

# Iowa Geospatial Infrastructure

## IGI and Emergency Management

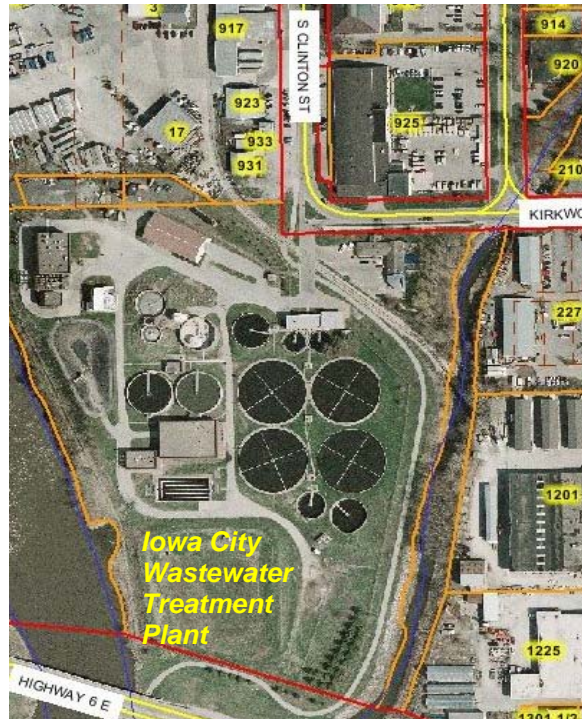
### LONG TERM BENEFITS OF IGI TO EMERGENCY MANAGEMENT

IGI will facilitate getting  
data from all sources

*"Data sharing is a huge issue for emergency management. The State (Wisconsin), through the State GIO Officer, has been working on the whole issue of data sharing and trying to develop agreements with the local governments. There is a long way to go."*

IGI will bring groups  
together and  
encourage  
collaboration

*"Why is there a resistance in Emergency Management to using GIS? Lack of base map data and resistance to analytical procedures. Yet emergency response is all about accurate information, and thus metrics. We should use data gathering efforts as a catalyst to bring disparate interests together and encourage data collaboration efforts."*



During the historic flooding of 2008, geographic information systems (GIS) technology and data were used as an effective tool to predict and track the areas of flooding, allocate resources for rescue and sandbagging, assess the damage and plan for the future. GIS was and is essential for many government agencies to efficiently carry out public service duties during natural disasters and other emergencies.

The Iowa Geospatial Infrastructure (IGI) will be a critical addition to the state's ability to plan for and respond to emergencies such as flooding, tornadoes and severe storms, and other potential disasters. The IGI will collect and transform framework GIS data layers from Iowa's counties and several state agencies into seamless, high-quality coverage of the state that will be available to all users for any purpose. Staff from two services bureaus, one for counties providing data and one for state agencies will collect the data from producers and make it available through web mapping services on the Internet. These two service bureaus will also work with local and state emergency management staff to develop common web applications needed to plan for and respond to different kinds of emergencies, such as predicting areas to evacuate during

### Framework GIS Data Layers

- Benchmarks
- Aerial Orthophotography
- City and County Boundaries
- Parcels
- Transportation
- Elevation
- Water Features
- Address points
- Structures



flooding, or do rapid assessment of damage to buildings, crops and infrastructure after the disaster occurs. Using web mapping services provided by the IGI service bureaus, emergency managers and responders, especially in areas not served by local government GIS will have access to a greater range of mapping tools and resources than currently available.

## DIRECT BENEFITS OF IGI TO EMERGENCY MANAGEMENT EFFORTS IN IOWA

IGI data agreements worked out ahead of time saves time during emergencies

IGI framework layers provide seamless coverage across different jurisdictions

IGI data and services available from two locations for redundancy during power outages, etc.

Parcels and structures data layers help in initial damage estimations saving time for field crews

IGI coordinates better resolution aerial imagery with more updates statewide

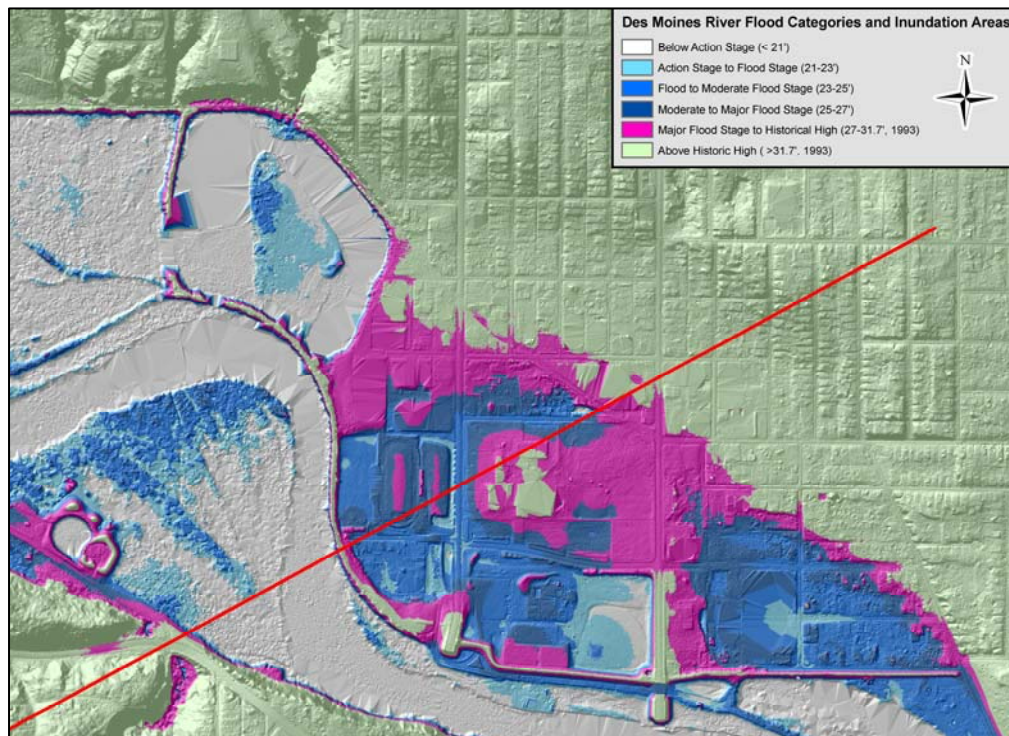
Staff from IGI county and state GIS service bureaus available to support operations during emergencies

IGI service bureau staff can train others to use GIS during emergencies

IGI elevation layer available for floodplain delineations and flood inundation studies

IGI data layers available for use in pre-disaster planning models such as FEMA HAZUS

**Investment in IGI = Better disaster planning and response = More property and lives protected**



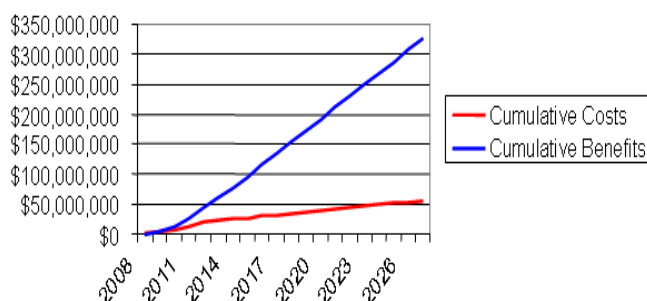
## IGI – Costs and Benefits

In 2007-2008, the Iowa Geographic Information Council (IGIC) received a grant from the Federal Geographic Data Committee (FGDC) to create a business plan for a statewide spatial data infrastructure. IGIC developed a plan for the Iowa Geospatial Infrastructure (IGI), which included ideas on how to address missing basic data coverage for the state, the lack of resources to build and maintain those layers, and removing institutional impediments to sharing and integrating GIS data from various jurisdictions. Using the FGDC grant, IGIC contracted with the Geographic Information Technology Association (GITA) to study the return on investment for the IGI, including the costs to build it, and the benefits of using it. Costs include two GIS service bureaus and data development projects averaging about \$3 million per year, while benefits to the state average about \$16 million per year.

GITA's 20 year ROI analysis for IGI shows a Net Present Value of **\$271 million**, a Present Value of Costs at \$56 million and an annualized Return on Investment of 24%.

GITA's ROI study clearly shows that the IGI is a good investment and will return good value to the citizens of Iowa.

### Multi-agency Cumulative Costs and Benefits



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The full IGI report can be downloaded from <http://www.iowagic.org/>