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## STATEWIDE EMERGENCY COMMUNICATIONS BOARD

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# NG911 COMMITTEE

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*Wednesday, September 16, 2015 1:00 p.m.*  
*HSEM State EOC, 445 Minnesota Street*  
*Suite 223, St. Paul*  
*Chair: Darlene Pankonie*

*Conference Call\**  
*Dial-in: 1-888-742-5095*  
*Code: 4898249110#*

*Video Conference Available –email Chair Pankonie*

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## AGENDA

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### Call to order

### Approval of Agenda

### Approval of Previous Meeting's Minutes

### Action Items

### ECN Reports

- **NG911 GIS Project Report (Adam Iten)**
- **NG911 Network/Features (Dana Wahlberg)**
- **StatusBoard (Cathy Anderson)**
- **Miscellaneous**

### Old Business

- **Vendor/Contractor Backgrounds**

### New Business

### Regional Reports

- **Northwest (Shafer/Wernberg)**
- **Northeast (Olson/White)**
- **Central (Diehl/McPherson)**
- **South Central (Wallace/Reimers)**
- **Southeast (Betcher/Evers)**
- **Southwest (Westfield/Ebert)**
- **Metro (McPherson/Lind)**

### Standing Committee Reports

- **NG911 Best Practices Subcommittee (Tina McPherson)**
- **GIS Subcommittee (Iten)**

### Adjourn

**STATEWIDE EMERGENCY COMMUNICATIONS BOARD  
NG911 COMMITTEE**

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July 15, 2015

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**MEETING MINUTES**

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**Attendance**

**Member/Alternate**

Darlene Pankonie, Chair/ Capt. Kathy Hughes, MN SHERIFFS ASSN  
Nancy Shafer/ Beryl Wernberg, NORTHWEST MINNESOTA  
Steve Olson/ Karla White, NORTHEAST MINNESOTA  
Judy Diehl/ Tina McPherson, Vice Chair, CENTRAL MINNESOTA  
Wayne Betcher/ Faith Evers, SOUTHEAST MINNESOTA  
Pat Wallace/ Peggy Reimers, SOUTH CENTRAL MINNESOTA  
Bonnie Westfield/Terri Ebert, SOUTHWEST MINNESOTA  
Clif Giese/Mary Borst, MAA  
Ross Tiesg/Vacant, MN CHIEFS OF POLICE  
Nicholas Carlson/ STATE PATROL  
Matt Goodman/Brad Digre, GIS  
Dana Wahlberg/Patty Kraft/Adam Iten, ECN  
Deb Harmon/ Vacant, TRIBAL PSAP  
Christine McPherson /Diane Lind, METRO MINNESOTA  
Bill Mund/Vacant, MN FIRE CHIEFS

\*Members attending are marked with yellow highlight.

**Guests reporting:**

Cathy Anderson, ECN  
Carol-Linnea Salmon, ECN  
Jim Stromberg, ECN  
Rick Juth, ECN  
Al Fjerstad, Mille Lacs County  
Joe Zunker, Douglas County  
Pete Eggimann, MESB  
Kathy Struffert, Stearns County  
Mary Terwey, Stearns County  
Jenna Walz, Stevens County GIS

**CALL TO ORDER**

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Chair Pankonie calls the meeting to order at 1:05 p.m. with a quorum. Dana Wahlberg takes over the meeting, as Wahlberg is located at HSEM and is easier to hear. Chair Pankonie is on video conference and says she will not be able to get back to the HSEM location until October due to her vacation and a huge CAD project.

Tina McPherson is committee vice chair and can possibly take over for August and September.

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## APPROVAL OF AGENDA

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Wahlberg adds one item to the agenda – a StatusBoard update from Cathy Anderson.

**Al Fjerstad moves to approve the agenda as amended.**

**Glif Giese seconds.**

**Motion carries.**

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## APPROVAL OF PREVIOUS MEETING'S MINUTES

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**Clif Giese moves to approve the previous meeting's minutes as submitted.**

**Judy Diehl seconds.**

**Motion carries.**

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## ACTION ITEMS

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None.

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## ECN Report

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- **RFP (Wahlberg)**

Dana Wahlberg gives the first update on the RFP. They had the initial group review meeting of the RFP, with ten participants, each one being part of the evaluation team. It went well, and they came up with a list of follow-up questions each vendor. Those went out on Monday of this week and are due back Friday of this week, the 17<sup>th</sup>.

On the 21<sup>st</sup>, we have a conference call to go over all those clarification responses, followed by two days of independent time to review and revise our scoring. We will submit our semi-final scoring back to the Department of Administration.

On Tuesday, August 4, we will have onsite visits by all three vendors and their subcontractors/partners that they responded with. TCS, Century Link, and 702 Communications. We'll have two-hour presentations conducted by each of those, and there will be specific agenda items they will need to address. Following that will be independent time again to make changes to our scores based on new information received.

The next steps will be making an offer, then a couple months of contract negotiations. We are making progress and it has been a long haul, but we have a thoughtful group, including Tina McPherson, Dar Pankonie, and Pete Eggimann, who have invested a lot of time and research into this, along with others.

- **PSAP Abandonment Devices (Wahlberg)**

Wahlberg says Century Link and Intrado have been busy doing site visits and encouraging PSAAPs to buy the PSAP abandonment devices – a flip of the switch abandons calls to whoever you've identified as your PSAP abandonment choice. Please bring back to your regions that before purchasing and installing your PSAP abandonment device, we would like you to do a 911 plan change letter so we know who has what and where the calls are supposed to go. We are trying to keep Century Link and Intrado alert to what the PSAP choices for alternate and abandonment routing are, and you have to share with us what your intentions are so we can stay on top of it with them. You do not want your calls going somewhere else.

Kathy Hughes asks if the letters should go to Dana, and the reply is for MESB and all Metro counties, they will work directly with Pete. This information was more for greater Minnesota.

- **SIP Enablement (Wahlberg)**

Wahlberg says there are about eight PSAPs that have gone to a direct SIP interface through their CPE, which means they are receiving their calls end-to-end in an IP environment. Those that have not, which is the majority, are still using PGM interface box that takes the IP connection in, converts it to CAMA, and connects to your CPE. You are encouraged to thinking about upgrading when you are able to. Some of you are able to now but most need to have CPE replacement, upgrade, or version change before you're able to do that. Wahlberg has asked Century Link and IES to provide her with a list with every PSAP's make, model, and version of software to make it easier when she works with each PSAP.

Dar found a challenge in Washington County when they were ready to migrate since there is a VPN in place for the CPE vendor to perform remote diagnostics. There was a conflict in the ability to get that direct CPE connection. Saint Louis County handled their issue independently by putting a firewall of their own that is managed by their IT division. We are still working on a preferable solution that would include the network vendor installing and managing these so we have consistency across the state, as well as having only one vendor to hold accountable for the integrity of the security that's being allowed in and out of that. This is something we're still working on, temporarily putting Washington County's migration on hold. Intrado has a solution for it, but there is a cost associated with it.

A CPE purchase is done independently by every PSAP, and we will give you requirement recommendations and support as you go through the process of choosing your vendor. Since we are all now on the ESI net, be aware that there is a process for any vendor, not just CPE, for example a text-to-911 solution vendor that is going to connect into the ESI net has to go thru an authentication process to make sure all of the interface requirements and specifications are met so they can plug and play.

There is a new vendor, Emergitech. You can read about them on the web; their product doesn't look bad. They have been doing PSAP visits and some are interested. Wahlberg has worked with their sales folks and have highly encouraged them to meet with Century Link and Intrado to begin that authentication process, which they are doing. Remember that there is a defined process in the T730 existing contract we have with Century Link and Intrado for network support. Not known how long it will take. If you are dealing with the sales folks, hope they communicated to you. not encouraging or discouraging you with them, but just for knowledge. Keep in mind when signing purchase contract – vendors need to be compatible to connect to ESI net.

Pete asks Dana if she asks for a 911 plan change when the CPE is switched out. She replies we never have but it may be something we might start doing so we know what version people are currently on.

- **Interstate relations - MN/ND testing, MN/WI testing (Wahlberg)**

Jason Horning, Dana's counterpart in ND, is very interested in negotiating an interstate agreement for us to be able to transfer wireline, wireless, and VOIP where it may be applicable, across state borders, with ANI and ALI. Northwest part of MN and North Dakota are interested in participating. Dana has engaged Intrado, as well. If it works, we want to implement it all along the north/south border on the west side of the state. If you are a regional rep for those seven counties, please alert them to this. Dana has been in communication with NW regions of Marshall, Kittson, and Polk. Should be doing the first testing within the next week or two for transfer of wireless calls over the St. Croix River between Chisago and Polk County in Wisconsin. Patty got all pAni's loaded that would potentially have a reason to transfer to a Minnesota PSAP, and they are ready to test. Will provide an update on that once we know how it's working. Also an initiative we would like to reach north/south border on east side of state if successful. ANI/ALI transfer over the borders would be helpful.

- **County 911 Plans (Wahlberg)**

We have revised the process and are about ready to send out some plans. Patty has worked on pre-populating some of those and Sharon worked with Dana to develop a template for it. Tried to minimize the amount of work the PSAPs have to do to keep these up. You will receive a letter of explanation to go with the electronic version

you'll initially receive, so you can go in and make changes to the errors you see with your contact information. There will be some specific sections for you to fill out, but it's pretty minimal in response to what they were in the past. The plans also include diagrams and spreadsheets for all the network and carriers that support your county for delivery of 911 calls. It's comprehensive and almost two years' worth of work. Make sure to focus on alternate and abandonment routing portion when you get to that. If you have questions, contact Patty or Dana and they can help you walk through that.

We want to get them cleaned up so the PSAPs know what they have and what they're asking for if they need to make the call. We want to make clear that Century Link, Intrado, or the next ESI net vendor has the same understanding and have found we are not all on the same page, partly due to uncommunicated terminology changes by Intrado.

Plans will go out in alphabetical order, so Aitkin will be first. We are just doing Greater Minnesota, and after bugs are worked out, we will share the template with Pete in case he wants to follow the same format.

- **Christine McPherson (Wahlberg)**

Committee representative, Christine McPherson, (Assistant Director of Minneapolis 911), and her husband were involved in a serious motorcycle/deer accident over the weekend. She was airlifted and is in intensive care. She emailed Dana today and is hoping to be released from the hospital but both have a long road to recovery. We are fortunate to have her expertise and anticipate she will be able to join us again at some time. In the meantime, prayers and/or good wishes are appreciated for her.

- **Mission Critical Partners (Wahlberg)**

Mike Beagle has been assigned as the new liaison to our project. Dana has heard good things about him but has not met him. He is going to serve as subject matter expert for our text-to-911 migration and other projects we are working on for downsizing or reassessing the carrier network.

Jerry is improving, he says hi, he misses everyone, and he would love to be back. He is making steady forward progress.

- **Jim Stromberg (Wahlberg)**

Jim Stromberg is the new SWIC with ECN. He has a law enforcement background and is a retired officer from Minnetonka Police Department.

- **StatusBoard (Anderson)**

Anderson says there were no unplanned outages in June. She says we should include the StatusBoard report from MNIT for this group as well as the Operations & Technical Committee. There are some fixes being tested, but it will be a couple weeks before they are ready for production. They are working to fix the slow profile issues, and that should help once it is done. Also being changed is the calendar reservation default, which currently covers two days. It will be changed to 24 hours, so you do not need to make a change in the date unless you want more than one day reserved.

MNIT also found an existing defect when they were testing. It shouldn't be a big one and will be worked on in the future. The defect will corrupt a profile if a user makes a reservation (which is still active) and then that employee's user's account is deleted due to termination/leave of absence. We don't anticipate this happening much, if at all, and it will be fixed in the future.

The biggest change will be adding a group email notification. This was a big controversy for agencies that had a group email listed for an individual user as opposed to the user's specific email because they want to know if a reservation is bumped. If the user that made the reservation is not working, nobody will know the reservation was bumped. Using a group email right now means that if there is a password reset done on a user's account, the email with temporary password information goes to the group email list. This is in violation of security policies, and most

counties have the same type of policy. You should always be checking to make sure your reservation is still valid before you use the resource, anyway, but once the group email line is added to user accounts, all accounts will have to list the user's specific email on the first line. If an agency desires, they may then add a group email to the proper group email line. This is not required, and without anything filled in, bump notifications and password resets will still go to the individual user. If you have the group email line set up, a bump notification will go to both the individual user and the group email address. Password reset information will only go to the individual user's email address.

For users with two profiles (someone who works for two different agencies or entities or someone that is a COML/COMT), for now, this will be the only exception allowed for having an individual email address listed on more than one account. In the future, you will have only one account but be able to select which profile you are logging in under.

- **WERM (Kraft)**

MNIT team was pulled off WERM to work on StatusBoard but started last week working on WERM again. Working on inbound files formatting that we'll receive from Intrado with all the call sites and sectors. Should be put into place and tested in next 3-4 weeks to see if what they set up is working properly. Looking at maybe still going live by December 2015 or by February 2016. Once the inbound files are received and tested, it will be a matter of doing all the data cleanup with Intrado, but it's a time consuming project to clean up data on 40,000 sectors and sites. After that, we'll upload info on internal startup and hopefully during that time, we'll be able to start going out to PSAPs to do hands-on training with actual web application. It will be actual data but only stuff to practice with and not the true data. It's been a long process, and we are hoping to see the end soon.

Reminder that Dana is looking for full-time and part-time staffing in your call centers, as well as call counts for 2014. We need the information by July 24, using the information for Dana's federal report. There are quite a few who have not sent information back yet. Send back the full-time and part-time staffing numbers even if there are no call counts available.

- **MnGeo (Iten)**

The Minnesota Geospatial Office (MnGeo) project team held its internal kickoff earlier this month. We are currently finalizing the PSAP Request for Information Summary Report, which highlights the responses that we received from each PSAP and GIS agency. To date, 95 of 105 PSAPs have responded to the survey. The PSAP RFI Summary Report will be distributed to project stakeholders next week. The report will also be available on the ECN website.

We are also collecting PSAP and Emergency Service boundary data from every County and PSAP in Minnesota on behalf of the FirstNet project. The data are being inventoried and aggregated into a single "Public Safety Entities" map layer that will be used by FirstNet to display and query their User Population data.

We are beginning to develop the MN NG9-1-1 GIS Standards, which will serve as a guide for preparing and maintaining GIS data for NG9-1-1 in Minnesota.

Finally, a monthly project newsletter will be created and distributed to all PSAP and GIS stakeholders to keep them informed and engaged with the project. The first newsletter is expected to be drafted in August.

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## NEW BUSINESS

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None.

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## STANDING COMMITTEE REPORTS

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- NG911 Best Practices Subcommittee

Chair Pankonie reports that the NG911 Best Practices Standards Subcommittee hasn't met in a while. NENA is re-writing Standard 56-006, Call Answering Standard/Model Recommendation. Pankonie and Judy Diehl are on the committee. It is coming along but is a slow process. To date, a lot of discussion around the call answer and call process times for the standard.

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## REGIONAL REPORTS

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**Northwest**                      **(Shafer/Wernberg)**

No report.

**Northeast**                      **(Olson/White)**

No report

**Central**                              **(Diehl/ McPherson)**

Judy Diehl reported that the Central region NG911 committee is now its own subcommittee under their regional SRB.

**South Central**                      **(Wallace/Reimers)**

No report.

**Southeast**                              **(Betcher/Evers)**

No report

**Southwest**                              **(Westfield/Ebert)**

No report

**Metro**                                      **(McPherson/Lind)**

APCO meeting on July 24<sup>th</sup> at Washington County Government Center. TriTech will be presenting on their latest software technologies. Everyone is welcome. RSVP to Dar Pankonie.

**Meeting adjourns at 2:50 p.m.**

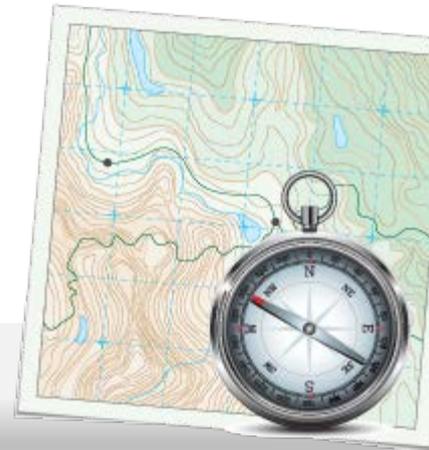
# Next Generation 9-1-1 GIS Project Status Update 9/9/2015



# Current Tasks

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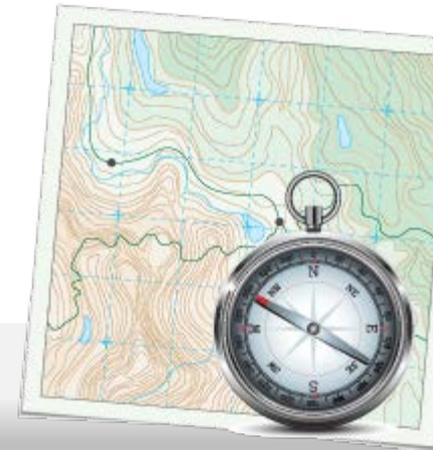
- PSAP Request for Information – Summary Report
- NG9-1-1 GIS Data Assessment and Preparation
- Map Viewer and Editing Tools
- Minnesota NG9-1-1 GIS Standards
- Communication Plan



# PSAP RFI – Summary Report

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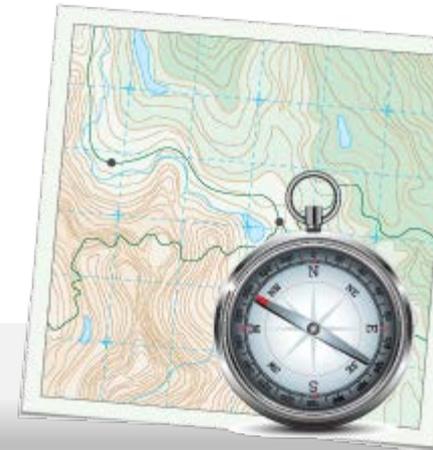
- RFI purpose: to assess the status of GIS data and software at every PSAP in Minnesota
- Response status: 95 of 105 PSAPs (90%)
- Summary Report
  - Distributed to stakeholders on 8/20
  - Available on ECN website



# NG9-1-1 GIS Data Assessment and Preparation

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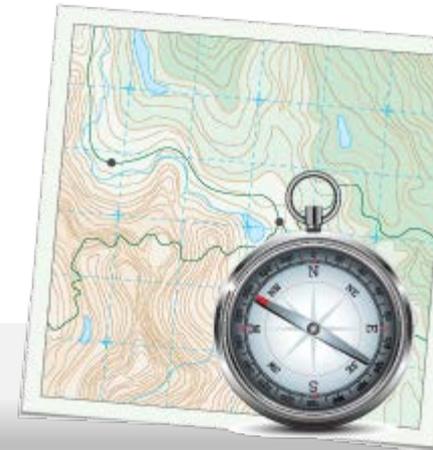
- Initial NG9-1-1 GIS data request
  - FirstNet – needs all Public Safety Entity boundaries by beginning of September
  - MnGeo – inventory existing NG911 GIS data, build internal processes, field mapping (local vs NENA schemas)
- New GIS data repository
- Document MESB's current 9-1-1 GIS data preparation processes in Metro region
- Plan for NE region



# Map Viewer and Editing Tools

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- Potential uses:
  - NG9-1-1 GIS data viewer
  - Project status tracking and reporting
  - Redline, comment, approval
  - Data editor
  - Error resolution
- Developing functional requirements
  - Short term vs long term
  - Stakeholder assistance



# Minnesota NG9-1-1 GIS Standards

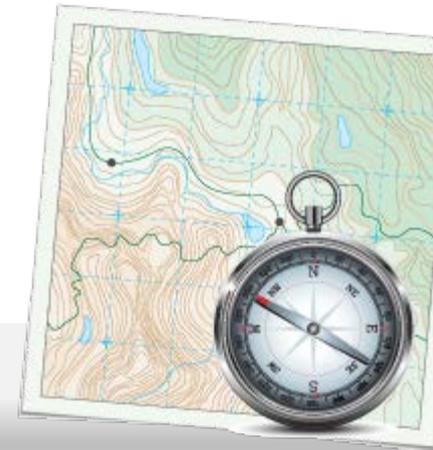
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- GIS data requirements for NG9-1-1 in Minnesota
- Align with NENA Standards
- Standards Workgroup
- Review and approval
  - GIS Subcommittee
  - NG9-1-1 Committee
  - Statewide Emergency Communications Board (SECB)
  - Statewide Geospatial Advisory Council (SGAC)
  - MNIT
- Other States

# Communication Plan

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- ECN website
- Monthly
  - Project newsletter
  - GIS Subcommittee meeting
  - NG9-1-1 Committee meeting
  - SECB meeting
- Quarterly
  - Regional PSAP/GIS meetings
  - Statewide Geospatial Advisory Council





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# **Next Generation 9-1-1 GIS Project PSAP Request for Information Summary Report**

**Prepared by**

**Minnesota Department of Public Safety**

**Division of Emergency Communication Networks**

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## Table of Contents

Introduction.....	3
Project Findings .....	4
Decisive Questions and Responses .....	5
PSAP Mapping Software.....	5
Which public safety systems in your organization utilize GIS data? (Question #3) .....	5
What is your current mapped ALI software? (Question #4).....	6
What is your current CAD mapping software? (Question #5) .....	7
What is your current in-vehicle map display software? (Question #6).....	8
What is your AVL software? (Question #7) .....	9
What is your CENS software? (Question #8) .....	10
PSAP Map Data and Maintenance .....	11
Do all of your mapping applications utilize the same GIS data? (Question #9).....	11
What GIS software are you using for data editing? (Question #10) .....	12
Which of the following GIS layers do you currently have and/or use in your PSAP Systems? (Question #14) ..	13
Please list GIS data layers, other than those listed in Question 14, that you believe are essential for effective PSAP operations? (Question #15) .....	14
Which of the following potential issues with GIS data concern you the most? (Question #16) .....	15
Does your jurisdiction have an ordinance in place that specifies a standard process for assigning addresses and/or an address schema? (Question #19).....	16
How often are the road centerlines updated in your PSAP’s mapping applications? (Question #20) .....	17
How often does your GIS data maintenance authority make edits to the road centerline dataset? (Question #21) .....	18
GIS Data Sharing .....	19
Do you currently share GIS data with neighboring counties/PSAPs? (Question #30) .....	19
Conclusion .....	20
PSAP Mapping Software .....	20
PSAP Map Data and Maintenance .....	20
GIS Data Sharing.....	20
Closing Thoughts.....	20
Footnotes .....	21



## Introduction

Advances in communication systems and technology over the past 10 years have placed a tremendous burden on legacy 9-1-1 systems. Cell and mobile IP devices with voice, text and video capabilities now serve as important communication tools that require access to emergency services. The public expects that these devices will be supported. Next Generation 9-1-1 (NG9-1-1) is a significant evolution of 9-1-1 systems and services that will support advanced communication technology through seamless interconnectivity between citizens, Public Safety Answering Points (PSAP) and first responders.

Today's E9-1-1 system is based on a phone number. NG9-1-1 is based on the location of the calling device and allows voice calls, along with all types of communications media to connect with PSAPs and first responders. With NG9-1-1 all requests for emergency services are associated with a location. The location can be a street address, a geodetic shape or a longitude and latitude coordinate. The location of the calling device determines which PSAP the request for emergency services is sent. NG9-1-1 depends on current and accurate Geographic Information Systems (GIS) data for location validation, call routing and emergency response. NG9-1-1 systems support all emergency service providers with advanced data capabilities by using non-proprietary systems of standardized data and formats operating on open systems specifications over managed multipurpose IP networks. NG9-1-1 allows seamless interoperability between PSAPs and emergency responders, across the region, the state and eventually the entire country.

This level of interoperability will require strict adherence to National Emergency Number Association (NENA) standards. The accurate routing of calls to the appropriate PSAP and emergency responders to those in need will be dependent on accurate and current GIS data and technology.

The primary purpose of this project is to create and put in place the mechanisms for a sustainable statewide geospatial data repository to support NG9-1-1 systems in Minnesota. Data will be harvested from and maintained by authoritative sources when possible.

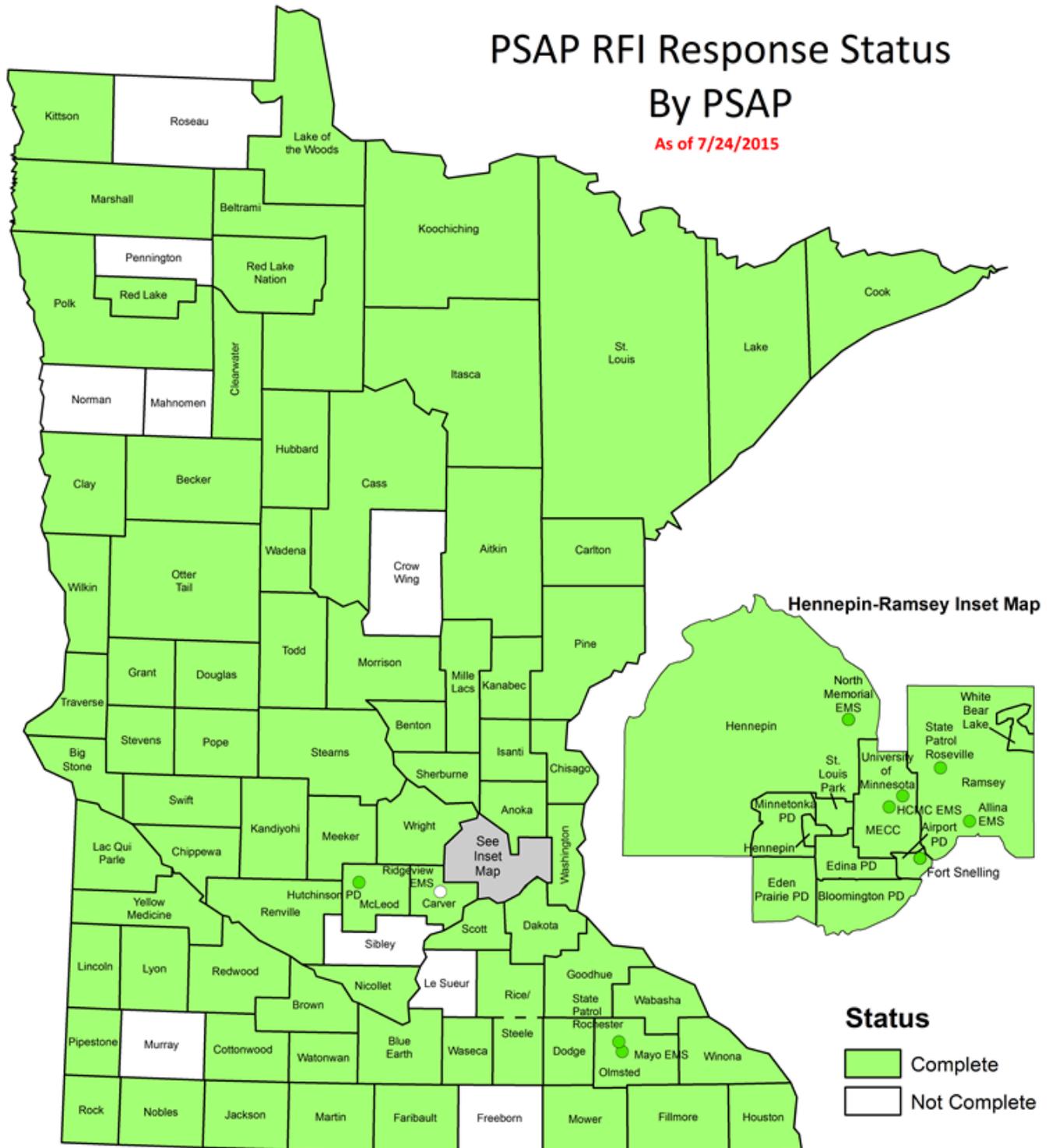
Prepared by the Minnesota Department of Public Safety's Emergency Communications (ECN) division in cooperation with the Minnesota Geospatial Information Office (MnGeo), the purpose of this Request for Information (RFI) was to assess the GIS capabilities, software, and data of every PSAP in Minnesota as part of the State's NG9-1-1 GIS project. The most efficient method to gather the required information was to prepare an electronic request for information. Each PSAP and County GIS Manager in the state was asked to work together to submit one response on behalf of their organization. The goal was a 100% response from all 105 PSAPs in the state by the end of June 2015.

The initial RFI questions were provided by the [National States Geographic Information Council \(NSGIC\)](#) and were modified to include questions that are specific to Minnesota. Questions were vetted by the following stakeholders:

1. [Statewide Emergency Communications Board \(SECB\)](#)
2. SECB NG9-1-1 Committee
3. SECB NG9-1-1 GIS Subcommittee
4. [Metropolitan Emergency Service Board \(MESB\)](#)
5. [Department of Public Safety - Emergency Communication Networks \(DPS-ECN\)](#)
6. [Minnesota Geospatial Information Office \(MnGeo\)](#)
7. [Minnesota Department of Transportation \(MnDOT\)](#)
8. [Teleivate](#) – ECN subcontractor on Minnesota FirstNet Consultation Project

## Project Findings

The RFI results discussed in this summary report are based upon responses from PSAPs identified in the map below. As of July 24, 95 of 105 PSAPs had responded.



## Decisive Questions and Responses

The RFI consisted of 36 questions designed to assess a PSAP’s GIS capabilities, software and data currently being used (or needed but not available) in their daily E9-1-1 workflows. They also sought to identify potential GIS data issues; data sharing considerations; and desired methods for NG9-1-1 project communication. The summary below represents 15 questions and responses deemed most impactful for shaping the implementation of NG9-1-1 in Minnesota. A complete list of RFI responses may be obtained by contacting ECN’s NG9-1-1 GIS Project Manager (Adam Iten, [adam.iten@state.mn.us](mailto:adam.iten@state.mn.us) or 651-201-7559).

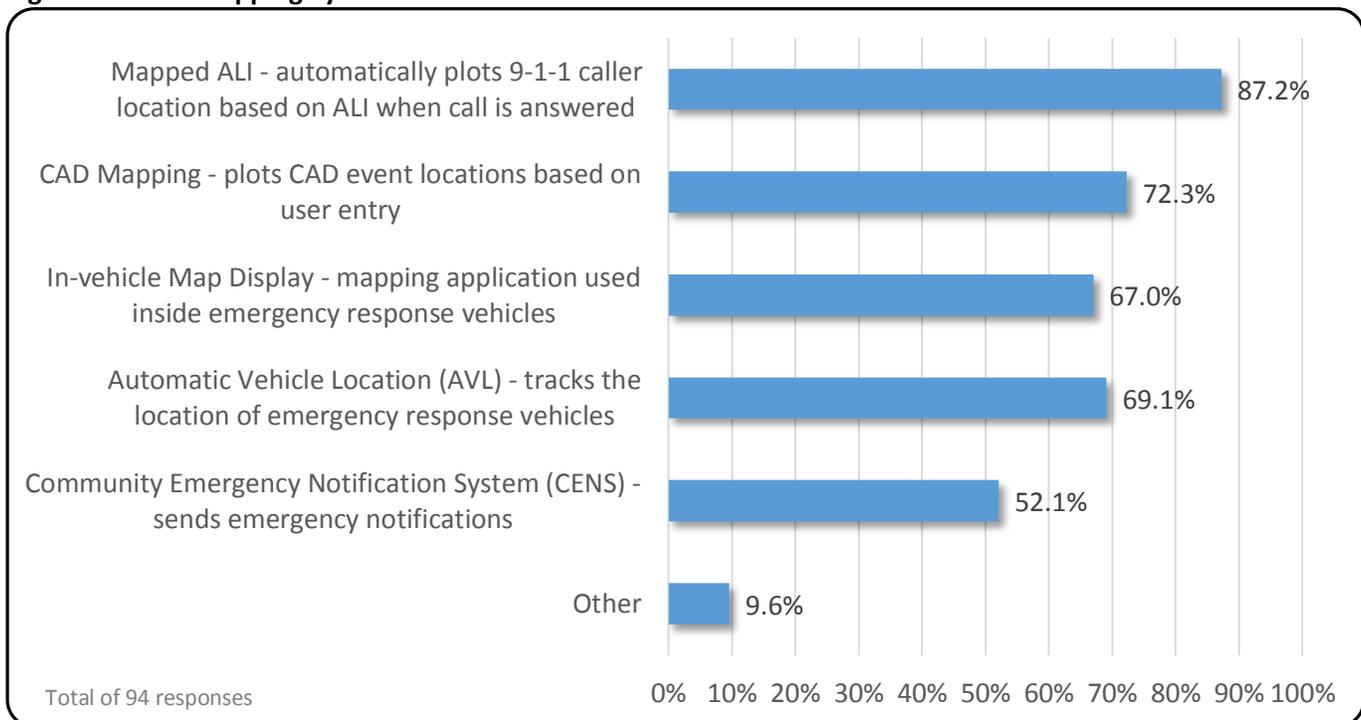
## PSAP Mapping Software

This series of questions deals with the types of mapping systems at each PSAP in Minnesota that utilize GIS data. The goal was to better understand where GIS data and mapping software are currently being used for 9-1-1 related purposes.

### Which public safety systems in your organization utilize GIS data? (Question #3)

As indicated in the Figure 1 below, the vast majority PSAPs in Minnesota have already embraced the use of GIS technology in their daily operations. Of those PSAPs in the “Other” category, several use GIS data for crime mapping. Others use it in their Emergency Management Department or Records Management System.

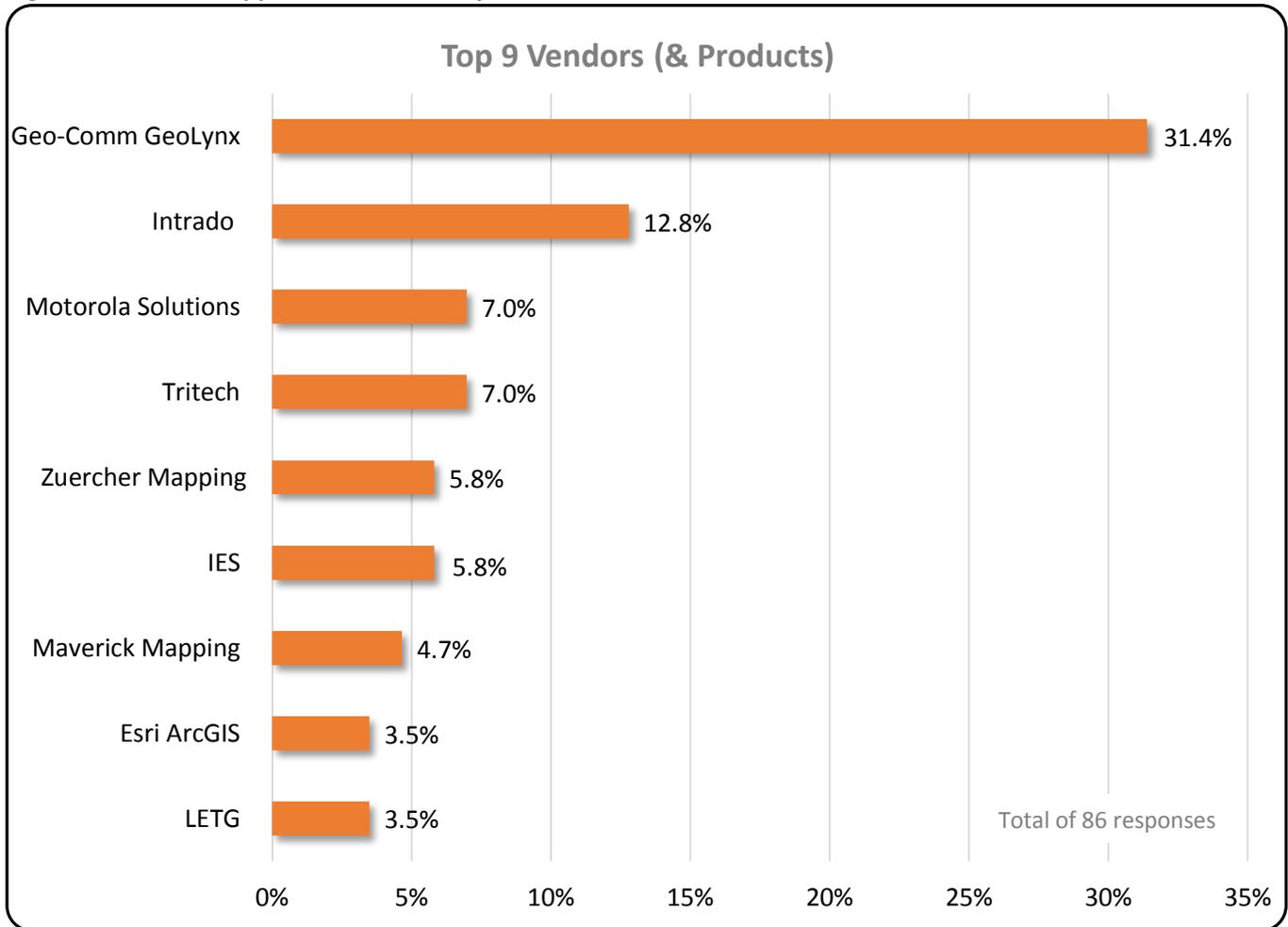
**Figure 1: PSAP Mapping Systems That Utilize GIS in Minnesota**



What is your current mapped ALI software? (Question #4)

Mapped Automatic Location Identification (ALI) automatically plots a 9-1-1 caller’s location on a map when the call is answered by the 9-1-1 call taker. A total of 19 different mapped ALI software products were listed in the responses, indicating that a wide range of mapped ALI vendors and products are being used. Of the 86 total responses to Question #4, only two are not using mapped ALI software.

**Figure 2: Current Mapped ALI Software by Vendor**

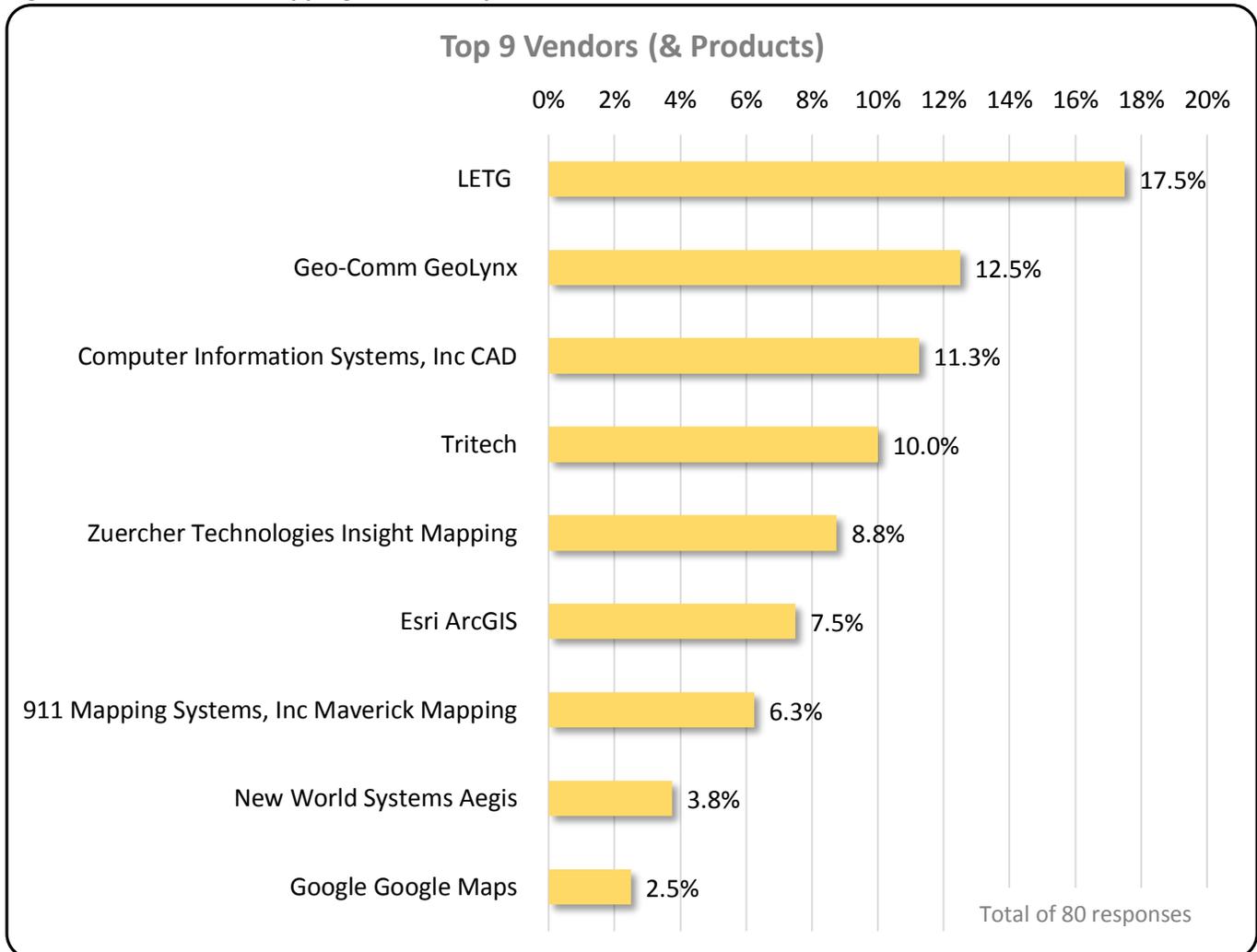


Note: Software listed may include only the vendor name and not their product names.

### What is your current CAD mapping software? (Question #5)

Different than mapped ALI systems, Computer Aided Dispatch (CAD) mapping plots event locations based on user entry and identifies the appropriate emergency responders. A total of 17 different CAD mapping software products were listed in the responses, indicating that a wide range of CAD mapping vendors and products are being used. Of the 80 total responses to Question #5, only four are not using CAD mapping software.

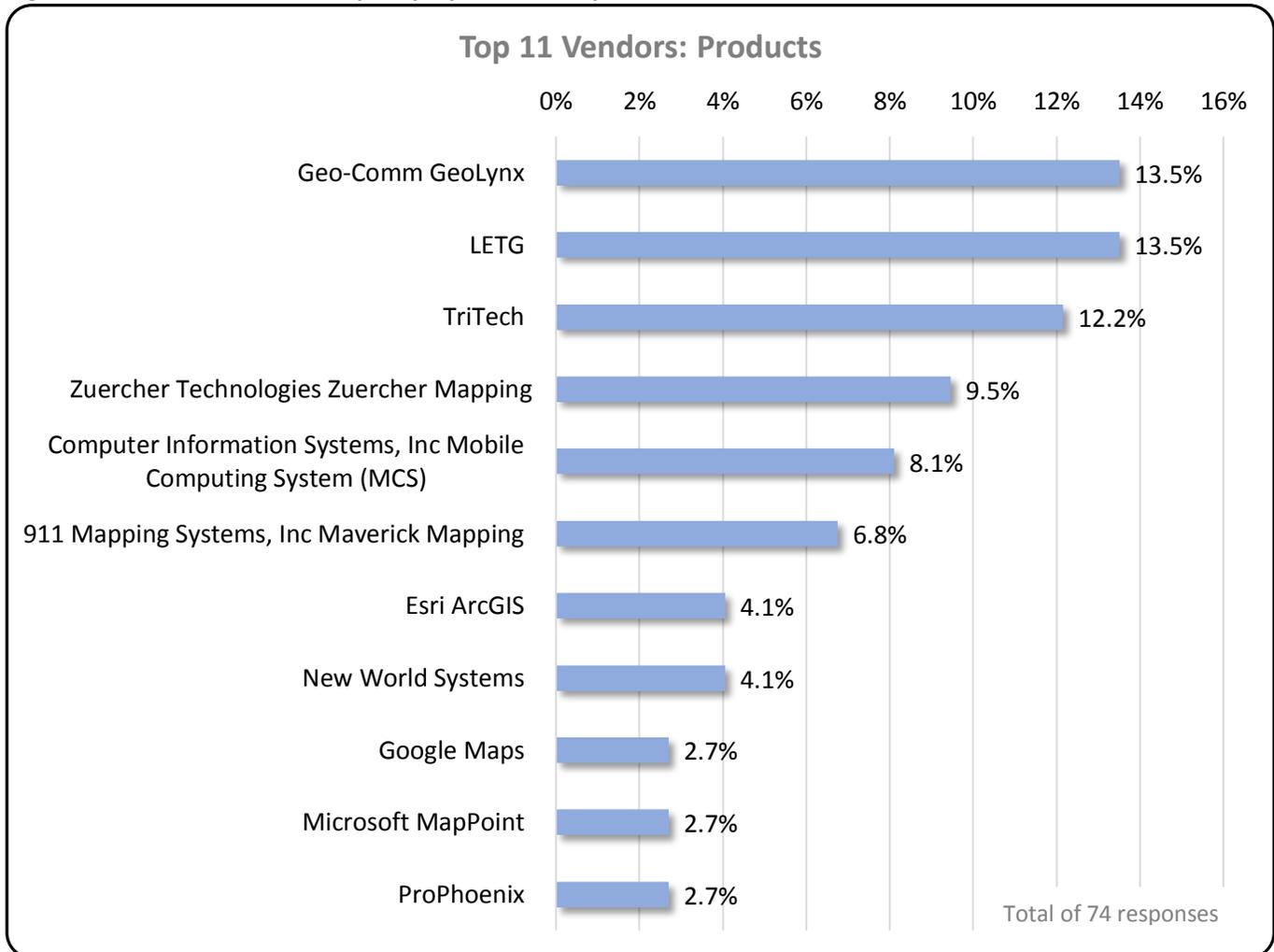
**Figure 3: Current CAD Mapping Software by Vendor**



What is your current in-vehicle map display software? (Question #6)

In-vehicle map displays help guide the emergency responders to the correct incident location. A total of 21 different in-vehicle map display software products were listed in the responses, indicating that a wide range of in-vehicle map display vendors and products are being used. Of the 74 total responses to Question #6, only five are not using in-vehicle map display software.

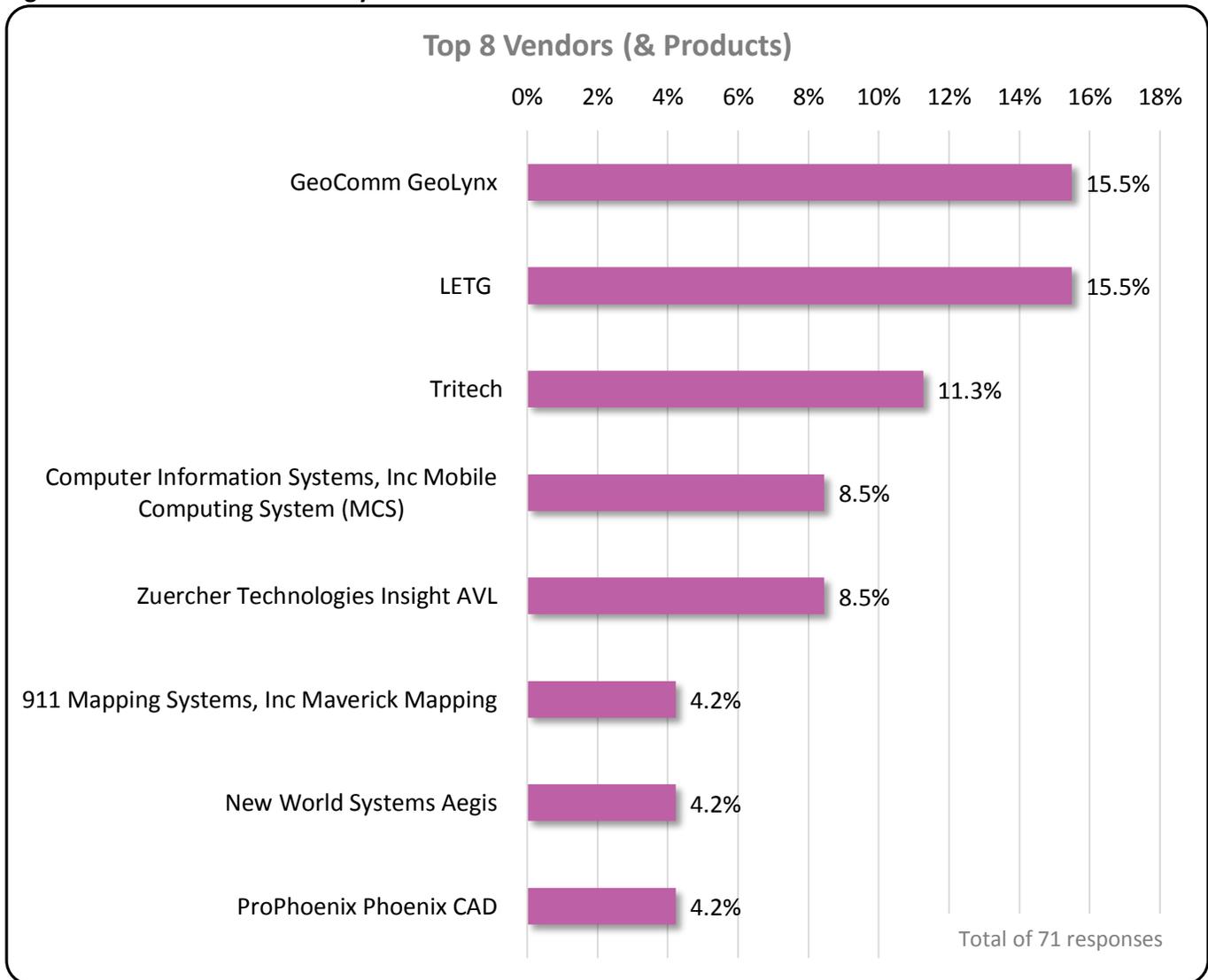
**Figure 4: Current In-vehicle Map Display Software by Vendor**



### What is your AVL software? (Question #7)

Automatic Vehicle Location (AVL) applications are used by PSAP Managers, call takers, and emergency responders to track the location of emergency response vehicles. A total of 18 different AVL applications were listed in the responses, indicating that a wide range of AVL vendors and products are being used. Ten of the 71 total responses to Question #7 are not using an AVL application.

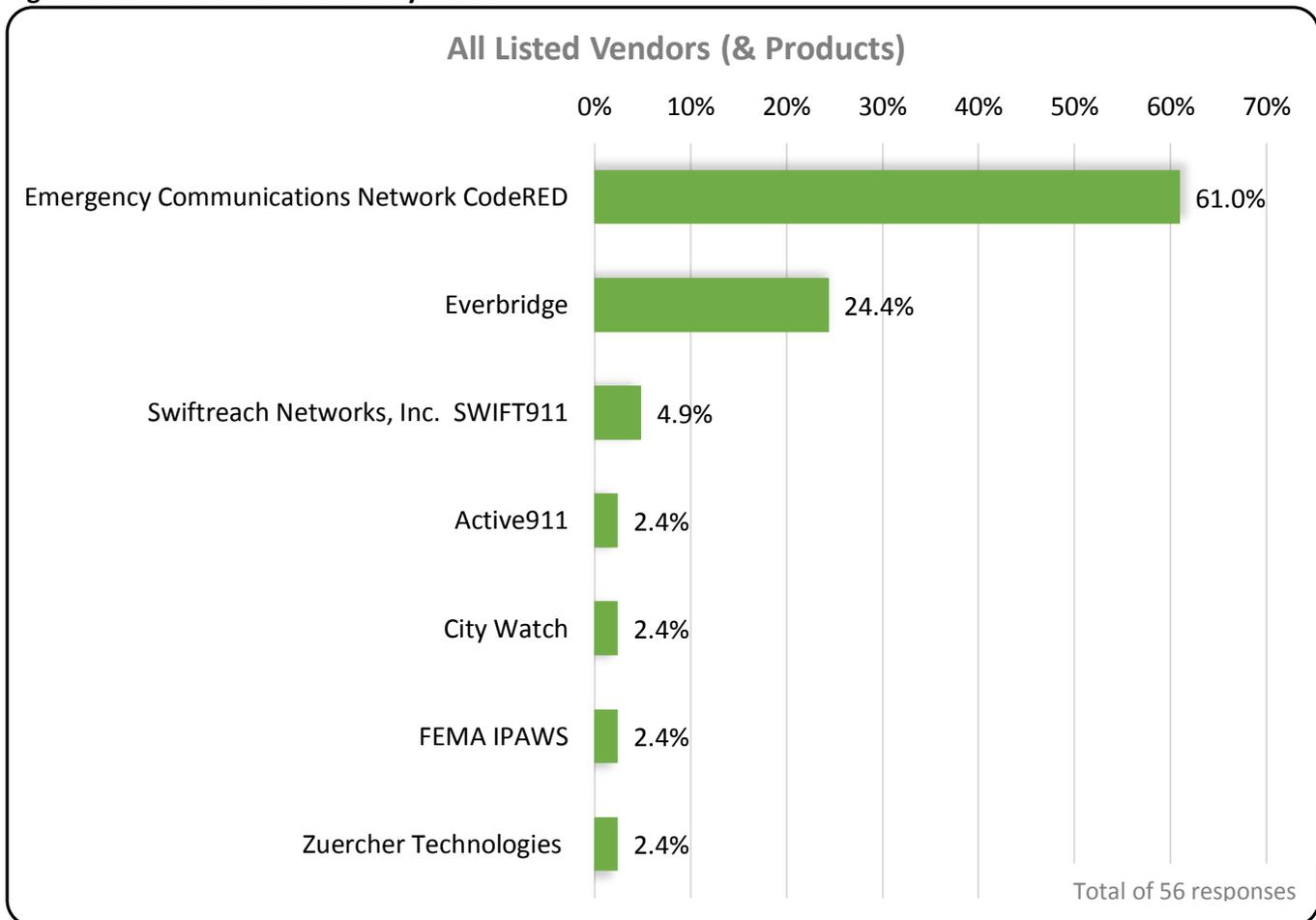
**Figure 5: Current AVL Software by Vendor**



### What is your CENS software? (Question #8)

Community Emergency Notification System (CENS) software allows for emergency notifications and public warnings to be delivered to wireline and wireless phones located within a specific geographic area. For example, a train derailment that results in a toxic plume. A total of 7 different CENS software products were listed in the responses, indicating that a wide range of CENS vendors and products are being used. Thirteen of the 56 total responses to Question #8 are not using a CENS product.

**Figure 6: Current CENS Software by Vendor**



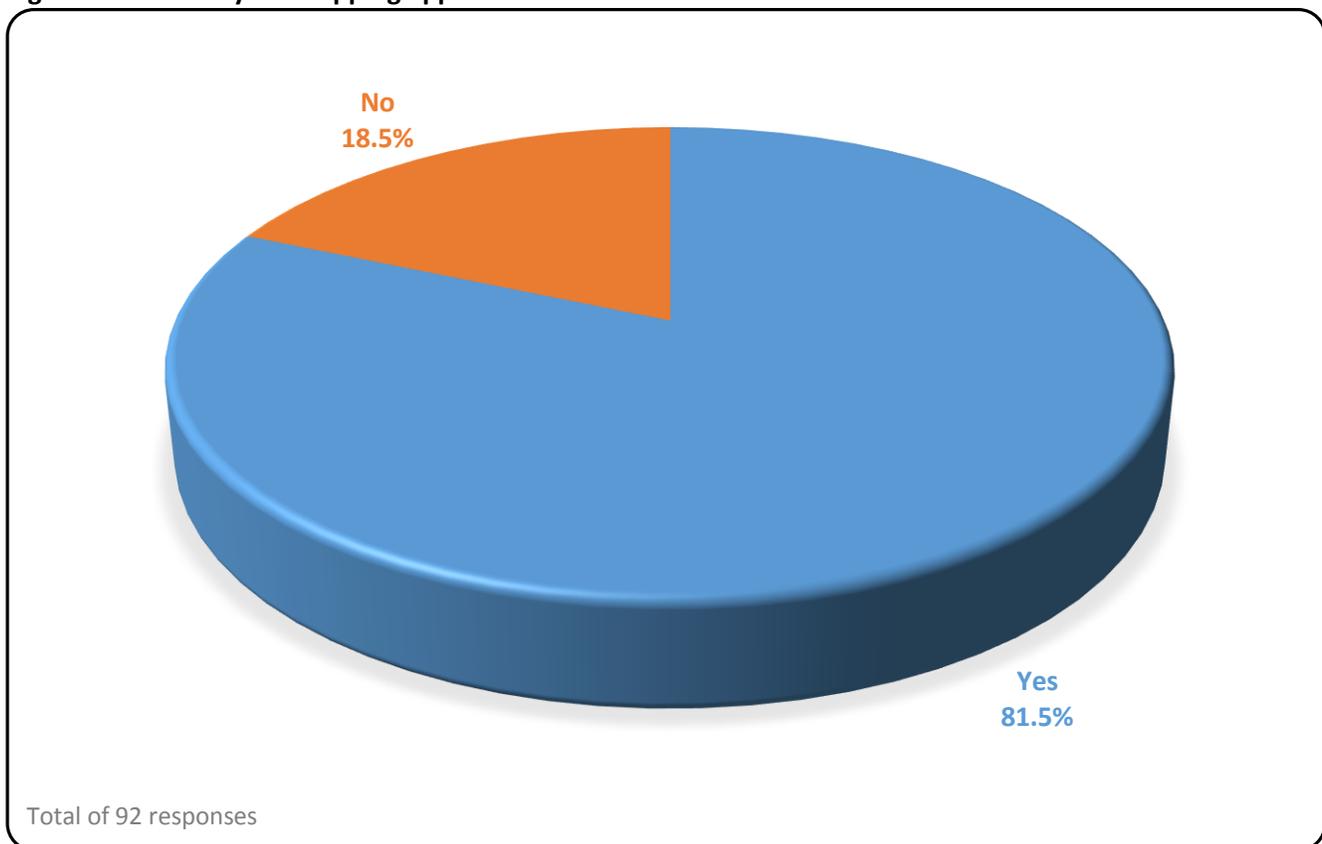
### PSAP Map Data and Maintenance

This series of questions deals with the types of GIS map data and maintenance practices at each PSAP in Minnesota. The goal was to better understand what GIS data are currently being used for 9-1-1 related purposes, as well as, how the GIS data are maintained.

Do all of your mapping applications utilize the same GIS data? (Question #9)

As Figure 7 indicates, most PSAPs in Minnesota utilize the same GIS data within their own suite of mapping applications. In some instances when two or more mapping systems utilize different versions of the same datasets the representation of an address and other location information can be inconsistent and lead to confusion.

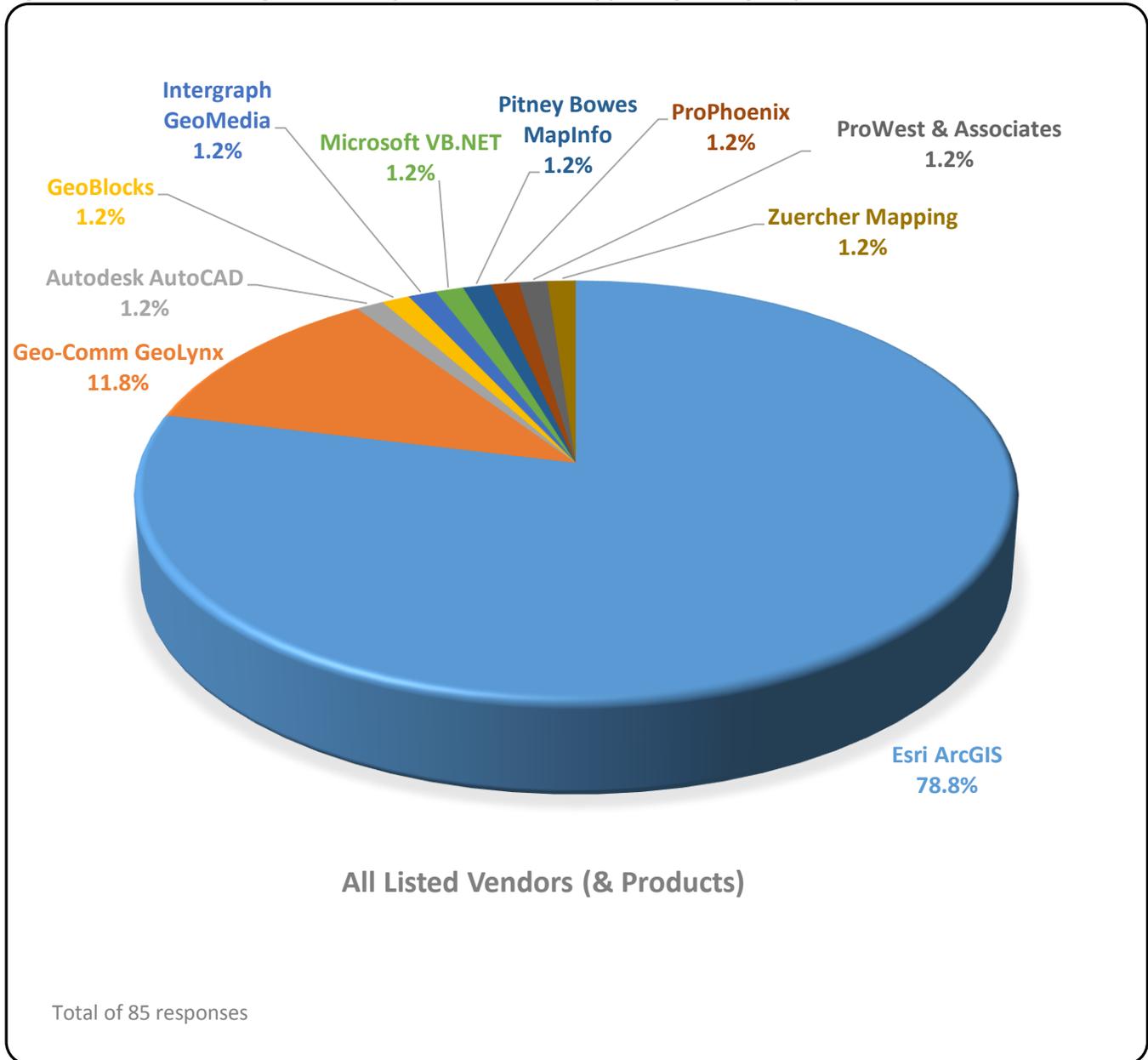
**Figure 7: Do all of your mapping applications utilize the same GIS data?**



What GIS software are you using for data editing? (Question #10)

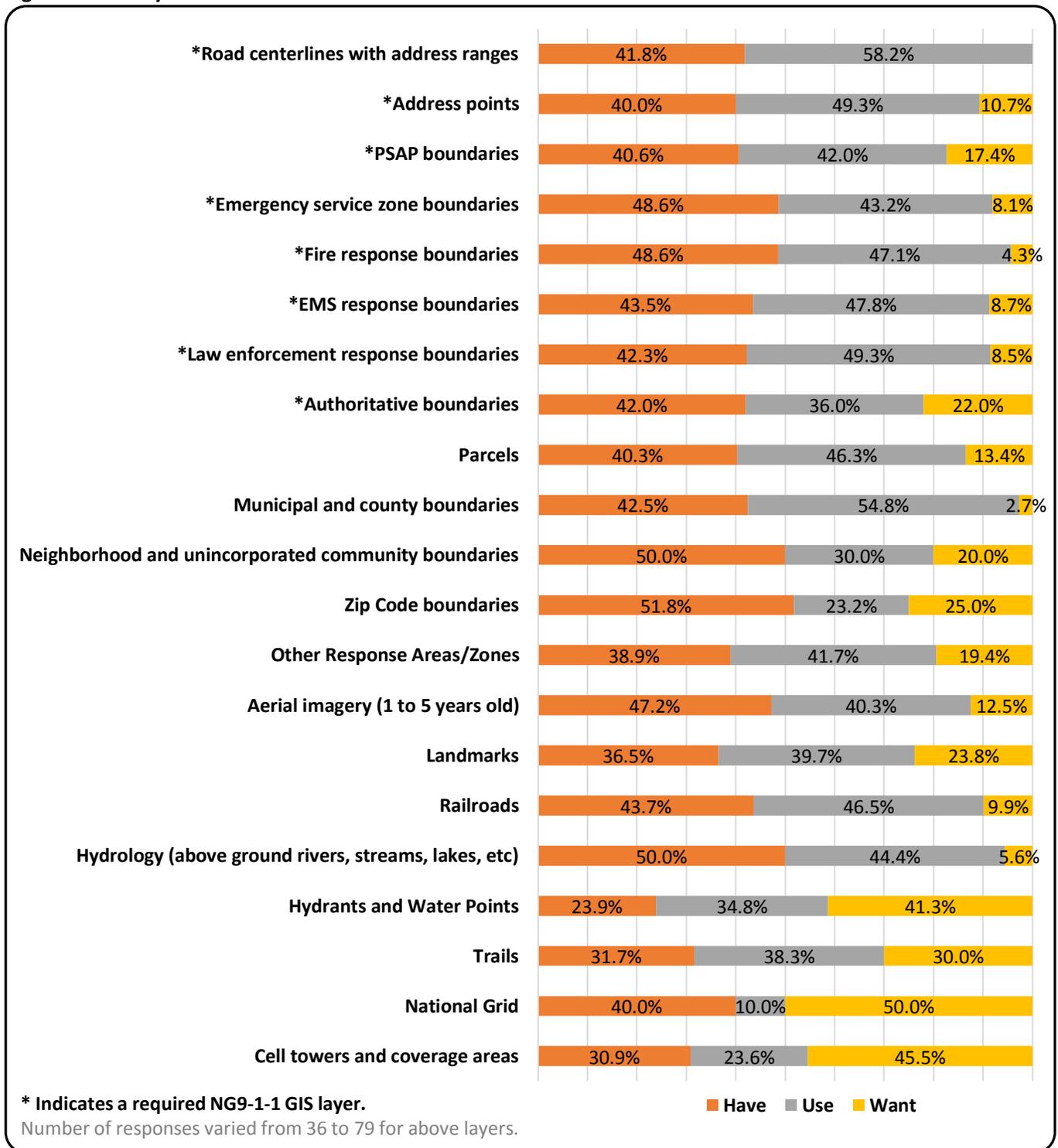
The vast majority of PSAPs and GIS agencies use the same software to edit their GIS data, as shown below in Figure 8.

**Figure 8: GIS Data Editing Software by PSAP and Their Supporting GIS Agency**



Which of the following GIS layers do you currently have and/or use in your PSAP Systems? (Question #14)  
 Most PSAPs have and use<sup>1</sup> the 21 common GIS layers listed below in Figure 9. The last four layers (hydrants/water points, trails, National Grid and cell towers/coverage areas,) are datasets that a significant number of PSAPs would like to have but do not currently possess.

**Figure 9: GIS Layers at Each PSAP**

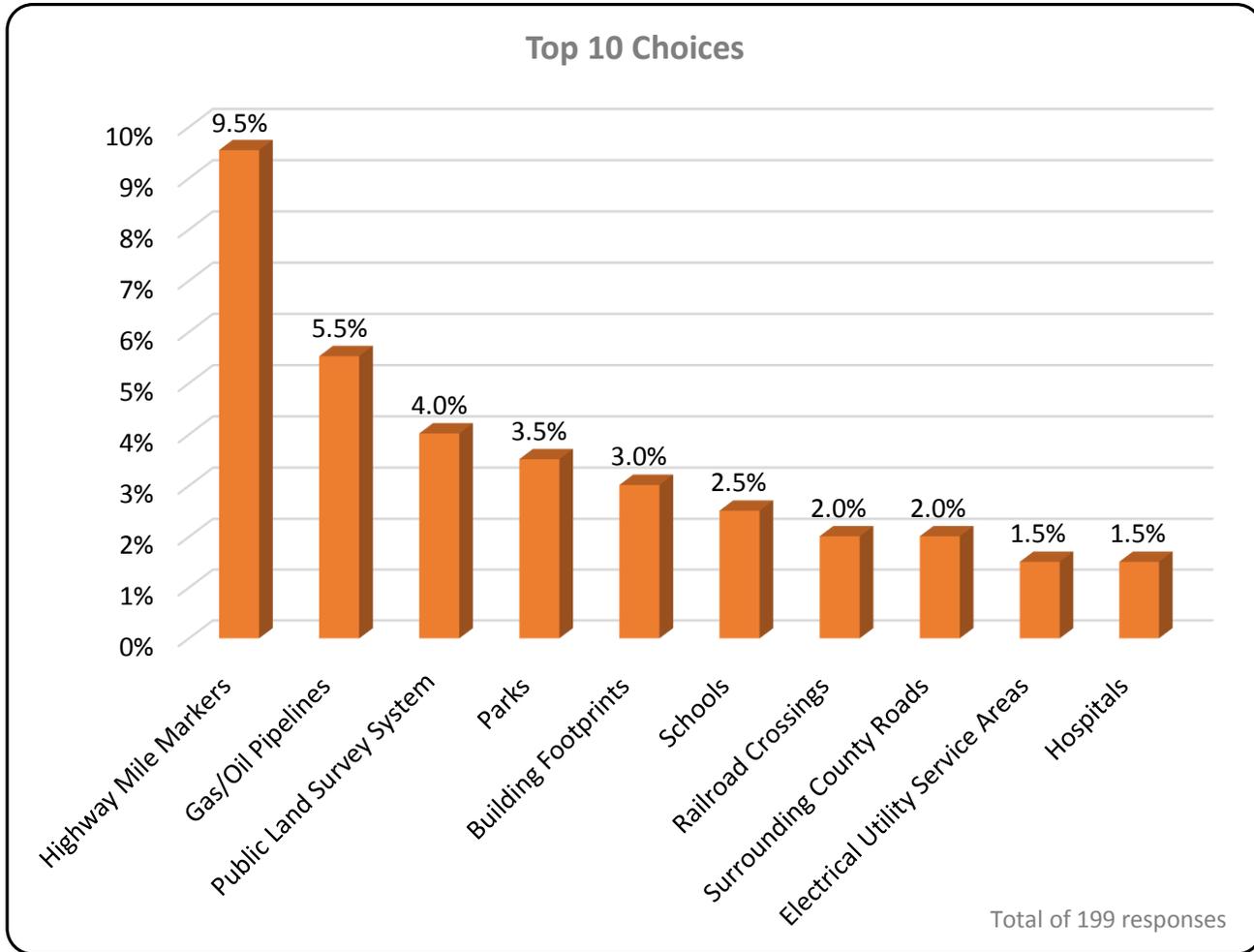


<sup>1</sup> 'Have' means a PSAP has acquired the layer but has not yet used it while 'Use' means it has used it. 'Want' means a PSAP desires a given layer but has not yet acquired or used it.

Please list GIS data layers, other than those listed in Question 14, that you believe are essential for effective PSAP operations? (Question #15)

Figure 10 shows the top ten additional GIS data layers that PSAPs would like to have that were not listed in Question 14.

**Figure 10: Additional GIS Layers Essential to Minnesota PSAPs**

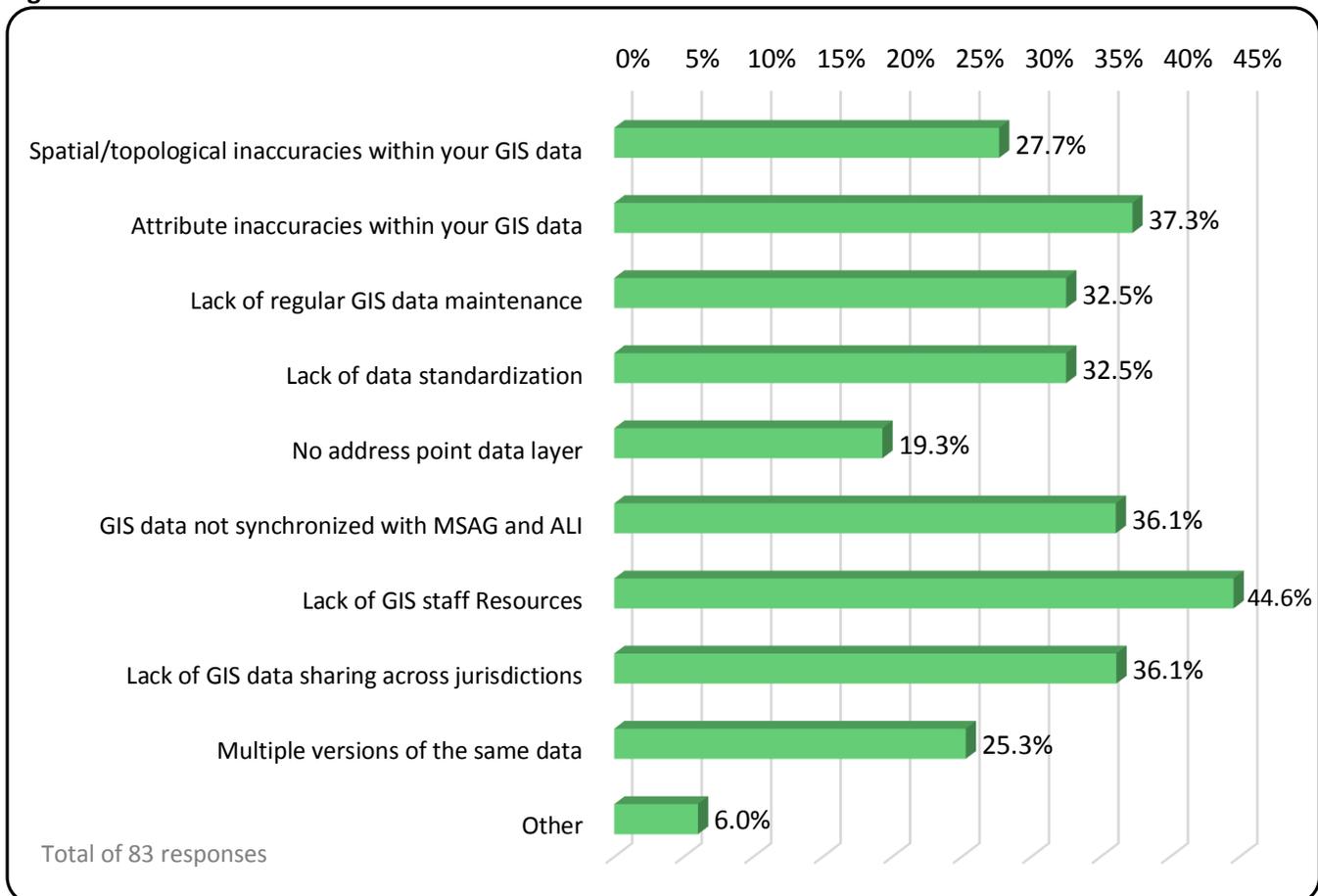


Which of the following potential issues with GIS data concern you the most? (Question #16)

The GIS data issues that concern PSAPs the most are:

1. *The lack of GIS staff resources to create and maintain data.* Current and accurate geospatial data is an essential component. For example, if new streets are not added to the system in a timely fashion, a dispatcher may not be able to direct a responder to the correct location.
2. *Attribute inaccuracies between data layers.* For example, street name inconsistencies between road centerlines and address points.
3. *Data is not synchronized with their Master Street Address Guide (MSAG) and ALI.* Improperly synchronized data results in mismatched addresses impacting the dispatcher’s ability to identify the proper location of the call.
4. *The lack of data sharing across jurisdictions.* For example, in the case of an incident that spans multiple PSAPs, some roads may appear in one system but not the other - potentially impacting response time.
5. *Spatial or topological inaccuracies exist between data layers.* For example, the left and right ESN of a road centerline street segment does not coincide with the ESN GIS-based boundary layer.

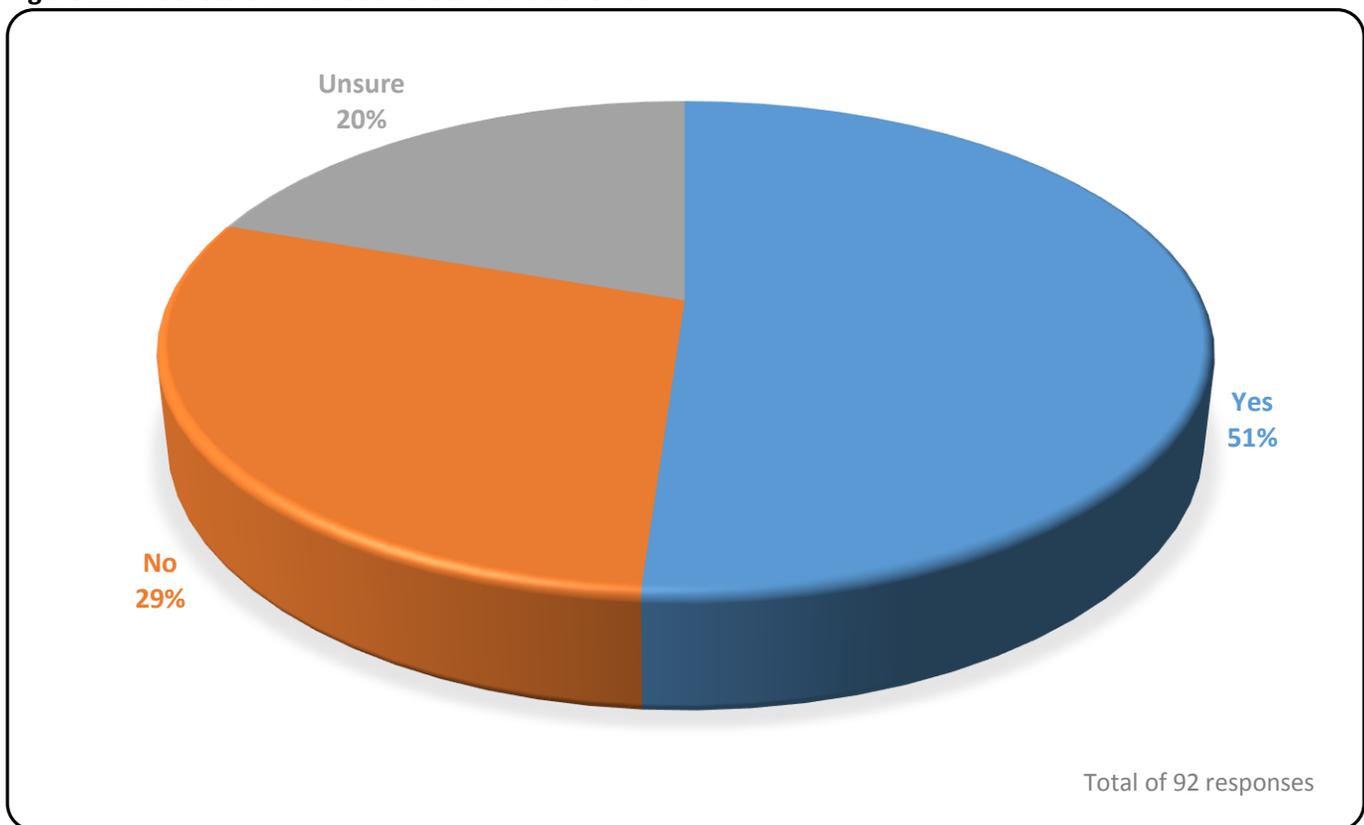
**Figure 11: Potential Issues with Local GIS Data**



Does your jurisdiction have an ordinance in place that specifies a standard process for assigning addresses and/or an address schema? (Question #19)

Just over half of PSAPs surveyed have a legally-codified standard process for assigning addresses and/or schema. As time is an especially critical factor in the delivery of emergency services – it can mean the difference between life and death; confusing, misleading or ambiguous addresses could slow response times, possibly with disastrous consequences. Standards developed by the National Emergency Number Association (NENA) can help guide the creation of uniform addresses in Minnesota. A model ordinance for address assignments will be critical for local agencies as they work to resolve address and street name errors as part of the NG9-1-1 GIS data project.

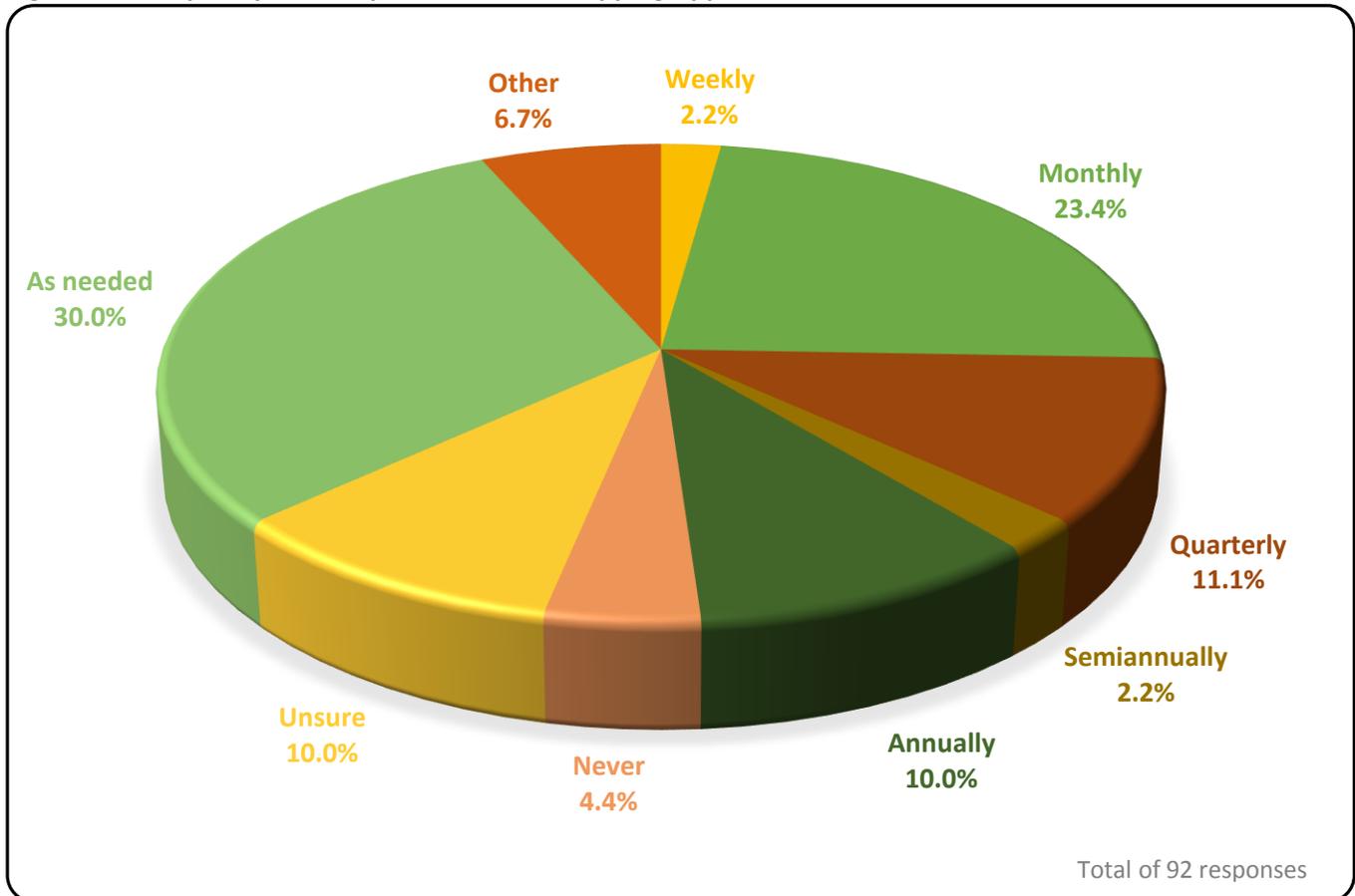
**Figure 12: Address Ordinance and Standard Schemas**



How often are the road centerlines updated in your PSAP’s mapping applications? (Question #20)

Most PSAPs update their road centerlines in their mapping applications on an “as needed” or monthly basis as shown below. “As decided by LOGIS” and “Every Couple Years” were two responses that occurred in the “Other” category.

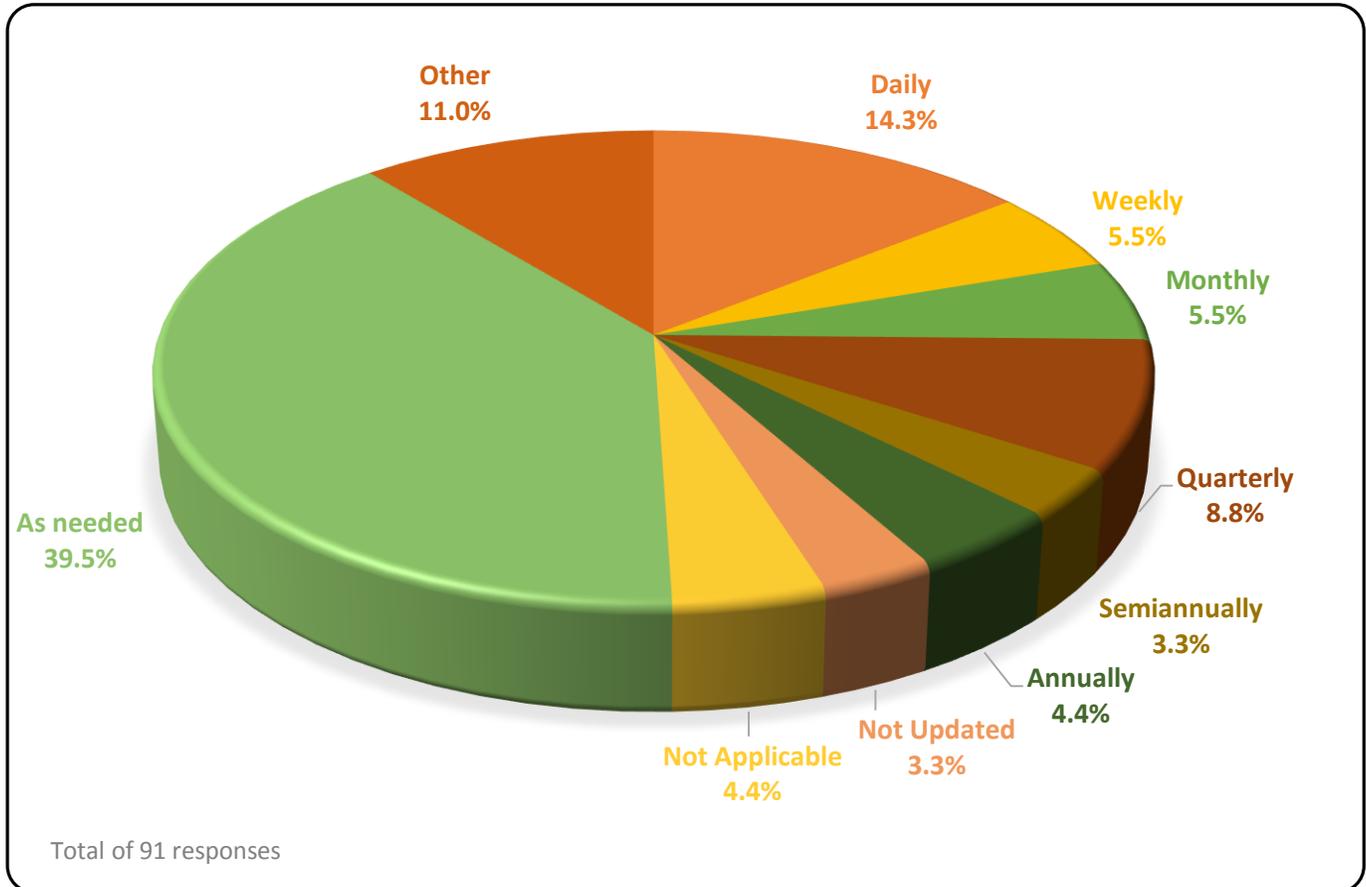
**Figure 13: Frequency of GIS Updates to PSAP Mapping Applications**



How often does your GIS data maintenance authority make edits to the road centerline dataset?  
 (Question #21)

PSAP’s GIS data maintenance authorities make edits to the road centerlines in a wide array of time intervals with ‘as needed’ being the most common as shown below. Some example responses occurring within the “Other” category were “Every Couple Years” and “Unknown”.

**Figure 14: Frequency of Road Centerline Edits by GIS Data Maintenance Authority**

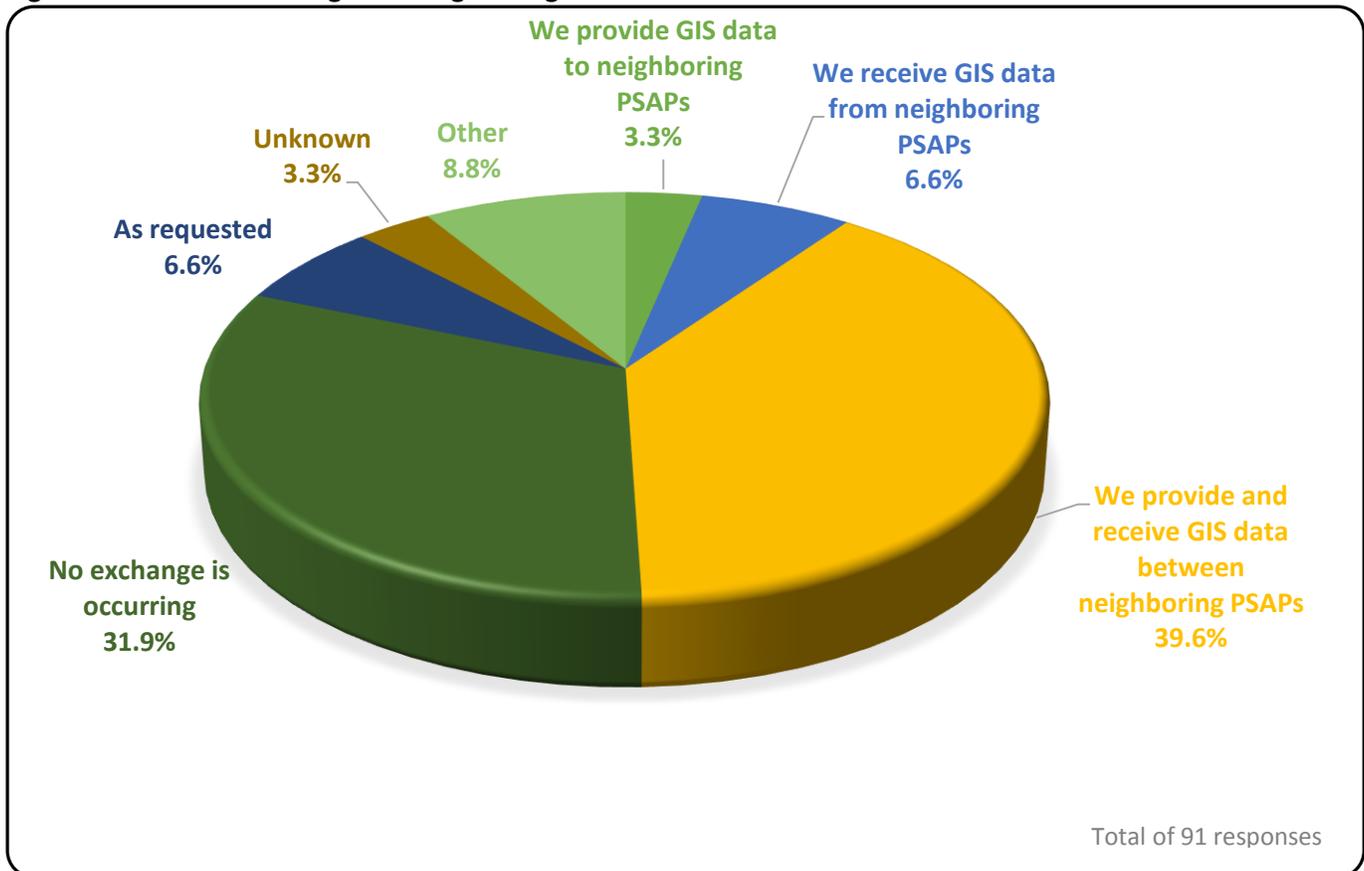


## GIS Data Sharing

Do you currently share GIS data with neighboring counties/PSAPs? (Question #30)

The amount of GIS data sharing between neighboring counties/PSAPs varies significantly as seen below. While most PSAPs responded that they share their GIS data with their neighboring counties and PSAPs, a significant percentage do not exchange GIS data at all. Data sharing is a vital component of implementing and maintaining a successful, statewide NG9-1-1 system.

**Figure 15: GIS Data Sharing with Neighboring Counties and PSAPs**



## Conclusion

It is clear from the RFI responses we have received to date that for many of Minnesota's PSAPs, GIS systems and geospatial data are important assets they possess and utilize. However, while these PSAPs have embraced the technology, some responses indicate that they may not be able to maintain or improve their geospatial data due to resource constraints. Finally, there remain some PSAPs that have not yet leveraged the technology. Both cases will impact the implementation of the State's NG9-1-1 program and will require careful consideration.

### PSAP Mapping Software

A great deal of variability exists in the type of software and GIS data among the PSAPs. This presents a challenge when provisioning statewide GIS data to meet each PSAP's specific software requirements. The GIS data layers that are being developed through the NG9-1-1 GIS project will meet the needs of the Emergency Call Routing Function (ECRF) and Location Validation Function (LVF); however, they will not be customized for use in each PSAP's mapping system. The statewide NG9-1-1 GIS data layers will be made available to every PSAP and public safety entity and it will be their responsibility to modify the data to suit their own mapping needs.

### PSAP Map Data and Maintenance

As noted in the results above, many PSAPs share the same GIS data issues such as a lack of GIS staff resources and attribute inaccuracies. Bridging these GIS resource gaps will need to be part of the NG9-1-1 implementation plans. GIS data will also be heavily scrutinized to meet and exceed mission critical NG9-1-1 standards, which will significantly improve the accuracy of the required NG9-1-1 GIS datasets.

Moving toward common, standardized, and regularly updated GIS data layers that are consistent between those used at the PSAP and those used for NG9-1-1 call routing and location validation will help ensure sustainable, accurate, and timely geographic information used in 9-1-1 call delivery, dispatch, and emergency response.

### GIS Data Sharing

Roughly one-third of the PSAPs indicated that they do not currently share GIS data with their neighbors. This implies that their mapping systems only contain their response area and their GIS data are likely not edge-matching along neighboring PSAP borders. The NG9-1-1 ECRF and LVF require seamless GIS data among all jurisdictions, so PSAPs and GIS agencies will need to work with their neighboring agencies to resolve data issues along borders.

Also, a key objective of the NG9-1-1 GIS project is to engage each PSAP and local GIS agency in the collection, aggregation and maintenance of geospatial data required for call routing and location validation. This will involve increased GIS data sharing among PSAPs and GIS agencies, which will lead to improved quality of emergency services, multi-jurisdictional coverage, and potential cost reduction of providing authoritative GIS data for multiple uses.

### Closing Thoughts

Overall, the migration to NG9-1-1 will be easier because many PSAPs are already utilizing GIS technology. Most PSAPs and their supporting GIS agencies are used to sharing GIS data with their neighboring PSAPs. Participation among and between PSAPs and their supporting GIS agencies will be critical to the successful completion of the NG9-1-1 GIS project.



Thank you to those PSAPs and GIS agencies who responded to this RFI. The information provided will help guide the State as it implements NG9-1-1 across Minnesota over the next several years. DPS/ECN will be contacting those PSAPs who have yet to respond. Finally, over time the NG9-1-1 GIS team will continue to reach out to PSAPs or supporting GIS agencies for guidance.

## Footnotes

- A PDF version of the PSAP RFI and Summary Report will be available on [ECN's website](#).
- For a copy of responses to all of the RFI questions, contact the NG9-1-1 GIS Project Manager (Adam Iten, [adam.iten@state.mn.us](mailto:adam.iten@state.mn.us) or 651-201-7559).
- The Request for Information was created using Survey Monkey.
- A special “thank you” to NSGIC and its NG9-1-1 Committee for allowing us to use many of their questions.

# StatusBoard CY 2015

	Total Hours Month	Total hours SCHEDULED MAINTENANCE Tues. 0900 - 1100 Wed. 1900 - 2300	Total Hours SCHEDULED Availability	Actual Duration of maintenance Rounded up to nearest hour	Total hours available AFTER scheduled maintenance	UNSCHEDULED OUTAGES Rounded up to nearest hour	TOTAL HOURS AVAILABLE
January*	744	24	720	16	728	0	728
February**	672	24	648	24	648	1	647
March	744	24	720	2	742	1	741
April	720	28	692	8	712	0	712
May	744	24	720	4	740	0	740
June	720	28	692	4	716	0	716
July	744	24	720	4	740	0	740
August	744	24	720	0	744	0	744
September	720	28	692		720		
October	744	24	720		744		
November	720	28	692		720		
December	744	24	720		744		

\* January 16-22: URL issues. Some users report unable to access application.

\*\*February 17: URL issues. Some users unable to access application

\*\*\*August 28th: 3 users reported being knocked off of the system for a few minutes, but logged back on without issue. We are currently researching this issue and will modify this report once we receive the results if needed.

StatusBoard Unscheduled Down Time								
Date	Time Down Military Time	Time Up Military Time	Total Unscheduled Down Time HH:MM	Scheduled Availability HRS	Actual Availability HRS/MIN	% of time up	Cause	Actions
2/3/2015	11:04	11:07	0:03	24	23:57	99.99%	Emergency server maintenance fix	Application Server reboot
3/19/2015	19:00	19:02	0:02	24	23:58	99.99%	Emergency server proactive maintenance fix	Database reboot

