GIS Professional Certification

Presented By: Elizabeth McNichols, GISP
Date: February 6, 2014
GIS Certification Institute

GISCI structure & history
GISP certification
Current activities
Member Organizations

- NGIC
- UCGIS
- GITA
- GLIS
- URISA
- AAG
Committees

- Certification Committee
- Review Committee
- Outreach Committee
- Ethics Committee


• **Certification:** A voluntary process by which individuals who have demonstrated a level of expertise in the profession are identified to the public and other stakeholders by a third party. Recognizes expertise.

• **Certificate:** An award given to an individual recognizing completion of an academic or training program.

• **Licensure:** The granting of a license to practice a profession. Often regulated by states and indoctrinated in legislation. Guards against incompetence.

• **Accreditation:** The process of evaluating the academic qualifications or standards of an institution or program of study in accordance with pre-established criteria.
Why Certify?

• Although GIS has many uses, GISCI certifies the GIS profession.

• GIS professionals understand and apply the full range of GIS capabilities, most commonly as their primary professional role.
Who Qualifies?

• Other professionals (surveyors, cartographers, landscape ecologists, planners, etc.) are typically not GIS professionals but they can be.

• GISCI does not look to restrict the use of GIS.

• GISCI looks to identify GIS professionals and separate them from casual users of the technology.
Self-regulation

• Unlicensed professions regulate themselves.

• Voluntary certification programs are the most popular form of self-regulation.

• Certification protects the profession from those erroneously claiming to have expertise in the profession.
Practitioner vs. Professional

- GISCI refers to non-certified GIS users as practitioners.

Julie Smith – Took an Introduction to GIS course at a local community college and can make a map exhibit with GIS software.
Practitioner vs. Professional

- GISCI refers to certified GIS users as certified geographic information systems *professionals* or GISP*Ps*. 

Julie Smith, **GISP**...
Julie Smith, **GISP** has met the minimum standards for educational achievement, professional experience, and manner in which she contributes back to the profession.

Julie Smith, **GISP** continues to educate and reeducate herself while preparing for renewal of certification.

Julie Smith, **GISP** has had her professional background scrutinized and reviewed by an independent third party organization. An Institute comprised of leading non-profit associations (AAG, GITA, NSGIC, UCGIS, GLIS, and URISA) focused on the application of GIS and geospatial sciences.

A person like Julie Smith, **GISP** lives in all 50 States and more than 30 foreign countries.

Julie Smith, **GISP** is more than a practitioner of GIS technology. Julie Smith, **GISP** is a professional.

Julie Smith, **GISP** must abide by higher guidelines for ethical behavior.
What can Certification Provide?

1) Professional recognition program for established GIS professionals.

2) Means of identification that can be used by colleagues, employers, the public, and other licensed or certified professionals.

3) Implementation of a professional code of ethics that identifies bad practices and upholds good practices.

4) Professional development yardstick through initial and renewal of certification requirements.
That’s Great, but What Can Certification Provide for Me?

From the 2006 “State of the GISP” Survey

- 7% received a salary increase
- 20% received a one time monetary bonus
- 20% received a title change or promotion
- An additional 30% feel it improved how they are perceived in their organization.
- Almost 60% of the respondents to the 2006-07 URISA Salary Survey plan on applying in the next 3 years.
- 85% of employers were supportive of the effort
- The Salary found a $12,000 differential between the salaries of GISP and non-GISP for comparable positions.
- Upon certification, GISCI sends a letter to your employer that highlights the achievement and explains how they can help with the renewal of certification effort.
No Formal Test!
(at this time, but it is coming soon)

- **Point-based** and **self-documented** –
- **1 decade of existence** – no changes have been made to the process.
- Based on **achievement in three categories:**
  - **Educational** attainment
  - Professional **experience**
  - **Contributions** to the profession
GISCI Professional Certification created a system that adds objectivity (points) to the subjective (one’s career).

The URISA Certification Committee spent 4 years developing the points system.

The result of their effort is the GISCI Certification Program.
Benchmarks

• **EDUCATION** – Bachelor’s degree with some GIS courses (or equivalent)

• **EXPERIENCE** – Four years in GIS application or data development (or equivalent)

• **CONTRIBUTIONS** – Annual membership and modest participation in a GIS professional association (or equivalent)
### Minimum Category Points

<table>
<thead>
<tr>
<th>Category</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Educational Achievement</td>
<td>30 points</td>
</tr>
<tr>
<td>Professional Experience</td>
<td>60 points</td>
</tr>
<tr>
<td>Contributions to the Profession</td>
<td>8 points</td>
</tr>
<tr>
<td>Additional (Flex) Points in any of the three Categories:</td>
<td>52 points</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>150 points</strong></td>
</tr>
</tbody>
</table>

Flex points allows one to make up for a lack in one category with an excess in another.
The Educational Achievement Section

There are 3 components to the Educational Achievement Section:

1. Credential Points (degrees in any field)

2. Course Points (geospatial technology courses)

3. Conference Attendance Points (days spent at relevant meetings and conferences)
Credential Points

Master’s Degree or Higher 25 pts
Bachelor’s 20 pts
Associate’s 10 pts
GIS Certificate* 5 pts

*400 or more student activity hours

Select the highest earned
Conference Attendance Points

- Conference attendance points are a result of the number of total days that the applicant has spent at meetings and conferences sponsored by professional societies and regional and local user groups.
Professional Experience

Job experience is the most important factor in GIS qualifications because:

• Performing in a job provides learning experiences that allow **growth and expansion of skill sets**

• Work environment with other professionals allows **transfer of knowledge**
Three Tiers of Professional Experience

• **Tier I: Analyst, System Design, Programming:** Typical tasks include database design or management, documentation or analysis of functional requirements, application design and evaluation, impl. management, and system administration. = **25 Points Per Year**

• **Tier II: Data Compilation, Data Maintenance, Teaching:** Typical tasks include editing data, map composition, report generation, database maintenance, data validation, instructional training, and teaching. = **15 Points Per Year**

• **Tier III: GIS User:** Typical tasks include utilization of applications involving geospatial technologies. Candidates may be involved in managing or coordinating GIS, but not involved in the technical implementation of GIS. = **10 Points Per Year**
**EXP-W Worksheet: Example #1**

**Title (from résumé):** Senior GIS Analyst  
**Employer:** Anytown, USA

<table>
<thead>
<tr>
<th>Start Date:</th>
<th>5/12/01</th>
<th>End Date:</th>
<th>3/3/06</th>
<th>Years / Months Employed:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td># of yrs + (# of months / 12) = 4.83</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Experience Level</th>
<th>% Full Time Equiv.</th>
<th>Years/Months (from above)</th>
<th>Pts/Yr</th>
<th>Subtotal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tier 1 - GIS Programmer or Similar</td>
<td>.70</td>
<td>x</td>
<td>4.83</td>
<td>x</td>
</tr>
<tr>
<td>Tier 2 - GIS Technician, Educator or Similar</td>
<td>.25</td>
<td>x</td>
<td>4.83</td>
<td>x</td>
</tr>
<tr>
<td>Tier 3 - GIS User</td>
<td>.05</td>
<td>x</td>
<td>4.83</td>
<td>x</td>
</tr>
<tr>
<td>Supervisory Bonus (“%FTE” cannot exceed 1.00)</td>
<td>1.00</td>
<td>x</td>
<td>1.08</td>
<td>x</td>
</tr>
</tbody>
</table>

**Supervisory Bonus:** 1.00  
**Total this worksheet:** 115.86
4-year Minimum

- Applicants must have a combination of at least 4 years (48 months) of professional GIS experience to apply for GIS Certification.

- If the applicant has met the minimum requirement with less than 4 years of experience then the applicant must wait until 4 years of professional GIS experience is accrued.
Contributions to the Profession

Documents and activities that add to the professional body of knowledge for the benefit of the profession as a whole – not just the employer and client.
The 8 Categories of Contribution Points

- GIS Publications
- GIS Professional Association Involvement
- GIS Conference Participation
- GIS Workshop Instruction
- GIS Conference Presentation
- GIS Awards Received
- GIS Volunteer Efforts
- Other GIS Contributions
Additional Requirements

• Code of Ethics & Rules of Conduct
• Renewal of Certification
  – Every five years
  – Minimum points in two categories
“I think another good reminder is for people to have a good bit more than 150 points when they apply. Some people may not consider that they can/will mark things down if it is appropriate.

Another good tip to remind people of is to collect documentation as they go. At the end I did have to go through and try and find things for my application. It would have saved me a few hours had I just printed my receipts/certificates to begin with than trying to relocate them at the end.”
Renewal of Certification

- Applicants must earn the following points in the five years following initial certification:

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<thead>
<tr>
<th>Category</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Educational Achievement</td>
<td>10</td>
</tr>
<tr>
<td>Professional Experience (No minimum)</td>
<td>0</td>
</tr>
<tr>
<td>Contributions to the Profession</td>
<td>10</td>
</tr>
<tr>
<td>Flex Points</td>
<td>20</td>
</tr>
</tbody>
</table>

Total = 40 points
Recognizing a GISP

• Julie Smith, GISP
The Application Review Process

• The GISCI Staff performs a QUANTITATIVE review.

• The GISCI Review Board performs a QUALITATIVE review.
Staff Review

- Will determine if the points have been added and documented correctly.
- Will make a recommendation of the applicant’s status to the Review Committee.
  - Accepted Outright
  - Rejected Outright
  - Pending Further Review
Review Committee

• Are current GISP\(s\) who have held their certification for at least one year.
  – Volunteers with GIS backgrounds and credentials.

• Will make the final determination on ALL manners of points, documentation, and status.

• Their decisions are final and settled by simple majority.
Review Committee

• They will perform independent reviews and return their decisions to GISCI staff.
• They will make periodic recommendations on how to improve the program to the BOD and Oversight Committee.
Notifying the Applicants

- All accepted/rejected candidates will be notified of their status hopefully within 2-3 months of submittal.
- Accepted candidates will receive a congratulatory letter and a certificate.
- Rejected candidates will be encouraged to resubmit.
Certification Fee

• The cost of GISCI certification is $250.

• Rejected applicants receive $150 back; a $100 processing fee is charged.

• Covers five years of certification with no annual fee assessed.

• Renewal of Certification fee is $115.
Current Activities

• Certification Committee
• Review Committee
• Outreach Committee
• Ethics Committee
Changes in the Works

• By 2015 an exam component will be added to this model at the latest the end of second quarter. Most certification programs require some form of examination.

• Rebecca Somers, of Somers-St.Clair, has been contracted to write the exam and vet the process.

• GISCI is currently conducting a Job Analysis Survey to help build the test
The exam will be based in part on the geospatial technology competency model provided by the US DOL. [Link](http://www.careeronestop.org/competencymodel/pyramid.aspx?GEO=Y)
As well as the GIS&T body of knowledge and industry best practices

Geographic Information Science and Technology Body of Knowledge

http://www.aag.org/bok/
Along with the Exam....

- Portfolio documentation will be required.
- There will be a professional contribution and education requirement.
- Exam can be taken by students and those having less than 4 years of experience to start the registration process.
GISP information

• Current GISP’s are not required to take the exam for re-certification.

• Unless...
  – The GISP fails to renew their certification and then will need to start the certification process from the beginning which includes the exam.
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