

Spatial Data Availability and Distribution Issues in Missouri

Local Government Committee of the Missouri GIS Advisory Council

2014 Local Government Survey Final Report

July 2016

SUMMARY

The Missouri GIS Council Local Government Committee, as part of its task to organize and lead a discussion of data sharing and distribution issues and understanding the geography of GIS in Missouri, surveyed local governments that use GIS and digital mapping technologies about their data practices. This report describes and summarizes the purpose, methods, and results of the survey.

PURPOSE

The goals of the 2014 survey were to:

- Updating data for understanding the status of GIS use at the County, Municipal Government, and Regional Planning Commission level in Missouri.
- Provide quantitative data about data acquisition and distribution practices.
- Collect data on entities using GIS in the State of Missouri.

FINDINGS

The findings of the current survey are:

- Received 117 responses to the survey:
 - 45 Counties
 - 68 Cities
 - 4 Regional Planning Commissions
- Only 8.5% of respondents know that they participated in the 2012 survey, suggesting that the 2012 and 2014 surveys reach between 140 and 198 unique entities in Missouri.
- 85.5% of respondents have GIS in their organization.
- The most common reason respondents gave for not having or implementing GIS in the organization was financial constraints.
- 80 responses indicate that their organization pays to have its imagery flown and 85% do so cooperatively with other entities.
- Most organizations responding to the survey fly new imagery every 1-2 years or 3-5 years.
- A majority of respondents strongly called for low cost training and more partnerships on GIS projects.

HISTORY

The earliest Status of GIS in Missouri map was completed by MGISAC in 2006. One of the primary goals of the 2012 survey focused on county government was to update this map. Other goals of the 2012 survey were to:

- Update the Status of GIS in Missouri Counties map.
- Provide baseline data for understanding the status of GIS use at the County level in Missouri.
- Provide quantitative data about data distribution practices.
- Collect contact information for those willing to share with SEMA mapping personnel.
- Collect contact information for those willing to be included in a “Who’s Who” of GIS professionals in the state, a related project of Missouri Geospatial Extension.
- Updating data for understanding the status of GIS use at the County level in Missouri.
- Provide quantitative data about data acquisition and distribution practices.

To meet the 2012 survey goals, the work group decided to call each county in Missouri and try to find someone that could speak about the status of GIS in the state. The importance of this approach, rather than a pure email survey, was the uncertain knowledge of who all of the GIS personnel are in the state or their contact information. Calling, asking around, and being transferred multiple times was expected, and was designed to put us in contact with the people that we wanted to survey.

Initial questions and format were reviewed by the Missouri GIS Advisory Council in April 2012. Follow up emails to more than 16 counties based on initial interest in an email version of the survey. An initial report was provided to the Council in June 2012. Follow up calls and an email version of the survey were sent to individuals who requested it and others not yet contacted but with known email addresses in October and November 2012. Draft final report results were reported to MGISAC in June 2013.

These methods met the goal of establishing a 2012 foundation of base knowledge at the county level. Future versions of the survey could include cities, municipalities, and other regional government structures, or the presence of state or federal GIS operations within the county.

The complete 2012 survey results are available at

<http://www.mgisac.org/wp-content/uploads/2014/06/SpatialDataAvailabilityandDistributionIssuesinMissouri-2012-FinalReport.pdf>.

The 2014 survey changed in two significant ways. First, the method of data collection changed to a web-based survey. Second, the target audience also broadened to include county, municipal, and regional commissions. To reach this wider audience, emails communicating the purpose of the survey and a link to the response page were sent via multiple email lists of GIS users, workshop attendees, and local government agencies and officials.

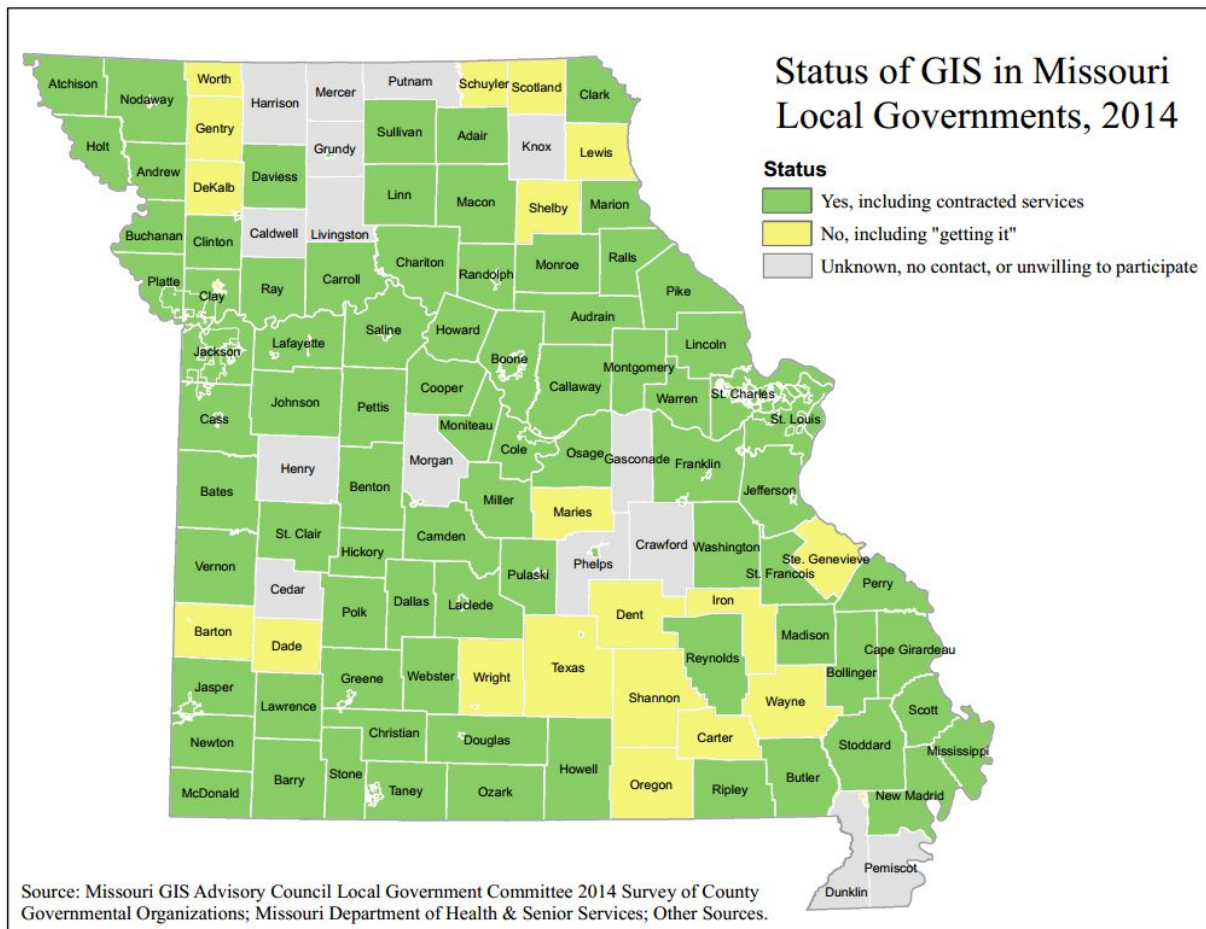
Survey Year	Responses	Entity Type
2012	91	County Governments
2014	117	County Governments Municipal Governments Regional Planning Commissions

Future versions of the survey could include regional government structures or the presence of state or federal GIS operations within the county.

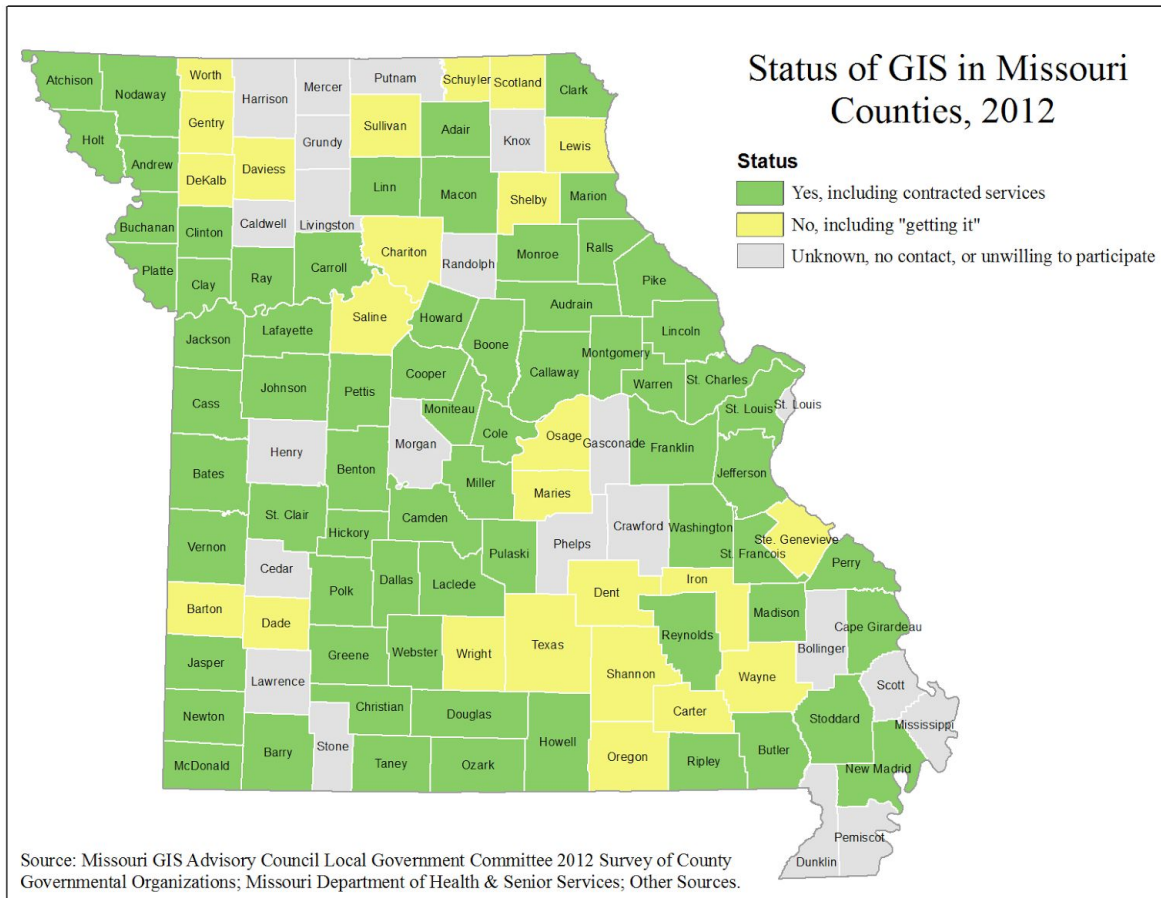
STATUS OF GIS IN MISSOURI

As a result of the survey responses and other information from individuals with knowledge about local-level GIS implementations, MGISAC is able to present a Status of GIS in Missouri Local Government, 2014 map.

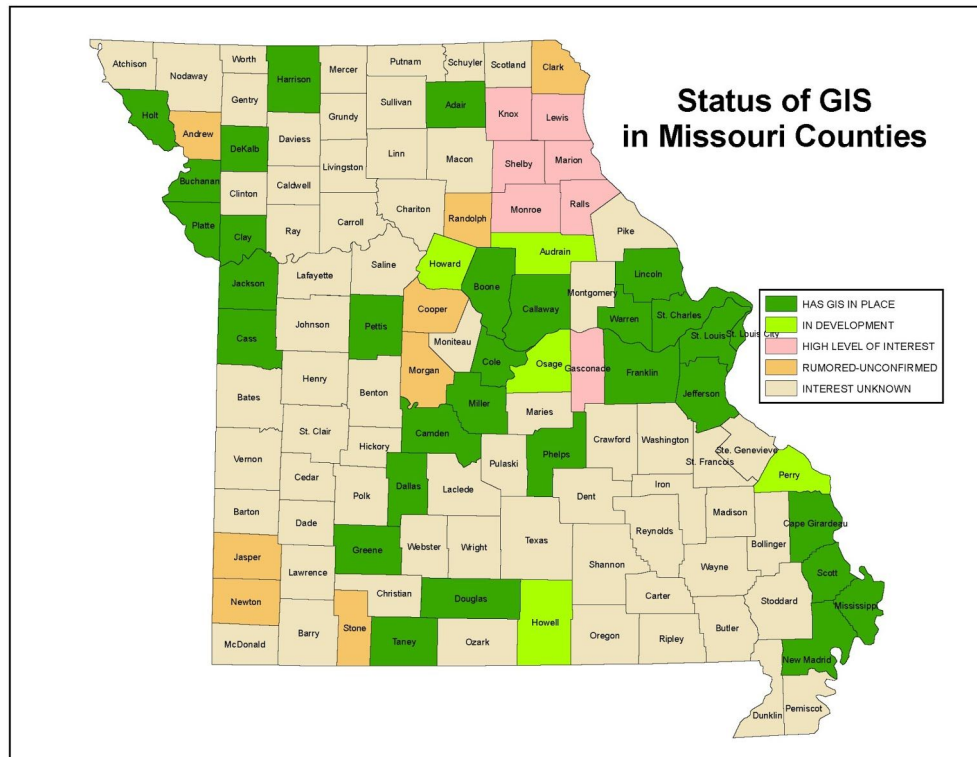
Status of GIS in Missouri, 2014



Status of GIS in Missouri Counties, 2012



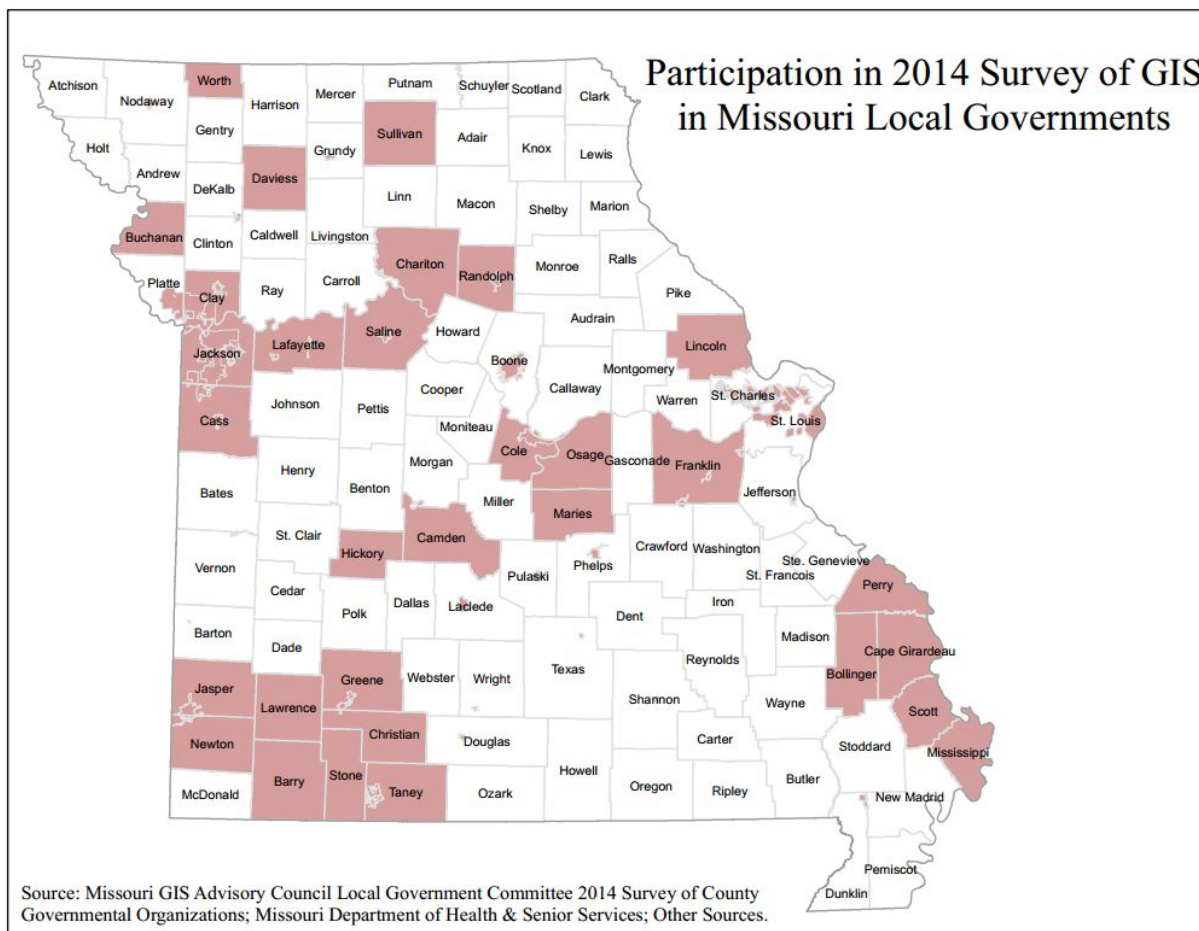
Status of GIS in Missouri Counties, c. 2006



Source: Missouri GIS Advisory Committee, circa 2006.

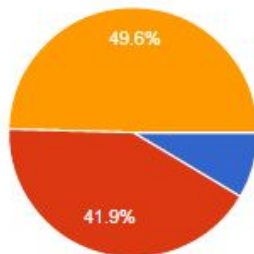
SURVEY CONTACTS

Participation in Survey of GIS in Missouri Counties, 2014



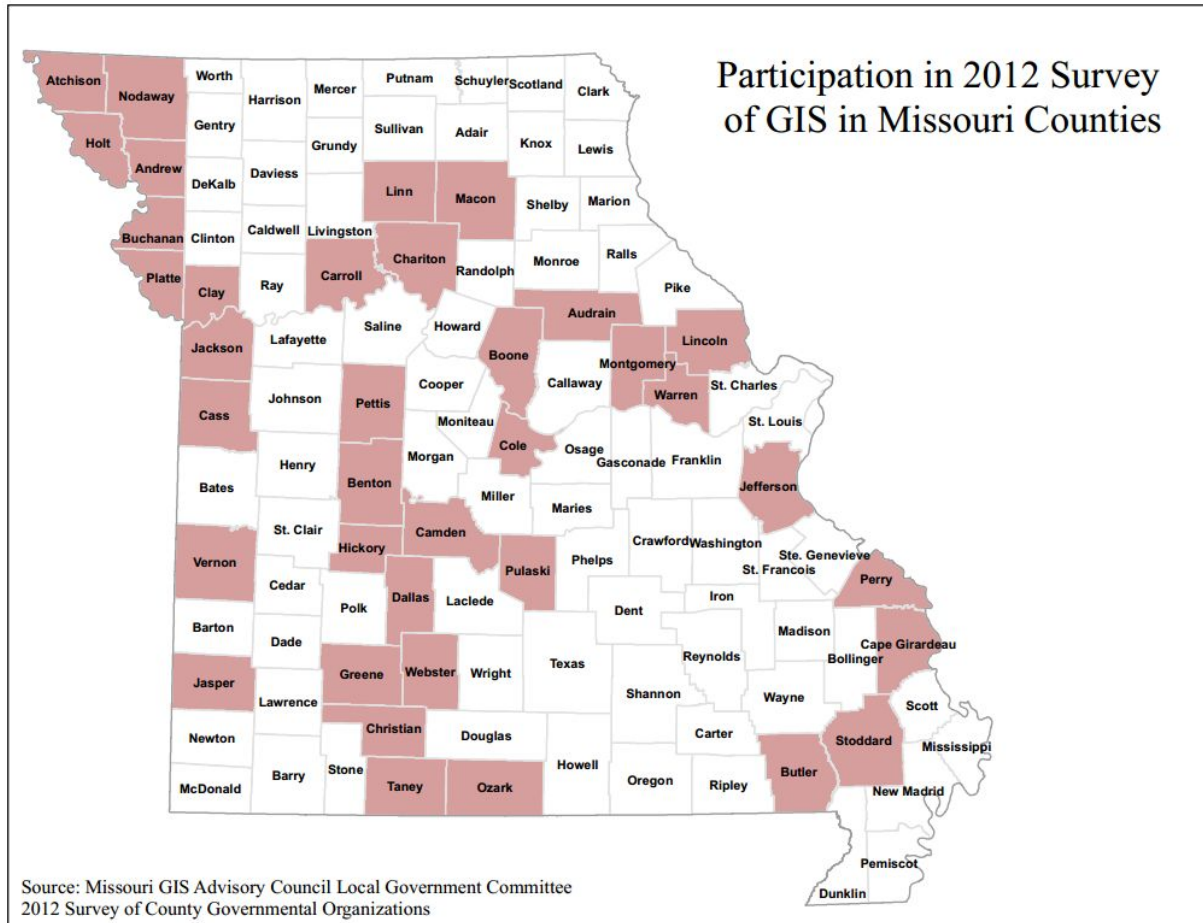
The 2014 Survey reached 117 total contacts. More than 40 percent of these are new contacts, not having participated in the previous survey. One reason for this is that the 2012 survey targeted county government, where the 2014 survey sought local government including counties, municipalities, and regional planning organizations.

Did you participate in our MGISAC Local Government Phone Survey in 2012?



Yes	10	8.5%
No	49	41.9%
Not sure/can't remember	58	49.6%

Participation in Survey of GIS in Missouri Counties, 2012

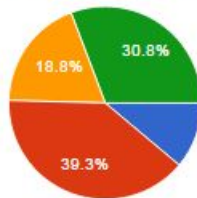


Survey Year	Responses	Entity Type
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RESULTS

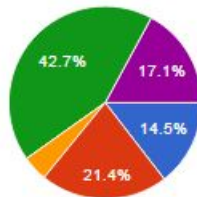
Survey Population

What role do you play in your organization?



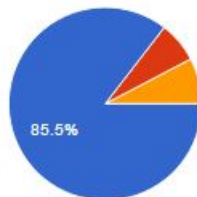
Elected Official	13	11.1%
GIS/IT Manager/Director	46	39.3%
GIS Analyst/Map Tech	22	18.8%
Other	36	30.8%

What department(s) within your jurisdiction are you representing?



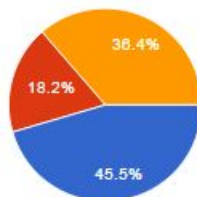
Assessor	17	14.5%
Public Works/Community Development	25	21.4%
Emergency Management	5	4.3%
Multiple Departments	50	42.7%
Other	20	17.1%

Do you currently have a GIS in place?



Yes (skip the next question)	100	85.5%
Currently in progress of implementing a GIS	8	6.8%
No	9	7.7%

For those without a GIS implementation, what are the reasons you have not implemented a GIS in your organization?



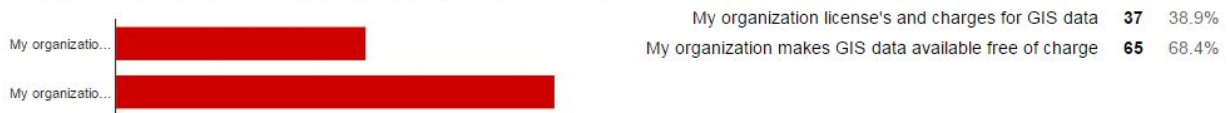
Financial - funding is not available	5	45.5%
I don't know how GIS would benefit my organization	2	18.2%
Other	4	36.4%

Map Layers and Availability

How are Map Layers Being Used?	2012 Response Percent	2014 Response Rate Percent
Do you have map layers that support public safety, such as addresses or road centerlines?	89.7%	72.2%
Do you have map layers that support development or permitting, such as municipal boundaries, zoning and school districts?	74.4%	81%
Do you have map layers that support asset management, such as signs, poles, culverts, pipes and bridges?	35.9%	74.3%
Do you have map layers that support tax parcel mapping?	89.7%	50.5%
Do you fly your own aerial imagery, such as oblique or ortho?	39.5%	73.4%

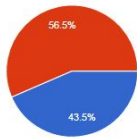
How are GIS and Map Data Available?	2012 Response Percent	2014 Response Rate Percent
Hard paper copy	69.2%	84.5%
Viewable on static maps on a website (PDF or image file)	35.9%	71.8%
Viewable in an interactive online map	48.7%	64.1%
Data is downloadable	12.8%	NA
Digital data is not available online but is distributed upon request	56.4%	NA
Digital data is available and distributed by request	NA	69.9%

Do you charge for distribution of your GIS data to recoup some costs or provide it free of charge?



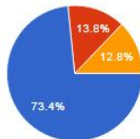
Imagery and Cooperative Purchasing

Do you participate, use, or plan to use cooperative purchasing or licensing for GIS-related equipment? For example, using state contracts for GIS software or GPS hardware?



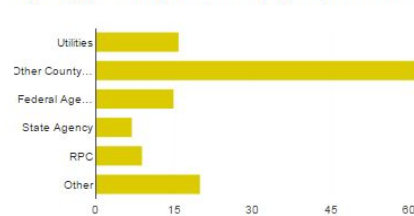
Yes **47** 43.5%
No **61** 56.5%

What are your imagery sources?



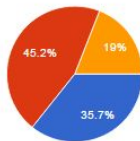
My organization pays to have its imagery flown **80** 73.4%
My organization utilizes free leaf-on imagery from sources such as MSDIS (Missouri Spatial Data Information Service) **15** 13.8%
My organization uses Google Earth or similar product **14** 12.8%

If you fly/purchase your own imagery, do you do so on your own or through a group effort with other entities? (Please select all that apply)



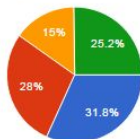
Utilities **16** 19.5%
Other County or Local Governments **62** 75.6%
Federal Agency **15** 18.3%
State Agency **7** 8.5%
RPC **9** 11%
Other **20** 24.4%

Do you charge for distribution of your imagery to recoup some costs or provide it free of charge?



My organization license's and charges for imagery **30** 35.7%
My organization makes imagery available free of charge **38** 45.2%
My imagery was acquired partially or completely through a grant and is in the public domain **16** 19%

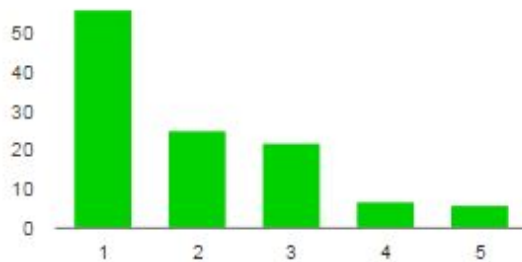
What is your flight schedule?



Every 1 - 2 years **34** 31.8%
Every 3 - 5 years **30** 28%
6 - 10 years **16** 15%
Not applicable/have not purchased imagery **27** 25.2%

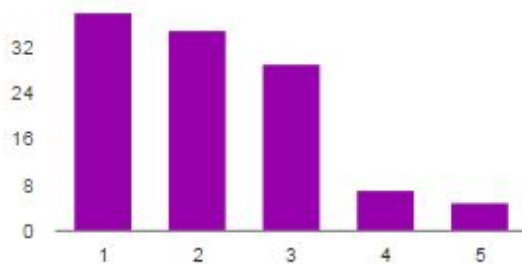
GIS Needs in Missouri

There is a need for low cost training



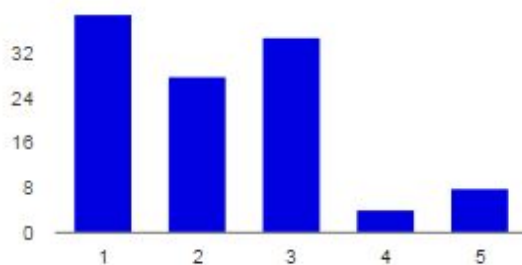
Strongly agree:	1	56	48.3%
	2	25	21.6%
	3	22	19%
	4	7	6%
Strongly disagree:	5	6	5.2%

There is a need for more discipline specific training



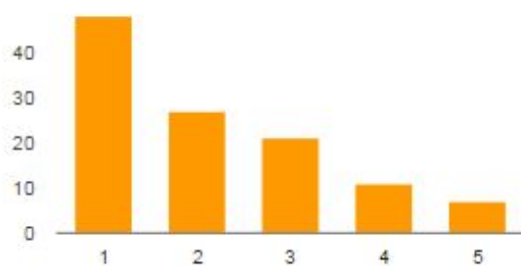
Strongly agree:	1	38	33.3%
	2	35	30.7%
	3	29	25.4%
	4	7	6.1%
Strongly disagree:	5	5	4.4%

There is a need for qualified GIS professionals



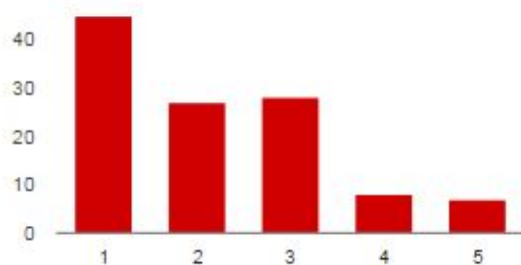
Strongly agree:	1	39	34.2%
	2	28	24.6%
	3	35	30.7%
	4	4	3.5%
Strongly disagree:	5	8	7%

More funding is needed to update and maintain my GIS system



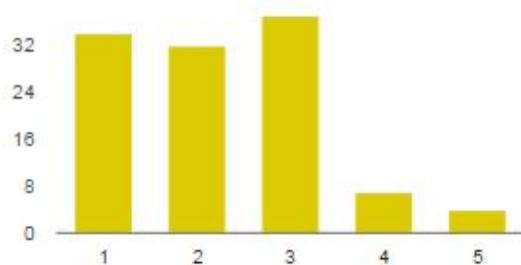
Strongly agree: 1	48	42.1%
2	27	23.7%
3	21	18.4%
4	11	9.6%
Strongly disagree: 5	7	6.1%

More funding is needed for up-to-date imagery products on a regular basis



Strongly agree: 1	45	39.1%
2	27	23.5%
3	28	24.3%
4	8	7%
Strongly disagree: 5	7	6.1%

There is a need for the development of data standards



Strongly agree: 1	34	29.8%
2	32	28.1%
3	37	32.5%
4	7	6.1%
Strongly disagree: 5	4	3.5%

There is a need for more partnerships between entities on GIS projects

