

GIS and Ethics in the Undergraduate Classroom


The GIS professional recognizes the impact of his or her work on individual people and will strive to avoid harm to them. Therefore, the GIS professional will:

1. Respect Privacy

- - Protect individual privacy, especially about sensitive information.
 - Be especially careful with new information discovered about an individual through GIS-based manipulations (such as geocoding) or the combination of two or more databases.

2. Respect Individuals

- - Encourage individual autonomy. For example, allow individuals to withhold consent from being added to a database, correct information about themselves in a database, and remove themselves from a database.
 - Avoid undue intrusions into the lives of individuals.
 - Be truthful when disclosing information about an individual.
 - Treat all individuals equally, without regard to race, gender, or other personal characteristic not related to the task at hand.

Main Entry: **eth·ic** 

Pronunciation: \e-'thik\

Function: *noun*

Etymology: Middle English *ethik*, from Middle French *ethique*, from Latin *ethice*, from Greek *ēthikē*, from *ēthikos*

Date: 14th century

1 *plural but sing or plural in constr*: the discipline dealing with what is good and bad and with moral duty and obligation

2 a: a set of moral principles: a theory or system of moral values <the present-day materialistic ethic> <an old-fashioned work ethic> —often used in plural but singular or plural in construction <an elaborate ethics> <Christian ethics> **b** *plural but sing or plural in constr*: the principles of conduct governing an individual or a group <professional ethics> **c**: a guiding philosophy **d**: a consciousness of moral importance <forge a conservation ethic>

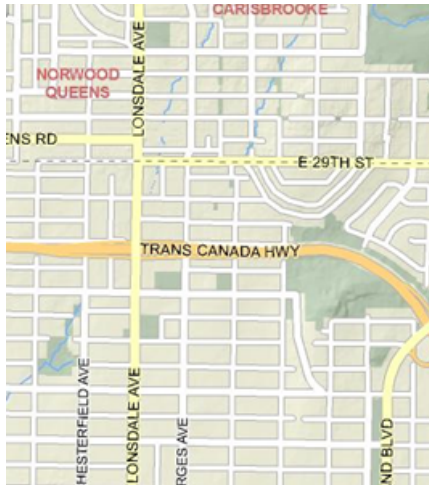
3 *plural*: a set of moral issues or aspects (as rightness) <debated the ethics of human cloning>

**Alexandra Serio Younica, GISP
King's College**

**Presented:
Association of American Geographers
Sunday, April 18, 2010**

Presentation Overview

- Encroachment of Ethics into Classroom
- Relationship of GIS and Ethics
- Student Perceptions of Ethics



Google maps

18711

Search Maps

Show search options

Find businesses, addresses and places of interest.

Get Directions My Maps

Wilkes-Barre, PA 18711

Directions Search nearby Save to more

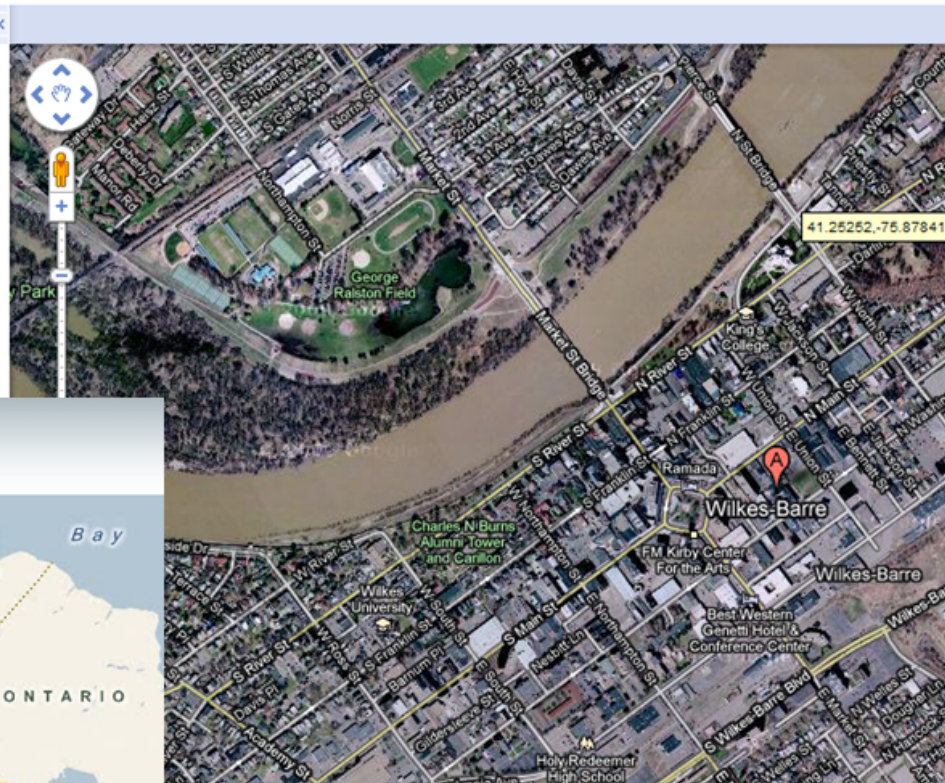
Explore this area

Photos



Places

King's College (Pennsylvania)



Get directions

Business, address, or landmark

Business, address, or landmark

Car

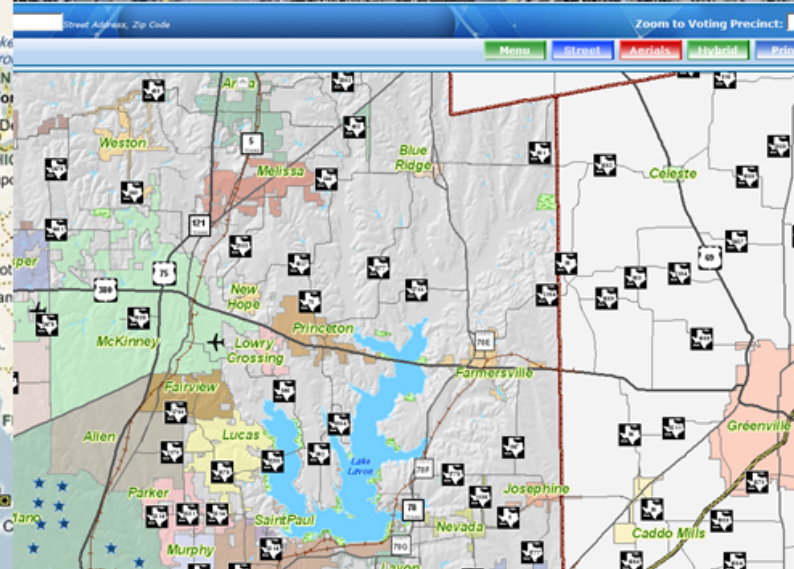
Get directions

Explore the new Bing Maps



With the new Bing Maps, you can see what's near a location, pin results you like, and explore cities at eye level.

Try it now!



Intersection of GIS and Ethics

- Access to personal, yet public, data
 - Home prices assessment and sales figures
 - Registered sex offender information
- Collection and distribution of controversial datasets
 - Hate crimes
 - Species population

PA Megan's Law Website - Windows Internet Explorer

http://www.pameganslaw.state.pa.us/OffenderDetail.aspx?text=bgeecfj&dt=HCGCFDED4EDNFDNHE4Ua

pa megans law

File Edit View Favorites Tools Help

PA Megan's Law Website

Pennsylvania State Police TO SEEK JUSTICE, PRESERVE PEACE, AND IMPROVE THE QUALITY OF LIFE FOR ALL.

pennsylvania PA

Megan's Law Website

Megan's Law Home

Search

- County
- Municipality
- City
- Zip Code
- Name
- Alias

PSP Listings


- SVP Listing
- Total Count of Active Registrants
- Count of Registrants by Residence, Employment, School, and County

PSP Links

- History of the Law and Federal Facts
- Registration Details
- Notification

Address Info **Physical Desc** **Vehicle Info** **Arrest Info** **Alias Info**

The offender listed below resides, works or attends school within a zip code that houses a federal, state and/or county prison facility.



RONALD MOBLEY

Classification Sex Offender
Last Updated Date 7/6/2009

NOTE: To be compliant with verification requirements, the verification date must be within the past 12 months for sex offenders and within the past 3 months for sexually violent predators.

Residence/Employment/School Information

Residence Address

| | |
|------------------------------|------------------------------|
| Street 1 | 1644 HAWORTH ST APT 2D |
| Street 2 | None listed in this registry |
| City, State & Zip | PHILADELPHIA, PA 19124 |
| Municipality | PHILADELPHIA CITY |
| County | PHILADELPHIA |

Employment Address

| | |
|------------------------------|------------------------|
| City, State & Zip | PHILADELPHIA, PA 19124 |
| Municipality | PHILADELPHIA CITY |

Back

Submit A Tip

NOTE: The address information posted on this page is the latest information reported by the offender. If you have information regarding the whereabouts of this offender, please report it using the "Submit a Tip" button above.

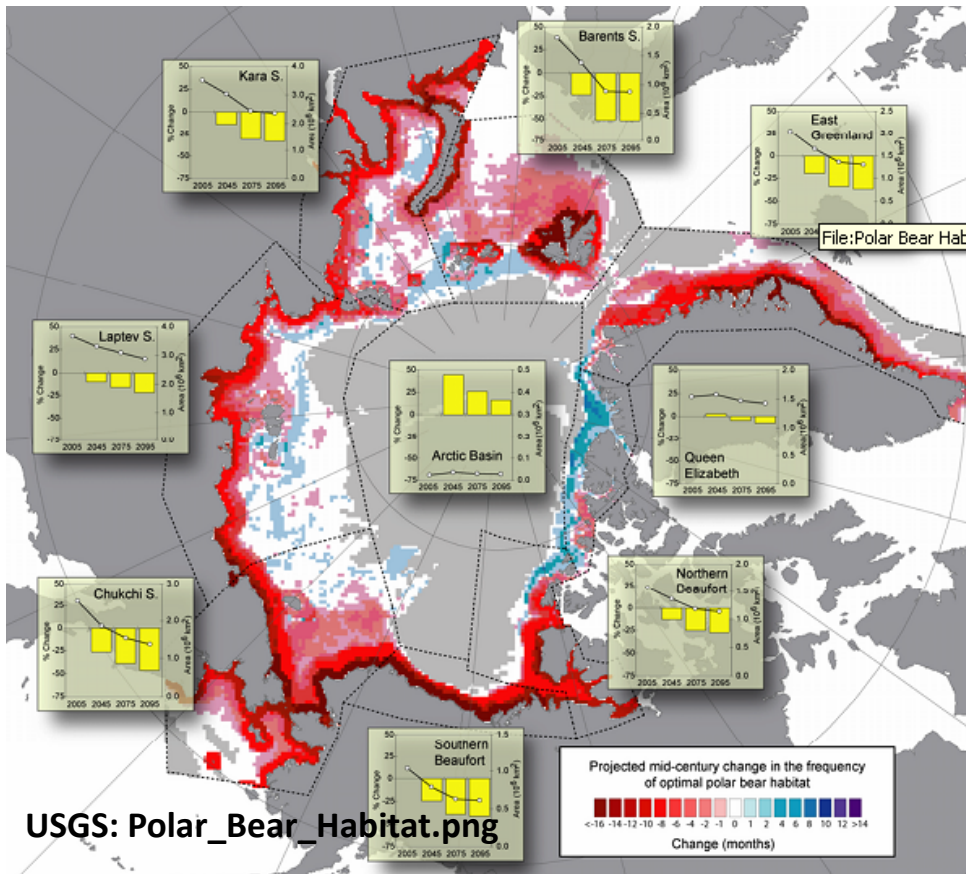
Done

Start Center for the Study of ... PA Megan's Law Web... Microsoft PowerPoint - [...]

Internet 100%

10:32 AM

| Agency name | No. of quarters reported | Bias motivation | | | | |
|---------------------|--------------------------|-----------------|----------|--------------------|-----------|------------|
| | | Race | Religion | Sexual orientation | Ethnicity | Disability |
| PENNSYLVANIA | | 60 | 36 | 13 | 8 | 1 |
| Cities | | 48 | 25 | 7 | 6 | 0 |
| Abington Township | 3 | 3 | 3 | 0 | 0 | 0 |
| Bensalem Township | 4 | 3 | 0 | 0 | 0 | 0 |
| Carlisle | 4 | 1 | 0 | 0 | 0 | 0 |
| Easttown Township | 4 | 0 | 0 | 0 | 1 | 0 |
| Erie | 4 | 1 | 0 | 0 | 0 | 0 |
| Harrisburg | 4 | 0 | 0 | 1 | 2 | 0 |
| Horsham Township | 4 | 1 | 1 | 0 | 0 | 0 |
| Johnstown | 4 | 4 | 0 | 0 | 0 | 0 |

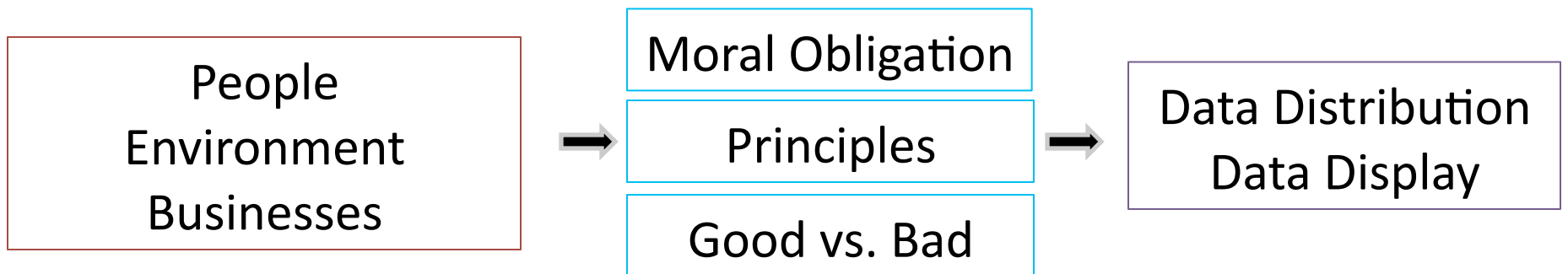


| Population | Aerial survey / Mark-recapture analysis | | Additional / Alternative Analysis | | Sim | TEK | Historical annual removals (5 yr mean) | Potential maximum annual removals | Status | Current trend | Estimated risk of future decline | Comment |
|------------------------------------|---|-----------------|-----------------------------------|------------------------|-----|-----|---|-----------------------------------|----------------|----------------|----------------------------------|-------------------------|
| | Number (year of estimate) | ±2 SE or 95% CI | Number (year of estimate) | ±2 SE or min-max range | | | | | | | | |
| Arctic Basin | Unknown | | | | | | N/A | 0 | Data deficient | Data deficient | Data deficient | Comment |
| Baffin Bay | 2074 (1988) | 1544-2604 | 1546 (2004) | 690-2402 | X | | 212 | 176 | Data deficient | Declining | Very high | Comment |
| Barents Sea | 2650 (2004) | 1900-3600 | | | | | 1 | 0 | Data deficient | Data deficient | Data deficient | Comment |
| Chukchi Sea | Unknown | | | | | | 37 - plus unknown but substantial in Russia (100-200) | No quotas | Reduced | Declining | Data deficient | Comment |
| Davis Strait | 2142 (2007) | 1811-2534 | | | | | 60 | 66 | Not reduced | Declining | Very high | Comment |
| East Greenland | Unknown | | | | | | 58 | 64 | Data deficient | Data deficient | Data deficient | Comment |
| Fove Basin | 2197 (1994) | 1677-2717 | 2300 (2004) | 1780-2820 | X | X | 101 | 108 | Data deficient | Data deficient | Data deficient | Comment |
| Gulf of Boothia | 1592 (2000) | 870-2314 | | | | | 60 | 74 | Not reduced | Stable | Very low | Comment |
| Kane Basin | 164 (1998) | 94-234 | | | | | 11 | 15 | Reduced | Declining | Very high | Comment |
| Kara Sea | Unknown | | | | | | N/A | 0 | Data deficient | Data deficient | Data deficient | Comment |
| Lancaster Sound | 2541 (1998) | 1759-3323 | | | | | 83 | 85 | Data deficient | Declining | Higher | Comment |
| Laptev Sea | 800-1200 (1993) | | | | | | N/A | 0 | Data deficient | Data deficient | Data deficient | Comment |
| M'Clintock Channel | 284 (2001) | 166-402 | | | | | 2 | 3 | Reduced | Increasing | Very low | Comment |
| Northern Beaufort | 1202 (1998) | 66-1718 | | | | | 28 | 65 | Not reduced | Stable | Data deficient | Comment |

<http://pbsg.npolar.no/en/status/status-table.html>

... research shows that the Canadian polar bear population has increased 25 percent from 12,000 to 15,000 during the past decade...

Context of Ethics to Prevent Damage



Ethics into Classroom Discussion

- All data, geospatial or not, has ethical considerations
- Concerns with data:
 - Source
 - Author
 - Purpose
- Open forum for students to consider and explore the above

Student Profiles

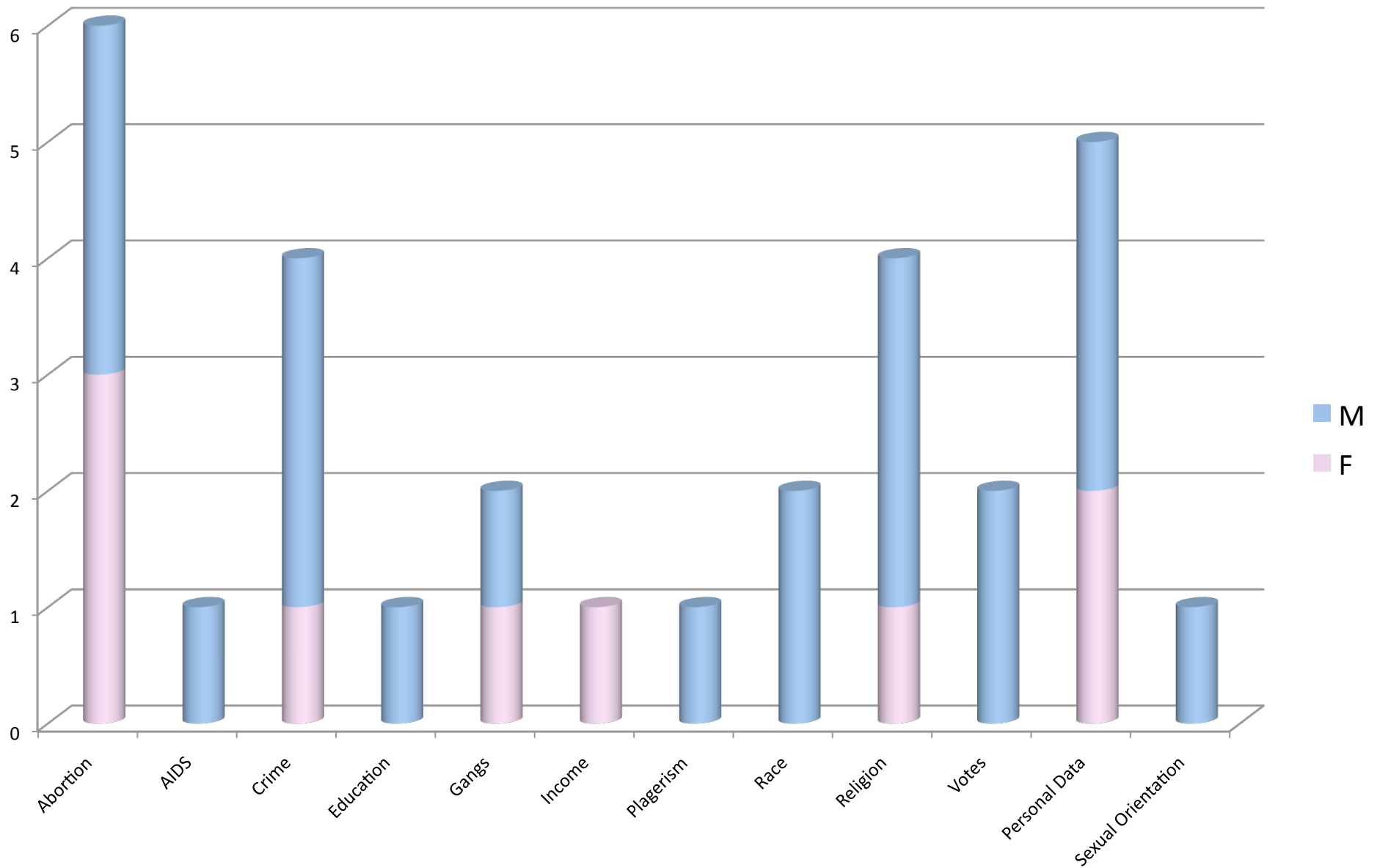
- Undergraduates
- Academic major varies

| | Environmental Studies | Information Systems | Criminal Justice | Total |
|--------------|-----------------------|---------------------|------------------|-----------|
| College A | 8 | 12 | - | 20 |
| College B | 8 | 1 | 1 | 10 |
| Total | 16 | 13 | 1 | 30 |

Posing the Question

- *What constitutes an ethical concern in GIS*
- *What is an example of an ethically sensitive GIS data layer and why**
- *What actions can be taken... to ensure data of this nature is treated/delivered responsibly*

**Sex offenders and hate crimes were precluded as responses due to prior discussions*



The Answers

Overall

Expected

Responses based on topics with an 'obvious' ethical component as well as reflective of current events

Unexpected

Social issues comprised 100% of responses from students heavily influenced by natural issues in both the classroom and via course of study

In Closing

- Continue exploring student views on GIS/Ethics
- Explore relationship of study and ethics

Thank you

alexandraserio@kings.edu

allyserio@yahoo.com