

# **Free and Open Public Geospatial Data 2016 Outreach Survey Results and Report**



**Minnesota Geospatial Advisory Council  
Outreach Committee**

**FINAL DRAFT – DECEMBER 20, 2016**

# Minnesota Geospatial Advisory Council Outreach Committee

## 2016 Free and Open Public Geospatial Data Survey

### Results and Report

#### Introduction

The **Minnesota Geospatial Advisory Council (GAC)** is authorized to work as a coordinating body for the Minnesota geospatial community, representing a cross-section of organizations that include counties, cities, universities, business, nonprofit organizations, federal and state agencies, tribal government, and other stakeholder groups that benefit from geospatial technology.

In spring of 2016, the GAC authorized the creation of an **Outreach Committee** with the purpose of promoting the value and importance of the geospatial infrastructure by actively engaging public policy makers and stakeholders. With the specific tasks of finding and documenting compelling geospatial stories useful to all levels of government, the private sector, professional associations, related professions, and citizens of the state and to tell those stories in venues where they can inform and influence policy makers and others seeking to improve government operations, economic development, and quality of life in Minnesota.

#### Members of the GAC Outreach Committee (2016-2017):

Len Kne, Committee Co-Chair, University of Minnesota  
Kari Geurts, Committee Co-Chair, Department of Natural Resources  
Victoria Reinhardt, Commissioner, Ramsey County  
Will Craig, University of Minnesota (Retired)  
Brad Anderson, City of Moorhead  
Michelle Trager, Rice County  
Andy King-Scribbins, Hennepin County  
Gerry Sjerven, Allete, Inc.  
Allison Slaats, Minnesota Department of Agriculture  
Geoff Maas, MetroGIS/Metropolitan Council

#### The Survey

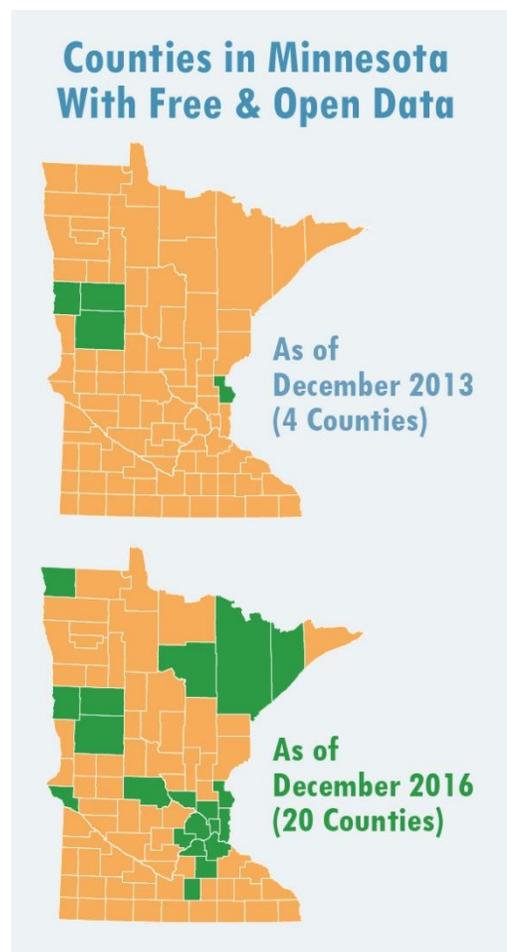
One of the first tasks the Outreach Committee decided to undertake in early 2016, was to develop, deploy, collect results and report on the status of free and open public geospatial data in Minnesota. It was felt that information gained from this effort would help to shape the full outreach plan and future work effort of the Committee.

## Context and Background

County governments and GIS departments have a central role in geospatial data production in Minnesota. Counties are the authoritative source for tax parcel data and road data and play a crucial role in aggregating the data created by their constituent cities and townships such as address points, street centerlines and infrastructure data as well as the on-going collection of aerial imagery. Changes to Minnesota’s Data Practices Act during the 1990 Legislative Session provided an avenue for cities and counties to engage in cost recovery measures in the deployment of GIS technology through the sale of the data they produced. County policies and practices regarding the availability of the data they produce and collect has developed in line with the maturation of the technology, the expanding business needs of the county and the response to the increasing demand for their data by interests outside county government.

Clay County—on Minnesota’s western border with North Dakota—began making its geospatial data freely available in 1999. Between the years of 2000 and 2009, three other counties, Becker, Otter Tail and Chisago, also made their data freely available. From 2010 through 2013, the Seven Metropolitan Counties began to deeply examine the benefits and challenges of potentially opening their data up to the public. In 2013, the Seven Metropolitan Counties working with partners in the MetroGIS collaborative developed a body of research and advanced it to their leadership, garnering support for moving toward free and open data. By October 2015, all Seven Metro Counties had adopted free and open data resolutions, with counties in Minnesota’s Arrowhead region and elsewhere following suit.

As of December 2016, twenty of Minnesota’s eighty-seven in the state are actively making their public geospatial data freely and openly available, without charging a fee or requiring a license agreement. Of these twenty, 10 counties have adopted resolutions at the County Board level in support of the initiative. This trend—a reversal of over two decades of the practice of sale and licensure—is resulting in cost savings and staff efficiencies for counties and significant benefits to the businesses, real estate and utility interests, academic community and non-profits who need this data to conduct their work. Resources such as the Minnesota Geospatial Commons providing a site where counties can share their data, or provide a link to their county portals and the research published by the MetroGIS partners serve to aid and assist counties in their consideration of the potential of open data.



## **Purpose of the Survey**

Given the current uneven landscape of data policies and data availability of geospatial data in Minnesota—with some counties freely sharing data and others still requiring fees and license agreements—the Outreach Committee took on the task of developing a survey to reach out to all counties to fully understand and document the full range of **issues and concerns** of the data producer community and to begin to document the **success stories** of GIS in both the user and producer communities relevant to the wider availability of data.

## **Development of the Survey**

The survey was developed during July-August of 2016 by the members of the Outreach Committee over several in-person and on-line meetings. The questions were devised to reach both open and non-open counties and provided both structured questions (multiple choice) with the opportunity to provide written comments. The range of questions included topics to understand the county's staff commitment to GIS, types of requests fielded, how long their county has maintained geospatial data, current policy on free and open data distribution and revenue generated from the sale of their data.

## **Survey Recipients and Respondents**

An electronic survey was distributed in late August 2016 to all primary GIS staff contacts (to the extent known) in all counties as well as to county survey department staff. The Outreach Committee partnered with the Association of Minnesota Counties to notify County Administrators and County Board Chairs that we were engaging with their staff. Survey responses were collected until Friday, September 30<sup>th</sup>. Fifty-nine (59) of the state's eighty-seven (87) counties responded to the survey, yielding a response rate of approximately 68%, however, a few counties had both their GIS and survey staff responding.

## **Presentation of the Survey Results**

The results of the open data survey were presented to the GAC at its quarterly meeting and by Outreach Committee members at the following venues during the year.

- **Minnesota GIS/LIS Consortium Conference**  
Duluth, Thursday, Oct 27, 2016
- **Association of Minnesota Counties Annual Conference (Information Booth)**  
Minneapolis, Monday, December 5, 2016
- **Minnesota Geospatial Advisory Committee Quarterly Meeting**  
St. Paul, Wednesday, December 7, 2016
- **Government IT Symposium**  
St. Paul, Thursday, December 8, 2016

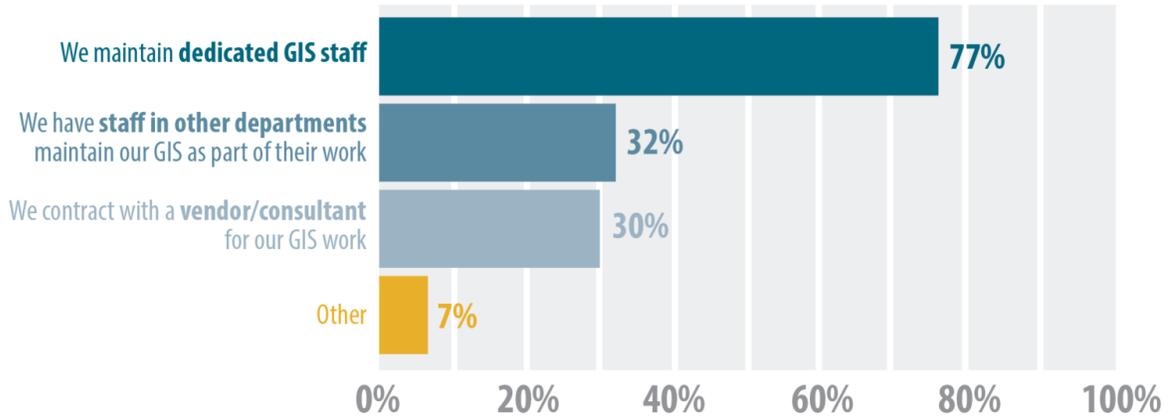
The Outreach Committee welcomes additional opportunities to present its findings.

# Free and Open Data Survey Responses

## Question 1:

**Does your county maintain a staff commitment to geospatial work? (n=59)**

*(Respondents were encouraged to check all that apply)*



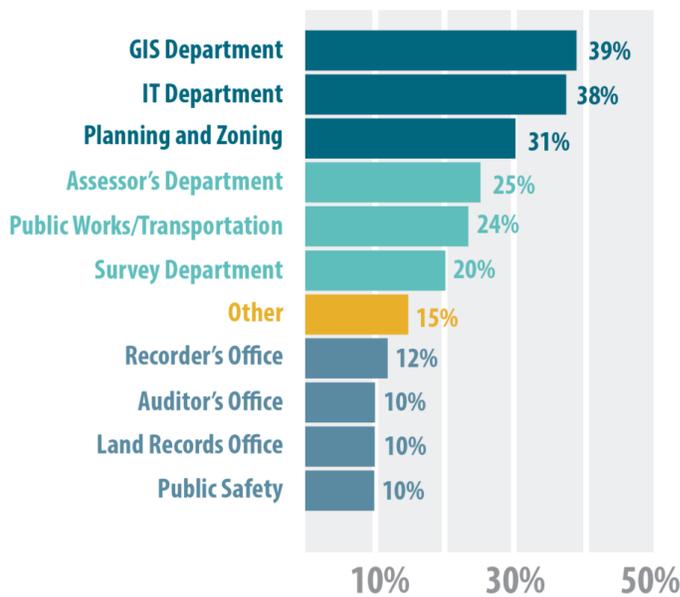
### Other:

- We have one (1) GIS specialist;
- Business areas maintain data plus central/enterprise staff;
- GIS falls under County Administrator duties;
- Some GIS is done by the County, some is outsourced;

## Question 2:

**Which department in your county is a steward of your geospatial data? (n=59)**

*(Check all that apply)*

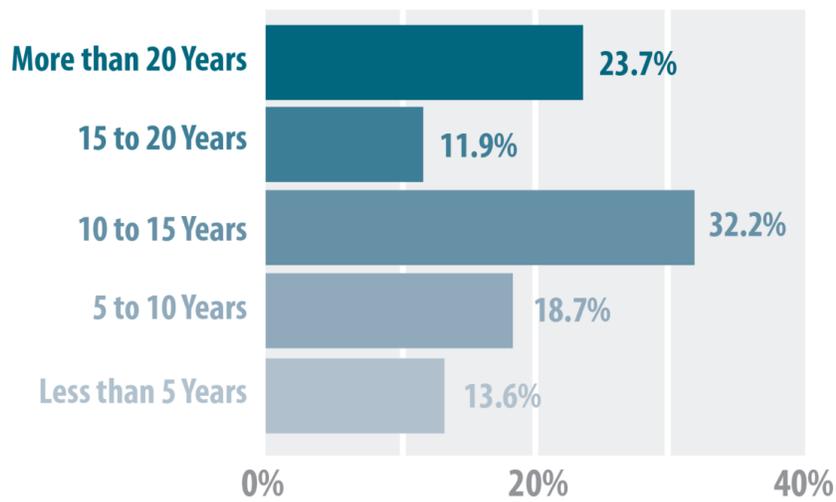


### Other:

- Environmental Services (x3)
- County Administrator's Office (x2)
- Community Works
- Human Services
- Health
- Drainage Administration
- Natural Resource Management

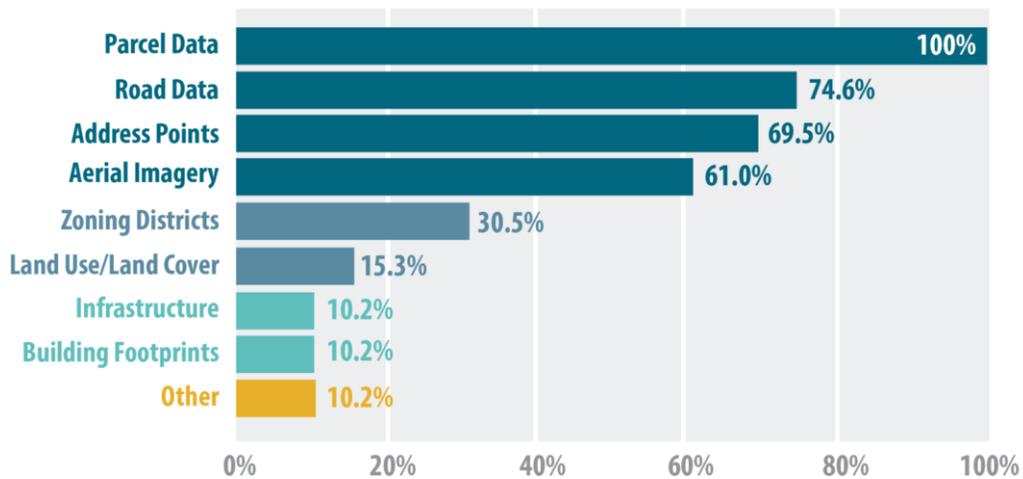
**Question 3:**

*How long has your county created and maintained geospatial data? (n=59)*



**Question 4:**

*What types of GIS data are commonly requested? (n=59)*

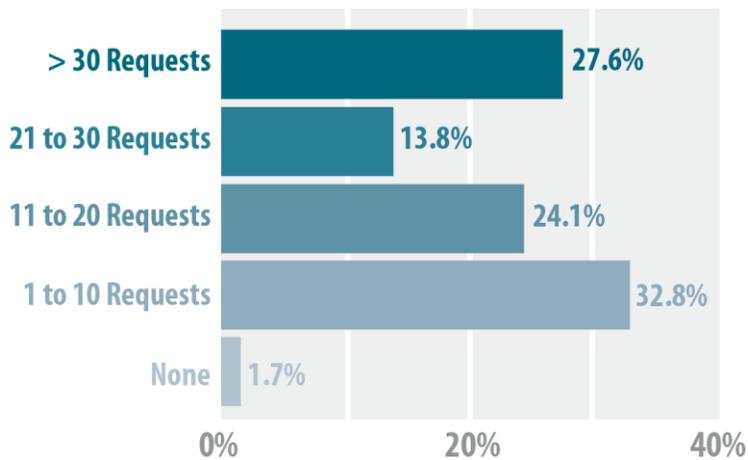


**Other:**

- *County Drainage*
- *County Ditch Systems*
- *Public Drainage Watersheds and Tile Centerlines*
- *PLSS corners*
- *Land surveying data*

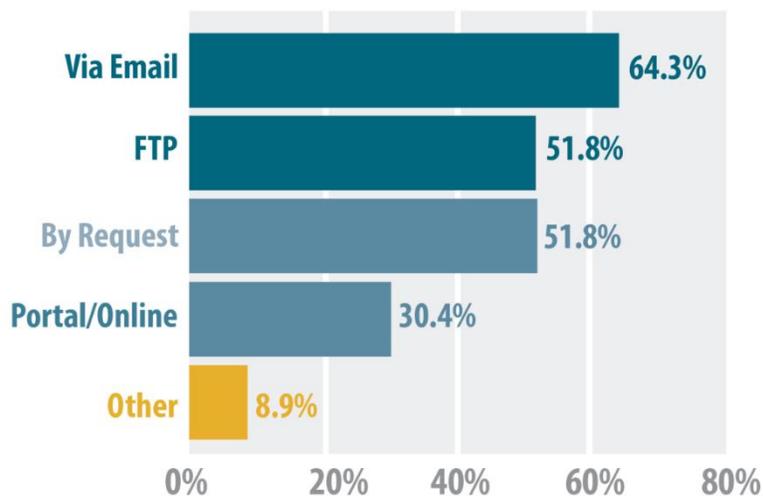
**Question 5:**

*Please estimate the number of non-government requests you receive each year for your geospatial data. (n=58)*



**Question 6:**

*How do you distribute your GIS data? (n=56)*

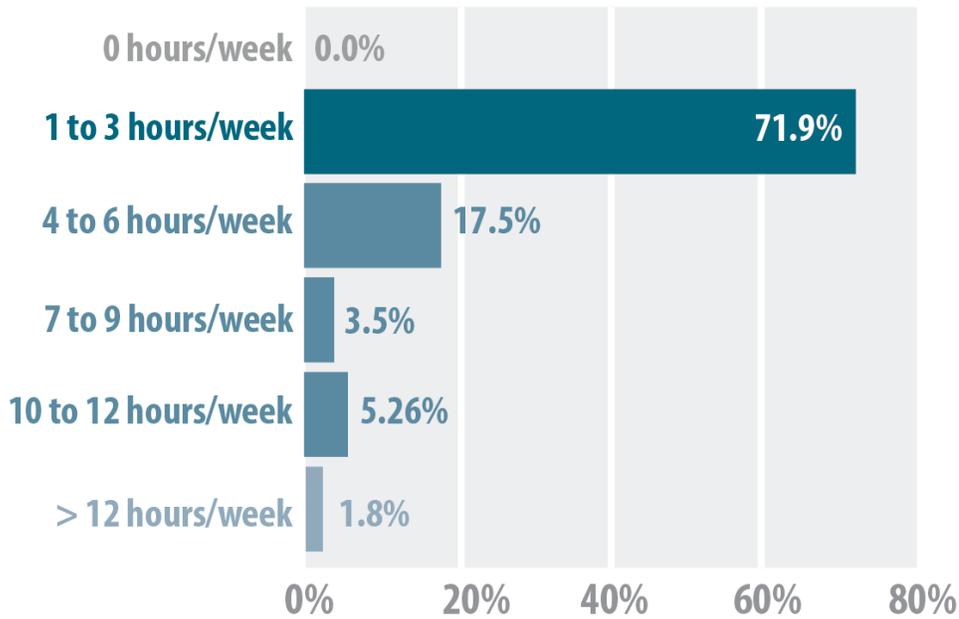


**Other:**

- *Minnesota Geospatial Commons (x2)*
- *Moving to an Open Data Portal (ArcGIS Online Site)*
- *Via Dropbox*
- *Web site downloads*

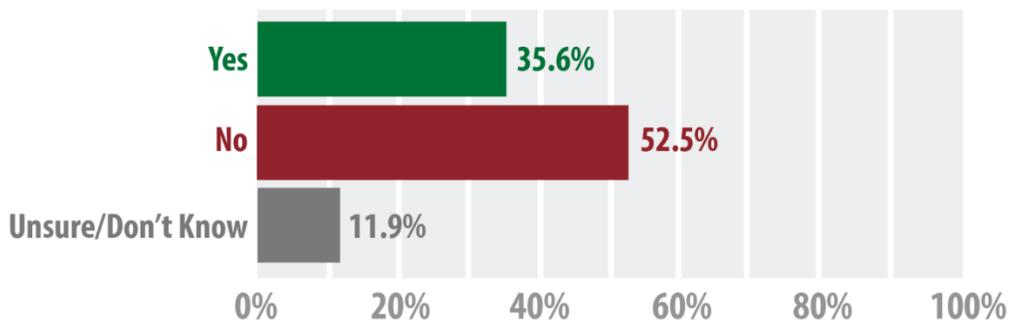
**Question 7:**

*Please estimate the number of hours that county staff (or vendors working for the county) spend each week preparing data for external requests. (n=57)*



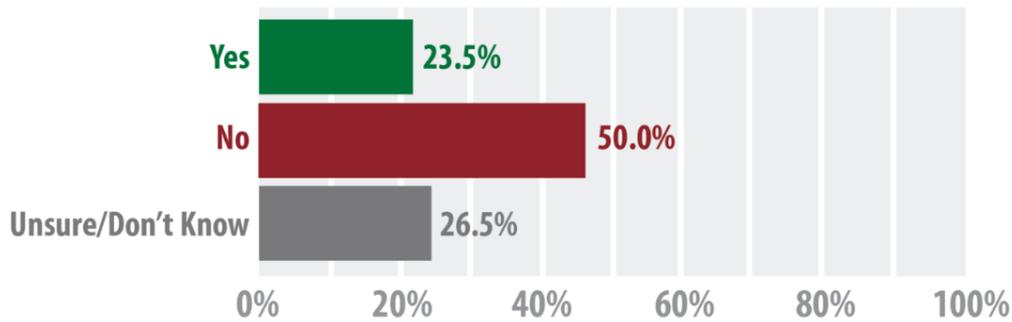
**Question 8:**

*Does your county provide its data freely and openly? (n=59)*



**Question 9:**

*Is your county considering making its geospatial data freely available in the near future?*  
(n=34)



**Written Responses Received to Question 9:**

**Responses categorized as 'Yes'**

- Yes, we are preparing local authoritative datasets (metadata creation, etc.) for open access via Open Data Portal from ArcGIS Online Site;
- We will be making our data available through ArcGIS Online;
- Since the 2013 legislation regarding sharing data among government entities, our county has been making its geospatial data freely and openly available to any requests from government. Since that time we have also been providing data at no cost to contractors and/or consultants working on behalf of a government entity to be used for the specific project or purpose for which the contractor or consultant was hired. We have made our county board aware of the growing trend toward free and open geospatial data. Recent board actions, such as eliminating subscription fees for enhanced functionality within the county's web mapping services, indicate that our board is generally becoming more comfortable moving in the direction of free and open geospatial data. Currently, there are staff at our county who are proponents of the free and open geospatial data movement and will continue to advocate for it;
- As the GIS Coordinator, I would like to implement free and open GIS data as a future project;
- Carlton County hopes to take it to management for discussion by the end of the year. If management supports the idea, it will be presented to the county board;

### Responses categorized as 'No'

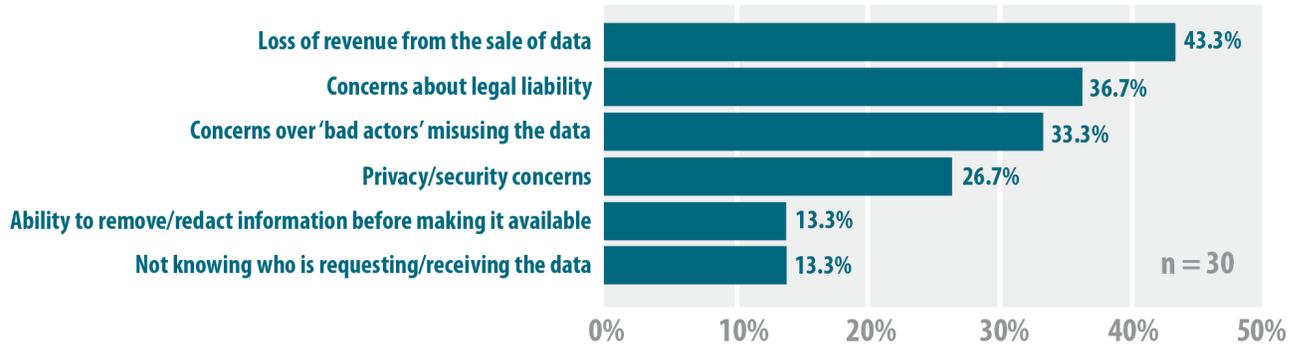
- I feel charging helps limit to serious requests;
- We do offer everything except parcels, PLSS Corner point inventory, Subdivisions, Lots and Blocks for free;
- Board of Commissioners wouldn't go for it, so I've been told;
- Most of our data is free; with the exception of parcels, address points, and PLSS corners. Address points and parcel data is shared with MN Geo for state agency use only;
- Our data is free and openly available to other government agencies who also freely share their data and to political subdivisions of our county and their contractors. Users whose end purpose is commercial in nature are charged \$75.
- We do offer some data as free and some details are for a fee;
- This is not even on the radar.
- We are a rural county, and a few sales of our GIS data goes a long way in supporting our GIS program.
- Due to the large capital investment by Jackson County we feel the need to charge for our datasets even though it is a minimal charge of 100 bucks;

### Responses categorized as 'Unsure/Don't Know'

- I can't say yes or no because the subject hasn't been brought up;
- It has not been decided what data will have a charge for and what will be free.
- The County Web mapping is free. Specialized data, and data requests that are strictly private resellers are not free. Our parcel sales have decreased significantly. We still spend significant amount of time preparing data to partners for free (neighboring counties, watershed districts, state) it would be more cost effective just to have all the users download it from one spot.
- A determination has not been made at this time; administration wants to determine the funding resources to support the development and maintenance of geospatial data.
- Depends on the use;

**Question 10:**

***What concerns does your county have about making its geospatial data freely and openly available? (n=35)***

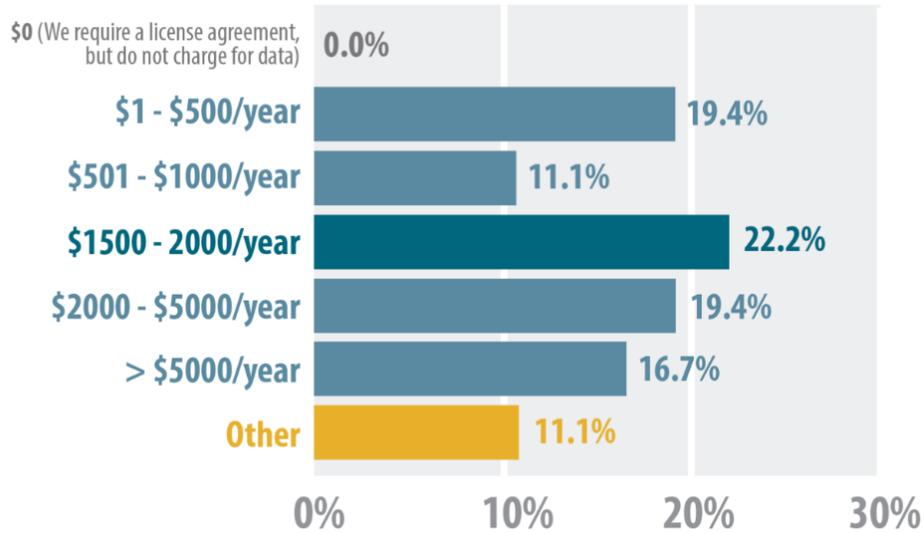


**Written Responses Received to Question 10:**

- All of the above (x2);
- Probably all of these concerns; but it really hasn't even been discussed;
- All though the revenue from the sales of geospatial data is low, there is a concern related to the overall funding support for the development and maintenance of geospatial data and services;
- We are a rural county, and a few sales of our GIS data goes a long way in supporting our GIS program;

**Question 11:**

*Please estimate the amount of revenue generated from the sale of data each year. (n=36)  
(This question was only answered by counties not having free and open data)*



**Other:**

- Nothing has been sold yet; nothing is currently available for sale;
- Unknown;
- This varies greatly depending on if someone wants data for a specific project area or the entire county. Countywide parcel data runs approximately \$4000;
- Since June 2010, with consideration of staff time, we are only about \$3000 in the black. If it wasn't for the sale of our entire parcel data set last year, we'd be in the red. With that in consideration, the average is \$500 revenue a year;

### Question 12:

***What kinds of issues or obstacles did your county work through to make its GIS data freely and openly available? (n=20)***

*(Note: This question was only answered by counties with free and open data)*



### Written Responses Received to Question 12:

- Multiple answers from above; Loss of revenue, liability, misuse, proper Minnesota Data Practices Act classification, etc.; our main concern was liability
- No concerns other than tracking how many times our data would be accessed through the data commons. We were eager to move to free and open data model to cut back on "nuisance" requests;
- The review from County Attorney took a while;
- None. Our leaders understood the value of making data available free of charge to everyone who needs it;
- All of the above;
- Loss of revenue and privacy and security, so we gave out only certain data

### **Question 13:**

***Are you experiencing benefits from making your geospatial data freely and openly available? If so, please summarize or describe those benefits? (n=13)***

*(Note: This question was only answered by counties with free and open data)*

- Reduction of staff time processing requests; transparency of government; increased internal focus on data quality and data management practices;
- Requests for data are definitely down;
- Organizations like Zillow, Black Knight and CoreLogic have already been directed to get their data from the data commons. Our tax folks are wishing to publish CAMA (Computer Assisted Mass Appraisal) and tax information tables to the data commons for use with the parcel GIS layer to further cut down on requests coming to their offices;
- Instead of accepting 'custom' data requests, we forward requestors to our open data site;
- We just received the approval recently. I have not had a chance to set up our site on the Minnesota Geospatial Commons yet;
- Reduced administrative burden for managing licenses. Increased opportunities to leverage software and data hosting since we don't need to be concerned about protecting a license;
- It saves staff time on data requests. Our data is getting used by more people to make better decisions;
- Free up time for other projects;
- The 'free' sharing of land surveying data is especially important to us and the private land surveyors. Working with these surveyors (not requiring them to share) has improved the quality of our data;
- Our staff rarely are involved in the process of data delivery, as all our data is available online. This frees up staff time to work on maintaining data instead of delivering it;
- Yes, far fewer requests for data and no managing of license agreements;
- Less inquiries from public as they look at info themselves;

*(Note: **Question 14** simply asked survey respondents if they were willing to allow their success story to be shared during upcoming presentations)*



## **Major Themes from the Survey Results**

In reviewing the overall survey results, five main themes are evident.

### **# 1 ) A significant commitment has been made to GIS at the County government level in Minnesota;**

- Surveyed counties all indicated some level of dedicated staff to GIS
- 67% of the survey respondents indicated their county had been developing geospatial data for at least 10 or more years;

### **# 2 ) The broad reach and extensive use of GIS at the county level;**

- The survey revealed that 12 different county departments are acting as data stewards or creating data;

### **# 3 ) There are four main types of data that are the most requested (the 'big four')**

- Parcel Data
- Road Centerline Data
- Address Point Data
- Aerial Imagery Data

### **# 4 ) There are a wide range of practices in place, and uncertainty about those practices**

- Some have already opened their data;
- Some are working with a sale/licensure model;
- Some have a mix of 'free/open' and 'sale/licensure'; e.g. some datasets are free and open, while other are available only via sale/licensure)
- Some have staff support for open data, but no support from leadership or are unclear on how to move the issue up to leadership;
- Some do not have the issue as a priority at either the staff or leadership level;

### **# 5 ) Counties generally share the same concerns about free and open data, these are**

- Potential loss of revenue from the sale of geospatial data
- Legal liability
- 'Bad Actors' misusing the data
- Privacy and security concerns

## **Appendix A: Testimonials for Free and Open Data**

**David Fawcett, Spatial Database Administrator**  
Minnesota Pollution Control Agency



*“Data published under a non-open license takes a significant amount of resources to manage. We must store the data in a restricted folder and ensure that each data user understands and commits to the restrictions imposed by the license. Even though we can use the data under a non-open license, it is of lower value because of the license terms. We need to create a data product that we can distribute to the public, but can't base it on the non-open data because that would violate the terms of use. Instead, it will cost us a lot more to build it from scratch.”*

**Curt Carlson, GIS Coordinator**  
NorthstarMLS



*“NorthstarMLS provides Real Estate listing services to it's subscribers who provide great benefit to both buyers and sellers of real property throughout Minnesota and Wisconsin. Having free and open parcel GIS data allows NorthstarMLS to confirm and improve the geo-positional accuracy as well as the characteristics of the data of over 42,000 currently active Real Estate listings in 103 counties in Minnesota and Wisconsin. Without free and open data, listing accuracy is compromised and this results in inaccurate searches and delays for buyers and sellers alike. Having access to free and open GIS data allows us to better serve the public in as large an area as possible”*

**Linda Glaser, Senior Veterinarian**  
Minnesota Board of Animal Health



*“During the 2015 highly pathogenic avian influenza outbreak, timely access to locational data was essential for an effective and efficient response. Lessons learned from this animal disease response and ongoing preparation for future animal disease emergencies highlight the need for the best locational data available. In Minnesota, having up-to-date parcel GIS data accessible is extremely important to the Board of Animal Health for the ability to identify landowners with livestock and poultry. With this information, we can contact producers to provide information and enable a swift response to animal disease emergencies.*

**Rebecca Otto, Minnesota State Auditor**  
Minnesota Office of the State Auditor



*“The goal of these comprehensive maps is to improve public policy/long-term financial planning and asset-management planning for our civil infrastructure throughout Minnesota's 853 cities and other local governments. By improving transparency of our infrastructure needs, all residents, local elected officials, legislators and governors will have a more comprehensive understanding of the total need over the next few decades statewide. This understanding can accelerate better planning, stabilize rates for users, and avoid major service disruptions due to inaction.”*

**Michelle Trager, GIS Coordinator**  
Rice County



*We receive many data requests for GIS data, especially from other government entities and contractors. Parcels, road centerlines, address points and imagery are the most commonly requested layers. I requested that our county share our data so I could spend less time filling requests, and still help other entities meet their business needs. In August, we received permission to go ahead with Free and Open Data. I am working with MnGeo to add data to the Minnesota Geospatial Commons. I am looking forward to being able to spend time working on other tasks like updating and creating ArcGIS Online maps.*

**Brad Anderson, GIS Manager**  
City of Moorhead



*As a creator, maintainer, and provider of GIS data for the City of Moorhead, I find most requests prefer a County-wide set of data. We have nightly tasks that exchange GIS and tax ownership data back and forth with Clay County. City specific data requests typically include underground utilities, parcels, elevation, easements, zoning/land use, flood mitigation, and miscellaneous historical data. I plan to setup an Open Data Portal to reduce my time spent filling requests; the only caveat being that I like to know how the data is being used AND receiving feedback on any errors so that I can make our data better. Which would benefit everyone.*

**Andra Bontrager, GIS Specialist**  
Minnesota Center for Environmental Advocacy



*We use geospatial science to address and resolve social justice and natural resource conservation issues. The usefulness and efficiency of the spatial analyses that we perform is tied directly to the availability and quality of data that we can obtain for their implementation. Having public GIS data that is readily available is imperative to our mission of advocating for the sustainability of our common resources.*

**Geoff Maas, Lecturer**  
Humphrey School of Public Affairs, University of Minnesota



*My GIS students are primarily pursuing graduate-level degrees in Urban and Regional Planning and Public Policy. Having unfettered access to government geospatial data at all levels (city, county, regional, state and federal) is a vital component to not only their ability to use GIS and perform spatial analysis but to fully understand the functions and operation of government. Being able to access and use the geospatial data as prepared by its authoritative sources is crucial for providing an authentic and valuable educational experience.*