

Ohio Department of Natural Resources
DIVISION OF GEOLOGICAL SURVEY

2012 Annual Coalition Meeting
Progress, Updates, Future Projects
For OHIO

Indianapolis - Jan. 16th, 2013

By: Mike Angle



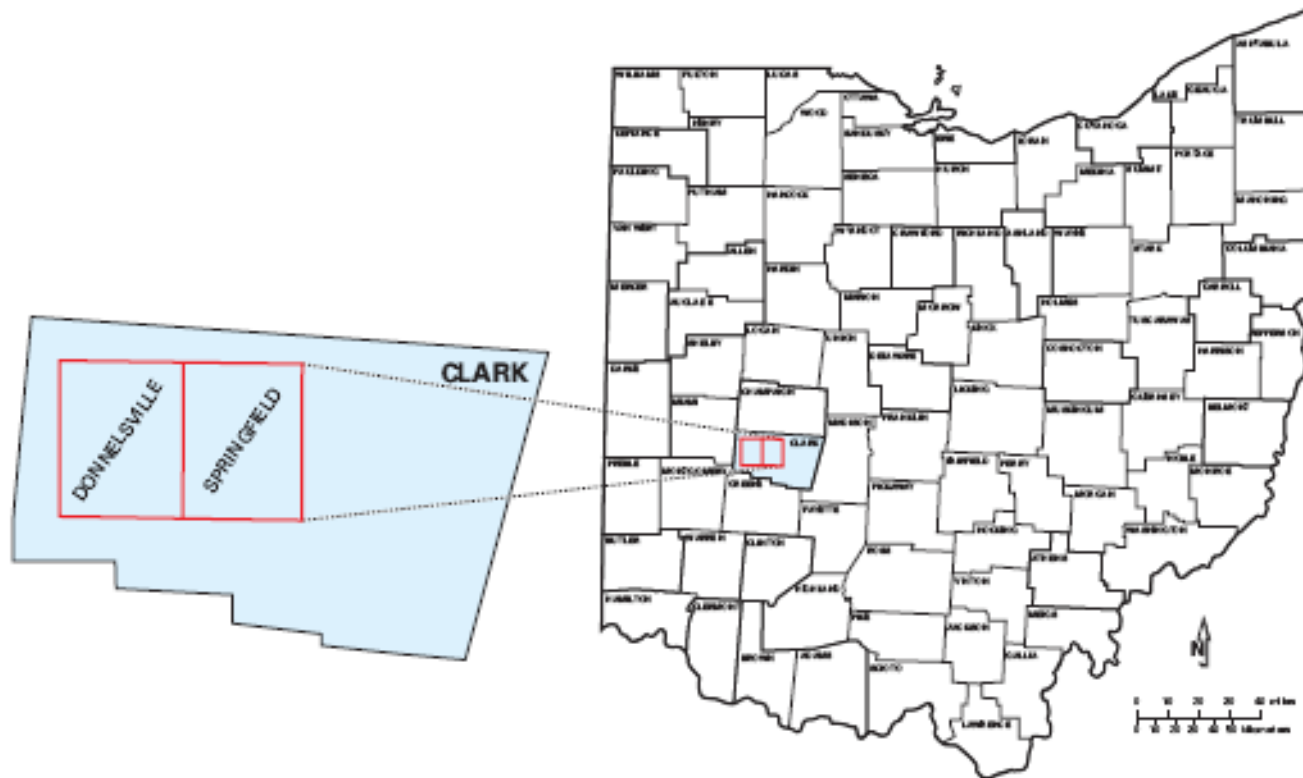
Overview of Topics

- Completed Projects submitted Sept., 2012 (FFY11)
- Ongoing Projects due for Sept., 2013 (FFY12)
- Future Projects proposed to begin in Oct., 2013 (FFY13)

Ohio Coalition Projects

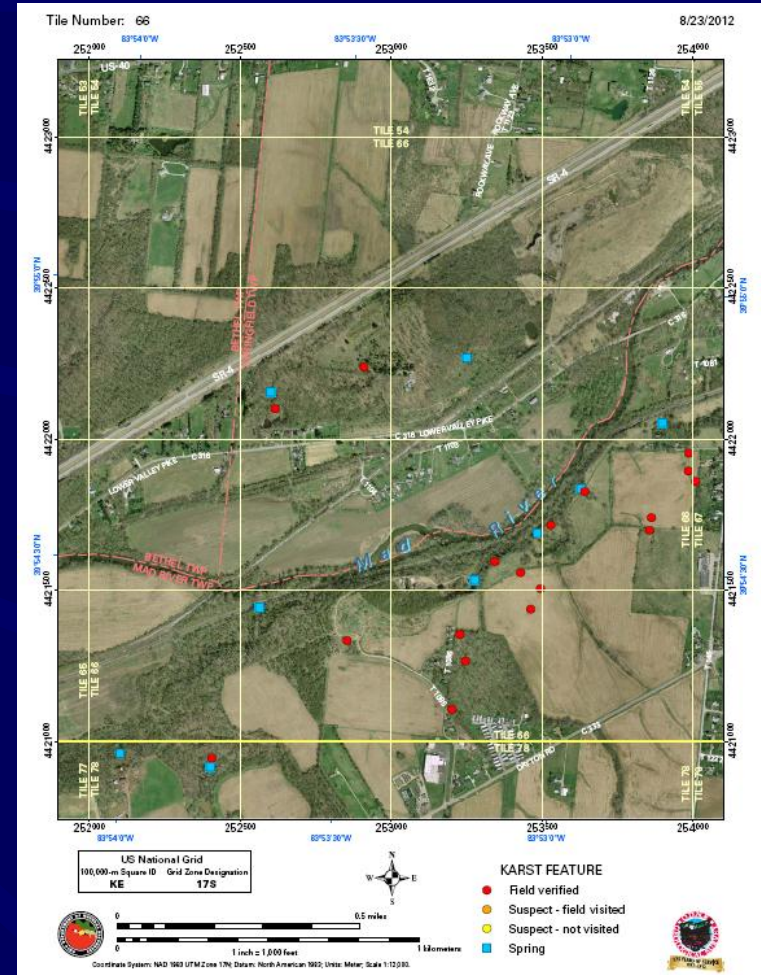
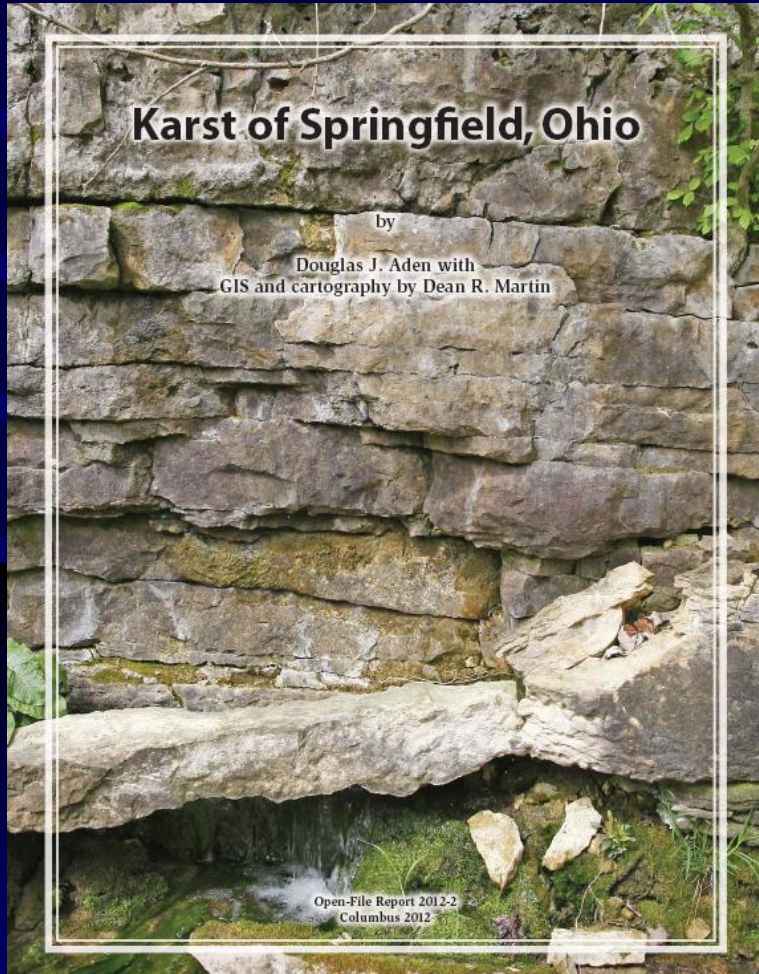
- Projects completed by the Fall of 2012
 - Springfield (Clark County) Karst Project Map Atlas/Report (OFR-2012-2)
 - Enhanced Quaternary Mapping of the Powell 1:24,000 Quadrangle
 - Draft report for the Milan 1:24,000 Quadrangle

Clark County study area

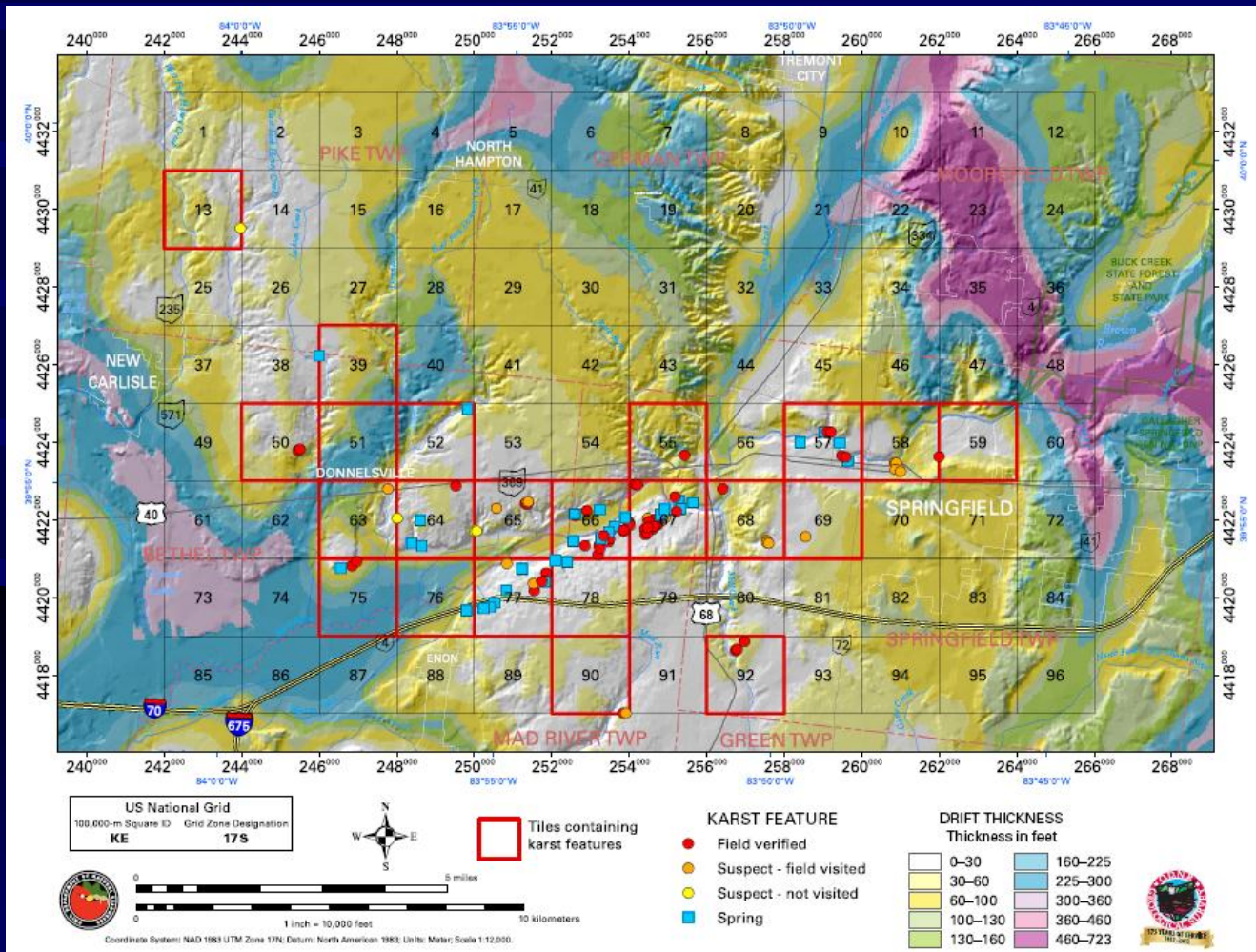


TASK II.—Clark County study area (Donnelstville and Springfield 1:24,000 quadrangles).

Western Delaware County Karst Open File Report 2011-4



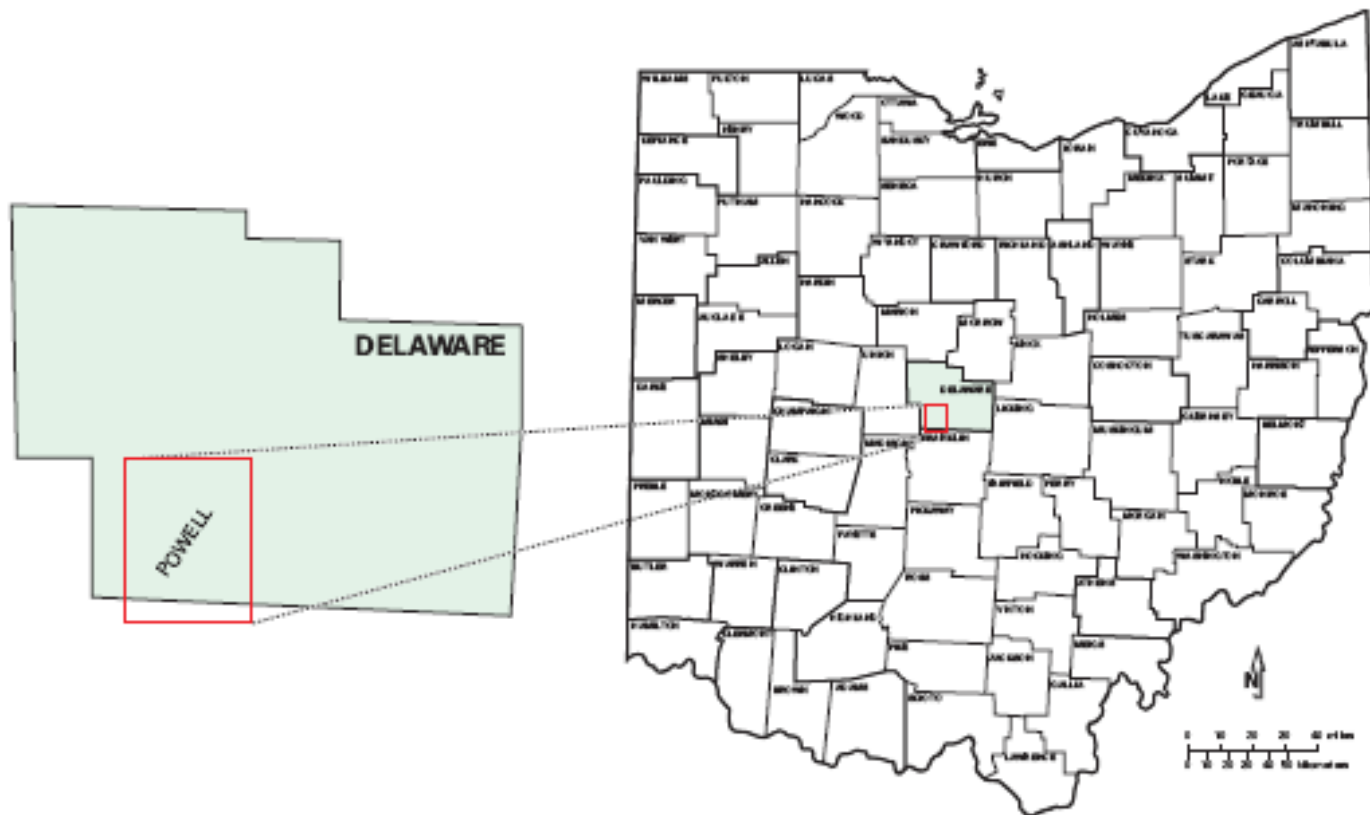
Map book page that relate the map atlas tiles to Drift Thickness for the Springfield area



Stream in the local uplands. Ohio EPA is trying to link contamination in adjacent buried valleys to karst

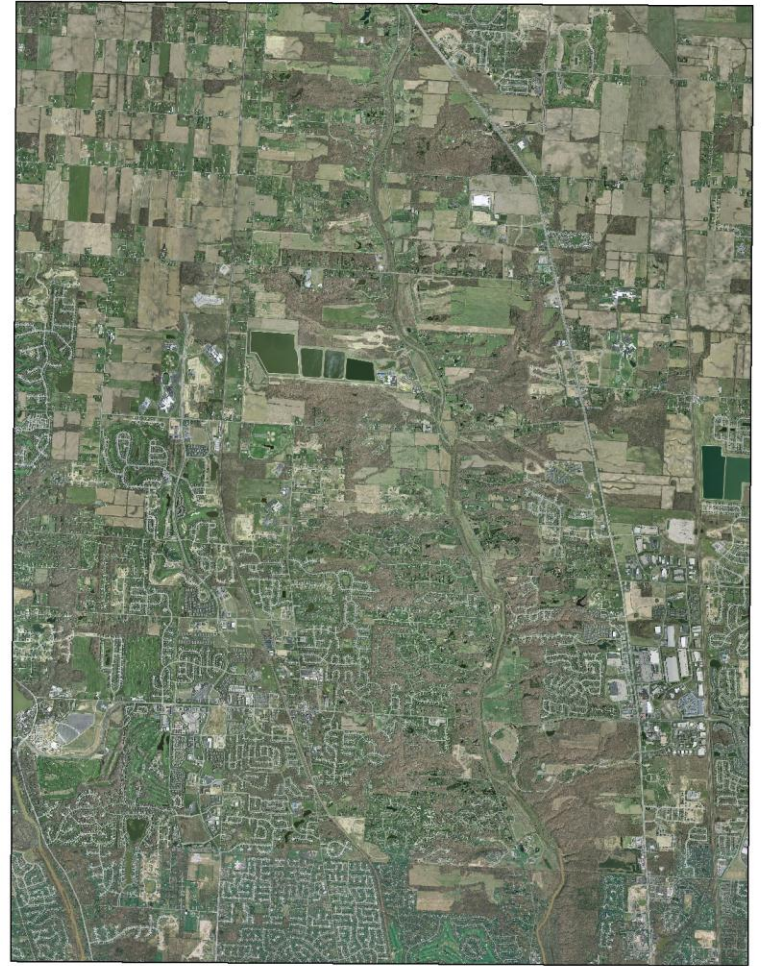
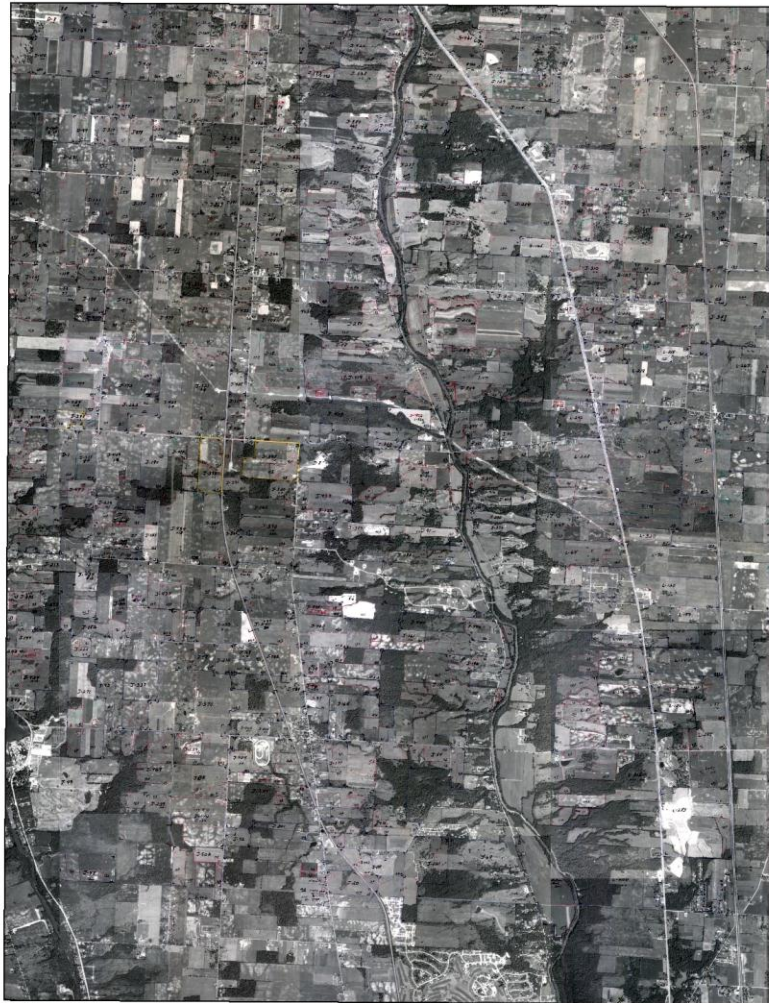


Proposed for 2011-Quaternary mapping for the Powell 1:24,000 Quadrangle

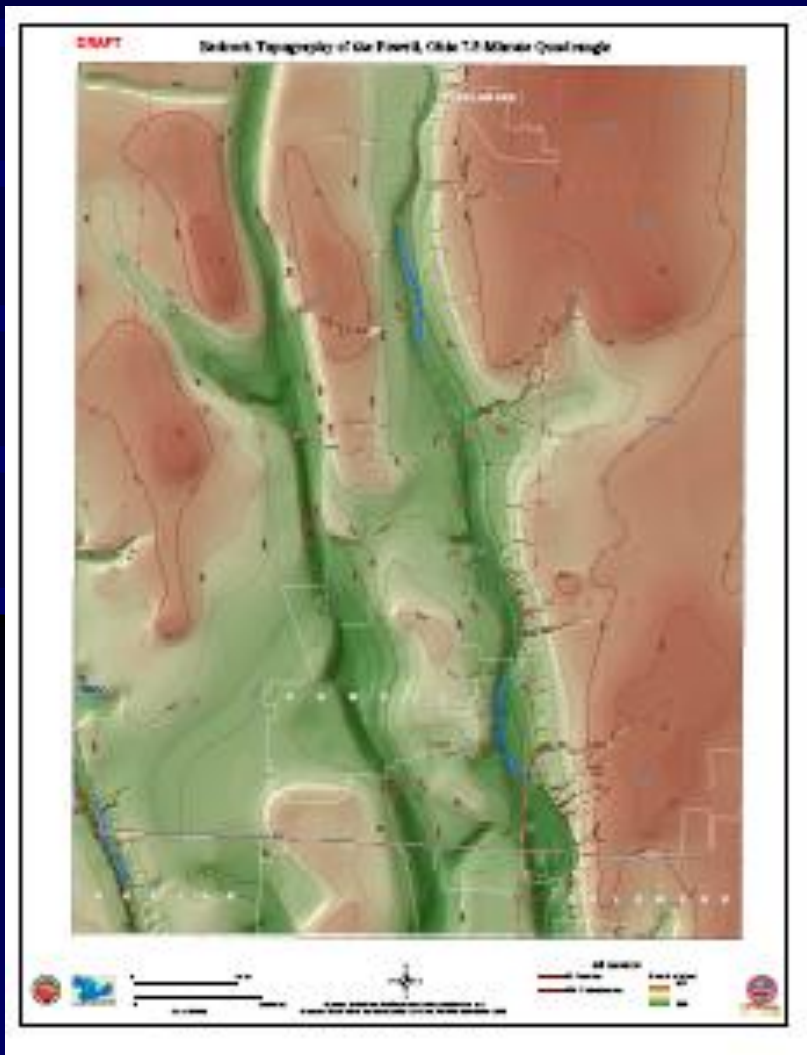


TASK I.—Western Delaware County study area (Powell 1:24,000 quadrangle).

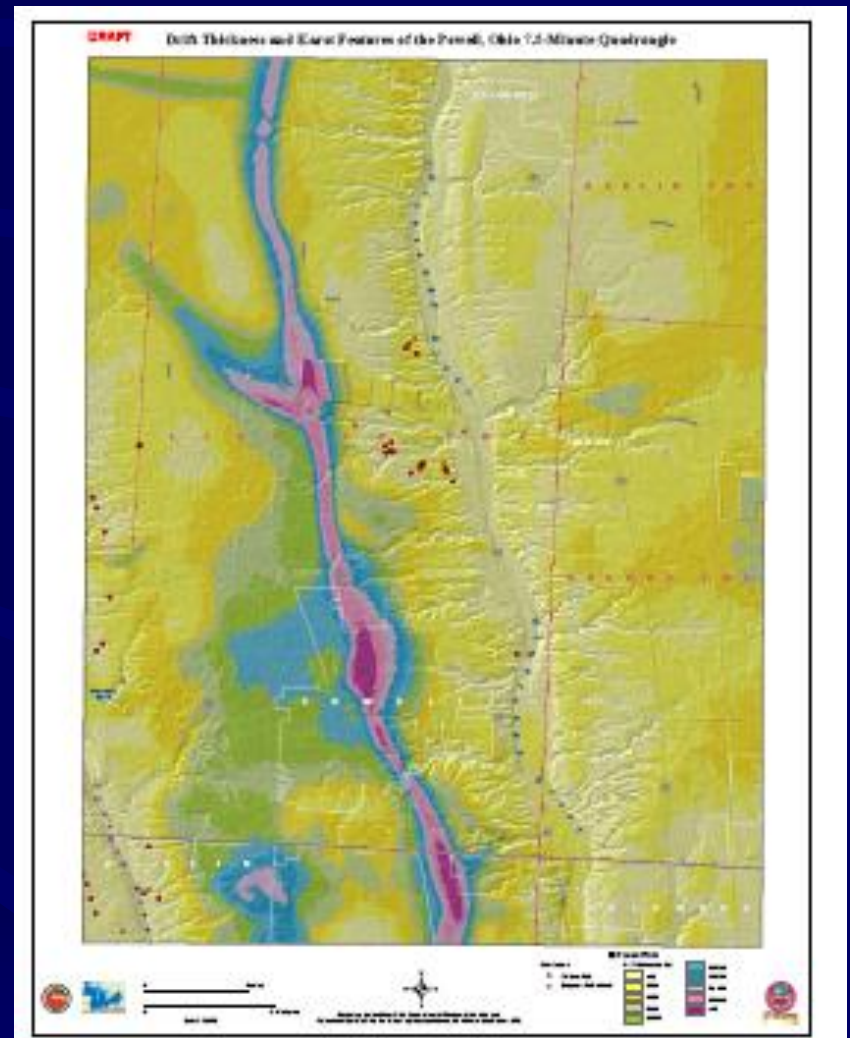
Powell Quad-Ohio's fastest growing metropolitan area!



Updated BT map for the Powell 1:24,000 Quad



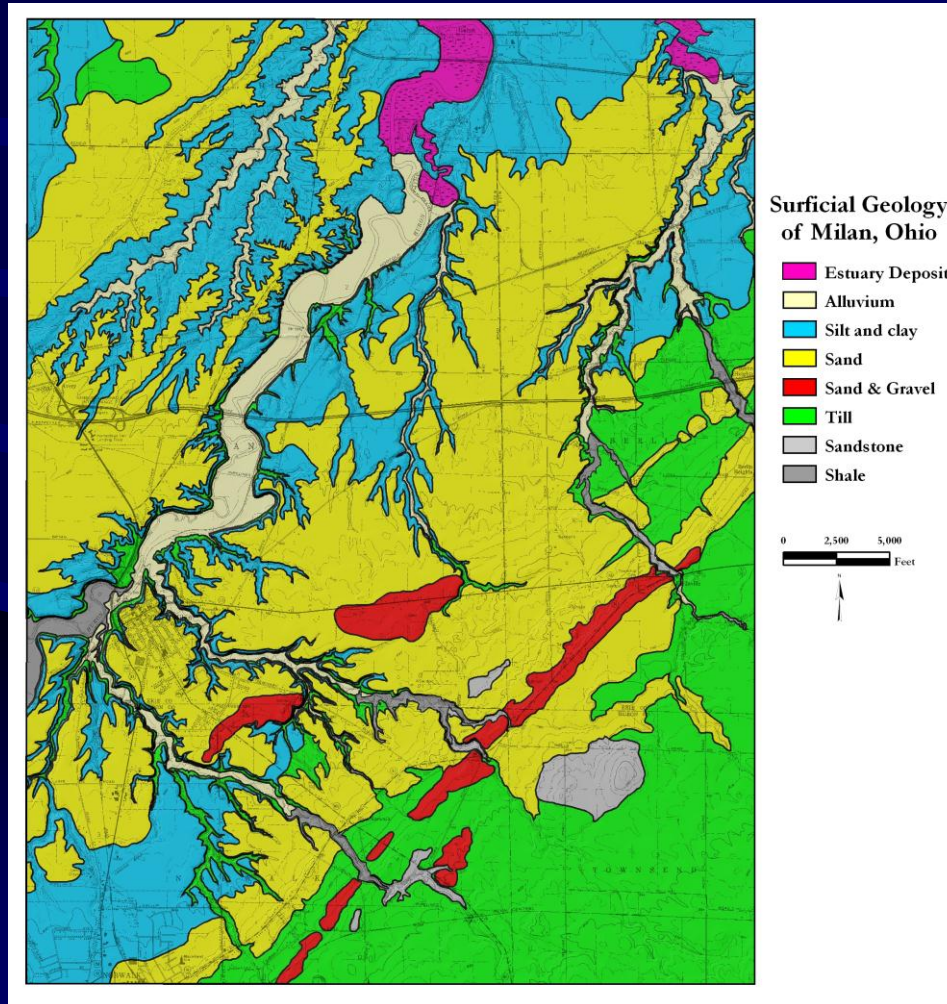
Updated DT map (with karst points) for the Powell 1:24,000 Quad



On-going projects for 2012-2013

- Finalized report for the Milan 1:24,000 Quadrangle
- Derivative Map --Potential for Mineable Bedrock in the Lima 1:100,000 Quadrangle
- Mapping bluff composition, North Kingsville 1:24,000 Quadrangle, Ashtabula County

We are getting close to having a completed report finalized for the Milan 1:24,0000 Quadrangle



Location of the Bellevue 1:24,000 Quadrangle



**Road flooded and closed;
SR-269 looking North**



Bellevue flooding up close-spring 2006



High precipitation levels for the fall of 2011- is another round of flooding coming?

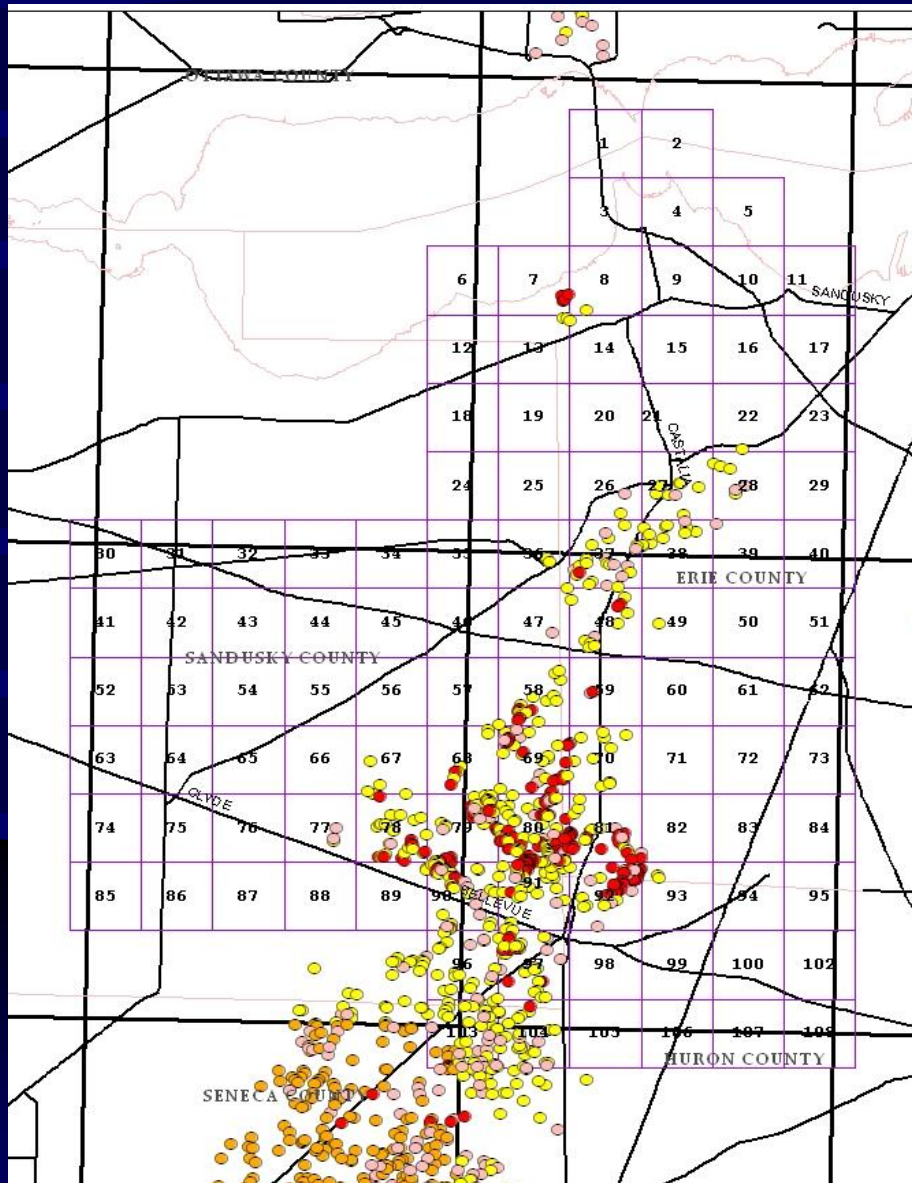
USGS 411819082493900 E-10



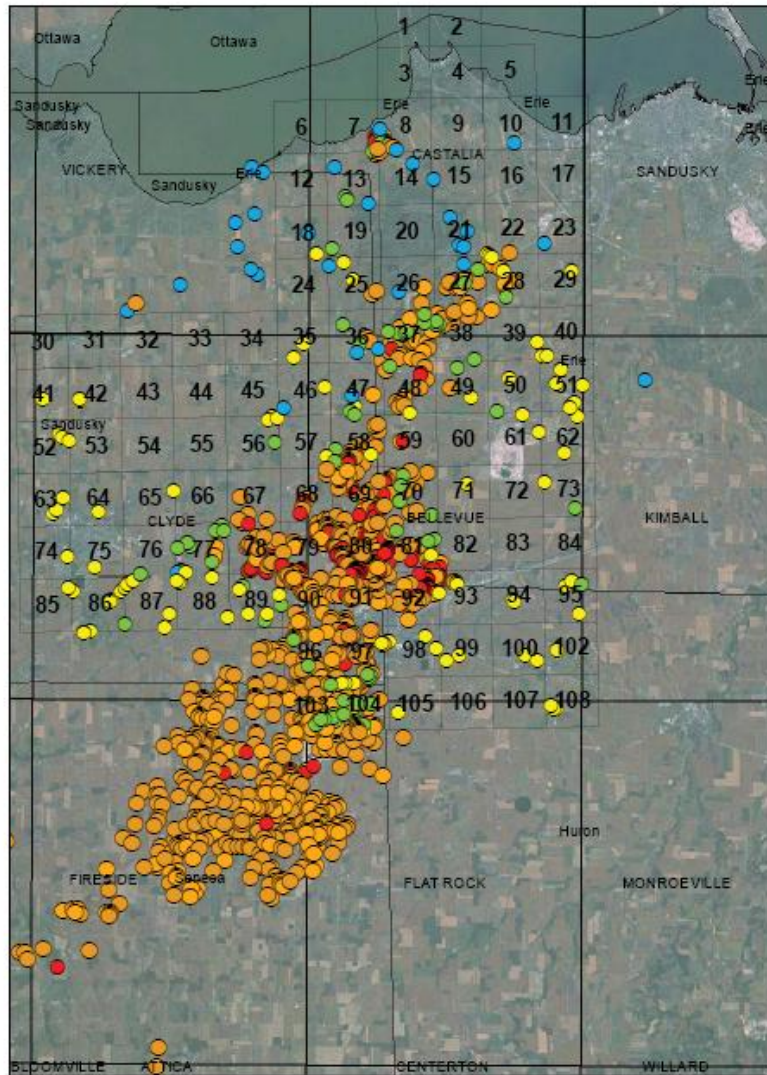
---- Provisional Data Subject to Revision ----

○ Measured depth to water level — Depth to water level

Distribution of Potential Karst points and features in the Bellevue area



On-going mapping is occurring in the Bellevue, Castalia, and Clyde Quads. Proposed mapping will be in the Fireside and Flat Rock quads



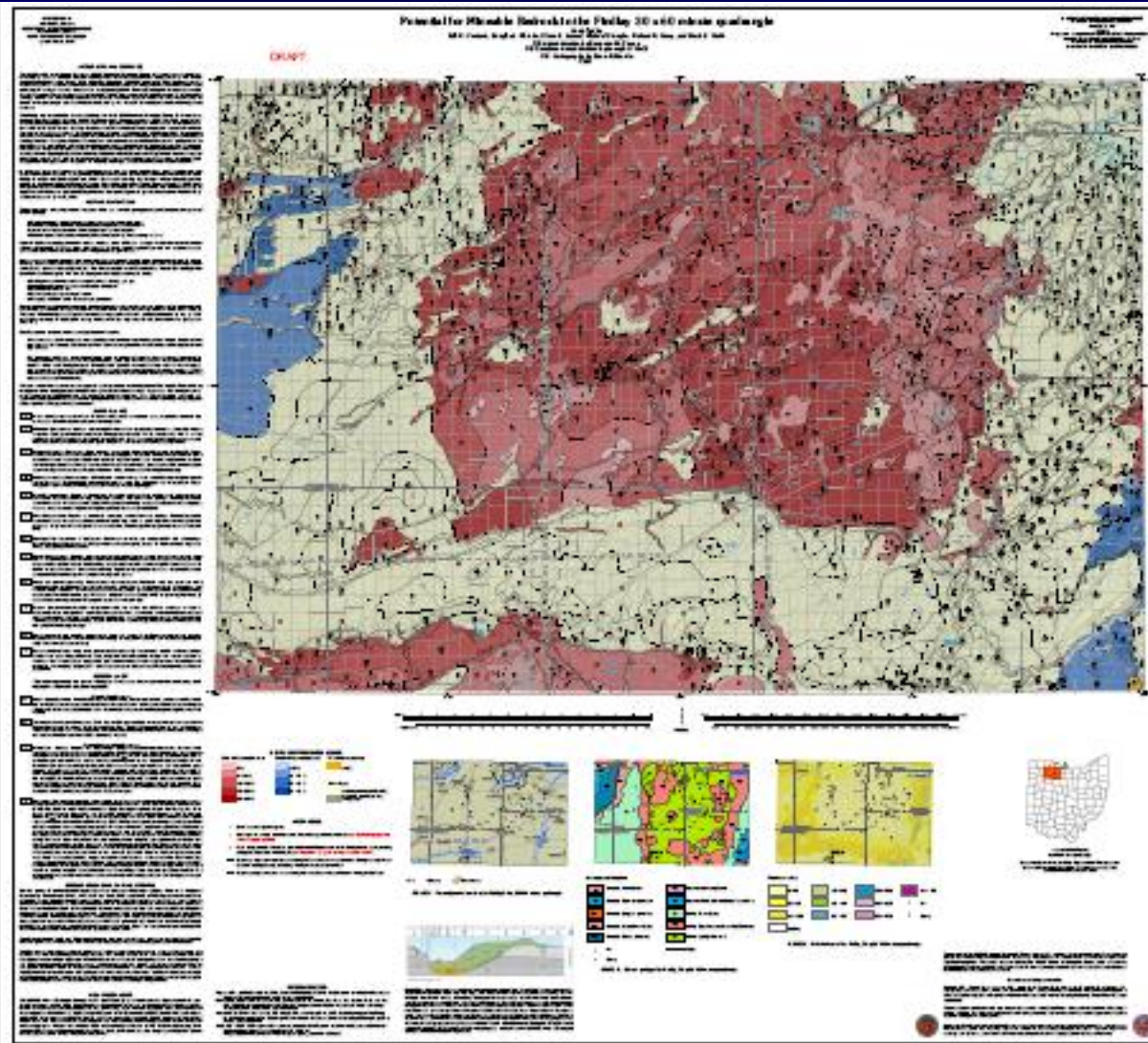
Karst Points

- Check
- Field verified
- Suspect
- Maybe
- Spring

Location of the lima 30 x 60 Minute Quadrangle



Derivative Map-Potential for Mineable Bedrock for the Findlay 30 x 60 Minute Quadrangle



Location of the North Kingsville 1:24,000 Quadrangle



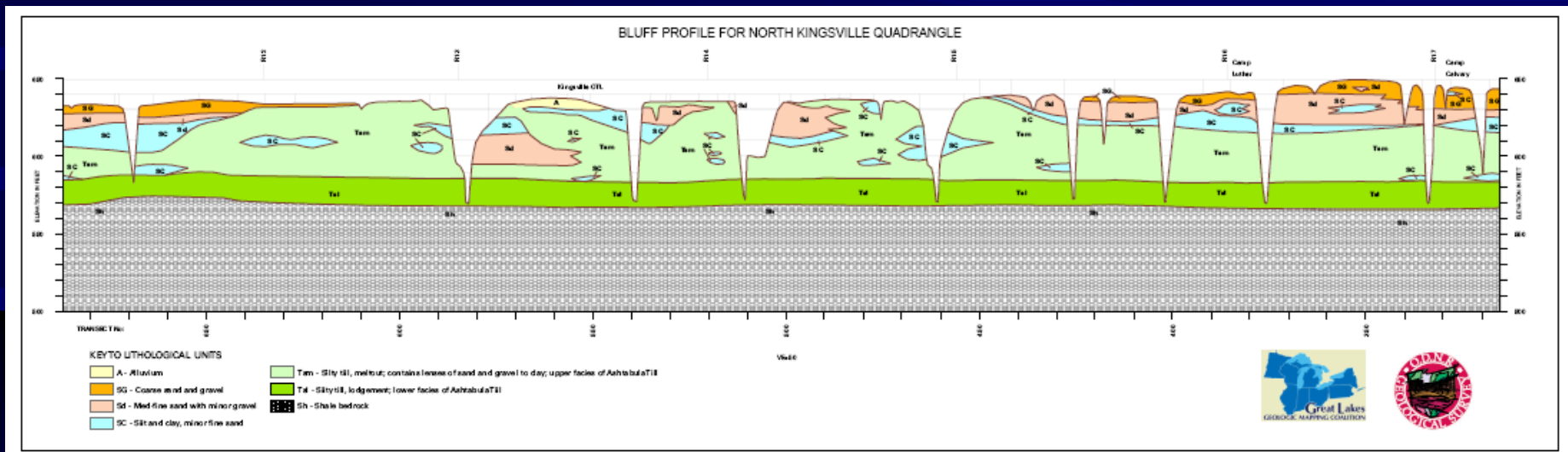
Shoreline erosion remains a major problem in northeastern Ohio



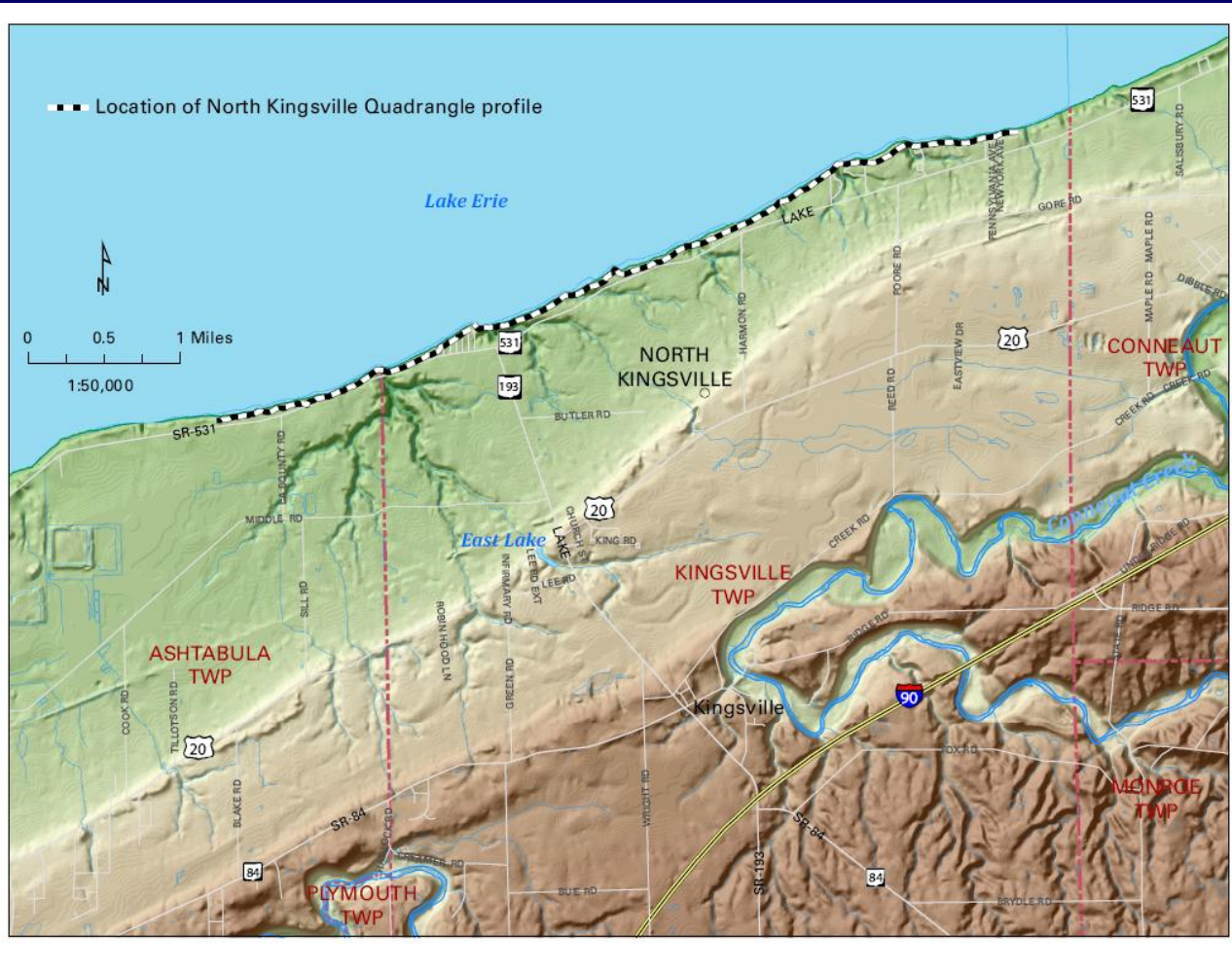
Protecting homes and infrastructure is important



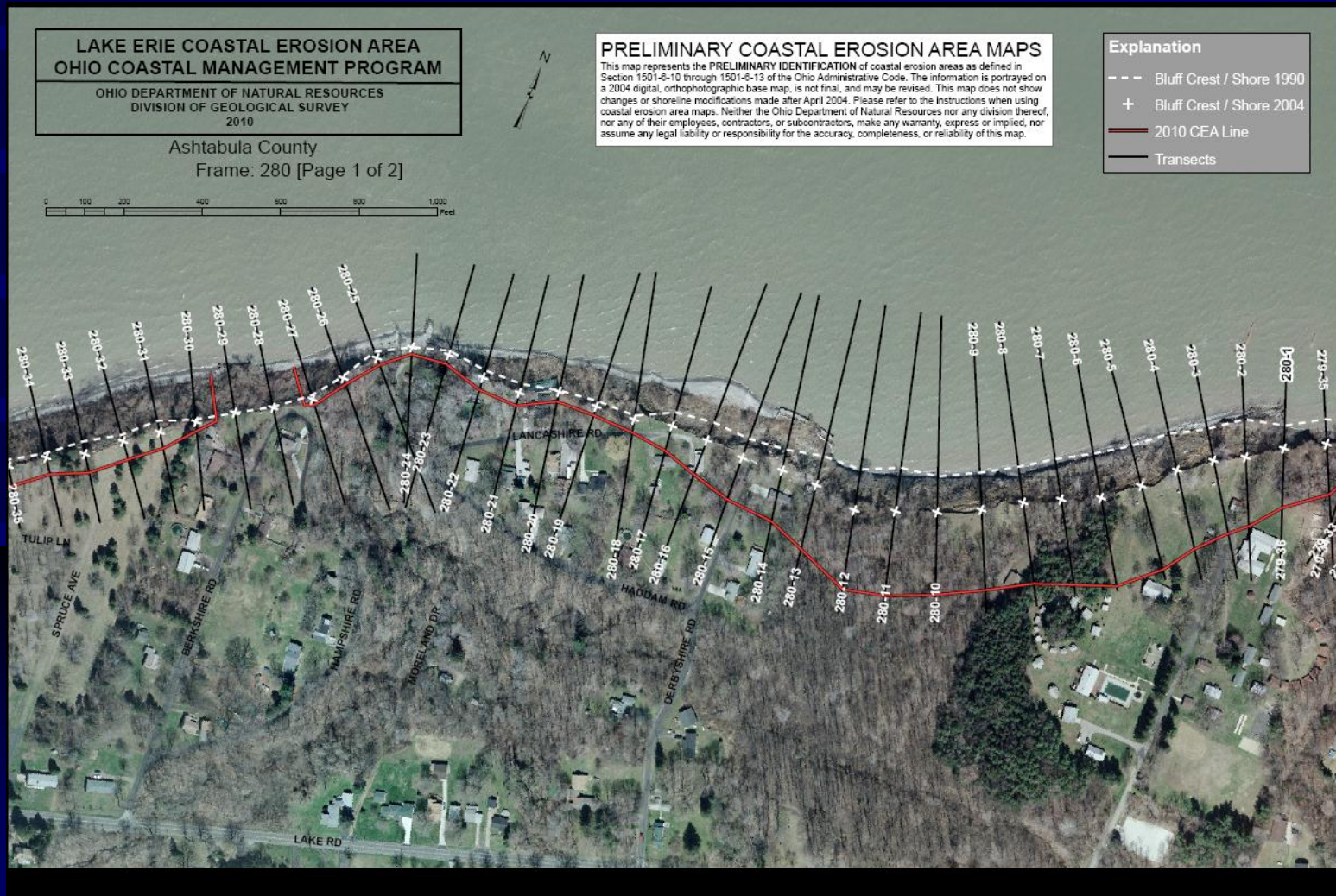
Shoreline “bluff” profiles are critical in determining erosion rates, permitting shoreline protection, etc.



Location of the bluff profile for the North Kingsville Quad



Sample of a Coastal Erosion Area (CEA) frame with transects.



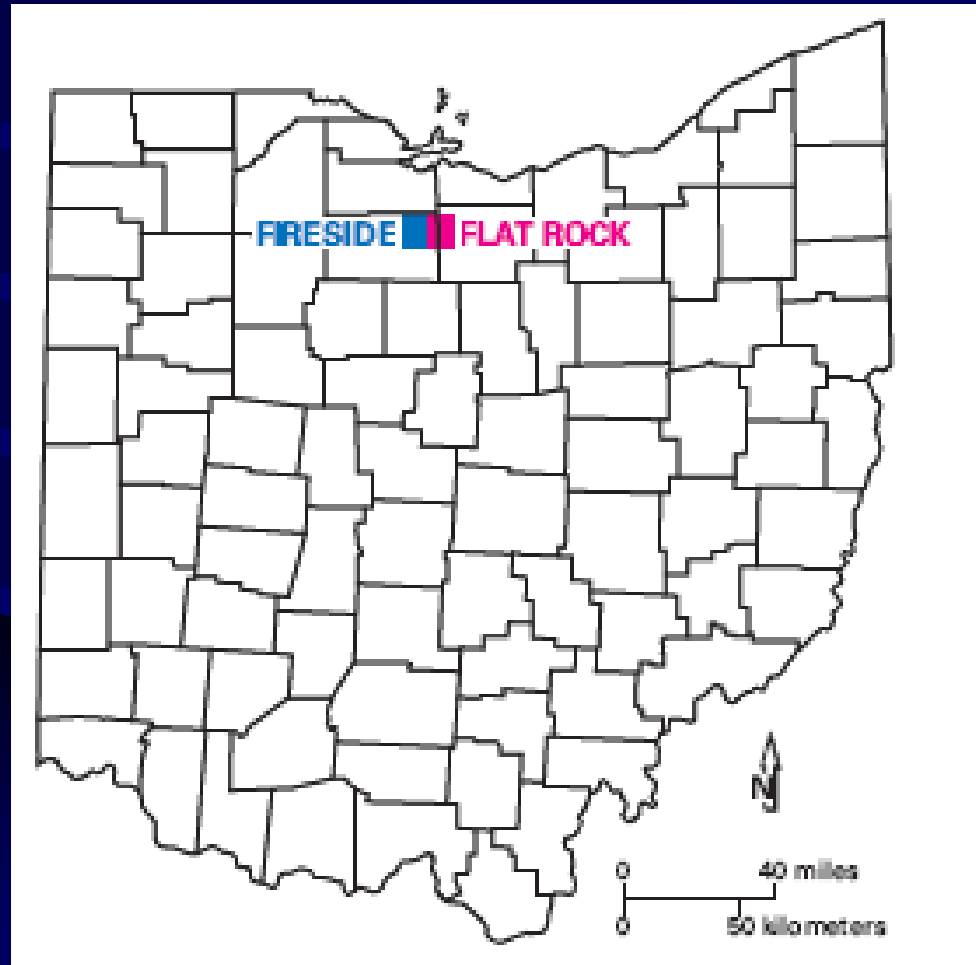
“Textural GIS” Bluff Composition Project

- Step1- Update and georeference bluff profiles
- Step 2 –Add hard textural data to bluff profiles
- Step3-Tie CEA transects in with bluff profiles
- Step 4-Calculate volume of lost bluff materials based on recession rate for @ transect
- Step 5-Determine volume of coarse materials available to the shoreline for each bluff reach

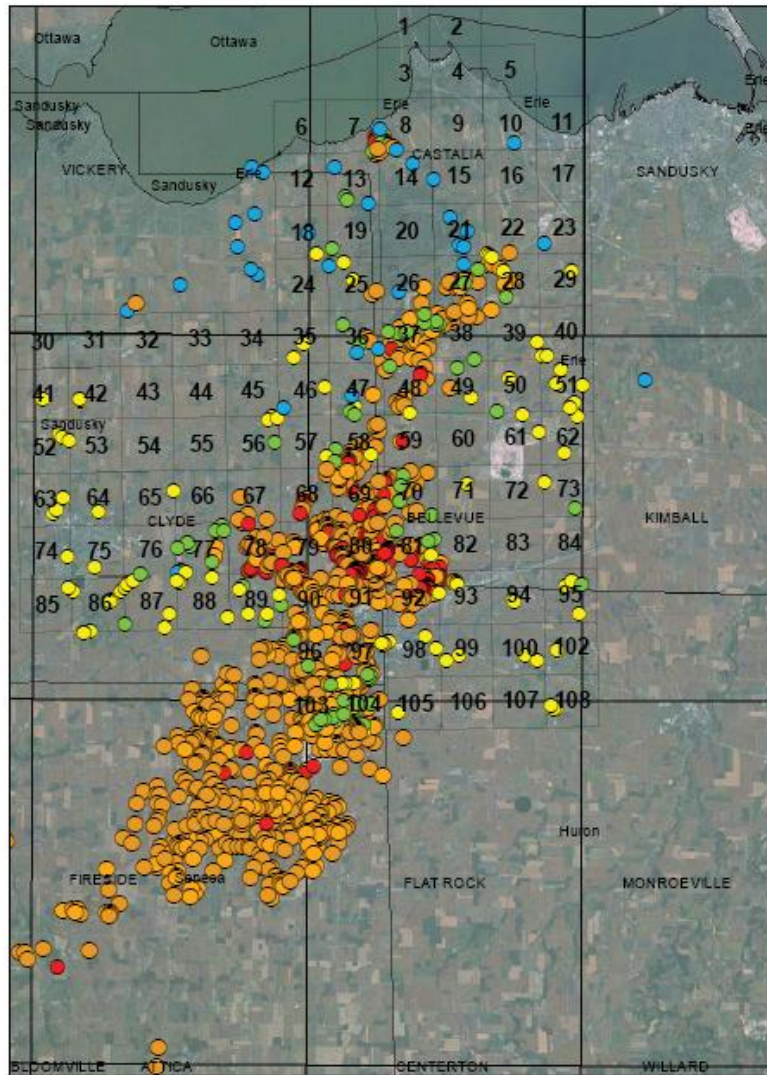
Proposed projects for 2013-2014

- Karst mapping for the Flat Rock and Fireside Quads (Bellevue area).
- Detailed mapping for the Rainsboro 1:24,000 Quadrangle, Highland County
(This will be in conjunction with the STATEMAP project to map the Hillsboro 1:100,000 quadrangle)

Location of the Fireside and Flat Rock Quadrangles



On-going mapping is occurring in the Bellevue, Castalia, and Clyde Quads. Proposed mapping will be in the Fireside and Flat Rock quads



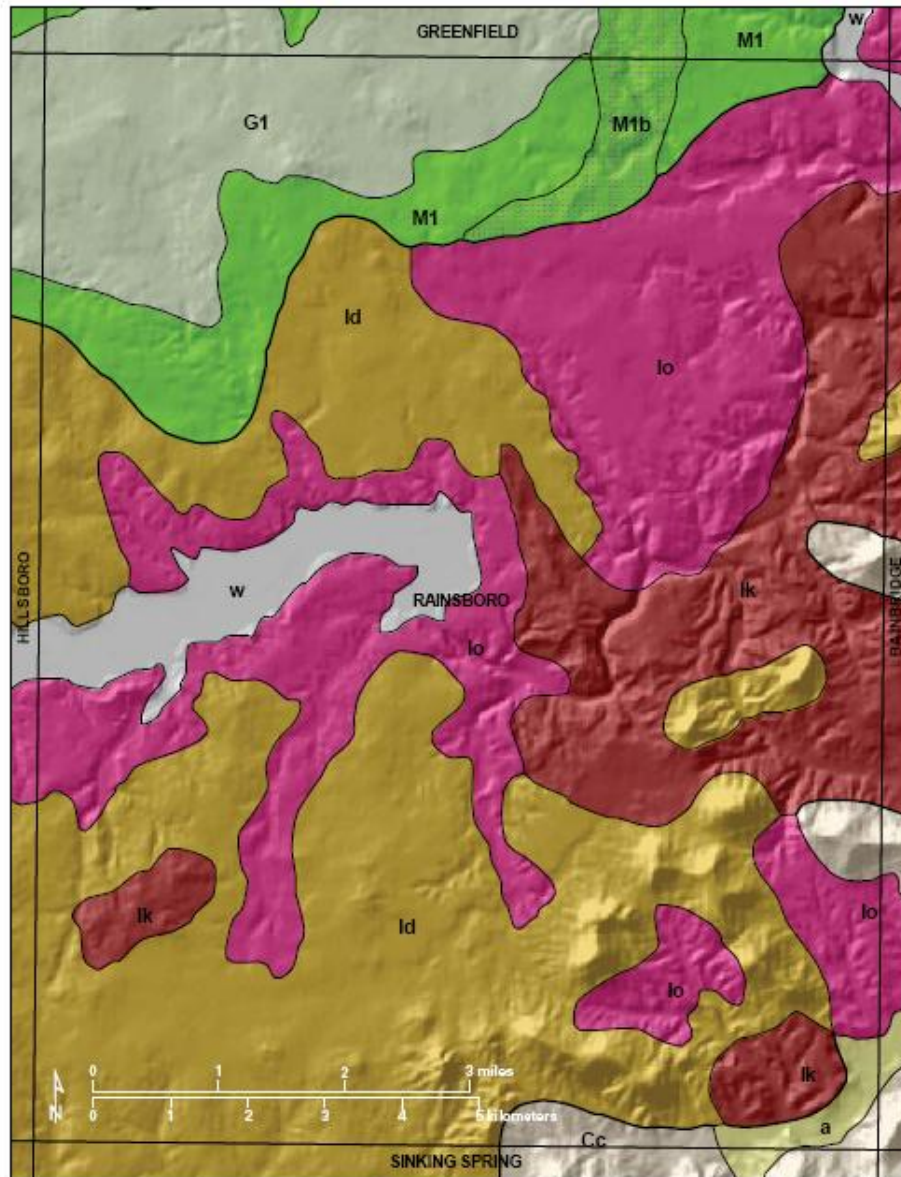
Karst Points

- Check
- Field verified
- Suspect
- Maybe
- Spring

Location of the Rainsboro 1:24,000 quad within the Hillsboro 1:100,000 quad



View of the classic Quaternary map of Ohio (Pavey et al, 1999) showing the great complexity of the Rainsboro 1:24,000 Quad



Quaternary Map Units

w Water	G1 Wisconsinan ground moraine	M1b Wisconsinan end moraine, bouldery	lo Illinoian outwash	ca Colluvium and bedrock
a Alluvium	M1 Wisconsinan end moraine	lk Illinoian kames	ld Illinoian ground moraine, dissected	



QUESTIONS ?

Mike Angle – 614-265-6602

Email: mike.angle@dnr.state.oh.us