Finding Geospatial Data Sources

Keith Jenkins
GIS Librarian, Mann Library

Geoportal 0.2

elevation place="United States" Search

Create new item

type
- data (4)
- datawebmap (1)
- maps (1)
- webmap (1)

topic
- elevation (3)
- climate (1)
- oceans (1)

place
- United States (5)
- Earth (1)

tag
- bathymetry (1)
- lidar (1)
- shoreline (1)
- topographic (1)
- weather (1)

5 items matching elevation United States

Sort by: title

Digital Elevation Model (DEM) Discovery Portal

http://www.ngdc.noaa.gov/mgg/dem/demportal.html

DEMs for coastal areas of US territory

United States data elevation oceans bathymetry shoreline

2011-08-18 15:12:23

National Map Seamless Server

http://seamless.usgs.gov/

The National Map Seamless Server is the ultimate location to explore and retrieve data. U.S. Geological Survey (USGS) and the EROS Data Center (EDC) are committed to providing access to geospatial data through The National Map. An approach is to provide free downloads of national base layers, as well as other geospatial data layers. These layers are divided into framework categories.

- Places
- Structures
- Transportation
- Boundaries
- Hydrography
- Orthoimagery
- Land Cover
- Elevation

Along with providing access to the data, the site contains:

- Tutorial to help with downloads
- Information about the downloadable products
- Frequently Asked Questions
- Links to product homepages and information pages

Earth United States datawebmap

2011-08-18 15:12:34

OpenTopography Datasets

http://opentopo.sdsc.edu/gridsphere/gridsphere?cid=datasets

United States data elevation lidar

2011-08-18 15:12:23

PRISM Group

http://www.prism.oregonstate.edu/

PRISM (Parameter-elevation Regressions on Independent Slopes Model) is a unique knowledge-based system that uses point measurements of precipitation, temperature, and other climatic factors to produce continuous, digital grid estimates

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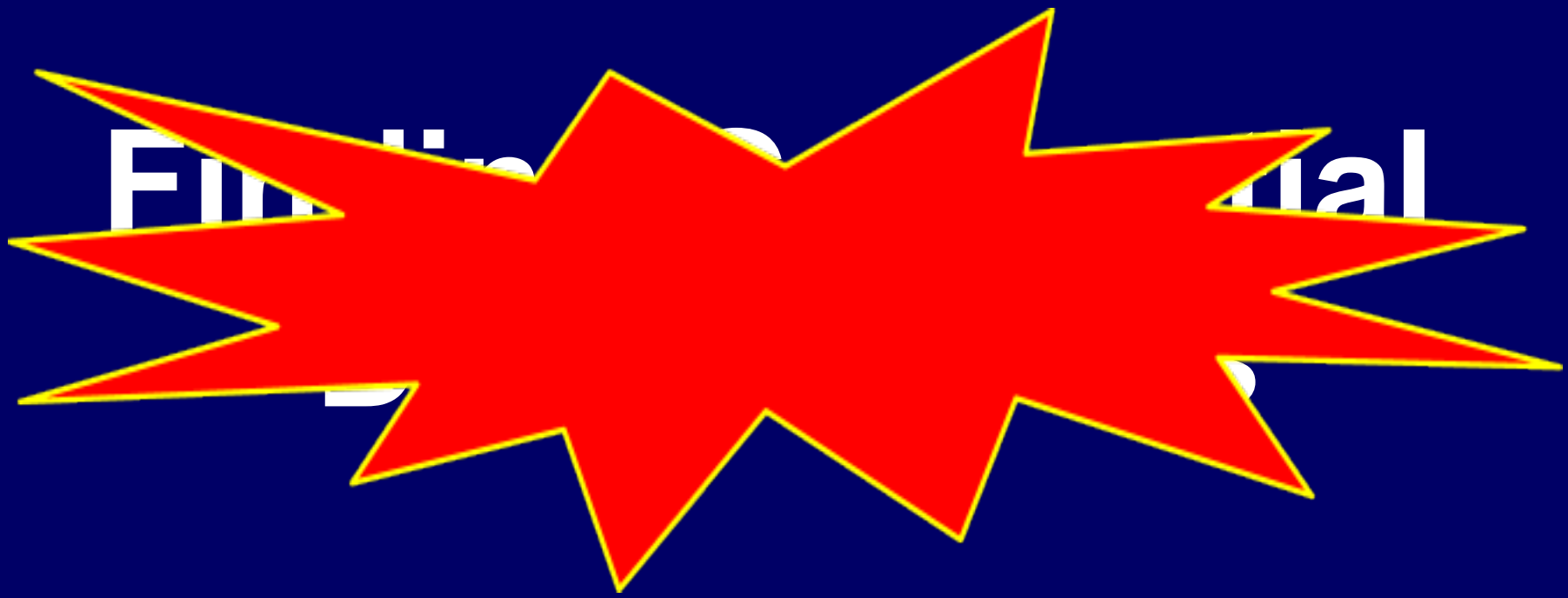

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Should I use ArcGIS or Manifold?

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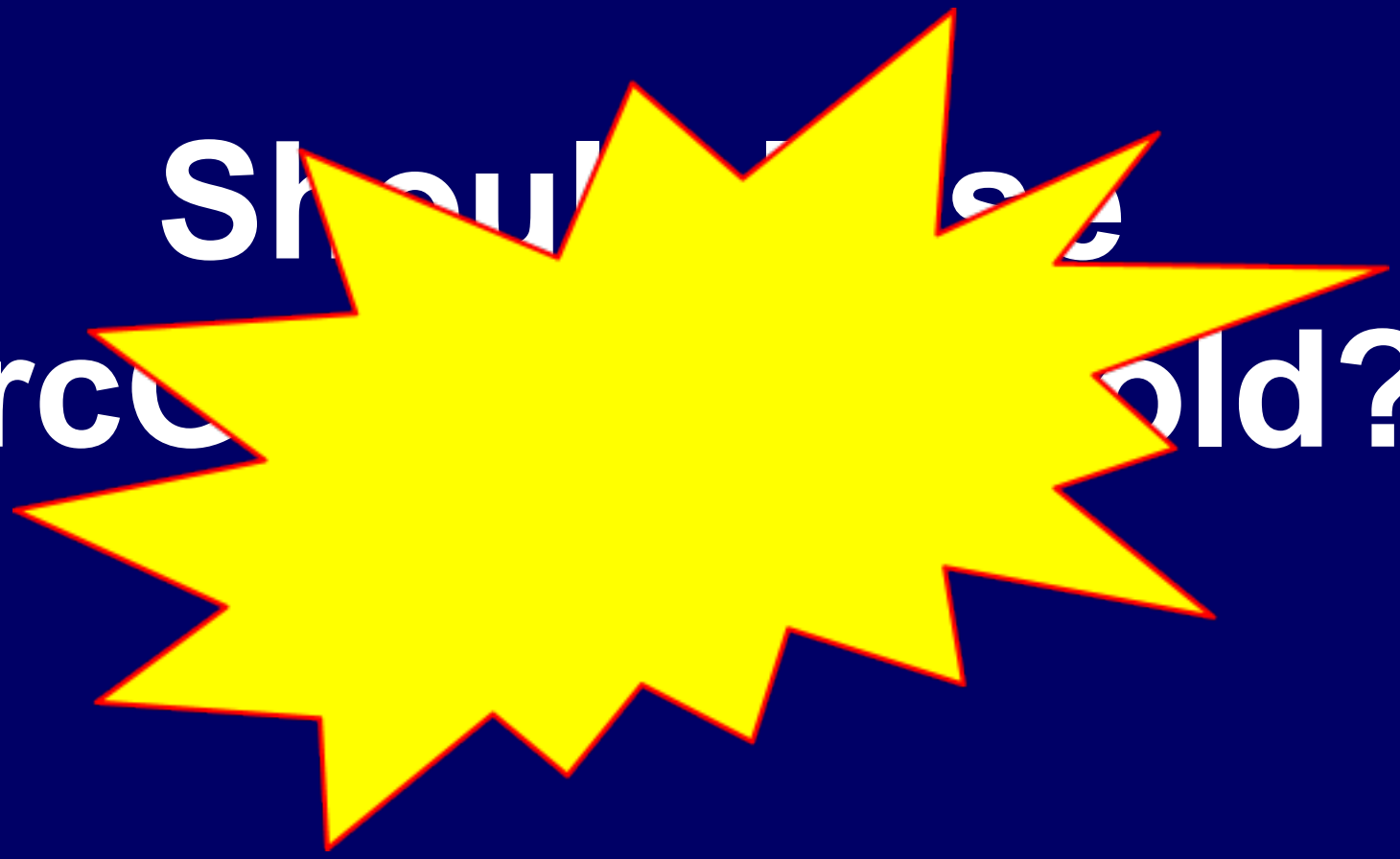
Should I use ArcGIS Online?



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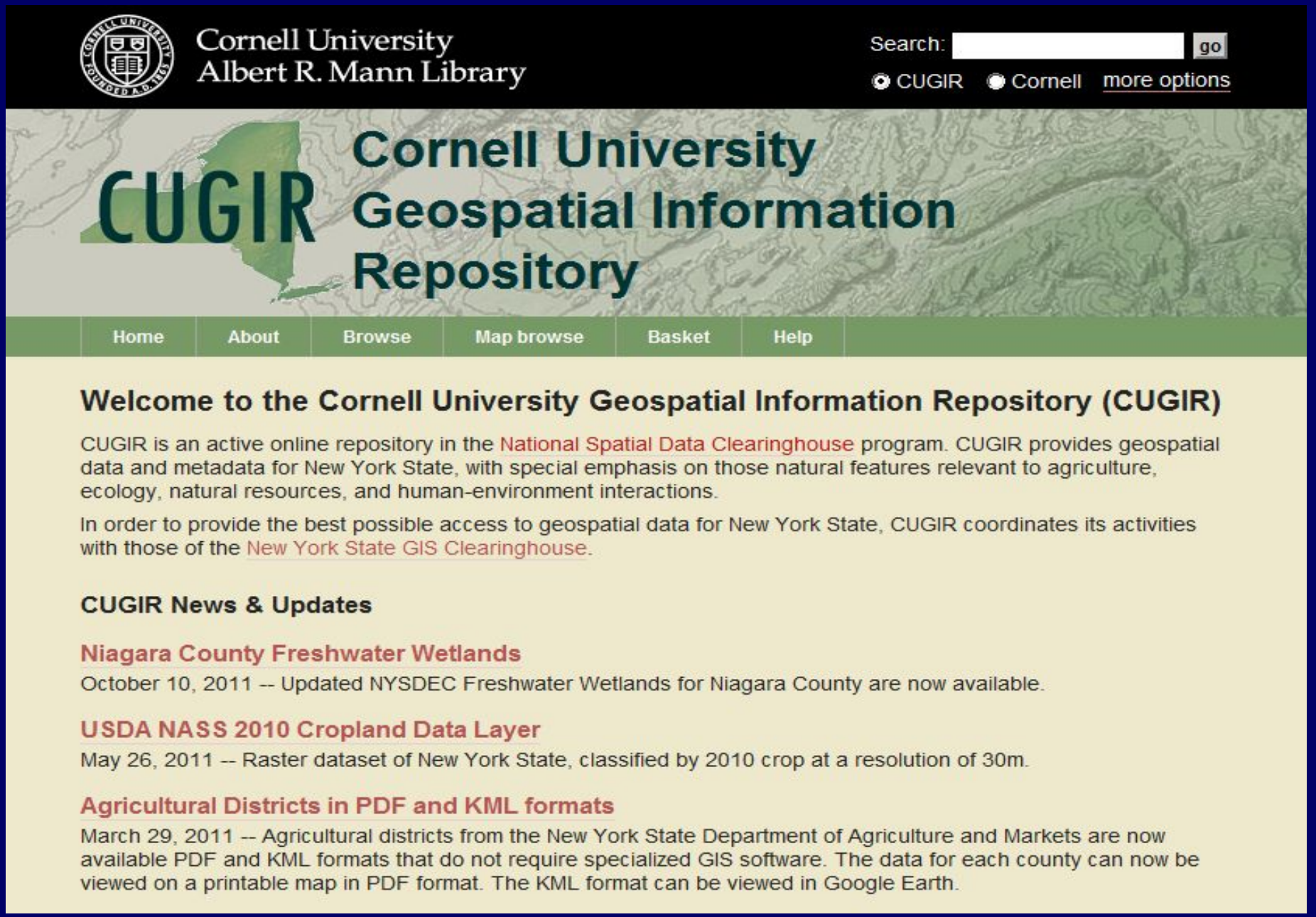
Tompkins County 2-foot contours

Tompkins County 2-foot contours

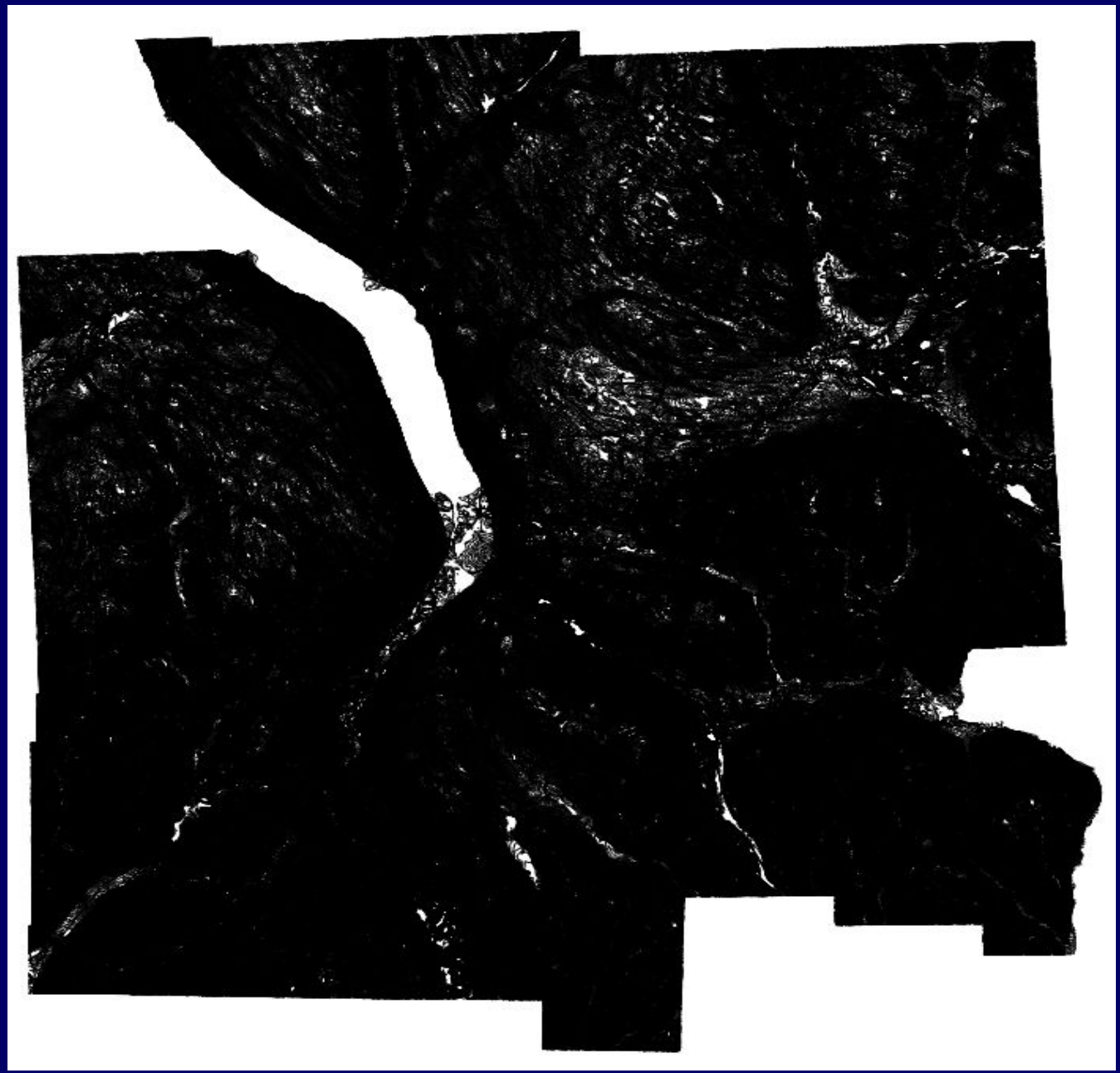
Tompkins County 2-foot contours

Tompkins County 2-foot contours

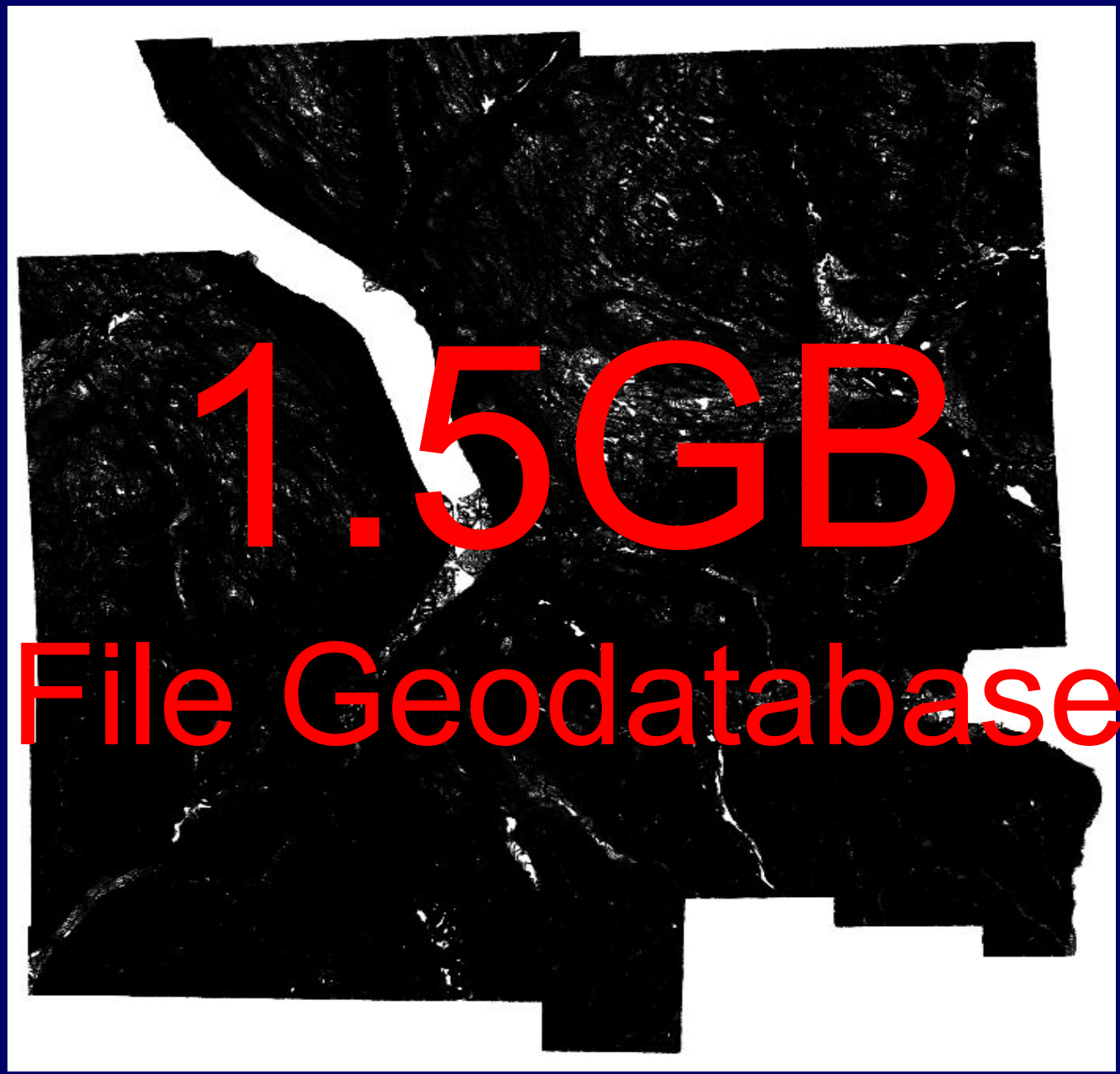
GOAL: Distribute via CUGIR



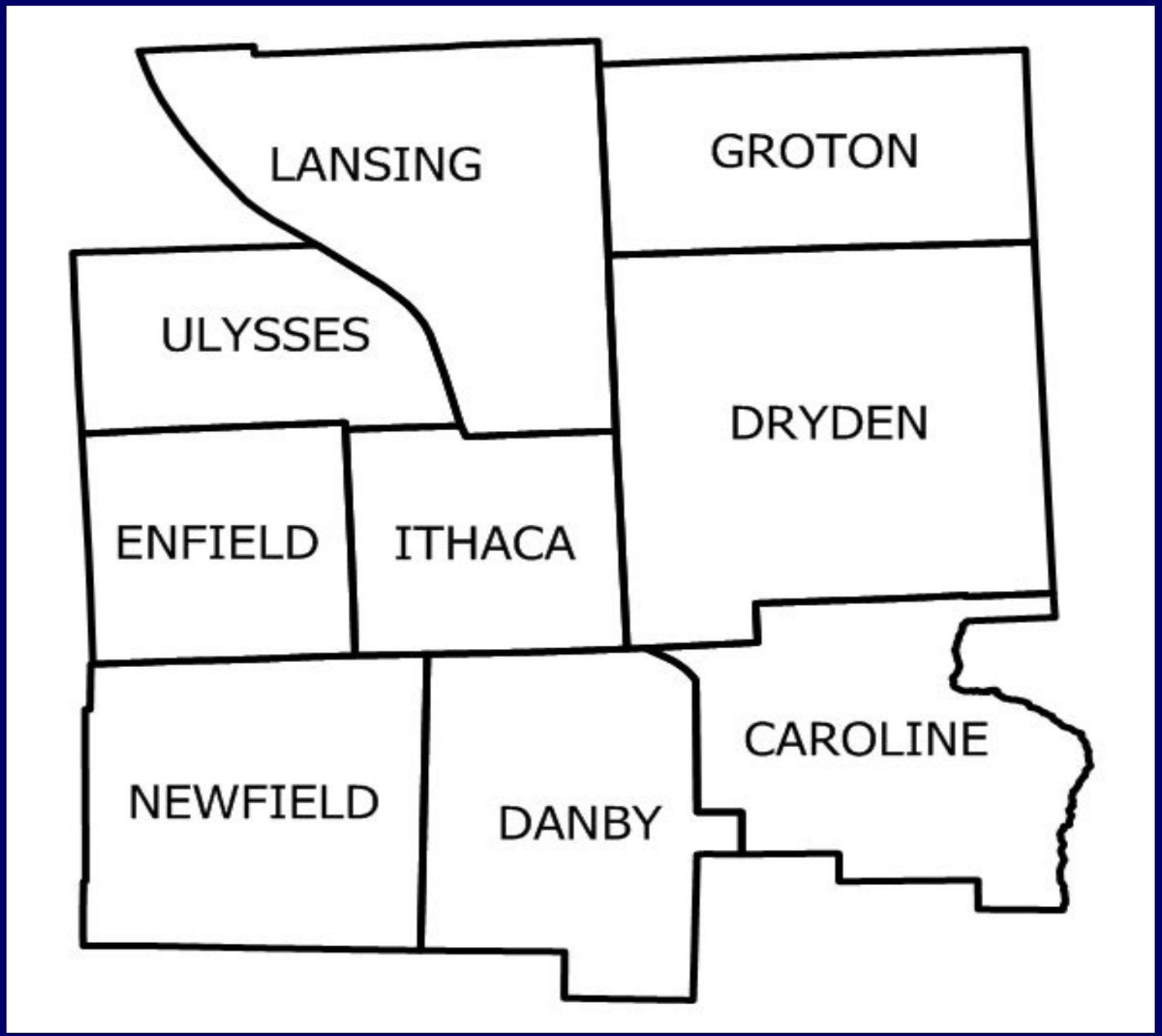
Tompkins County 2-foot contours




43,000
miles


1.5GB
File Geodatabase

Strategy: Split into town-based files



ArcGIS: clip to Town of Dryden

over 2 hours later...

Wrestling with 43,000 miles of contour lines

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Wrestling with 43,000 miles of contour lines

using ArcGIS and Manifold

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GIS Librarian, Mann Library

ArcGIS File Geodatabase

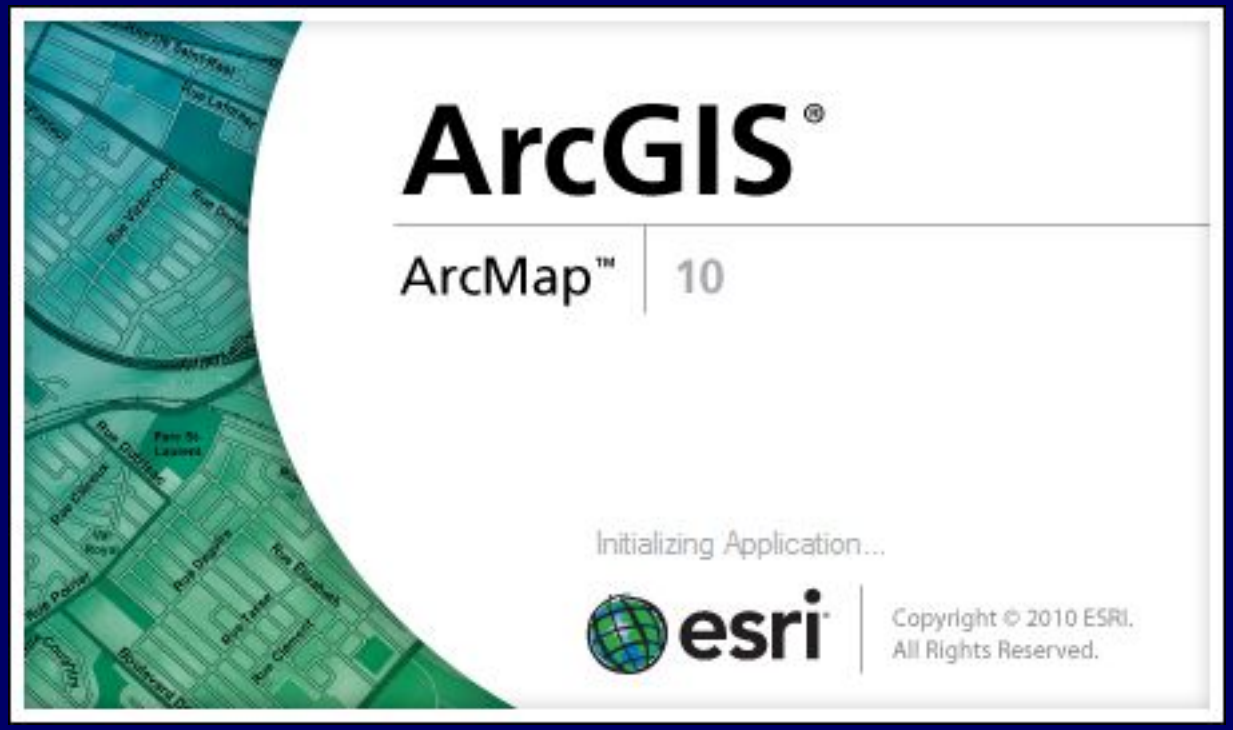
* Can only be read by ArcGIS

* Converted to a shapefile
  * 2GB
  * invalid file
    (probably due to shapefile size limits)

ArcGIS + Manifold

Eventually was able to generate
a 880 MB shapefile

(Details omitted)


ArcGIS®
ArcMap™ 10
Initializing Application...
esri
Copyright © 2010 ESRI.
All Rights Reserved.

Intersect

Input Features

Features	Ranks
TownDryden	
TompkinsContours	

Output Feature Class

D:\project\Tomp2ftcontours\ArcOutput\intersect.shp

JoinAttributes (optional)

ALL

XY Tolerance (optional)

Feet

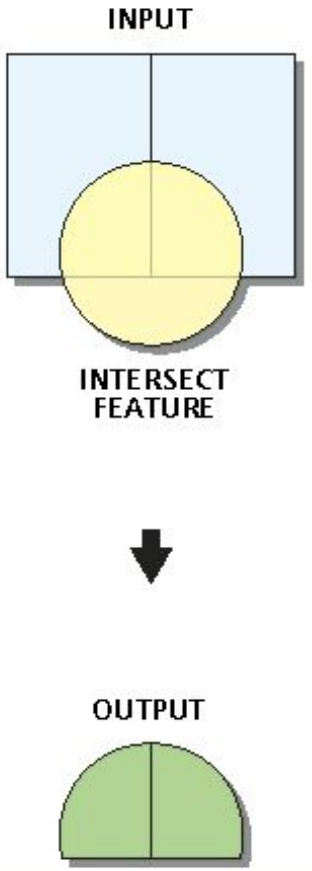
Output Type (optional)

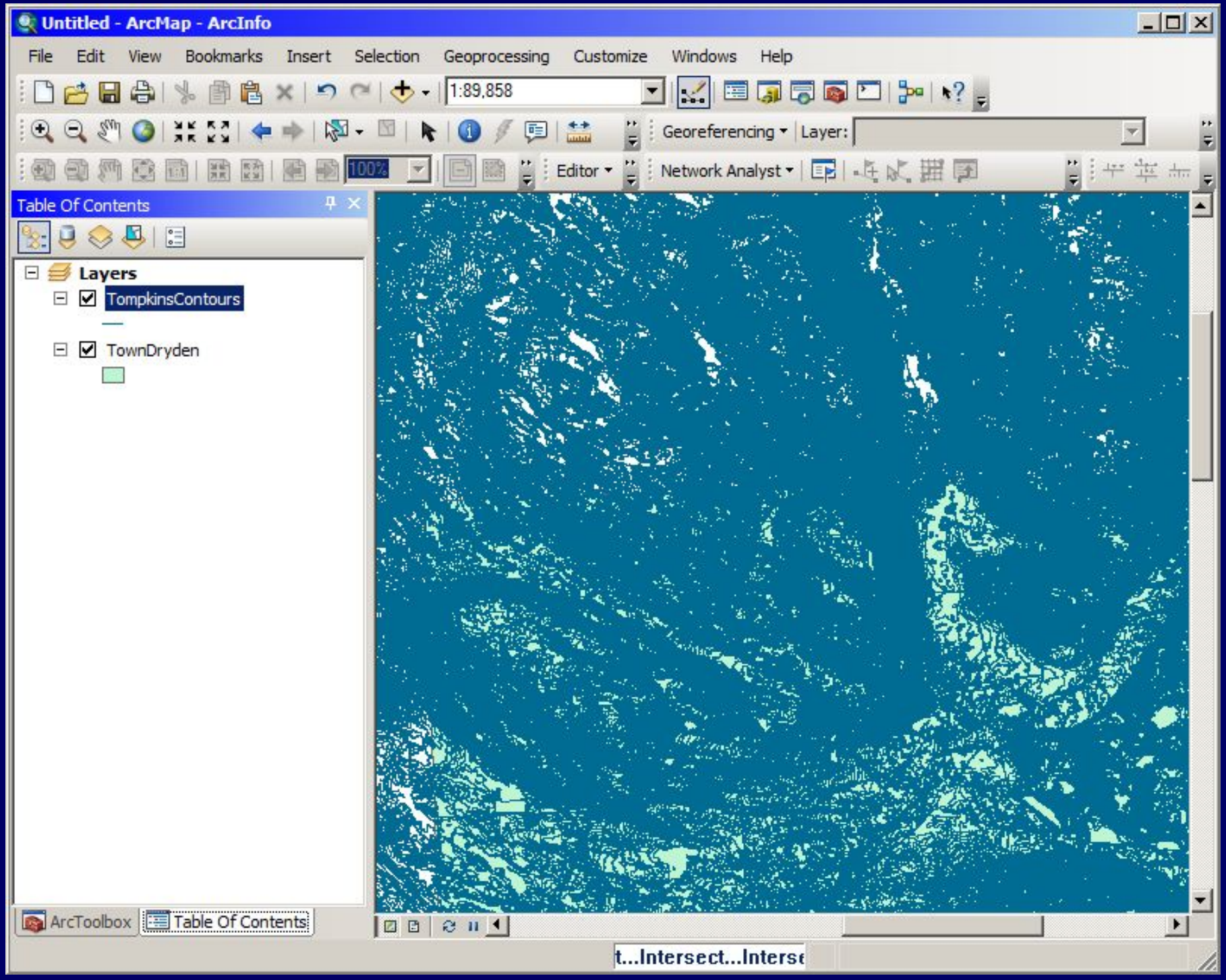
INPUT

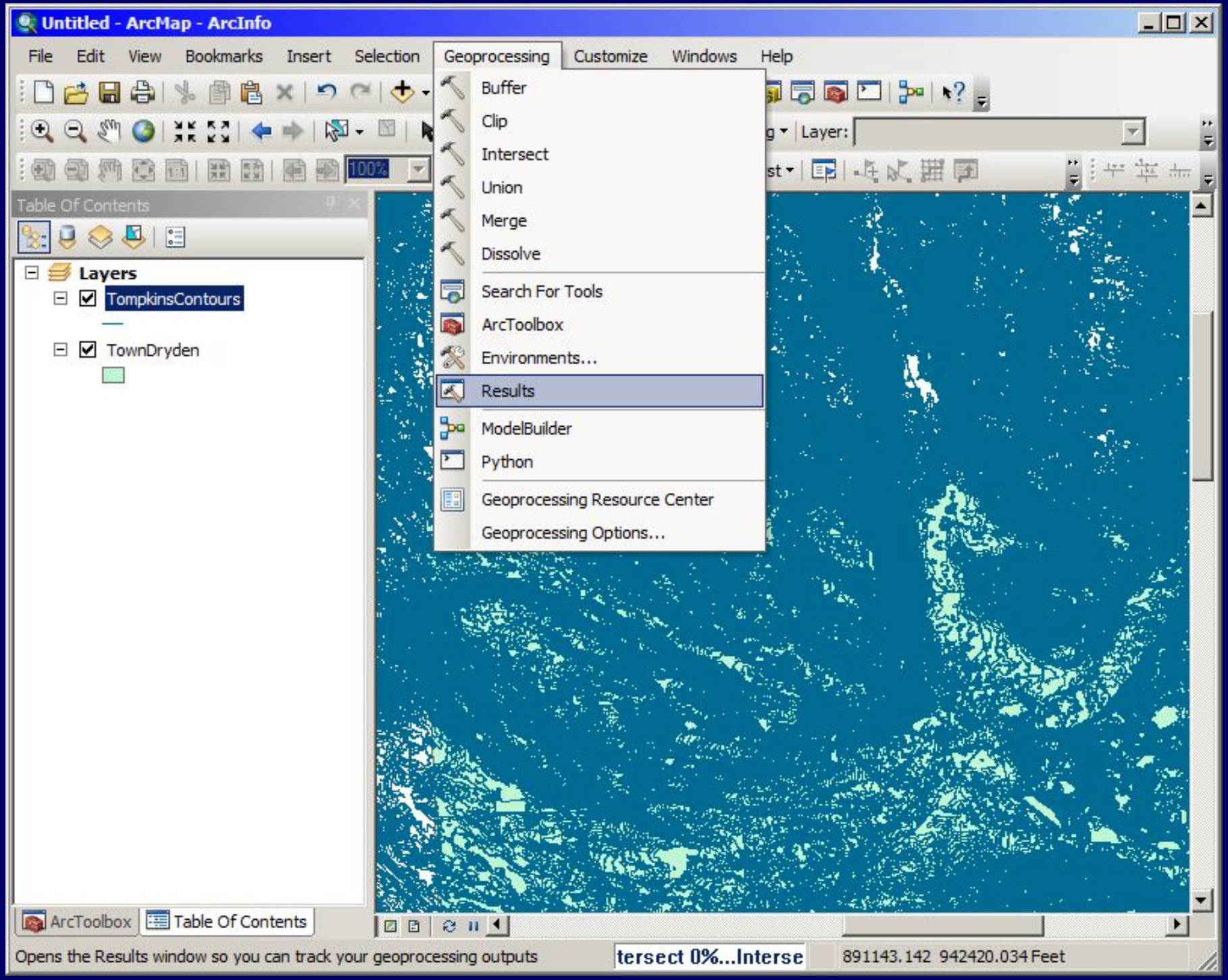
OK | Cancel | Environments... | << Hide Help | Tool Help

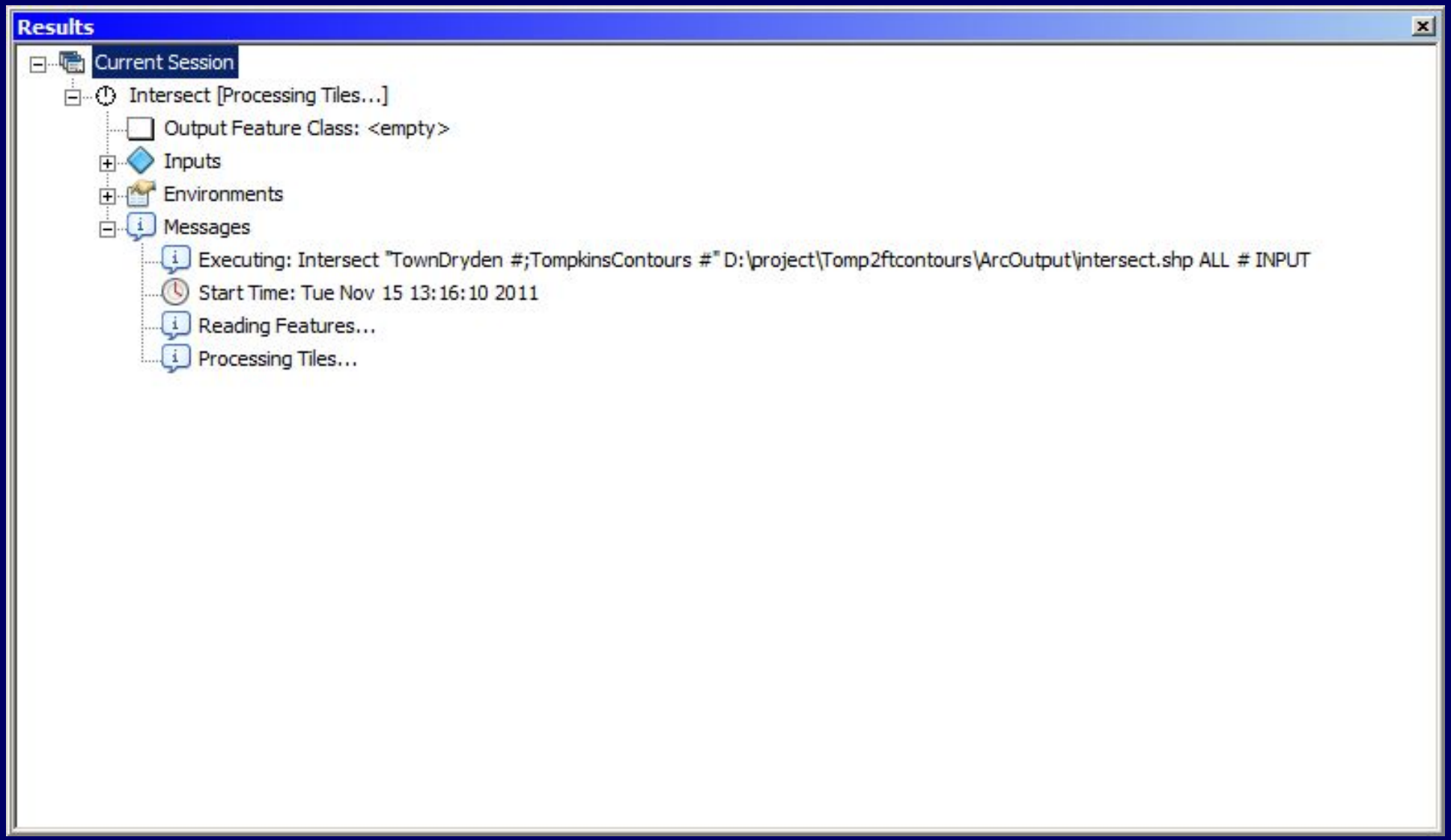
Intersect

Computes a geometric intersection of the input features. Features or portions of features which overlap in all layers and/or feature classes will be written to the output feature class.

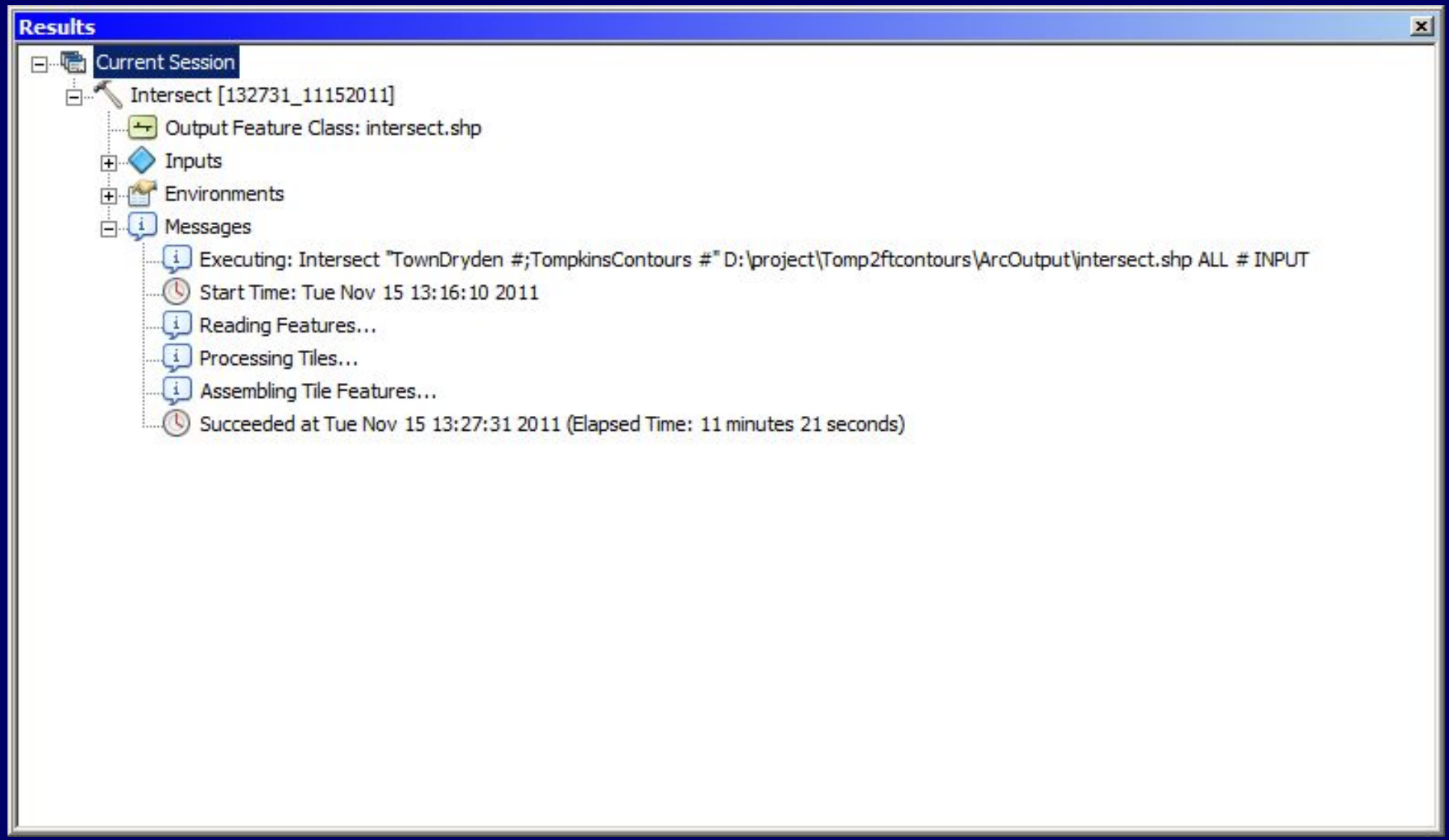



Untitled - ArcMap - ArcInfo
File Edit View Bookmarks Insert Selection Geoprocessing Customize Windows Help
1:89,858
Georeferencing
Layer:
100%
Editor
Network Analyst
Table Of Contents
Layers
TompkinsContours
TownDryden
ArcToolbox
Table Of Contents
t...Intersect...Interse


Untitled - ArcMap - ArcInfo
File
Edit
View
Bookmarks
Insert
Selection
Geoprocessing
Customize
Windows
Help
Buffer
Clip
Intersect
Union
Merge
Dissolve
Search For Tools
ArcToolbox
Environments...
Results
ModelBuilder
Python
Geoprocessing Resource Center
Geoprocessing Options...
Layer:
100%
Table Of Contents
Layers
TompkinsContours
TownDryden
ArcToolbox
Table Of Contents
Opens the Results window so you can track your geoprocessing outputs
tersect 0%...Interse
891143.142 942420.034 Feet

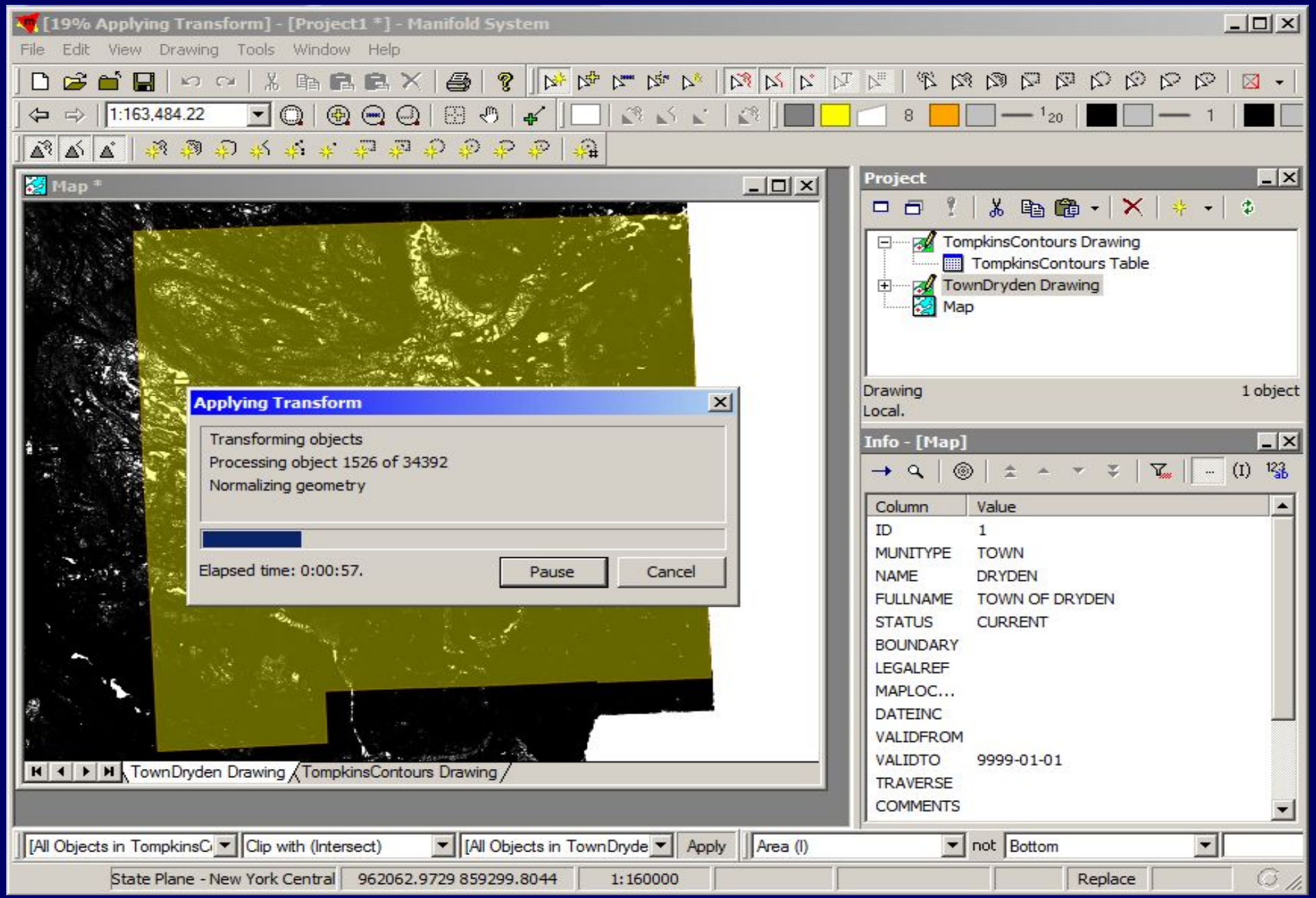

Results
Current Session
Intersect [Processing Tiles...]
Output Feature Class: <empty>
Inputs
Environments
Messages
Executing: Intersect "TownDryden #;TompkinsContours #" D:\project\Tomp2ftcontours\ArcOutput\intersect.shp ALL # INPUT
Start Time: Tue Nov 15 13:16:10 2011
Reading Features...
Processing Tiles...

ArcGIS: 681 seconds




manifold.net

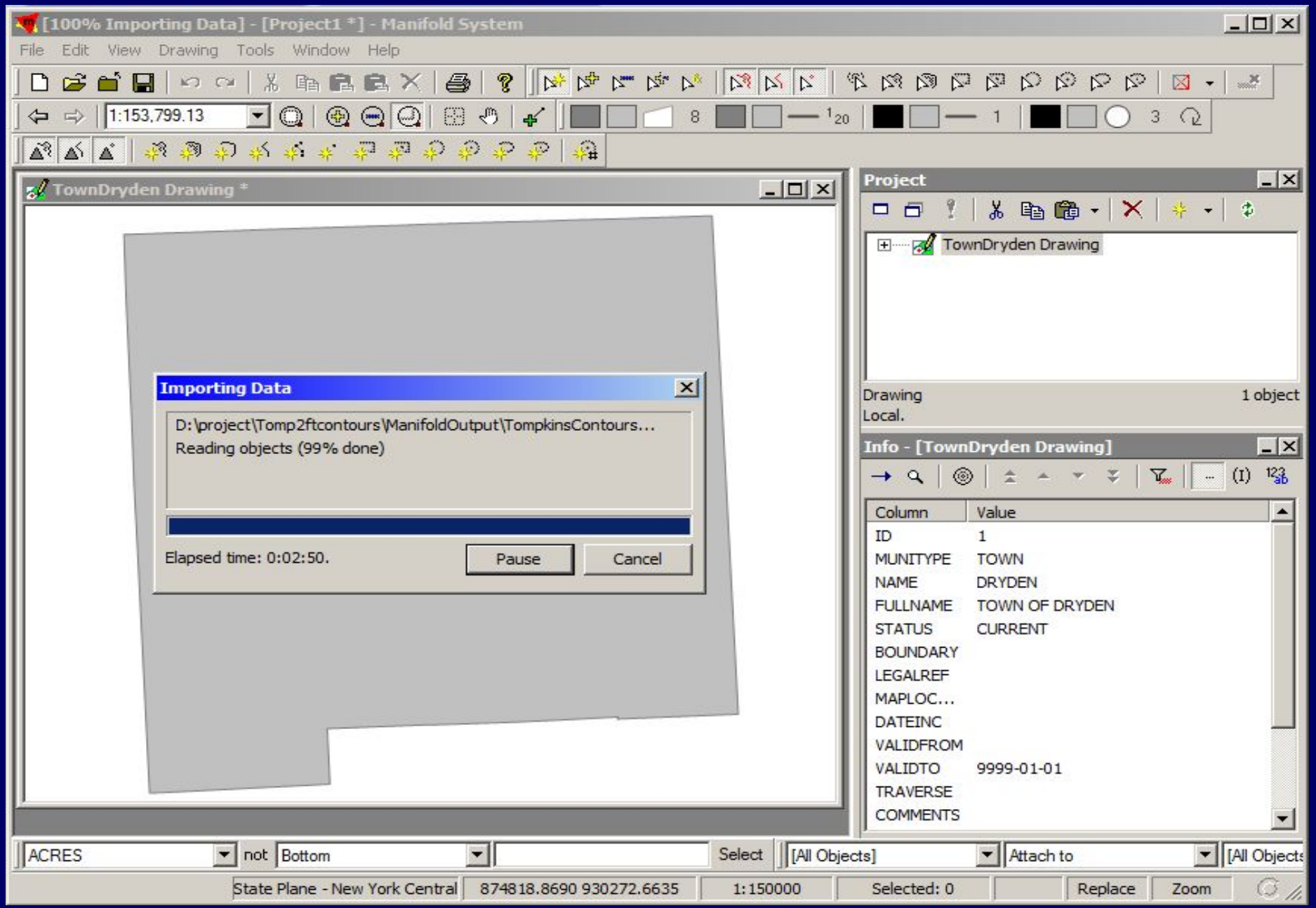
Manifold clip: 489 seconds



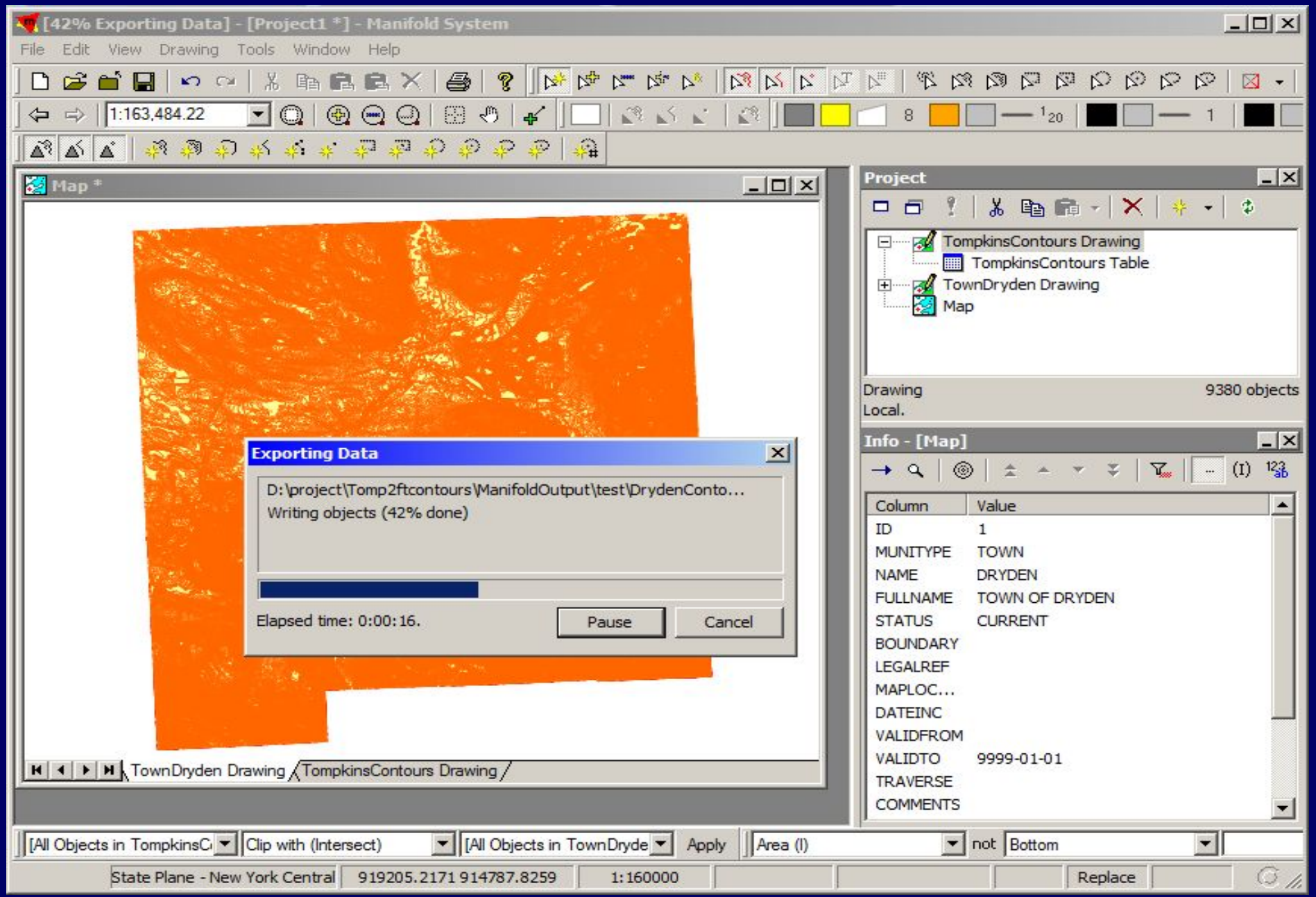
Comparison

ArcGIS	681 seconds
Manifold	489 seconds

Manifold import: 170 seconds



Manifold export: 39 seconds



Manifold

Import	170
Clip	489
Export	39
TOTAL	698

Comparison

ArcGIS	681 seconds
Manifold	698 seconds

Wrestling with 43,000 miles of contour lines

using ArcGIS and Manifold

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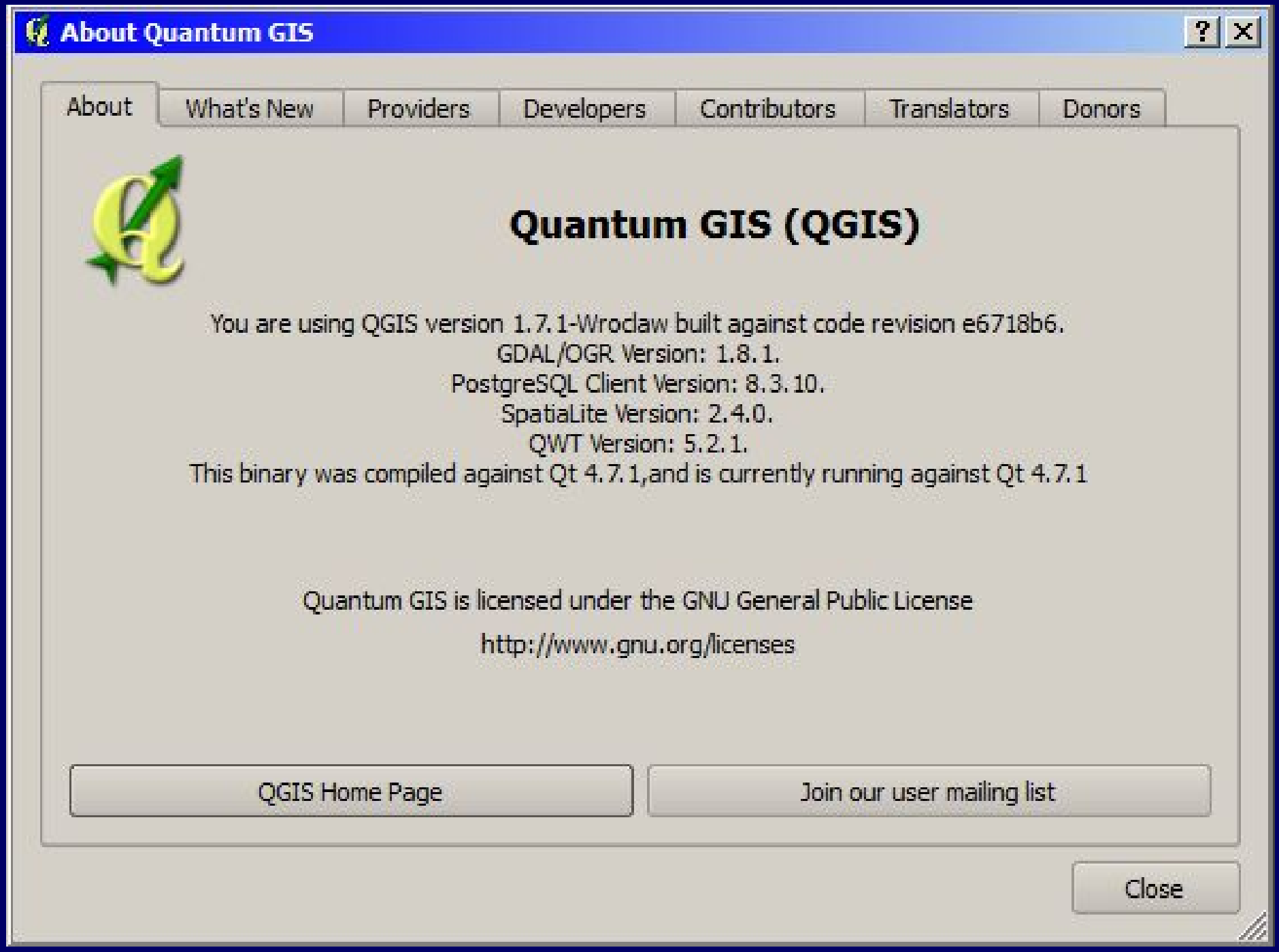
QuantumGIS
Version
1.7.1
'Wrocław'


About Quantum GIS
About
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Developers
Contributors
Translators
Donors
Quantum GIS (QGIS)
You are using QGIS version 1.7.1-Wroclaw built against code revision e6718b6.
GDAL/OGR Version: 1.8.1.
PostgreSQL Client Version: 8.3.10.
SpatiaLite Version: 2.4.0.
QWT Version: 5.2.1.
This binary was compiled against Qt 4.7.1,and is currently running against Qt 4.7.1
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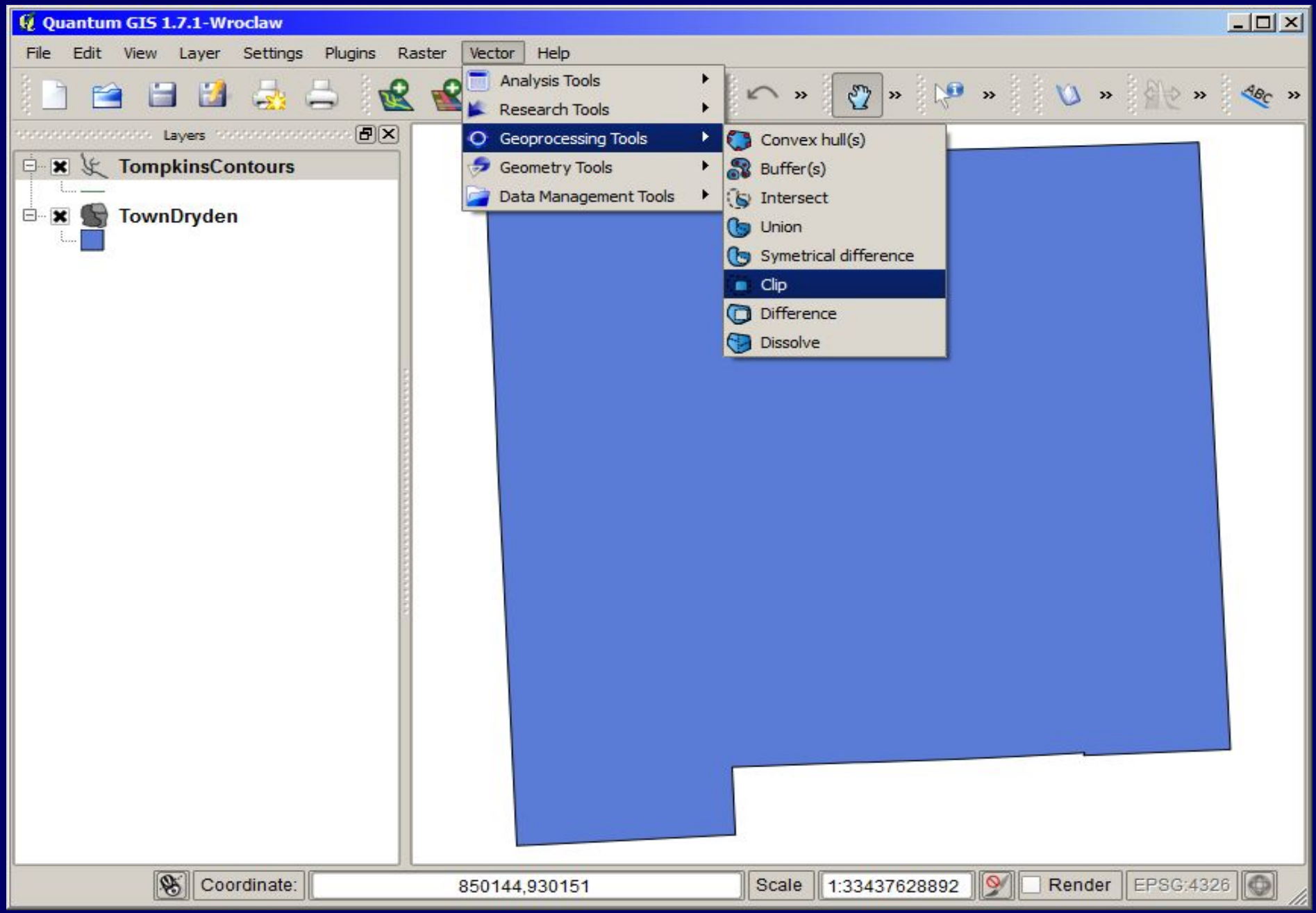
QGIS


Quantum GIS 1.7.1-Wroclaw
File
Edit
View
Layer
Settings
Plugins
Raster
Vector
Help
Analysis Tools
Research Tools
Geoprocessing Tools
Geometry Tools
Data Management Tools
Convex hull(s)
Buffer(s)
Intersect
Union
Symetrical difference
Clip
Difference
Dissolve
Layers
TompkinsContours
TownDryden
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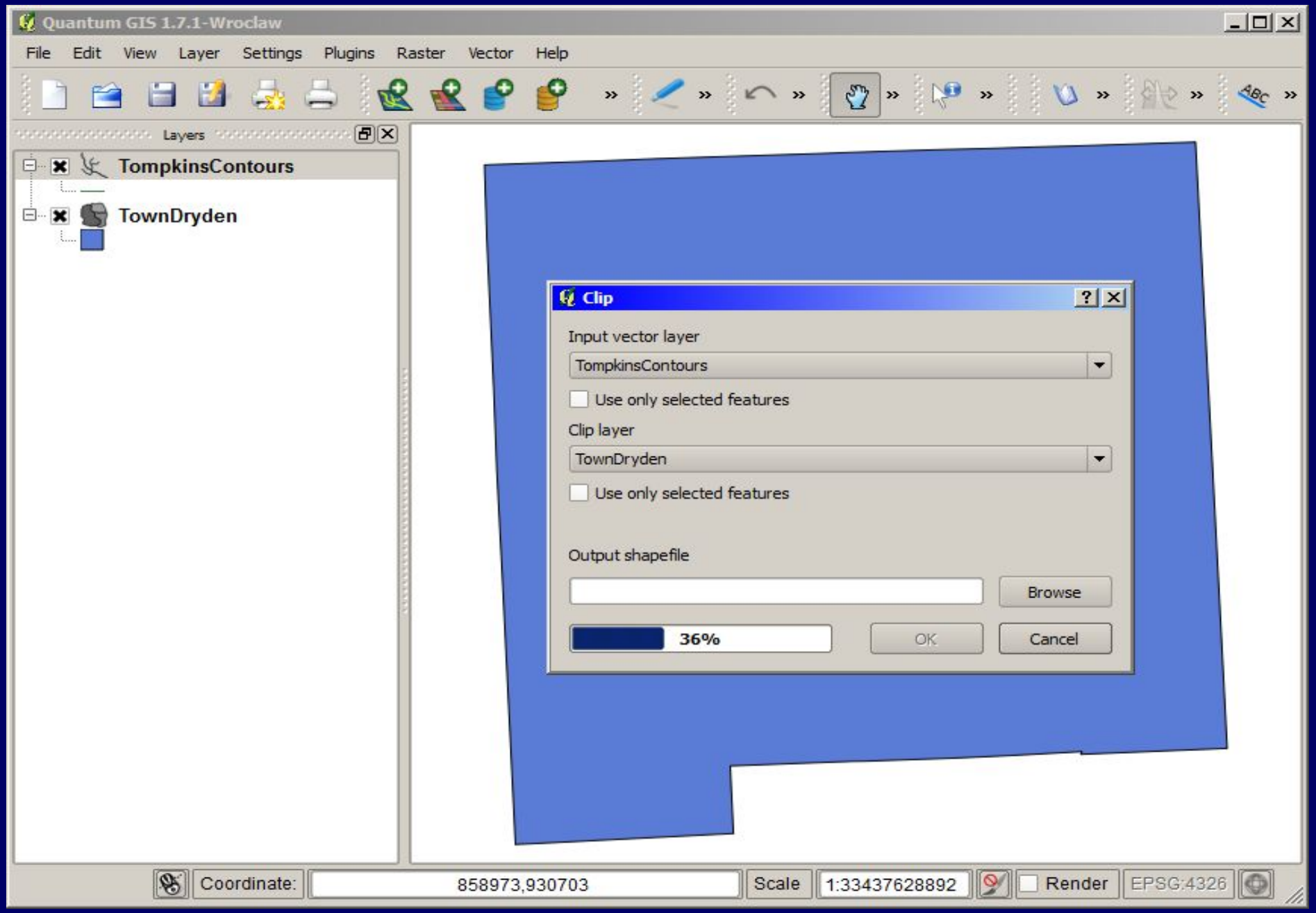
Render
EPSG:4326

QGIS


Quantum GIS 1.7.1-Wroclaw
File
Edit
View
Layer
Settings
Plugins
Raster
Vector
Help
Layers
TompkinsContours
TownDryden
Clip
Input vector layer
TompkinsContours
Use only selected features
Clip layer
TownDryden
Use only selected features
Output shapefile
Browse
36%
OK
Cancel
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Scale
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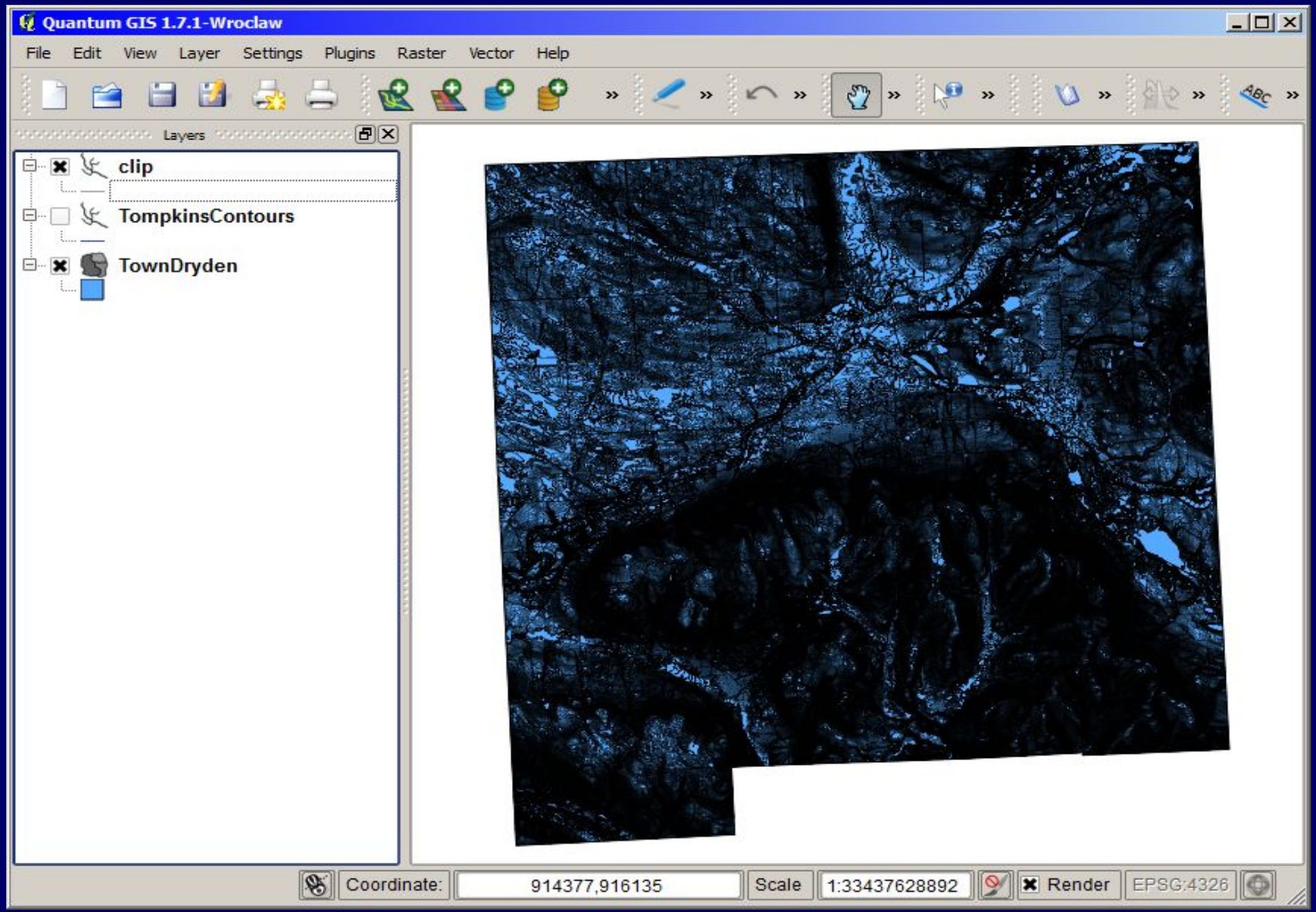
Render
EPSG:4326

QGIS: 82 seconds



Comparison

ArcGIS	681 seconds
Manifold	698 seconds
QGIS	82 seconds

Conclusion

* Every GIS software has its strengths.

* Every GIS software has its frustrations.

* There might be better tools out there
  that we've never even heard of.