



GIS Certification Institute

# GISCI & GISP Certification

*The Benefits of Certification in the  
Geospatial Profession*

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GIS CERTIFICATION INSTITUTE

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# THE GIS CERTIFICATION INSTITUTE

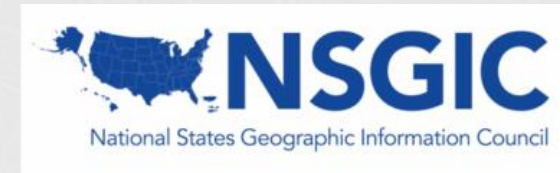
**The GISCI is a not-for-profit organization that provides the geographic information systems (GIS) community with an internationally-recognized, complete certification program, a GISP® Certification.**

# Jochen Albrecht, GISP

How did Jochen get to be a GISP?

# GISCI Member Organizations

GISCI is composed of a group of Member Organizations representing the range of the geospatial community. One of the strengths of GISCI has been strong and diversified Board representation.



**AAG**

AMERICAN ASSOCIATION  
of GEOGRAPHERS



*University Consortium for*  
**GEOGRAPHIC INFORMATION SCIENCE**



**GIS Certification Institute**



# GISP PROCESS

**Requirements & Costs for  
New and Recertifying GISPs**

# GISP Certification Requirements

## Initial GISP: Portfolio + Exam

- Sign **Ethics Statement**
- Submit **Portfolio** Application online
  - Meet point requirements in Education, Experience, and Contributions to the Profession
  - Requires a minimum of 4 years of Geospatial Experience (employment)
- Pass GISCI Geospatial Core Technical Knowledge **Exam**

***3 Year Certification Period***

*NOTE: You can complete the exam and portfolio in the order of your choosing.*

## Recertification: Portfolio Only

- Sign **Ethics Statement**
- Submit **Portfolio** Application online
  - Meet point requirements in Education and Contributions to the Profession (Experience Points optional)

***3 Year Recertification Period***

# GISP Certification Costs

## Initial GISP

- Application Fee: \$100 (a one-time fee)
- Portfolio Review Fee: \$100
- Exam Fee: \$250 (\$300 if international)
- Annual Maintenance Fee: \$95/year  
*(starts in the 2<sup>nd</sup> year of initial certification period)*

### **3 Year Certification Period**

*NOTE: If you do not pass the exam and need to retake, you will be charged the \$250 exam fee to retake but not the \$100 application fee.*

## Recertifying GISP

- Annual Maintenance Fee:  
\$95/year or single payment of \$285

### **3 Year Recertification Period**

# Portfolio Requirements

- Education
  - Credentials
  - Courses
  - Conference/webinar attendance
- Experience
  - Years in position of data analysis, system design, programming, etc.
  - Years in data compilation or teaching
  - Years as a GIS user
  - Supervisory bonus
- Contributions to the Profession
  - Publications
  - Prof. association involvement
  - Conference participation
  - Workshop instruction
  - Conference presentation
  - GIS awards received
  - GIS volunteer efforts
  - GIS Day, etc.



# EXAM CREATION & PREPARATION

**Exam Creation, Content, and  
Study Resources**

# Why an Exam?

- Provides for a measurable competency level
- Provides increased visibility for GISP Professional Certification
- Builds upon the established, successful, recognized GISP Portfolio
- Industry shows increased use of GISP as a preferred credential in job descriptions
- Provides for increased participation for students and early career professionals
- Provides a basis for a move to more specialized certifications
- **It continues to advance and consolidate the profession**

# GISP Exam Overview

## Exam Creation:

- Written by **GISPs** for GISP Certification
- Composed at a 4 Year Experience Level
- Centered on Applied Knowledge
- Based on the jobs performed by the interviewed GISPs – 45 KSAs\* were selected for exam coverage
- KSAs divided into 10 Content Areas

*\*Knowledge, Skills, Abilities*

## Exam Process/Calendar:

- Two exam offerings each year in early June & December
- Exam can be taken at any time in a person's career
- Students can test at the time they graduate or before
- There is a 6-year window to complete all parts of the Certification process. The 6-year clock starts once you either pass the exam or get a Portfolio approved.



# Selection of Exam Knowledge Areas

- Started with the GISP community
- Used a combination of job analysis, DACUMs, and focus groups to examine major tasks used in the GISP community
- The total number of GIS Knowledge areas exceeds 400+, as defined by the GIS&T Body of Knowledge
- GISCI found approximately 10% of total GIS knowledge areas relevant to a GISP professional across the range of GIS certified professionals
- 45 KSAs (knowledge, skills, abilities) were identified for exam coverage

# GISP Exam Blueprint

## 10 Knowledge Categories

1. Conceptual Foundations	10%
2. Geospatial Data Fundamentals	15%
3. Cartography & Visualization	10%
4. Data Acquisition	11%
5. Data Manipulation	11%
6. Analytical Methods	11%
7. Database Design & Management	10%
8. Application Development	7%
9. Systems Design & Management	7%
10. Professional Practice	8%

# GISP Exam Blueprint

**10 Knowledge Categories break down into 45 KSAs, for example:**

## 1. Conceptual Foundations 10%

- **101** Understanding of datums, coordinate systems, & projections
- **102** Understanding of representation of discrete features & continuous phenomena in GIS
- **103** Knowledge of earth geometry & its approximations
- **104** Knowledge of basic geomatics and relationships to GIS

## 2. Geospatial Data Fundamentals 14 %

- **201** Understanding of spatial data models & their associated planar geometries
- **202** Understanding of spatial data relationships
- **203** Understanding of data quality
- **204** Understanding of data resolution
- **205** Understanding of data validation & uncertainty
- **206** Understanding of metadata
- **207** Knowledge of temporal data
- **208** Knowledge of spatial data standards, including ISO, FGDC, and OGC

## 3. Cartography and Visualization 10%

- **301** Understanding of graphic representation techniques and implications
- **302** Understanding of map design principles and essential map elements
- **303** Understanding of surface interpretation and representation
- **304** Understanding of 2D and 3D visualization

## 4. Data Acquisition 11%

- **401** Understanding of digitization & other manual data collection & conversion methods
- **402** Knowledge of field data collection
- **403** Knowledge of automated data collection and conversion methods
- **404** Knowledge of remotely sensed data sources and collection methods
- **405** Knowledge of acquisition, use, & limitations of crowdsourced & open source data & services



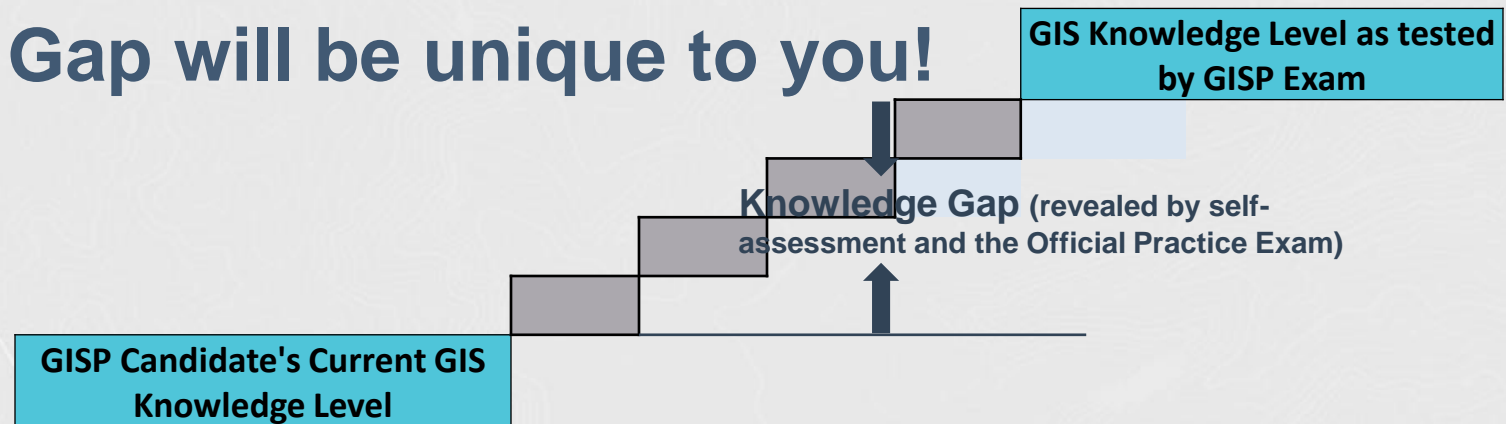
# Exam Environment

- The exam is taken at an official testing center (PSI)
- It is composed of 100 scored multiple choice or multiple response questions.
- Additional non-scored questions are on the exam to be tested for possible use on future exams. (generally, 80-90)
- You do not receive your results at the completion of the exam. You will receive your results from GISCI approximately 1 month later after our formal exam review.

# Preparing for the Exam

There is no single, endorsed textbook for preparing for the exam, but there are several resources and methods you can use to prepare:

- Start with the [2019 Exam Blueprint](#) and [Self Assess!](#)
  - Evaluate the KSAs you know vs the KSAs you don't know
  - Decide on a plan to achieve the knowledge you lack
  - **Your Knowledge Gap will be unique to you!**



# Preparing for the Exam

- Investigate the [GISCI Unofficial Exam Prep Doc](#)\*
- Investigate 3<sup>rd</sup> Party Exam Prep workshops (URISA, TeachMeGIS)
- Start a Study group
- **Take the Official Practice Exam!**

\* [https://www.gisci.org/Portals/0/GISP\\_Unofficial\\_StudyGuide\\_Sept\\_2019\\_Revised\\_Blueprint.pdf](https://www.gisci.org/Portals/0/GISP_Unofficial_StudyGuide_Sept_2019_Revised_Blueprint.pdf)



# Official Practice Exam

Get a sense of the structure and content of the exam through our new practice exam

- Consists of 50 questions retired from previous exams to be completed in 1 hour  
*.....yes, actual questions that have been on previous forms of the exam!*
- Mirrors the official exam appearance, administration, and scoring
- Available online through PSI/G\*Metrix, our exam provider, for a \$30 fee
- Provides an overall score upon completion
- Provides a performance report of the 10 exam content areas
- Allows you to review the questions you answered incorrectly

For more information, visit: **<https://www.gisci.org/ExamInfo/PracticeExam.aspx>**

# THE BENEFITS OF CERTIFICATION

**Most professional industries have some form of professional certification. Certified professionals will likely see increased pay, better job prospects and new career opportunities.**

# Defining a Profession

Criteria for professionalism:

- a self-awareness
- a unique body of knowledge
- a social ideal to unify the professionals
- a formal organization of its members
- a hall of fame
- a code of ethics



# Common Elements of a Certification

- Awarded by professional organizations
- Confirmation that you possess specific knowledge or skills needed
- Earned after completing education and/or experience gained
- Involves meeting specific standards and usually passing an exam
- Credential is usually valid for a limited time and must be renewed

# Why certify?

- Demonstrate a commitment to behaviors that enrich the profession
- Grow professional knowledge and skills
- Differentiate yourself from other professionals
- Establish professional credibility
- Increase your earning potential

# Certification vs. Licensure

- **Certificates** indicates you finished a vocational or educational program's coursework. They are not academic degrees and do not certify you work in a particular occupation or industry.
- **Certification** is an official document that proves you have attained a certain level of knowledge or achievement that qualifies you for your line of work.
- **Licensure** is proof that you are licensed to work in your profession. Unlike certification, licensure is a legal designation, with a clear set of requirements for each vocation.

# Certification vs. Licensure

- Over 1,600 types of certifications exist across a myriad of industries
- Some 17% of civilian, noninstitutional workers hold a certification or license *(Bureau of Labor Statistics 2019)*
- There are four certifications available to geospatial professionals:
  - ASPRS – Remote Sensing (GIS)
  - USGIF – GEOINT (geospatial intelligence)
  - Esri – Technical Certifications – ArcGIS products
  - **GISCI - GISP**



# Who certifies?

- Since the addition of the exam, GISP demographics are changing:

## New Potential GISPs - Characteristics

Professional Sector	% of Exam Candidates
Consulting Firms	50%
Government (all levels)	35%
Academia (Faculty & Staff)	9%
Other (Tribal, Nonprofit)	5%
Students	< 1%

# WHY CERTIFICATION IS IMPORTANT TO YOU

**GIOs and private businesses have the same challenge: finding qualified candidates to do the work the right way.**

# What is a Geospatial Professional?



How do you qualify the geospatial capabilities of a new hire?



Experience  $\neq$  foundational knowledge



Would you hire this guy?





# Who Are You Going to Hire?

How do you qualify the geospatial capabilities of a new hire?

- What common issues are associated with projections and transformation of data?
- What are the detailed differences between geographic coordinate systems and projected ones?
- What is the best way to visualize data distributed along a mean?

**GISPs have the proven knowledge base to pass the exam and certification.**



# Why Should I Support Certification for Staff?

- A direct investment in staff:
  - The GISP is ***not*** a software pathway
  - The GISP program is an educational guide to become a complete geospatial professional
  - Requires ***ongoing*** continuing education
  - Establishing foundational knowledge
- Encouragement to contribute back to the profession
- Encouragement to network, present and be present in our profession

**Creating a GISP is an investment not an expense.**

# Why Should You Certify as a Geospatial Professional?

- Benefits you in the following ways:
  - Provides a competitive advantage
  - Increases your earning potential
  - Establishes and grows foundational knowledge
  - Helps establish professional credibility
- Encouragement to contribute back to the profession
- Encouragement to network, present and be present in our profession

**Becoming a GISP is an investment not an expense.**



# FUTURE DIRECTION OF GISCI

**What's next?**

# Ongoing Efforts & Future Directions

GISCI continues to work to promote the field of GIS and its professionals.

- Exam maintenance & updating – every 3 to 4 years
- Increasing communication with and involvement in the broad geospatial community
- Expanding our footprint within the geospatial community
- Increase our growth with international professionals
- Creation of entry level exam for prospective GISPs graduating from college



# Ongoing Efforts & Future Directions

GISCI continues to work to promote the field of GIS and its professionals.

- Grow our involvement in monitoring legislative issues that impact the profession
- Development of a pre-GISP exam for graduating students
- New designation for retired GISPs

# Student Outreach

## Pathways to GISP

- Guide to becoming a GISP candidate and geospatial professional
- Designed to provide portfolio guidance along with exam prep advice
- Help students become a part of our profession

## PreGISP Initiative

- Accelerated pathway to becoming a GISP
- Standardized pre-professional exam
- Offered at the end of a student's career in their final GIS&T class
- Allows student to add credential to CV

# GISP - Retired

The GISCI Retired Designation allows current GISP's to maintain their certification in a limited capacity upon retirement from the workforce and a paid position as a GIS Professional.

## Minimum Qualifications

- Must have been an active GISP in good standing for a minimum of 3 (inclusive) consecutive recertification cycles (9 years).
- Must not be employed as a GIS professional.

## Required Criteria

- Activities of a GISP-R are limited to those which use their GIS professional skills in voluntary or charitable role (reviewed by Executive Director).
- Signed ethics statement.
- Fee \$50 (Initial 3-year period and each 3-year renewal with a 6-month grace period)

# GISCI Endorsing Employer Designation

- Created to help increase the value of GISP Certification for our primary stakeholders, and to help facilitate the growth of the GISP Program.
- Granted to organizations that the GISCI deems to be supportive of GIS Professionals and the GISP Certification process.
- Available to all organizations at no cost.
- Each approved GISCI Endorsement will last for three (3) years, provide the organization with permission to display their organization logo on our website and provide permission to display the GISCI Endorsement designation on their website.



# Closing Thoughts

- Becoming a GISP takes a long-term investment
- Maintaining your GISP also requires an investment
- GISPs are active in their profession leaders in their field

***It reinforces behaviors that enrich the profession.***

William F. Johnson - Carpe Geo Evangelist, Applied Geographics, Inc (AppGeo)



**GIS Certification Institute**

# Thank You!

## Questions?

**Contact Jochen: [jochen.albrecht@gmail.com](mailto:jochen.albrecht@gmail.com)**