



GIS CERTIFICATION INSTITUTE



GISP UPDATE

**Presented By: Troy Bumgardner, GISP
on behalf of Bill Hodge, GISP
Executive Director GISCI
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GISP IN THE HOUSE

Show of hands

- Who has heard of the GISP or GISCI?
- Who is a GISP?
- Who took the test?





GISP UPDATE

GISCI began providing GIS professional certification in 2003 and launched the GISCI Core Technical Knowledge Exam[®] as an addition to the GISP certification in 2015.

This session will focus on the value and growth of GIS professional certification and where GISCI and the GISP certification will go from here.



GISP – An Updated Perspective



Certification

GISP Certification History

GISP Current Process

Exam Creation

Future Direction



GISP – An Updated Perspective

WHY CERTIFY?

Professional certification is a process by which a person shows that she has acquired the knowledge, experience, and skills to perform a specific profession.



HOW DO WE MOVE FROM THE BIRTH OF AN INDUSTRY TO CERTIFICATION?



**ALL INDUSTRIES FOLLOW THE SAME
PATHWAY, REGARDLESS OF TIMEFRAME**



One certification generally leads to another

**Managerial
Certification**

**Higher Level
Certification**

**Entry Level
Certification**

**General
Certification**

**Provisional
Certification**



GISP – An Updated Perspective

CERTIFICATION vs LICENSURE

Over 1,600 types of Certifications exist across a myriad of industries

In 2016, approx. 17% of civilian, noninstitutional workers held a certification or license.

(data: Bureau of Labor Statistics 2016)



Board Members

One of the strengths of GISCI has been the strong and diversified Board representation over the years!

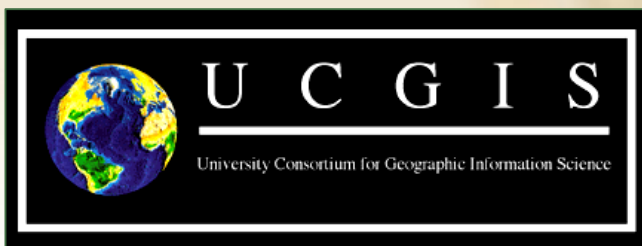
Our current Board makeup reflects that same passion, experience, and service. Most members come from our member organizations!

GISCI is composed of a group of Member Organizations & Strategic Partners representing the full range of the geospatial community.



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Member Organizations





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Strategic Partners



Beginning in 2015 we formed alliances with Strategic partners.

In 2017, we began the USGS/GISCI GIS Summer Intern Program





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ACTIVE GISPs: CERTIFICATION HISTORY

Since its inception, the number of GISPs has expanded from 29 in 2003 to over 8,000 GISPs around the world.

2004 - 2019 -  8,000 + Active GISPs

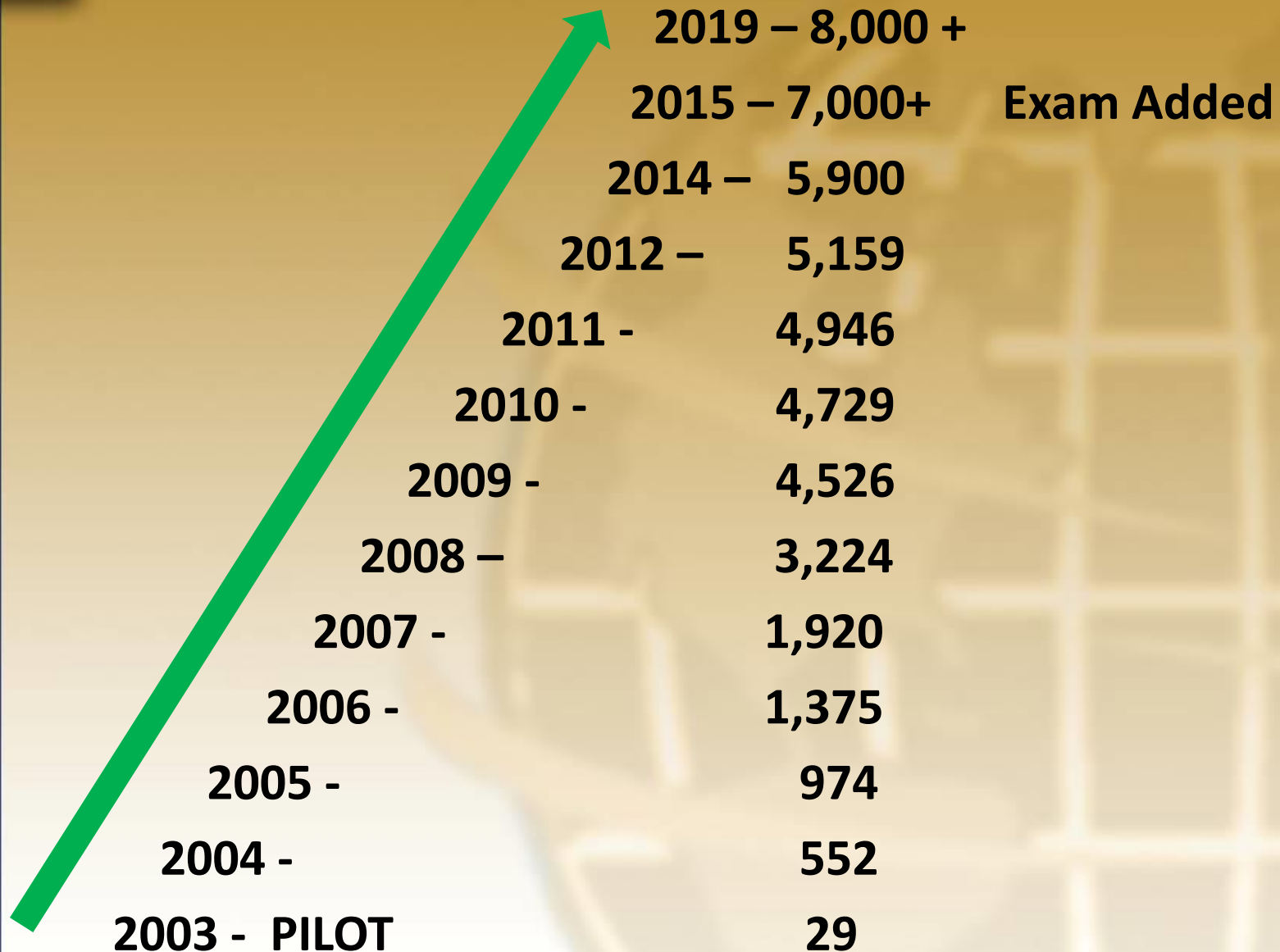
2015 - 2018 -  14,000+ Potential
GISPs have registered on our site to start/explore the
process since the exam was added

2018 & beyond – 20,000 GISPs + by 2024 ?



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ACTIVE GISPs: CERTIFICATION HISTORY





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GISP Current Process

Initial GISP: Portfolio Requirement + Exam

- Ethics Statement
- 4 Years Min Geospatial Experience
- Portfolio Application
 - Education, Experience, Contributions
 - Minimum Points Req in Each Category
- **GISCI Geospatial Core Technical Knowledge Exam Now Required**



GISP Current Process

Recertification: Portfolio Requirement

- Education & Contributions Required
- Experience Optional
- Exam Not Required for Recertification

- Online Application
- 3 Year Recertification Period



GISP Current Cost

Initial GISP Cost:

- Application Fee - \$ 100
- Portfolio Review Fee - \$ 100
- Exam Fee - \$ 250
- Exam Fee - \$ 300 International
- 3 Year Certification Period
- **Annual Maintenance Fee of \$ 95/yr** starts in the 2nd year of initial certification period



GISP Current Cost

Recertification Cost:

- Annual Maintenance Fee continues-
\$ 95/year or \$ 285 as one payment
- No Exam Required
- 3 Year Certification Period
- Recertification Application Online



GISCI – An Updated Perspective

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Exam Creation History

- Aug 2012 - GISCI Board Selects Exam Development Project Mgr & Psychometric Consultant – Starts Job Analysis**
- Nov 2015 - Inaugural Exam Deployment**
- Summer/Fall - Exam Testing Windows**

The exam is administered twice each year



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 – 44 KSAs* were selected for exam coverage

*KSA – Knowledge, Skills, Abilities



Exam Creation Considerations

MAJOR CONSIDERATIONS

- **The Exam is now required in addition to the Portfolio Process**
- **Two Exam offerings each year in early June & Dec**
- **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 once you either pass the exam or get a Portfolio approved**



Exam Creation Considerations

Selection of Knowledge Areas for Exam

- Started with the GISP community
- Used combination of job analysis, DACUMs, 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 approx. 10% of total GIS knowledge areas relevant to a GISP professional across the range of GIS certified professionals
- 44 KSAs (knowledge, skills, abilities) were selected for exam coverage



Exam Creation

For Comparison: GIS&T Body of Knowledge 2006

GIS&T Body of Knowledge: 400+ topics included

Knowledge Area	Units	Topics
Analytical Methods	12	59
Conceptual Foundations	6	30
Cartography & Visualization	6	27
Design Aspects	7	32
Data Modeling	5	23
Data Manipulation	3	14
Geocomputation	9	40
Geospatial Data	12	47
GIS&T Society	7	21
Organizational & Institutional Aspects	6	32



Exam Creation

EXAM BLUEPRINT: Exam Components selected for testing

Knowledge Category – 44 KSAs Included

Conceptual Foundations	12% (12 scored questions)
Cartography & Visualization	14 %
GIS Design Aspects & Data Modeling	29%
GIS Analytical Methods	17%
Data Manipulation	15%
Geospatial Data	<u>13%</u>
	100% (100 scored questions)

Exam to be offered every 6 months – Summer & Fall Windows



Exam Creation

EXAM BLUEPRINT: Exam Components Summary

Knowledge Category

Conceptual Foundations

12%

- Knowledge of spatial concepts
- Knowledge of standard spatial data models (vector, raster, object-related models)
- Knowledge of Earth geometry
- Knowledge of georeferencing systems

Cartography & Visualization

14 %

- Knowledge of contour mapping
- Knowledge of basic physical geography
- Knowledge of how data collection methods influence map design
- Knowledge of principles of map design
- Knowledge of graphic representation techniques
- Understanding of how data classification techniques affects the thematic map



Exam Creation

EXAM BLUEPRINT: Exam Components Summary

Knowledge Category

GIS Design Aspects & Data Modeling 29%

- Knowledge of data exchange procedures
- Knowledge of security restrictions on data
- Knowledge of systems architecture & design
- Knowledge of database design
- Knowledge of geospatial data structure

GIS Analytical Methods

17%

- Knowledge of overlay aspects
- Knowledge of statistics
- Knowledge of basic programming
- Knowledge of raster/vector principles
- Knowledge of units of measurement



Exam Creation

EXAM BLUEPRINT: Exam Components Summary

Knowledge Category

Data Manipulation

15%

- Knowledge of selection queries
- Knowledge of different data types
- Knowledge of data relationships
- Knowledge of data collection

Geospatial Data

13%

- Knowledge of metadata and standards
- Knowledge of data archiving and retrieval
- Knowledge of differences among join, merge, union, clip, intersect
- Knowledge of basic field data



Exam Creation

ADVANTAGES OF AN EXAM

- Provides for a Measurable Competency Level
- Industry increased use of GISP as a preferred credential in job descriptions
- Provides Increased Visibility for GISP Professional Certification
- Builds Upon The Established, Successful, Recognized GISP Portfolio
- **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**



Exam Creation

ADVICE TO A STUDENTS & YOUNG PROFESSIONALS

- Start a profile on LinkedIn and start making connections
- Start a Portfolio on the GISCI site and work towards a GISP
- Plan to take the GISCI Exam as a means to differentiate yourself
- Join an association/s while in school – participation counts
- Attend a local GIS User Group
- **Show an employer you are looking to the future**



Exam Creation

PREPARE FOR AN EXAM

- Download and study the Exam Candidate Manual from GISCI's site
 - **Concentrate on the 44 KSAs identified**
- Examine the GIS&T Body of Knowledge for reference material
- Examine URISA's site for Exam Preparation Workshop Info
- Search the web for individual KSA materials
- Refer to your own textbooks and class materials
- Visit GISCI's link on our site to Exam Information
- **<https://www.gisci.org/ExamInfo.aspx>**



Exam Creation

NEXT EXAM DATE

- **June 1st – 8th**
- **Deadline to apply**
2 weeks prior



Exam Creation

PREPARE FOR AN EXAM

- Visit the GeoTech Center website
 - www.geotechcenter.org
- Take the Personal Assessment Tool Online Survey



- A geospatial practice exam is posted on the GISCI site
- Exam preparation materials are posted on the GISCI site

The key is to focus on the 44 KSAs covered – NOT the entire geospatial world!



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Future Direction



Future Direction

- **Exam Maintenance & Updating**
- **GISP Certification Specializations**
- **Increased International Growth**
- **New Member Organizations**
- **Increased participation - 20,000 GISPs by 2024?**



Future Direction

- **Greater Student Involvement**

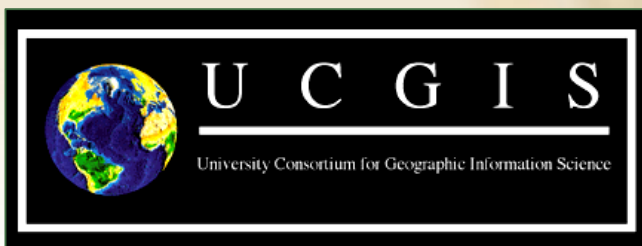
USGS – GISCI GIS Summer Intern Program

- **Students who register with GISCI & start their Portfolio are eligible for early consideration for GIS Summer Intern positions with USGS**



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Member Organizations





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You may be asking...

when can I meet
Mr. Hodge?



Come see Bill at the
OKSCAUG event in
September for his
annual GISP
Workshop.





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THANK YOU!

Please feel free to reach out to
Bill Hodge with any questions –
and check out the GISCI website.

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www.gisci.org



ENJOY THE REST
OF THE SCAUG
CONFERENCE!!

