

**MEETING SUMMARY
 MICHIGAN NSDI CAP GRANT
 OUTREACH MEETING
 MARQUETTE APRIL 20, 2010**

MEETING OBJECTIVES

- Build stakeholder understanding of and support for goals
- Learn about status of stakeholder GIS use and business needs
- Get input and ideas for achieving the SDI
- Get suggestion for future direction of the MGF

ATTENDEES

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Additional Attendees:

Paul Harmon Michigan Department of Technology, Management and Budget
 Steve Aichele USGS
 Martin Roche GeoPlanning Services

MEETING AGENDA

1. Welcome and Introduction
2. Business Drivers and Business Needs for GIS
3. Identification of GIS Benefits
4. High level characterization of GIS Status and Implementation Obstacles
5. Specific Data Activities and Needs
6. Overview of MGF
7. Characteristics of Successful Collaborative Programs
8. Data Stewardship and Access
9. MGF Detailed Discussion
10. Wrap-Up and Next Steps

MEETING NOTES

BUSINESS DRIVERS FOR GIS

Development and implementation of a Wildfire Protection Plan specifically with GIS used for:

- Risk modeling
- Planning
- Education
- Completion of required US Forest Service-Federal Forms
- Participation from Feds, State, County, Tribal, Township and Villages

Cartographic production to support master planning and recreational planning

Modernization and maintenance of Zoning Data to improve efficient implementation of land use regulations and to reduce legal costs. Additional business driver for zoning GIS is the preservation of records and the ability to communicate zoning designation for individual parcels to the public.

Preservation of paper records for zoning, utility systems (water/wastewater) and plats is a driver for building GIS. Digital copies can be stored off-site for preservation in case of a fire or other disaster. Conversion of paper to digital formats is also driven for a variety of legal reasons.

Property assessing was cited as having a number of business drivers for implementation of a GIS:

- Cost savings from reduced field work
- Forecast revenue for future years based on sales data trends in property values

Property Assessment

Making sure that properties are appropriately taxed is a large driver for building a GIS and acquiring imagery. Specifically identifying improved parcels taxed as unimproved, underserved agricultural exemptions, and identifying improvements that were not issues building permits (sheds, garages, mobile homes, etc.) were cited as reasons.

Homestead exemptions, specifically individuals claiming more than one for property to get tax breaks that they are not entitled to was identified as a driver for creating a GIS on land ownership. Significant additional revenue is possible particularly for areas with summer homes or significant numbers of rental properties.

Corner monumenting issues

- Property transfer fees pay for collection of section corners
- Frustration with current project by land surveying department (pace of project, data received)
- Coordinates required but not provided by contractors
- Establish township lines for property appraisers
- Important for E-911
- Disaster planning
- Disputes exist over current or re-drawn boundary lines

Natural Resources

- Private land forestry issues
- Management of resources—to maximum yield
- Management of variable distance buffers based on soils, slope, water quality, etc.
- Understanding of land values
- Resource management

Flood Maps

- Requires better elevation data than currently available
- Current flood map modernization with “best available” data doesn’t provide a suitable solutions for most communities
- Poor flood maps jeopardize water quality as septic permits may be issued for inside of flood plain
- Improved elevation data required for economic development
 - Identification of appropriate industrial sites
 - Tower locations for broad band accessibility

Provide improved public information

Planning and communicating road improvement projects

BENEFITS FROM GIS IMPLEMENTATION

Technology reduces staff time to:

- Maintain critical data
- Respond to citizen requests
- Lower costs maps and services to walk-in citizen requests
- Reduced time to identify location to provide service from 1 hour to 5 minutes

Routing of snow plows, school busses, garbage trucks, inspectors:

- Reduced fuel use and vehicle maintenance from reduce miles driven
- Improved accountability—no plows parked at bar when they should be working
- Better service to citizens

Improved data quality through people using the data and identifying issues

Digital Data available via .pdf provided info faster cheaper and easier interactive

GIS can be used to support grant application bring money and needed services to the community:

- Can provide better more competitive applications using GIS
- Communications and graphics
- Identification of compliance with grant requirements
- Reporting grant requirements

Jobs

Education—GIS can be used to educate elected officials and the public about complex issues. “Maps are worth more than 1,000 words...” when attempting to explain a difficult issue or put together different data.

Data Integration—able to take data from multiple sources and perform analysis that would otherwise be impossible

Analysis—modeling for improved infrastructure planning, wildfire risk assessment and mitigation, etc.

Maximize road improvement budget—

- use asset management to repair roadways before situation requires very expensive repairs (example may be reseal road before it is so bad it needs to be completely re-structured)
- identify critical improvements based on crash data

Tower location example

- move tower to tribal or other owned land and efficiently place it to provide service eliminated \$1,400/month rental fees

Prioritize Infrastructure for construction

- Use GIS to identify most critically needed infrastructure

Seek \$\$ from Grants

Quantify the costs of sprawl

- Additional road mileage comes with specific costs—GIS can be used to analyze those
 - Plow \$\$ per mile
 - Garbage collection, student transportation
 - Pavement maintenance

Visualization/Analysis of Alternatives

- See and better understand variable land use scenarios
- Produce 3D visualizations of slope to demonstrate impact of development

Limit “Stupid Things”

- Better information enables decisions makers to make better decisions

- Example: Understand that an easement that was initially with a single parcel may now cross two (after a subdivision for example) and changes to add a pipe when only a road was authorized by the easement may required negotiation with multiple landowners

Boost Public Confidence

- Make Government appear to citizens to “have its act together”
- To be technologically up to date and provide efficient services
- Minimize the “run around” for permits from zoning, to building, to address assignment, etc.

Make Complex concepts easy to understand

- Visualization of results of analysis
- Put together different data to identify situations where a circumstance exists when it would have been very difficult to do in the past (Example: crash data and business locations to make access to shopping safer and easier)

Economic Development

- Provide information to local businesses to allow them to grow
- Seek grant moneys for training workers, building infrastructure, etc.
- “Economic Gardening” enabling local people to start and build profitable businesses

Recreation and Tourism

- Better market the fact that a region has a lot of opportunities in close proximity
- Identify trails (hiking and snow mobile)
- Provide improved access to opportunities to local citizens

Fire Protection

- Improved response times through appropriate assignment of address to 911
- Location of fire stations in places here most needed to reduce response times
- Perform risk assessment (primarily wildfire) and assignment of stations or districts to areas of high risk
- Model high wildfire risk areas, compare to housing locations, work to mitigate potential loss of life and property

Search/Rescue

- Coordinate for improved response
- “Get to them quicker” by understanding access via trails, forest roads, etc.

GIS CHARACTERIZATION

Stand Alone GIS	2
Enterprise GIS	10
Enterprise GIS w/1-5 Depts	2
Enterprise GIS w/6-10 Depts	2
Enterprise GIS w/10+	5

What are the departments that you are working with or supporting?

- NRCS Natural Resource Conservation Service?
- USDA
- Forest Services
- Private firms (foresters, engineers, others)
- Conservation Districts
- National Parks
- State Police
- Timber Companies
- E-911 Coordinators
- Electric/Gas providers
- Townships

OBSTACLES TO GIS MEETING BUSINESS NEEDS

Departments view GIS as “something I use the maps from but don’t need to understand myself”

Lack of Training and Education

Lack of Data

Lack of Communications (internal and external)

Money

Ownership restrictions—This is “my data”

Needs private company data (utility) that they are unwilling to share

Concern over cooperation with private firms

Staffing capacity—only so much time and most of it is devoted to doing basics

Lack of education (focused on decisions makers)

Resistance to change from current staff and management

Time spent on coordination can be spent on doing the job my employer demands

Staff turnover

Charging for public data since it is exempt from FOIA

STEWARDSHIP AND COOPERATIVE PROGRAMS

Reasons for concerns about data sharing

- Need to recover costs for data development and to support data distribution
- Bad analysis done by people after I provide data may put me and my organization in a bad light with the public
- Poor data quality—or data that I have is fit for my use but may not be appropriate for what the next person wants to do with it
- Management demands for cost recovery
- A lack of trust

Bureaucracy gets in the way of effective stewardship. Some institutions want secrecy.

ROI for the data “custodian” (organization that collects and maintains the data) may not be there if additional time and effort must be spent to meet other people’s needs.

Chippewa County is in the early stages of working with the county, city, state, and feds on data sharing.

CHARACTERISTICS OF SUCCESSFUL COLLABORATION EFFORTS

Local sharing with County has been positive—close, similar requirements

Good communications

Informal relationships—I know who to call to get what I need and we work well together

Trust—built on long term personal relationships

Everyone benefits

Data Development Collaborations (for example orthos with USGS)

- Single administrator to deal with vendor and project management
- Everyone gets a good deal on cost

User groups that meet locally are a big benefit for successful collaboration

- Build relationships
- Get a good understanding of what everyone is doing and how we can cooperate

Positive attribute of cooperating on framework data is that the state distributes it—when requested can direct to state to take care of them

Tribal data sharing is successful based on strong communications and shared goals

Wildfire prevention and containment has driven sharing based on a national system has also been successful. Training available, certification system and \$\$\$ are available

Collaboration with Universities is also a positive thing

- Lake Superior State—Lab and project give an opportunity to have students do projects
- They provide answers to “hard” problems we don’t have the time or technical knowledge to work out

- Michigan Tech's Roadsoft is an example:
 - Driven by a legislative mandate
 - Support people are readily available by telephone and have been stable over the life of the product
 - It is FREE

CHARACTERISTICS OF LESS THAN OPTIMAL COLLABORATION EFFORTS

Flood map modernization projects were identified as a less than successful project from the viewpoint of local governments. This is largely because they are driven by old data resulting in an inferior product. The project also was developed without sensitivity to local needs and situations—particularly in rural communities with limited data and resources.

The re-monument program current underway for township corners is not sensitive to local needs and although it has a dedicated funding source (in the form of property transfer fees) the funds are not sufficient to get the work done in a timely manner. Local needs and GIS were not considered since the coordinates of the re-monumented corners are not provided.

General comments on the failure of some collaborative efforts include there can be no match of local benefit to local cost. The cost may be carried locally while benefits are realized by the state or federal government.

A lack of good management of collaborative efforts was also identified as a reason that many have failed to produce desired results.

Other general comments on failed collaboration efforts:

- Ownership “this is OUR data”
- Some benefits don't come back to locals even if promised...the real benefits of the effort are at the state level not the local level
- Negotiation is difficult with multiple parties (with variable budget deadlines, project requirements, etc.)
- Liability concerns—will I be liable for mis-use or mistakes in my data
- Public safety may be compromised
- Privacy of data may be compromised—individual names of property owners, etc.
- Homeland security concerns—making sensitive data available for critical facilities
- Variable needs not identified and cause trouble with scale, attributes, etc.

DISCUSSION OF THE MGF

WHAT IS GOOD ABOUT THE MGF?

Free

Available

Data is “pretty good”

It provides a reliable source for our base data and base maps

We use it for:

- Platt books
- Road Atlas for emergency responders, etc.
- Long range planning (land use and transportation)

MGF is important to support or planning for:

- Land use and zoning
- Wildfire protection and identification of future land uses
- Natural resource protection and management

It is also useful for:

- Maps required for grant applications
- Provides surrounding county data when necessary
- Supports census analysis
- Redistricting
- Transportation planning
- Asset management
- Access management (state roads, driveways, etc.)
- Non-motorized transportation (trails, rail)
- Logistics (routing, etc.)
- Railroads & Distribution Utilities
- Contained in Geographic Data Library

WHAT CAN BE IMPROVED?

Accuracy

- Spatial accuracy doesn't match the orthos
- Tabular data can be incorrect or lacking important information
- Content—it contains some roads that do not exist
- Structure data not complete

Need to have more timely corrections (some corrections are not accomplished after 3-4 notices to the state. Example cited was a jurisdictional boundary)

New versions aren't turned around quickly enough

Schedule of distribution of updates doesn't match demand for RoadSoft users

WHAT CAN BE ADDED TO THE MGF TO MAKE IT MORE VALUABLE

What data elements should be added to the MGF to make it meet your business needs?

- Flood zones
- Parcels (statewide)
- Emergency response zones (fire districts, etc.)
- Orthos

Improve the coordinate density would be a benefit

Consistency across jurisdictions in the roads that are in the database would be beneficial. Include all local roads, forest service roads, unpaved/gravel roads, and important driveways to boost utility of data for emergency response and local transportation

Review the labeling of roadways. It is difficult to pull a single road from the database since the county names, state names, and local names seem to be variable.

Correct error in roadway functional class identifies

Add reservation boundaries.

Establish more clarity in resolving boundary disputes in the data. [Note: There appears to be a lack of understanding in the complexity of changing boundaries between legal jurisdictions that should be resolved if possible.]

Hydrology as it exists in the MGF is poor. Improve the quality, consider moving toward the National Hydro Dataset NHD. There was also some concern expressed about lakes in the database that don't exist and the lack of a linear feature for water at lakes.

Establish a mechanism for providing communication about the status of changes.

Provide a list of the MGF contact in other regions to facilitate communication.

Provide users with an organizational chart so it is clear who does what at the State office. (Name and staff changes have caused some confusion)

Establish a process for identification of authorized data editors.

Allow digital submissions. County has great data and it would like to include it in the MGF but there appears to be no mechanism in place to do so.

Clean up Act51 and TIGER 2000 data

Provide improved information with the re-monumentation data.

Include ortho data and synchronize collaborative programs with local budget and project cycles. Provide longer notice on potential joint projects including timelines and cost models.

LIDAR and elevation data at a better resolution than current would be a nice addition.

More collaboration with state and federal agencies to enhancing the MGF is necessary.

Change tracking and communication with locals would be a benefit.

Consider creation of a funded "regional" representative structure. Perhaps have an individual from each planning council fill this role as the local voice of the MGF. They could be the authorized editor and serve a role in building partnerships to improve the dataset.

Adjust timing of releases so they can be more in sync with the asset management council requirements for RoadSoft.