



Director of Technology Integration (GISP)

Job Description

A GIS Specialist uses Geographic Information Systems (GIS) technology to **analyze, interpret, and visualize spatial data, supporting decision-making in fields like environmental resource management**. They collect and maintain GIS data, run analyses and create maps that help people understand places and patterns, and provide support as a consultant to their clients.

Salary

Entry — \$65,000
Middle — \$110,000
Top — \$165,000

Core Tasks

- Use GIS software to analyze spatial and non-spatial data to identify patterns, relationships, and trends.
- Collaborate with cross-functional teams to apply GIS analysis to projects. Present findings and recommendations to stakeholders.
- Collect, verify, and organize spatial data from various sources (e.g., satellite imagery, GPS data, maps, spreadsheets). Build and maintain GIS databases, ensuring data accuracy and integrity. Perform data quality checks and corrections.

Workplace / Environment

- Work hours**
Approx. 40 hours/week
(At key milestones overtime work may be required to meet deadlines)
- Environment**
Typical office environment, some travel to meet with clients. Collecting data in the field can also be part of some GIS positions.
- Travel**
Dependent on **project location**, within company jurisdiction

Education / Prerequisites

Education Level

Bachelor's degree in geography, cartography, computer science, or a related field required.

Licensing

The GISP certification program is accredited by CESB.

Pre-Job Preparation

5+ years of experience managing GIS projects, with a proven track record of successful project delivery.

Experience

Soft Skills

- Excellent Communication
- Critical-thinking
- Detail-oriented

Technical Skills

- Strong skills in GIS software such as ArcGIS, QGIS
- Strong analytical skills
- Data management



Career Path: Jennifer Schmidt

About Me

Director of Technology Integration
at Herrera Environmental Consultants

Master of Applied Sciences from John
Hopkins Bloomberg School of Public Health

Early Decisions

"When I was like eight or nine, I decided I wanted to be an anesthesiologist. I figured I was going to be in school for a long time and then be a doctor. I was convinced that that's exactly how it was going to work out. **Life has a way of putting you on the path you're meant to be on.**"

College Changes

"When I started at University of Washington, I took a couple quarters of biochemistry and I realized that that path was a little bit too dry, for lack of a better word. I had a little bit of exploration and thought I might go into teaching. I started the prerequisite courses for doing a master's in teaching and I had to take a geography class, I **absolutely loved it**. Space and place impacts every single thing that we do. So I decided that I was going to major in geography. Before I got to college, I didn't know GIS existed, and my dad said that I should give it a shot, because that's a pretty practical way to use a geography degree. So I took one class and **I was just hooked**. It was just that perfect mix of, something that **combined my passion for analytics, and my need to be creative**, with immediate application to problem solving."

Into the Real World

"When I was getting close to graduating, the job announcement for Herrera popped up. I was actually still in school when I applied, so I hadn't really given a lot of thought to exactly what I was looking for, but I liked their mission, and so I applied. I think I'm kind of an anomaly in the fact that I've been at this job for **my entire professional career**. I finished my last final on a Wednesday and I started on Friday. I got very lucky that this the it's a great company to work for, and I get to do work that I'm passionate about. So I **never felt like going anywhere else.**"

Combining Passions

"I've always been a **pretty creative person**. I was and I'm still a musician. I always thought that there'd have to be a trade off, in my spare time I will be creative, and I'll do my technical job, and those two won't necessarily meet. It really ended up being a great thing for me when I found something that **allowed me to have that creative expression**. Because GIS is cartography too, it has an artistic element to it and a creative visual element. There is both a creative component to it and sort of an ethical responsibility, which I think is cool. And there's the problem solving every day, there's some kind of new problem or challenge that me and my team have to figure out."

What's GIS?

"I would describe GIS, Geographic Information Systems, as a super-powered map software. GIS lets us overlay all kinds of different information, like population density or where species live, and to put that information on a map, so that you can see how the spatial interactions play out. Everything in our life is spatial, so it helps to see patterns that you might miss if you weren't able to look at all of that stuff on a map.""

About My Job

Pros

- "One of the things I really love about GIS is that it combines the creative side of map making and problem solving with the analytical, more typical math stuff. It **scratches both itches**, for me."
- "**I'm never bored**. I've been working at this company for over 20 years, and I still find my job to be interesting and exciting. It's good to have a job where I feel like I'm doing something positive. I have a very technology-centric job that can help to really find creative solutions to environmental problems. And making pretty maps is fun."

Fieldwork

- "So I **primarily work in the office**, but the other GIS folks on my team do field work on a fairly regular basis. Usually things related to collecting data with GPS equipment. We also have some folks who go out and fly drones to collect imagery and elevation data that we can use back in the office to help support our mapping projects."

Cons

- "I think a con in consulting, in general, is that we bill our time, we have budgets that we have to stick to. So I **don't always get to dive as deep** into something as I want to, because we have to make sure that the company's making money and we're getting paid for the time that we spend."

Office Work

- "We do work related to water, restoration, and sustainable development. I'm really lucky that I get to use **GIS to support all of those areas**."
- "A given day for me is an adventure. I do a lot of work related to planning for parks, making sure that parks are in the the places where folks really could benefit from them most. I get to help support the whole range of things that my company works on with maps and data. So **it's pretty great**."
- "I really like projects that have an **equity and social justice component** to them. We can make sure that investments for parks are being targeted to where they're needed the most."

Skills

- "I think that having a **strong analytic foundation is important**. I took math beyond what I had to in high school, up through calculus, and I think that was really helpful for me to be able to understand all of the background stuff happening with GIS."
- "But there's also a lot of overlap with **other types of related technology**, like Python coding or R, or web development. I think just **having a lot of curiosity** and testing out a lot of different interests that are related to a job like this is good."
- "**An artistic eye is important too**. I think that ability to synthesize information, whether that be through maps or related technologies, wasn't really something I was that interested in early in my career, but it's been something that is the way the world is heading."

Education/Experience

- "It's helpful to have a **real world understanding** of the direction that you want to use GIS in. A lot of college programs combine GIS and environmental science now, just because it's such an important use case. But there are other ways that people go with GIS. I think just having a **really solid foundation with the software** and **willingness to learn is important**."
- "It's pretty common now to have GIS in another department. So when I'm hiring new folks, we require **at least a certificate** in GIS, **ideally a full bachelor's degree** in it, just to make sure that folks have had plenty of exposure to the software and are ready to start using it."

The Future of GIS

"It's been amazing the amount of change over the 20 years that I've been working."

"GIS went from something that people used, but it **wasn't that pervasive**. Now it's everywhere. I think that the big thing that is in the mix now, not just for GIS but for everything, is AI. Figuring out how to integrate AI in a way **that is more collaborative**. I guess that it makes the work easier, and maybe frees up time for the human brain to focus on higher level things. I go to this GIS conference every year in San Diego, and they've been talking for an increasing amount over the last few years about the role of AI and how it's going to just change the nature of how GIS analysts interact with the software. Some things that right now take a long time to do manually, the machines are going to be a lot better at doing those. But I have heard that the folks at ESRI are saying that AI is **not going to replace GIS analysts**, because you still need a person to interpret the output of an analysis. I think it's going to **change the day to day of how work is done**. But I don't think that GIS analysts are going to be replaced by AI at least not any time in the near future."

About Sustainability Ambassadors

We are here to **RAPIDLY ADVANCE A SUSTAINABLE FUTURE**. Empowering **YOUTH** to catalyze community sustainability, **TEACHERS** to integrate rigor with relevance for real-world impact, **COMMUNITY** to drive collective impact.

We support a year-round training program for over 60 highly motivated middle and high school youth, a Teacher Fellows Program, City-County CAP internships, and college-level interns, and work with hundreds of educators to design new models of problem-based, place-based learning around **a shared vision of educating for sustainability**.

Your Green Jobs Future

Ready to explore your future in green jobs? Use [Map your Career](#) to map your trajectory!

Find career opportunities near you now! Use [Career Connect - Washington's](#) tool to find programs to build your career skills.

Interested in a future in solar? Take a look at the [Solar Jobs Census](#) to track solar job growth nationwide.

Explore [RVC's opportunities](#) to work with organizations led by communities of color.

Dive into the [Center of Excellence for Clean Energy's](#) robust career tools in the sustainable energy sector.

Grow your professional sustainability skillset with the [Seattle Youth Good Program](#).

See Seattle's [Clean Energy Resources Map](#) to examine what the city is planning for a greener energy future.

Check out the [U.S. Green Building Council](#) to explore the sector's current opportunities. :

Funder Acknowledgement



King County

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Wastewater Treatment Division

