

Finding Geospatial Data Sources

Keith Jenkins
GIS Librarian, Mann Library

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:

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

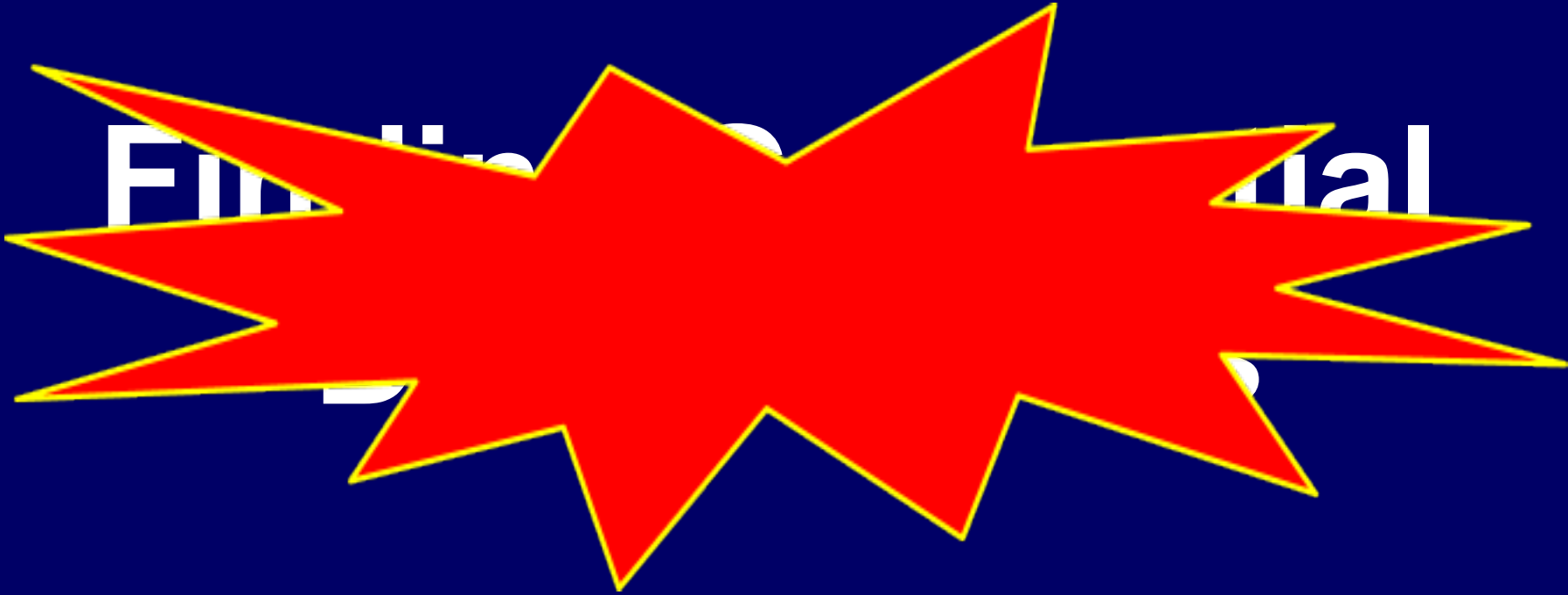
<http://www.prism.oregonstate.edu/>

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

Finding Geospatial Data Sources

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Final




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Should I use ArcGIS or Manifold?

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Should these
Arccold?

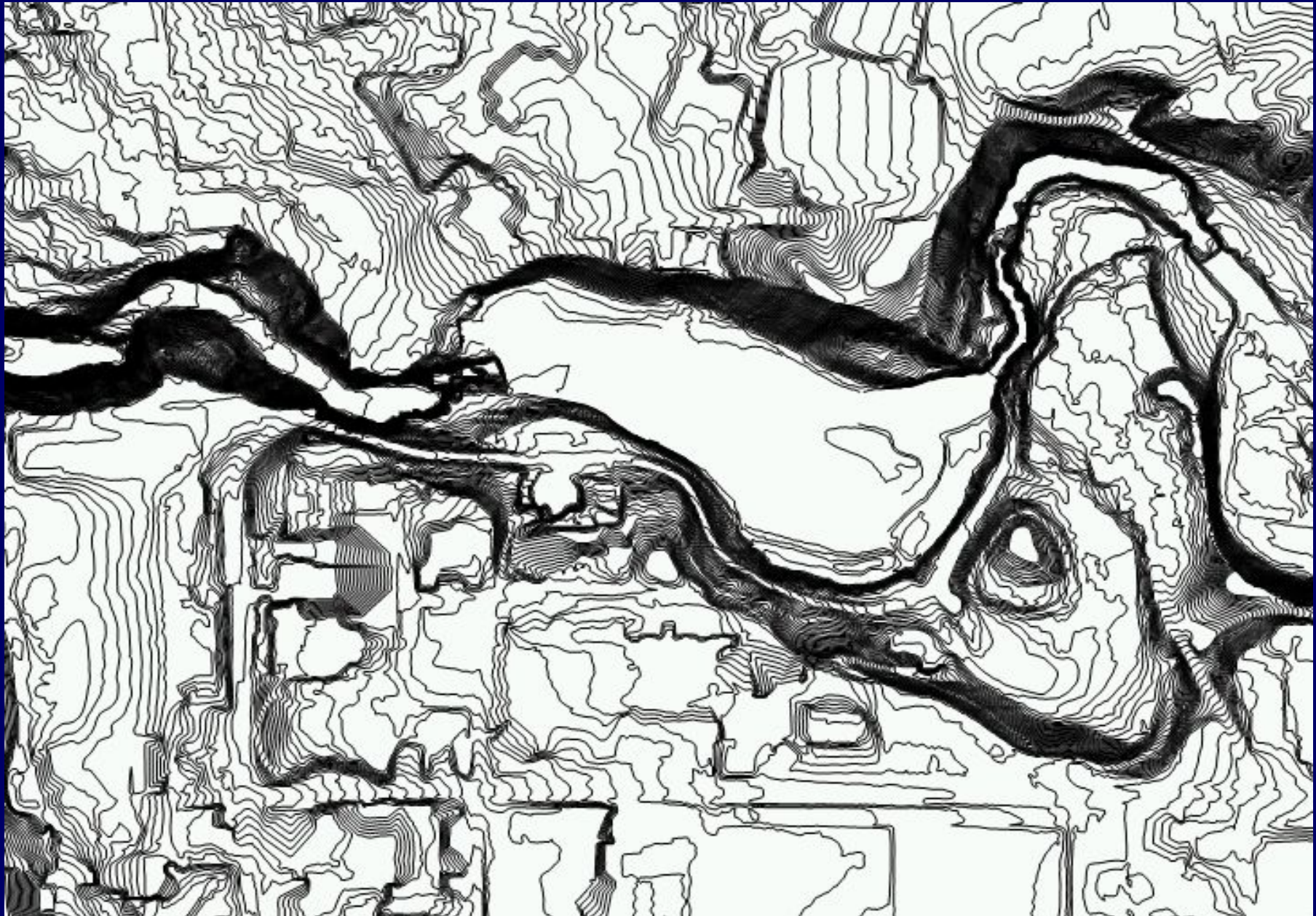


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Tompkins County 2-foot contours



Tompkins County 2-foot contours



Tompkins County 2-foot contours



Tompkins County 2-foot contours



GOAL: Distribute via CUGIR



Cornell University
Albert R. Mann Library

Search: go

CUGIR Cornell [more options](#)

The CUGIR logo, where the letters 'CUGIR' are in a bold, green, sans-serif font. The letter 'U' is partially filled with a green map of New York State.

CUGIR

Cornell University Geospatial Information Repository

[Home](#)[About](#)[Browse](#)[Map browse](#)[Basket](#)[Help](#)

Welcome to the Cornell University Geospatial Information Repository (CUGIR)

CUGIR is an active online repository in the [National Spatial Data Clearinghouse](#) program. CUGIR provides geospatial data and metadata for New York State, with special emphasis on those natural features relevant to agriculture, ecology, natural resources, and human-environment interactions.

In order to provide the best possible access to geospatial data for New York State, CUGIR coordinates its activities with those of the [New York State GIS Clearinghouse](#).

CUGIR News & Updates

[Niagara County Freshwater Wetlands](#)

October 10, 2011 -- Updated NYSDEC Freshwater Wetlands for Niagara County are now available.

[USDA NASS 2010 Cropland Data Layer](#)

May 26, 2011 -- Raster dataset of New York State, classified by 2010 crop at a resolution of 30m.

[Agricultural Districts in PDF and KML formats](#)

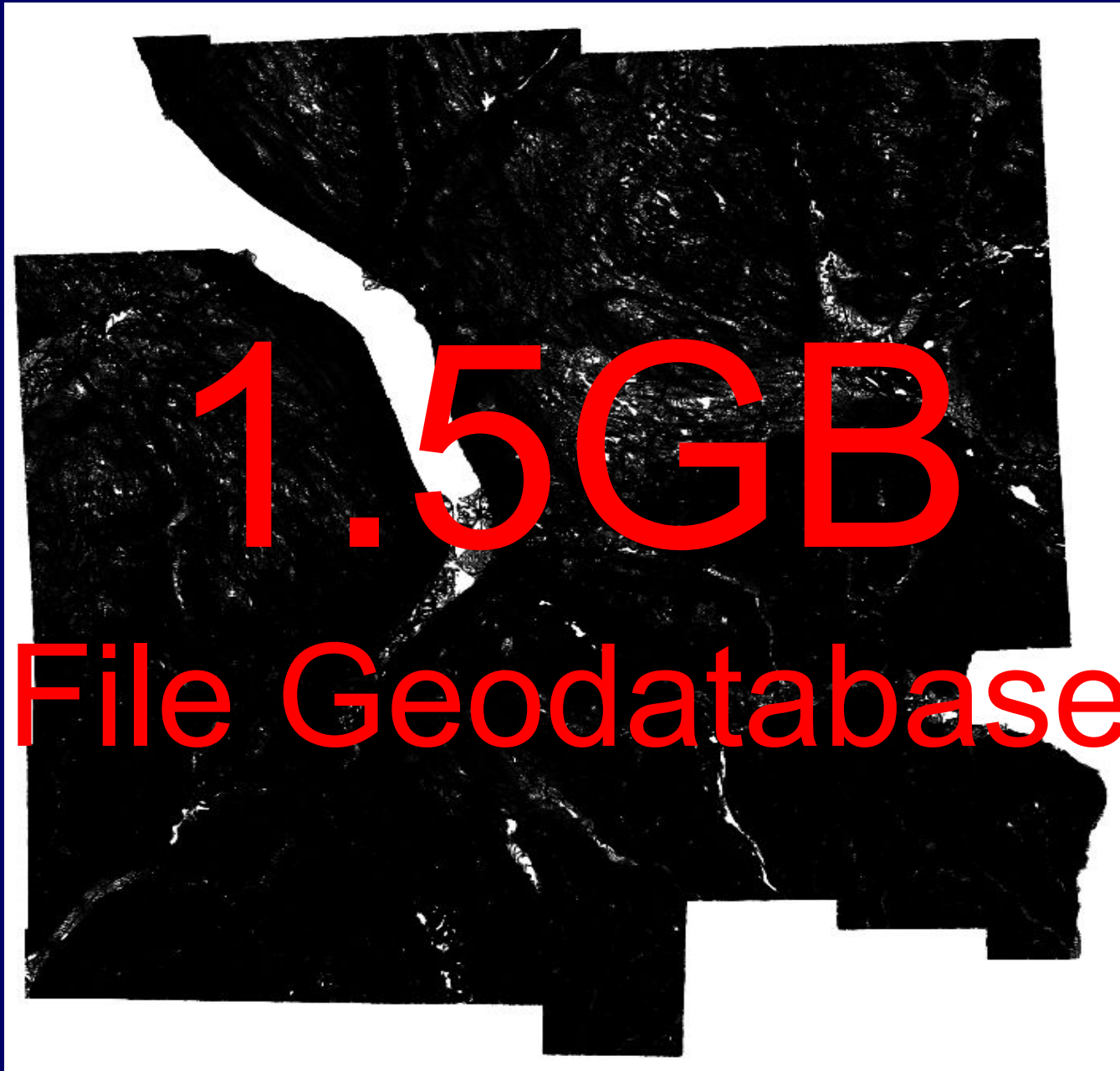
March 29, 2011 -- Agricultural districts from the New York State Department of Agriculture and Markets are now available PDF and KML formats that do not require specialized GIS software. The data for each county can now be viewed on a printable map in PDF format. The KML format can be viewed in Google Earth.

Tompkins County 2-foot contours





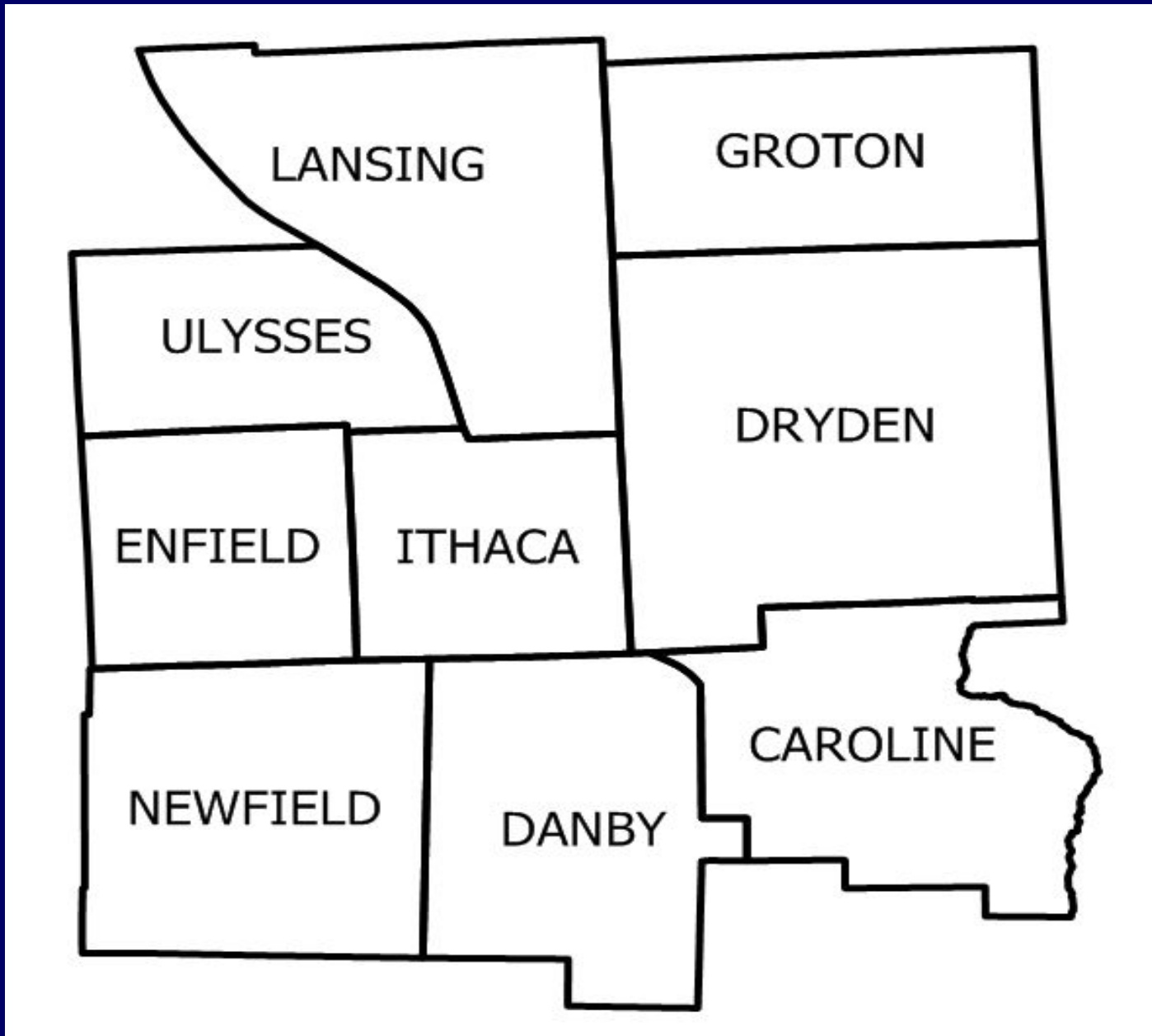
43,000
miles



1.5GB

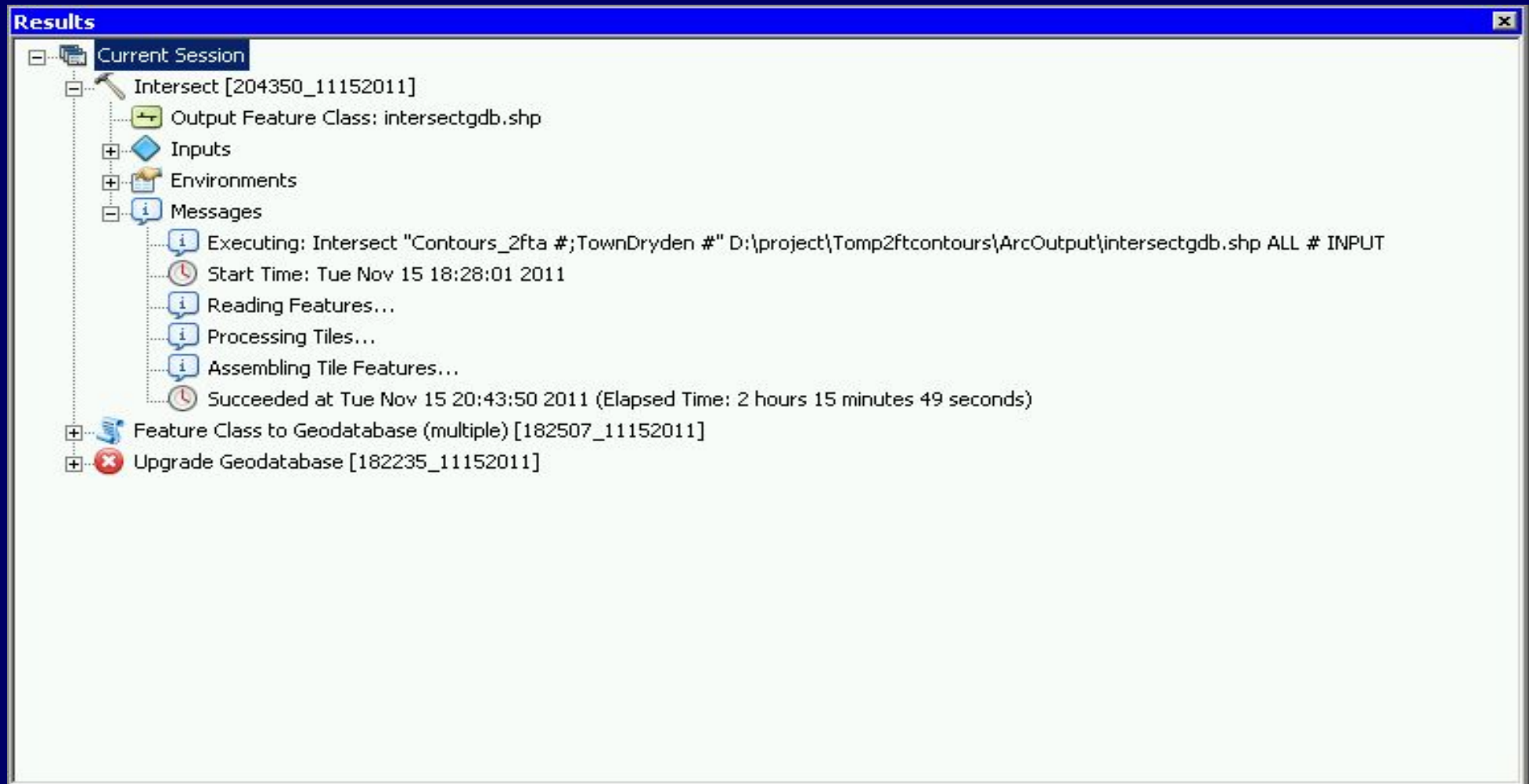
File Geodatabase

Strategy: Split into town-based files



ArcGIS: clip to Town of Dryden

over 2 hours later...



Wrestling with 43,000 miles of contour lines

Keith Jenkins
GIS Librarian, Mann Library

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...



Copyright © 2010 ESRI.
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Intersect

Input Features

Output Feature Class

JoinAttributes (optional)

XY Tolerance (optional)

Output Type (optional)

Features	Ranks
TownDryden	
TompkinsContours	

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

ALL

Feet

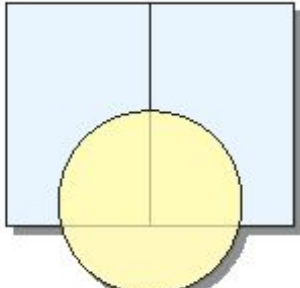
INPUT

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.

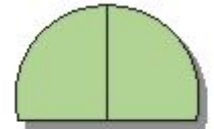
INPUT



INTERSECT FEATURE

↓

OUTPUT



File Edit View Bookmarks Insert Selection Geoprocessing Customize Windows Help

1:89,858

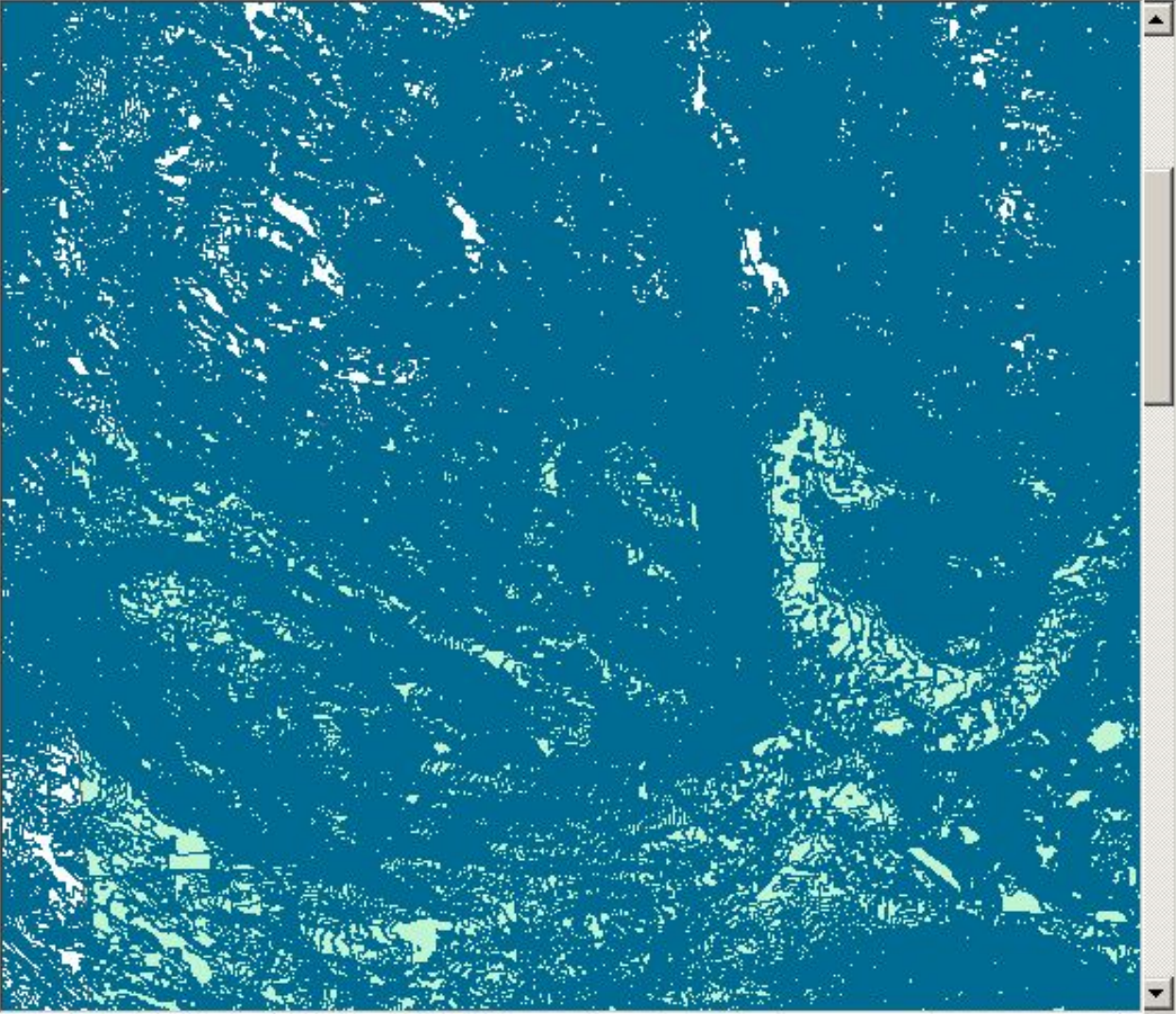
Georeferencing Layer: []

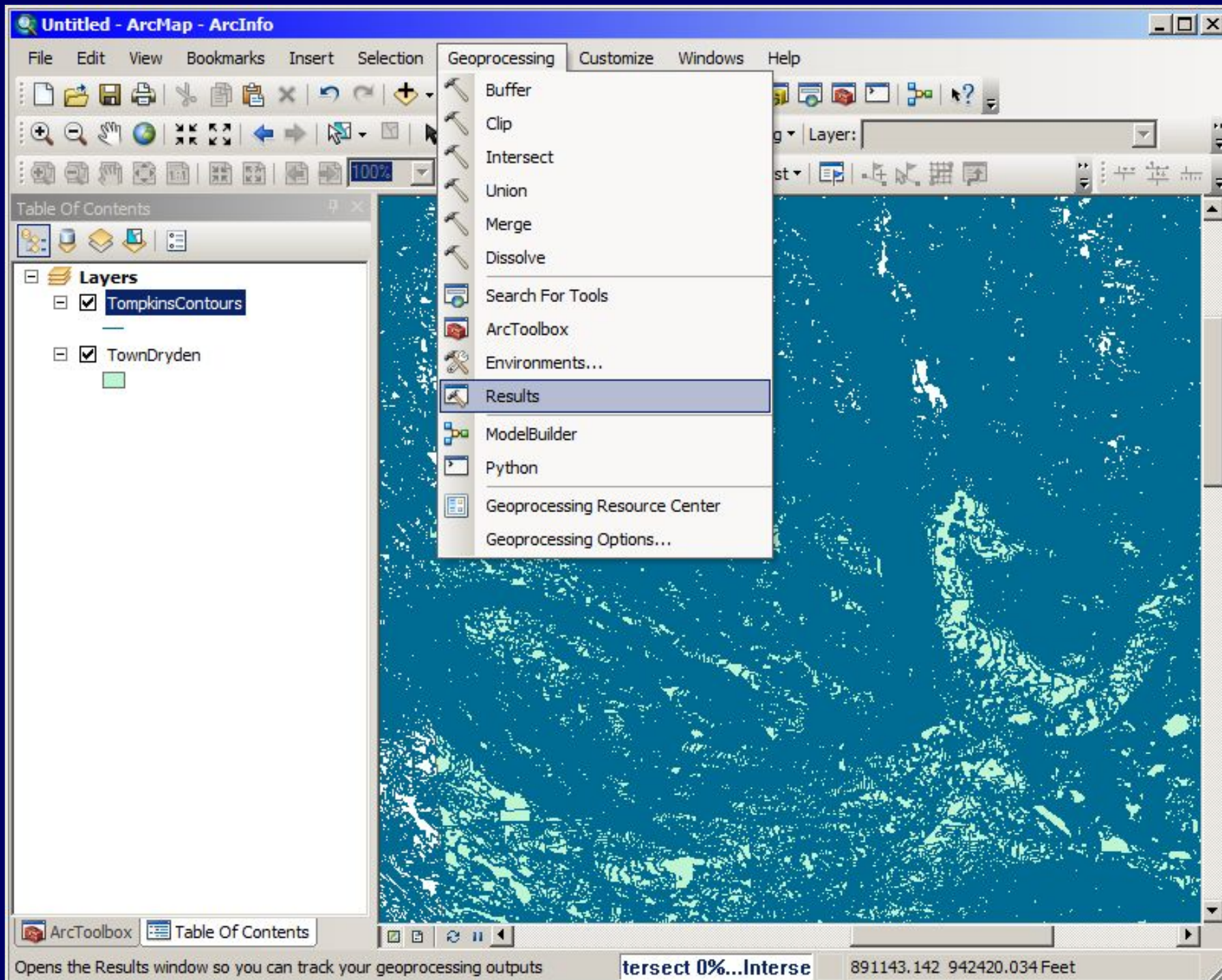
Editor Network Analyst

Table Of Contents

Layers

- TompkinsContours
- TownDryden





Opens the Results window so you can track your geoprocessing outputs

Intersect 0%...Interse

891143.142 942420.034 Feet

Results



Current Session

Intersect [Processing Tiles...]

Output Feature Class: <empty>

Inputs

Environments

Messages

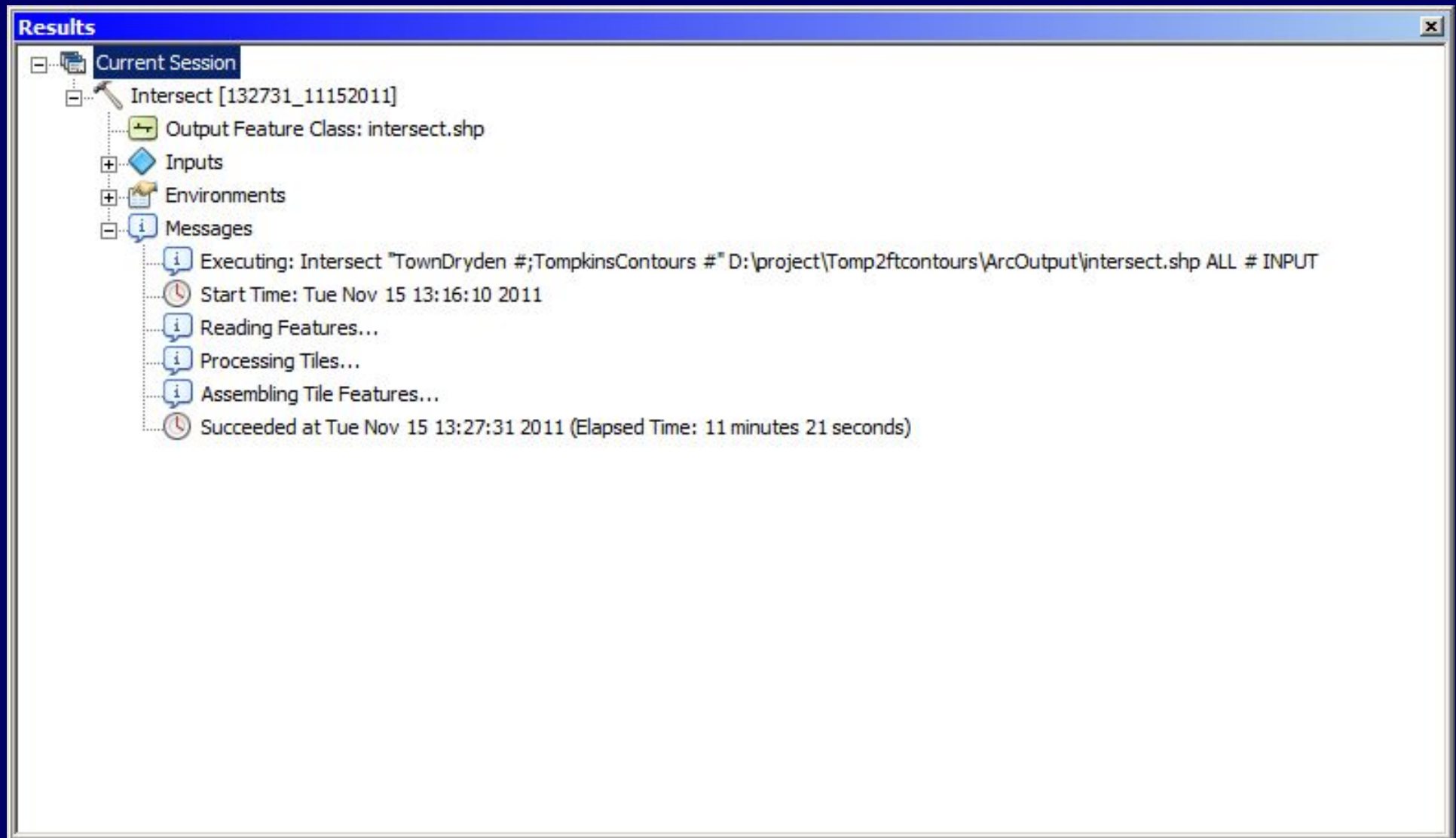
Executing: Intersect "TownDryden #;TompkinsContours #" D:\project\Tomp2ftcontours\ArcOutput\intersect.shp ALL # INPUT

Start Time: Tue Nov 15 13:16:10 2011

Reading Features...

Processing Tiles...

ArcGIS: 681 seconds



The screenshot displays the 'Results' window in ArcGIS, showing the execution details for a tool named 'Intersect [132731_11152011]'. The window is organized into a tree view with the following sections:

- Current Session**
 - Intersect [132731_11152011]**
 - Output Feature Class: intersect.shp**
 - 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...
 - Assembling Tile Features...
 - Succeeded at Tue Nov 15 13:27:31 2011 (Elapsed Time: 11 minutes 21 seconds)



Manifold clip: 489 seconds

[19% Applying Transform] - [Project1 *] - Manifold System

File Edit View Drawing Tools Window Help

Map +

Applying Transform

Transforming objects
Processing object 1526 of 34392
Normalizing geometry

Elapsed time: 0:00:57. [Pause] [Cancel]

Project

- TompkinsContours Drawing
- TompkinsContours Table
- TownDryden Drawing
- Map

Drawing Local. 1 object

Info - [Map]

Column	Value
ID	1
MUNITYPE	TOWN
NAME	DRYDEN
FULLNAME	TOWN OF DRYDEN
STATUS	CURRENT
BOUNDARY	
LEGALREF	
MAPLOC...	
DATEINC	
VALIDFROM	
VALIDTO	9999-01-01
TRAVERSE	
COMMENTS	

[All Objects in TompkinsC] Clip with (Intersect) [All Objects in TownDryde] Apply Area (I) not Bottom

State Plane - New York Central 962062.9729 859299.8044 1:160000 Replace

Comparison

ArcGIS	681 seconds
Manifold	489 seconds

Manifold import: 170 seconds

The screenshot shows the Manifold System interface during a data import process. The main window displays a drawing titled "TownDryden Drawing" with a grey-shaded polygon representing a town boundary. An "Importing Data" dialog box is overlaid on the drawing, showing the file path "D:\project\Tomp2ftcontours\ManifoldOutput\TompkinsContours..." and the progress "Reading objects (99% done)". The dialog also indicates an elapsed time of 0:02:50 and includes "Pause" and "Cancel" buttons.

The software interface includes a menu bar (File, Edit, View, Drawing, Tools, Window, Help), a toolbar with various drawing tools, and a status bar at the bottom. The status bar shows the current drawing is "ACRES" on a "not Bottom" layer, with a scale of "1:150000".

On the right side, there are two panels: "Project" and "Info - [TownDryden Drawing]". The "Project" panel shows the drawing as a single local object. The "Info" panel displays a table of object properties:

Column	Value
ID	1
MUNITYPE	TOWN
NAME	DRYDEN
FULLNAME	TOWN OF DRYDEN
STATUS	CURRENT
BOUNDARY	
LEGALREF	
MAPLOC...	
DATEINC	
VALIDFROM	
VALIDTO	9999-01-01
TRAVERSE	
COMMENTS	

Manifold export: 39 seconds

The screenshot shows the Manifold System interface during a data export process. The main window displays a map with orange contours. An 'Exporting Data' dialog box is open in the foreground, showing the file path and progress. The right sidebar contains a 'Project' tree, an 'Info - [Map]' panel with a table of attributes, and a status bar at the bottom.

Exporting Data Dialog:

D:\project\Tomp2ftcontours\ManifoldOutput\test\DrydenConto...
Writing objects (42% done)

Elapsed time: 0:00:16.

Buttons: Pause, Cancel

Project Tree:

- TompkinsContours Drawing
 - TompkinsContours Table
- TownDryden Drawing
 - Map

Info - [Map] Table:

Column	Value
ID	1
MUNITYPE	TOWN
NAME	DRYDEN
FULLNAME	TOWN OF DRYDEN
STATUS	CURRENT
BOUNDARY	
LEGALREF	
MAPLOC...	
DATEINC	
VALIDFROM	
VALIDTO	9999-01-01
TRAVERSE	
COMMENTS	

Status Bar:

[All Objects in TompkinsC] Clip with (Intersect) [All Objects in TownDryde] Apply Area (I) not Bottom

State Plane - New York Central 919205.2171 914787.8259 1:160000 Replace

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

Keith Jenkins
GIS Librarian, Mann Library

Wrestling with 43,000 miles of contour lines

using ArcGIS and Manifold



and QGIS

Keith Jenkins
GIS Librarian, Mann Library



About

What's New

Providers

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

Quantum GIS is licensed under the GNU General Public License

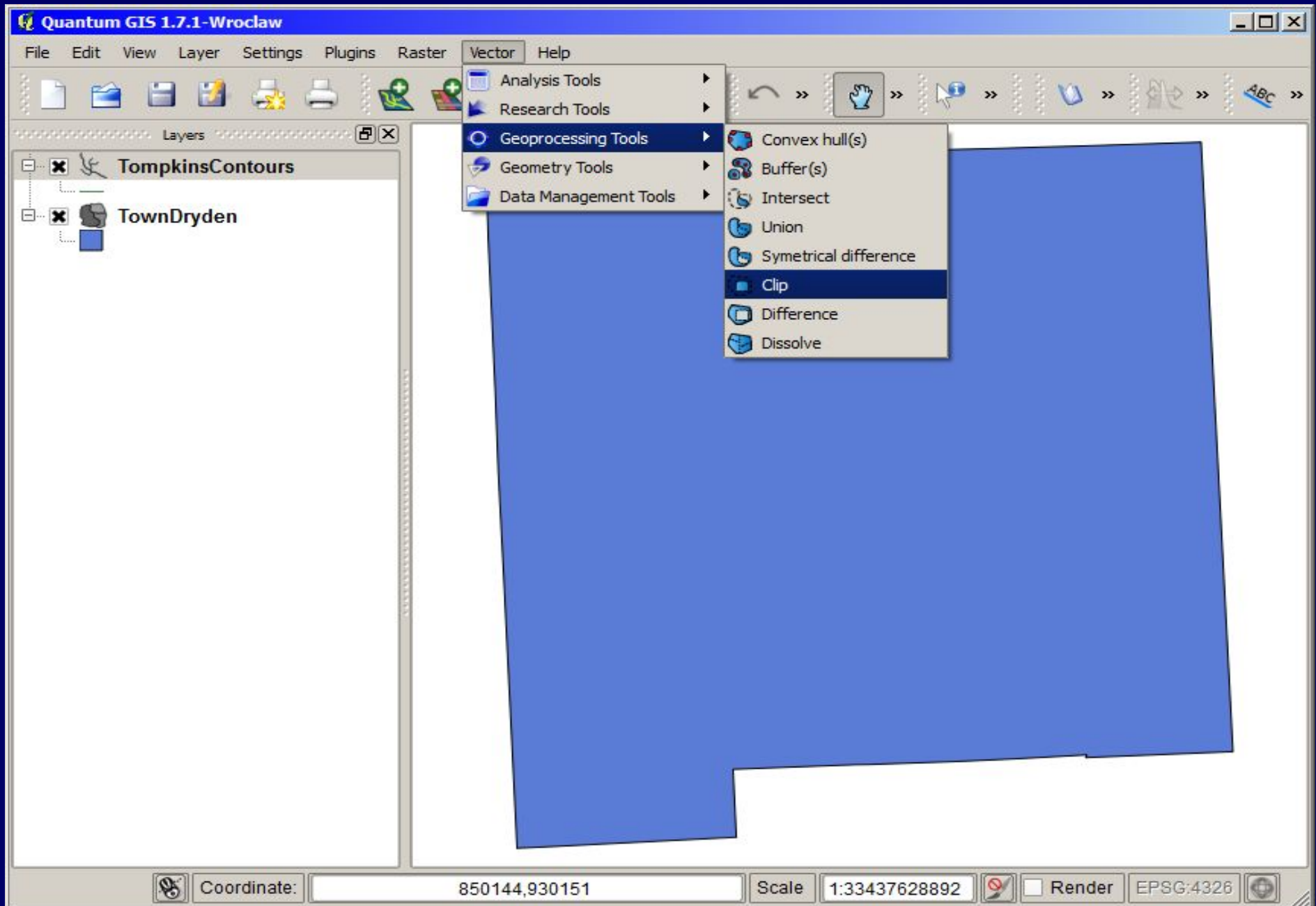
<http://www.gnu.org/licenses>

QGIS Home Page

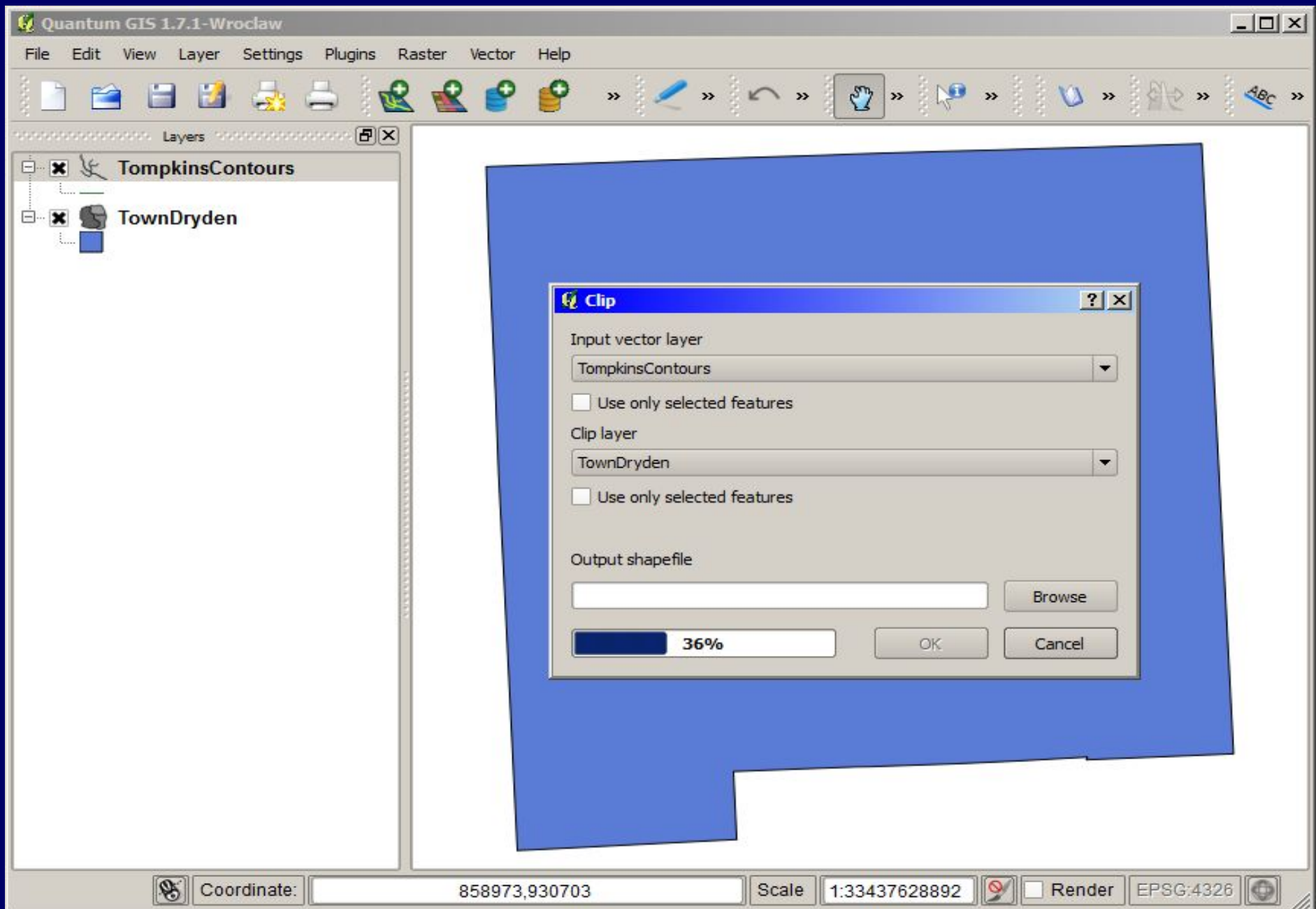
Join our user mailing list

Close

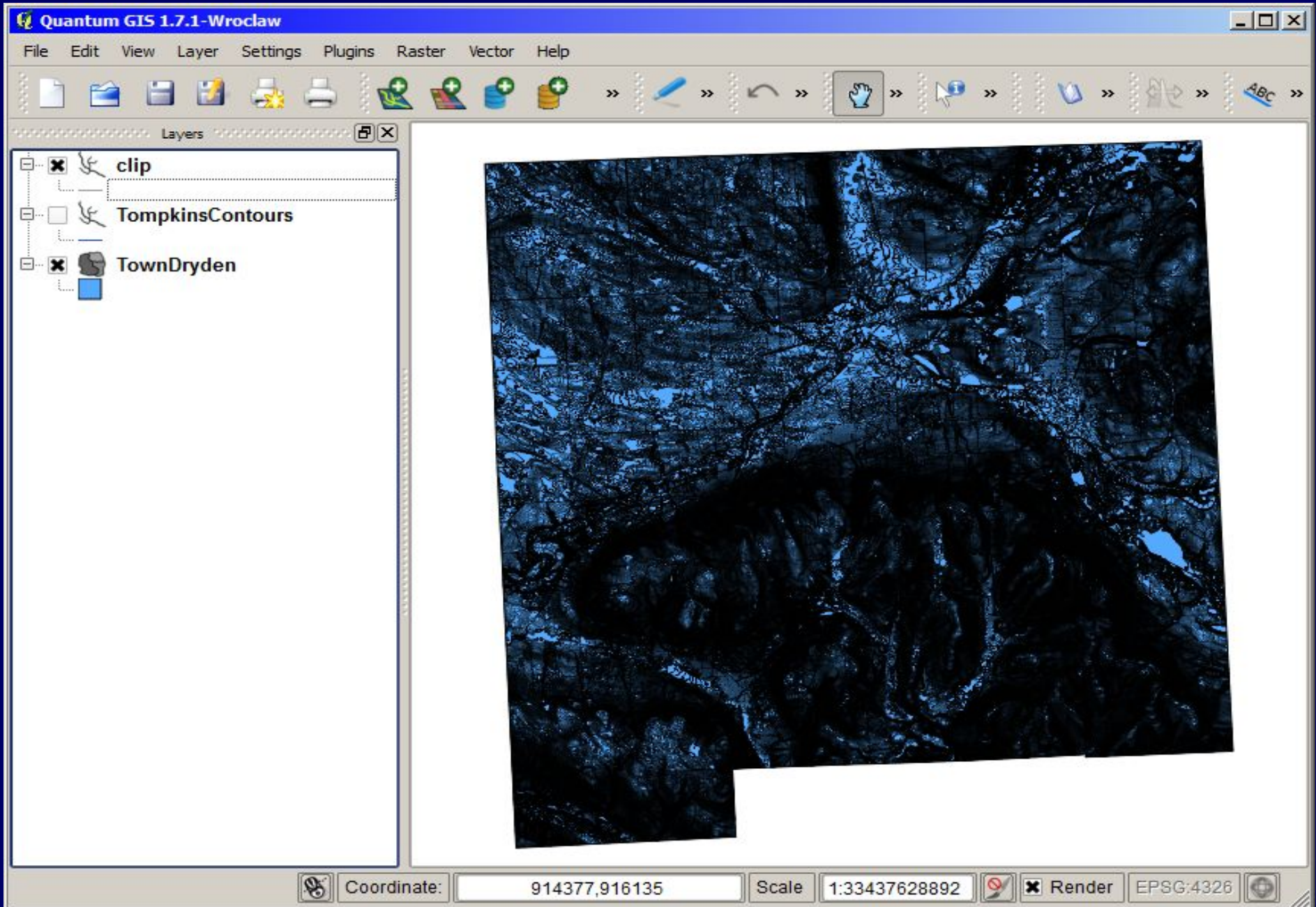
QGIS



QGIS



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.