APPENDIX A
ON-LINE SURVEY RESPONSES

Michigan NSDI CAP Grant
Outreach Findings Summary

Prepared for

Michigan Department of Technology, Management and Budget

Prepared by
GeoPlanning Services LLC
3564 Avalon Park Blvd E.
Suite 1, #243
(407) 608-4186

www.GeoPlanningServices.com

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INTRODUCTION

This document captures all responses provide to the on-line survey offered to the stakeholders in the Michigan CAP Grant. Since many questions were open ended and intended to collect general impressions this document includes the comments received.

ORGANIZATIONAL INFORMATION

WHAT BEST DESCRIBES YOUR ORGANIZATION?

Answer Options	Response Percent	Response Count
Government: City	7.5%	21
Government: Incorporated Township	7.1%	20
Government: Village	1.4%	4
Government: County	31.7%	89
Government: State	17.1%	48
Government: Federal	5.7%	16
Government: Tribal	1.1%	3
Government: Sub-state Regional Agency/Authority	5.0%	14
Special Purpose District or Authority	0.4%	1
Public School District	0.4%	1
Private Firm: Survey/Mapping	6.0%	17
Private Firm: GIS or IT Service Provider	5.3%	15
Private Firm: Resource Management	0.4%	1
Private Firm: Retail and Commercial Services (Real Estate, Development, Business Planning)	0.4%	1
Private Firm: Service Delivery (Transportation, Shipping, Delivery, and related)	0.0%	0
Private Firm: Other	1.8%	5
Utility: Public (Utility Department of Government Jurisdiction)	0.4%	1
Utility: Public (Independent District or Board)	1.1%	3
Utility: Private (Investor Owned or Cooperative)	1.1%	3
University or Educational Institution	2.8%	8
Not-for-Profit	2.5%	7
Professional or Trade Association	1.1%	3
Other (please specify)		12
answered question		281
skipped question		1

OTHER?

Hyrdogeology & Environmental Engineering Consultant
Hospital
Management consulting
Military
Geospatial Services
Private Firm: Engineering Consultants
Engineering
COUNTY ROAD COMMISSION
County Road Commission
Charter Township of Independence
County Road Commission
Citizen Appointee to a county Brownfield Redevelopment Authority

WHAT BEST DESCRIBES YOUR POSITION?

What best describes your position?		
Answer Options	**Response Percent**	**Response Count**
CIO [principal decision maker for organizations technology and budgets]	4.6%	13
Director [make decisions for GIS Department or Program]	12.1%	34
GIS/IT Manager [influence decisions, supervise GIS staff, manage projects]	23.5%	66
GIS Analyst [senior technical GIS staff]	13.2%	37
GIS Technician [junior GIS technical staff]	3.9%	11
GIS User [GIS not primary job but uses technology]	18.1%	51
City/Township/County Manager [jurisdictions senior management staff]	1.1%	3
Elected Official	3.9%	11
Educator	1.4%	4
Other	18.1%	51
Other (please specify)		53
answered question		281
skipped question		1

OTHER?

Supervisor
Engineer
IT Specialist
MDOT Real Estate Project Development Manager
Transportation Engineer
Emergency Manager
Emergency Manager
Consultant
One of several Principals in the firm
Surveyor
professional surveyor
GIS Specialist
Land Surveyor
GIS project Manager
Engineering/ Transportation/ State & Local Gov. Account Manager
Planner
Road Commissioner
911 director
Transportation Engineer
Manager
Photogrammetrist
Database Architect - Assisting with GIS data implementation
GIS Developer
Administration/Management
surveyor
Supervising Surveyor, Geodetic Surveys and Mapping
Aerial Mapping Project Manager[Imagery User/creation to support engineering design and GIS]
Transportation Engineer - MDOT
GIS Specialist (Professional Staff)
Administrative Assistant
Transportation Planner
Professional Surveyor
Web Developer
ENGINEER
Land Use Planner
Ecologist, GIS lead
Geodetic Advisor
Health Department Staff
equalization director

EQUALIZATION DIRECTOR
Sales
Appointed County Planning Commissioner
Planning Commission Chair
Professional Surveyor
Survey Department Manager
Zoning Administrator
planning commission chairman
Solid Waste Council member
Citizen Appointee to a County Redevelopment Authority
Zoning Administrator
Deputy Clerk
County appraiser
land use planner

DOES YOUR ORGANIZATION HAVE A GIS?

Answer Options	Response Percent	Response Count
Yes	90.7%	255
No	9.3%	26
answered question		281
skipped question		1

WHAT BEST DESCRIBES THE CURRENT GIS PROGRAM STATUS IN YOUR ORGANIZATION?.

Answer Options	Response Percent	Response Count
No Use of GIS	0.8%	2
Planning to Implement GIS	4.9%	12
Initial GIS Under Development	9.8%	24
Current Department-based GIS in operation	42.7%	105
Current Multi-Department or Enterprise GIS Program in Operation	47.6%	117
Major Expansion/Enhancement of GIS Program Underway	10.6%	26
Use GIS Services or Products from Another Organization	12.6%	31

Other (please specify)	13
answered question	246
skipped question	36

OTHER:

Single User license - used on a "as needed" basis
Currently use GIS for recreation/master plan maps
develop GIS data and maps for governments
GIS Consultant
High level GIS every day for consulting and products
ArcGIS Server after release of 10
We develop tools for Enterprise GIS
academic
Using GPS coords in crash mapping system
We pull our GIS from Oakland County's GIS
Our Township uses the County GIS services
We build GIS solutions for our clients
County

IN YOUR DAY-TO-DAY ACTIVITIES, WHAT DO YOU USE GIS FOR?

Answer Options	Response Percent	Response Count
Public Safety [law enforcement, crime analysis, emergency response, fire, E-911]	39.4%	97
Real Property Appraisal and Tax Assessment	40.7%	100
Land Development or Other Permit Review and Tracking	29.3%	72
Land Use Planning	47.2%	116
Transportation Planning	38.6%	95
Transportation Management	27.2%	67
Economic Development [Facility Site Selection, Workforce Development, etc.]	27.6%	68
Infrastructure Asset Management or Maintenance	39.8%	98
Natural Resource Planning or Management	36.6%	90
Environmental Assessment and Regulatory Management	32.1%	79
Public Health/Social Services Planning or Provision	16.7%	41
Engineering Modeling or Analysis	32.5%	80
Financial or Business Planning	7.7%	19
Budgeting and Facilities Management	12.6%	31
Market and Demographic Analysis	15.0%	37
Delivery Route Optimization	5.3%	13
Parks and Recreation	32.1%	79
Schools/Education	15.9%	39
Agriculture	11.0%	27
Other	16.7%	41
Other (please specify)		43
answered question		246
skipped question		36

OTHER:

preliminary planning for field recon. / mapping of survey and ecological data
Public and Board explanations
occasional use only
Data development for most of the above items
N/A at this time
Mapping for 911, ORV, equalization
Wide Area Network Mapping
Crash Mapping
any or all of the above, as needed by client governments
All in GIS consulting and products realm
Watershed & Stormwater Management
Professional geospatial consulting
Utilities
Develop and distribute GIS based asset management software
Military
Equalization
we also assist others in implementing a GIS
Range Management for Military Training
In support 2010 Census & on-going Census programs
All the above
Asset inventory (natural, cultural, historic) of 8 county region
academic
Transmission Line Engineering
ortho photos for transportation
Land Surveying, Ground Control, Photogrammetric and aerial mapping planning, Engineering for Transportation Design
Safety - Engineering Analysis
Electric and Water Engineering, Creation Work Orders, Study, Plant Management, Analysis, Landbase, and Record Keeping
Mapping crashes and other points-of-interest
Land Bank
These are the uses of GIS in my agency, not necessarily just by me.
Research
Ecological Research
Keeping Track of Road History (Road Commission) and other Data for Helping with Engineers to do planning and other functions
Project Planning
Emergency Response and Recovery, Floodplain Mapping, Nuclear Planning,
Review and editing of soil survey spatial data.
query data to produce maps for assessors
use by planning dept and citizens
Land/Property Records
We don't use GIS per say, we build GIS Solutions for a variety of client activities
we are not operational yet
County Drains

wetland mapping

SELECT THE NUMBER OF RESPONSES YOUR GIS SUPPORTS

Answer Options	Response Percent	Response Count
2 or 3	21.4%	25
4 or 5	28.2%	33
More than 5	50.4%	59
answered question		117
skipped question		165

PLEASE SELECT THE DEPARTMENTS SUPPORTS BY YOUR GIS

Answer Options	Response Percent	Response Count
Public Safety [law enforcement, emergency response, fire, E-911]	64.9%	72
Tax collection and assessment	55.0%	61
Permitting	41.4%	46
Planning and Growth Management	65.8%	73
Economic Development	49.5%	55
Asset Management	53.2%	59
Natural Resource Protection	45.0%	50
Parks and Recreation	49.5%	55
Schools/Education	23.4%	26
Drain Commission	38.7%	43
Other	27.0%	30
Other (please specify)		42
answered question		111
skipped question		171

OTHER:

transportation/ IT
Engineering
Road Commission
Public Works and Engineering
Transportation Applications, Forecasting
In our GIS consulting and products practice
Municipal services and application development
Utility Services
State wide Master Planning efforts
Transportation, Environment, Demographic and Land Use
Operations
Health Dept--Env. Health
Heritage Wildlife
Federal land program delivery
Military Departments
U.S. Census Bureau
All Above
Created for Real Estate to display permanent land record maps linked to data/documents (fee, easements, leases, licenses) needed to support electric/gas transmission & distribution systems.
your answers are all geared toward government users
Transportation and Public Works (utilities)
Road Commission, Health Department
Within DTE Energy we support numerous business units and projects both enterprise wide and also specific to gas and electric.
Department of Public Works
mosquito control $ gypsy moth suppression
Customer Service, Engineering, Maintenance, Operation, Dispatch
Engineering, survey, environmental
Animal Control
Research
Sign Shop and Engineering Department (Construction and Design)
Emergency Response & Recovery, Mitigation, Public Assistance, National Preparedness, Individual Assistance
Emergency Management
Register of Deeds
Treasury, Courts, Clerk, Transportation, Road Commission, Facilities
Engineering & Highway Maintenance
Geography, Botany, Plant Pathology, Fisheries & Wildlife
GIS data conversion, maintenance, professional services
Mine Commission
Environmental Health
Clerk (Qualified Voter File), Public Health, Transportation, Road Commission, Local Communities
Engineering

We don't have departments; but we build solutions for all of these departments
engineering

BUSINESS DRIVERS

WHAT ARE THE BUSINESS DRIVERS FOR GIS IN YOUR ORGANIZATION?

Answer Options	1-Little or no importance	2	3	4	5-Critical Importance	Response Count
Reduction in labor or operational costs	31	34	58	59	40	222
Improvement in data quality and consistency	3	6	19	76	122	226
Explore new sources for revenue generation	65	43	46	35	28	217
Enhance/increase inter-organizational partnerships	6	29	61	75	46	217
Economic/business development and improvement	39	28	58	53	39	217
Infrastructure improvement and maintenance	21	18	37	64	81	221
Environmental protection/Natural Resource Enhancement	25	23	59	54	58	219
Improved land use planning and decision making	19	17	42	74	69	221
Emergency preparedness and response	27	26	37	60	68	218
Enhancement of health for citizens	47	47	49	41	26	210
Enhancement of quality of life for citizens	28	30	70	48	33	209
Support quality and availability of educational and training opportunities	48	52	60	35	15	210
Other	16	2	4	4	10	36
Other (please specify)						18
					answered question	227
					skipped question	55

OTHER:

A general perception that it is valuable. Econ development is a new focus.
So far these questions are government related only. Answering them in light of our firms supporting these operations with services and products.
Citizen services, efficiency of our departments (particularly building, zoning, DPW, and assessing), promote the Township with high-quality, accurate graphics on our website and in advancing our industrial parks.

Make GIS affordable, available and easy to use by anyone who wants or can benefit from the technology.
to provide an accurate count of people, where they are, & their associated demographics for use by anyone within or without the Federal government.
As a service provider, any one or all of these issues may be the critical focus of the user(s) development. Systems need to structured for evolution.
Assist of our member counties, townships, cities and villages - serve as a central data collection point. Serve as a resource for high quality maps for the region.
academic
HPMS submittal
Research
Enhanced data analysis, visualization, planning and decision making (beyond the traditional confines of Land Use as the county doesn't have a planning dept or land use planning authority.)
Maps assist organization in marketing its services as well identifying county geography for public use
provide base data for construction operations
We are a GIS services provider.
Promote interdepartmental communication and shared knowledge across the organization.
Improves efficiency of day-to-day operations; greatly enhances public education
Public Safety
habitat mapping

DATA USE AND NEEDS

NSDI FOUNDATION DATA USE

Answer Options	Don't Use or Need	Produce my own	Receive and use as-is from an outside source	Receive and edit from an outside source	Need it but don't have it	Response Count
Orthophotography (high resolution)	4	33	127	28	13	205
Cadastral Parcels or Legal Lots	16	72	59	36	25	208
Street Centerlines and Transportation Features	2	75	74	49	9	209
Administrative Boundaries	9	68	87	33	7	204
Hydrography	11	34	102	46	12	205
Elevation	15	35	103	18	34	205
Geodetic Control	28	45	72	23	31	199
					answered question	212
					skipped question	70

OTHER DATA NEEDS

Answer Options	Don't Use or Need	Produce my own	Receive and use as-is from an outside source	Receive and edit from an outside source	Need it but don't have it	Response Count
Addresses [Street Centerline Ranges]	19	51	75	33	15	193
Addresses [Point Features]	25	64	50	21	36	196
Bioscience-Aquatic Habitats and Features	96	13	38	10	27	184
Bioscience-Terrestrial Habitats/Features	90	14	43	11	27	185
Buildings/Structures	24	48	42	21	57	192
Cadastral Reference (24K PLSS)	42	33	69	14	17	175
Climate/Meteorological	115	0	41	7	19	182
Critical Facilities	47	53	32	12	42	186
Cultural/Historic Sites and Features	48	44	49	15	30	186
Demographic Enumeration Districts/Data	48	15	86	16	19	184
Elevation–Contours	15	31	85	17	42	190
Elevation–Digital Elevation Models	20	28	88	16	37	189
Geodetic Control	33	35	69	11	33	181
Geology	55	4	88	7	26	180
Governmental Boundaries	5	47	106	24	8	190
Hydrologic Unit (watershed) Boundaries	20	24	107	16	19	186
Land Cover	22	30	95	18	21	186
Land Use/Zoning	18	62	67	17	23	187
Natural Hazards	49	16	57	6	50	178
Recreation Sites and Facilities	24	64	60	12	24	184
Satellite imagery	39	4	107	12	25	187
Soils	24	5	121	16	18	184
Surface Hydrography (water bodies/streams)	7	27	106	31	12	183
Subsurface Hydrology	58	7	76	4	31	176
Survey Reference Grids (e.g., PLSS)	31	30	87	12	21	181
Telecommunications Facilities	61	21	44	6	51	183
Transportation (aviation facilities)	51	28	62	10	34	185

Answer Options	Don't Use or Need	Produce my own	Receive and use as-is from an outside source	Receive and edit from an outside source	Need it but don't have it	Response Count
Utility-Electric Transmission/Distribution	39	16	46	8	80	189
Utility-Gas Transmission/Distribution	42	11	46	8	82	189
Utility-Pipelines	28	31	43	8	78	188
Utility-Sanitary Sewer	30	47	38	9	62	186
Utility-Drainage, Flood Control	34	31	39	8	74	186
Utility-Water Distribution	35	44	36	10	57	182
Utility-Water Supply, Transmission	37	43	38	10	59	187
Wetlands	12	18	115	19	27	191
Other	9	10	2	1	7	29
Other (please specify)						15
					answered question	200
					skipped question	82

OTHER:

Once again, we produce and help maintain a lot of data for clients but not our own so don't want to answer and throw off statistics.
Air pollution sources; point (factories), area (gas stations) and mobile (auto)
Owner names; parcel sizes; parcel dimensions; use for Master Plan
META DATA???? don't see that on the list
Business locations
Anything else we create in-house
GIS activities currently limited to ground control, Land survey corners and project tracking
Primarily use is health or vital statistics data
many listed as needed we are short for all areas and current
Research plots, other inventory-monitoring plots
Utility Notification Polygon Layer For Cable,Telephone, Water, Sewer, Schools, MCD's, Gas & Electric
CRITICAL DUNES AREAS. PRODUCED MY OWN ANSWERS IMPLIES MODIFIED OUTSIDE SOURCE DATA.
Regulated Woodlands, Street Tree Locations
Election Geography, ZIP codes, Tile Drain, Drain Districts all produced in-house
surface impermeability (need don't have)

OBSTACLES TO MEETING BUSINESS OBJECTIVES

RANK OF CURRENT OR PAST OBSTACLES

Answer Options	Never Encountered	Currently Experiencing	1-Minor Impact	2-Some Impact	3-Major Impact	4-Critical Threat	Response Count
Insufficient senior management awareness or support	46	25	35	46	36	16	183
Inter-departmental communication and coordination obstacles	24	37	54	52	37	11	180
No or insufficient operational management for GIS program	49	25	50	40	23	6	177
Lack of or insufficient external partnerships	26	29	62	53	29	3	178
Funding limitations	7	59	16	42	58	40	187
Poor program focus, direction, or plan	43	24	56	28	25	9	165
Staffing limitations (number of staff or skills)	21	45	27	47	44	22	177
Needed geospatial data does not exist or is not readily accessible	25	37	54	50	28	14	177
Problems with data quality, currentness, updating	9	39	52	48	41	11	171
GIS applications are not "user-friendly" enough	22	29	74	56	23	2	182
System problems: software, hardware,and networks	34	33	53	39	26	10	174
Difficult integration of data from different sources	11	37	65	59	30	3	176
Lack of or insufficient use of data or system standards	31	29	52	52	31	10	180
Insufficient opportunities for training and education	39	22	58	48	27	7	183
Other:	11	2	3	4	2	2	23
Other (please specify)							4
						answered question	190
						skipped question	92

OTHER:

Lack of time to sufficiently keep data updated and skills current.
Usually Project specific
Difficult to leverage robust in-house GIS data in third party applications used by other departments
Lack of State integration of local level GIS data and knowledge

COMMENTS ON OBSTACLES

Answer Options	Response Percent	Response Count
Insufficient senior management awareness or support	36.1%	22
Inter-departmental communication and coordination obstacles	39.3%	24
No or insufficient operational management for GIS program	18.0%	11
Lack of or insufficient external partnerships	29.5%	18
Funding limitations	52.5%	32
Poor program focus, direction, or plan	24.6%	15
Staffing limitations (number of staff or skills)	42.6%	26
Needed geospatial data does not exist or is not readily accessible	27.9%	17
Problems with data quality, currentness, updating	32.8%	20
GIS applications are not "user-friendly" enough	31.1%	19
System problems: SW, HW, and networks	29.5%	18
Difficult integration of data from different sources	26.2%	16
Lack of or insufficient use of data or system standards	23.0%	14
Insufficient opportunities for training and education	27.9%	17
Other:	9.8%	6
answered question		61
skipped question		221

COMMENTS:

Insufficient senior management awareness or support
County & Township boards and decision makers are not aware of the "under the hood" GIS use and its potential
Comment redacted. To receive comment text please make a request to the DTMN project management team (Paul Harmon, harmonp@michigan.gov, or Laura Blastic, blasticl@michigan.gov).
GIS is not a mandated operation and hence funding is limiting full utilization of potential
Great support in implementing and using, terrible recognition of staffing needs and commitment.
hard to explain details to non-technically oriented people
Have to get them up to speed and show the usefulness of software
If senior management is aware, they need to let those who are affected know that they are aware and trying to fix the problem.
Increased exposure at their peer gatherings and print media, also, increase exposure one political level above/below the target.
it is getting worse...Sr Mgmt not qualified to make GIS decisions
It's always difficult to manage what you don't know.
Lack of Understanding
Major budget issues, no implementation at this time.
Management tends to not know how to use the programs or their capabilities and therefore does not endorse funding initiatives.
Many senior managers in our agency are not GIS users, therefore are not aware of GIS needs and variables that can decrease efficiency/applicability of GIS issues we face.
More education and demonstration for top tier.
Senior & Middle management supports IT, not GIS
Senior mgmt claims they support it, but GIS projects are not approved...
Senior officials do not recognize importance of accurate GIS data
State CGI does not connect with Locals - communication/cooperation
This is the most critical problem I'm facing while trying to GIS implement.
Too many problems distracting their focus on resource opportunities.
Visions of the important of public facing GIS differs slightly from that of senior management
Inter-departmental communication and coordination obstacles
Again education and moving to distributed operations.
AutoCAD users/department feel threatened by GIS. In other words that they won't have work/mapping to do. And they feel that we will simply duplicate work using GIS.
CAD Dept not using State Plane coordinates

DNRE needs to share data more easily with other agencies. Why does it take so long to upgrade ArcGIS? Why does it take so long to upgrade hardware and the network?
DOT manages Geodetic control system that would be of benefit to geospatial users. Coordination would prove beneficial.
Egos need to be shelved. Hurts forgotten.
GIS staff time insufficient to inform other departments of full potential of GIS implementation in their program areas
How to incorporate many databases into one management system
Increased senior management awareness of potentials, increase examples at state government; demonstrate what information is common to all "stove pipes" and how coordination can save.
Internal data-sharing problems; GIS users get along, but bosses don't
lack of funding for enterprise solutions
Little coordination among Fed/State/County data producers
need more data sharing between Depts of LaborEconDevGrowth and NaturalResourcesEnvironment
Need to train others so they can benefit from GIS
Other depts have no desire for desktop apps.
same
Some departments just "don't like each other" and thus data does not get shared
Still some lingering interdepartment disagreements
too much overlap within
Using GIS to the full potential
using separate systems now which are not completely compatible
Water Department and Engineering Department do not communicate or get along very well
We are an MDOT maintenance agency; would like to see state storm drain infrastructure in county-based GIS alongside county structures to have complete drainage models.
Working on it.
No or insufficient operational management for GIS program
a minor problem due to lack of high level experience
AirQualityDivision in DNRE has no GIS management
Documented, easy to read examples of GIS success with further reading options; constantly demonstrate in press and at other trade conferences.
GIS coordinator staff is only 10% FTE which limits true operational management
Internal GIS resources are minimal but high functioning. What is lacking is standardization & awareness of GIS mapping initiatives throughout the organization.
Internal knowledge of GIS opportunities lacking
Need overall plan for GIS departmental use
No good champion in many cases.
Our current GIS is a larger job than the assets which are assigned to it.
same

same as "Insufficient senior management awareness or support"
Lack of or insufficient external partnerships
As a federal govt entity, it's difficult to generate partnership when the data we produce will be available for free anyway.
external partners are so far behind we end up doing all the work.
Haven't been ones that really worked or been true partnerships.
Improved, however need less duplications from entities
Increase use of GIS Server resources to facilitate sharing
Need more help/data/funding from State and Federal Agencies
Need more user groups and relationships to share data
need real partnerships w state, not enough county incentives
partnerships exist but not enough support for each party to make any headway
Resources may be available, but awareness of them is lacking.
See #2
SEMCOG helps when it can, but business data is guarded
sometimes due to competitive nature of looking for work or ownership of data
Specifically for Emergency management disasters are not contained within geographical boundaries. Data sets are not quickly accessible or "linked".
State of Michigan needs to incorporate local level data - parcels, address points, centerlines.
There are many opportunities for cooperation between the state and federal agencies - but sometimes it seems like there is a competition
Working on them, part of problem is identifying
would external partnership at county level help with access to parcel dataset
Funding limitations
A fact of life
a recurring problem
A stable funding source for geospatial technologies needs to be implemented through legislation.
Budget shortfalls may cause dissolution of GIS program in upcoming years
Budgets are getting tighter and tighter due to state revenue sharing cuts. We need more and more stable funding for GIS throughout the State.
Could use more seats
DNRE needs to buy more help from CSS. DNRE needs more hard-drive space to handle GIS data. (Best Buy has 2 TB hard drives for <$200!)
Due to funding limitations it is taking a long time to complete our county. (8 years for one township).
Find a dedicated revenue source to replace Enhanced Access
Funding limitations are always an issue for the federal agencies, there are many departments competing for limited funds.

Funding,...of course; sufficient staff, equipment, data refresh, training, etc.
GIS is general fund, no dedicated funding source
GIS is not a specific line item in our budget. Have to be multifunded by other budget areas.
housing market drives government revenues
Key issue in staffing and knowledge
lack of funding for advancement in GIS integration in enterprise and web development
Licensing with ESRI is not cost-effective. The State or Regions need to work with ESRI to develop better "enterprise" licensing agreements.
Never seems to be enough money.
of course
REVENUE CUTS HAVE NOT CURRENTLY IMPACTED DEPT. BUT MAY ELIMINATE SOFTWARE SUPPORT CONTRACTS IN NEXT BUDGET.
software funding limitations
Sometimes I would like to use ArcInfo but don't have software or knowledge to use
Spell out GIS relationships to mandated services from State, bring OEM community at state levels to local programs, targeted resource allocations for GIS programs
Staff funding.
Surviving at current levels, but no expansion.
This is connected to "Insufficient senior management awareness and support". We have the money, senior management won't spend it.
This is Michigan
This is the main concern we have. We are a regional agency trying to service 8 counties with no budget for GIS. Funding for GIS activities must come as part of other projects, but those projects typically involve just one community. There is no mechanism for funding the maintenance of GIS data at a regional level. Seems that the state should fund at least one GIS staff for each regional agency.
We are a small County with a limited budget NO $$$
We have enough money for a good GIS enterprise system but we need more money to improve the access to the GIS data we have. Specifically, we need money for a GeoCortex to improve the city's GIS web capabilities.
we need yearly bi-annual flyovers, but too expensive
Who doesn't?
Poor program focus, direction, or plan
Changing technology and multiple platforms confuse issue
CONTRACTOR HIRED TO CREATE BASE LAYERS, TOOK US IN A DIRECTION THAT WAS EASIER FOR THEM TO IMPLEMENT, INSTEAD OF WHAT WE REALLY NEEDED. PROJECT QUALITY CONTROL WASN'T.
Dept did not lost focus on GIS for over 2 years...now are scrambling to catch up.
GIS thus far has been an option for field staff- very, very limiting to our success.
high quality spatial location of air facilities and property boundaries is relatively low priority for AirQuality management

I would like to post as much GIS data on the city's website as possible but we lack the funding, licenses, or interest from city officials to do that.
Lots of floundering for many orgs, some have good plans.
Materials from management peers which help demonstrate GIS Data and interactions
Need plan for inter-departmental GIS initiative
No goal setting, just reactive to demands.
No plan on how utilize the GIS more fully
Part of Problem with developing a program is not enough time to implement a program and policies
should be state regulated
State level objectives are poorly defined and outcomes difficult to measure
This is a problem at all levels
Staffing limitations (number of staff or skills)
#1 but inseparable from funding limitations, not enough core staff to even manage contracting if budget was larger
1 FTE is not sufficient to keep up with demand.
Additional staff needed for programming related projects, but no monies available.
Because of lack of GIS focus, staff GIS skills are not nearly where they should be.
could use another staff member dedicated to GIS but no funding available ever
Could use more staffing that understand GIS
Current skills operating a very involved and powerful
Data maintenance is staff intensive - consider a distributed data maintenance model
Do not have dedicated GIS staff
Fail to recognize the need for staff and the time commitment needed to produce a quality and timely GIS system that reaches expectations on time.
Fisheries Division needs help with division-specific business-critical projects involving GIS and statewide database. We get low priority because we are "only" one division. Please allow divisions to have some GIS/IT staff of their own, rather than all being in DTMB.
Gets back to funding problems and keeping qualified staff in poorer orgs.
Huge problem in my area. Staff using GIS also do dozens of other tasks, and often GIS is pushed aside.
I am only AirQualityDivision staff w/limited knowledge of GIS
I AM the GIS department, but have other responsibilities that compete for my time.
I'm a one person GIS Department when I'm not busy being the DPW Director.
Increase funding sources and program awareness
Key issue to developing further expanded use
Need database manager and trained IT staff
No one in the Assessing Dept fully knowledgeable in GIS
ONE EDITOR ONSITE, EQUALIZATION STAFF DISPLAYS EXISTING DATA BUT HAS MIN. TRAINING WITH PAGE LAYOUTS OR SQL.
Our GIS program is data rich, but programming poor. We need an application developer to fully realize the

benefits of GIS.
R&D staff are the first to get laid off
remote sensing experience by GIS staff is a joke...
Staff limitations hinder better training and utilization of GIS in other county departments
The program is growing so fast that we need more people right away.
Needed geospatial data does not exist or is not readily accessible
costly to collect or buy
Data is too expensive to acquire on our own. Need help from outside sources.
Gas and electric utility information is always a struggle to obtain.
I would like access to power transmission line data but currently do not have it.
In the past 20 years our quality and quantity of spatial data available to us has increased logarithmically.
Increase funding sources and program awareness
MDOT's Michigan Spatial Reference Network is a system of CORS (Continuously Operating Reference Stations) covering the state. Data is readily available at www.mdotcors.org or National Geodetic Survey data site.
more remote sensing...less GIS
Need better sources for accurate data
Need Elevation Modeling / Contours
Not too big a problem except in gap areas of the state with no local level parcels or address data.
Often data does not exist. More often data, restricted behind licensing barriers
Parcels are impossible to obtain from local gov'ts
poor area source inventory, business location, high resolution land use
Relates to lack of staff and funding - data is not getting updated.
Trying to expand capabilities of a mapping system to POIs alongside current crash mapping
updated digital parcel mapping is needed
Problems with data quality, currentness, updating
A fact of life
always, GIS data not part of IT or maint crews job
Base map issues - very slow in getting it updated
Data for GIS mapped parcels was recently migrated from several legacy systems into one Property Mgmt system. This presents a challenge for data scrubbing over the next 3 years.
EXISTING DATA FROM OUTSIDE SOURCES IS BEING CORRECTED AS NEEDED. IF CORRECTED "CREATED MY OWN" WAS CHECKED
GIS'ers go after the easy out of date sources...unwilling to invest in updating GIS data
I make updates to the Jackson's road layer that never seem to make it to the states All roads layer on the spatial website.
Increase funding sources and program awareness

Insufficient staffing to keep up with updating
Issues with determining who has the final "say" for a layer. E.g., Emergency Response claims something is a hospital, Health division disagrees.
lack of regular parcel maintenance in some key counties
Lot of issues here with accuracy and suitability from local to state to federal levels and the whole maintenance, transmittal, financial, and trust issues
Many discrepancies with data at different levels
Metadata is important
National Hydrography Dataset needs editing; several hundred lakes seem to be missing; some flow directions are incorrect.
Required accuracy continues to increase.
State of MI needs to update orthophotos
State's road centerline is not spatially accurate or have accurately maintained address ranges for geocoding purposes.
surveyor needs to be involved
yes, sometimes
GIS applications are not "user-friendly" enough
Web mapping application development will resolve this problem with time.
User friendly GIS apps to get the information out to all users are too costly. Free options are too bulky and slow.
training, training, training
This may become more of an issue as we develop ArcGIS Server apps.
This is getting better. Good work.
Our current internal GIS website used by city employees to access GIS data is too difficult for some to use easily. Upgrading from ArcGIS Server Manager to GeoCortex would help but we lack the funds.
not usually
Need a stable free viewer for distribution to GIS users who don't need to edit
More of a financial issue, cost is not keeping up with ease of use.
LOTS OF BUTTONS AND SEQUENCES TO REMEMBER TO ACHIEVE WHAT YOU WANT TO ACCOMPLISH.
It's a hurdle that newcomers have to negotiate
Internet band with makes web service difficult for the public
Increase training and development of web tools; educate why GIS should not be overly user friendly.
GIS data consumers want an "Easy" button. We struggle to create applications and procedures to make it easier for them.
Getting better- my support as well!
ESRI is not user friendly...Go with Open Source like Mapserver/Geomoose
DNRE and Fish Div could benefit from additional specific applications that are tailored for specific tasks and easier for field staff to use than ArcGIS.

Continuing to get better.
AMEN! Too complicated, inconsistent, and poorly indexed.
System problems: SW, HW, and networks
Aerial imagery is housed in one Corporate ImageServer implemented in 2008; however, due to bandwidth issues access of these images Statewide is not currently possible.
As part of the Military, we have very strict security which interferes with our daily operation.
continued interface problems in a federal standardized configuration.
DNRE needs to move to the latest version of ArcGIS. DNRE needs to be able to share data between former DEQ and DNR folks. DNRE should not have to duplicate storage of MI Framework data due to hardware/network issues.
Educate IT folks on GIS use, demands and resources from within the community. GIS is not IT with a map!
Firewalls and bandwidth
handled by DIT
Mostly all related to money and planning.
network infrastructure needs some upgrades, need $ for this
not usually, except in some instances, but usually find work around
Obtaining hardware with enough speed, RAM, etc. to support GIS is getting harder and harder.
Occasionally floating ArcView licenses are not released even when they are no longer being used.
software limitations due to budget restraints
Speed, backups
State Govt not set up for GIS applications; storage space inadequate; lack proper backup solutions
SW see above. HW= printer problems, but I suspect these are actually SW problems.
This is getting better. Good work.
We are having internal network problems
Difficult integration of data from different sources
Coordinate system variations between Michigan GeoRef and statutory Michigan Survey Coordinate Systems complicate data sharing.
Data is created for a given purpose; unify the purpose for creating data.
especially imagery, converting/clipping/reprojecting/re-georeferencing image file types (.sid, .ecw)to fit your project area in state plane coordinates int. ft.
Having problems with some of the most recent Microstation formats.
Issues center around local/county data lining up together and not having a common standard.
Many sources-conflicting data
metadata is important
need to eliminate e00 format and put them into shapefile format/some problems with MIGeoRef and outside data
No one is posting their data

not usually
problems with software talking to each other - ex. 911 software
State should drive standards and metadata
This is why most of us have jobs.
Time of convert different Application projection
We use RoadSoft for Asset Management which is based off State Framework GIS, but we also have a county-based Centerline layer which is more accurate and updated faster than State framework centerline..would like to see process for integrating edits of county centerline layer into RoadSoft/state framework centerline layer.
yes, Oracle, MS SQL, ArcSDE, etc
Lack of or insufficient use of data or system standards
Any statewide local to state to federal data must collaboratively develop and enforce standards.
Framework data needs to allow for local level attribute feature validation.
Has been a serious problem. Becoming better as we move towards centralization of our spatial databases.
Increase funding and program awareness
maybe
Michigan should use the National Hydrography Dataset as the hydrographic standard for the Michigan Framework.
No standards and no metadata. No staff time to dedicate.
no state to state standards for the most part
relates to data integration. geography fine, attributes standard needed. differing attribute needs for differing software
System knowledge
This is getting better. Good work.
We attempt to enforce standards, but too often a project "just has to get done" and the standardization step is skipped, creating a data nightmare for us to clean up later.
We have problems with inconsistent addresses.
yes, everyone needs something different
Insufficient opportunities for training and education
Budgets are limited everywhere.
Harder with the financial circumstances.
Insufficient training is a problem for two reasons, limits on my time and explosion of IT developments in this field
maybe
Need more opportunities to utilize tools, extensions, etc.
Not enough $$$ to send staff
Not enough opportunities for training & education.

Pooled training opportunities across all levels of government should be embraced.
Promote and use free web resources
Rural area, so training involves travel and added time & expense. Other job responsibilities besides GIS limit my opportunities.
Software vendor's offerings are introductory.
Some out there, could be more.
There are few opportunities locally (Lansing) for GIS training for professionals. Most training is focused on those who have some knowledge, but not for those with little or no knowledge. Professional training would be extremely helpful.
too much ESRI training to support an expensive program.
training facilities have a hard time finding sufficient students for so many customized needs
Will soon need training on ArcGIS 10.
would love to get some hands on programming training but no funding ever available
Other:
(1)Time, and (2) frustration with the software
Create distributed editing environments where certified GIS professionals are enabled to update State framework datasets
I use Autodesk map for mapping & arcmap to query data & produce visual maps. The assessors have been pleased with the output.
NON-PROFIT CORPS. THAT ARE RECEIVING GRANT MONEY ARE MAKING IT EXTREMELY DIFFICULT FOR COMMERCIAL BUSINESS TO COMPETE IN GIS MARKET
Comment removed since it singled out an individual for criticism.
There are three core limits: Time, Funds, Accuracy. We must pick two and the third will be a result... How can the State assist with any of the three limits.

MGF AWARENESS AND COMMENTS

ARE YOU AWARE OF THE MGF AND BING PROGRAMS?

Answer Options	Response Percent	Response Count
Yes	72.1%	147
No	27.9%	57
answered question		204
skipped question		78

DO YOU PARTICIPATE IN THE MGF?

Answer Options	Response Percent	Response Count
No	16.0%	23
Yes-as a partner providing updates and using data	24.3%	35
Yes-as a partner providing updates	1.4%	2
Yes-as a user of the data	52.1%	75
Not sure	6.3%	9
answered question		144
skipped question		138

HOW ARE YOU USING THE MGF?

Mapping, Data collection
As base map for displaying our data in a county
As a user of MGF data. I download shapefiles from the CGI website for use as basemaps to create maps of groundwater sampling laboratory analytical results, groundwater potentiometric surface maps, groundwater and soil sampling location maps.
use the transportation layer, government corner layer, hydrographic layers, streams layer, municipal boundary layer.
Some departments use MGF as their base data
Street centerline / address, locational base
Downloading shape files to use when creating maps for planning.
Currently using a version of the MGF for 911 calls that I've updated and manipulated for our purposes.
User of data
We take delivery of the data annually.
Downloaded data used in GIS projects in communities that do not have a GIS program
Reference Data for 9-1-1
The original data set for 911 was taken from MGF. A street centerline and hydrology layer was created.
As base data.
A variety of methods, but most critical as base layers for GIS. Specifically the PLSS, Administrative, roads and hydro layers.
data downloads
Will download and use with clients as appropriate.
Watershed and Stormwater management and modeling
Doing a great job on infrastructure data. Perhaps a clearer partnership between MGF and counties would be useful. I use framework 2 data because that is what I started with and have modified locally. I am hesitant to use more recent framework data because I'm fearful of losing local modifications.

downloading data sets
as base data
All of our Transportation and Demographic Planning occurs on the framework. It's an integral part of our business workflow
In my day to day work, creating maps and data, I use MGF data. All of my mapping work uses data from the Framework at the very least.
Base layers.
Basemaps
various projects with orthos, and base layers being most used (roads, lakes etc)
Base mapping
Have gradually transitioned to framework version 9 from internally generated layers. Use it as a base layer for nearly all applications.
Data source for counties we are associated with
Primarily for base maps.
Mostly as base map data
PLSS, Roads, hydro for reference in program delivery
We use MGF for regional mapping.
We use the MGF for our base files for our counties.
Sharing data and occasionally downloading data from your site for areas off of our ownership.
As base map data for land use and transportation planning
Currently not using.
User of the various data sets
Transportation
Base map for asset management of county road system.
Reference data. Starting point for many projects.
I download street centerlines, hydro and aerials for base map development. This is primarily in the less developed counties or in areas where we have limited coverage of a data layer.
As a user of the data.
Using framework to fill in gaps for features we do not have as we well as provide adjacent jurisdiction data.
As an "as is" road centerline file for our and surrounding counties.
We use the data as basemap data for transmission line and substation projects throughout the state (both UP & LP)
Through Roadsoft
Providing annual updates to CCS and using MGF in programs such as RoadSoft and Google.
We frequently obtain ortho imagery to supplement our design surveys for transportation.
Limited use as reference to other data.
Trying to incorporate road name and address range corrections for roads
Clerk Office and Transportation Funding (Act 51)
We have used the Framework file as a base for updating a local centerline file with enhanced address ranges. We are currently in the process of providing that updated file to MGF. As the GIS Coordinator is also the Transportation Planner we update and feed road network changes to MGF during annual review and rating of the federal aid eligible roads.
I use the MGF as part of the Michigan PR Finder, TMS.
Downloading current versions of statewide data for land use planning
Used for base information in GIS applications
Reference and geocoding outside of corporate limits.
Generic downloads for surrounding county information.

mainly the roads, bridges and boundaries.
obtained list of Michigan street names and coordinates of all intersections
As base layers
As basedata to build more complex infrastructure schemes. Integrated with Federal data to complete this picture. Information is also compared against crime statistics.
Within RoadSoft. I use it for PASER rating of pavement, but
We use it to provide data to our users outside of the county (e.g., county boundaries, hydro, roads).
We aren't. The data is not accurate enough and has to be transformed to integrate with CLEMIS and other internal systems.
Primarily for graphic purposes on small scale maps
Linear Referencing of the roads
Most of the data our agency uses comes from the MGF. It is used for all of our mapping needs.
Mostly pulling data out of the library.
as reference data when creating new data, as part of my geospatial library i.e. usgs DRGs', wetlands, soils, geology
The base layers, streets, hydrology, etc. in county mapping.
Download GIS data annually to make regional data available to the enterprise.
For data where accuracy is not very important
Forms the basemap for almost all of our GIS/mapping projects
as base map data
RoadSoft; other cartographic output
We are using the data to have information on surrounding counties and to supplement layers we currently do not have.
I assume that the base layers created by the contractor came from MGF. Supplemental information DEM, Hydrology, Soils, Land use. LUST sites.
It is the base data for all of our GIS. We update the data on a regular basis and send the updates to MGF once a year.
Base mapping
Road centerlines - pavement condition assessment inventorying and deterioration modeling using RoadSoft software.
All regional data sources are being used from MGF.
In my regular GIS business.
Reference
Foundational for most every spatial project we do -- Data conversion, Data integration, geocoding, cartography, GIS analysis, etc..
As data for our clients
Obtain some data. Provide updates for roads and NHD (through state)
Often use the MGF data sets to as a starting point and edit to the necessary scale needed within my organization. Also use when producing maps at smaller scales.
I use MGF in analyses for many projects in DNRE Fisheries Division.

WHAT DO YOU FEEL ARE THE GREATEST STRENGTHS OF THE MGF?

easy access

Freely downloadable.
can download data from a central source
Everyone can have access to it, it is a good base for our needs as a road commission with limited recourses.
Standardized between counties. Wealth of data
inexpensive
There are a variety of data files, and they are well organized and readily accessible on the MGF website.
Availability
Good range of sources are available and a lot of the data has great Metadata.
The linear referencing system, community boundaries, census boundaries, school districts, etc.
free, easy to use
Availability
Inexpensive center line was created. This county did not have a center line available from any other location.
Statewide coverage, uniformity, and segmented by county. Ease of download and use.
Standardization across large geography.
broad selection of data
One stop shop, lots of feature categories.
strengthens basic data base
Sheer amount of data made available for counties and other agencies to use.
free data
free
A statewide consistent fabric
It is well documented and easy to download. The updates to the framework and documentation of the improvements are a great strength.
Availability of good, complete base layers for the entire state.
ease of access, quickness, completeness
a nice array of data layers (most are useful to us)
Accuracy and labeling.
County wide and state wide data. The continual improvement of attributes and geometry and how it interfaces with other applications (Roadsoft)
It is is on place and readily available. May be more useful - if it was served up by and enterprise program with layer files to the users.
Having actual GIS data to disperse freely to anyone.
State compilation.
Data structure is EXCELLENT.
I feel that there is a great amount of data provided by the MGF. The fact that it is free is also beneficial.
Providing statewide extents for many datasets.
Its available and free
General Information.
single state wide repository of GIS data, saves time and money when looking for data
Central point for updates
Up to date digital resource.
Statewide coverage, easy-to-use, good reference.
Its consistency and known level of quality. It is very good for projects covering multiple counties, where the individual counties have varying degrees of data available.
Frequent updates

The availability of data and providing a standardized format (data fields).
Multi-agency use.
Easy to use table of contents (By County, By Theme), Most data is kept up-to-date, data sorted by categories (hydrology, political, elevation, etc.)
It gives me a great basemap for road asset management
My experience with CCS has been great-very strong communication and quick response times with staff.
Ease of use and extent of data.
That it is potentially a "common denominator" of communication and sharing of data from Local, County, State and Federal levels as well as quasi governmental (schools, etc)
Good base product and friendly staff. They have always been willing to share and help with technical questions.
Availability of diverse data.
It has a simplistic representation of the transportation system in Michigan. This allows for relatively fast loading of data.
One source for data; chance for standardized base mapping; opportunity for networking with other GIS users
consistency of data sets
statewide dataset
Many types of data all in one place.
broadness of the data
Statewide coverage
A first step toward data integration. Data integration is the most important factor in a successful GIS program.
Having a seamless, state-wide coverage of the most common basemap data layers
For Counties with no GIS data it is a good base
Statewide consistency
It is statewide, current, free, and accessible to all.
The ease of use in obtaining the data. Also the way it's organized by geography/topic/ etc.
the amount of data available for download
Easy access, good start for a basic GIS
Making GIS data available to organizations that do not have the resources to develop and maintain it locally.
Easily accessible
Currentness of the road network
FREE, wide variety of data
Uniformity throughout state; applications such as RoadSoft
Covers the whole state.
Easy access broken down by county. Easily downloadable on high speed connection. No waiting.
It is excellent base data, and they have integrated all of the changes we have requested. It also gives us a place to send folks who want the base data for free.
Has been greatly improved through local feedback Unique identifiers for road segments Free and available to public
Comprehensive coverage of statewide features at intermediate to small map scale applications.
Standardization of data, clearing house function, easily accessible source of base map data, aerial imagery archiving, Availability of Bing Map for Enterprise as a tool for user friendly interaction with

public agency maps - this is the selling point rather than imagery).
Access, update frequency and the amount of data
1) Integrated statewide data (government boundaries, census, transportation, hydrography, core attribution) 2) Complete statewide Linear Referencing with version control and change transaction files 3) Completely funded by state agencies so data can be made available for free 4) Completely owned by State of Michigan which enables collaborative data exchange partnerships - no license/partnership restrictions
State-wide coverage, decent accuracy and completeness.
Easy to work with for our updates. Good website.
The volume and variety of data produced and maintained.
Annual updates; statewide coverage; standardization.

WHAT ARE THE GREATEST WEAKNESSES OF THE MGF?

Significant lack of communication to the end-users.
no parcel data set available
MDOT produces plans in State Plane Coordinates and MGF image data is not as accurate.
None that I am aware of.
need to have data on an SDE layer.
Errors in data, without a local partnership on our part the errors are not fixed as they don't know about them, we are not in a position as of yet to enter into a partnership with CSS to provide them with necessary updates.
Not up to date. Address ranges incomplete. Too many hurdles to contribute updates. Much data is too low rez. Some data contain many, many errors (well log records). Migeoref coords have fundamental coordinate resolution limit as I understand it. inability to sync data between locals and state.
not timely
Some information, particularly the hydrography layer, was digitized using a 1/24k scale, so it is not spatially accurate on top of an aerial photo.
Timely updates.
Organization and the ability to preview data before download.
Level of detail could be better, spatially and with attribute data.
Data is often out of date, incomplete/inaccurate, often does not line up with orthophotos or other datasets obtained from other sources.
Accuracy
The data was inaccurate. Multiple corrections by the county GIS department had not been corrected in the past.
Slight data errors that require manual editing. Surprised to find these after the layers have been revised over the years.
need for updated data and way of notifying users of update availability

In general, not appropriate for local/county level operations. Addressed centerlines not appropriate for E911, public safety applications. Not reconciled with MSAG. No consumable web services to integrate with client desktop and viewers. Many local updates have been sent to them and not integrated with MGF.
water resource data is very weak
Too disconnected from small county organizations.
Not very accurate
updating process
It's driven by MDOT and other state department needs and not on local needs. It's becoming too cumbersome.
A weakness is the data format of MGF as only offering shapefiles. It would be good to start offering a Geodatabases with the Framework and an ability to replace the database as the data at MGF is updated.
Accuracy of some of the data, for example township/sections.
Some data table could be more robust (e.g., roads w/better alternate names, interstate, state and local road data). Sometimes I need better hydrology catchment data (subsubsubsub watershed).
positional accuracy is an issue for some layers
Getting updates in a timely fashion.
somewhat unpredictable update schedule - which is understandable on a statewide level. And why aren't commercial products using this same data?
Not coordinated with all counties, cities and townships
The ability to update layers timely and more accurately.
Inaccuracies.
A better method of input from users when errors are discovered- quicker turn around.
MGF has never realized its potential. There are still swaths of transportation information not attributed for addresses. I think the staff at the state has to find someone who is expert enough at addressing to fill in the blanks. These large blank areas translate up to internet mapping sites, making navigating in certain areas of Michigan hard for the general public.
Incomplete road data. The lack of a formal process for submitting updates.
Web site is not very intuitive to find and download data. Mostly to find it.
Accuracy, attributes incorrect (road names, lake names, etc.)
IT is more of an information stream than an active operating stream
not updated often enough
Lack of timely updating
Detail.
Spatial and temporal accuracy i.e. some areas are definitely more up-to-date than others. Lack of input from counties and local units.
It can really only provide the starting point for a project. The aerial quality is ok, but for many applications I need much higher resolution imagery.
Lack of understanding on how to use the data.
This is in regards to the road layer, which we use most often. Weakness is in the accuracy in geometry and lack of coordination of street names. We have experienced and noticed that the street name varies from the local level to State to U.S. Postal to MSAG - Master Street Address Guide. There need to better coordination regarding standardizing street names.
Ease of updates and integration with other datasets at the geography level. (stream/road) Requires updates to multiple geography datasets within the unified product.
Orthophotos are not as up-to-date as possible, no parcel data from local governments - even if it is just

the lot lines and a parcel ID, the use of the e00 file format
Proper naming of roads at change points (i.e. county line, north v. south)
Would like higher resolution imagery, prefer to work in State Plane Coordinates.
Based on Michigan GeoRef coordinates. Positional accuracy of data collected and incorporated into MGF not as accurate as desired.
disconnects to make it a seamless common denominator. Identify who is responsible for what.
There data is somewhat gross at times for local county use.
It has a simplistic representation of the transportation system in Michigan. Being simple it does not always align with the actual roadways, or have the ability of correctly identify intersections. The way the framework is laid out, it considers the roadway going over the freeway and the freeway itself to be an intersection with no vertical separation. This issue can cause data to be incorrectly located. Another issue that I have encountered is the lack of network speed when trying to retrieve aerial imagery from CGI. The connection has become worse over the past 2 years where I have been restricted to downloading the images at less than 30 KB/s.
Data from too many sources; outdated data; not enough metadata to support files; inaccurate data; no ortho imagery from current flights
positional accuracy
Lack of accuracy in some places and no state attribute standard to follow.
up to date information on all fields, road centerlines should be within 1 meter or so, lack of synchronization with Act 51.
lack of accessibility via the web
Address ranges
Lack of historical data
Not services driven outside of the SoM domain. Also versioned meaning updates that are needed in real time have reduced its overall efficacy for use in law enforcement
typically find the centerline is not as accurate as our produced local centerline. Most of the time the Centerline does not match up with the ortho or have wrong names and the representation is not always accurate.
Currency of the data, and how to streamline updates between the locals and the state.
The data has to be reprojected to match up with local data. Even when reprojected it doesn't match up with local datasets. Wish the State could use State plane instead of georef. Even though we submit our data to the State, those changes do not seem to get integrated and some data gets lost in the mix.
poor spatial and topological accuracy; much of MGF is redundant with high quality but fragmented county and local data sets, especially in southern MI.
Spatial and attribute accuracy is not always the top quality
Sometimes accuracy at the local level
horizontal accuracy is not tight enough for our standards, way too many fields on such things as road centerlines
Sometimes there is no projection file with the downloaded files. Michigan georef projection has to be converted to State Plane, NAD 83, international feet in order to use orthos and other county data.
The duplication of effort in maintaining the same data locally and at the State.
Like us all the manpower to update and make more accurate
hydrography layers need updating - they should be brought into conformance with NHD-Hi-Res so there is only one, standard vector line file representing the stream/river hydrography of Michigan. MGF need not carry all the NHD attributes, but should store and disseminate all the NHD_Hi-Res perennial and intermittent stream vectors.
PLSS needs to be updated with remon coords
May not have spatial accuracy of local GIS data sets or reflect recent changes as quickly as county data sets

Data does not always lay in with aerial photography(could be the aerials, but aerials come from two different sources, local 1997 and 2005 USDA, both lay in the same location). Parcel layers has been COGO'd and aligned to aerial, Qtr/Qtr grid is way off from proposed location. You mentioned updating the data at the local level. What degree of accuracy would be required to do this? Our road layer is ever expanding with new private roads that the road commission does not keep track. Can this be added updated locally?
Not all updates and changes are taken. Only can update once a year.
Road data do not include paved / not-paved information Roads often segmented into tiny segments
1. Absence of spatial and attribute accuracy necessary to support large scale mapping applications. For example, road centerlines are out of position and their address ranges are not accurate enough to support E-911 applications. Even Bing/Google address geocoding is more accurate and consistent for many local level applications. 2. Absence of staff to responsively maintain and update core Framework data layers, especially roads. 3. The absence of address points and parcels also hinders the large scale applications of the State's Framework dataset.
Local Projection needs, Local attribute needs, insufficient funding for critical data needs (e.g. imagery: the agreement with MS/Bing allows for capturing areas of Michigan that may not be captured otherwise, but it comes with many costs beyond financing. Affordable marketing of the BME platform for interactive mapping services may provide more funding than the imagery partnerships. Control of the aerial project and certain restrictions on distribution of the imagery are too big of a cost for many agencies.
Sometimes less than desirable spatial accuracy
Accuracy
1) Does not contain a parcel layer 2) Address range stewardship update mechanisms are strong in some areas and weak in others 3) Cartographic representations for general consumption could be better 4) Better integration of state forest roads and trails 5) current editing system (which is being updated) can't handle digital update mechanisms from partners
If others are not using them (e.g. counties) to make updates (e.g. roads) then we also suffer from the poor data outside our immediate jurisdiction.
Data is not appropriate for use at small governmental agencies and needs to be edited for use.
The hydro layers differ from the NHD, the national standard.

WHAT IMPROVEMENTS TO THE MGF WOULD BENEFIT YOUR ORGANIZATION?

There needs to be a two way communication between the state and its data providers.
access to parcel data,
Major improvements to data quality. Data provided in State plane international feet.
more current updates
A continual updating of data ensures higher accuracy and more information with each new version.
Updated more often.
Updated streets, census block boundaries, one way street data

Accuracy and updating of data, a way to automatically update MGF data without having to go to the CGI site every so often to see if I have the most current information.
Accuracy
Integrate the subdivision plat information at http://www.cis.state.mi.us/platmaps/sr_subs.asp.
state wide access to remonumentation progress and attributes of reestablished corners etc
See above and, A truly reciprocal arrangement to receive and integrate current and accurate local/county data in return for tangible benefits from the state/feds either in funding support or in-kind return of data such as orthos/lidar. A fair formula badly needs to be collaboratively developed to ensure sustainability.
significant effort to include water resource data enclosed in the GIS system
A direct communication and data link between smaller counties like us and MGF would be useful. Classes held in northern Michigan a few times a year to help us understand data available and how to better integrate it into our system.
Improve precession and accuracy
ability to update certain data sets in house.
Have it meet more of the local needs such as the Act51 process. Some county's have adopted their workflow to be done directly (digitally) on the Act51 features and then submitted back to the state. NO MORE HARD COPY MAPS!!!. I believe the direction of the state to have local users be editors is a good start. But the biggest benefit will be if the future direction of the MGF is not solely on the MDOT's plan but on all users; state and local. Until that happens you will have a segmented audience.
Offering of more data, such as elevation - statewide. Higher resolution of aerial or satellite products would be well received and used in our organization, too.
Improved accuracy of some of the cadastral layers.
Dun and Bradstreet database access
having lakes and rivers "fit" digital orthos
ROW layer from County and State projects
Add an image server to serve all state imagery in a seamless way.
Have a system in place that would allow for better and quicker methods for updating framework layers such as roads.
Better communication
Standard PLSS attributes per a national standard. Parcel information. Plat book data.
MGF hasn't caught up to us for data accuracy. If we could ever synchronize, then I'd be able to go over to MGF completely.
Specifically, I would like to see address ranges for all road segments (which match the MSAG). Structure point files would also be beneficial. A file which shows all public lands would be helpful (local public lands as well). Separate the lakepoly from the riverpoly like it used to be (putting them together makes it difficult if you just want to see lakes). Provide a river centerline for the riverpoly file. A road right of way polygon file would be great. And, the biggest thing that would be beneficial - provide a file of business locations. This information can be purchased from 3rd party vendors, but having it for free would help Michigan tremendously. Another great benefit would be to present the actual census data - already put in shapefile format rather than just the boundaries. I find it difficult to find the census data I need and then link it to the boundary file.
Accuracy, updated and accurate name and attribute information
It would be great if internet hosting were available to the counties and other units at cost-effective rates.
county level parcels and street info
Updates must be made more timely

That depends on the layer but the major issue would be work with counties/local units to accelerate updates.
1.Higher resolution imagery. 2.Becoming a depository for state-wide parcel data with metatdata on the timeliness of updates and to provide a standard to follow for counties developing parcel data. This would be a huge task, but many counties are still creating poor quality parcel data which leads to local complaints and lack of use.
In house explanations of what is available and how we might use it.
Improve of the weaknesses state above will be a start.
ArcGIS Server access via the web and a developed "sand box" for local updates.
see weaknesses
Proper naming of roads at change points (i.e. county line, north v. south)
See above.
Easy transformation between coordinate systems and among various platforms. Better ties to and utilization of MDOT statewide CORS network and system for better data positioning and improved accuracy in maps.
ability to merge locally maintained street attributes with each new version. Have confidence that changes I make will stick from version to version
If there were some state funding provided by MGF to the counties to assist in GIS development, the counties would likely be more willing to share the data, and all would benefit. Something like the remonumentation program which provided state funding and also the opportunity for local funding.
Better accuracy in roadway layout, and the ability to overlay data to Google Earth as a *.KML file.
Bringing user groups together; help to set up GIS implementation plan for inter-departmental integration; partnerships to acquire current ortho imagery, centerlines, parcels, etc.
Statewide parcel mapping
More incentives to participate in a partnership with the State. This would enable them to have better data, updated at regular intervals.
a robust and accurate lrs migration tool that can also update fields other than the PR and MP's.
A web-based API for Framework, so my applications could access the data contained.
Historical data/images
More data on infrastructure in Michigan. Also if there was an effort to coordinate the crime mapping of state, county and local agencies.
spatial accuracy then the centerline might be able to be used and also provide a more current version of the centerline than 1yr old for RoadSoft. I believe there is a process to update that more frequently to get to the end users.
Adding web services that could be consumed by locals, such as address validation. Offering an easy way to provide updates that would eliminate duplication of effort.
have the State stand up a server app that allows locals to submit their data or changes electronically or just make it easier to submit edits, improve the accuracy of the data and clean up issues with topology/data errors, make it easier to download and use - the State website is hard to navigate and the data library is buried. Provide the data as Geodatabase and get rid of coverages.
better integration of local data, local stewardship of both transportation and hydrography
if the Addressing from and to fields followed our counties standards so we could geocode
making sure all attributes are checked for accuracy. Such as correctly identifying the names of Lakes and Roads etc.
data downloads including imagery: need to be able to download this data in your chosen projection and units. The .ecw and .sid image formats can be difficult to work with when having to clip and either re-project or re-georeference the imagery to you coordinate system and units. I think the state and local units need to have monetary relationship with data, after all, the local units (county) are starving for revenues and any monetary offer for the data they have spent their tax dollars on needs to be supported/backed up by the end users or the state. The local units can't proceed to create and maintain

this high quality, local data if their isn't money supporting the cause.
Address ranges in road segments are important to us, but they need major revisions in the MGF street layer. We are working on it locally and providing MGF with updates, so slowly we'll get better quality address ranges.
Rectification to updated imagery
Live editing environment and quicker integration of edits
Improvements to the hydrography layer(s) [see above]/
PLSS needs to be updated with remon coords
Faster edits/updates with local sources; ultimately having a single data set for state/local that is used in RoadSoft and all other applications
The Bing maps proposal was a great idea. If you could take that and allow the county to pay into a fund annually, instead of once every three to five years, it may be easier to finance. Our departmental budget surplus (if any) disappears at the end of the year.
More frequent updates. Inclusion of more data in this model (i.e. statewide imagery and topography programs, more updated land use/land cover data)
Quicker integration of updates
Provide the opportunity for distributed data management/editing using internet map web editing tools. Offer a certification program whereby qualified GIS professionals participate in maintaining roads, parcels, address points, and government boundaries in conjunction with or on behalf of the State. Everyone who adds/revises data would know when their update submission would propagate into the next Framework data release published by the State. These professionals are not exclusive to local government but could also involve State funded universities - consider Michigan Technological University's work with the Asset Management Council and the RoadSoft application for pavement evaluation rating systems as a perfect example. There are other universities with outstanding GIS outreach programs like MSU, CMU, EMU, and WMU which could take some responsibility for helping train/certify GIS professionals to maintain State Framework datasets.
Marketing of the BME platform and designing of APIs for specific public interaction initiatives could provide needed services for Michigan regions. Our transportation GIS staff attended a National Association of Regional Councils (NARC) GIS Web Applications webinar that was concurrent with the Lansing NSDI meeting. BME was not even mentioned from what I can tell which is a shame given our state's agreement with MS/BME. This should be a role that the state takes strong leadership in since most regions do not have Arc-IMS. At a minimum, offering training in how to convert GIS data for use within BME would be a potentially profitable solution for the state.
Adding elevation data from counties that have collected it so far (i.e., LiDAR data)
DNR ownership mapped to below the 40 level. Work with Counties to get their updates.
Use an unchanging (i.e., constant from version to version), unique, identification code for individual lake polygons. Do NOT merge together all unnamed lakes into a single feature. Use the highest resolution NHD as the statewide hydrography layer. Update/improve the naming of the hydrography layer.

WHAT HAS PREVENTED YOUR FROM FULL PARTICIPATION IN THE MGF?

Answer Options	Response Percent	Response Count
No need for transportation data	15.0%	3
No need for hydrography	15.0%	3

No need for government boundaries	15.0%	3
No need for PLSS and geodetic control data	20.0%	4
MGF spatial data is not accurate enough to support my needs	15.0%	3
MGF attribute data does not meet my business needs	20.0%	4
MGF data is not available quickly enough to support my business needs	10.0%	2
Participation in MGF could reduce my revenue from data sales	5.0%	1
MGF data is not provided in a format I can use	0.0%	0
My organization doesn't have sufficient staff to support anything outside of our core data and mission	45.0%	9
Other (please specify)	45.0%	9
	answered question	20
	skipped question	262

OTHER:

Core datasets maintained and provided at county level.
Lack of familiarity with MGF, its programs, services, and needs.
Not in control of the data that is used in MGF or data I produce or use is used in the MGF.
Became ESRI users in 2007. We are a utility and there has been little support or interest. There is more interest in partnering with local government, municipality, etc.
It is not accurate enough, was not created in conjunction with our business process needs, and there is very little communication and cooperative effort put forth the make the products better.
We already had a system in place to meet our (whole County) needs and got it done cheaper than the cost originally quoted by the MGF.
Not that familiar with it or what it offers.
Data integrity. The data supplied is not accurate.
MGF is for only Michigan....I need all Great Lake States to be on the same page using the same standards.

WHAT COULD BE DONE TO MAKE MGF PARTICIPATION ATTRACTIVE TO YOUR ORGANIZATION?

MGF is an excellent program to provide geospatial data to municipalities and private organizations lacking the funds to create core GIS datasets including aerial photography and transportation layers. However, we are fortunate enough to work in a county that handles these core datasets and hands them down to the local units of government. As someone that used to work in a municipality where we had to create our own tax parcel layer and pay for our own orthophotography flights, I can ensure you that we appreciate the fact that our core datasets are maintained by the county.

Information about what it is, how it works, etc.
not much since it is base a counties and not tribes
Not sure, I am looking forward to attending the listening session.
Comment redacted. To receive comment text please make a request to the DTMB project management team (Paul Harmon, harmonp@michigan.gov, or Laura Blastic, blasticl@michigan.gov).
It's all about cost.
More information - more training from MGF; better presence at conferences and workshops around the state.
The CSSTP needs to acknowledge the value of locally developed data. The State would like to utilize local data, but does not provide anything in return. In order to participate in any data sharing opportunity, I need to show that it is an equal partnership with data or other resources flowing in each direction. In past attempts to partner with CGI, the local agency did not receive much in return for providing data and expertise that are literally worth millions of dollars. CSSTP needs to change their workflow and technology to utilize enterprise geodatabases (if they have not done so already) in order to facilitate efficient data sharing among partners. Comment partial redacted. To receive full comment text please make a request to the DTMB project management team (Paul Harmon, harmonp@michigan.gov, or Laura Blastic, blasticl@michigan.gov)
Coordinate system should NOT be Michigan GeoRef. It is substandard.
Make it a Great lakes GF!

BENEFITS FROM GIS IMPLEMENTATION

IDENTIFY ANY BENEFITS YOU HAVE RECEIVED FROM IMPLEMENTING GIS

	Yes	No	Not Applicable	Response Count
Improved Decision Making	168	4	7	179
Improved Timeliness and Quality of Data and Services	163	6	9	178
Protection/Enhancement of Natural Resources	113	15	42	170
Legal Compliance/Protection Against Expensive Legal Claims	69	33	66	168
Code Compliance/Improved Voluntary Compliance	64	35	71	170
Savings of Life and Property	79	36	52	167
Protection from Catastrophic Records Loss	59	41	60	160
Catalyst for Partnerships and Information Sharing	128	13	26	167
Improved Staff Productivity/Labor Cost Savings	148	12	15	175
Increase in Revenue [improved collection of taxes, fees, fines)	54	37	73	164
Reduction in Duplication and Redundancy	125	20	23	168
Reduced Costs from Asset Management	91	26	43	160
Support for Economic Development Initiatives	102	16	48	166
Avoidance of New Costs	67	52	40	159
Savings in Capital Project Design and Construction	73	36	54	163
More Effective Management/Allocation of Field Services	112	26	27	165
Reduced Costs Through Joint Funding	84	34	44	162
			answered question	180
			skipped question	102

RETURN ON INVESTMENT INFORMATION

ESTIMATE COSTS ON TECHNOLOGY & DATA OVER THE LAST 5 YEARS

Answer Options	Response Average	Response Total	Response Count
Hardware ($)	1,160,550.56	104,449,550	90
Software ($)	183,292.78	16,496,350	90
Data ($)	1,495,624.34	110,676,201	74
Personnel ($)	1,148,951.91	90,767,201	79
Contracted GIS Services ($)	2,507,126.34	190,541,602	76
Other ($)	28,934.59	839,103	29
		answered question	99
		skipped question	183

RESPONSES:

Hardware ($)	Software ($)	Data ($)	Personnel ($)	Contracted GIS Services ($)	Other ($)
4,000.00	2,000.00	1,500.00	35,000.00		
5,000.00	3,500.00	4,000.00	100,000.00	-	10,000.00
100,000.00	100,000.00	1.00	1.00	1.00	1.00
3,000.00	9,000.00	3,000.00	60,000.00	-	-
10,000.00	10,000.00		100,000.00	15,000.00	
20,000.00	5,000.00				
3,000.00	2,400.00	100.00		-	
10,000.00	45,000.00	430,000.00	1,000,000.00		
	60,000.00	-	300,000.00	600,000.00	
					2,500.00
50,000.00	150,000.00		250,000.00	100,000.00	
					1.00
5,000.00	5,000.00	25,000.00	100,000.00		
-	2,000.00	-	-	1,500.00	
5,000.00	4,500.00	500.00	100,000.00	-	-
1,000.00	-	-	-	-	-
5,000.00	7,000.00	-	45,000.00	-	-
8,000.00	15,000.00				

3,000.00	2,500.00	-	6,200.00	-	
3,000.00	1,500.00	-	-	-	-
100,000.00	7,500.00	100.00	70,000.00	100.00	100.00
10,000.00	10,000.00		120,000.00		
				50,000.00	
-	65,000.00	-	300,000.00	500.00	
17,000.00	14,000.00	4,000.00	175,000.00	27,000.00	
30,000.00	5,000.00	30,000.00	150,000.00	30,000.00	
-	5,000.00	-	-	-	-
5,000.00	1,200.00			25,000.00	
800.00	600.00	15,500.00	45,000.00	1,500.00	1,000.00
10,000.00	3,500.00		200,000.00		
10,000.00	25,000.00	40,000.00	300,000.00	25,000.00	
5,000.00	25,000.00	-	200,000.00	-	-
300,000.00	50,000.00	2,000,000.00	200,000.00	25,000.00	
30,000.00	30,000.00	19,000.00	114,000.00		
5,000.00	1,500.00	60,000.00	500,000.00	-	
7,500.00	5,000.00		40,000.00		
2,000.00	8,000.00	-	-	-	-
1,000.00	2,500.00	-			
10,000.00	30,000.00				
-	4,000.00	-	-	35,000.00	
500,000.00	900,000.00	-	50,000.00	-	800,000.00
6,000.00	70,000.00	-	400,000.00	-	-
30,000.00	40,000.00	20,000.00	1,500,000.00	15,000.00	
50,000.00	150,000.00	25,000.00	150,000.00		
34,500.00	70,000.00	22,000.00	450,000.00	56,000.00	
30,000.00	20,000.00	1,000.00	80,000.00		
6,000.00	20,000.00	10,000.00		5,000.00	
15,000.00	500.00	-	50,000.00		
				-	
15,000.00	15,000.00	4,000.00	350,000.00	-	
50,000.00	250,000.00	50,000.00	1,250,000.00	50,000.00	
10,000.00	32,500.00		225,000.00		5,000.00
30,000.00	60,000.00	250,000.00		60,000.00	
50,000.00	250,000.00	60,000.00	200,000.00	130,000.00	
10,000.00		5,000.00	300,000.00		
10,000.00	40,000.00	25,000.00	300,000.00		
50,000.00	27,000.00	5,000.00	60,000.00	90,000.00	
10,000.00	20,000.00		40,000.00	35,000.00	
250.00	500.00	-	-	1,000.00	500.00
25,000.00	75,000.00		350,000.00	45,000.00	
20,000.00	20,000.00	2,000,000.00	2,000,000.00		
	200,000.00				
20,000.00					
15,000.00	10,000.00	500.00	200,000.00	-	-
360,000.00	150,000.00	70,000.00	420,000.00	86,000,000.00	
10,000.00	15,000.00	5,000.00	150,000.00	10,000.00	

15,000.00	9,000.00	135,000.00	300,000.00	130,000.00	
2,000.00	3,000.00	4,000.00	100,000.00	150,000.00	1,000.00
				1.00	
15,000.00	15,000.00			40,000.00	
5,000.00	5,000.00	-	25,000.00	1,000.00	
35,000.00	85,000.00	400,000.00	600,000.00	150,000.00	
30,000.00	30,000.00		25,000.00	150,000.00	
60,000.00	25,000.00	5,000.00	2,289,000.00	-	-
20,000.00	20,000.00	5,000.00	150,000.00	20,000.00	
				25,000.00	
20,000.00	100,000.00	75,000.00	500,000.00	-	-
5,000.00	2,500.00	-	-	-	
7,000.00	15,000.00	-	-	30,000.00	
500,000.00	1,000,000.00	700,000.00	12,000,000.00	266,000.00	-
5,000.00	10,000.00	55,000.00		-	
50,000.00	25,000.00	50,000.00	50,000.00	100,000.00	
1,000,000.00	1,000,000.00	1,000,000.00	1,000,000.00	-	
35,000.00	70,000.00	5,000.00	420,000.00	35,000.00	3,000.00
70,000.00	185,000.00	1,000,000.00	1,360,000.00	130,000.00	16,000.00
10,000.00	5,000.00	8,000.00	350,000.00	-	
-	-	-	-	-	-
7,500.00	49,750.00	9,000.00	150,000.00	150,000.00	
10,000.00	2,000.00			10,000.00	
12,000.00	99,400.00		408,000.00	660,000.00	
25,000.00	10,000.00	8,000.00	200,000.00	1,000.00	
75,000.00	-	-	150,000.00	-	
250,000.00	500,000.00	2,000,000.00	7,500,000.00	1,000,000.00	
10,000.00	50,000.00	10,000.00	30,000.00	20,000.00	
					-
10,000.00	3,000.00	-	-	-	-
100,000,000.00	10,000,000.00	100,000,000.00	50,000,000.00	100,000,000.00	
25,000.00	20,000.00	20,000.00	100,000.00	40,000.00	
6,000.00	5,000.00	2,000.00	25,000.00	1,000.00	1.00

WHAT IS THE VALUE THAT THE GIS HAS PROVIDED YOUR ORGANIZATION OVER THE LAST 5 YEARS?

Answer Options	Response Average	Response Total	Response Count
Staff Productivity and Labor Cost Savings ($)	96,015.66	3,072,501	32
Revenue Increases [improved collection of taxes, fess, fines, insurance claims, etc.] ($)	145,374.30	4,797,352	33
Reduction in Duplication and Redundancy ($)	37,133.37	1,002,601	27
Asset Management ($)	19,134.83	440,101	23
Support for Economic and Business Development Initiatives ($)	26,072.82	573,602	22
Avoidance of New Costs ($)	17,656.61	406,102	23
Savings in Capital Project Design ($)	26,526.13	610,101	23
Savings in Infrastructure Maintenance and Design ($)	13,504.59	297,101	22
More Effective Management/Allocation of Field Services ($)	20,704.04	517,601	25
Reduced Costs Through Joint Funding ($)	533,439.22	12,269,102	23
		answered question	42
		skipped question	240

RESPONSES:

Staff Productivity and Labor Cost Savings ($)	Revenue Increases [improved collection of taxes, fess, fines, insurance claims, etc.] ($)	Reduction in Duplication and Redundancy ($)	Asset Management ($)	Support for Economic and Business Development Initiatives ($)	Avoidance of New Costs ($)	Savings in Capital Project Design ($)	Savings in Infrastructure Maintenance and Design ($)	More Effective Management/Allocation of Field Services ($)	Reduced Costs Through Joint Funding ($)
10000	5500	5000						20000	
20000	1	1	1	1	1	1	1	1	1
	0								
	3000								
2000		2000			10000				
100000	0	25000	0	25000	0	0	0	25000	0

10000	50000	0	0	0	100000	0	0	0	0
100000	100	100	100	100	100	100	100	100	100
						150000			
500	1000	0	0	500	0	0	0	500	2000
50000	2500	5000		3000			2000	2000	
20000	5000								
0	0	0	0	0	0	0	0	0	0
	10000			5000	6000			10000	7000
						120000			
200000	5000	120000	10000	5000	200000	0	50000	0	0
	250								
0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0
	0	0	0		0	0	0	0	0
40000	0	30000	250000	0	10000	0	50000	50000	0
						100000			
		100000				0			
0	0	50000	0						
0	0	0	0	0	0	0	0	0	0
	1200000								
									10000000
600000	0	350000	0	0	0	0	0	180000	180000
50000	100000	15000	20000	10000	10000	10000	10000	5000	100000
1									
40000	20000	20000	20000	500000	40000	50000	100000	50000	10000
15000									
						150000			
35000	250000					0			
0	0	0	0	0	0	0	0	0	0
	300000								
25000	0	20000	20000	15000				15000	50000
									100000
0	0	0	0	0	0	0	0	0	0
500000	100000	100000	50000	10000	10000		50000	100000	100000
800000		160000							820000
0									
	40000								
0	0	0	0	0	0	0	0	0	
300000									
150000	5000		50000		20000	20000	30000	50000	
5000	1	500	20000	1	1	10000	5000	10000	1

IF YOU HAVE ANY EXAMPLES OF BENEFITS FROM YOUR GIS PLEASE PROVIDE US WITH THAT INFORMATION

Exceptional coordinate conversion utilities help us move between AutoCAD and ArcView 9.2. GIS also gives us the ability to assign desired attributes to the spatial data; e.g. well data (point data) we could also have sample dates, various contaminant concentrations, groundwater elevations, etc. associated with the data.
The GIS system has been used by my organization to supplement a wide range of planning initiatives at regional and local levels.
Pictometry imagery and software, while not true GIS has provided more revenue to the communities in under assessed properties. These increases are not one-time, but perpetual.

Probably some trips to the field are eliminated by aerial imagery and tools. This saves some direct costs that have not been quantified but also indirect costs such as risk involved by staff driving etc.
The planning commission's mapping activities can be done in-house.
FEMA Community Rating System increase in scoring. Floodplain location is easier and faster.
As a private firm, our ability to provide high-quality GIS services and maps is one of the reasons for our success in planning and economic development. While it's impossible to quantify, I would guess that we would have missed out on business opportunities if not for our GIS capabilities
DDA planning, assessment and appraisal
GIS is used for 9-1-1 in this organization so there is no way to calculate the value. In NG9-1-1, accurate datasets are the key foundation.
GIS data when used by 911 does not have dollar amount assigned. 911 operations measure improvement in time in seconds.
Improved quality of maps available to public.
much more precision in our modeling, hard to tell about accuracy...
Data not traced to be able to quantify above figures.
Pending delegated authority to regulate aluminum, copper and other nonferrous foundries via US EPA National Emission Standards for Hazardous Air Pollutant (NESHAP). Maps of locations/types/size of existing foundry air sources helped foundry business organization knowledge of this industry in Michigan as well as Air Quality Division managers assess the strengths (pollution abatement) and weaknesses (workloads to district FTE inspectors/permit engineers) of taking/assuming delegated authority to regulate these sources. Potential revenue from fees, increased compliance (decrease air pollution translates to increase public and environmental health).
Professional image, department efficiency (esp. building, zoning, DPW, assessing), coordination of departmental projects
Hard to come up with these numbers since the use is so widespread
Developing a GIS is time consuming and costly. Although we are fully committed, we're only beginning to see potential at the field level. I can't summarize cost savings,...but they are certainly there in both tangible and intangible forms.
Online mapping for parcels saves about 75% of the time previously spent in the Equalization department doing parcel look ups. We estimate 50% of the cost of engineering services to have been absorbed through the GIS at 1/3 of the rate of outside services. As a data repository the GIS also saves about 50% of the start up cost for new projects.
Townships can visually see issues and solutions to problems they face
Our GIS and new Property Management software are just being rolled out. No dollar savings have yet

been realized/tallied.
As a private firm our intent is to make money by providing these benefits to our clients, which I think we do but it is very hard to determine a dollar value spread over 30-40 communities.
Reduced Overhead for County Departments Annual Value

Sign Management Inventory: Field Application: Road Commission $30,-$35,000

*Access to high resolution aerial imagery; verify road markings " " $2, - $10,000

*Searchable property maps: locate incoming calls: Drain Commission $15,-$25,000

*Access to current tax and drain districts maps for printing rolls: " " $8,-$12,000

*Property maps with TaxID#, link forfeiture ID#'s Treasurer $30,-$50,000

*Property maps with TaxID, aerial, drains: Equalization field appraisals visits 400%

*Property maps with assessing data on-line for the public calls 60%

*Must have up-to date information to achieve benefits
improved routing/ better engineering of transmission lines/improved decision making
Hard to estimate dollars saved.
Google Earth saves us at least 3-6hrs a week x40 engineers/tech. = 120-240 hrs per week

PR Finder saves us at least 1-2 hrs a week x10 engineers/tech. = 10-20 hrs per week
Michigan Environmental Mapper Web Application
We have used limited GIS to date, and we generally contract with the County to obtain what is needed. We use the County services for Zoning Maps, as the base map for our Future Land Use Map (which was developed by a consulting firm) and for our Non-Motorized Transportation Planning Maps.
Digital flood maps., Directing staff to the right locations during response, where to establish sand bag locations, calculating the evacuation needs for housing in a flood event, where to direct EPA spill recovery teams, assisting communities in planning for floodplain development to mitigate disaster damages, assisting communities in post disaster recovery, using USGS gage data for planning, critical infrastructure protection, coordinating disaster recovery center locations, catastrophic planning for earthquakes, long term recovery planning from flood disasters, groundwater inundation mapping.. I'll stop there
excellent decision making tool across the board at the local level (E911, Equalization, Treasurer, Clerk, Register of Deeds, Emergency Mngmt, Planning/Zoning, Building Dept., DPW, Landfill operations, Road Commission, DNR, USFS, Assessors, Townships, Villages, Cities). GIS has taken root in all these units and is considered a must-have in some.
It's impossible to put a dollar value on the benefits of the GIS at this time. We have not done the type of surveys needed for that information.

We started a mapping website four years ago and get about 4000 visitors a month to the GIS webpage (5th most popular page on our county website, after the homepage, HR and some directory webpages). This obviously saves on phone calls and walk-in traffic. Also the Health department and Equalization uses the website daily. They are able to do preparatory work before going out to the field, which saves time and money. But the benefits are hard to quantify without specific studies in each department, and even then some of the benefits are intangible but real.
The Assessing Dept uses (or can use) GIS to make maps for vacant land sales, land acreage, measure wetland areas, determine similar homes in neighborhoods, property that is vacant, voting locations and areas assigned to them, school district boundaries, etc.

I HAVE NO INFORMATION REGARDING COSTS ABOVE....THEREFORE, PUT IN $1 IN ORDER TO CONTINUE.
The public can go to our website and find out information on individual parcels. The information includes owner, addresses, legal descriptions etc. They can then look at our map and get a general location of the property and information about the surrounding properties. This saves time for staff having to answer some of those questions and allows the public to find the information any time of the day. They are not limited to office hours.
I have created maps for numerous grants. Jackson recently received about $900000 to restore the Amtrak station in town. Our GIS system was used to make maps that assisted in the grant application.
The availability of oblique and ortho photography has saved much of our time in the field. We can do the measuring from our desks and thus be available to the customers as they come in the office while doing "field" work.
#1- Labor savings come from not having to get up and get a book or measure by hand the area of a parcel.

#2- With the use of aerial photography structures that were not currently on the tax rolls were added.

#7- Engineering firms use our parcel layer data and aerial photography to supplement designs for the local units. It is assumed that they pass that savings on to the local unit. 911 center upgraded to a point address system created in house based on centroid (and aligned to aerial photos currently in work). Saving the 911 center on implementation cost.
We recently completed some analysis that allowed me to provide information regarding investment in GIS. Unfortunately, information with regard to savings is not readily available.
I work for a federal agency and have no idea of the $ benefits or costs in the 2 areas immediately above this box.
Data sharing agreements between county - city - council of governments provide for basis of consistent / reliable decision making support. Land record information updates and comparisons support and justify local property assessments which are revenue source lifelines for local and state operations.
We are able to assess more drain districts than we did before GIS was implemented at the Drain Commissioner's office. Also, only one person maps parcels in the county thereby eliminating the need to map the parcels within each drain district, which took one person 40 hours per district before GIS was utilized. Staff time is also saved when they can research an address location before going to a site visit only to find out that the address is actually in a neighboring county. This saves each employee almost 40 minutes for a site that is near the county boundary.
We provide GIS services to others and support our own project work.
Can’t quantify the benefits. Again, the County maintains the GIS we at the Township level use it.
We are strictly a GIS company, so benefits don't really apply. Everything we do is meant to benefit someone else.
We've taken our annual special assessment process from a 2-3 month process, involving 6-8 staff members and hundreds of hours of overtime, to a 3 week process involving 3-4 people and no overtime!
marinemap.org
Portable laptop for field utility location.
DNRE and Fisheries Division are better able to distribute information to the public using web applications, such as MRBIS, MI-SWIMS, MI-Hunt, online Trout Regulation Maps, online lake depth-contour maps.

WHAT COULD BE PROVIDED TO HELP MAXIMIZE THE RETURN ON YOUR INVESTMENT IN GIS?

low cost access to parcel data and address point data
More cost effective options for higher resolution digital orthophotos than the 2005 NAIP imagery.
Base GIS data made available by the Michigan CGI is very valuable to my organization's GIS. Our planning efforts would benefit from the availability of more data.
More cost effective options for data... regional data collection perhaps or state programs.

Standard web applications designed by state that could be hosted their or provided to meet needs of counties. Example: how about a zoning notification application? We would provide parcel data in return for that capability. How about more clear guidelines on contributing data to the state?
additional training
Better customized applications. Cost effective software.
We work often in small, rural communities, who often don't even know what GIS is. Therefore, improving the quality of the freely available data - and making more data available - are very high priorities for me.
Training should be made available for outlying areas; i.e. Northern Lower & the Upper Peninsula of Michigan
An Enterprise solution model would better serve the public both in money and in increase in quality of service.
all of the above...
Increased access to programming resources, possibly through college interns.
Help in creating a complete GIS program to better serve the county departments and citizens.
More data both raster and vector available as gis services so there won't need to be any downloading and prepping of data prior to use. The state offers imagery, only to State Agency's this way via their MIS. Why not open this to the public.
additional training; access to more cost effective options for data,
Knowledge of businesses (location/type/size) in Michigan would help DNRE AirQualDivision better regulate businesses through permits and enforcement actions. Some smaller businesses not in AQD air inventories affect air quality and environment (in broad sense). Having demographic (including disease surveillance data) along with business data would enhance AQD's ability to provide the public with knowledge of areas surrounding the places they live, work and play (e.g. Detroit urban blight, dumping, industrial sources, environmental justice).
Additional training, more time to work on GIS.
Better customized apps

Additional training

More accurate base map
Less expensive maintenance costs. Less expensive software upgrades.
Better hardware and investment in staff using current tools. Annual partnership to obtain leaf on imagery.
Access to the New PLSS corner coordinates!!!!!

Access to current MDF data is great don't mess with it!
We could really use a web based data entry portal at the state to make direct submission and

corrections to the framework. I spent 6 weeks using the census tool to update their information and would be willing to make the same commitment to the state data IF we could be assured that it wouldn't be ignored. A partnership similar to Bing for the acquisition of LIDAR would also be wonderful.
Finding where the right data is located is difficult. Even within state agencies there doesn't seem to be one collection and dissemination point. Having one central place where all GIS data is uploaded and available for download (for free) would be ideal. However, this will probably never happen without some sort of state mandate. First, communities have to convince their powers that be that GIS is worth the investment. If they are successful, that leads to the next problem - the powers that be see the value of the GIS and aren't going to let their data go for free.

ArcInfo license, updated parcel and address data, updated land use data

I didn’t fill out most of this survey as most of the questions seemed to deal with justifying a GIS. Not to be rude but such questions seem about 10 years out of date. At this point in time, the utility of GIS in Michigan is well established (in most sectors of the economy). What is not well established are funding mechanisms which vary widely by organization e.g. simply compare one county to another. This is in contrast to states like Wisconsin where there is a uniform funding mechanism. What is also not well established is the interaction between the various users of GIS technology and data throughout the State. This is most pronounced in the limited back-and-forth between the State and the counties and local units of government. All have very serious responsibilities and complementary areas of expertise. The big question is how can a productive and economical partnership be established that will benefit all GIS professionals within the State?

Improved access to data: (1) Having Parcel/Tax information available for ALL Michigan counties would be a huge benefit. Currently we are limited in Michigan with on-line parcel/records information. (2) We currently pull in Aerial images from the ESRI website. It would be great to have updated flights available through the Michigan.gov website. (3) The Map Library on the website is of great value. Adding a 'More to See' communication to GIS partners updating us on new Map Products that are available would be a plus.

Improved access to data; additional training;

Increased requirements for local assessors to use digital parcels, create annual maps from digital parcels and database records, and share all source information.

improved access to data, more up-to-date data

affordable training. RS&GIS is great, but with budget cuts, it's getting tough to attend.

Improved image resolution, tighter geodetic reference.

Access to more cost effective options for data, software, hardware; Better imagery storage and serving; better customized applications that are easy to use.

Improved data access, data accuracy and redundancy minimized.....

enterprise based system in cooperation with the city of bay city, which could provide better data with lower software costs. More integration of GIS with other departmental applications.

The lack of computing power (no 64-bit systems so there are no systems with more than 2GB of RAM even though they can go to 3GB and with the 64-bit go to 8GB). There are computers here that have been found online for $90; so even if the network is upgraded, they are not going to be able to stream any application to them. The programs that are run by MDOT exceed the computing requirements of most other departments and require more bandwidth in order to properly function; currently the bandwidth supplied does not meet the needs of the user at MDOT . Constraints that have been put on the user as of recently and they have restricted the efforts of our educational aspect to Safety.

additional training, access to data, planning

being able to report changes/corrections/additions on MGF segments via program or web that tracks them and has a QC mechanism.

Historical Data and Imagery

Applications that every government could utilize such as a public safety/dispatching/emergency management apps. This could be a great way to start implementing a standard for roadways, addresses, and other boundary information which could be utilized across jurisdictional boundaries. These could also be leveraged as incentives for partnership participation and give more weight to having data at the state up-to-date.

Additional training. If I had better training opportunities, I would use GIS much more frequently and for considerably more projects. Access to more cost effective options for data, software and hardware would also be helpful in this difficult budget time.
Funding from the State for GIS Staff or data development
Improved data serving via the internet
Without a doubt access to data, particularly the structure location on tax parcel ID data, more trained staff particularly in database management, getting staff trained.
GRANT FUNDING from anywhere, it is hard to find if you don't live on the Great Lakes coastline or have tribal ties within the county. Money for hands-on training or ESRI led training for programming.
Funding for the advancement of GIS such as ArcServer, SDE, ArcInfo, etc... Remonumentation needs to be required to supply local units (GIS) digital coordinates of the PLSS be contracted for remon. We need funding for GPS of section corners or any of the PLSS to advance our parcel accuracy. We need funding for web applications.
Very targeted, hands-on training is needed to change the working habits for people in for instance Equalization, Public Safety, or Register of deeds office. The GIS people don't know what the other professionals do, and the professionals don't have a good understanding of all the potential that GIS has in their specific work circumstances. I wish I could just watch over the shoulders of the people in these departments and get an understanding of what exactly they do, and I think I could come up with many shortcuts using our GIS website or other GIS solutions. But I don't have that kind of time.
Additional training for our staff so we can utilize GIS better and do more mapping and reports with it.
Access to more cost effective options for data, software made available at a more reasonable price including maintenance
The State of Michigan (all of us, not the Governmental Entity) needs to have a coordinated, supportive, cooperative effort put forth to develop GIS. This will most likely need to come in the form of a Coordinating Council that will be put together of a wide range of accepted decision makers and influencers that can drive GIS forward. The current structure at the State of Michigan CSSTP is not and does not support the development of GIS down to the local levels, and the efforts they have put forth do not support the business needs and/or concerns that local counties, cities, townships and villages have in regard to GIS development. They need to work WITH us instead of forcing programs down. Also, they need to support ALL GIS organizations in the state, not just the one that always supports their position without any challenges to their proposals.
Having access to more cost effective software would be helpful. The software would need to have better editing capabilities and a way to more easily share the data among the different departments.
GeoCortex or similar program to improve access to the data we already have. More current air photos flown on a regular basis.
Better and more up to date data. More funding. greater access to training and networking opportunities. better and cheaper viewing and web viewing sources.
inter-operability of data, being able to bring in data from various sources.

low cost training
I like the idea of improved access to data(updatable, standardized data), additional training.

Since this a 3 person department, primarily the Equalization Department, more time to work on the existing layer data would be nice. No new personnel are ever going to be hired within this department and I suppose once the budget contracts enough this department will experience reduced staffing.
Putting an end to the current GIS program in this county.
Improved access to quality data, particularly imagery and elevation data
Create a dedicated revenue mechanism to support data maintenance and distribution practices. Data which is reliable, accurate, and timely will be of greatest value. Local level support for data management practices must be a central component to maximize ROI. Provide a Convincing ROI Case to Prevent Local Unit Data Hoarding Under Enhanced Access: Enhanced Access is restraining the use of data at a cost which is far greater than the revenue being realized by local governments selling their data. If the green economy is where Michigan is focusing its investment and our State is handing out tax abatements than local government needs to realize the full potential of their data to further economic

development initiatives. This goes back to my earlier points regarding the use of assessing level data to help promote properties which can be affordably purchased and secured for business development potential. Enhanced Access will be an obstacle for many communities' participation until there is recognized value in openly sharing their datasets. The real value is in the use of the data NOT in keeping it under lock and key in the hopes that large commercial vendors will come along to purchase datasets for a one time sale.
We need a voice in the state legislature to promote geospatial knowledge, which could lead to legislation to create a stable funding source for geospatial technologies at all levels of government. We also need the CSSTP to acknowledge that local data has value and that local government GIS programs can benefit the state only when the partnership works both ways. The CSSTP cannot expect to 'take' locally developed GIS data and not 'give' anything in return.
Need more Counties/Townships to implement GIS.
Data warehousing, Public interfacing for data requests, BME promotion with comprehensive support for GIS applications (The state could charge reasonable fees for this coordinated service!!)
Greater access to high-resolution elevation data. Willingness of folks to partner. Training in Coordinate Systems and Datums.
I think the greatest benefit would be to build into every GIS service and application a set metrics that will help define the ROI. The metric development should be a requirement for every application using GIS data and services. In this way, the case could be better made as to how to prioritize projects and where investments need to be made.
Staffing levels are currently limiting our ability to maximize the return and potential of the GIS. Other factors like training would help but are relatively minor compared to our lack of staffing resources.
Have everyone post their GIS data on the Web using OGC formats....and use more opensource software.
Improved access to data on the servers in other departments (and former departments: DEQ & DNR).

Additional training (ArcGIS 10 is coming soon). Access to more cost-effective options for data, such as easier network connections so that DNRE does not have to store its own versions of MGF. Better customized applications, such as GIS-network services additions to the DNRE Fisheries Division's Fish Collection System (the main database for Fisheries Division).

MICHIGAN GEOGRAPHIC FRAMEWORK QUESTIONS

NON-GIS ENABLED ORGANIZATIONS

WHAT HAS PREVENTED YOUR ORGANIZATION FROM IMPLEMENTING A GIS?

We are working w/LIAA to create a base layer. We are hoping to have it completed by the end of August.
Funding
THE COST OF IT.
Cost and operational utility.
not sure
We are private consulting firm to Michigan municipalities, and provide services assessing municipal IT systems and processes, including GIS.
Not required
Size of firm, limited use.
Staff, funding and knowledge

Start up costs, Lack of trained GIS operator
Participate in countywide GIS program.
Money and training.
We coordinate with state and the development of their system
WORK WITH ROADSOFT, USE SOME OF THE COUNTY GIS SYSTEM
money
funding
We contract for services
We're located in a county that has a GIS system which we're able to utilize freely
Cost
We do not have our own system in place, we piggy-back on the local county.
Lack of information
Don't know. Probably need (we are a rural twp) and finances
Needs are limited at this time. Minor user.
Staff education
budget!