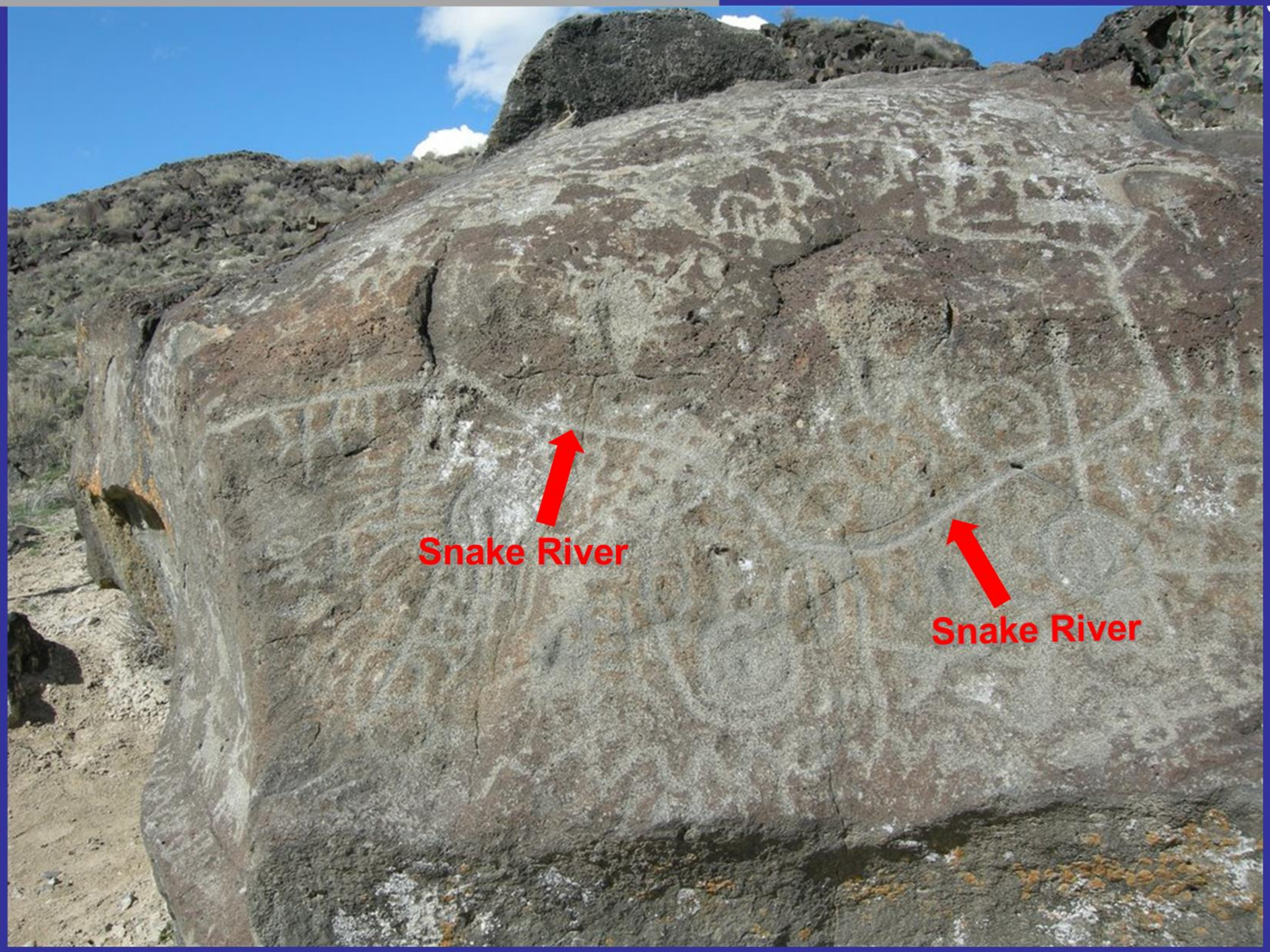
Seminar 1
Slide Set 2
Version 1

USGS

VNIVERSALE DESCRITTIONE DI TVTTA LA TERRA CONOSCIVTA FIN QVI
LOUISIANA
GULF OF MEXICO
MAP OF KNOX COUNTY ILLINOIS
FILE COPY
USGS
US Topo

USGS

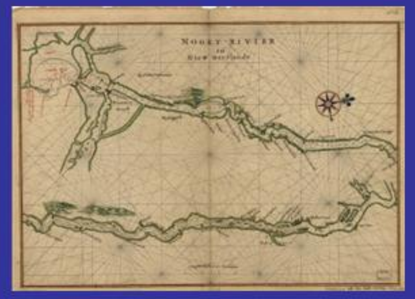
Map Rock - Shoshone Map of the Snake River



Second Era

1507 1639 1719 1770 1804 1878

Waldseemuller Map

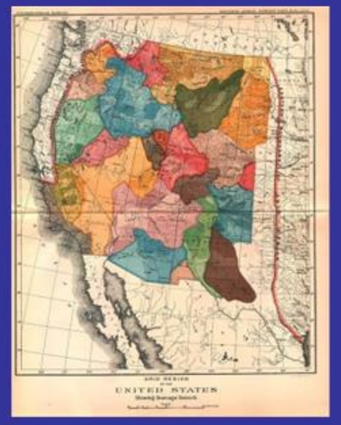


Dutch Hudson River Map

Herman Moll Map

A Plan of the Mississippi River

Louisiana Purchase Map



Powell Drainage Map

USGS

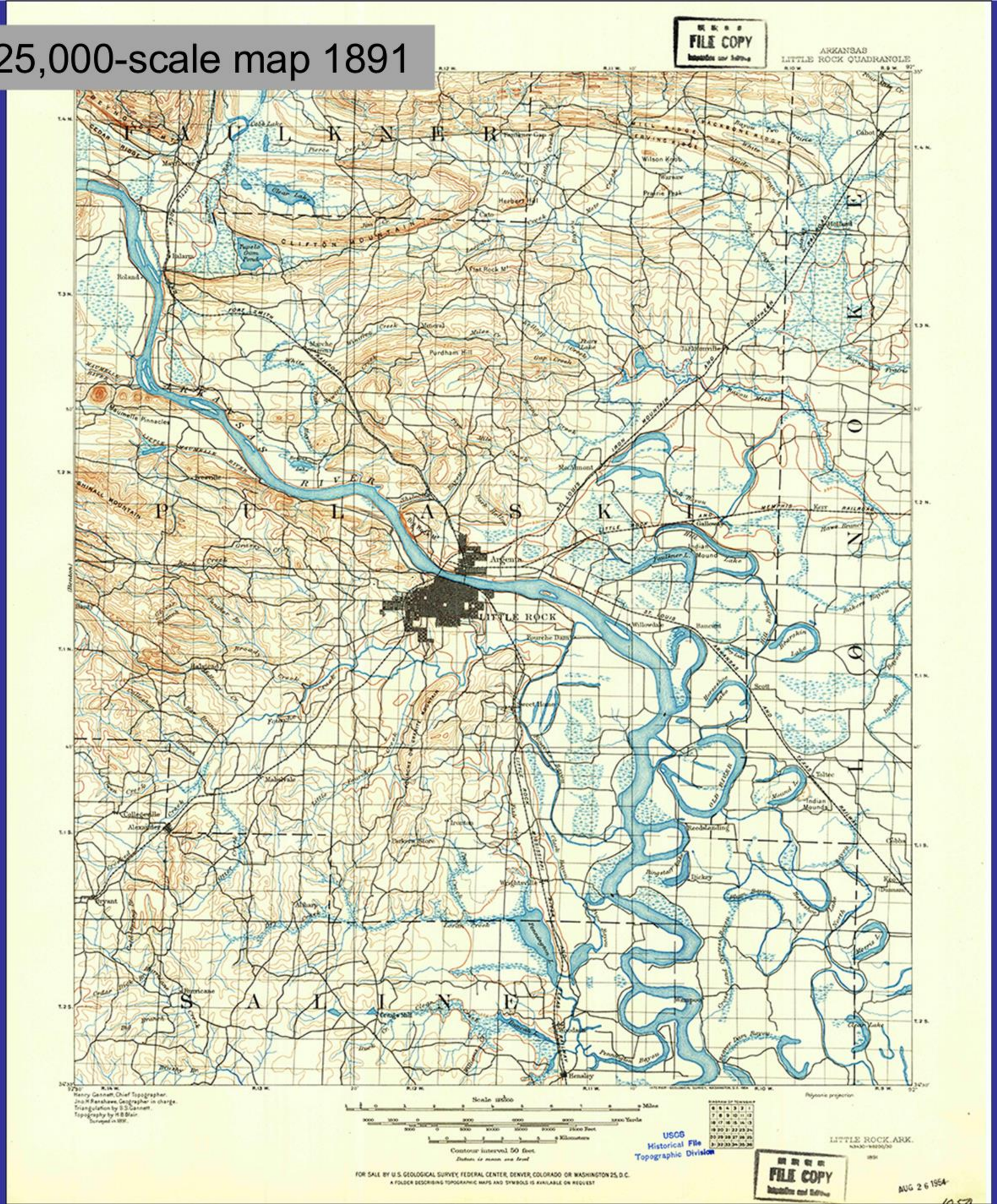
1879
0

"…begin a rigid scientific classification of the national domain for general information."

USGS

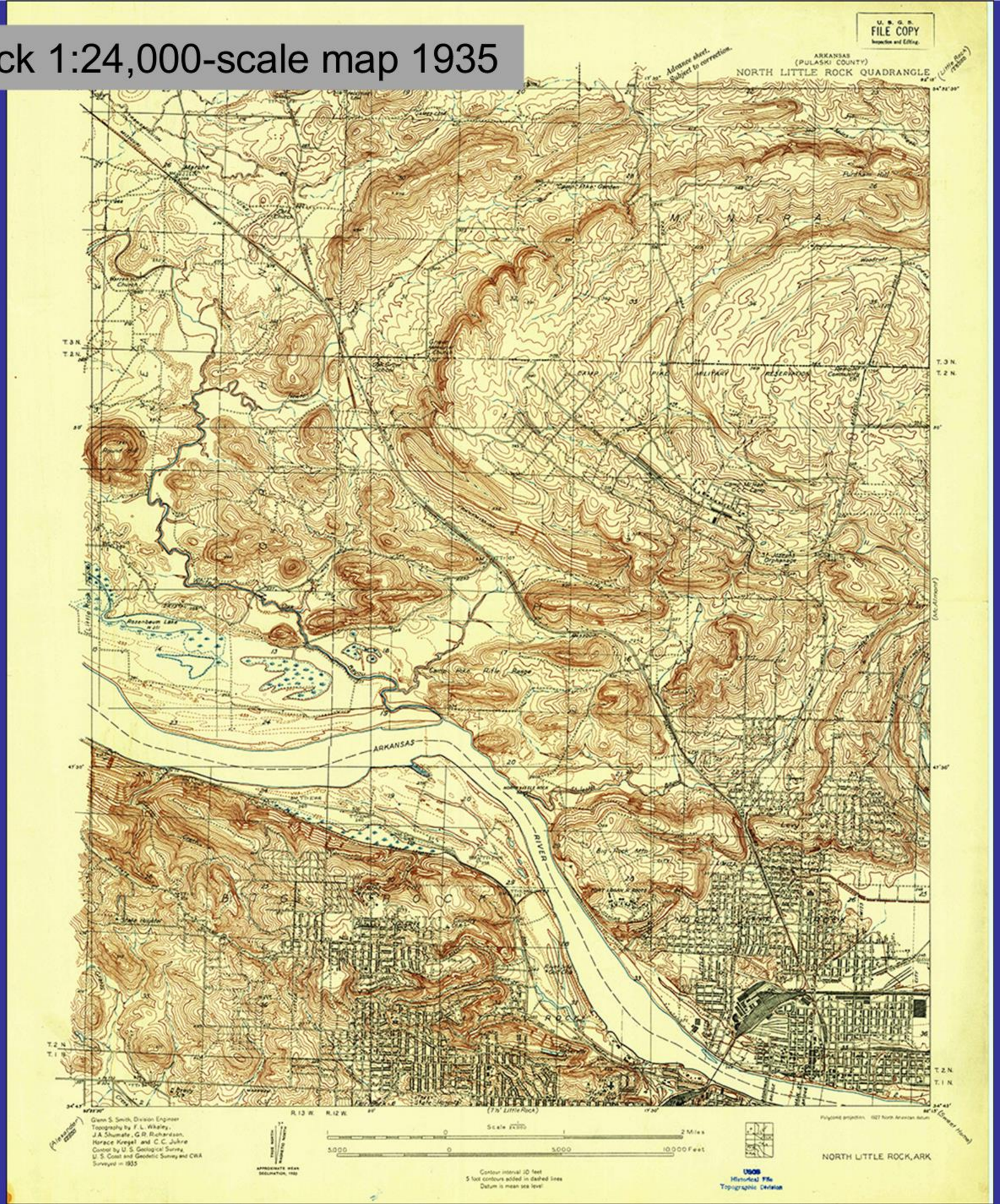
Little Rock 1:125,000-scale map 1891

1891
100



North Little Rock 1:24,000-scale map 1935

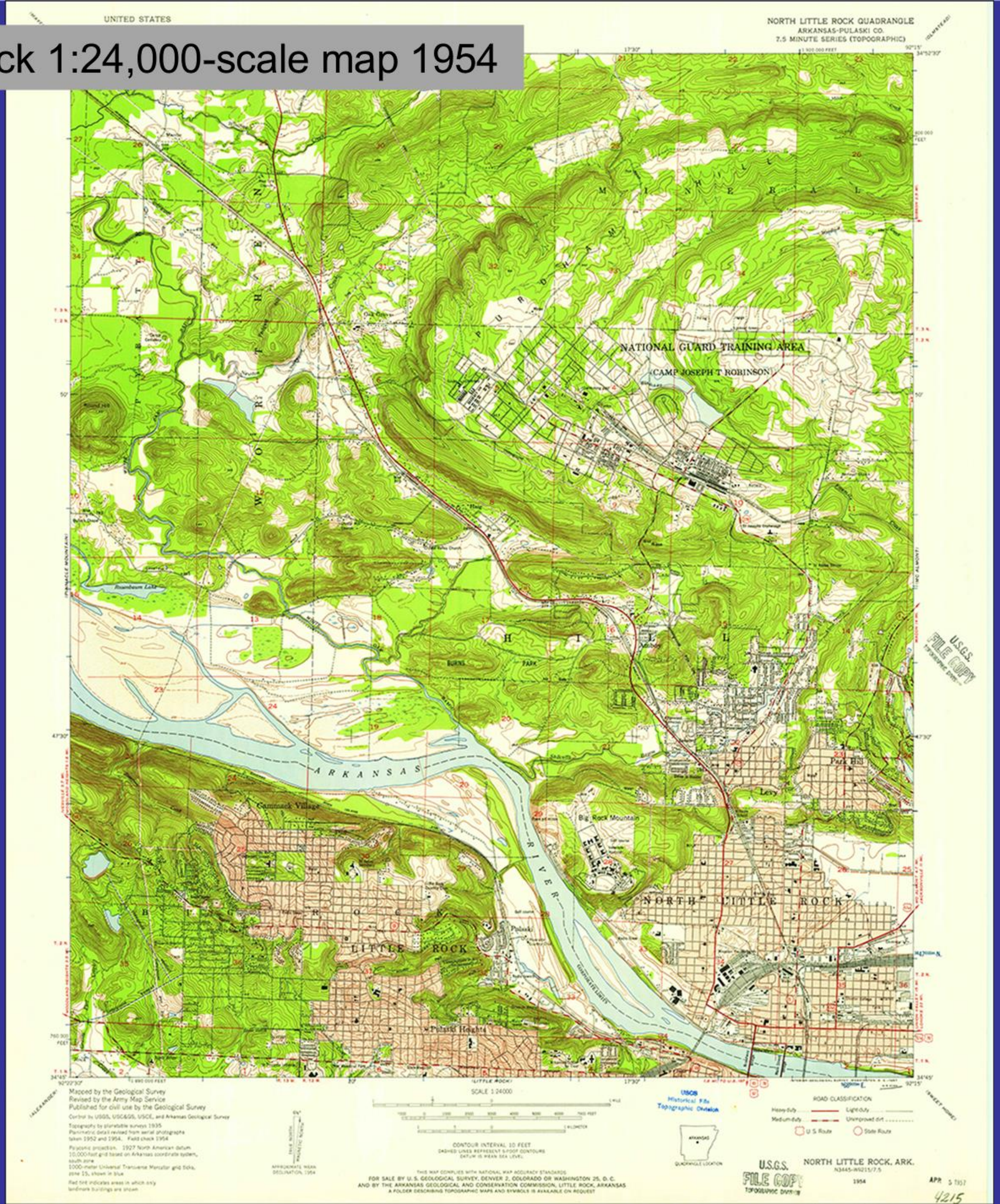
1935
102



USGS

North Little Rock 1:24,000-scale map 1954

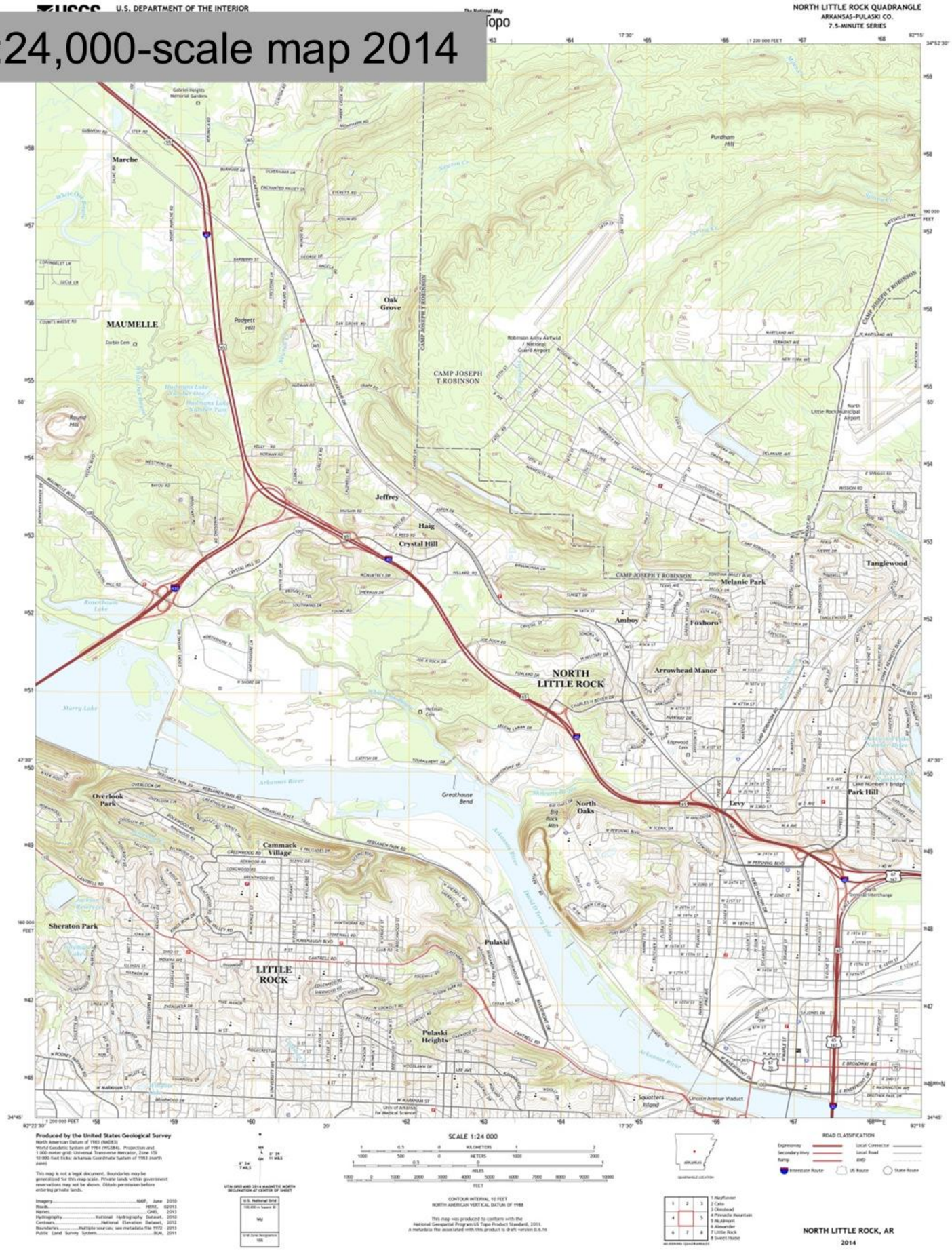
1954
103



USGS

North Little Rock 1:24,000-scale map 2014

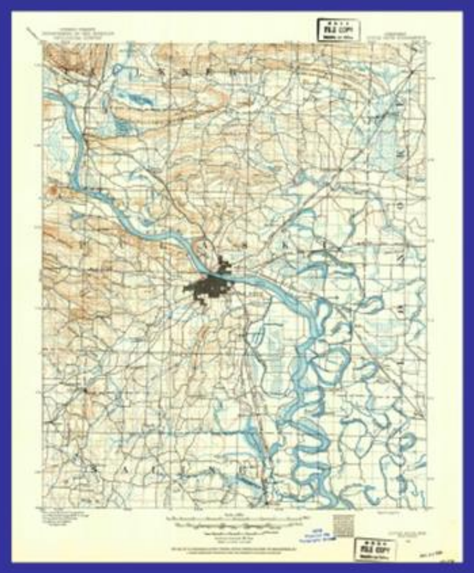
2014
108



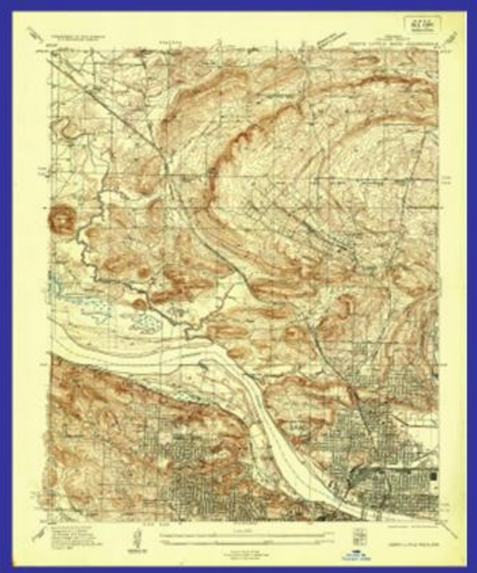
USGS

Era 3

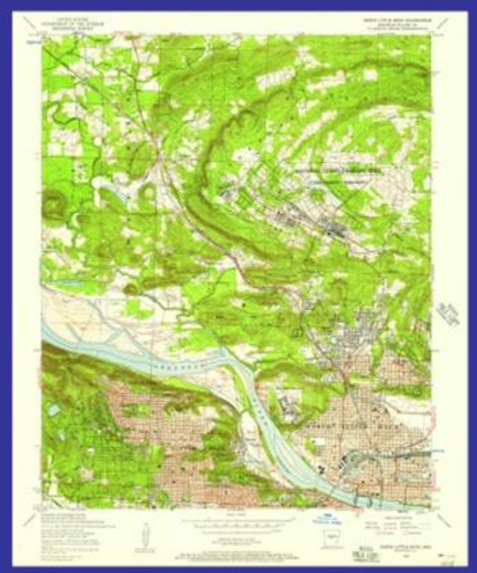
1878 | 1934 | 1940's | 2011 | 2015



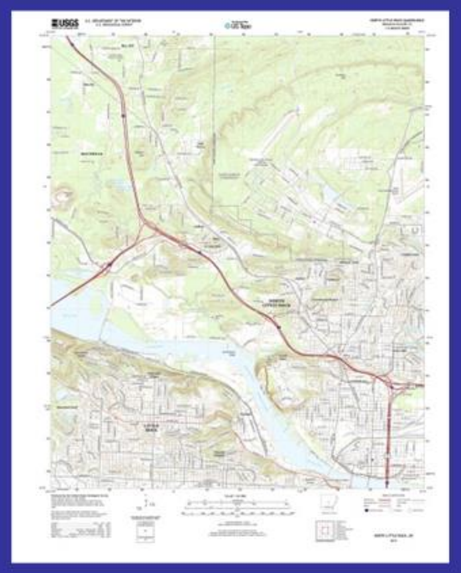
30-Minute Series



7.5-Minute Series
Ground Survey
Methods



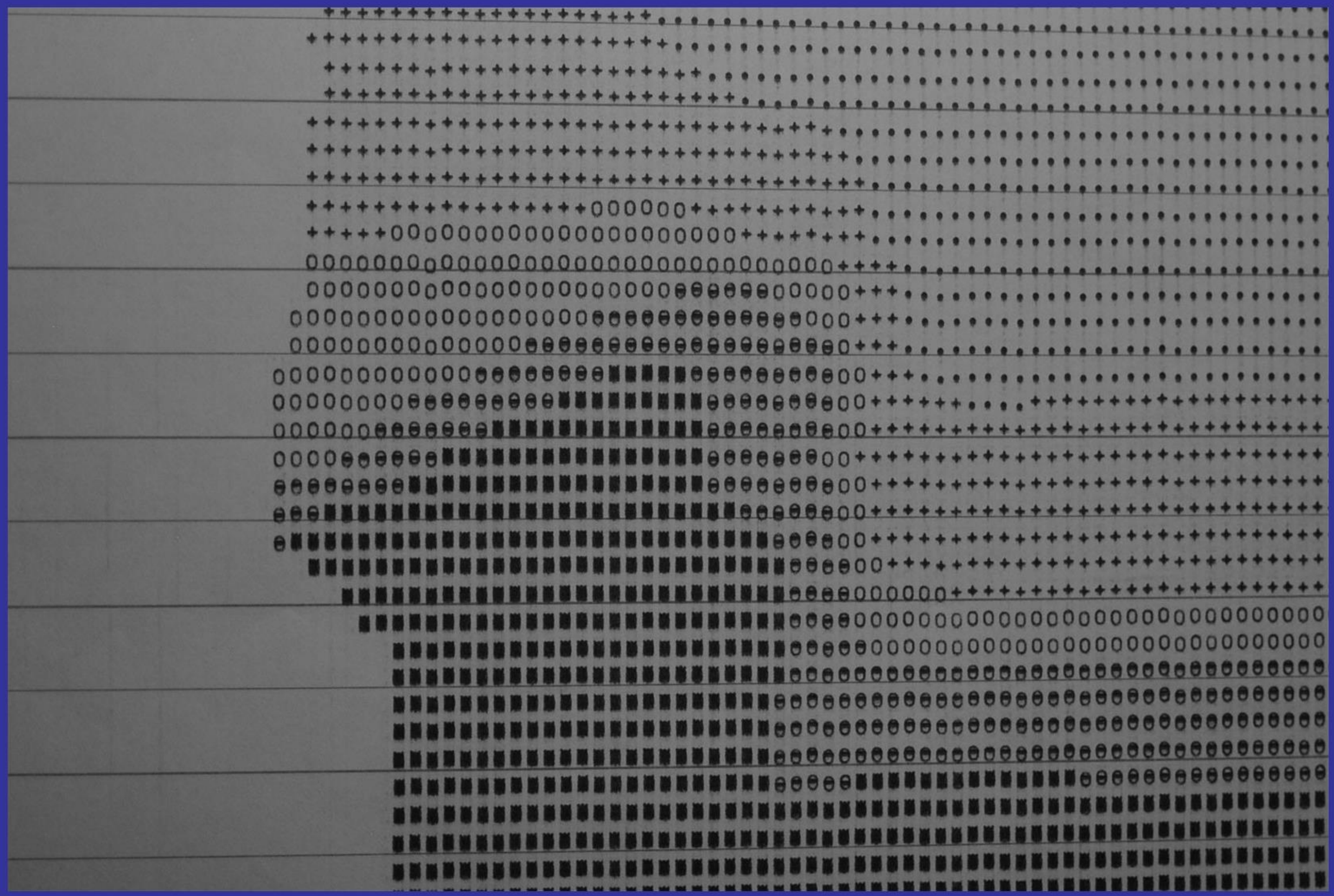
7.5-Minute Series
Photogrammetric
Methods



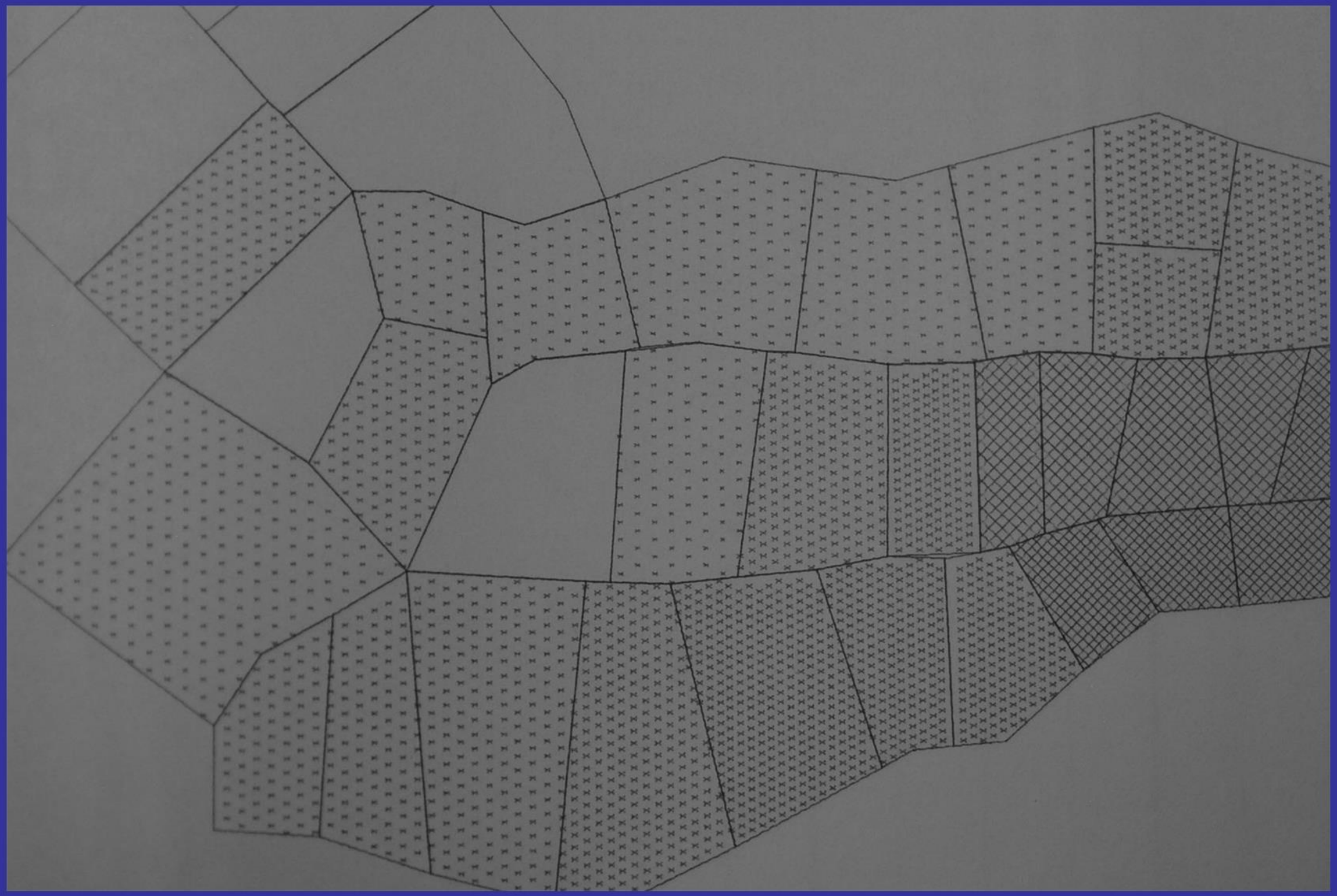
7.5-Minute
US Topo
All-digital

USGS

1960's SYMAP Computer Printer Map – Water Turbidity



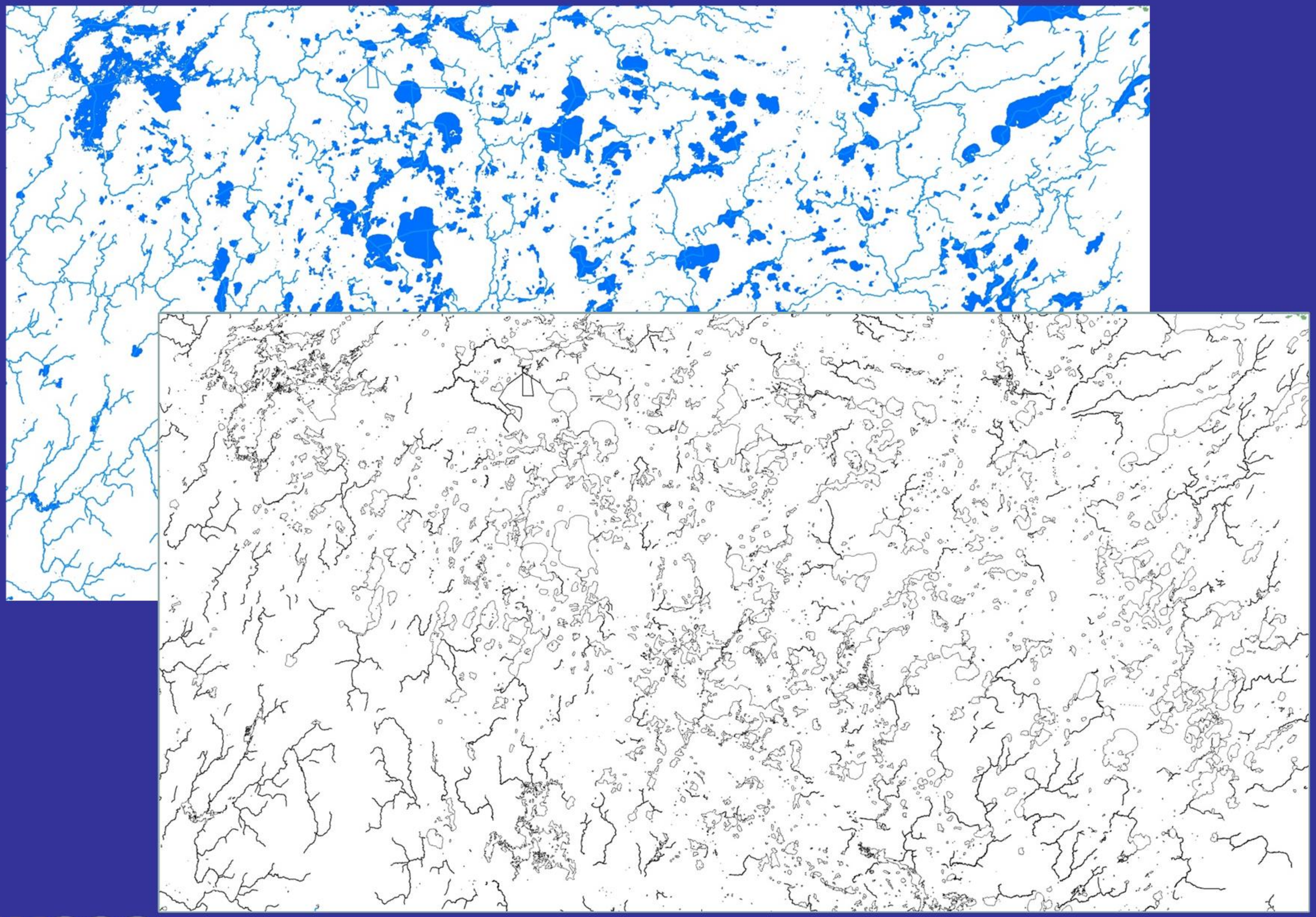
1970's Computer Vector Map Plotting



1980's Interactive Computer Graphics

Jeff Simley

Hydrography Manuscript / Digital Line Graph



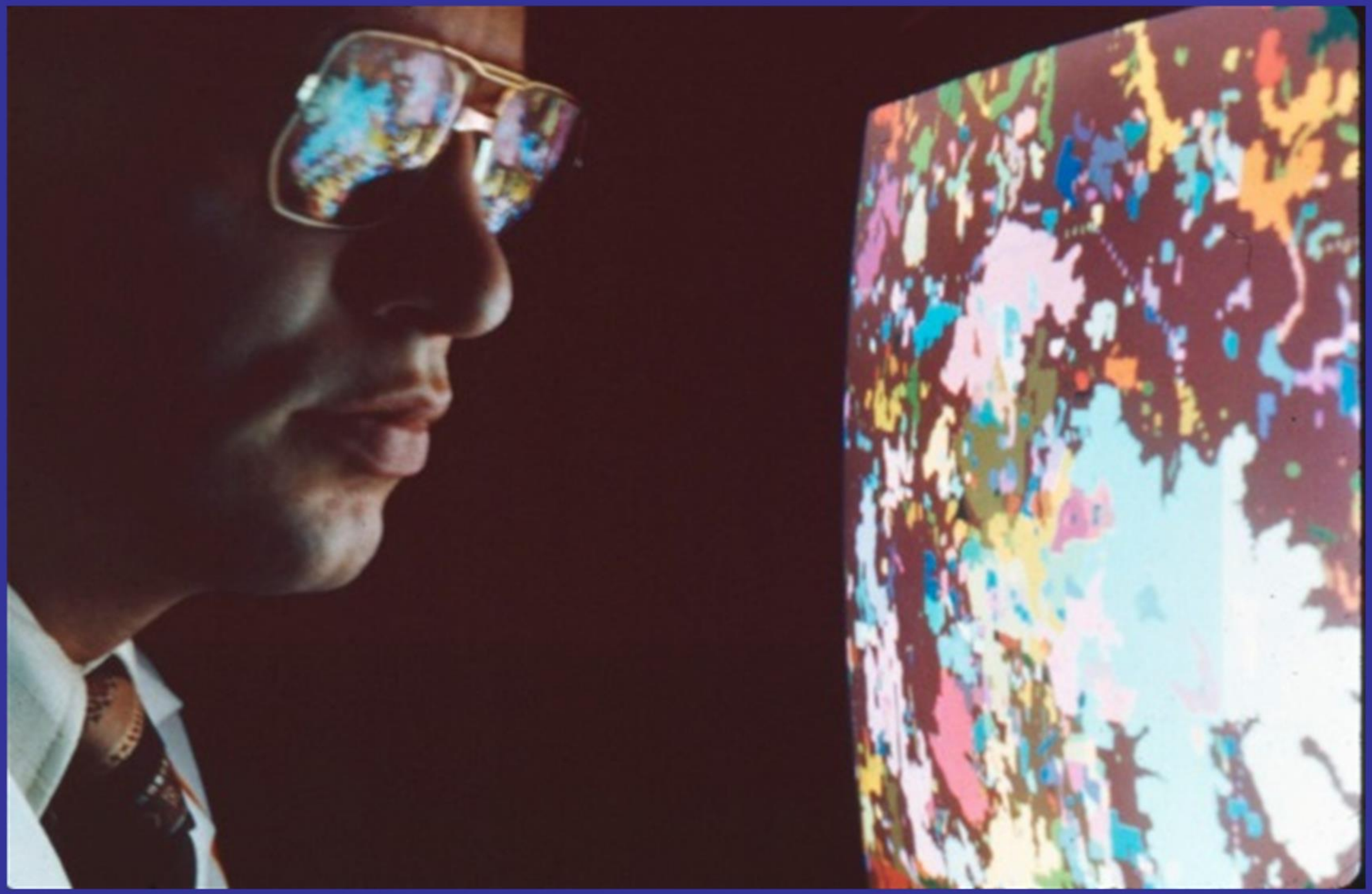
USGS

North Little Rock Hydrography

2014
292

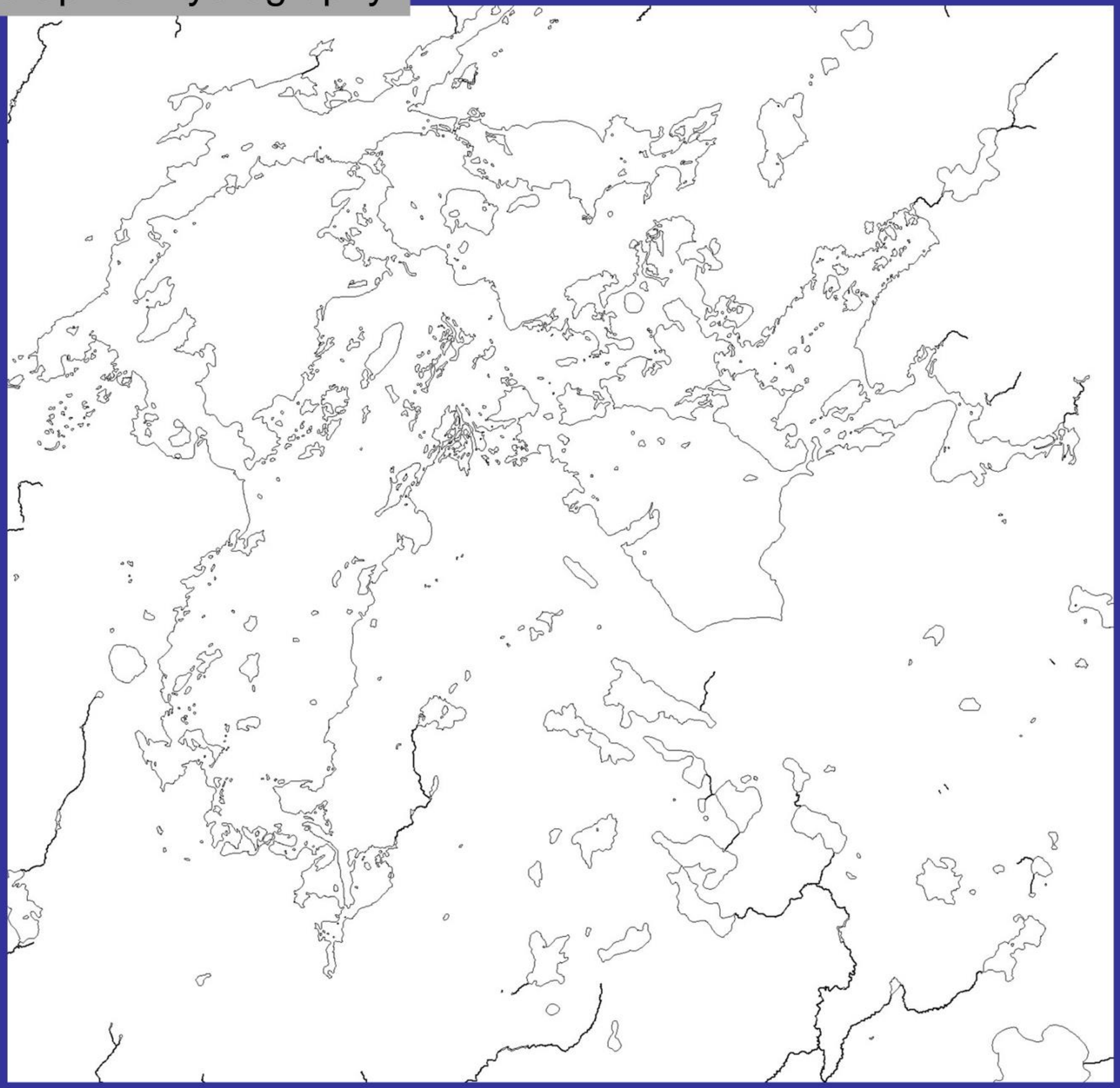
USGS

1980's Early GIS Systems

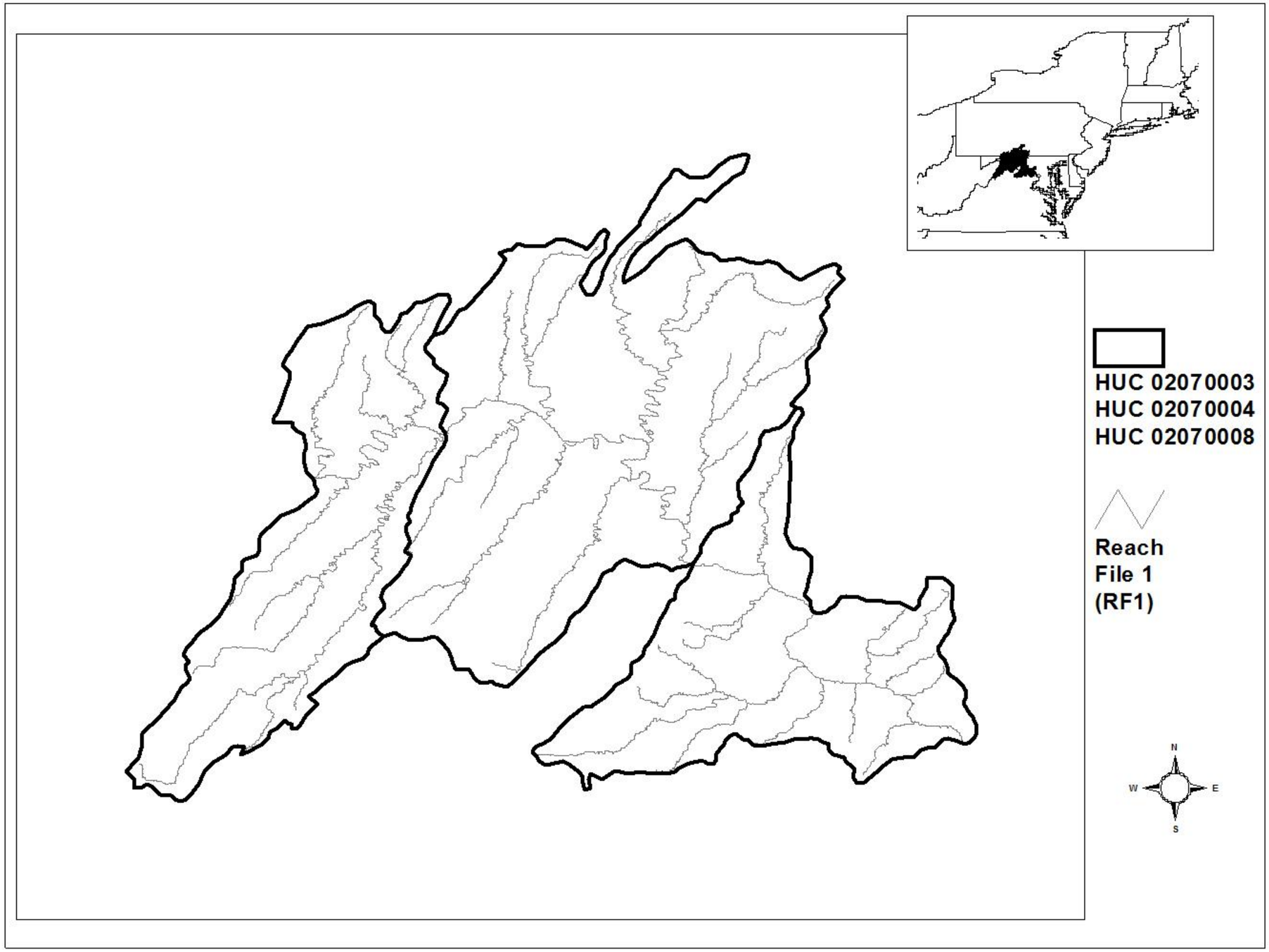


Jeff Simley

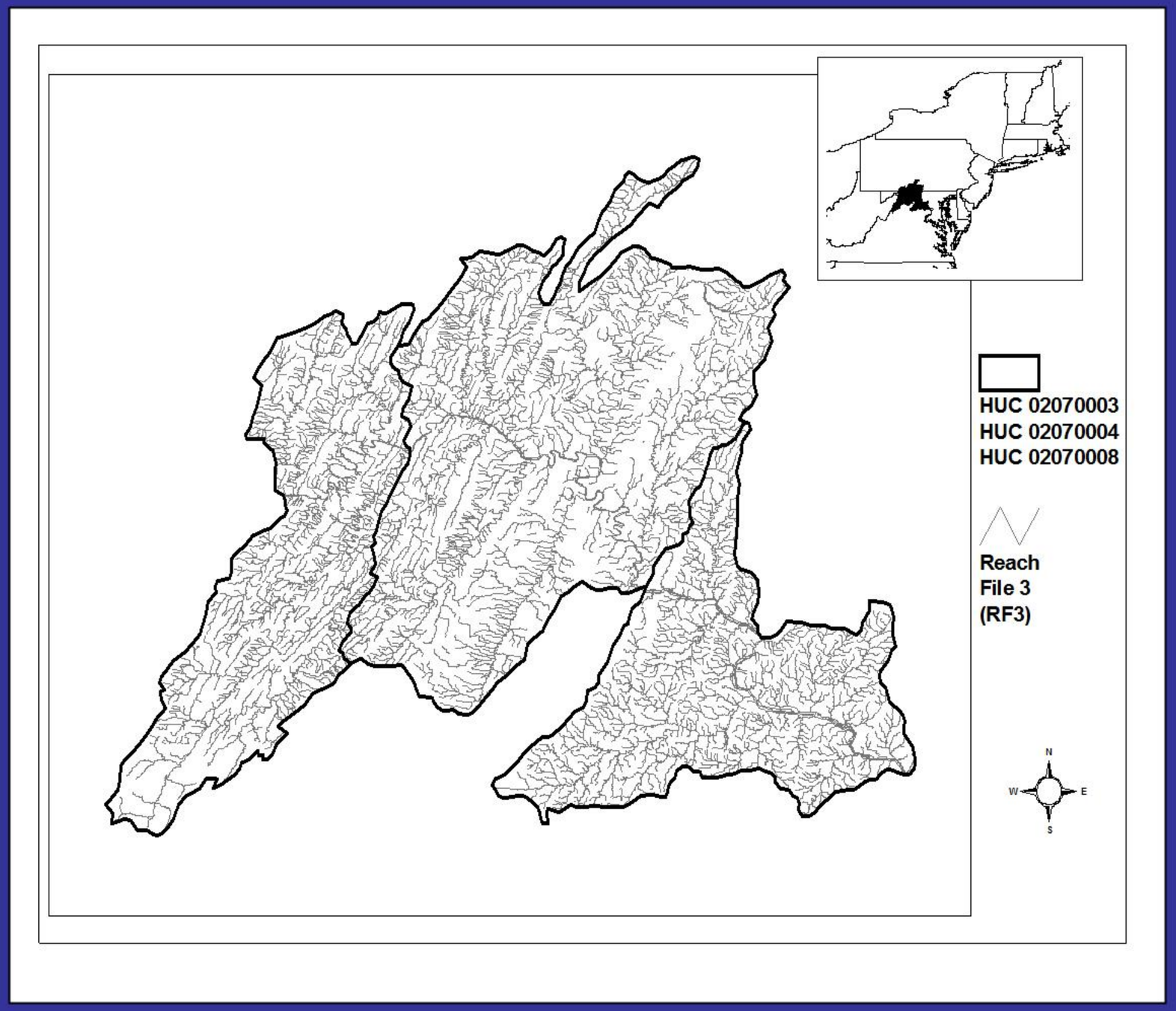
Digital Line Graph of Hydrography



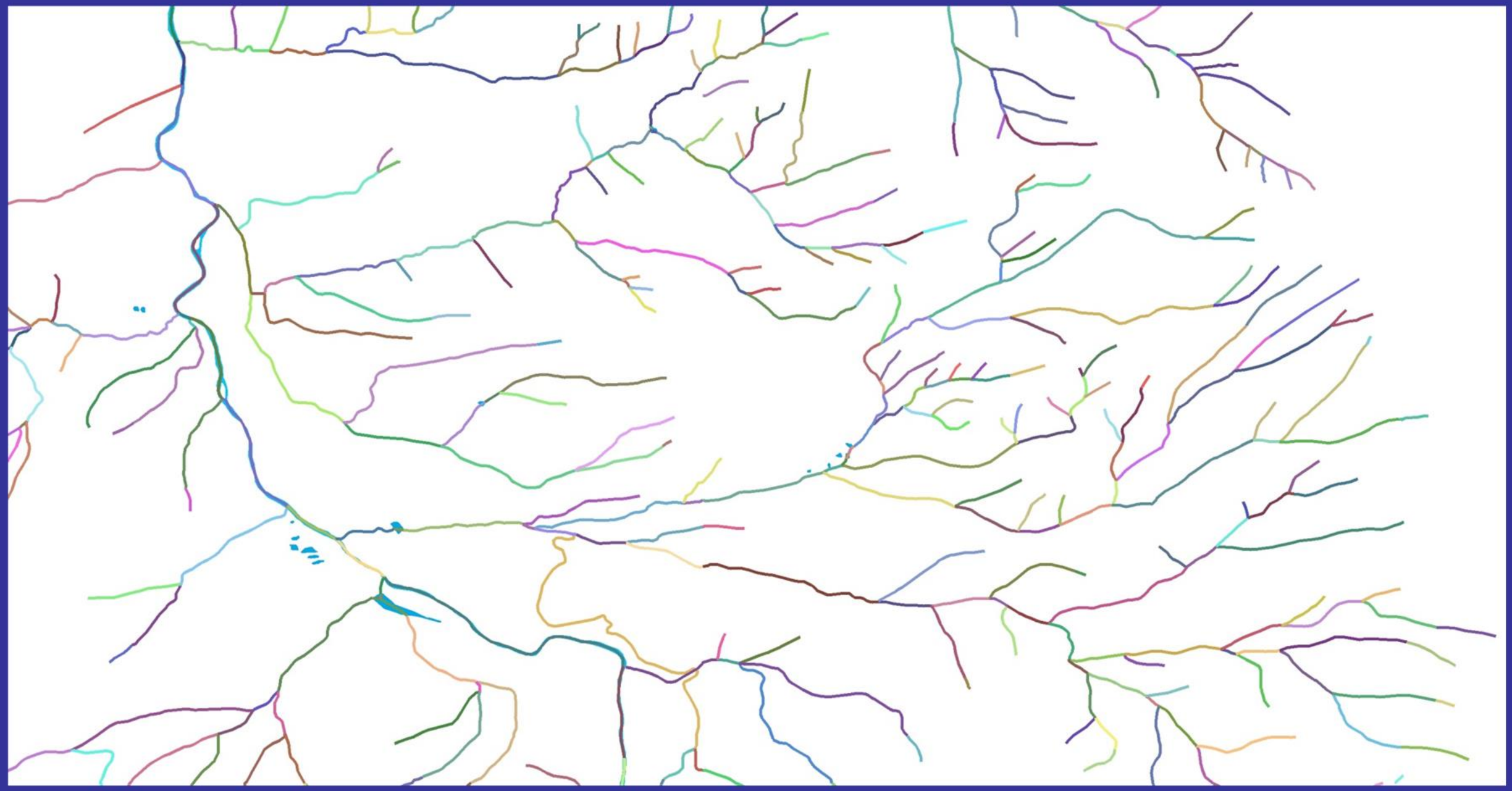
RF1 In Upper Potomac



RF3 in Upper Potomac



Example of Stream Network Components



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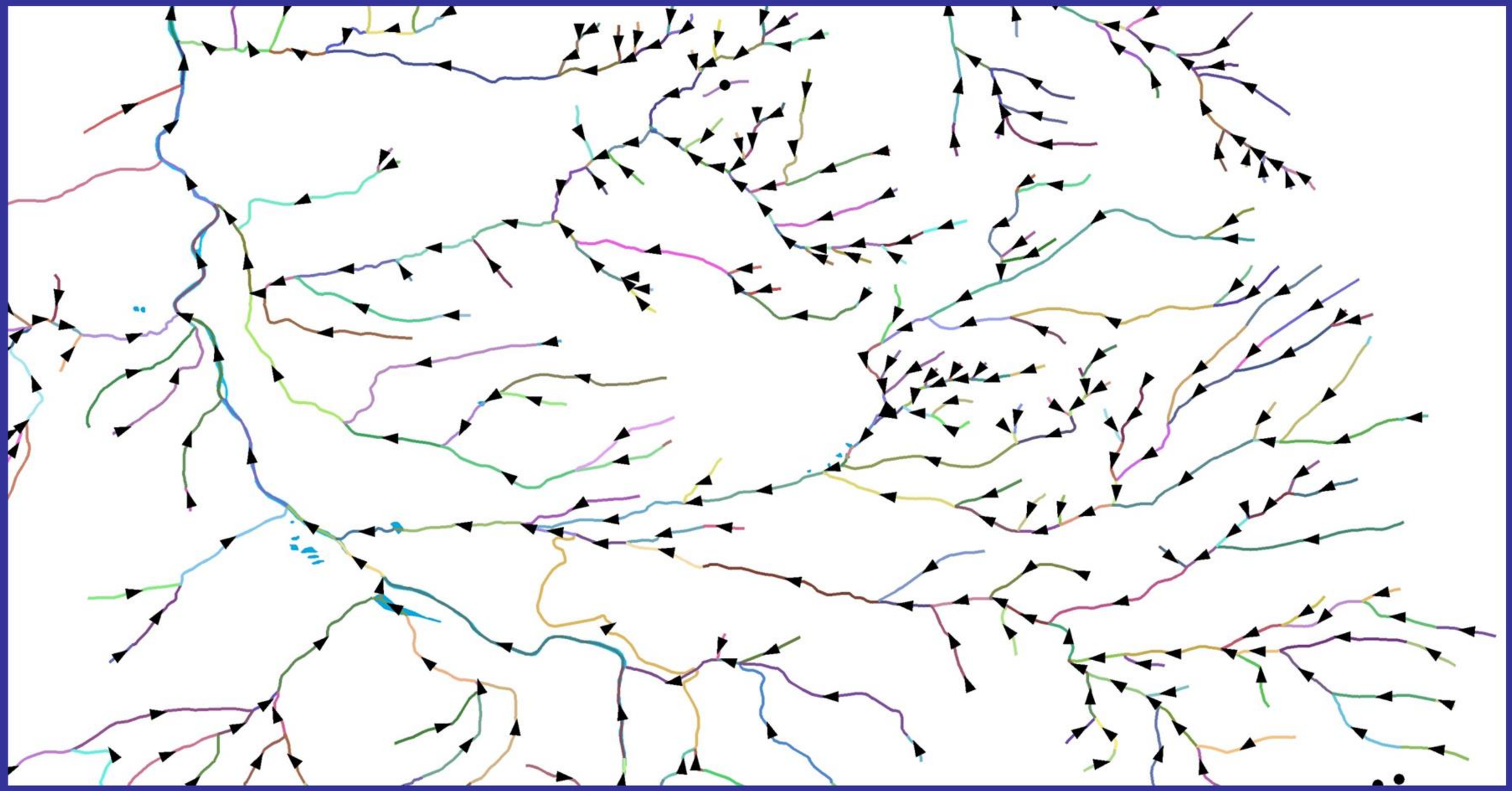
Example of Flow Network



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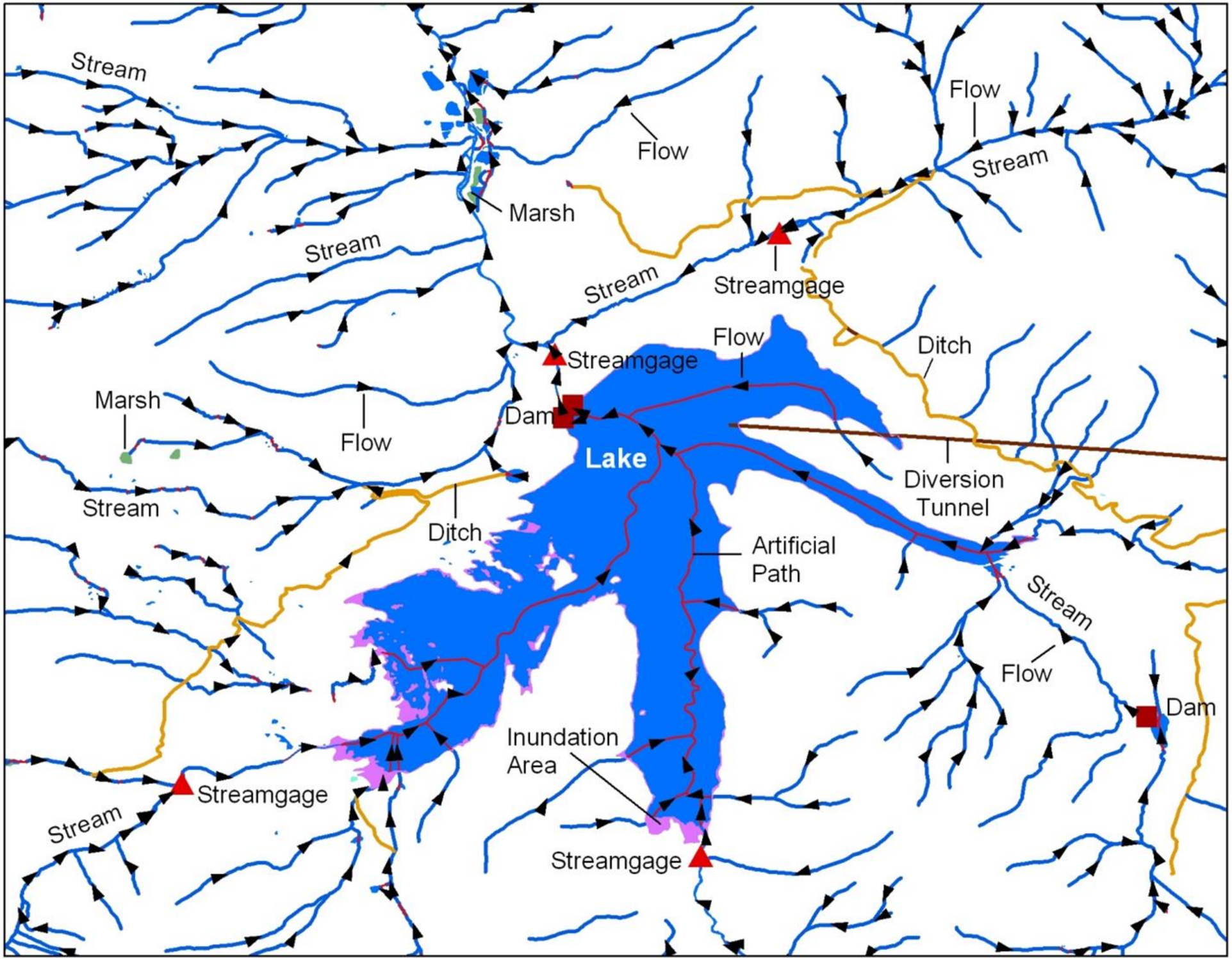
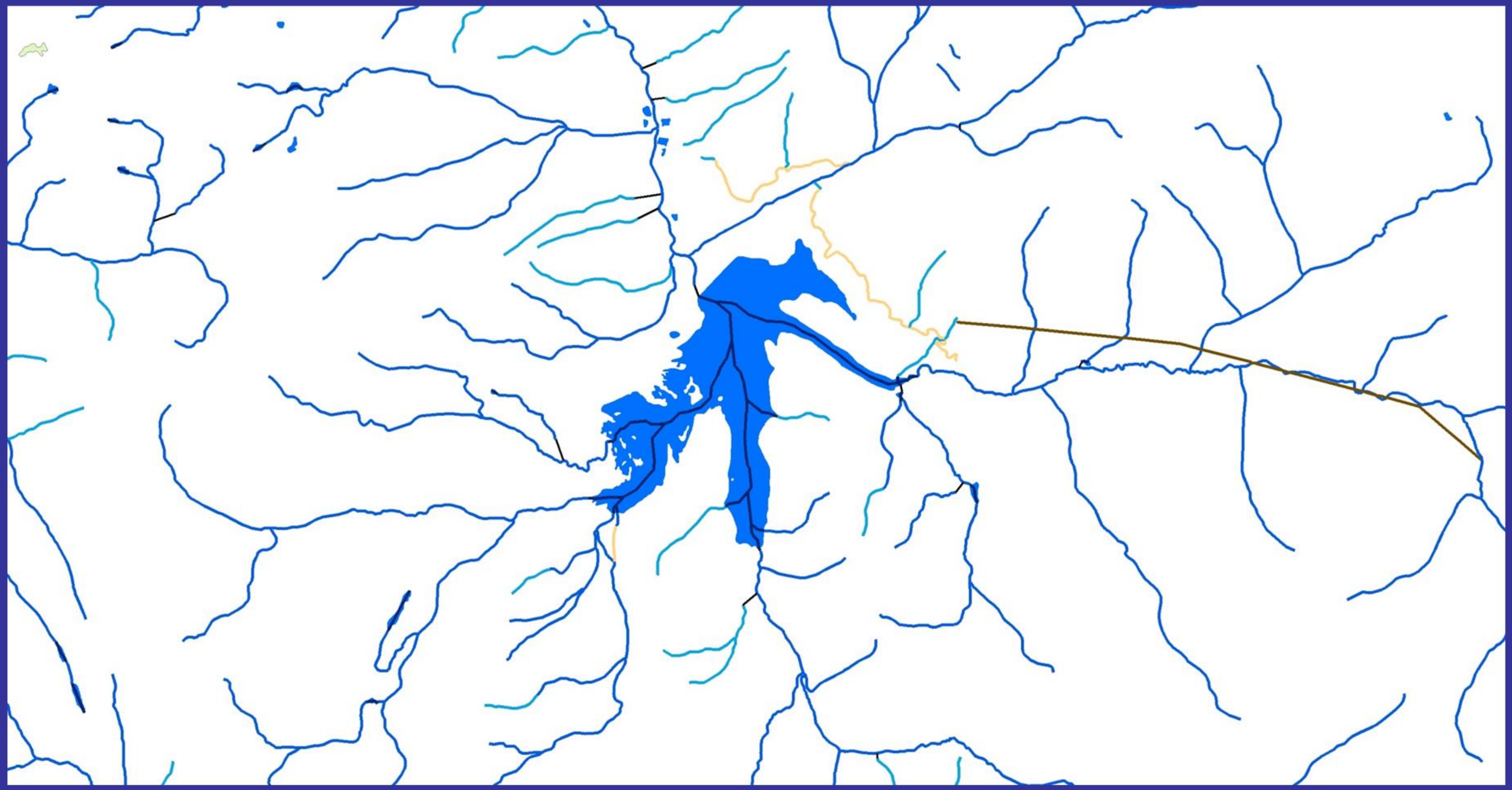
National Hydrography Dataset

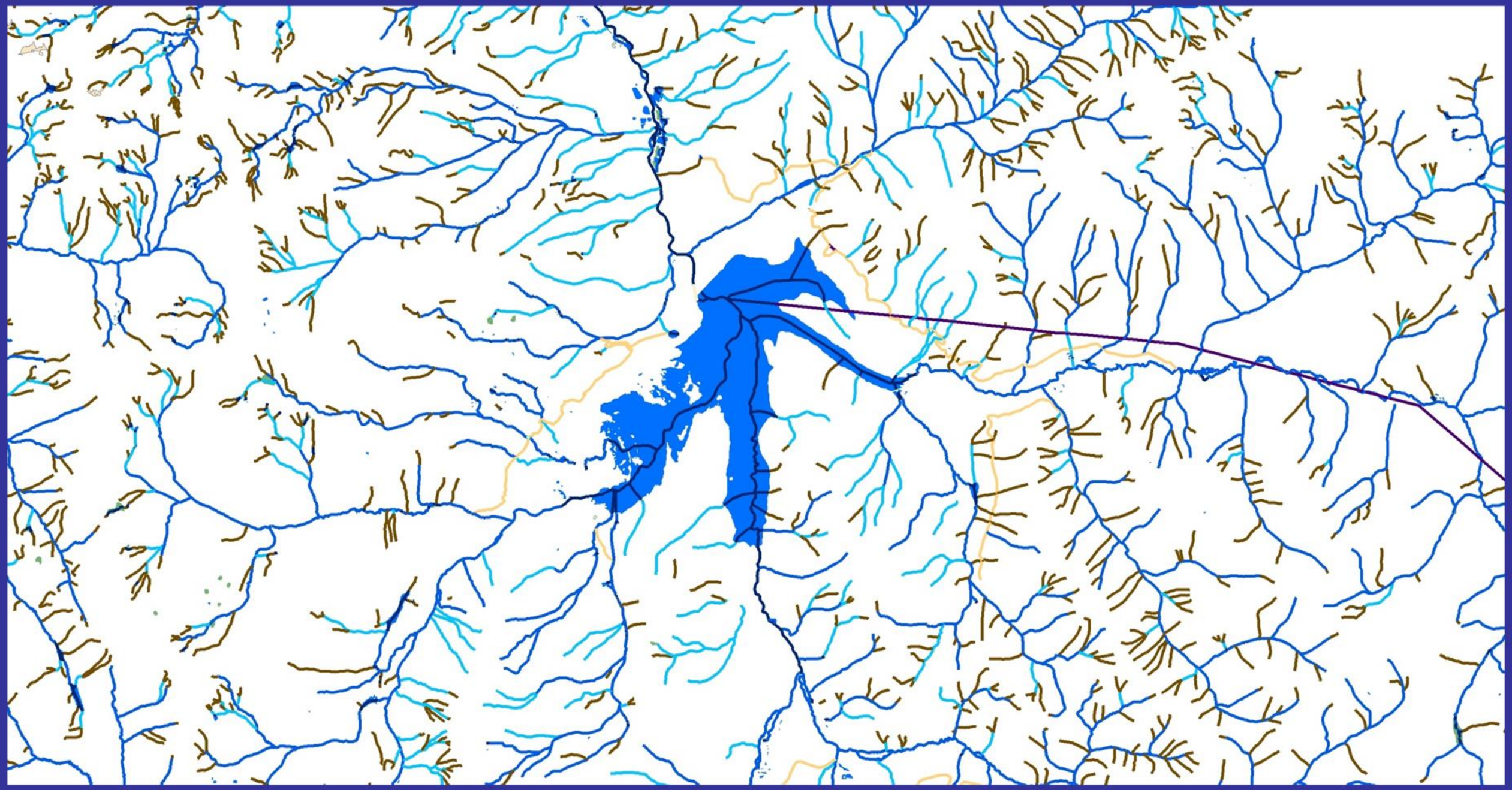


National Hydrography Dataset – Medium Resolution



USGS

National Hydrography Dataset – High Resolution



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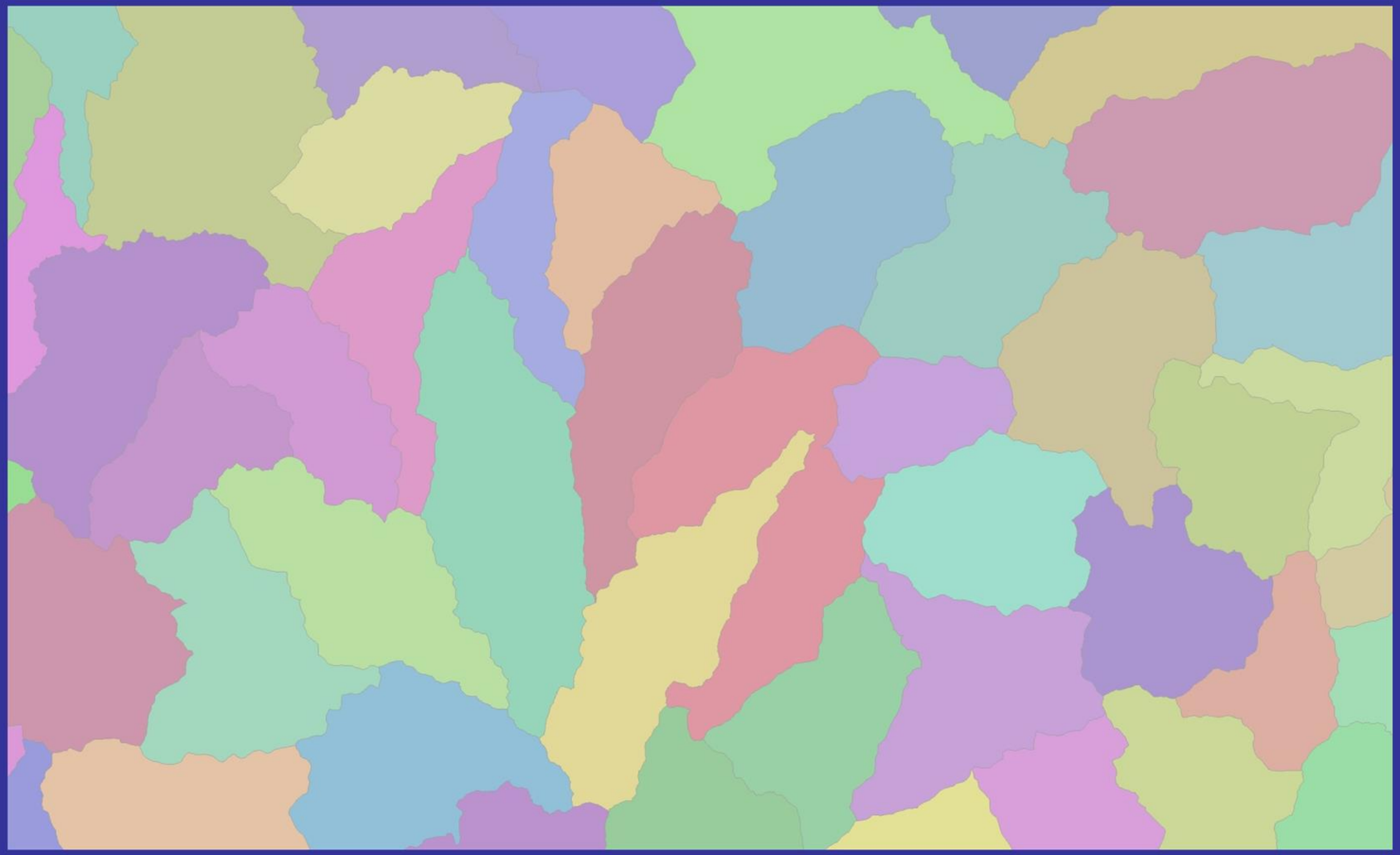
Watershed Boundary Dataset



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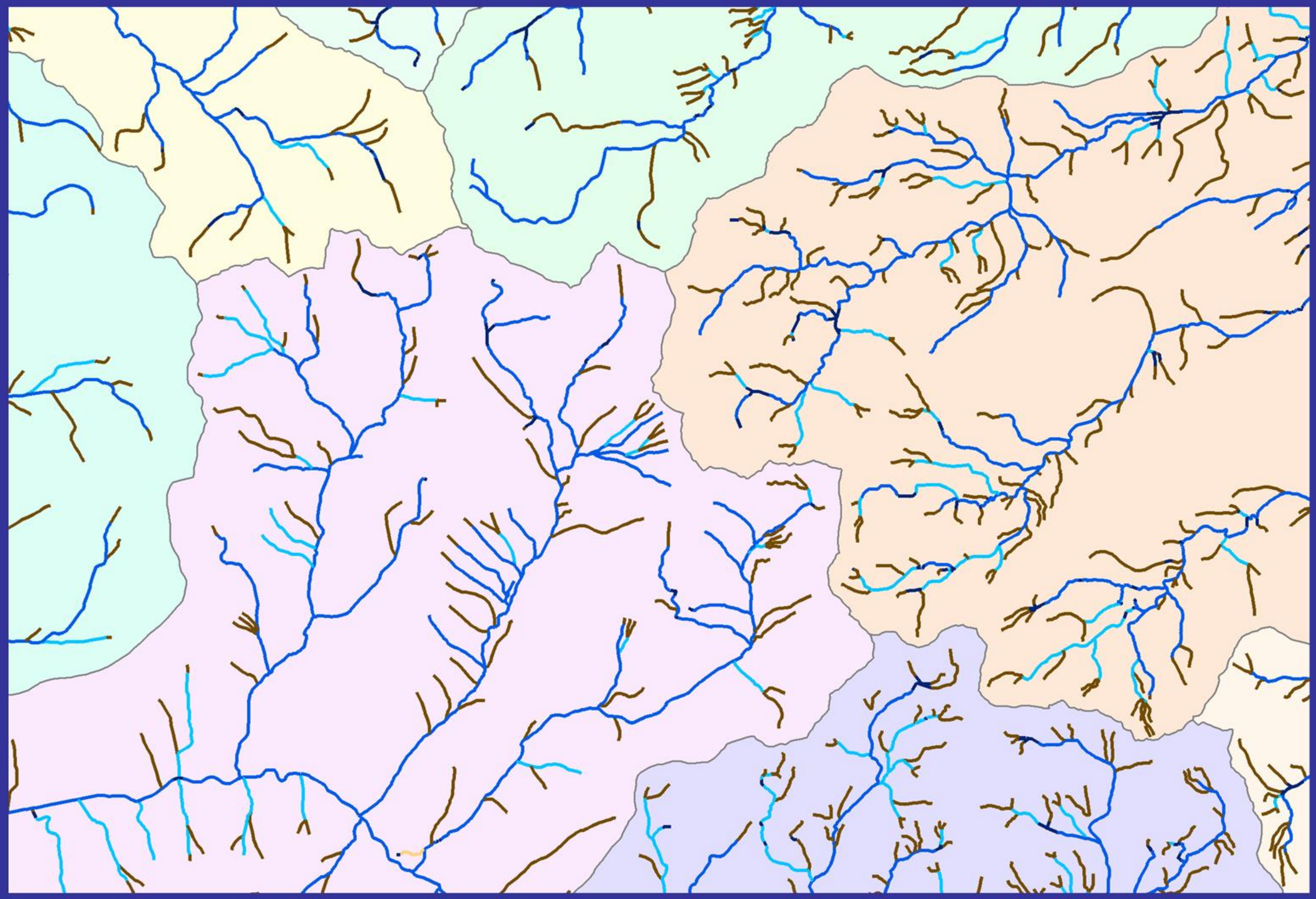
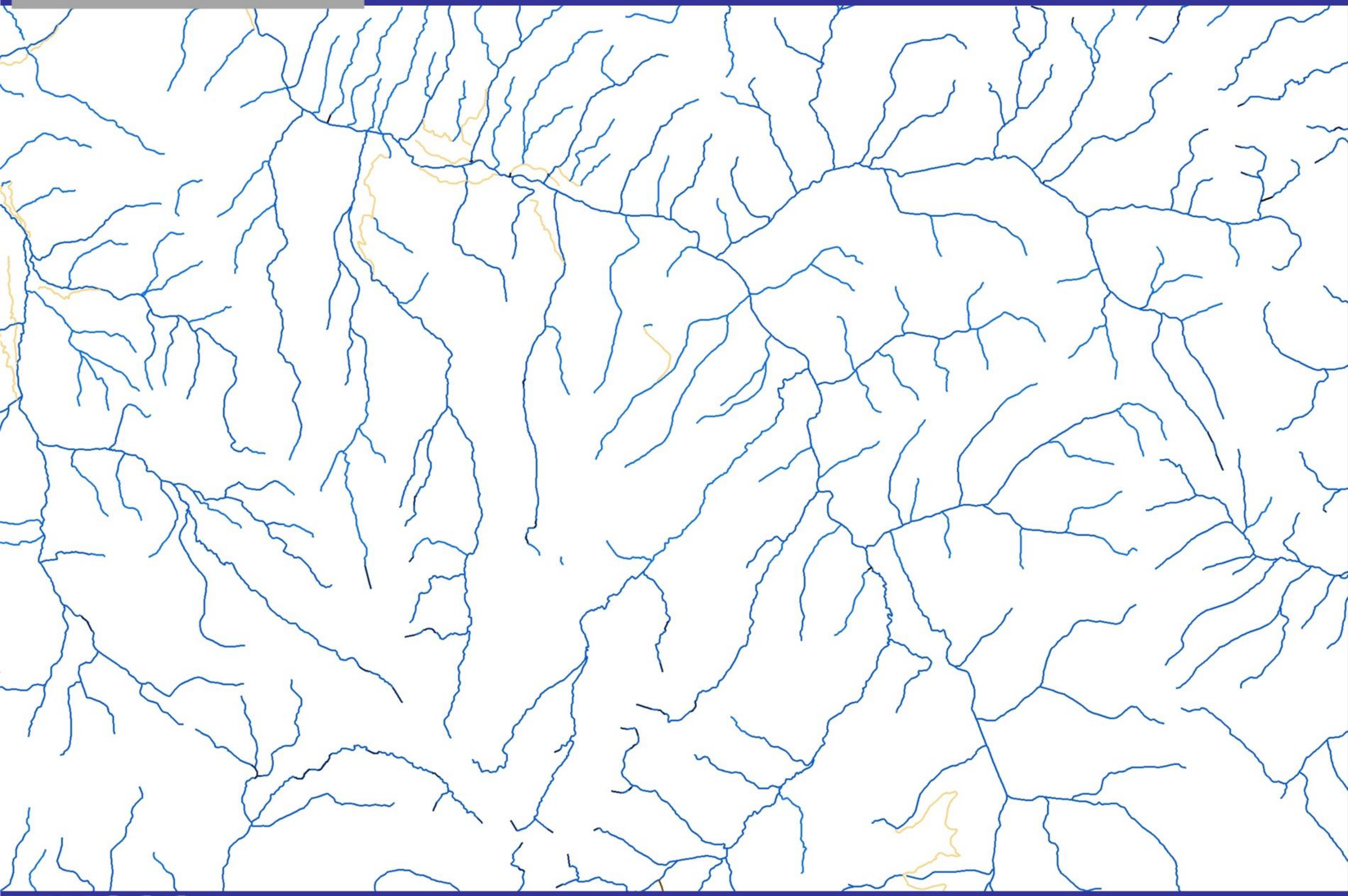
National Hydrography Dataset and Watershed Boundary Dataset



USGS

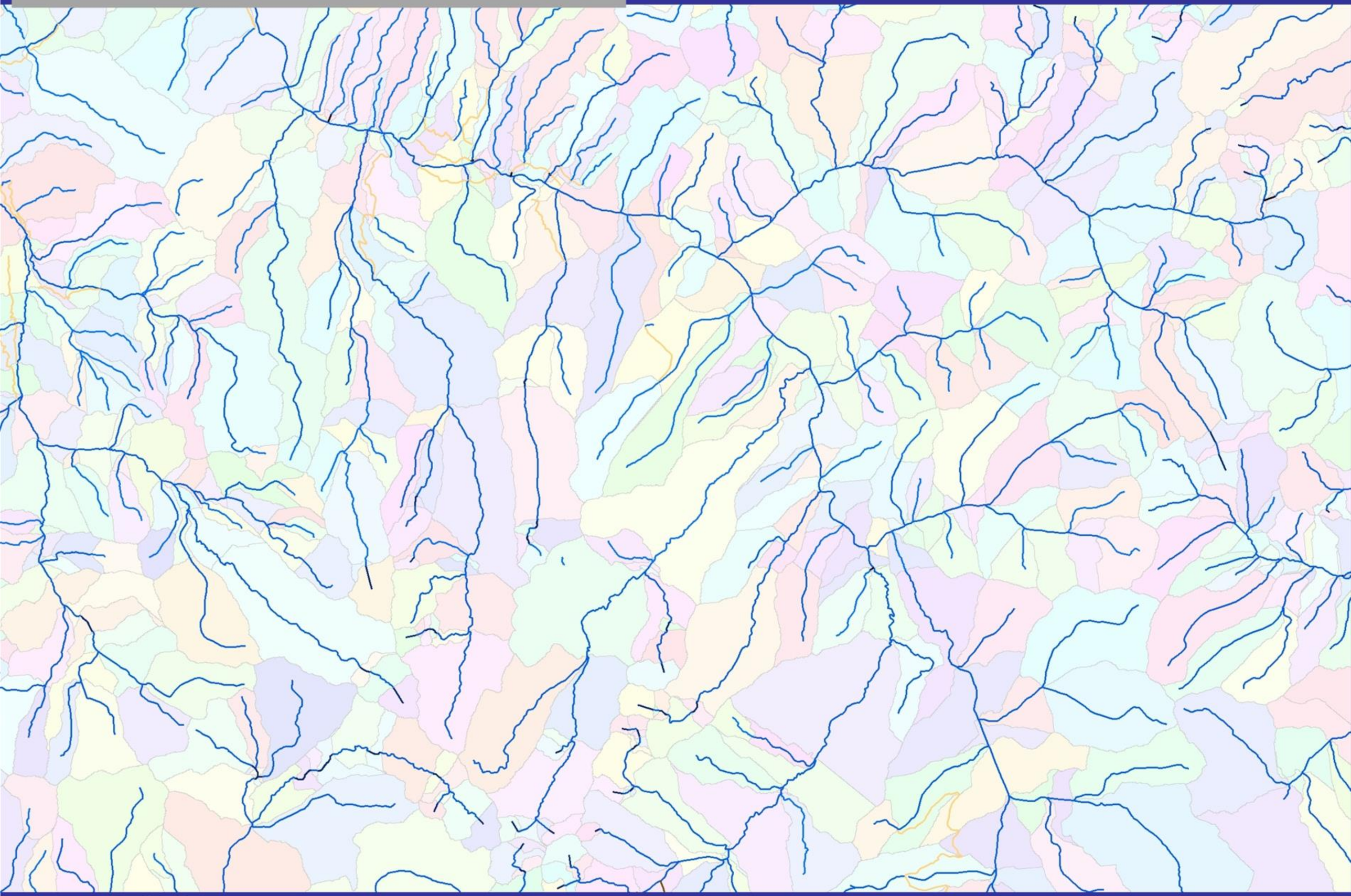
1:100,000-scale NHD

166A

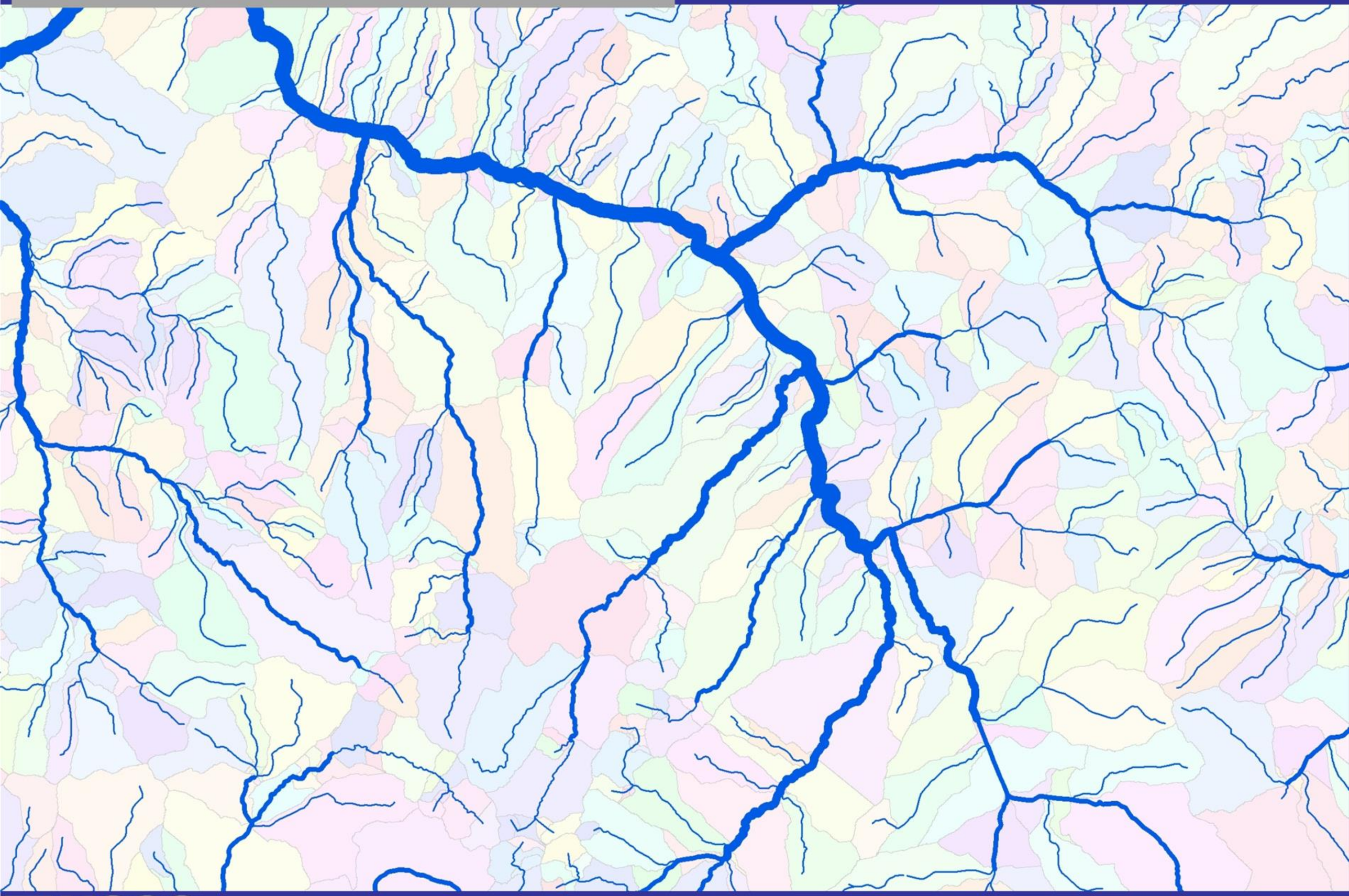


USGS

1:100,000-scale NHD with Catchments

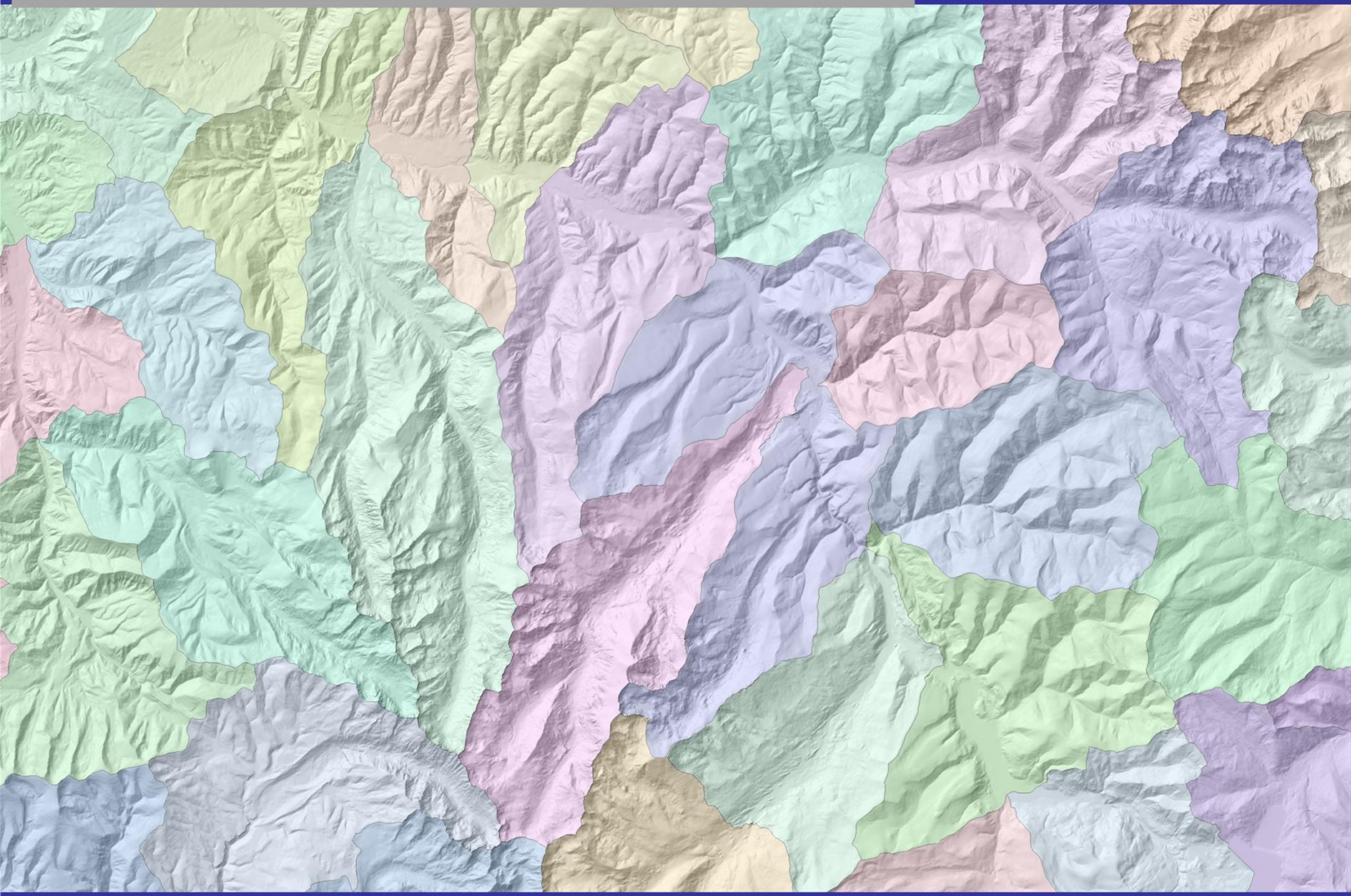


1:100,000-scale NHD with Flow Estimates

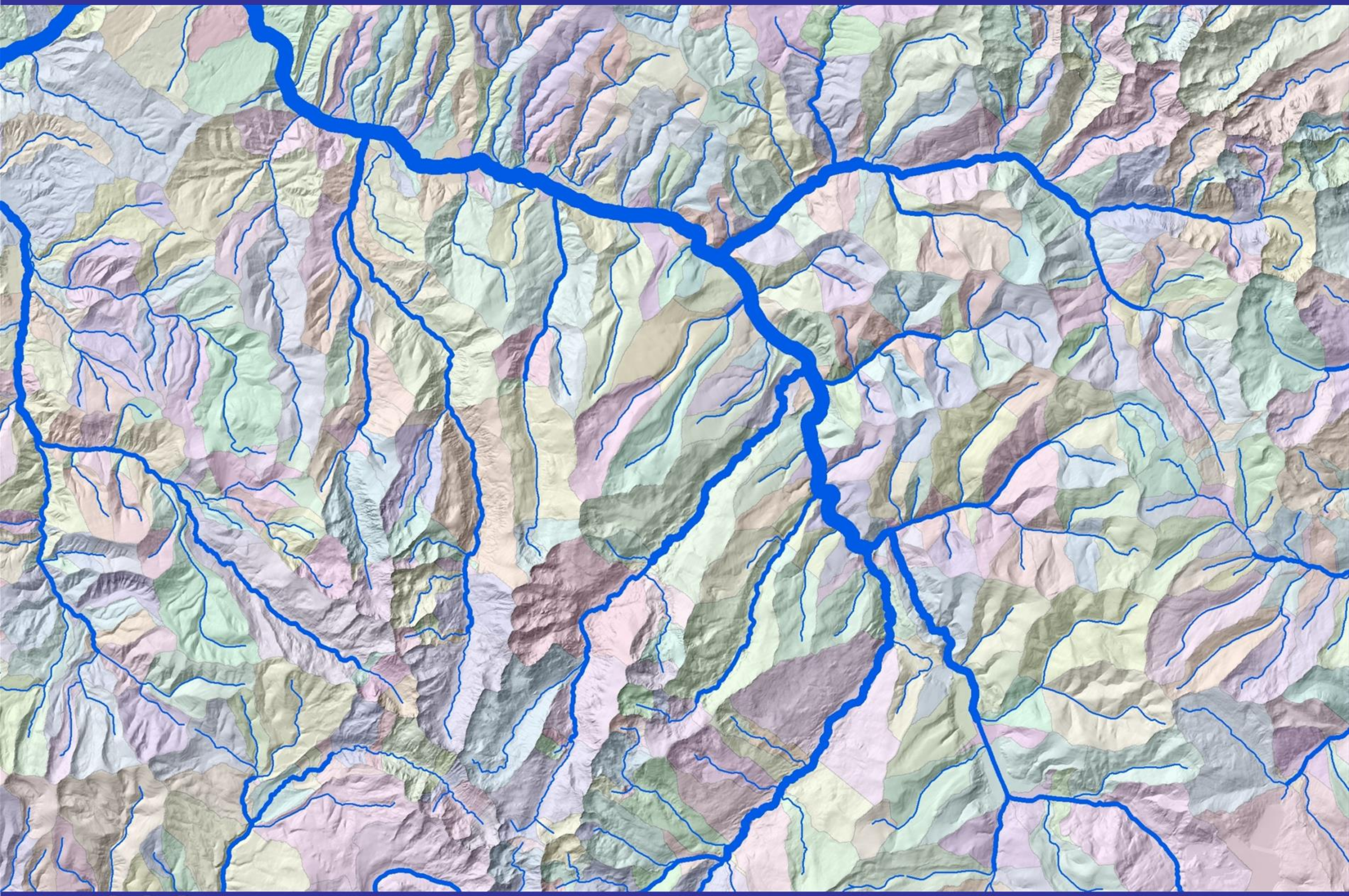


National Elevation Dataset / Watershed Boundary Dataset

166D

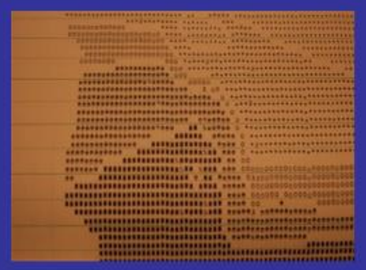


USGS



Era 4

1960's 1980's 1990's 2002 2008 2015



First Computer Maps of Water

GIS Hydrography Theme

EPA RF1 Data

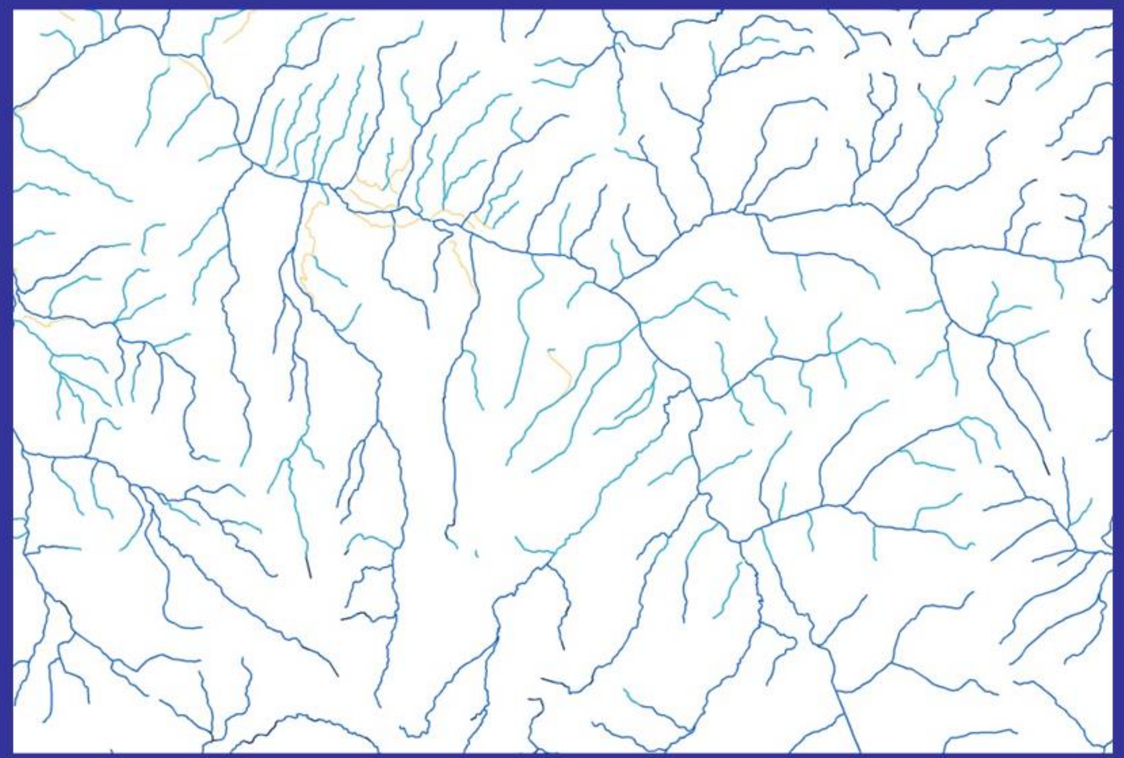
NHD

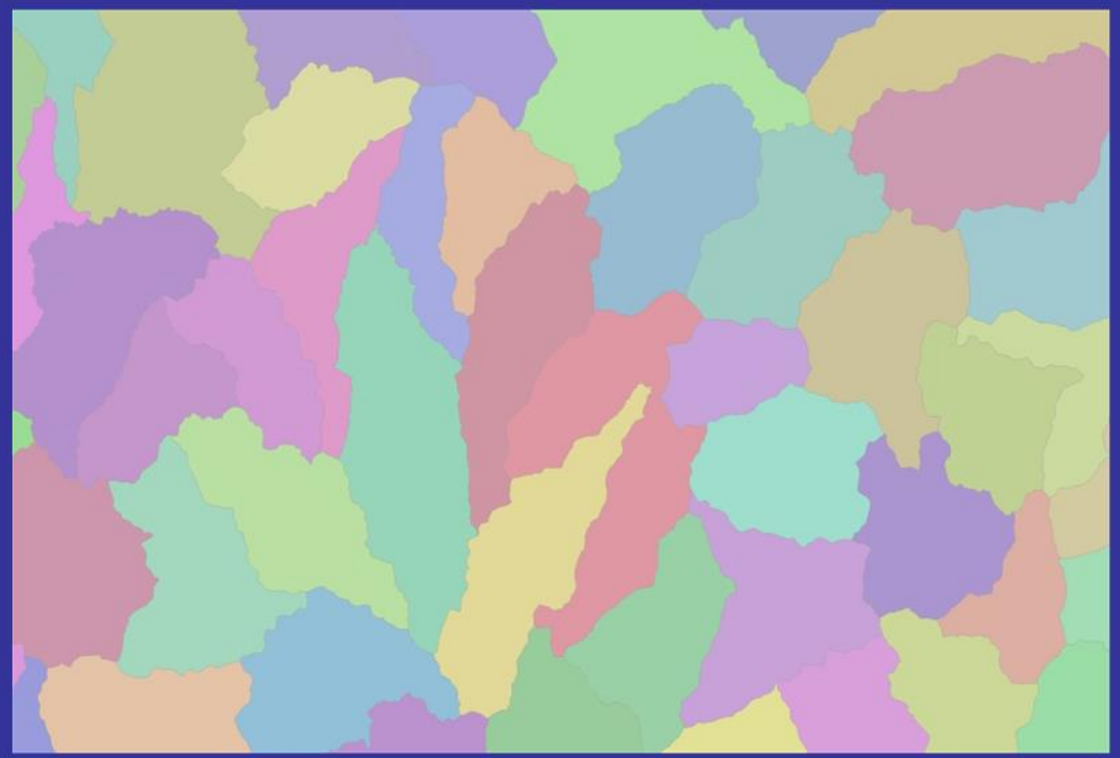
WBD

NHDPlus

?

1:24,000-scale NHD/WBD/NED





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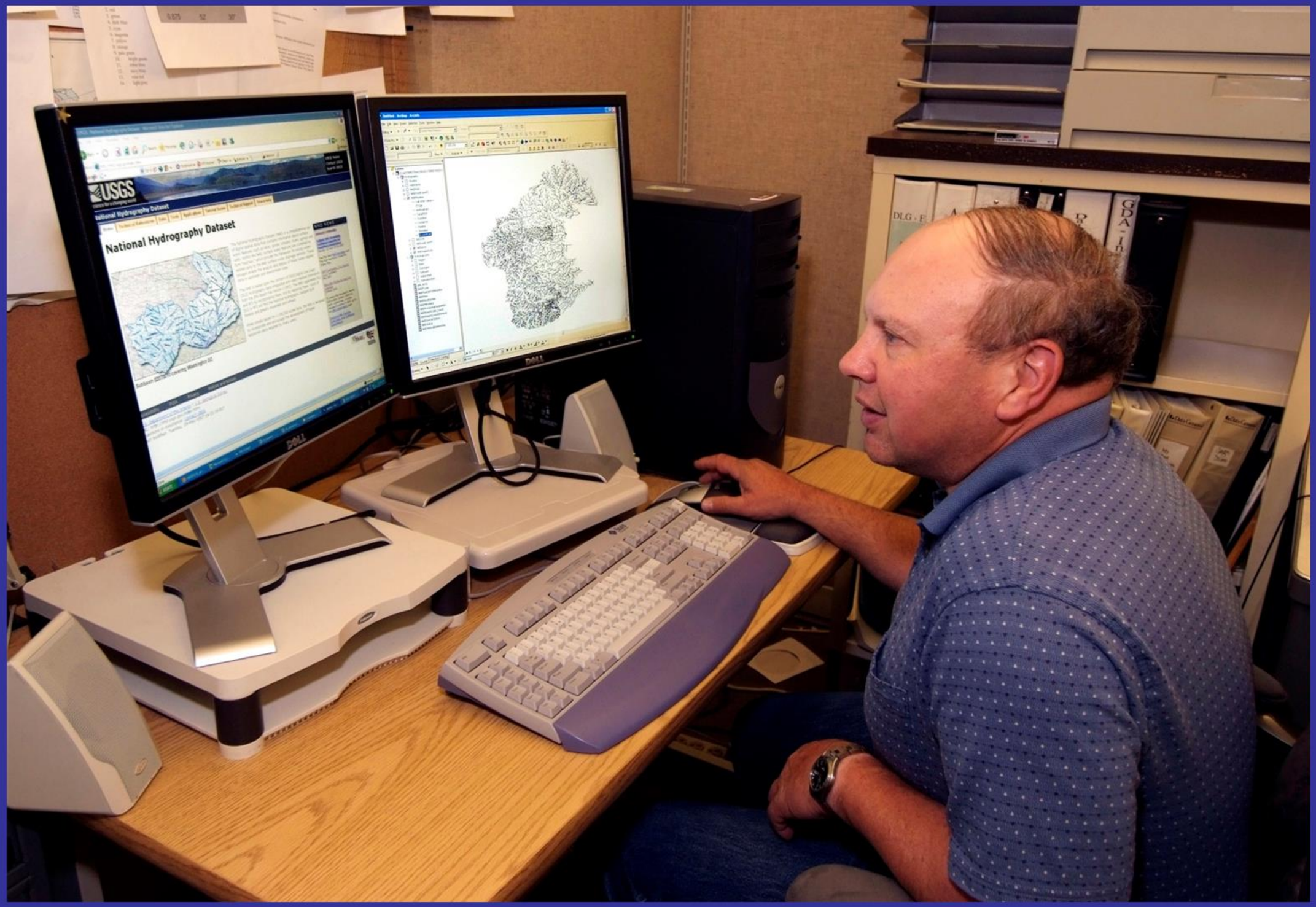
Contemporary NHD Editing



USGS

West Virginia NHD

- 1990s – Hand digitized River Reach lines developed by WV Dept. of Natural Resources (WVDNR) and WV Dept. of Environmental Protection (WVDEP)

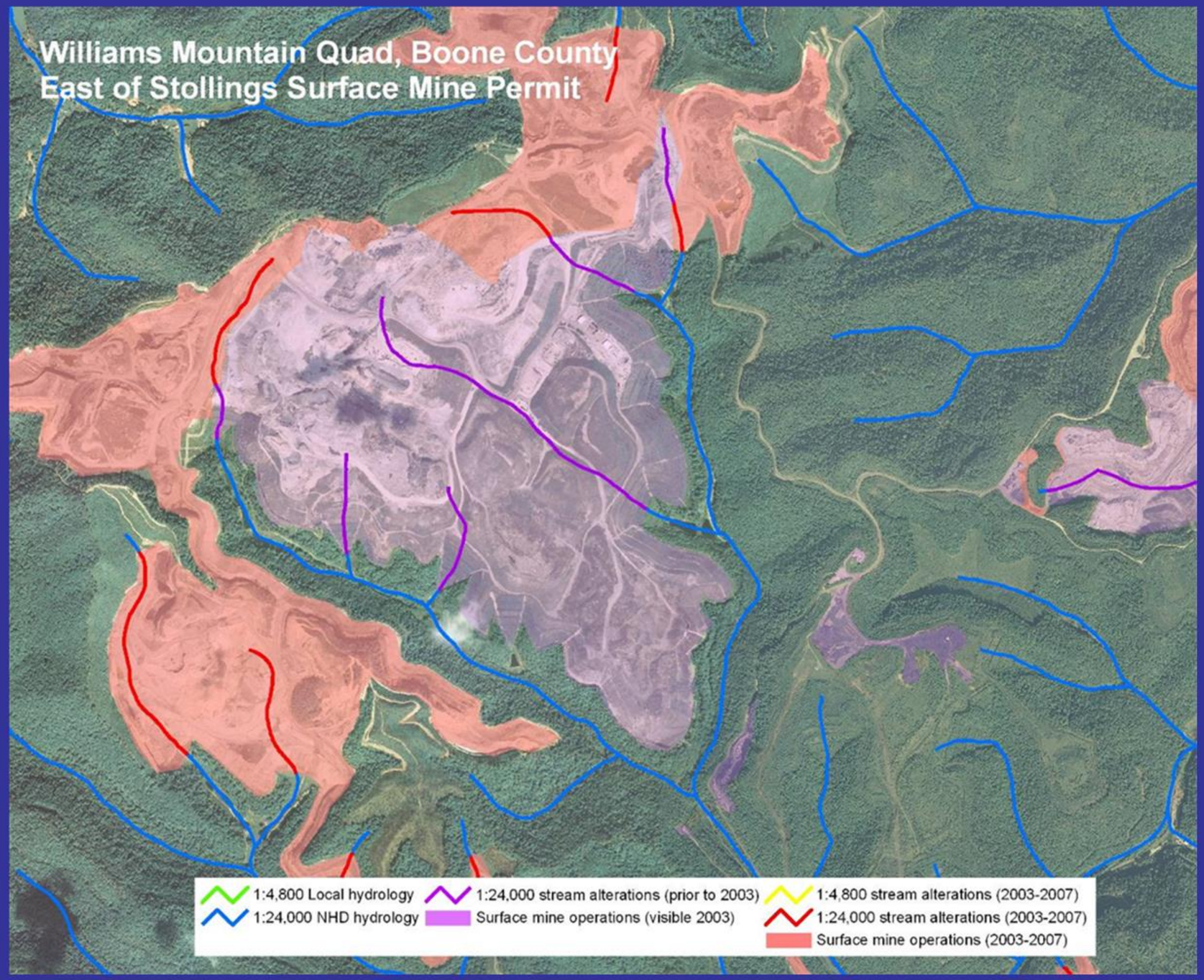
- 2001 – 2004 – Statewide High Resolution NHD completed
  - Based on 1:24000 Digital Line Graph (DLG-3)
  - coop w/USGS, West Virginia University, WV DEP

- 2005 – 2012 – Focus on data omissions and feature editing in high-change and sensitive areas of the state for WVDEP
  - Targeted input of Statewide 1:4800 planimetric stream mapping and 1/9th arcsecond (3-meter) Digital Elevation Model (DEM)
  - Incorporated Watershed Boundary Dataset (WBD)

- 2013 – 2016 – NHD / WV StreamStats project
  - Migrate Hi-Res NHD into hydrological modeling environment for USGS water programs and state agency cooperators

West Virginia NHD

- Current focus: address hydrographic network changes and regulatory issues associated with areas impacted by surface mining



RiverSpill and the Incident Command Tool for Drinking Water Protection

Dr. William Samuels
Center for Water Science and Engineering
Leidos Incorporated
Alexandria, Virginia

USGS

U.S. Geological Survey Hydrography Webinar Series

Session 2

May 21, 2015

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U.S. Geological Survey
Hydrography Webinar Series

Closing

Poll

Recording

http://nhd.usgs.gov/HydrographySeminarSeries.html

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Hydrography Webinar Series

Thank You

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