

2019

## Unit 6

Forrest J. Bowlick

*University of Massachusetts Amherst*, [fbowlick@umass.edu](mailto:fbowlick@umass.edu)

Follow this and additional works at: [https://scholarworks.umass.edu/intro\\_GIS](https://scholarworks.umass.edu/intro_GIS)

---

### Recommended Citation

Bowlick, Forrest J., "Unit 6" (2019). *Introduction to Geographic Information Science (GIS) course materials*. 6.

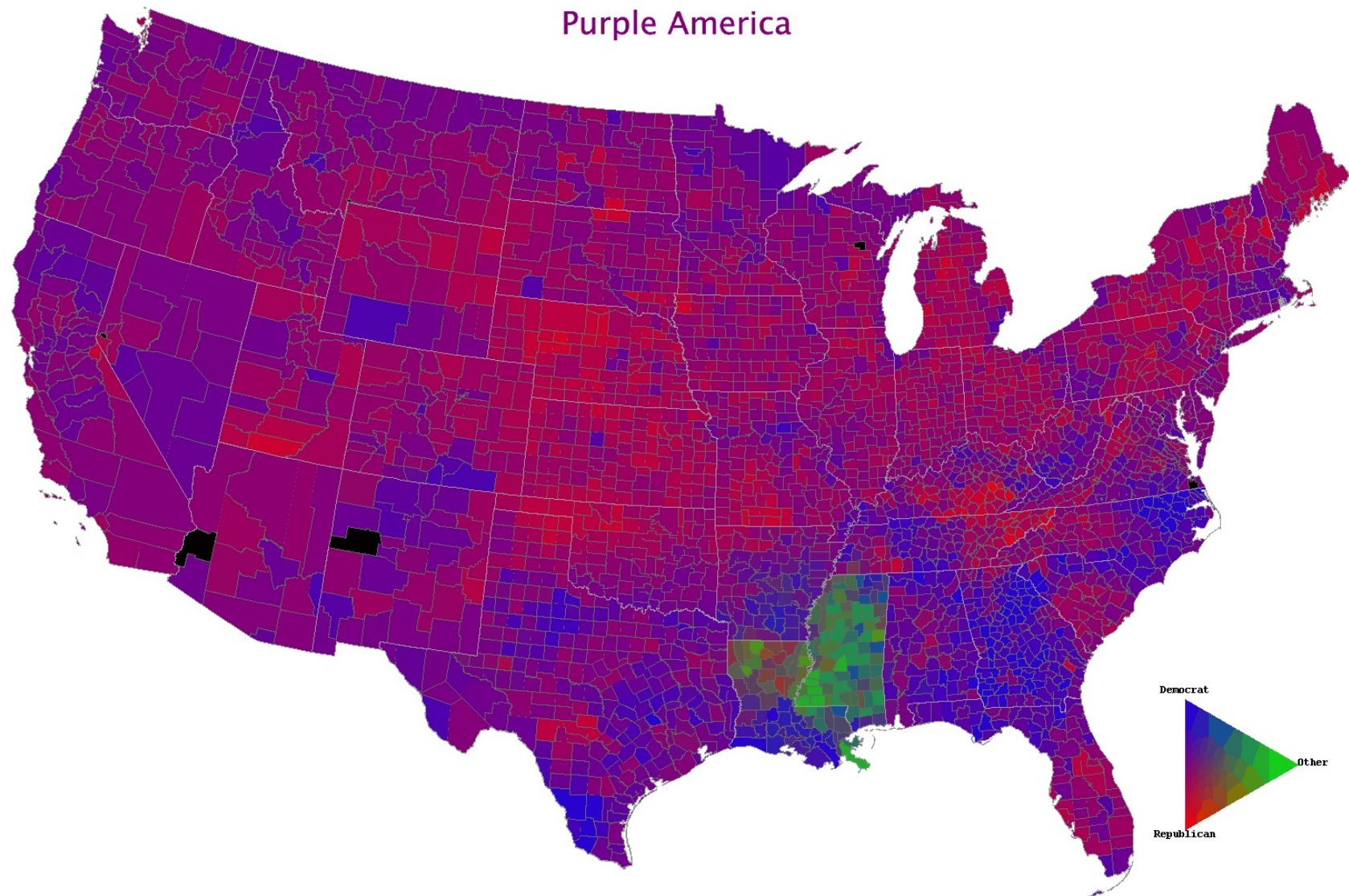
[https://scholarworks.umass.edu/intro\\_GIS/6](https://scholarworks.umass.edu/intro_GIS/6)

This Book is brought to you for free and open access by the Open Access GIS Instructional Materials at ScholarWorks@UMass Amherst. It has been accepted for inclusion in Introduction to Geographic Information Science (GIS) course materials by an authorized administrator of ScholarWorks@UMass Amherst. For more information, please contact [scholarworks@library.umass.edu](mailto:scholarworks@library.umass.edu).

# Practically Halfway There

1960 Presidential Election

Purple America



Forrest J.  
Bowlick,  
Intro to  
GIS

UMass –  
Amherst

# Overview

- Practical Questions (demo?)
- Data Management
  - ArcGIS oddities
  - Demo
- Beginning Your Project
  - Some 'best practices'

# Practical Details (reminder)

- Open everything EXCEPT
  - Other people (this is your individual work)
    - This includes people who have taken the course before, their resources, help forums, Snapchat, Twitter, etc. Your work, your notes.
  - The answer keys to the practice practical are not recommended!
- Full lab period to complete (three hours)
  - Testing accommodations check with me
  - Bring a writing tool

# To Help Focus:

- Google poll!
- [Tx.ag/gis6](https://tx.ag/gis6)

# Study Guide Thoughts?

# Demo Thoughts?

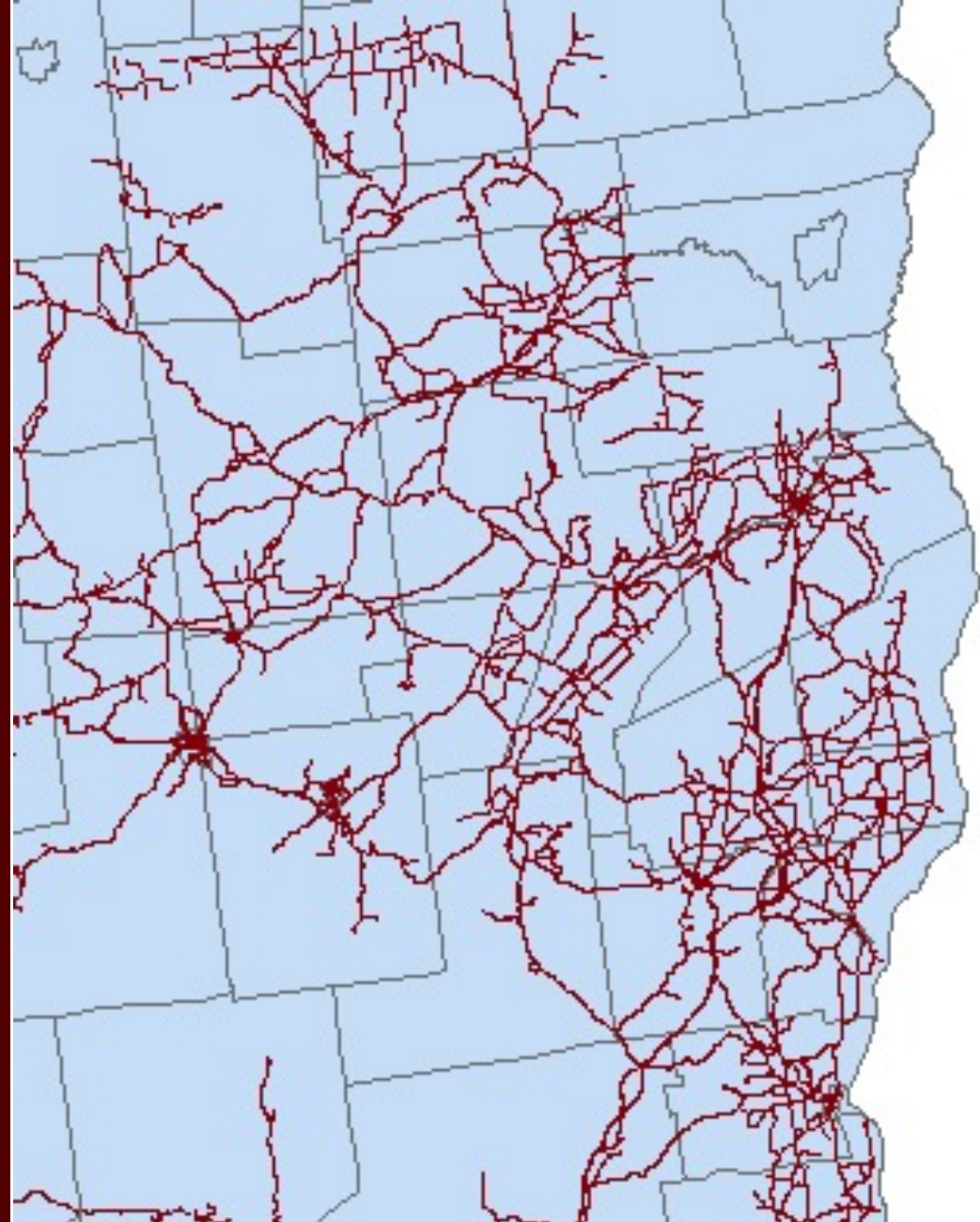
# Data Management

- It's fairly easy to unintentionally lose your data/analysis in Arc
- Part of this we've discussed before (organizing your data)
- Part of it is structural (we'll address now)



# Saving, Processing, Defaults

- ArcMap processes things where it wants to process them.
- This is often not useful for you.
- In order to remain in control of your data and analysis, you need to ensure your own data and analytical consistencies.

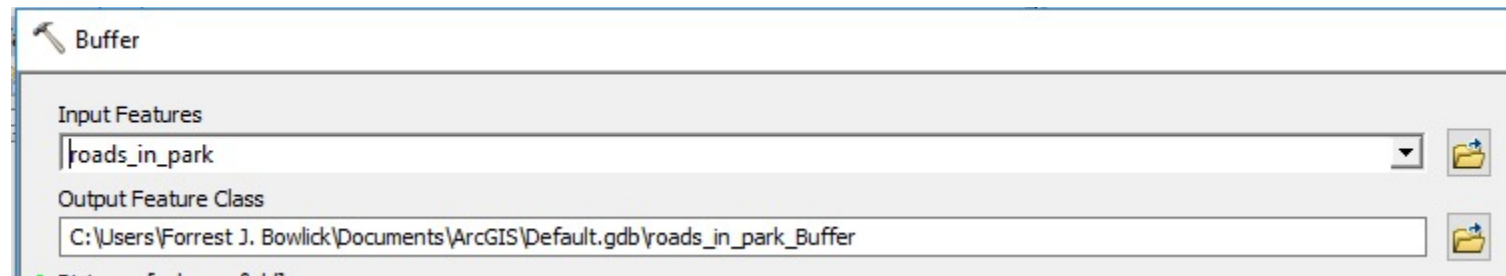


Catalog

Location: landcover.shp

- Home - Documents\ArcGIS
  - AddIns
  - Packages
  - Projects
  - ProjectTemplates
  - Default.gdb
  - Greenland\_Lake.gdb
  - Toolbox.tbx
  - Greenland\_Lake.lyr
  - WWilliams.shp
- Folder Connections
  - C:\Users\Forrest J. Bowlick\Desktop\Exam\_data
  - C:\Users\Forrest J. Bowlick\Desktop\Practice
    - part2\_data
    - part3\_data
      - landcover.shp
      - landcover\_descriptions.xls
      - NY\_towns.shp
      - roads\_in\_park.shp

# Beware the Default Geodatabase



# Default Geodatabase?

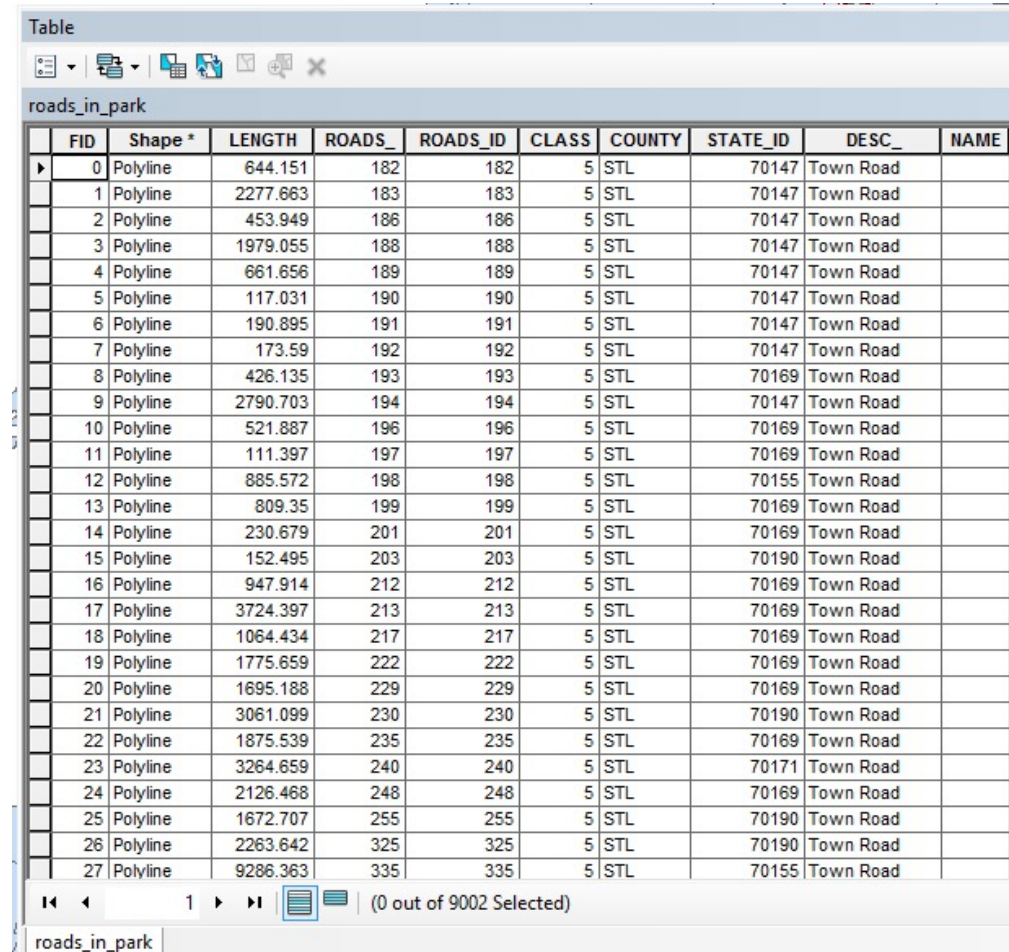
- The preset place where ArcMap puts your stuff.
- Located (unless you change it) at:  
C:\Users\ArcGIS\Default.gdb

# Geodatabase?

- Via Arc Help:
  - 'An ArcGIS geodatabase is a collection of geographic datasets of various types held in a common file system folder, or a multiuser relational DBMS (database management system)'.

# Database?

- You've been using them already!



Table

roads\_in\_park

| FID | Shape *  | LENGTH   | ROADS_ | ROADS_ID | CLASS | COUNTY | STATE_ID | DESC_     | NAME |
|-----|----------|----------|--------|----------|-------|--------|----------|-----------|------|
| 0   | Polyline | 644.151  | 182    | 182      | 5     | STL    | 70147    | Town Road |      |
| 1   | Polyline | 2277.663 | 183    | 183      | 5     | STL    | 70147    | Town Road |      |
| 2   | Polyline | 453.949  | 186    | 186      | 5     | STL    | 70147    | Town Road |      |
| 3   | Polyline | 1979.055 | 188    | 188      | 5     | STL    | 70147    | Town Road |      |
| 4   | Polyline | 661.656  | 189    | 189      | 5     | STL    | 70147    | Town Road |      |
| 5   | Polyline | 117.031  | 190    | 190      | 5     | STL    | 70147    | Town Road |      |
| 6   | Polyline | 190.895  | 191    | 191      | 5     | STL    | 70147    | Town Road |      |
| 7   | Polyline | 173.59   | 192    | 192      | 5     | STL    | 70147    | Town Road |      |
| 8   | Polyline | 426.135  | 193    | 193      | 5     | STL    | 70169    | Town Road |      |
| 9   | Polyline | 2790.703 | 194    | 194      | 5     | STL    | 70147    | Town Road |      |
| 10  | Polyline | 521.887  | 196    | 196      | 5     | STL    | 70169    | Town Road |      |
| 11  | Polyline | 111.397  | 197    | 197      | 5     | STL    | 70169    | Town Road |      |
| 12  | Polyline | 885.572  | 198    | 198      | 5     | STL    | 70155    | Town Road |      |
| 13  | Polyline | 809.35   | 199    | 199      | 5     | STL    | 70169    | Town Road |      |
| 14  | Polyline | 230.679  | 201    | 201      | 5     | STL    | 70169    | Town Road |      |
| 15  | Polyline | 152.495  | 203    | 203      | 5     | STL    | 70190    | Town Road |      |
| 16  | Polyline | 947.914  | 212    | 212      | 5     | STL    | 70169    | Town Road |      |
| 17  | Polyline | 3724.397 | 213    | 213      | 5     | STL    | 70169    | Town Road |      |
| 18  | Polyline | 1064.434 | 217    | 217      | 5     | STL    | 70169    | Town Road |      |
| 19  | Polyline | 1775.659 | 222    | 222      | 5     | STL    | 70169    | Town Road |      |
| 20  | Polyline | 1695.188 | 229    | 229      | 5     | STL    | 70169    | Town Road |      |
| 21  | Polyline | 3061.099 | 230    | 230      | 5     | STL    | 70190    | Town Road |      |
| 22  | Polyline | 1875.539 | 235    | 235      | 5     | STL    | 70169    | Town Road |      |
| 23  | Polyline | 3264.659 | 240    | 240      | 5     | STL    | 70171    | Town Road |      |
| 24  | Polyline | 2126.468 | 248    | 248      | 5     | STL    | 70169    | Town Road |      |
| 25  | Polyline | 1672.707 | 255    | 255      | 5     | STL    | 70190    | Town Road |      |
| 26  | Polyline | 2263.642 | 325    | 325      | 5     | STL    | 70190    | Town Road |      |
| 27  | Polyline | 9286.363 | 335    | 335      | 5     | STL    | 70155    | Town Road |      |

roads\_in\_park

# Geo?

- Stop it.

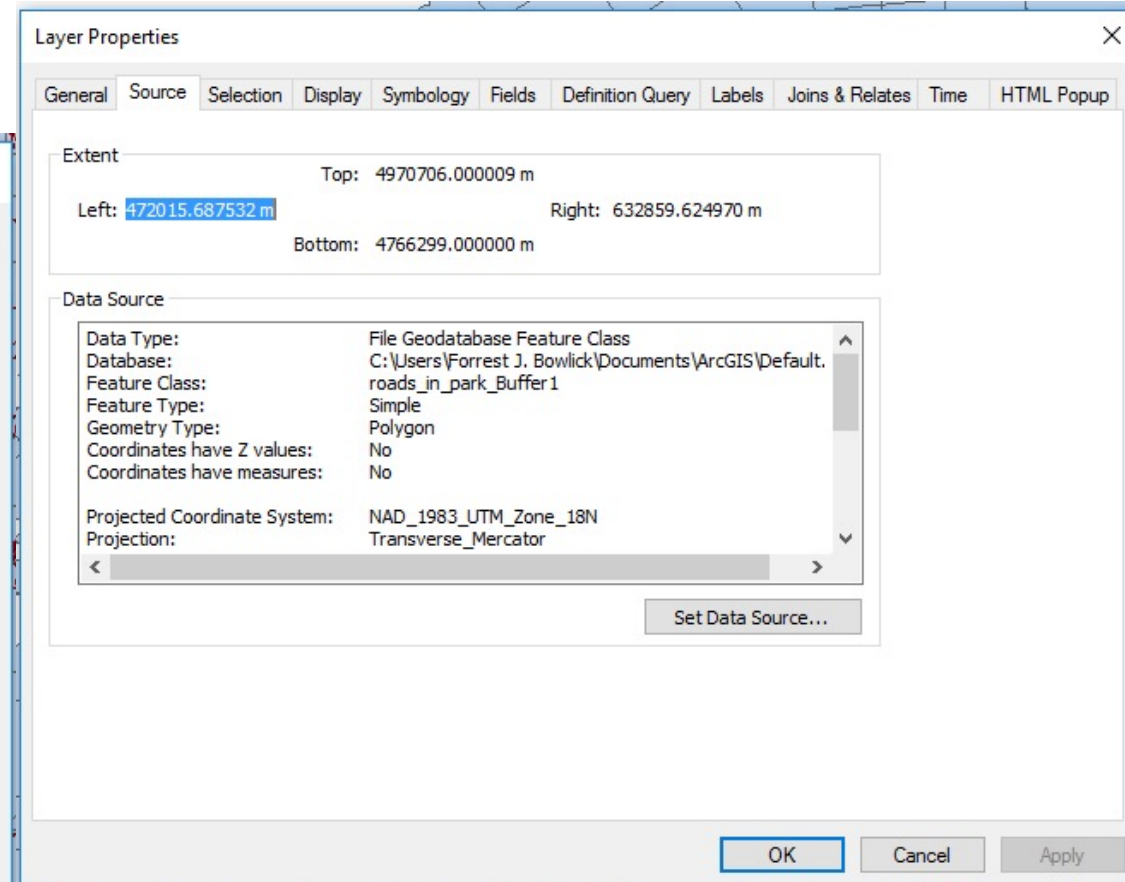
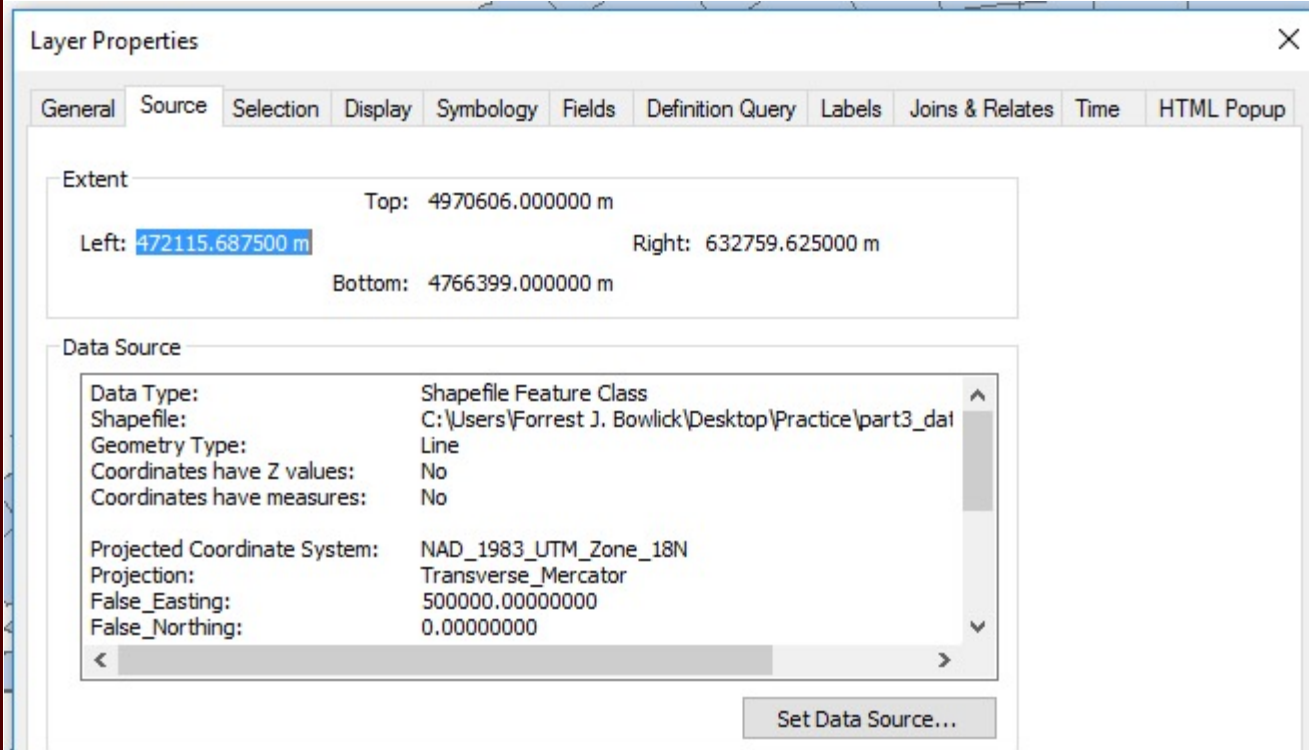
# Default Geodatabase Problems

- Where the default gdb exists is likely not where your data is mobile.
- Your flash drive might store the layer files, but the analysis is staying behind 😞



# How do you tell?

- Remember the fantastic source tab.



# Those Pesky !

- The ! appear when you load an .mxd into ArcMap but it can't find your data.
- Think back to one of our definitions of GIS:  
The container of maps.

# What does it mean?

- 'When data has been relocated after the creation of an ArcMap .mxd, relative path names no longer work. A red exclamation point appears next to the feature classes in the ArcMap table of contents.'
- If you have all the data, an easy fix.

# Projects

- Selections coming soon!
- Assignment email will start soon!
- Communication matters.

# Tips

- ***You*** are the practitioner!
- Ask questions!
- Protect your Data!!!