

# **Minnesota GIS/LIS Consortium**

## **2020 Salary Survey Report**



Data collected: March to April 2020  
Report date: December 2020

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## About the Consortium

### Mission Statement

To develop and support the GIS professional in Minnesota for the benefit of our state and its citizens.

The Minnesota GIS/LIS Consortium is a forum for communicating information to, and improving cooperation among, those interested in Geographic Information Systems (GIS) and Land Information Systems (LIS) in the State of Minnesota. Members include GIS users in local, state, federal and tribal government agencies; business and industry; educational institutions and nonprofits. Membership is **FREE** just by being on our mailing list.

The Minnesota GIS/LIS Consortium is an official 501c3 non-profit organization. More info about the MN GIS/LIS Consortium is available on our website at [www.mngislis.org](http://www.mngislis.org).

## About this report

### Timeframe

We collected survey responses between the dates of March 11<sup>th</sup> and April 3<sup>rd</sup>, 2020. Based on firsthand experience, we knew that at this same time GIS professionals were scrambling to keep up with their workloads as the COVID-19 pandemic rapidly accelerated in the US. In such an environment, many of our members likely did not have time to fill out the survey. To accommodate for this unique situation, we extended the survey deadline to April 15<sup>th</sup>, 2020.

### Response makeup

We received 313 total responses. Of these, 240 respondents (77%) worked in the government sector, 47 (15%) in the private sector, and 26 (8%) in the education or nonprofit sector. We will go into more detail on response makeup in the results section of this report.

### Methodology

To build the survey, the Board of Directors commissioned an ad hoc Salary Survey Committee. Members of this committee built the survey using ArcGIS Survey123 (version 3.8), an online survey tool available to the Consortium through existing ArcGIS software maintenance.

We advertised the survey through the Consortium's opt-in, biweekly e-announcement emails. We also posted the survey link multiple times on the Consortium's Twitter, Facebook, and LinkedIn pages.

While the 2020 survey was modeled after the 2014 survey, direct comparisons between the two surveys should not be made as the format, timing, and solicitation of the two surveys were not identical. The 2014 survey has also not been updated to adjust for inflation to reflect the relative dollar value in 2020.

### Testing for significance

Answers that received fewer than 16 responses (5% of all responses) are not included in the report results.

### Limitations

The results of the 2020 salary survey reflect the composition of the pool of survey respondents. Although the Consortium's membership includes GIS and LIS users in government agencies, business and industry sectors, and educational institutions, membership is weighted heavily toward public sector employees.

Survey results also suggest that GIS users who classify themselves as occasional users or are new to the GIS field were less likely to participate in the survey. As a result, the respondent pool could be smaller due to the lack of awareness or lower membership participation in the Minnesota GIS/LIS Consortium.

Lastly, there is an assumed level of subjectivity in survey responses. The GIS industry generally uses a common language to describe positions and specialties, but the terminology is not standardized.

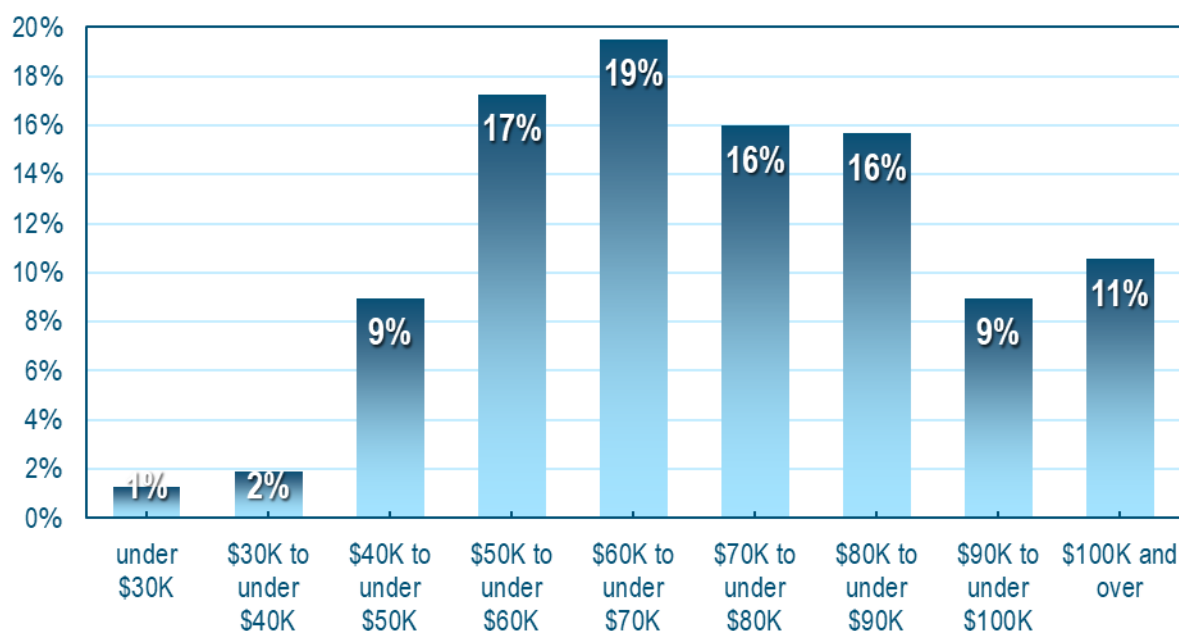
With these known limitations, we now present these results in this report as a snapshot of GIS profession salary trends in Minnesota for the year 2020.

### Accessibility

Some of the data in this report are presented in chart images. In those cases, we have also included the data in a table. If you have any accessibility issues with this report, please email us at [profdev@mngisliis.org](mailto:profdev@mngisliis.org).

## Report results

Unsurprisingly, the overall reported salaries varied widely. The median salary reported was \$70,720. The mean salary was \$72,447, suggesting a slight skew of the data by a greater number of outlier high salaries compared to outlier low salaries. The chart below further demonstrates this uneven curve.



Salary range	Number of responses	Percent of responses
Under \$30,000	4	1%
\$30,000 to under \$40,000	6	2%
\$40,000 to under \$50,000	28	9%
\$50,000 to under \$60,000	54	17%
\$60,000 to under \$70,000	61	19%
\$70,000 to under \$80,000	50	16%
\$80,000 to under \$90,000	49	16%
\$90,000 to under \$100,000	28	9%
\$100,000 and over	33	11%

The top five salaries reported were \$130,000 or higher. The bottom five salaries reported were \$34,000 or lower. About one third of respondents reported a salary below \$61,000. Another third reported a salary above \$80,000, with the middle third reporting salaries between those values.

No single attribute of a GIS job can fully explain the salary ranges. There are usually other related factors such as time spent as a GIS professional and at an organization that influence GIS salaries. We explore some of these factors in the remainder of this report.

### Salaries by compensation type

Perhaps unsurprisingly, salaried employees receive a higher median salary than hourly employees. Worthy of note, over two thirds of respondents who reported having an annual salary also have at least 10 years of experience using GIS.

Compensation type	Number of responses	Median salary	Lowest reported	Highest reported
Annual salary	138	\$80,000	\$34,000	\$147,000
Paid hourly	175	\$64,334	\$15,660	\$120,640

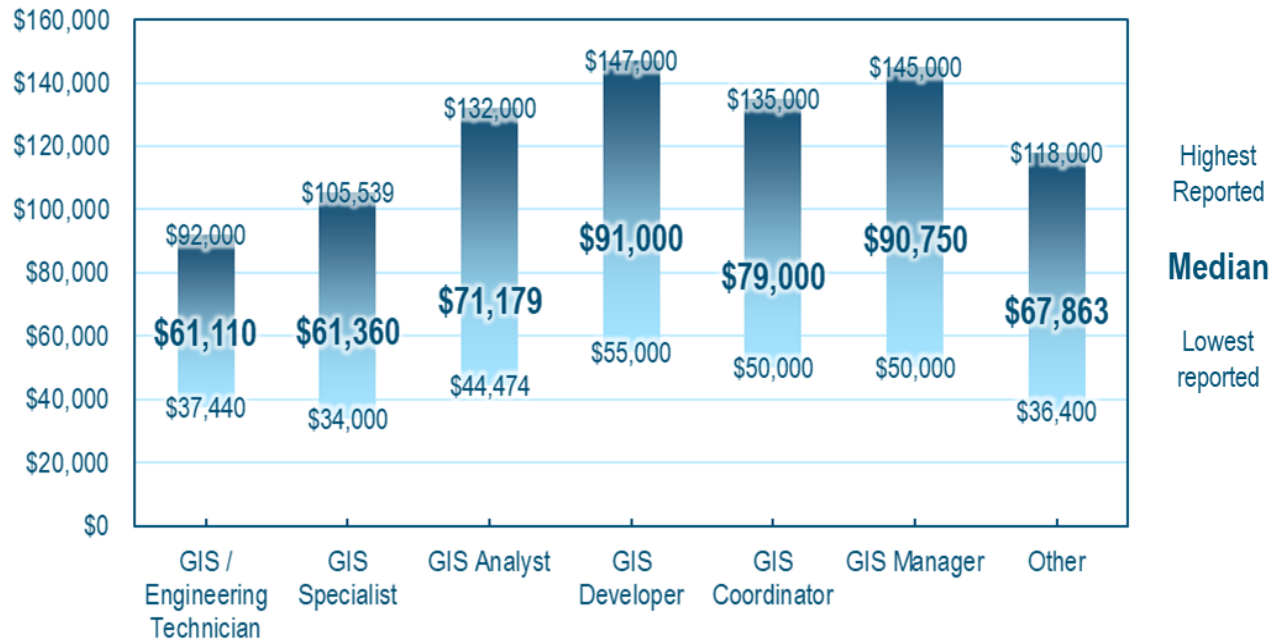
### Salaries by job title

Respondents were given a list of 11 job titles and asked to choose the description that best described their position. 6 of those titles, plus those who responded Other, had a large enough sample size to report.

Job title	Number of responses	Percent of responses
GIS Specialist	65	21%
Other	56	18%
GIS Analyst	47	15%
GIS Coordinator	42	13%
GIS/Engineering Technician	26	8%
GIS Developer	22	7%
GIS Manager	22	7%

Nearly half of respondents reported job titles of GIS Specialist, Analyst, or Coordinator.

Other job titles included positions in environmental and natural resources, research assistant/scientists, and various other GIS, data, and science-oriented titles.



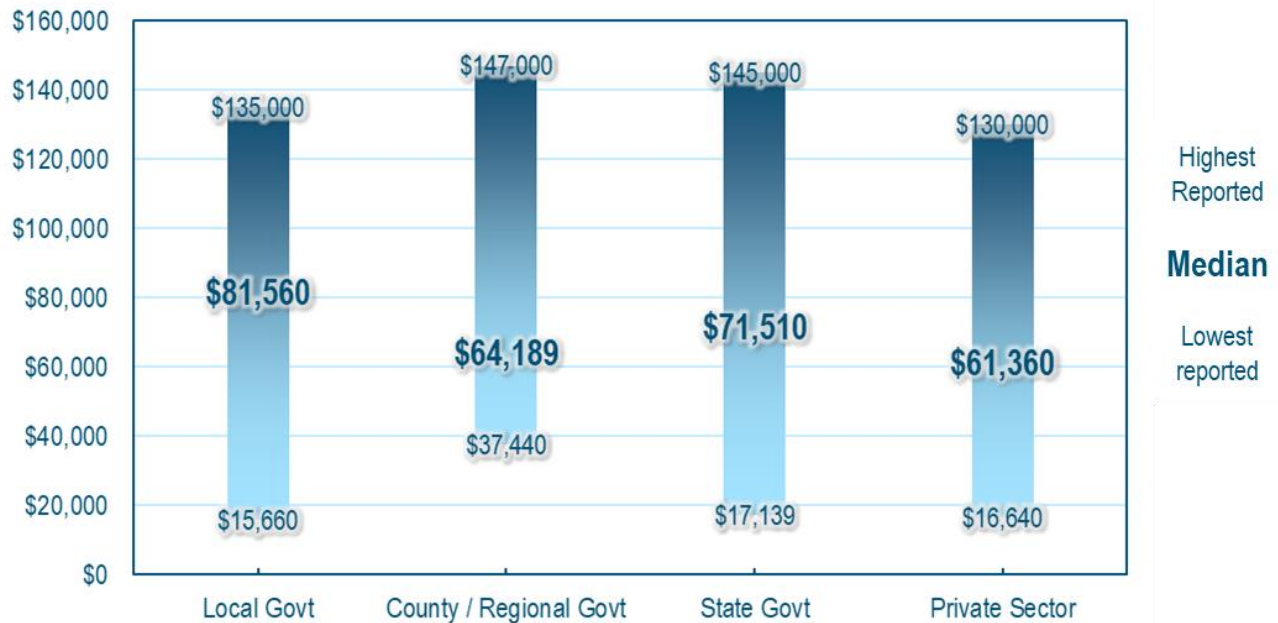
Job title	Median salary	Lowest reported	Highest reported
GIS / Engineering Technician	\$61,110	\$37,440	\$92,000
GIS Specialist	\$61,360	\$34,000	\$105,539
GIS Analyst	\$71,179	\$44,474	\$132,000
GIS Developer	\$91,000	\$55,000	\$147,000
GIS Coordinator	\$79,000	\$50,000	\$135,000
GIS Manager	\$90,750	\$50,000	\$145,000
Other	\$67,863	\$36,400	\$118,000

Job titles with the highest median salary were GIS Developer, Manager, and Coordinator. These three job titles also had very wide-ranging salaries reported.

17 of the 22 respondents (77%) who listed their title as a GIS Manager also had 10 or more years of experience.

## Salaries by sector

Over 75% of respondents work in some level of government. 15% work in the private sector, and the remaining respondents work in education or for nonprofits, neither of which cleared the threshold for number of responses to be able to report salary trends.



Sector	Median salary	Lowest reported	Highest reported
Local government	\$81,560	\$15,660	\$135,000
County / regional government	\$64,189	\$37,440	\$147,000
State government	\$71,510	\$17,139	\$145,000
Private sector	\$61,360	\$16,640	\$130,000



## Salaries by experience areas

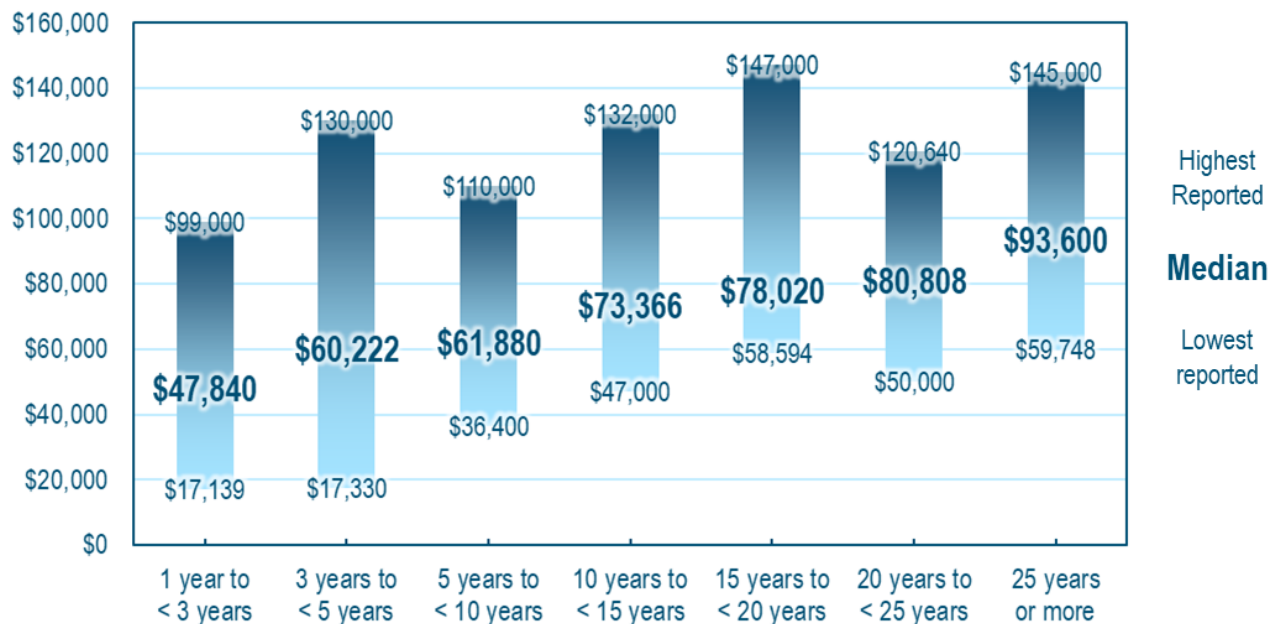
Respondents were able to select one or more work areas in which they had experience. Therefore, the median salaries below should not be read as discrete specialties.

Experience area	Median salary	Lowest reported	Highest reported
Govt (Local/Regional)	\$70,179	\$34,000	\$135,000
Govt (State/Federal)	\$70,720	\$17,330	\$145,000
Health/Human Services	\$80,000	\$45,101	\$147,000
IT	\$84,989	\$17,330	\$147,000
Natural Resources	\$70,860	\$34,000	\$147,000
Planning and Land Use	\$69,614	\$15,660	\$147,000
Public Safety	\$80,000	\$41,080	\$147,000
Survey/Land Records	\$65,853	\$15,660	\$147,000
Transportation	\$70,090	\$17,139	\$147,000
Utilities	\$78,624	\$37,440	\$147,000

Other areas that did not meet the minimum response threshold were defense and intelligence, K12 education, and higher education.

## Salaries by years of experience

57% of respondents have at least ten years of GIS experience. 23% have at least twenty years of experience. 19% have five years or less experience.



Experience	Median salary	Lowest reported	Highest reported
1 to less than 3 years	\$47,840	\$17,139	\$99,000
3 to less than 5 years	\$60,222	\$17,330	\$130,000
5 to less than 10 years	\$61,880	\$36,400	\$110,000
10 to less than 15 years	\$73,366	\$47,000	\$132,000
15 to less than 20 years	\$78,020	\$58,594	\$147,000
20 to less than 25 years	\$80,808	\$50,000	\$120,640
25 years or more	\$93,600	\$59,748	\$145,000

This chart is the most predictable one in the report. We see a steady increase in salaries as experience level grows, with larger increases in median salary occurring around 3 years, 10 years, and 25 years.

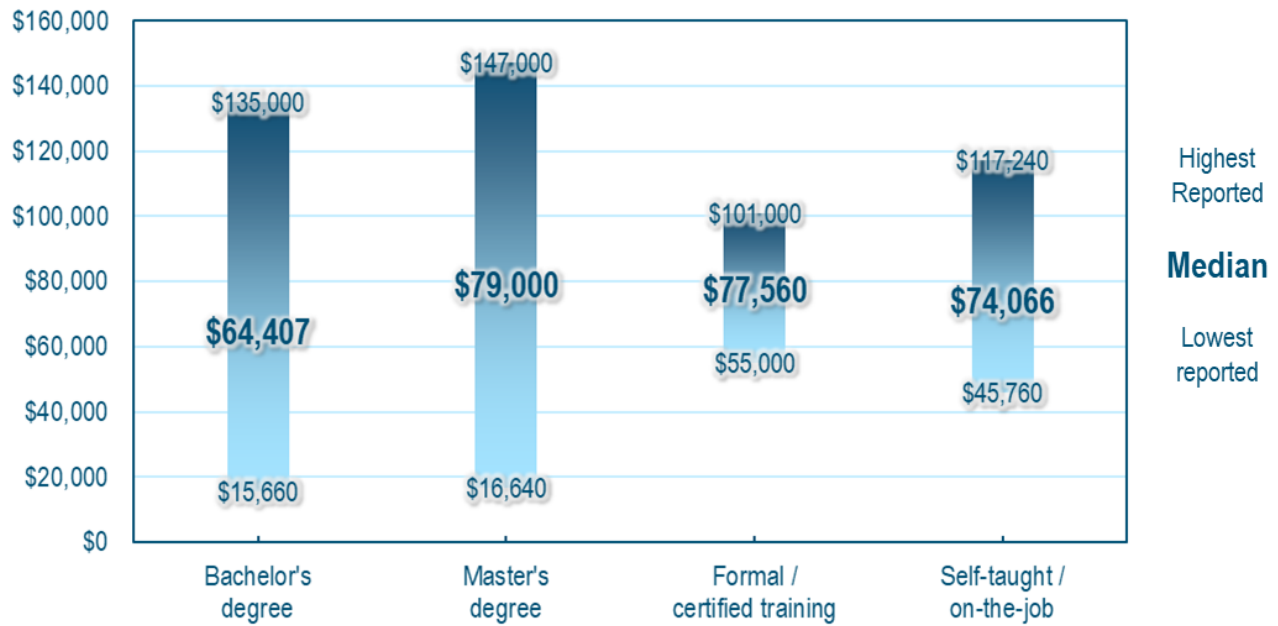
### Salaries by educational background

Respondents answered multiple questions about their education. First, they answered whether or not they have a degree in GIS or a closely related field.

Have a GIS or related degree?	Number of responses	Median salary	Lowest reported	Highest reported
Yes	243	\$69,472	\$15,660	\$147,000
No or currently pursuing	70	\$74,066	\$17,330	\$117,240

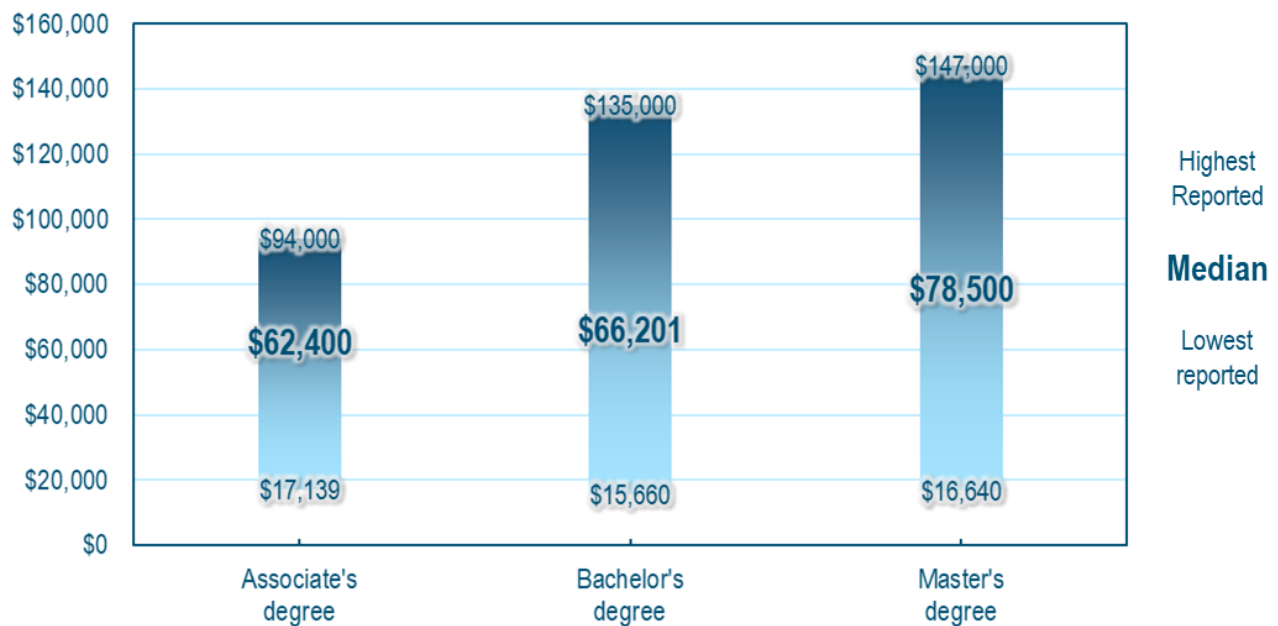
The most common degrees reported were Geography (111), GIS (98), and various natural and social sciences (32). Depending on the answer to the first question, respondents then answered the degree or alternative training or certificates they had received.

Of the 11 options, 4 of them received a large enough sample to report, as listed on the following page.



GIS Education	Median salary	Lowest reported	Highest reported
Bachelor's degree	\$64,407	\$15,600	\$135,000
Master's degree	\$79,000	\$16,640	\$147,000
Formal / certified training	\$77,560	\$55,000	\$101,000
Self-taught / on-the-job	\$74,066	\$45,670	\$117,240

Lastly, respondents shared their highest education level was regardless of their degree.

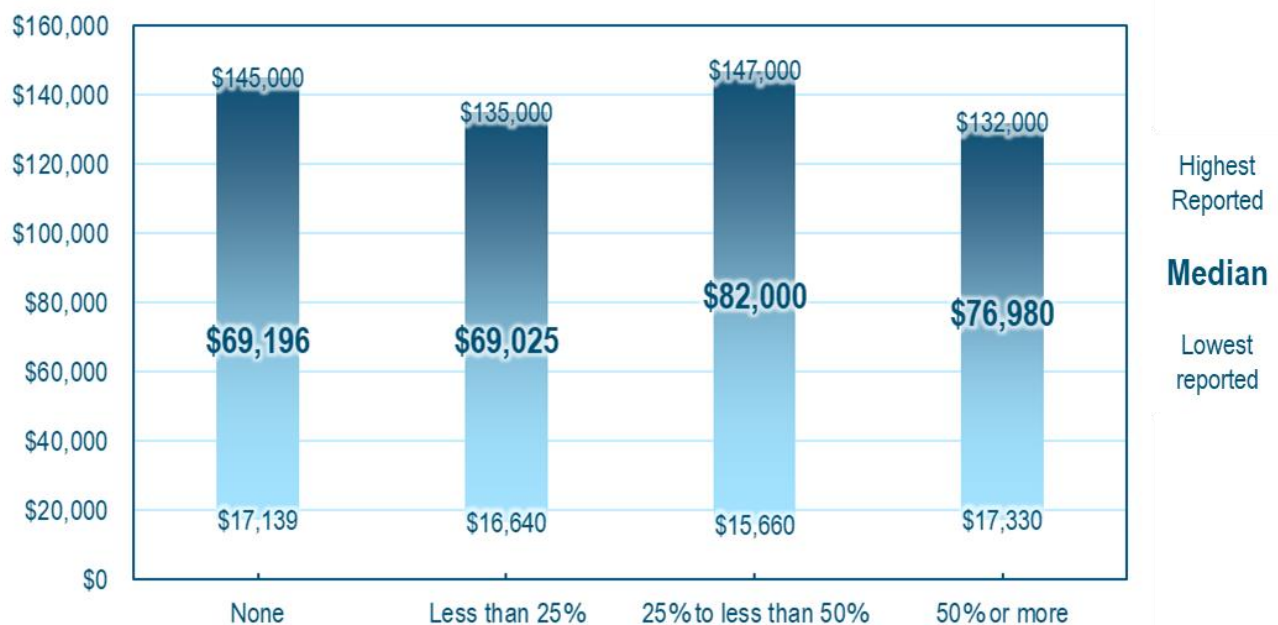


Overall Education	Median salary	Lowest reported	Highest reported
Associate's degree	\$62,400	\$17,139	\$94,000
Bachelor's degree	\$66,201	\$15,600	\$135,000
Master's degree	\$78,500	\$16,640	\$147,000

These two related questions provide some intriguing data. While a higher degree leads to a higher salary, respondents who developed their skills through non degree-based education have salaries similar to those who received their Master's. Given what we know about how the GIS field has grown in the last two decades, it is possible that those without GIS-related degrees lack them simply because those types of degrees were not offered during their college years. However, as with all the data provided in this report, we remind readers not to interpret correlation as causality.

### Salaries by computer programming level

GIS professionals who spend 25% or more of their time on programming see an increase in their compensation, with an exception for those who spend 50% or more of their time. It is unclear what underlying reasons there could be for this finding.



Computer programming	Median salary	Lowest reported	Highest reported
None	\$69,196	\$17,139	\$145,000
Less than 25%	\$69,025	\$16,640	\$135,000
25% to less than 50%	\$82,000	\$15,660	\$147,000
50% or more	\$76,890	\$17,330	\$132,000

## Salaries by proficiencies

Respondents were asked about their proficiencies in nine GIS skill areas. Proficiency levels in the following tables are grouped when a level did not meet the minimum response threshold.

Each proficiency includes a brief description of the salary trends. Respondents were not given definitions of the skill or proficiency level. As such, these categories should be interpreted as subjective.

### Desktop GIS software

There was no difference for desktop GIS users at the intermediate level or lower. Advanced users see an increase, though this was also the most common response.

Proficiency level	Number of responses	Median salary	Lowest reported	Highest reported
No experience/beginner	19	\$64,480	\$16,640	\$145,000
Intermediate	73	\$64,834	\$15,660	\$120,000
Advanced	221	\$72,800	\$17,330	\$147,000

### Cartography

Unlike desktop GIS software usage, there is a steady increase in median salary as proficiency in cartography increases, suggesting this specific desktop GIS skill has a more quantifiable value.

Proficiency level	Number of responses	Median salary	Lowest reported	Highest reported
No experience/beginner	44	\$63,740	\$15,660	\$147,000
Intermediate	127	\$69,000	\$17,139	\$120,640
Advanced	142	\$75,940	\$37,440	\$135,000

### Data analysis

While this is an extremely generic description of a proficiency, respondents who rate their data analysis skills as advanced have a much higher salary than those in other levels, reporting more than double a salary increase when comparing beginner and intermediate practitioners.

Proficiency level	Number of responses	Median salary	Lowest reported	Highest reported
No experience/beginner	31	\$60,000	\$15,660	\$145,000
Intermediate	135	\$66,060	\$17,330	\$135,000
Advanced	147	\$78,624	\$34,000	\$147,000

## Python

This proficiency is one of the most drastic differentiators in reported median salaries. The gap between no experience and advanced Python users is nearly \$15,000. The rise from beginner to intermediate is also notable.

Proficiency level	Number of responses	Median salary	Lowest reported	Highest reported
No experience	63	\$68,931	\$16,640	\$130,000
Beginner	153	\$66,498	\$15,660	\$145,000
Intermediate	61	\$77,043	\$41,000	\$118,000
Advanced	36	\$83,755	\$17,330	\$147,000

## SQL Server or other DBMS (Database Management System)

This proficiency is another significant differentiator. While the gap between beginner and intermediate practitioners is not as high as Python, the salary gap between GIS professional with no versus advanced SQL experience is \$24,000.

Proficiency level	Number of responses	Median salary	Lowest reported	Highest reported
No experience	63	\$61,000	\$16,640	\$130,000
Beginner	118	\$66,518	\$15,660	\$145,000
Intermediate	98	\$75,980	\$17,330	\$132,000
Advanced	34	\$85,000	\$37,440	\$147,000

## Remote sensing

While all of the proficiencies likely have some skew based on their value and use in different industries, remote sensing is perhaps one of the more niche skill sets. That being said, while the difference in median salary between those with no experience to intermediate experience is essentially level, respondents with advance experience reported a \$10,000 a year higher salary.

Proficiency level	Number of responses	Median salary	Lowest reported	Highest reported
No experience	67	\$71,478	\$40,000	\$147,000
Beginner	134	\$69,182	\$15,660	\$145,000
Intermediate	84	\$70,720	\$17,330	\$120,000
Advanced	28	\$80,770	\$50,000	\$120,640

## Web GIS

Web GIS is a broad skill and can mean many things. Most interesting for this proficiency is that over 68% of respondents reported having at least intermediate experience, a good sign that web GIS is here to stay as an essential tool!

Proficiency level	Number of responses	Median salary	Lowest reported	Highest reported
No experience	21	\$71,510	\$43,680	\$104,000
Beginner	78	\$69,098	\$16,640	\$145,000
Intermediate	131	\$68,578	\$15,660	\$135,000
Advanced	83	\$77,000	\$39,459	\$147,000

## Open-source GIS

As another niche and organization-specific proficiency, open-source GIS experience does not appear to have a notable impact on compensation for the reported respondent jobs. However, given that this skill is platform-specific, it may be that this skill is driven more by organizational needs than it is individual career tracks.

Proficiency level	Number of responses	Median salary	Lowest reported	Highest reported
No experience	101	\$71,478	\$34,000	\$135,000
Beginner	121	\$69,100	\$16,640	\$147,000
Intermediate/advanced	91	\$71,510	\$15,660	\$130,000

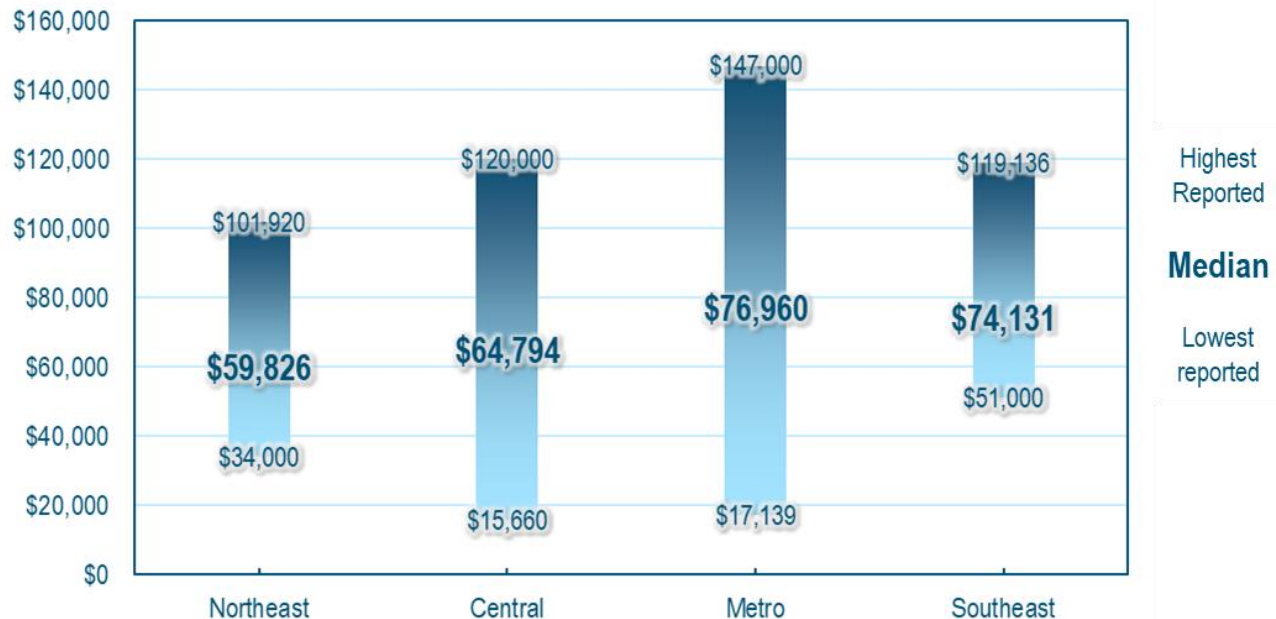
## Application development

Only 36% of respondents report intermediate or higher proficiency in this skill set, with an evident salary increase for those with advance application development experience. This trend appears to be in line with the higher median salaries reported by respondents who are GIS Developers.

Proficiency level	Number of responses	Median salary	Lowest reported	Highest reported
No experience	95	\$66,342	\$15,660	\$120,000
Beginner	106	\$69,050	\$35,360	\$145,000
Intermediate	74	\$71,788	\$17,330	\$120,640
Advanced	38	\$85,736	\$44,474	\$147,000

## Salaries by region

Respondents were asked to identify their general region in MN using a map included in the appendix of this report. Of the seven regions, four of them had a large enough sample size to report salaries for.



Region	Median salary	Lowest reported	Highest reported
Northeast	\$59,826	\$34,000	\$101,920
Central	\$64,794	\$15,600	\$120,000
Metro	\$76,960	\$17,139	\$147,000
Southeast	\$74,131	\$51,000	\$119,136

58% of respondents (181) were from the metro Twin Cities area. The next largest response pools were from the Central region (40), Northeast region (39), and Southeast region (19).



## Salaries by GISP certification

For those unfamiliar with the GISP certification, more information is available from the GIS Certification Institute at [www.gisci.org](http://www.gisci.org).

Respondents were asked if they've ever received a GISP and if they still have it. Of the 48 who responded yes, all but 9 still held the certification.

Received GISP	Number of responses	Median salary	Lowest reported	Highest reported
No	265	\$69,000	\$15,660	\$147,000
Yes	48	\$82,500	\$36,400	\$120,000

As of August 2020, the GIS Certification Institute listed 85 GIS professionals in Minnesota as currently having their GISP. These professionals first received their GISP as early as January 2004 and as recently as June 2020.

There is no overall consensus on the career value of the GISP certification. While the survey results show that respondents who have a GISP are compensated at a higher level, the qualifications required for a GISP are likely a significant factor in the disparity.

## Salaries by gender identity

Respondents were asked to choose one or more gender identities, describe their own identity, or choose not to answer. The numbers reported here include any respondents who include the listed gender identity as either their only or one of their selections.

Gender identity	Number of responses	Median salary	Lowest reported	Highest reported
Female	104	\$64,791	\$15,660	\$115,000
Male	189	\$74,000	\$16,640	\$135,000
Other or prefer not to answer	21	\$77,272	\$48,755	\$147,000

The numbers reported are stark, but they are also consistent with general trends seen in the professional world. GIS professionals who identify as female earn a median salary over \$9,000 below their male peers.

18 of the 22 respondents who reported being a GIS Manager identify as male.  
15 of the 22 respondents who reported being a GIS Developer identify as male.

3 of the top 25 earners identify as female. 18 identify as male, and 4 preferred not to answer.

## Salaries by race and ethnic identity

Similar to gender identity, respondents were able to choose one or more race/ethnic identities, describe their own identity, or choose not to answer. The numbers reported here include any respondents who include the listed each race/ethnic identity as either their only or one of their selections.

Race/Ethnic identity	Number of responses	Median salary	Lowest reported	Highest reported
Not white	20	\$60,000	\$15,540	\$100,000
Prefer not to answer	24	\$82,486	\$50,000	\$147,000
White	276	\$70,450	\$15,660	\$135,000

As with gender identity, these numbers highlight some clear discrepancies. GIS professionals who identify as non-white earn a median salary over \$10,000 below their white peers.

19 of the 22 respondents who reported being a GIS Manager identify as white.  
18 of the 22 respondents who reported being a GIS Developer identify as white.

The top 30 earners identified as white or preferred not to answer.

## Salaries by disability

We did not receive a large enough sample size to report salaries based on disability.

We can report that 89% of respondents do not have a disability, and those respondents reported a median salary of \$70,720. The remaining 11% of respondents who answered yes, prefer not to answer, or skipped the question reported a median salary of \$69,000.

## Conclusions

The vast majority of responses came from GIS professionals working in the government sector. The median reported salary was \$70,720. The middle third of reported salaries fell in range of \$61,000 to \$80,000. The highest earning GIS positions reported were GIS Developer, Manager, and Coordinator.

Over half of respondents have 10 or more years of experience. About a quarter have over 20 years, and a fifth have 5 years or less. Median salaries based on experience had a consistent increase over time, with larger median increases around the 3-year, 10-year, and 25-year marks.

On GIS skills and proficiencies, the largest salary differentiators reported were advanced skills in SQL or other DBMS, Python, and application development. Advanced experience with cartography, remote sensing, and data analysis had a medium range impact. The least notable differentiators were advanced skills in desktop GIS, web GIS, and open-source GIS.

### A note on equity

The Consortium's mission, to develop and support the GIS professional in Minnesota for the benefit of our state and its citizens, does and should include every GIS professional. The responses on gender, racial, and ethnic identity revealed that our industry is not immune to the pervasive pay gaps seen in the United States. We will use this information, along with all the data collected in the survey, to work to ensure that our mission applies to all of our members.

### Acknowledgements

The Minnesota GIS/LIS Consortium Board of Director thanks our members that contributed the data for this report. Without your participation, we would not have been able to provide this data!

Many people were involved in the collection of this data and preparation of this report. In particular we would like to thank:

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- Sharvari Sangle

Report prepared for the MN GIS/LIS Consortium by

*John Nerge*

John Nerge, GISP  
2019 Board Chair

## Supplemental materials

### Survey questions

As mentioned before, we modeled many of these questions after the 2014 salary survey. \* refers to a required question.

#### Page 1 of 3 – About Your Job

##### 1) Which of the following best describes your job position? \*

*Choose one*

- |   |  |
|---|--|
| <input type="checkbox"/> GIS Intern/Seasonal        | <input type="checkbox"/> Consultant              |
| <input type="checkbox"/> GIS/Engineering Technician | <input type="checkbox"/> GIS Developer           |
| <input type="checkbox"/> GIS/CAD/IT Systems Support | <input type="checkbox"/> GIS Coordinator         |
| <input type="checkbox"/> GIS Specialist             | <input type="checkbox"/> GIS Manager             |
| <input type="checkbox"/> GIS Analyst                | <input type="checkbox"/> Surveyor                |
| <input type="checkbox"/> Educator/Trainer           | <input type="checkbox"/> Other (please describe) |

##### 2) What is your company's primary sector? \*

*Choose one*

- |                                     |                                    |
|-------------------------------------|------------------------------------|
| <input type="checkbox"/> Education  | <input type="checkbox"/> Nonprofit |
| <input type="checkbox"/> Government | <input type="checkbox"/> Private   |

##### 2a) What level of government \*

(conditional, if respondent chose govt for question 2)

*Choose one*

- |  |                                  |
|--|----------------------------------|
| <input type="checkbox"/> Local           | <input type="checkbox"/> State   |
| <input type="checkbox"/> County/Regional | <input type="checkbox"/> Federal |

##### 2a) What level of education \*

(conditional, if respondent chose government for question 2)

*Choose one*

- |                                    |  |
|------------------------------------|--|
| <input type="checkbox"/> K12       | <input type="checkbox"/> Other (please describe) |
| <input type="checkbox"/> Higher Ed |  |

**3) In what areas do you work or specialize? \***

*Choose all that apply*

- |   |   |
|---|---|
| <input type="checkbox"/> Defense and Intelligence           | <input type="checkbox"/> Natural Resources      |
| <input type="checkbox"/> K12 Education                      | <input type="checkbox"/> Planning and Land Use  |
| <input type="checkbox"/> Higher Education                   | <input type="checkbox"/> Public Safety          |
| <input type="checkbox"/> Government (local and/or regional) | <input type="checkbox"/> Surveying/Land Records |
| <input type="checkbox"/> Government (state and/or federal)  | <input type="checkbox"/> Transportation         |
| <input type="checkbox"/> Health and Human Services          | <input type="checkbox"/> Utilities              |
| <input type="checkbox"/> IT                                 | <input type="checkbox"/> None of these areas    |

**4) How would you rate your proficiency in the following areas? \***

*Ranking options*

- |  |                                       |
|--|---------------------------------------|
| <input type="checkbox"/> No experience | <input type="checkbox"/> Intermediate |
| <input type="checkbox"/> Beginner      | <input type="checkbox"/> Advanced     |

*Areas*

- |   |  |
|---|--|
| <input type="checkbox"/> Desktop GIS software     | <input type="checkbox"/> Remote sensing          |
| <input type="checkbox"/> Cartography              | <input type="checkbox"/> Web GIS                 |
| <input type="checkbox"/> Data analysis            | <input type="checkbox"/> Open source GIS         |
| <input type="checkbox"/> Python                   | <input type="checkbox"/> Application development |
| <input type="checkbox"/> SQL Server or other DBMS |  |

**5) Do you have a degree in GIS or a closely related field? \***

*Choose one*

- |                              |   |
|------------------------------|---|
| <input type="checkbox"/> Yes | <input type="checkbox"/> Currently pursuing |
| <input type="checkbox"/> No  |   |

**5a) What is the highest level degree you have in GIS or a closely related field? \***

(conditional, if respondent chose yes for question 5)

*Choose one*

- |                                     |                                  |
|-------------------------------------|----------------------------------|
| <input type="checkbox"/> Associates | <input type="checkbox"/> Masters |
| <input type="checkbox"/> Bachelors  | <input type="checkbox"/> Ph.D.   |

**5b) What did you receive your degree in? \***

(conditional, if respondent chose yes for question 5)

*Open ended response*

**5a) Have you done or received any of the following? \***

(conditional, if respondent chose no or currently pursuing for question 5)

*Choose all that apply*

- |   |  |
|---|--|
| <input type="checkbox"/> Undergraduate GIS certificate    | <input type="checkbox"/> Partially completed a GIS program, no longer pursuing |
| <input type="checkbox"/> Graduate GIS certificate         | <input type="checkbox"/> Self taught or learned GIS on-the-job                 |
| <input type="checkbox"/> Formal or certified GIS training | <input type="checkbox"/> None of these   |

**6) Have you ever received a GIS Professional (GISP) certification? \***

*Choose one*

- |                              |                             |
|------------------------------|-----------------------------|
| <input type="checkbox"/> Yes | <input type="checkbox"/> No |
|------------------------------|-----------------------------|

**6a) Are you currently a certified GISP? \***

(conditional, if respondent chose yes for question 6)

*Choose one*

- |                              |                             |
|------------------------------|-----------------------------|
| <input type="checkbox"/> Yes | <input type="checkbox"/> No |
|------------------------------|-----------------------------|

**7) How much computer programming is included in your job responsibilities? \***

*Choose one*

- |  |   |
|--|---|
| <input type="checkbox"/> None          | <input type="checkbox"/> 25% to less than 50% |
| <input type="checkbox"/> Less than 25% | <input type="checkbox"/> 50% or more          |

Page 2 of 3 – About Your Salary

**8) Are you paid annually or by the hour? \***

*Choose one*

- |   |   |
|---|---|
| <input type="checkbox"/> Receive an annual salary | <input type="checkbox"/> Paid by the hour |
|---|---|

**8a) What is your annual base salary? \***

(conditional, if respondent chose receive an annual salary for question 8)

*Open ended response*

**8a) What is your base hourly rate? \***

(conditional, if respondent chose paid by the hour for question 8)

*Open ended response*

**8b) What is your base hourly rate? \***

(conditional, if respondent chose paid by the hour for question 8)

*Open ended response*

**9) Is your job considered full time, part time, or seasonal/temporary? \***

*Choose one*

- |                                    |  |
|------------------------------------|--|
| <input type="checkbox"/> Full time | <input type="checkbox"/> Contract/Internship/Other temporary |
| <input type="checkbox"/> Part time |  |

Page 3 of 3 – About You

**10) What is your primary office's ZIP code? \***

*Open ended response*

**11) What is your primary office's regional location? \***

*Choose one*

[View a reference map](#)

- |                                    |  |
|------------------------------------|--|
| <input type="checkbox"/> Northwest | <input type="checkbox"/> Southwest                           |
| <input type="checkbox"/> Northeast | <input type="checkbox"/> South Central                       |
| <input type="checkbox"/> Central   | <input type="checkbox"/> Southeast                           |
| <input type="checkbox"/> Metro     | <input type="checkbox"/> Outside Minnesota (please describe) |

**12) How much GIS experience do you have? \***

*Choose one*

- |  |   |
|--|---|
| <input type="checkbox"/> Less than 1 year              | <input type="checkbox"/> 10 years to less than 15 years |
| <input type="checkbox"/> 1 year to less than 3 years   | <input type="checkbox"/> 15 years to less than 20 years |
| <input type="checkbox"/> 3 years to less than 5 years  | <input type="checkbox"/> 20 years to less than 25 years |
| <input type="checkbox"/> 5 years to less than 10 years | <input type="checkbox"/> 25 years or more               |

**13) What is your highest education level? \***

*Choose one*

- |  |   |
|--|---|
| <input type="checkbox"/> Did not graduate High School diploma or receive GED | <input type="checkbox"/> Bachelors degree |
| <input type="checkbox"/> High School diploma or GED                          | <input type="checkbox"/> Masters degree   |
| <input type="checkbox"/> Some college, no degree                             | <input type="checkbox"/> Ph.D.            |
| <input type="checkbox"/> Associates degree                                   |   |

**14) What percent of time in your job do you spend using GIS and related applications? \***

*Choose one*

- |   |   |
|---|---|
| <input type="checkbox"/> Less than 10%        | <input type="checkbox"/> 50% to less than 75% |
| <input type="checkbox"/> 10% to less than 25% | <input type="checkbox"/> 75% or more          |
| <input type="checkbox"/> 25% to less than 50% |   |

**15) Which of the following best describe your gender identity? \***

*Choose all that apply*

- |  |  |
|--|--|
| <input type="checkbox"/> Female                        | <input type="checkbox"/> Non-binary              |
| <input type="checkbox"/> Male                          | <input type="checkbox"/> Prefer not to answer    |
| <input type="checkbox"/> Gender Variant/non-conforming | <input type="checkbox"/> Prefer to self-describe |

**16) Which of the following best describe your racial and ethnic identity? \***

*Choose all that apply*

- |  |   |
|--|---|
| <input type="checkbox"/> American Indian/Alaska Native | <input type="checkbox"/> Asian/Indian                     |
| <input type="checkbox"/> Black/African-American        | <input type="checkbox"/> Hispanic/Latino/Spanish- origin  |
| <input type="checkbox"/> Middle Eastern/North African  | <input type="checkbox"/> Native Hawaiian/Pacific Islander |
| <input type="checkbox"/> Two or more races             | <input type="checkbox"/> White                            |
| <input type="checkbox"/> Prefer not to answer          | <input type="checkbox"/> Prefer to self-describe          |

**17) Do you have a disability?**

*Please respond at your comfort level*

- |                              |   |
|------------------------------|---|
| <input type="checkbox"/> Yes | <input type="checkbox"/> Prefer not to answer |
| <input type="checkbox"/> No  |   |

**17a) Has the Consortium been responsive to your requests for accommodations at workshops, conferences, and events?**

(conditional, if respondent chose yes for question 17)

*Choose one*

- |                              |  |
|------------------------------|--|
| <input type="checkbox"/> Yes | <input type="checkbox"/> Prefer not to answer        |
| <input type="checkbox"/> No  | <input type="checkbox"/> I haven't made any requests |

**18) Do you have any additional comments?**

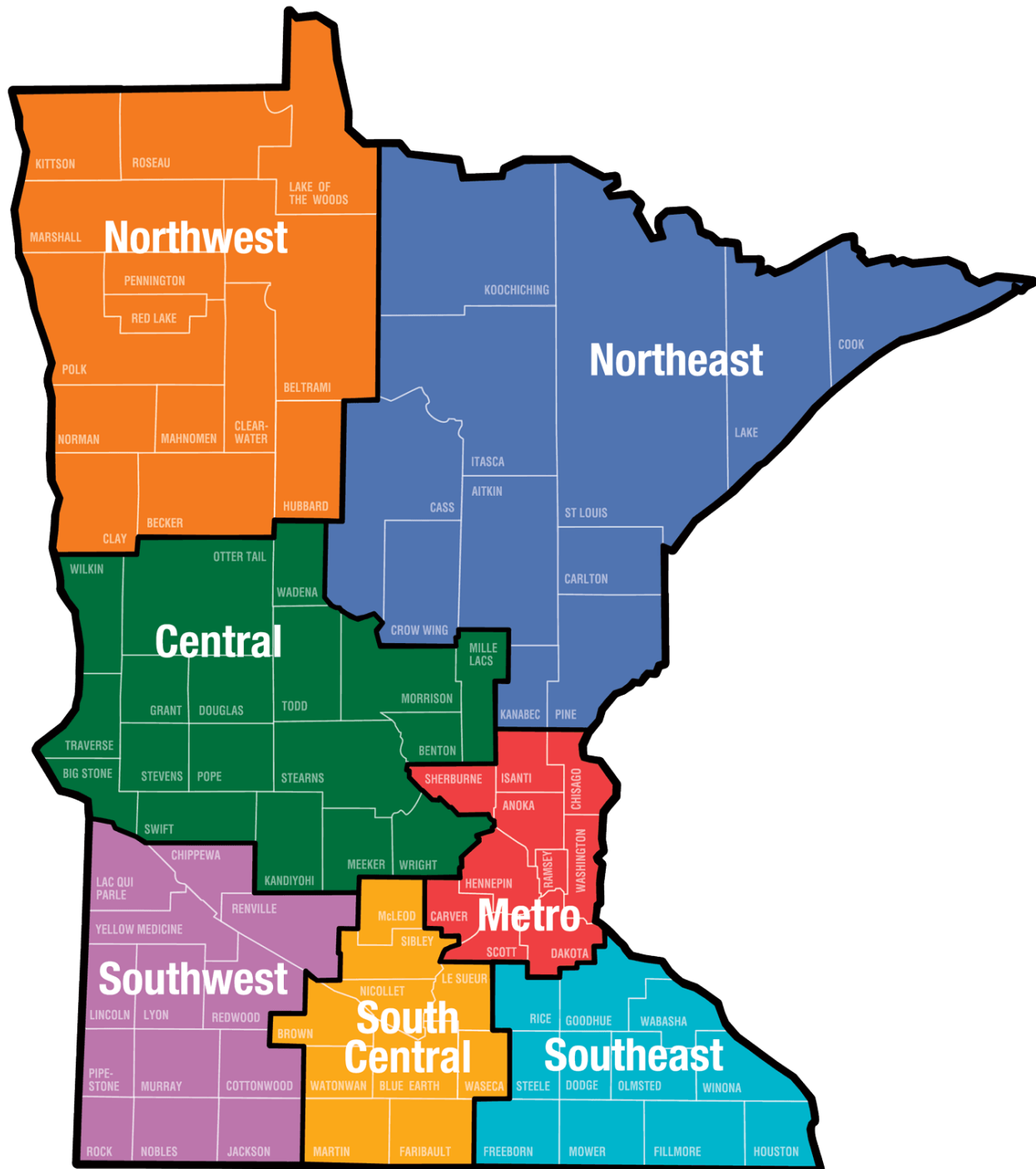
*Open ended response*



## Survey response regions

Map source: Minnesota Emergency Communications Board (MNECB)

<https://www.mnecb.org>



## Survey response map

For general reference, we created a map to show where survey responses came from by ZIP code. Not surprisingly, the map shows higher response rates in denser areas of the state.

