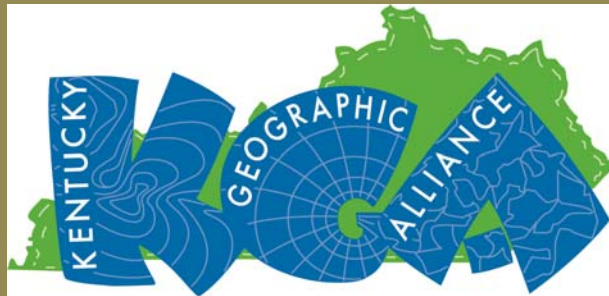
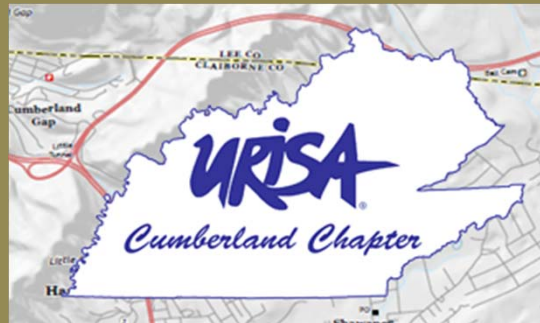


The KGA K-12 GIS Initiative



kga.org

Scott Dobler

The KGA K-12 GIS Initiative

- In the Next 30 Minutes
 - Our similar mission
 - URISA
 - Cumberland Chapter
 - Alliance Network
 - Kentucky
 - Tennessee
 - How did we get here?
 - Summer Institute
 - Teacher Training
 - STEM
 - Bringing us together

Melding of Missions

- URISA:
 - educational experiences
 - connected community
 - Share essential resources
 - multidisciplinary association
 - come together to share concerns and ideas.
- KGA:
 - improving geographic literacy
 - provide professional development, networking, model programs, and teaching materials.
 - Prepares students to succeed as citizens in an increasingly global society

The Linkages

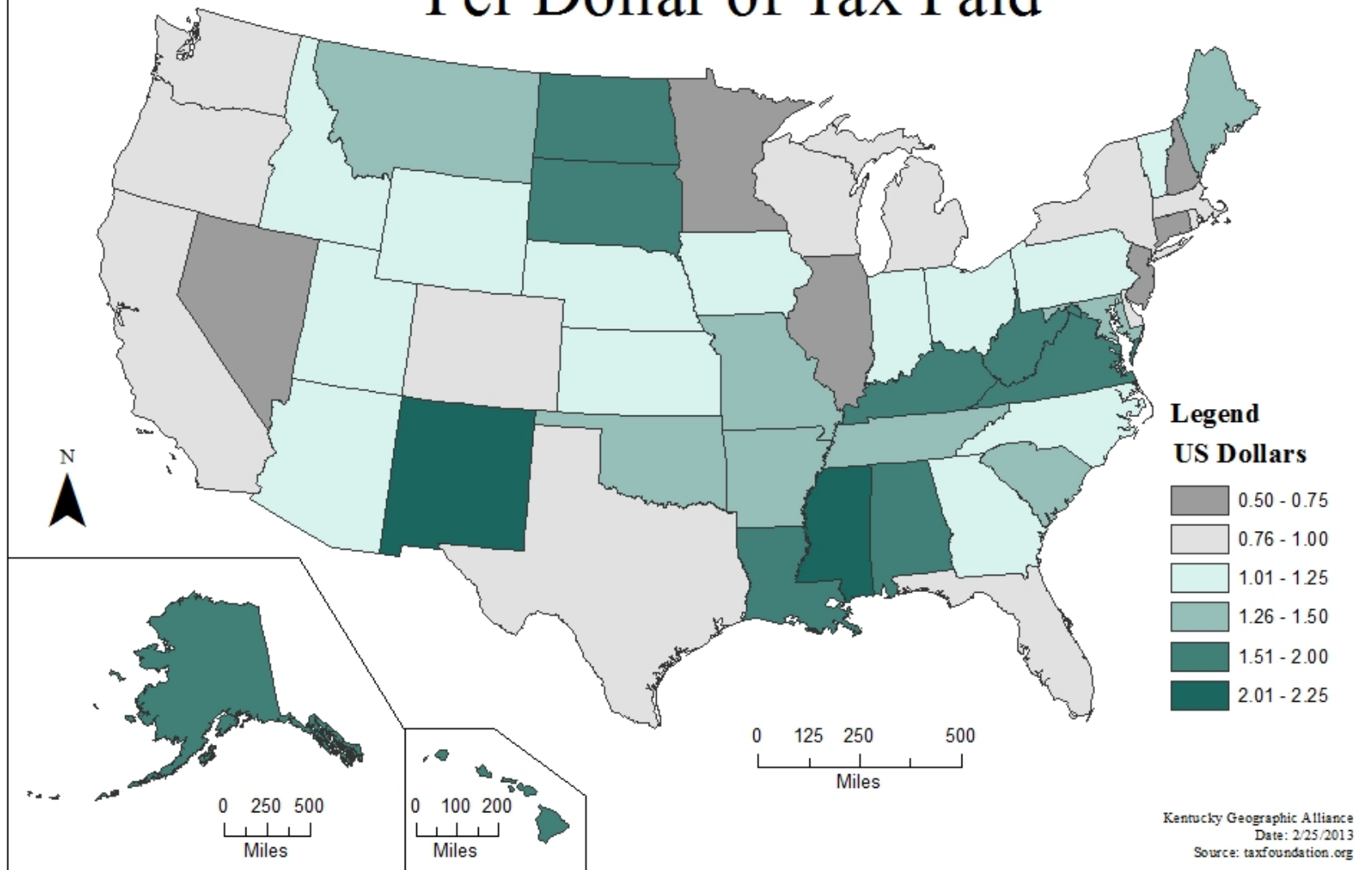
Geoscience Education History

- Education of the Masses vs. education of the elite
- Integration of Geography into Social Studies
- Loss of Geographic Skills
 - [Roper Pole](#) (1980's 2000)
- National Geographic
 - Gil Grovesner
 - Geographic Network, KGA
- No Child Left Behind
- Next Generation Science Standards
- C3 Framework (Social Studies)
 - College, career, civic life

Political Context

- NGS, vs. AAG, vs. AGS vs. NCGE
 - Geojournalism
 - Academic Geographers
 - Business and Industry
 - K-12 Education
- Content ^{dis}Integration
- Science vs. Politics and GRIDLOCK
 - Climate Change vs. global warming
 - KY: Climate Change, Evolution
- Passing of the Federal Budget
- Teaching Geography is Fundamental legislation
 - Rand Paul meeting
 - Self reliance for each state

2005 Federal Spending Received Per Dollar of Tax Paid



Enter Alliance Networks (53)

- Loss of Funding
 - Look for money and ideas

— Strategic Planning

- Creation of **GeoAdvocates**
 - Who understands Geography?
- **KGA: Develop consortium of stakeholders (partnerships)**
 - Government, business, education
 - ESRI
- **Serve as advocate for GeoEd**
 - State meetings
 - Policy Reform
 - Public Awareness
 - Geog of KY
 - [KY in the News](#), [Geography News](#)
- **Secure funding**
 - Grants
 - Atlas project
 - GIS applications

— Sign MOA with Esri

Change in How Geography is implemented

— GEO Literacy

- Interactions
 - How Systems Interact
- Interconnections
 - Geographic Reasoning of Connection
- Implications
 - Decision Making

FED EX example



KGA Summer GIS Institute, 2013

- Esri: ArcGIS Online
 - Limited issues
 - Easily applicable
 - STEM ready
 - Works seamlessly with students
- 7 Teachers
 - K-12, Multiple disciplines
- 3 day meeting
 - Team building
 - Technology introduction
 - Field experience
 - ID of local project need

- Outcomes

Follow up with training



KGA MOA with Esri

- Lessons learned

- Pros
- Works well with mission
- Use of ArcGIS Online
 - Limited issues
 - Easily applicable
 - STEM ready
 - Works seamlessly with students
 - Crowd sourcing

- Cons
 - Only 8 qualified support personnel
 - Bureaucratic nightmare for small shop implementation
 - Teachers need supervision/training
 - (lots of it)



KGA Summer GIS Institute, 2014

- **Integrate** GLSP network
 - Use local expertise to identify potential training sites
- Find remote sights throughout state
- Advertise for participants
- Search for \$ to support training



Why are we here together?

- Use of the Alliance network to drive Geo advocacy
 - Teaching Geography is Fundamental Legislation
 - Provide opportunity to work together for leverage
 - Uncover potential opportunities to work on real-world community-based issues.
- Others?

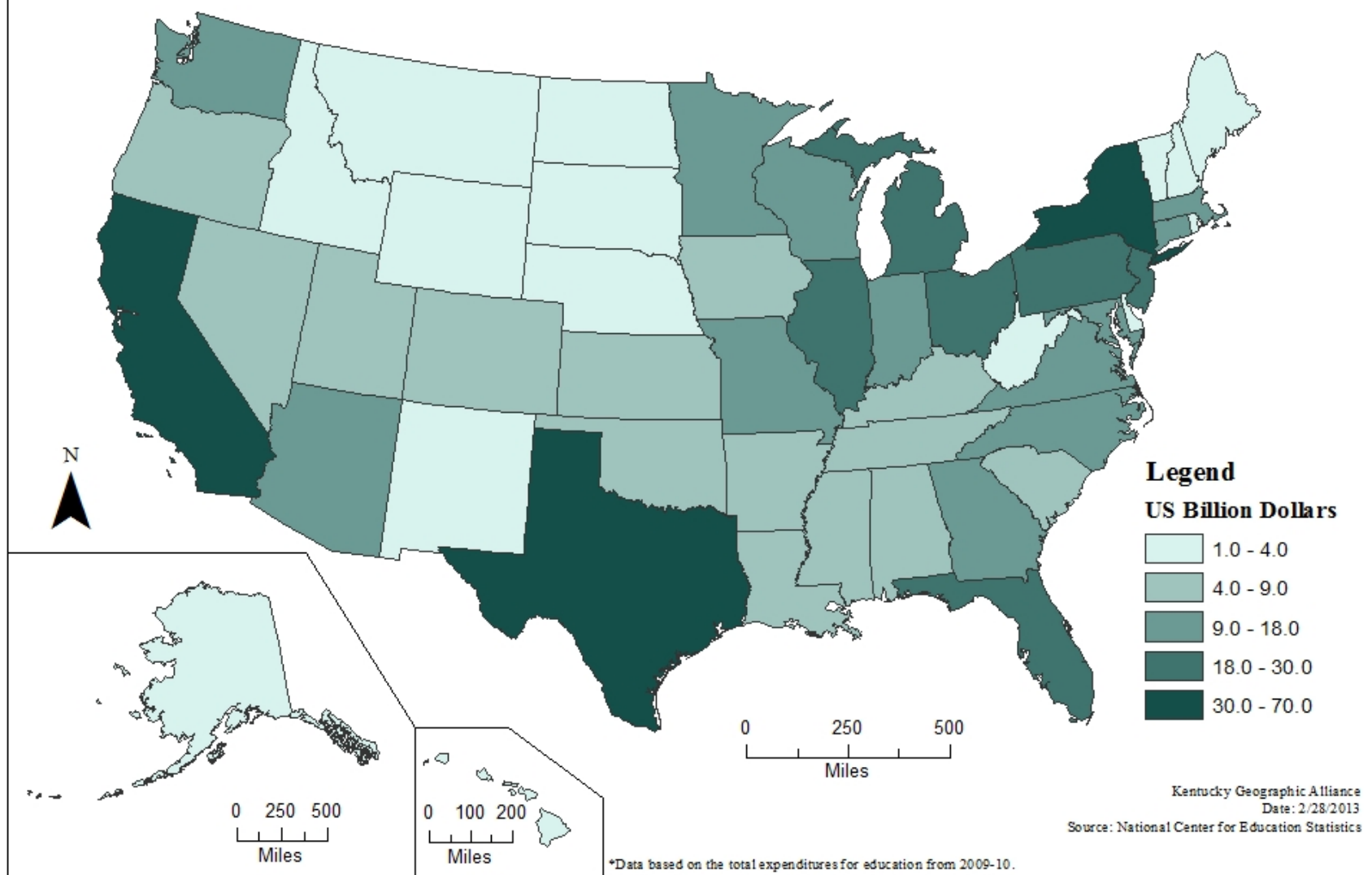
Questions?

Science Standards

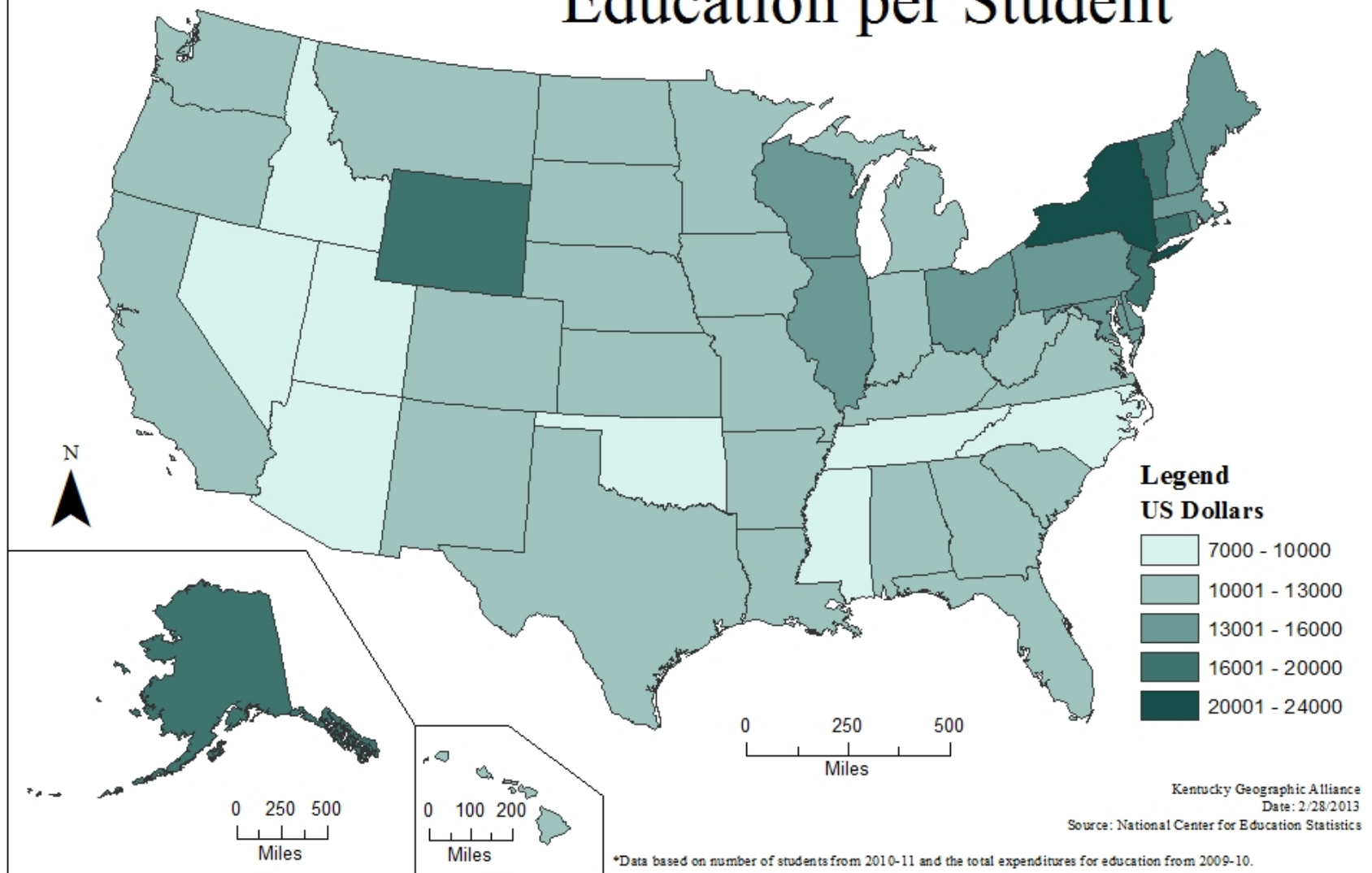
- Next Generation Science Standards
 - Conceptual shift
 - College Career readiness
 - Sci. and Engineering practices
 - Crosscutting concepts
 - STEM
 - Math connections
 - Literacy
 - Interdisciplinary
- Topical Arrangement
 - ESS2A: Earth Materials and Systems
 - ESS2D: Weather and Climate
 - ESS3B: Natural Hazards
 - ESS3C: Human Impacts
 - ESS3D: Climate Change



Total Expenditures for Education



Total Expenditures for Education per Student



Total Expenditures for Education per Student Compared to the National Average

