

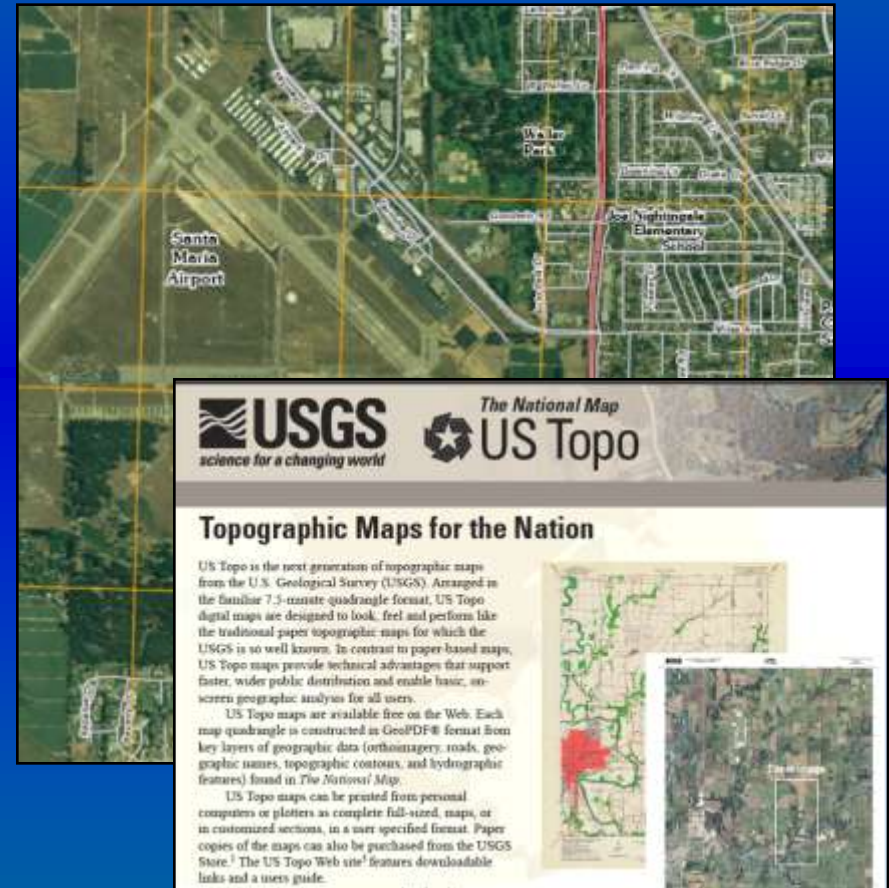
Advancing the Analysis Potential of Topographic Maps in the Digital World

**Prepared for Ignite Spatial
May 7, 2012
Providence, Rhode Island**

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Foundation: *The National Map*

- Base topographic data
 - ✓ NSDI Framework layers
 - ✓ Seamless
 - ✓ Nationally consistent
- Ongoing maintenance through partnerships
- Available on line
- Source for US Topo

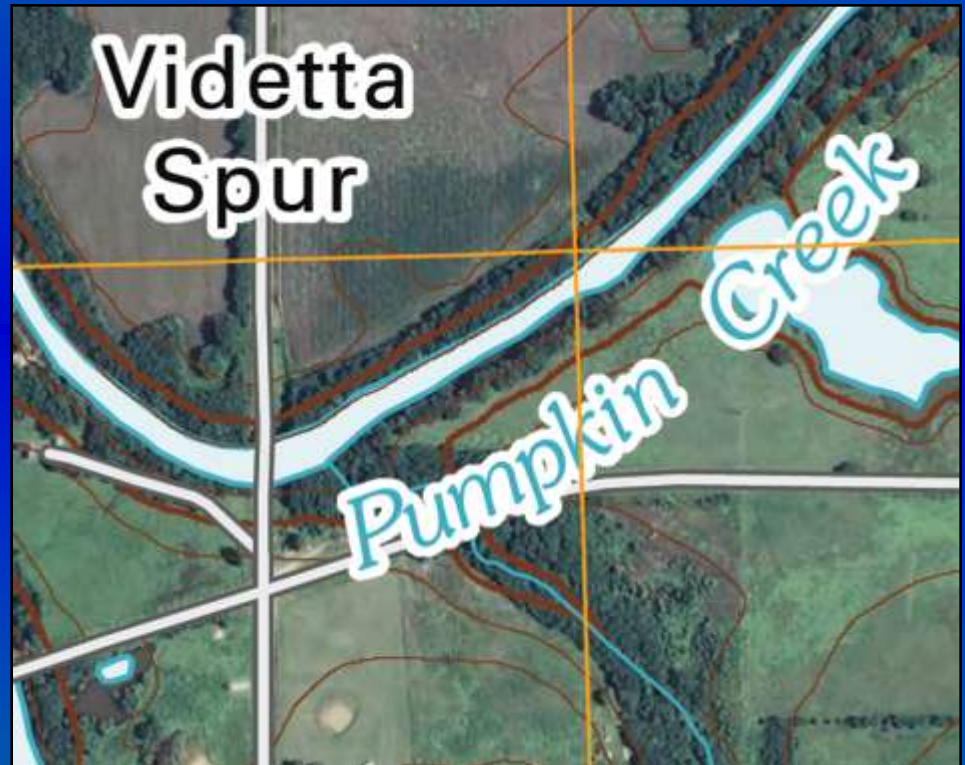


The National Map & US Topo Background

- Legacy 1:24,000 USGS Topographic maps
 - 55,000 maps
 - Nationwide coverage
 - Seamless with consistent scale and content
- Maps from the 1970s and 1980s were used to generate digital datasets (hydro, DEM data, etc)
 - Now it's the other way around
- Maps remain available as GeoPDF files

The US Topo Digital Datasets

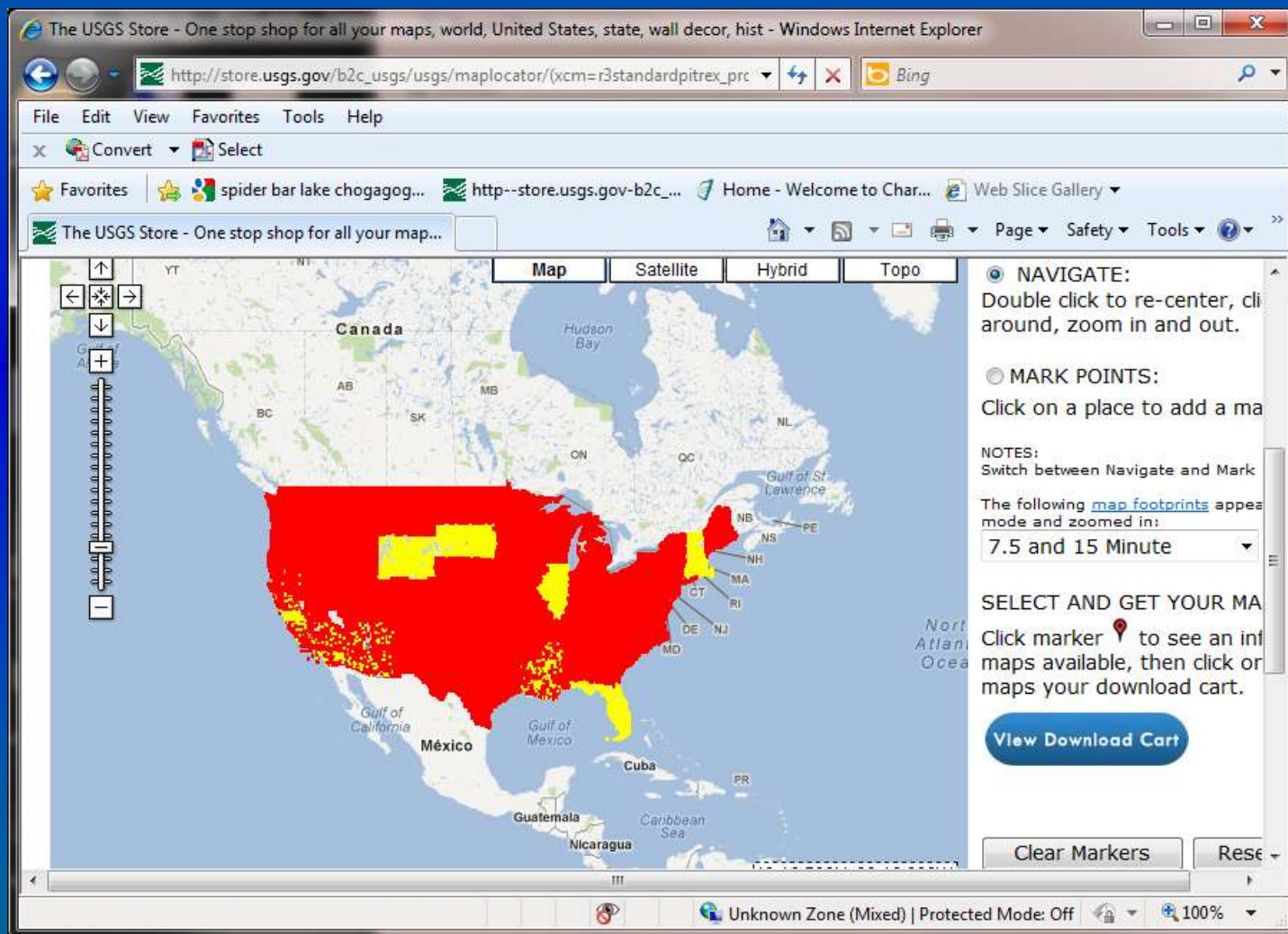
- US Topo Content
 - ✓ Orthorectified image
 - ✓ Roads
 - ✓ Names
 - ✓ Contours
 - ✓ Hydrography
 - ✓ Woodland tint
 - ✓ State & county boundaries
- All but contours are currently available on The National Map

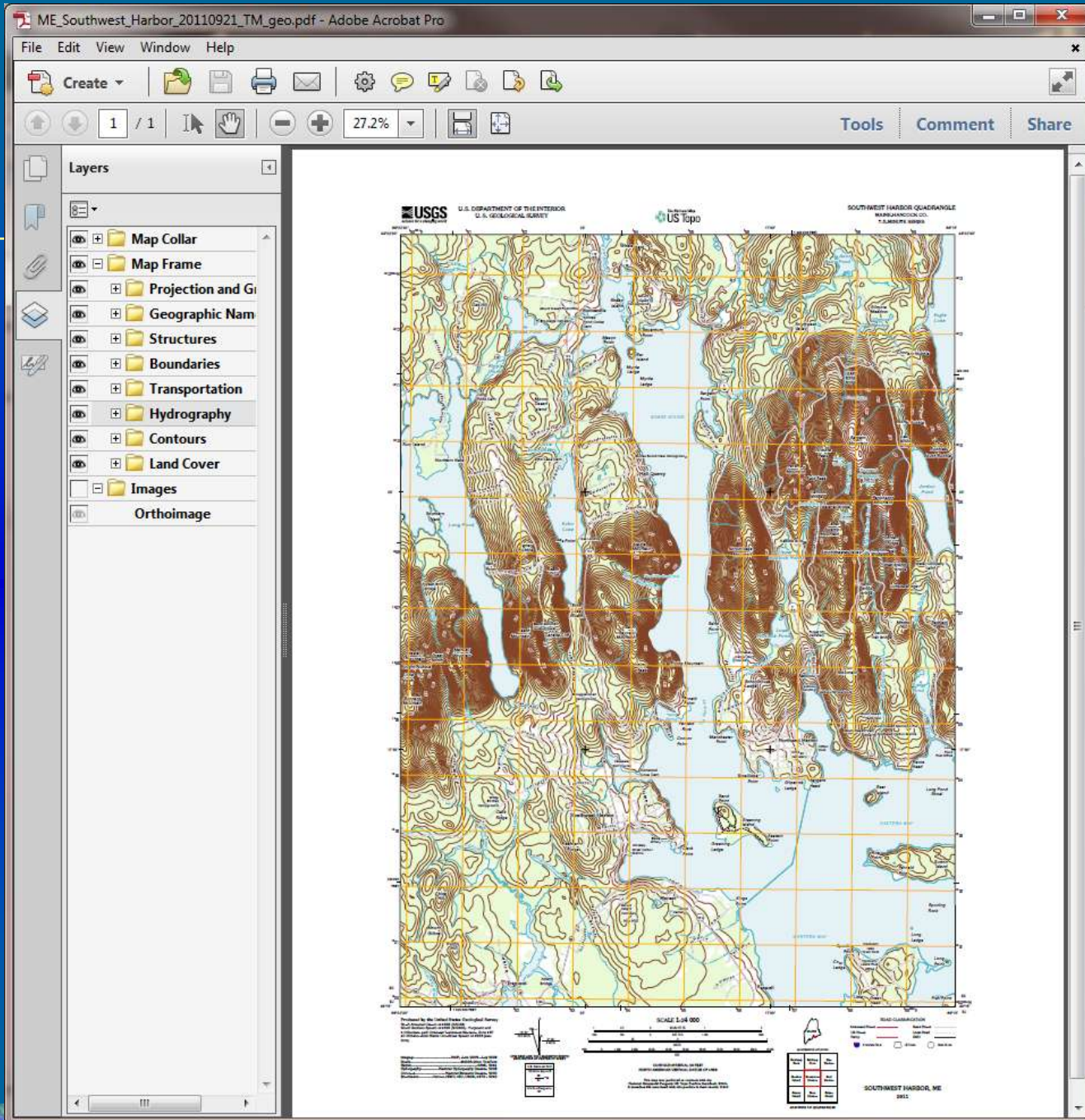


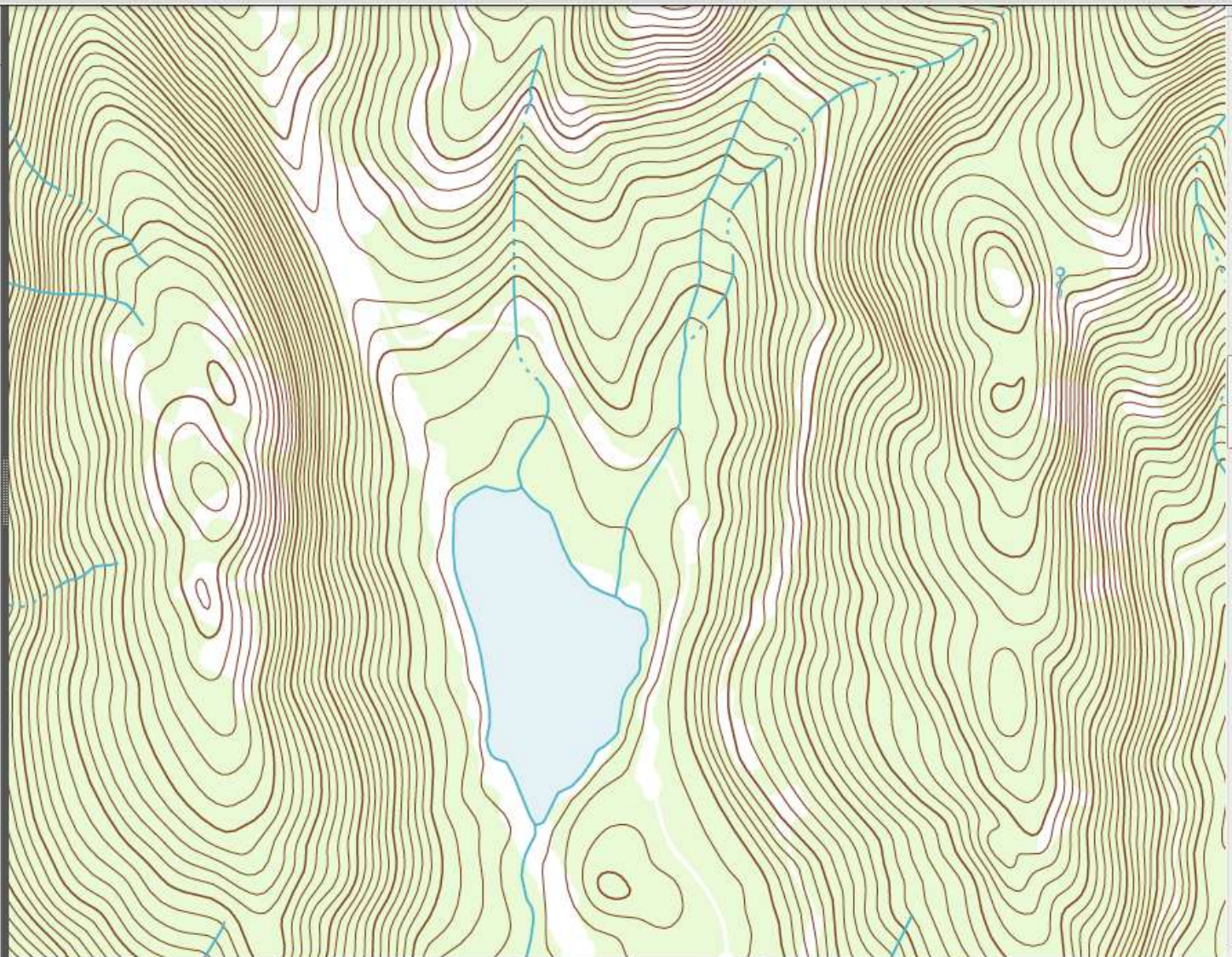
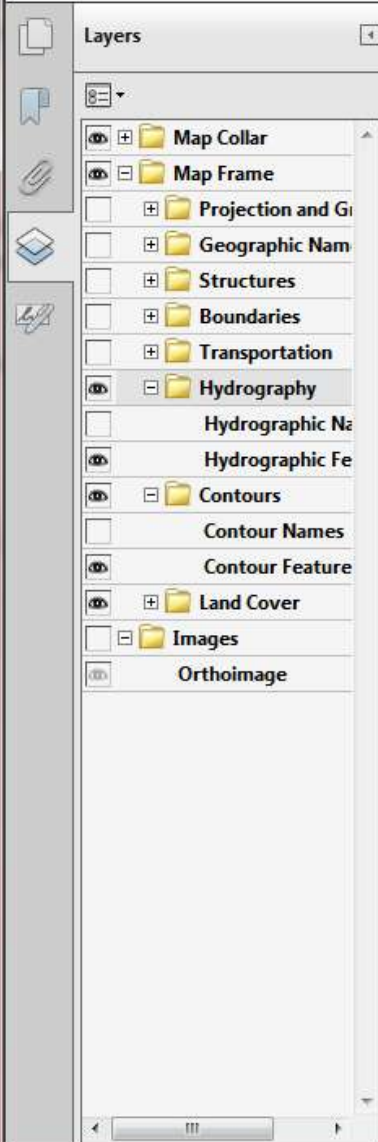
GeoPDF Product Characteristics

- Traditional USGS 7.5-minute topographic quadrangle format
- Nationally consistent
- Can be used electronically or plotted
- Reference systems:
 - ✓ Latitude/Longitude
 - ✓ National Grid and Coordinates (Military Grid Reference System)
 - ✓ Universal Transverse Mercator

USGS Map Store





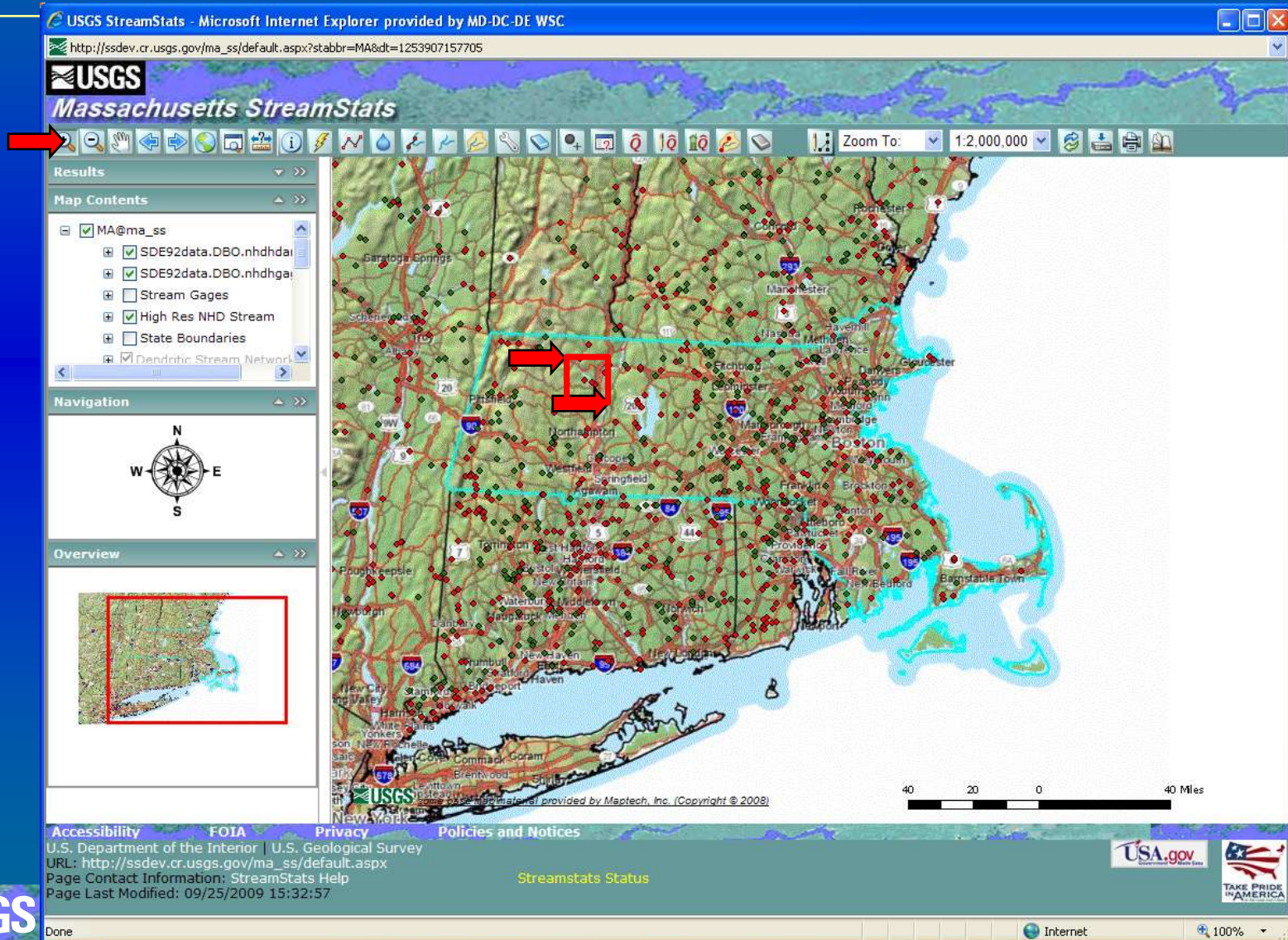


22.75 x 29.00 in

What makes the Topographic Map Intelligent?

- Much is based on the complimentary aspects of the hydrography and surface contour features
 - Channel slope functionality
 - Stream Network navigation
 - Terrain Profiles
 - Raindrop tools
 - Cross Section Profiles
 - 3 Dimensional “Viewsheds”
 - Some of this is already available in StreamStats

StreamStats with NHD Gages and Dams



Select Ungaged Site

Note: Scale must be at least 1:24,000

USGS StreamStats - Microsoft Internet Explorer provided by MD-DC-DE WSC

http://streamstats.sr.usgs.gov/ma_ss/default.aspx?stabbr=ma&dt=1275053404309

USGS
Massachusetts StreamStats

Results

Map Contents

- ☒ MA@ma_ss
 - ☒ GlobalSDE_SS_USER.nhc
 - ☒ GlobalSDE_SS_USER.nhc
 - ☐ Stream Gages
 - ☒ High Res NHD Stream
 - ☐ State Boundaries
 - ☒ Nondrilled Stream Network

Navigation

Overview

Click on Point Delineation button

Zoom To: 1:20,000

USGS

Accessibility | FOIA | Privacy | Policies and Notices

U.S. Department of the Interior | U.S. Geological Survey

URL: http://streamstats.sr.usgs.gov/ma_ss/default.aspx

Page Contact Information: StreamStats Help

Page Last Modified: 05/28/2010 15:29:09

StreamStats Status | News

USA.gov

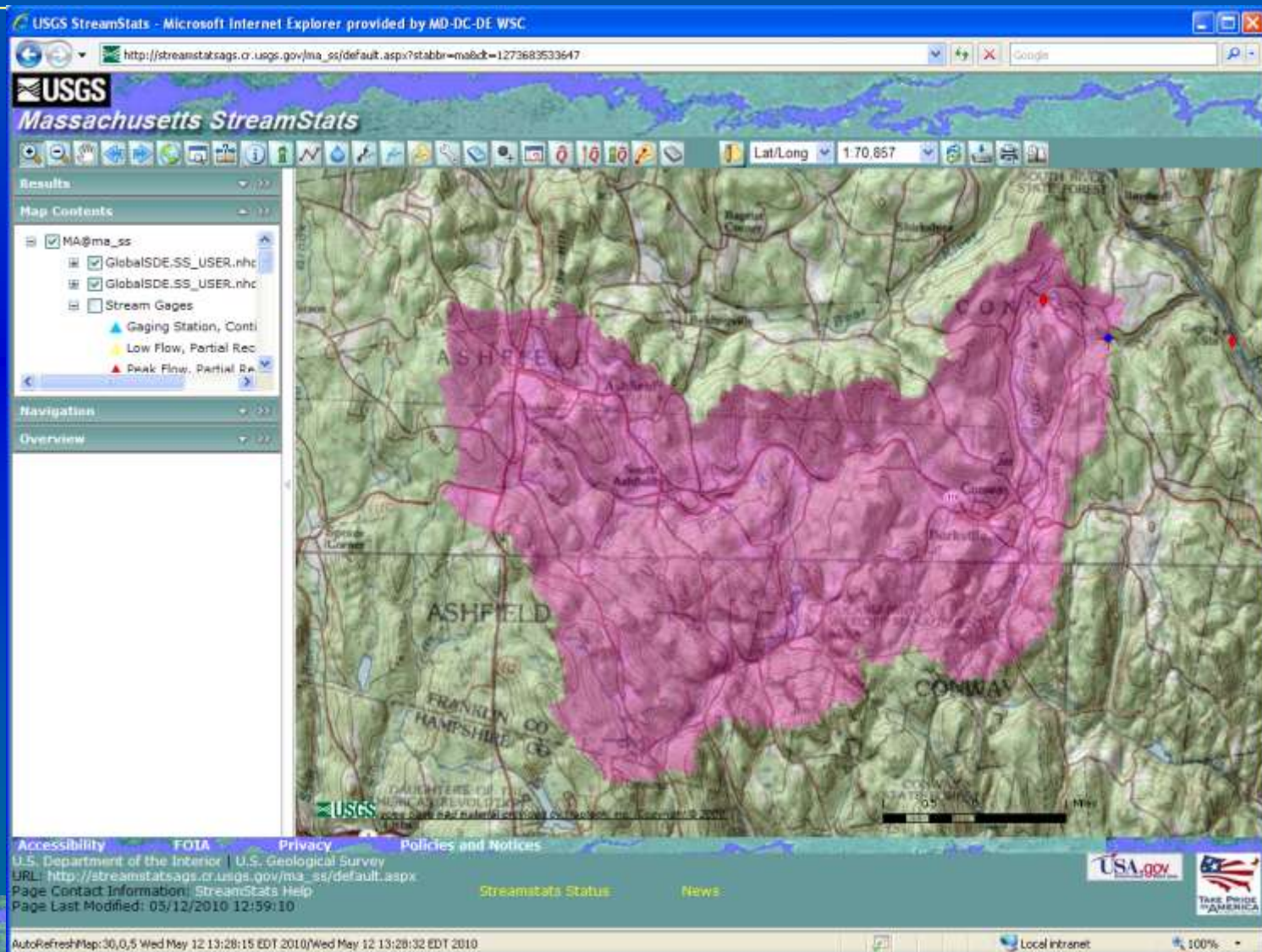
Take Pride in America

Done

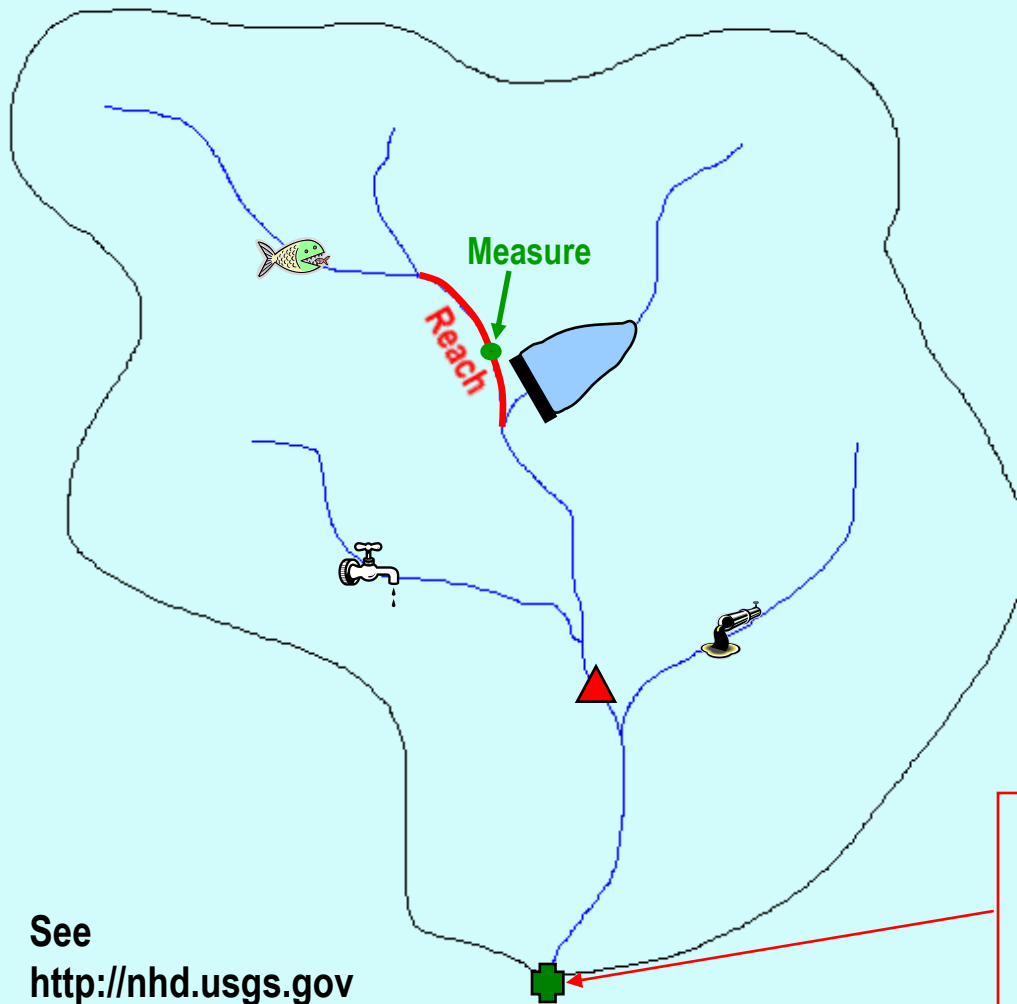
Local intranet

100%

Delineated Basin



Network Navigation/NHD Reach Indexing



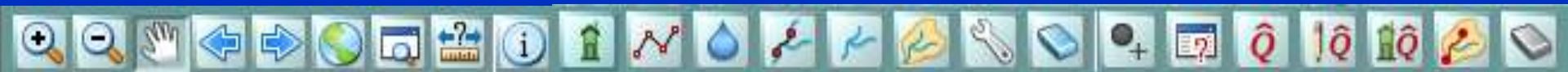
Explanation

- User-selected site
- ▲ Streamgaging station
- ▬ Dam site
- ⚙ Point discharge
- ⚗ Water withdrawal
- 🐟 Biological sampling site

StreamStats provides reach addresses for user-selected sites, consisting of reach number and percentage distance from downstream end of reach

See
<http://nhd.usgs.gov>

NHD Navigation Tools on Toolbar

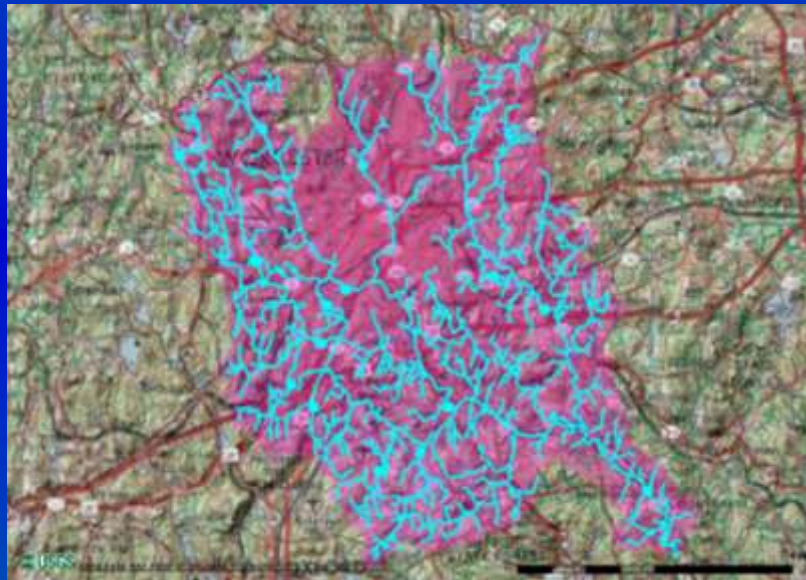


Terrain Profile and Profile
Raindrop and Flow
Network Path
Estimate Flow Based on
Clear Features
Trace and Profile
NH Trace and
Stream and
Watershed
Profile
Similar Watershed
and Show

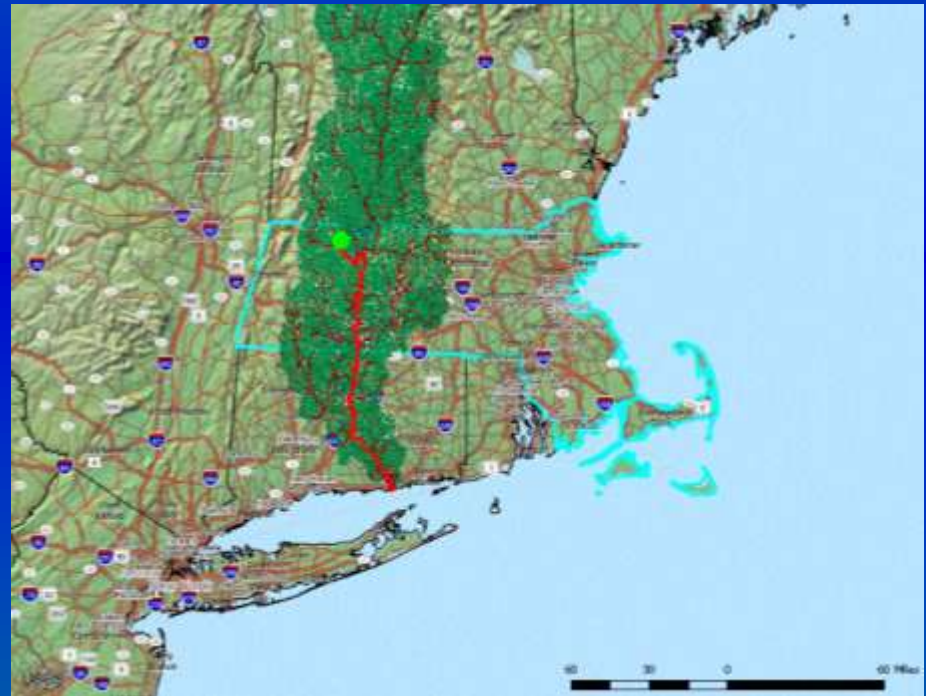
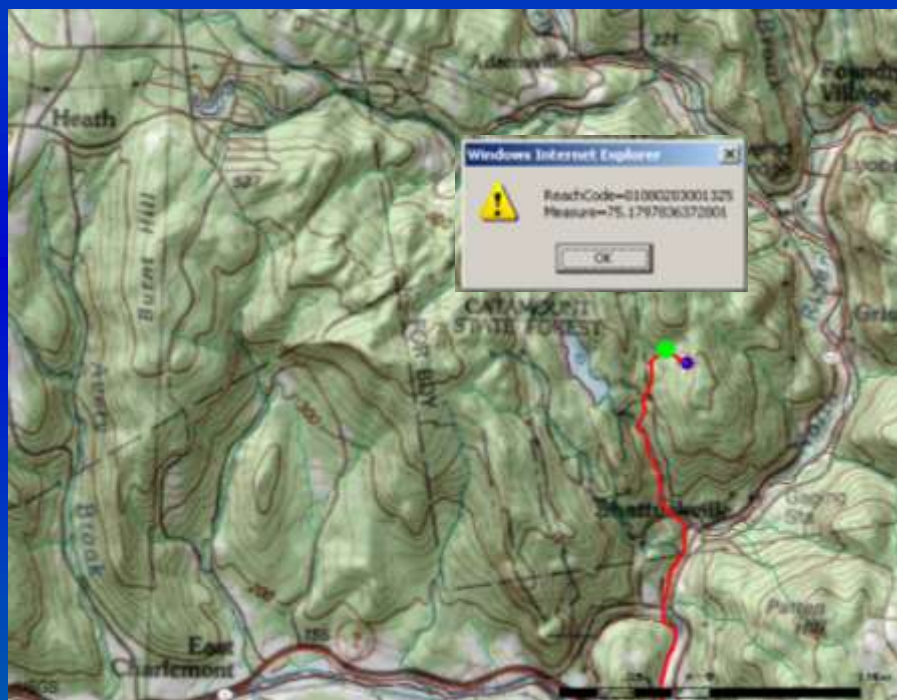
Network Tracing in StreamStats

- **Configure trace**
 - Specify layer used (NHD, NHDPlus)
 - Direction of tracing (upstream, downstream)
 - Participating event layers (gages, dams, etc.)
- **Trace from delineated point**
 - Select and display reaches
 - Select and display point events
- **Raindrop trace to network**
 - Display path from point to network, and downstream
 - Compute reach address at point on network

Trace From Delineated Point

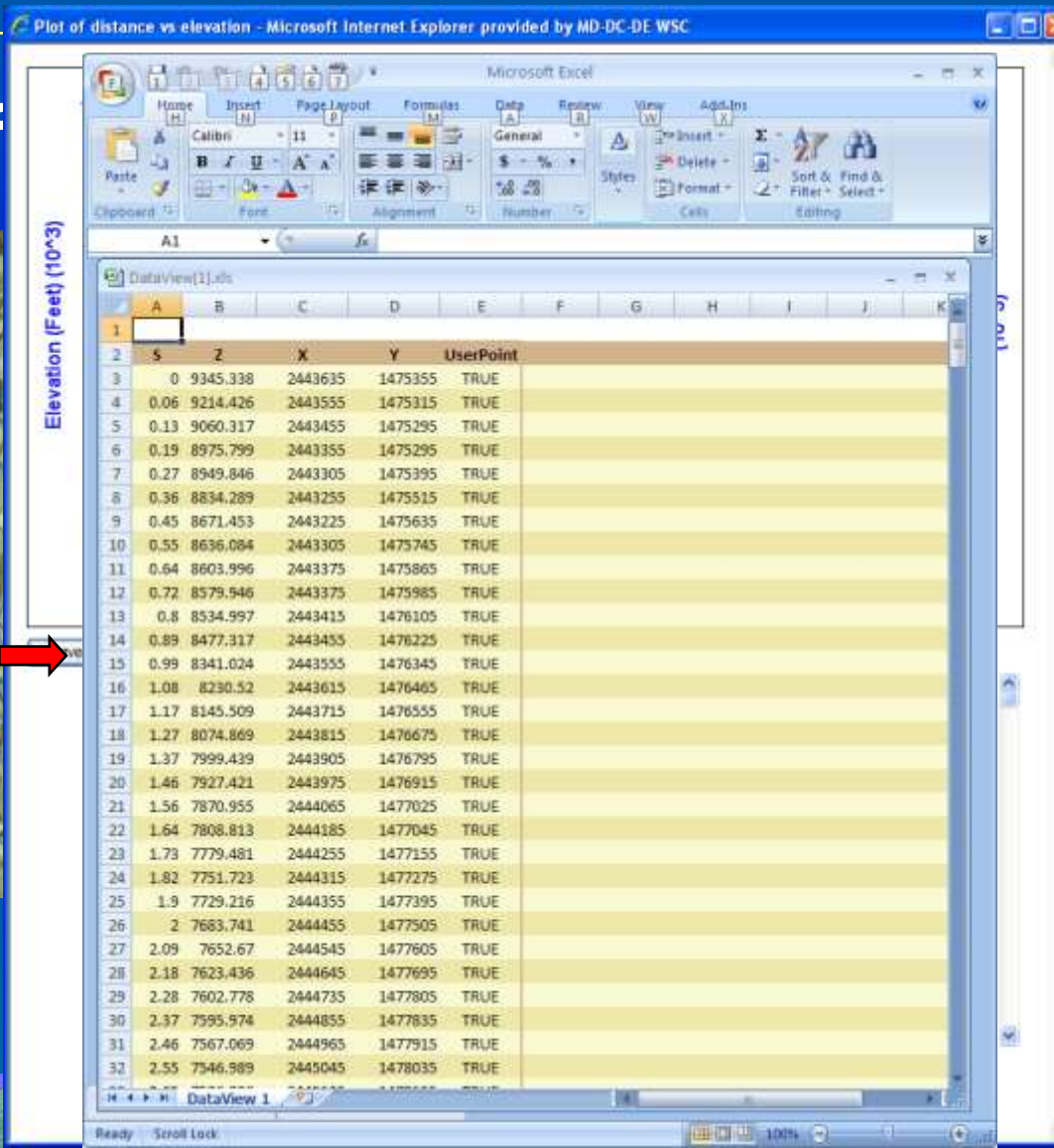
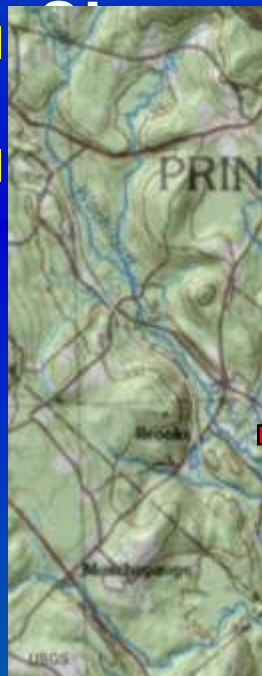


Raindrop Trace to Network



Network Profile Plots

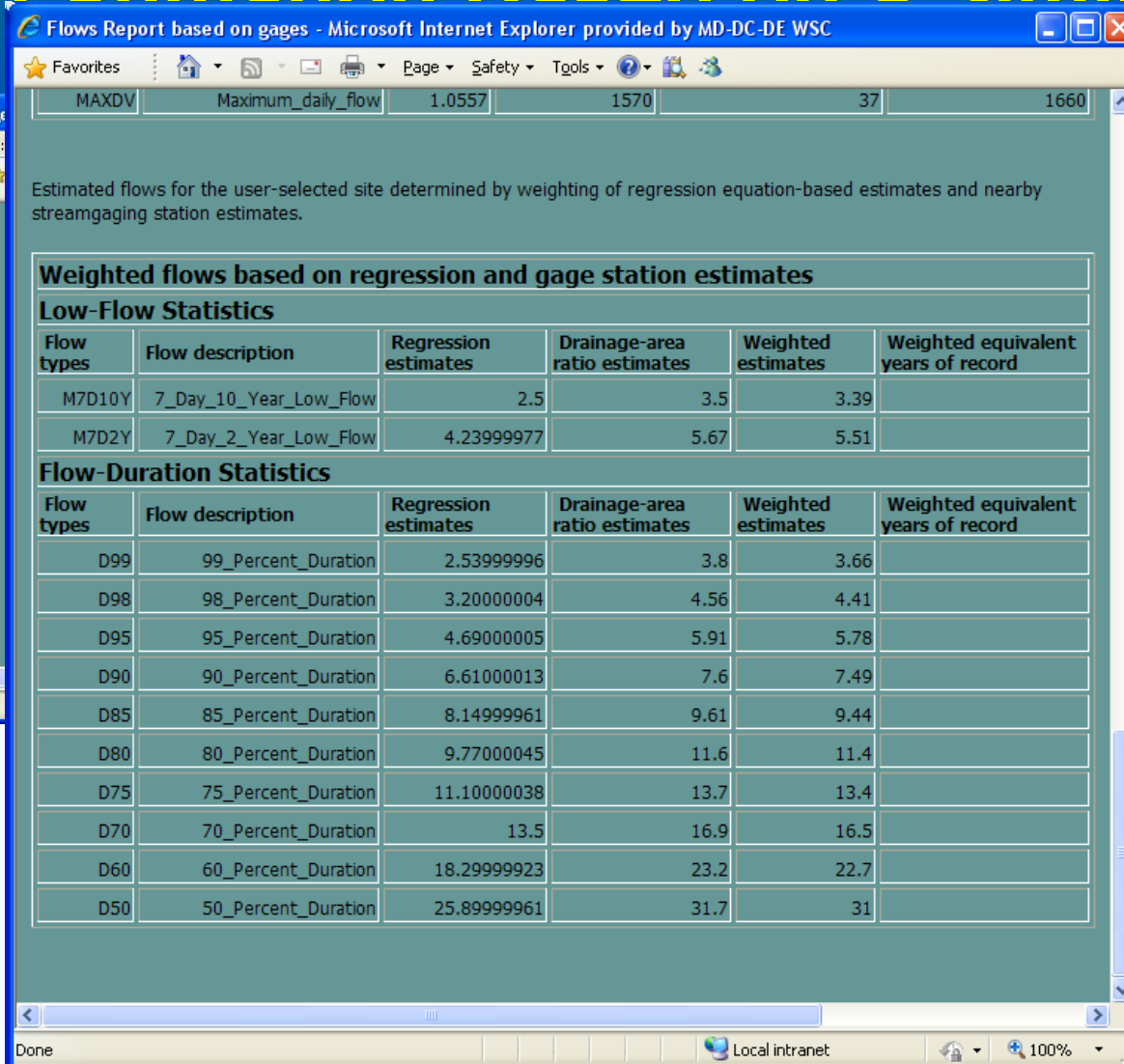
■ Trace f



ershed



Flow Estimation Based on a Similar Gage



provided if
5 and ≤ 1.5

Terrain Profile Tool

