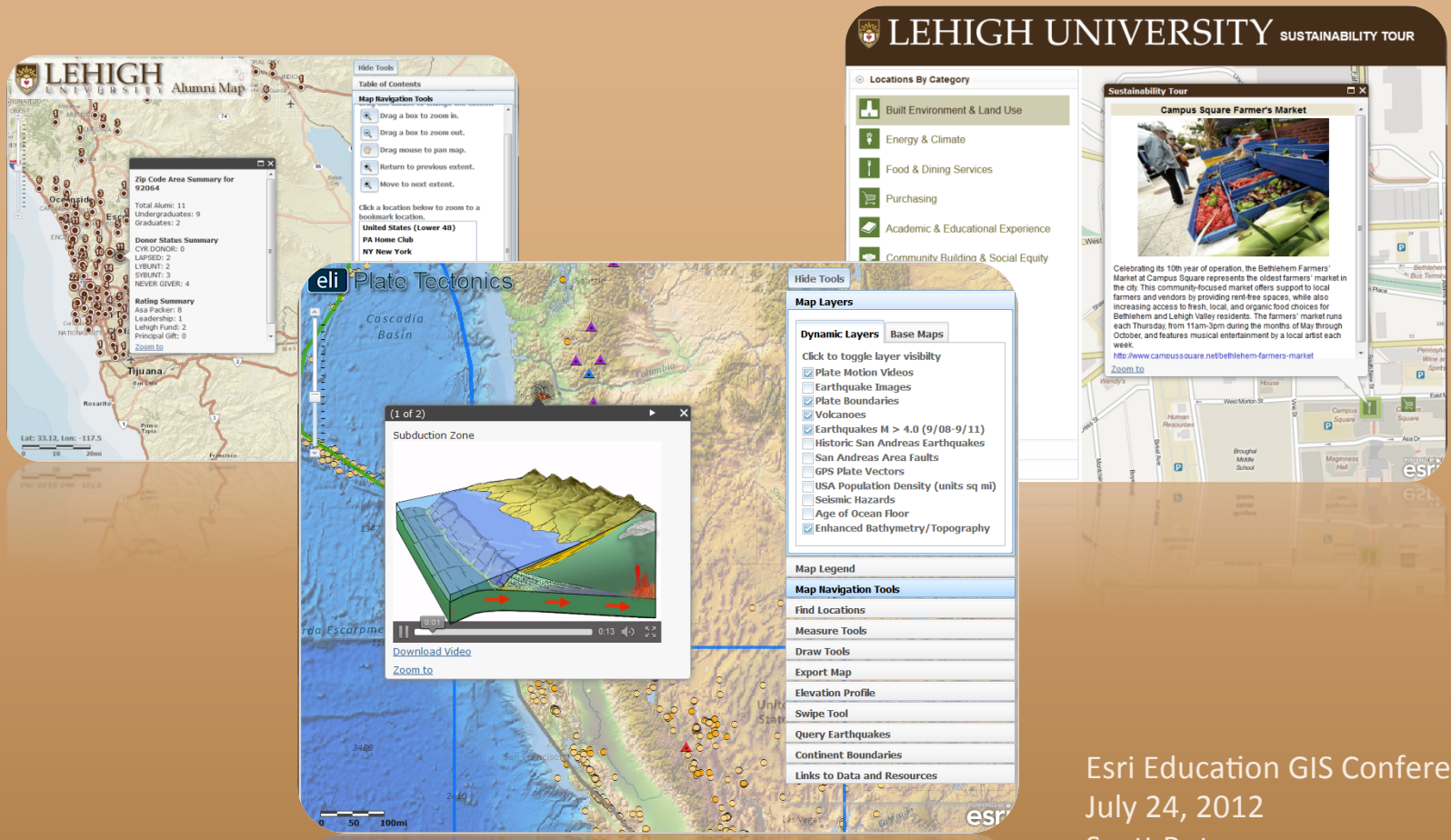
Target Everyone

Expanding your audience with the JavaScript API



Esri Education GIS Conference
July 24, 2012
Scott Rutzmoser
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Presentation Outline

Part 1 – Geospatial Curriculum Enhancement

- Project Overview
- Goals
- Education Trends
- Technical Requirements
- Available Frameworks
- Why Esri JavaScript
- Project Outcome

Part 2 – Demonstration Our JavaScript Viewers

- Esri JavaScript Viewer
- Dojo, Dijits and Widgets
- Html 5 Content
- Custom Tools

Geospatial Curriculum Enhancement

- **Project Overview**
- Goals
- Education Trends
- Technical Requirements
- Available Frameworks
- Why Esri JavaScript
- Project Outcome

- Research Team

Alec Bodzin, Lori Cirucci, Scott Rutzmoser, David Anastasio, Dork Sahagian, Allison Teletzke, Denise Bressler, Jill Burrows

- Project Partners

Lehigh University, Broughal Middle School, Nitschmann Middle School, Esri, National Science Foundation

- Environmental Literacy and Inquiry (eli)
- Create Web-based Geospatial tools to enhance Middle School Science Curriculum
- Help Students Better Understand Earth's Tectonic Processes
- Facilitate Geospatial Analysis, Map Visualization, and Data Manipulation

Geospatial Curriculum Enhancement

- Project Overview
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- Encourage Widespread Adoption
- Remove Technical Hurtles
- Simple Intuitive Interface
- Enable Development of Geospatial Thinking Skills
- Innovative Web-Based Viewer
- Engage Middle School Students

Geospatial Curriculum Enhancement

- Project Overview
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- Away from Desktop Applications
- Towards Laptop or Tablet
- Bring Your Own Device (BYOD)
- Mix of Mac, iOS, Windows, Android

Geospatial Curriculum Enhancement

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- Operating System
  - Windows
  - Mac
  - iOS
  - Android
- Devices (Mobile First)
  - Desktop
  - Laptop
  - Tablet
  - Phone
- Browser Independent
  - Firefox, Internet Explorer, Chrome, Safari…etc.







Geospatial Curriculum Enhancement

- Project Overview
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- **Available Frameworks**
- Why Esri JavaScript
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- Adobe Flash/Flex
  - Esri Flex API
  - Adobe Air
- Microsoft Silverlight
- JavaScript Map Control
  - Google API
  - Open Layers
  - Esri API

Geospatial Curriculum Enhancement

- Project Overview
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- Available Frameworks
- **Why Esri JavaScript**
- Project Outcome

- Users
  - Device/OS/Browser Independent
  - Simple Browser Based
  - No Plugin or Installer
  - Looks Cool
  - Intuitive Interface
- Development
  - Lots of Samples and Examples
  - Well Documented
  - Open Development
  - Innovative Applications
  - Leverage Our Investment
  - ArcGIS, ArcMap, Server
  - Host Everything on Lehigh Servers

Geospatial Curriculum Enhancement

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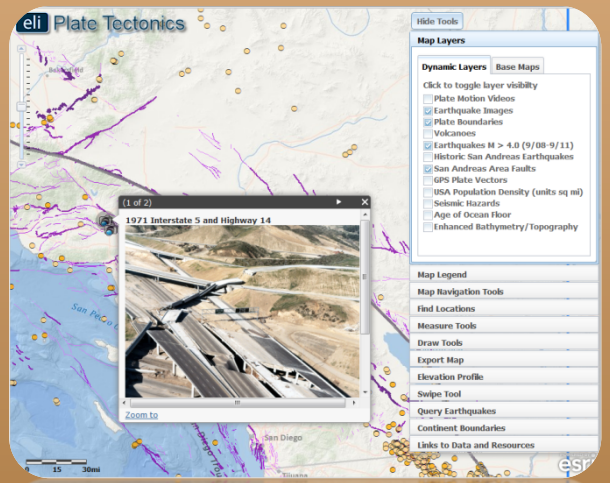
- Available Frameworks
- Why Esri JavaScript
- **Project Outcome**



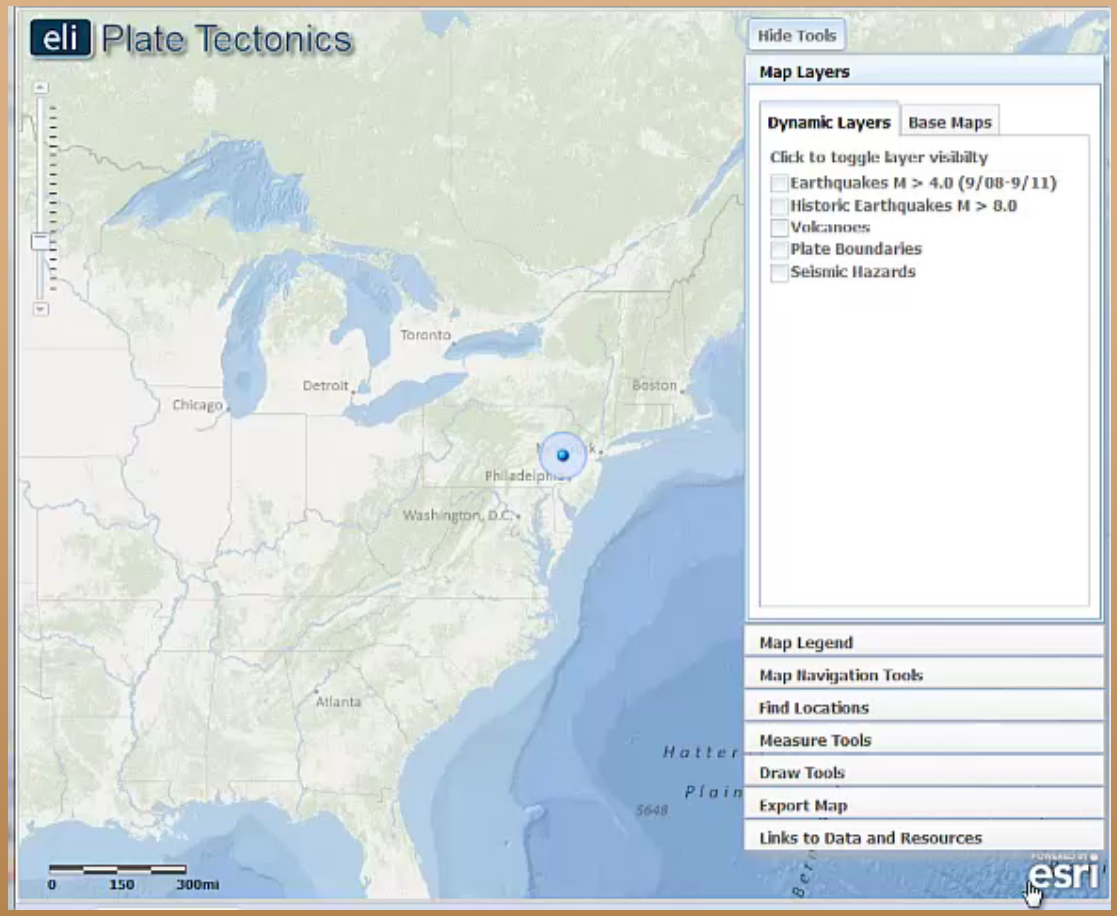
Six Geospatial Web Applications that provide the framework for Classroom Investigations

1. Geohazards and Me: What geologic hazards exist near me?
2. How do we recognize plate boundaries?
3. How does thermal energy move around the Earth?
4. What happens when plates diverge?
5. What happens when plate move sideways past each other?
6. What happens when plates collide?

Demonstration
Our JavaScript Viewers

- **Esri JavaScript Viewer**
- Dojo, Dijits and Widgets
- Html 5 Content
- Custom Tools

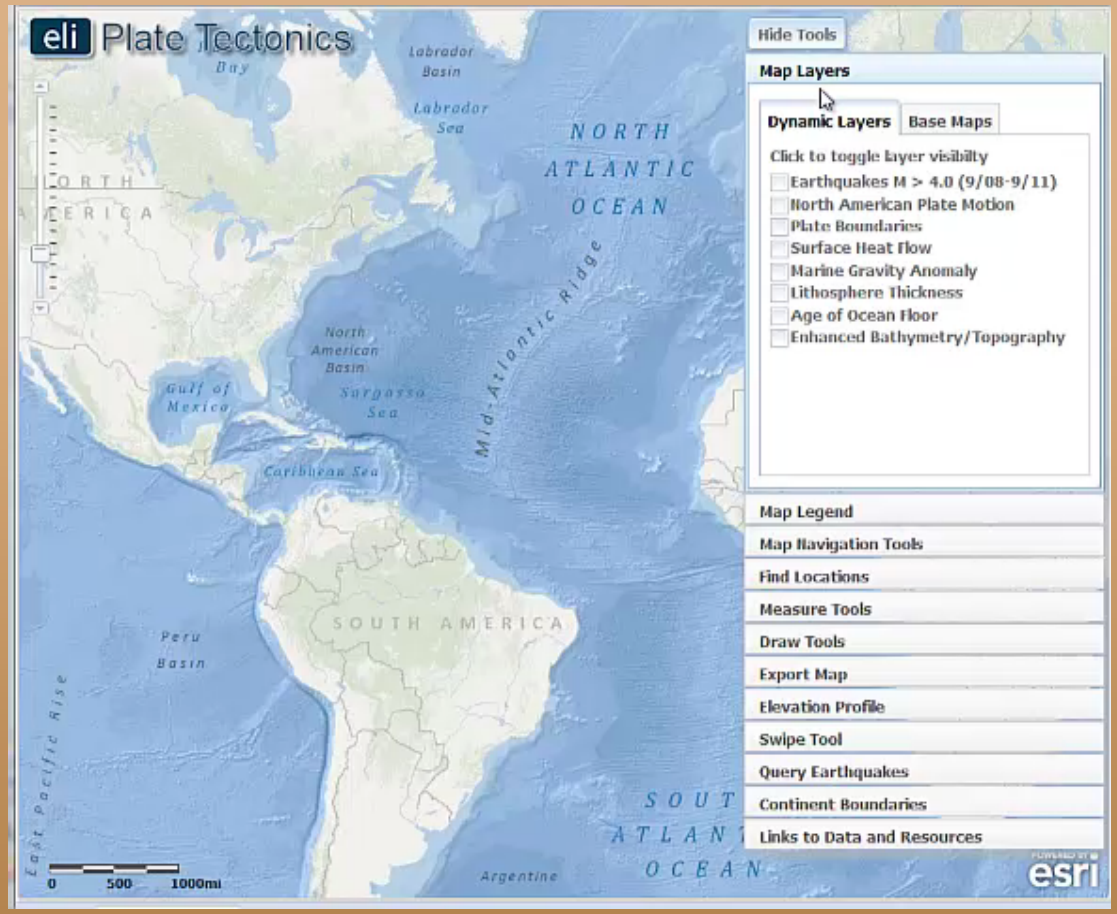
- Base Map Gallery
- Legend and Dynamic Layers
- Address Geocode Service



Demonstration
Our JavaScript Viewers

- Esri JavaScript Viewer
- **Dojo, Dijits and Widgets**
- Html 5 Content
- Custom Tools

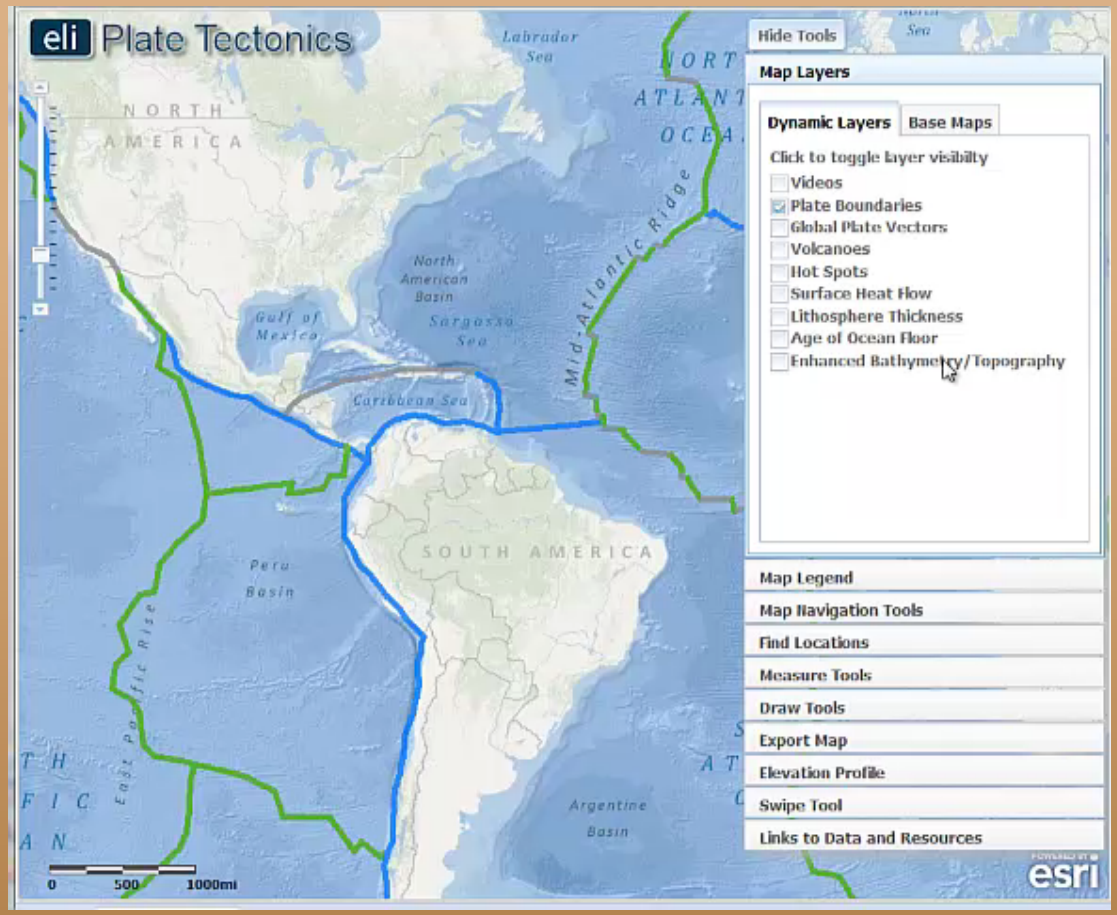
- Animated Controls
- Pre-Configured Style Sheets
- Widgets Drawing, Measuring, Undo



Demonstration
Our JavaScript Viewers

- Esri JavaScript Viewer
- Dojo, Dijits and Widgets
- **Html 5 Content**
- Custom Tools

- HTML 5 Canvas (export map)
- Embed Video Content
- Browser Geolocation



Demonstration
Our JavaScript Viewers

- Esri JavaScript Viewer
- Dojo, Dijits and Widgets
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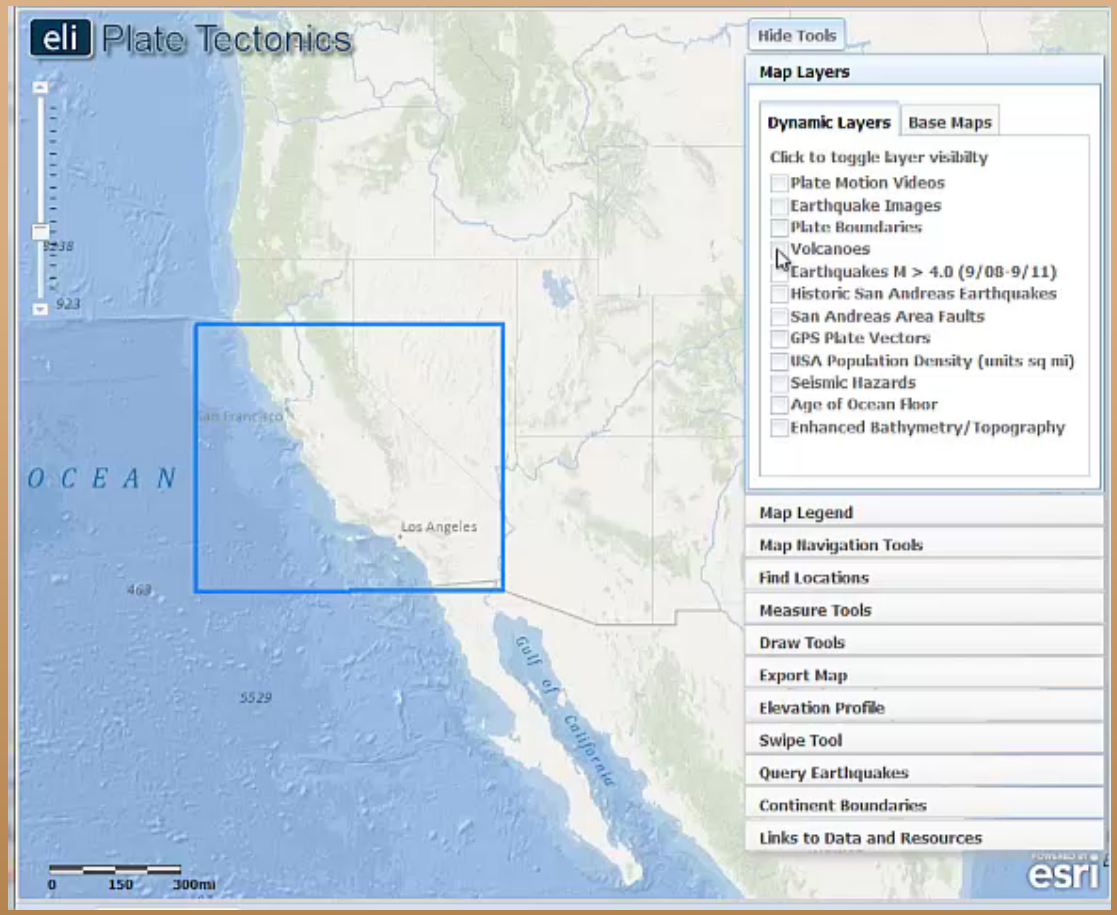
- **Custom Tools**

- Query Map
- Swipe Tool



Demonstration
Our JavaScript Viewers

- Esri JavaScript Viewer
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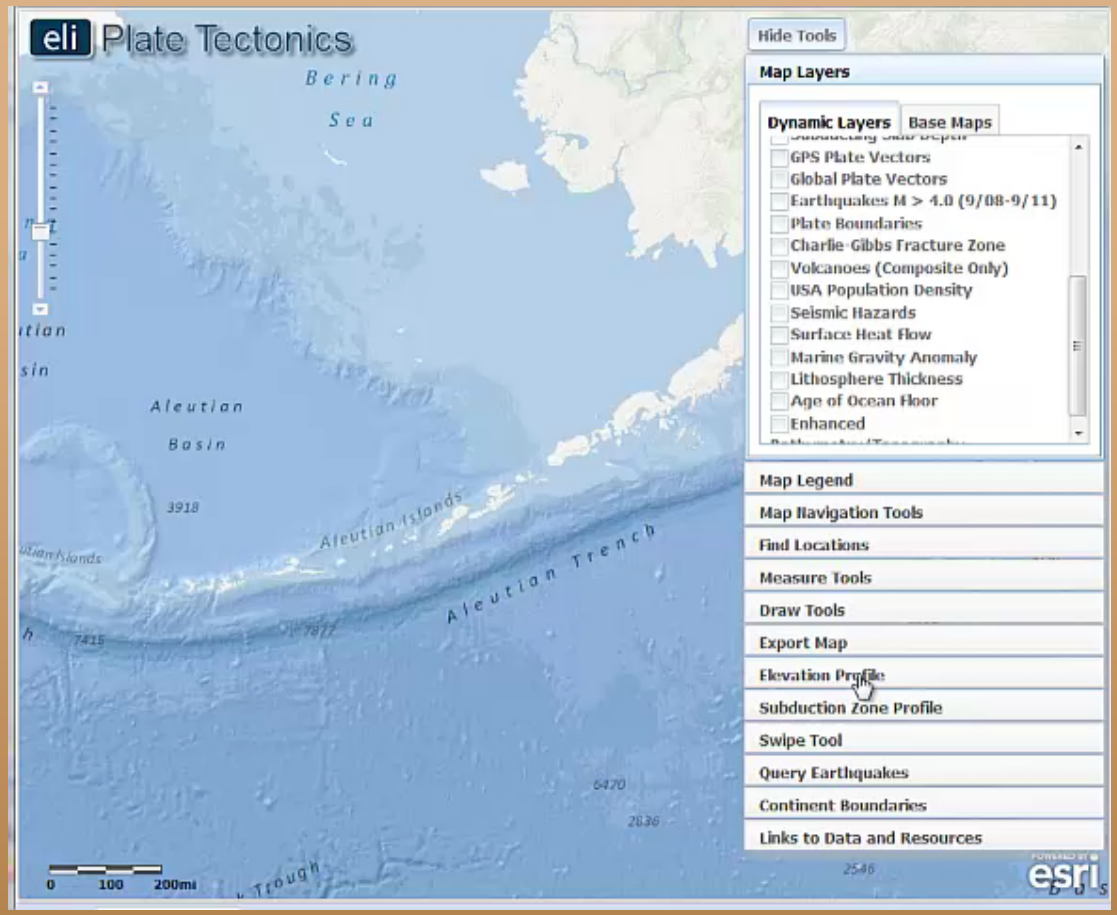
- Html 5 Content
- **Custom Tools**

- Elevation Profile Tool
- Interaction With Chart



Thank You

eli Website

http://ei.lehigh.edu/eli/

Web GIS Index

http://www.ei.lehigh.edu/learners/tectonics/

Contact Information

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