GIScience

Introduction

Image from NASA:
https://commons.wikimedia.org/wiki/File:Earth_Western_Hemisphere_transparent_background.png#filelinks

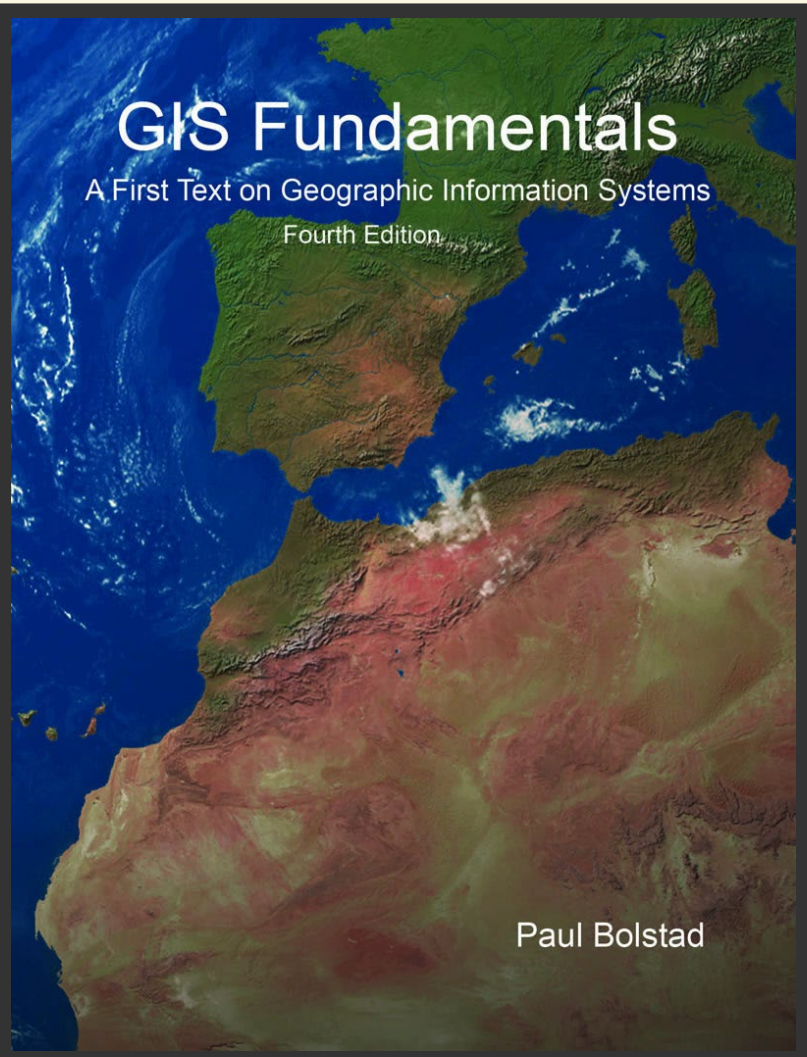
WV VIEW

AmericaView℠
Empowering Earth Observation Education
AmericaView.org - Est. 2003

What is a GIS?

A computer-based system to aid in the collection, maintenance, storage, analysis, output, and distribution of spatial data and information

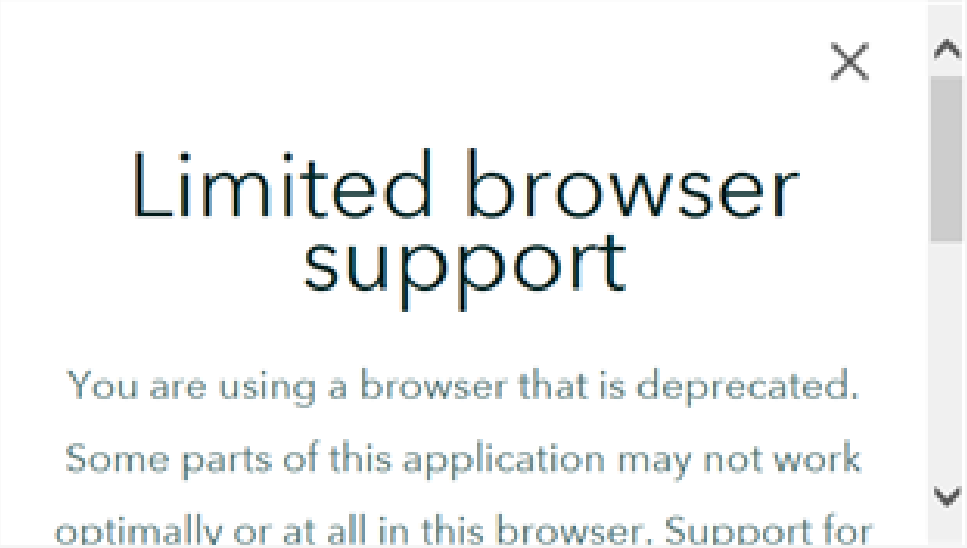
-Paul Bolstad



https://www.xanedu.com/higher-education/educators/custom-books%20catalog/gis_fundamentals/

Web Object

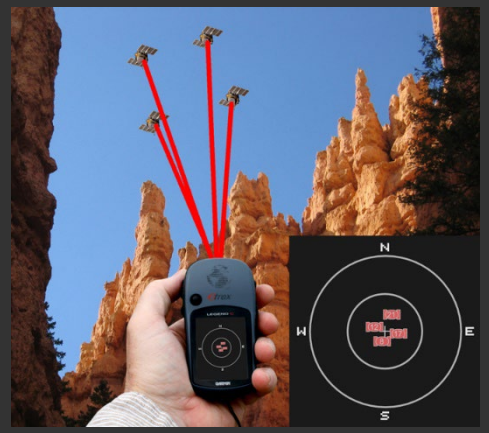
Select this object and click the **Web Object** button to edit



Functions of a GIS

1. Capture

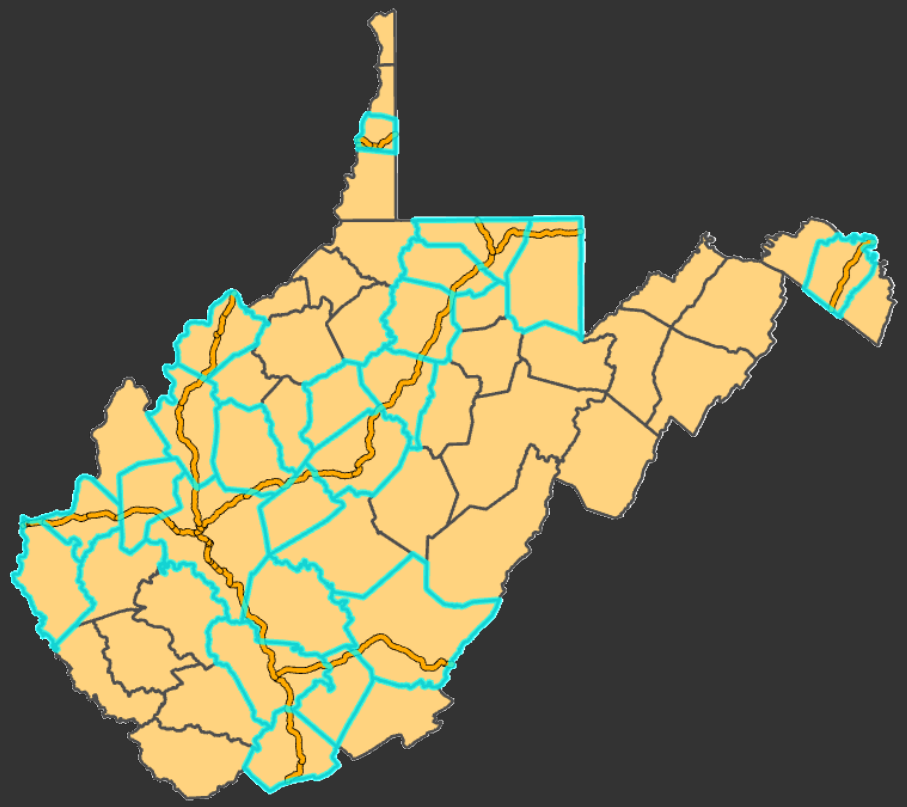
https://commons.wikimedia.org/wiki/File:Interspect_UAV_B_3.1.png



https://commons.wikimedia.org/wiki/File:Bad_gdop.png

https://www.usgs.gov/landsat-missions/landsat-8

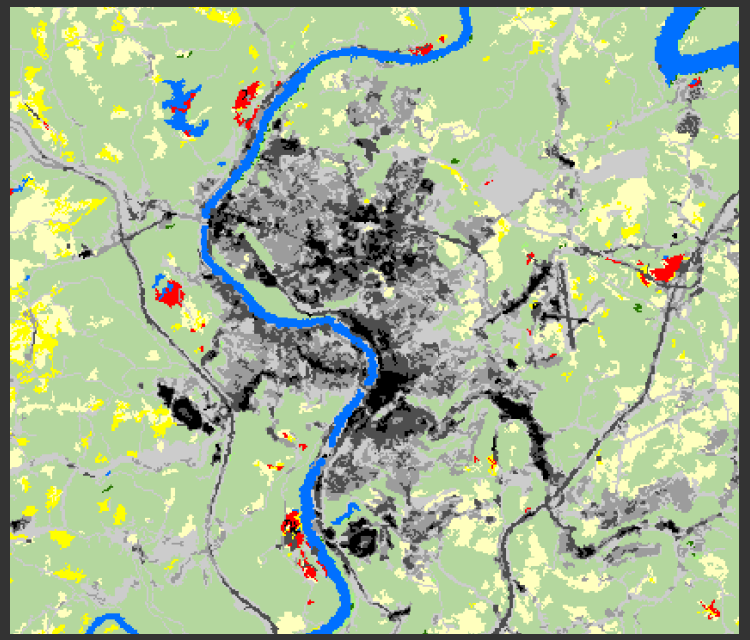
GIS, Remote Sensing, GPS

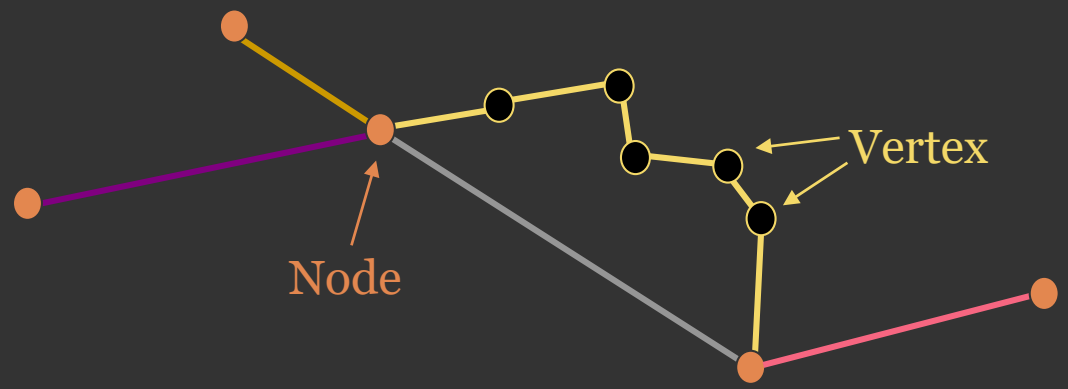


https://www.usgs.gov/landsat-missions/landsat-8

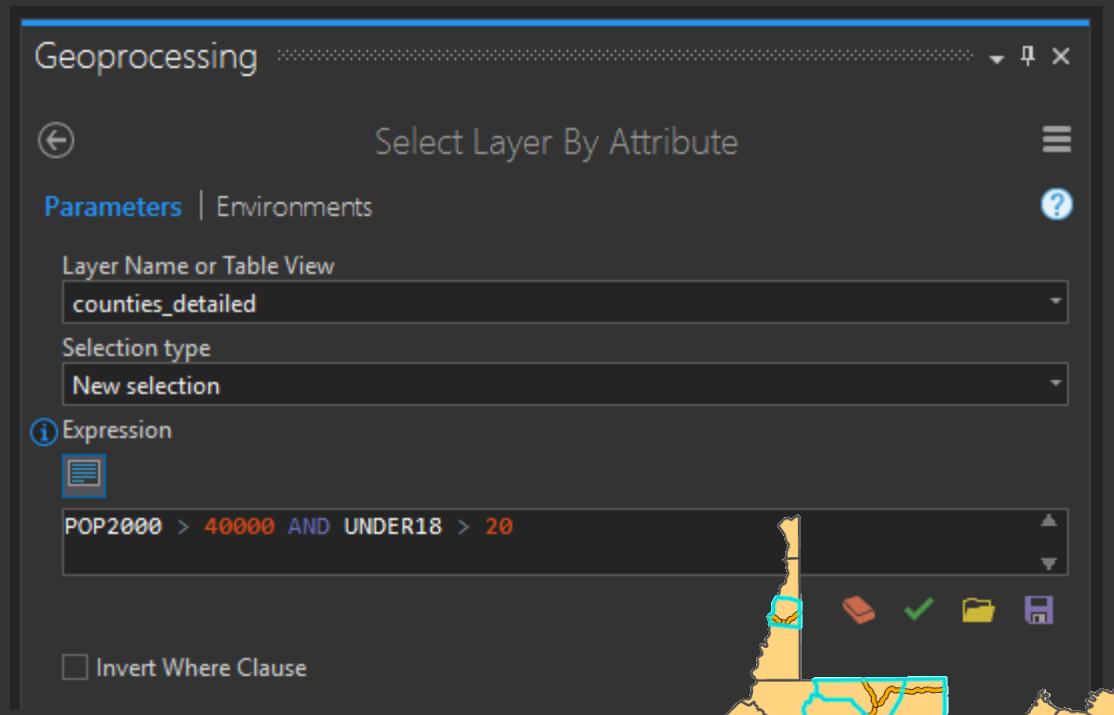
https://commons.wikimedia.org/wiki/File:Bad_gdop.png

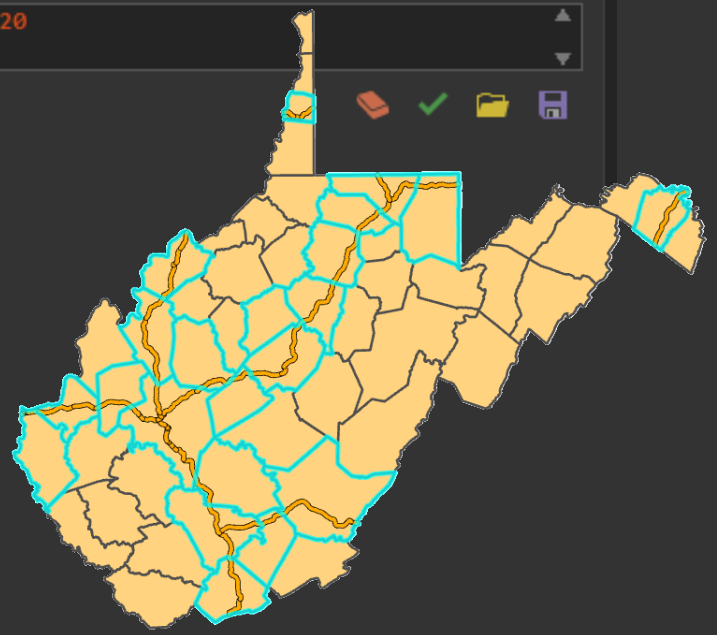
2. Store

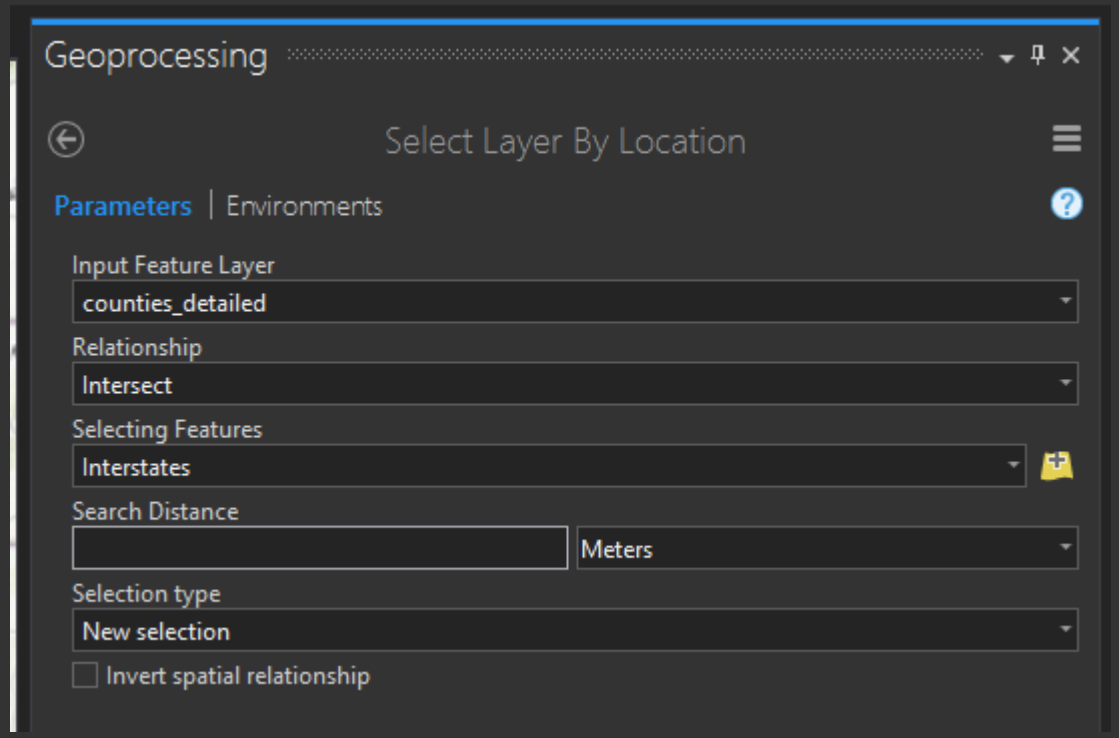




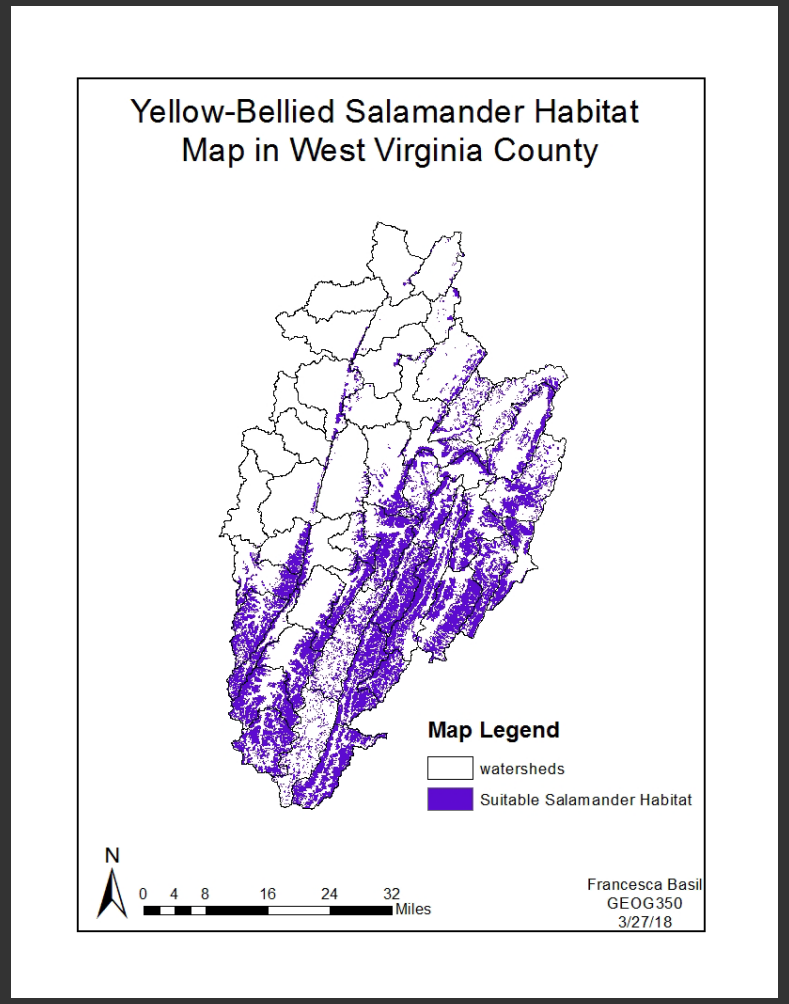
3. Query


Geoprocessing
Select Layer By Attribute
Parameters | Environments
Layer Name or Table View
counties_detailed
Selection type
New selection
Expression
POP2000 > 40000 AND UNDER18 > 20
Invert Where Clause

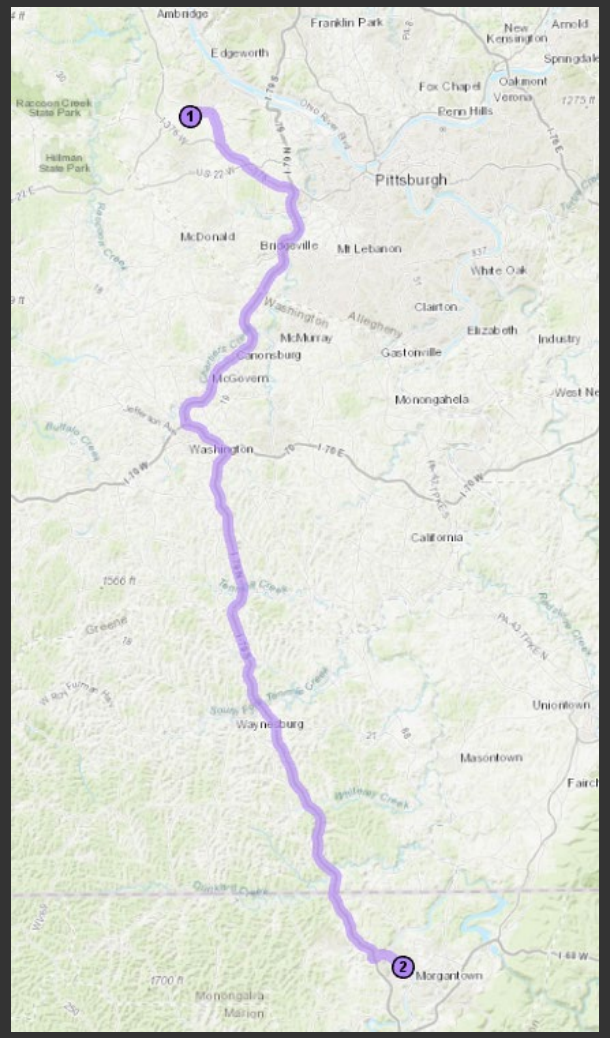



Geoprocessing
Select Layer By Location
Parameters | Environments
Input Feature Layer
counties_detailed
Relationship
Intersect
Selecting Features
Interstates
Search Distance
Meters
Selection type
New selection
Invert spatial relationship

4. Analyze

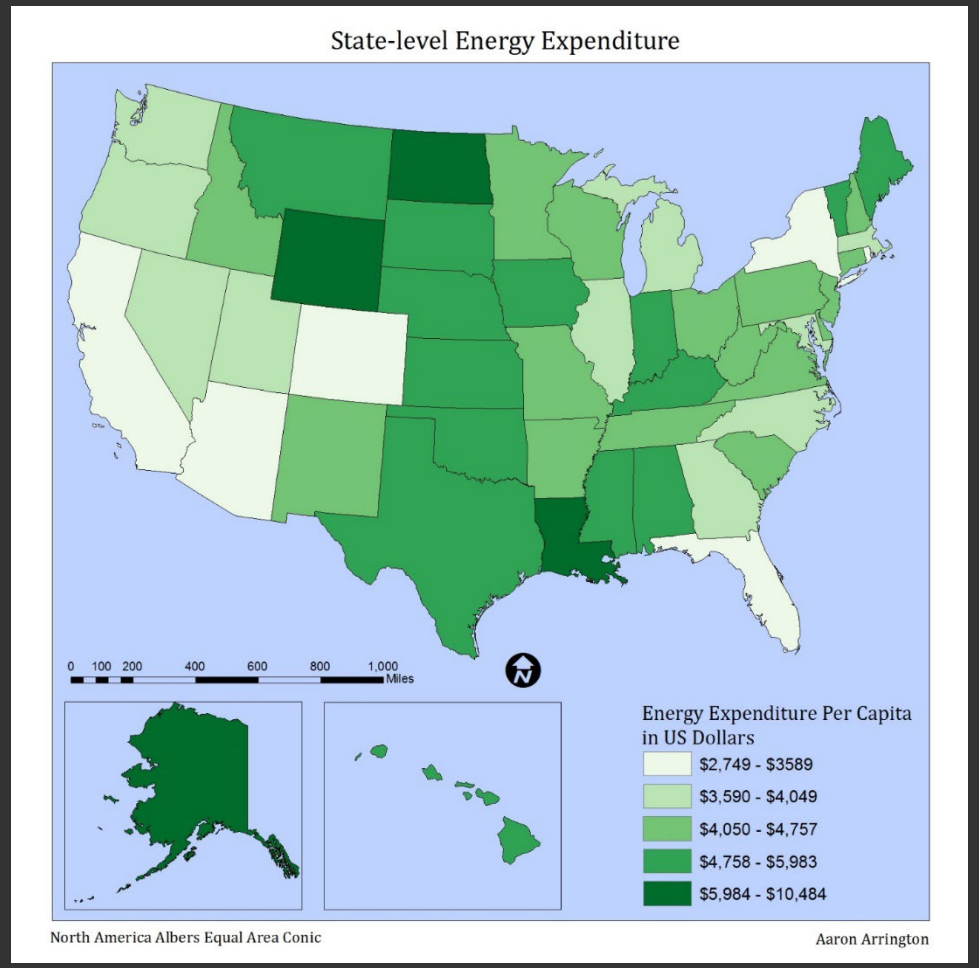


Map by Francesca Basil



- Directions
- Proximity
- Suitability
- Meet defined criteria
- Likelihood
- Best locations
- Worst locations
- Etc.

5. Display



Map by Aaron Arrington

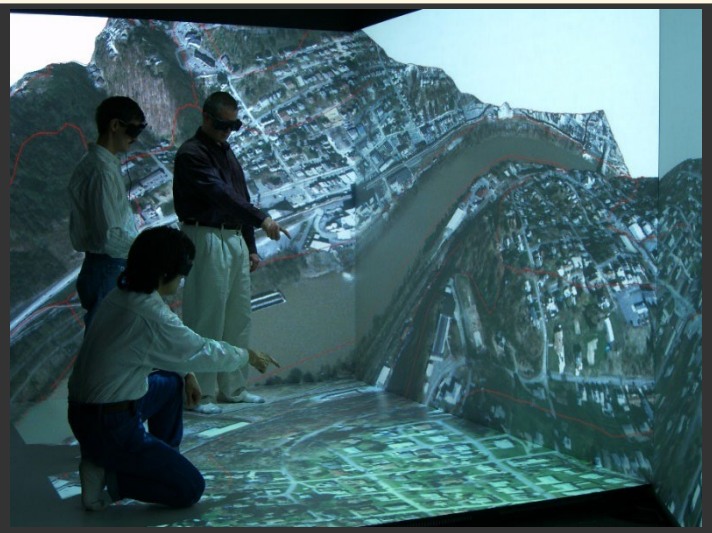


Image from Google Earth

Components of a GIS

Components of a GIS

1. People
2. Data
3. Hardware
4. Software
5. Methods/Protocol

Software

Logos were obtained from organization websites.

Hardware

People

AAG
AMERICAN ASSOCIATION of GEOGRAPHERS

http://www.aag.org/

WVAGP

https://www.wvagp.org/

asprs
THE IMAGING & GEOSPATIAL INFORMATION SOCIETY

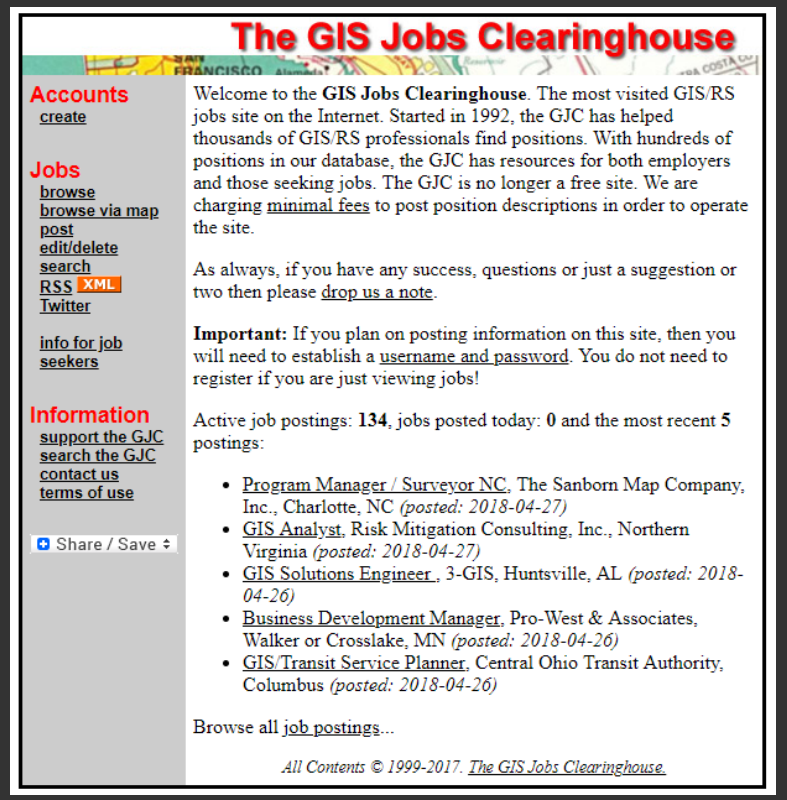
https://www.asprs.org/

GIS Certification Institute

https://www.gisci.org/

Logos were obtained from organization websites

Geospatial Job Market



The GIS Jobs Clearinghouse

Accounts
create

Jobs
browse
browse via map
post
edit/delete
search
RSS XML
Twitter

info for job seekers

Information
support the GJC
search the GJC
contact us
terms of use

Share / Save

Welcome to the **GIS Jobs Clearinghouse**. The most visited GIS/RS jobs site on the Internet. Started in 1992, the GJC has helped thousands of GIS/RS professionals find positions. With hundreds of positions in our database, the GJC has resources for both employers and those seeking jobs. The GJC is no longer a free site. We are charging minimal fees to post position descriptions in order to operate the site.

As always, if you have any success, questions or just a suggestion or two then please drop us a note.

Important: If you plan on posting information on this site, then you will need to establish a username and password. You do not need to register if you are just viewing jobs!

Active job postings: **134**, jobs posted today: **0** and the most recent **5** postings:

- Program Manager / Surveyor NC, The Sanborn Map Company, Inc., Charlotte, NC *(posted: 2018-04-27)*
- GIS Analyst, Risk Mitigation Consulting, Inc., Northern Virginia *(posted: 2018-04-27)*
- GIS Solutions Engineer , 3-GIS, Huntsville, AL *(posted: 2018-04-26)*
- Business Development Manager, Pro-West & Associates, Walker or Crosslake, MN *(posted: 2018-04-26)*
- GIS/Transit Service Planner, Central Ohio Transit Authority, Columbus *(posted: 2018-04-26)*

Browse all job postings...

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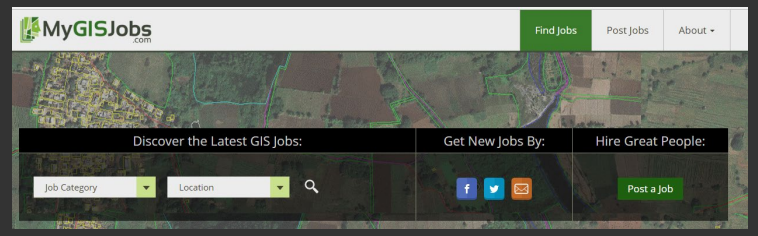
http://www.gjc.org/

https://www.gisjobs.com/



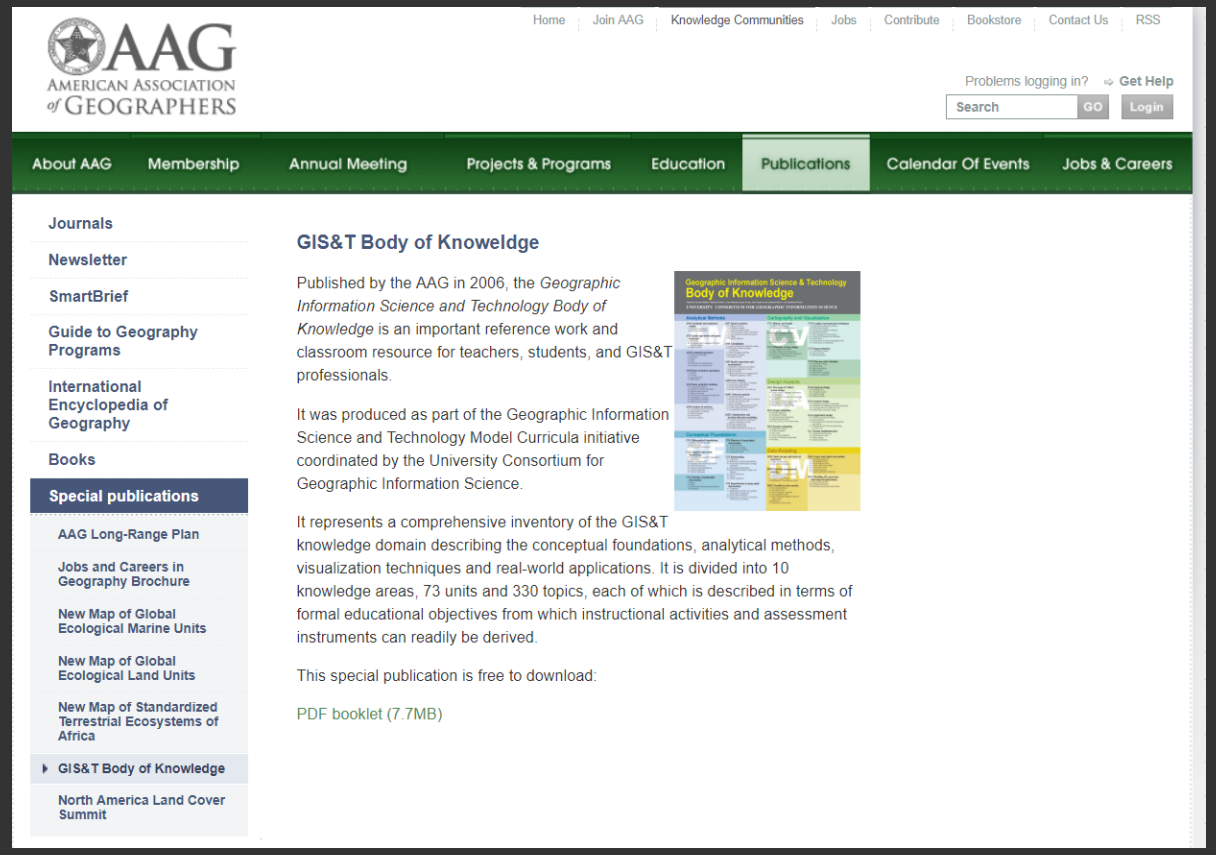
https://www.mygisjobs.com/

Job titles include:

GIS Technician
GIS Analyst
Remote Sensing Analyst
GIS Programmer
GIS Web Developer
Aerial Survey Technician
Survey Technician
Image Analyst
Etc.

Important Geospatial Skillsets

1. Spatial problem solving
2. Spatial analysis
3. Software troubleshooting
4. Statistics
5. Spatial predictive modeling
6. Database management
7. Web GIS
8. Python scripting
9. JavaScript scripting
10. Cartography/Map design
11. Graphic design
12. Remote sensing/Image interpretation
13. GPS technology



http://www.aag.org/cs/publications/special/gist

This is the end of this lecture module.

Please return to the West Virginia View Webpage for additional content.