mitigate water-powered destruction. GIS compiles data and allows users to visualize or interpret information in multiple ways, to find patterns and trends or create easy-to-read yet functional maps, graphics and reports.

"We use spatial analysis to run 2-D and 3-D simulations and scenarios, to evaluate the effectiveness of a levy and determine the acreage or extent of flood damage with and without improvements," said Kevin Pien, Department of the Army intern and GIS specialist. "With GIS we do shoreline inventories and can predict what percentage is at risk in a natural disaster like in American Samoa."

The geospatial analysts can create 3-D digital models from blueprints and designs for building management; manage data records for the Army's Formerly Used Defense Sites (FUDS) program to accurately map areas of unexploded ordnance and munitions debris; and assist in planning for or responding to natural or man-made disasters.

GIS 2-2-2

"Maps are core to emergency management," said Sarah Falzarano, a cartographer in the TIB. "We provide timely and critical information. We can map areas of a tsunami inundation and impact areas, and determine where the critical infrastructure support is needed."

According to the GIS Day website; the National Geographic Society has sponsored GAW since Congress passed a resolution approved by Ronald Reagan, establishing the week in 1987. GIS Day branched off as an integral part of GAW in 1999, to showcase the technology in real-world applications. Since its inception, GIS Day has been celebrated by more than 10,000 organizations in over 80 countries.