Creating Web Applications with ArcGIS

Jeremy Bartley
Bernie Szukalski
Derek Law
Agenda

• Tour of real-world Web applications
• ArcGIS Online
• Intelligent web maps
• Sharing web maps
• Building web applications
• Web mapping APIs
• Summary
Soil Liquefaction in Orange County

Estimated risk from soil indicators.

Nice Location. Where's the Risk?

Many of us have heard the old adage, "Location, Location, Location." Our location is Orange County, California.

However, location information alone is no longer enough to base an entire business or personal decision. Data are readily available, and can be used to reveal underlying risk hazards for physical and environmental safety, as well as factors which are used to rate insurance premiums.

In California, one of the chief environmental hazards is earth

Legend

Risk
Risk
very low
low
medium
high
very high

Liquefaction Risk: Medium-high with high confidence
The calculated risk is 57

Soil Indicators:

Zoom to
Map of Metal

Dargestellt ist die landespezifische Dichte der Metalbands bezogen auf 100.000 Einwohner.

Je dunkler ein Land eingefärbt ist, desto mehr Bands pro Einwohner sind in diesem Land beheimatet.

Klicke auf ein Land um weitere Informationen zu erhalten und Videoclips abzuspielen.

LEGEND
Metalbands / 100.000 Einwohner
Metalbands
- 0 - 0.2
- 0.3 - 0.6
- 0.7 - 1.4
- 1.5 - 2.3
- 2.4 - 4.4
- 4.5 - 7.9
- 8.0 - 12.2
- 12.3 - 18.4
DPR Facility and Summer Camp Closures

Agency Performance
Website: http://dpr.dc.gov

Jesus Aguirre
Director
Ask the Agency

DCParksAndRecreation
DCDPR
DCDPR @dc_dgs @trinimlin
DGS - it's already been fixed.
5 hours ago · reply · retweet · favorite
DCDPR @trinimlin They
are open.
2 days ago · reply · retweet · favorite
DCDPR @dc_dgs DGS, can u
respond? This may be
@GCDPR's responsibility.
Can everyone respond so we
can remedy this? Thx!!
2 days ago · reply · retweet · favorite
thinklocaldc Pretty soon, the
pop-up park will be popping
with local vendors and
organizations!
instagram.com/p/NWEc9ElgB/
2 days ago · reply · retweet · favorite

The following Aquatic Facilities are closed:

• Chevy Chase Recreation Center Spray Park
• East Potomac Outdoor Pool
• Ferebee Hope Indoor Pool
• Turkey Thicket Recreation Center and Pool

The following facilities are experiencing air conditioning outages:

• Benning Stoddert Recreation Center (status closed July 3rd)
• Columbia Heights Community Center
• Lederer Youth Gardens (status closed July 3rd)
• Rita Bright Community Center
• Takoma Field House (not Takoma Recreation Center)

Please use the map below to find summer camp and facility closures in your area.

For the latest updates and information on DPR facilities and summer camps check our Website, DPR.DC.GOV, or follow
FEMA Fire Disaster Declarations
Comparison of FEMA fire declarations since 1953 to active wildfire locations

Description

This map provides a thematic rendering of FEMA fire declarations aggregated at the state level. Multiple counties that were part of the same disaster event are counted as individual declarations. The data that was used to create the state-level summary can be found here at data.gov. The dataset includes records from 1953 to 2/24/2012.

The state features are symbolized based on the total number of fire declarations. A popup is configured to provide counts for fire and drought incidents and total incidents of all types. A pie chart is included in the popup to show the breakdown of all incident types for the state.

The active wildfire locations are provided via a KML feed from GeoMAC.
After the Storm: Where are the most vulnerable populations?

Regional Vulnerability

This map provides a summary of vulnerable populations. It helps answer the question: where is the greatest potential impact from disasters? Demographic variables including age, income, elderly and disabled populations, home value, or other factors are considered. The social vulnerability score is represented at the block group level. A high score indicates an area is more vulnerable, a low score indicates an area is less vulnerable.

Storm reports are from http://www.spc.noaa.gov/cll/moreports/120629_rpts.html

Wind Storm Reports 06/28/2012

USA Social Vulnerability

2009 Social Vulnerability Index

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UNESCO Världsarv

UNESCOs världsarvskommitté har utsett 936 platser runt om i världen som har enastående universellt värde.

En berättande karta ("story map")
ide.SEVILLA cuenta una historia sobre el mapa

Descubre Sevilla

Ver Sevilla paseando por sus calles es una experiencia fascinante que le ayudará a descubrir sus tesoros artísticos y sus gentes.
Map Matrix: Explore interactive web maps on ArcGIS Online

ArcGIS Online features thousands of intelligent web maps that have been created and shared by users across the globe. This gallery presents a small sampling.
This interactive map allows residents and prospective residents of Broward County, Florida to view the FEMA Flood Insurance Zones for their property. The Federal Emergency Management Agency (FEMA) determines and publishes flood zones. These zones are used to determine insurance rates when a prospective homeowner applies for a mortgage.

On its web site, FEMA explains that "Flood Zones are geographic areas that the FEMA has defined according to varying levels of flood risk. These zones are depicted on a community's Flood Insurance Rate Map (FIRM) or Flood Hazard Boundary Map. Each zone reflects the severity of type of flooding in the area." For more information on FEMA's National Flood Insurance Program, visit FEMA's website at FEMA National Flood Insurance Program.

Quick Help
To determine FEMA Flood Zone designation for an address, search for the address by entering it into the address search box and hit the "enter" key. Next, left mouse click on the property location. If the land parcels are visible, it is best to left mouse click on the parcel identified by the address marker.
Light-brown to brown to gray shale, shaly marlstone, and marlstone. Contains abundant chert both as small nodules and as thin, interbedded: calcite pseudomorphs after salt crystals (Ray and others, 1956), interbeds of shale and limestone facies. Sandstone lenses, as much as 15 m (50 ft) thick, are common near top of unit. Many thin tuff beds in lower part. Widespread empty molds of healed saline minerals give unit its name. Locally, as much as half of some shale beds are composed of abundant calcite pseudomorph after salt crystals (Ray and others, 1956). Interbeds of shale and limestone facies. Saline facies is about 380 m (1,250 ft) thick in northwest sector of quadrangle but thins rapidly eastward and pinches out in north-central sector of map area. Unit weathers to form thickly bedded masses of unusually fissile shale that stand as both vertical and overhanging faces. The saline facies we map is the same as the saline facies of the Uinta Formation of Dane (1954, 1958), and Ray and others (1956).
ArcGIS Online is a New GIS Pattern
What is a web map?

• The foundation for your maps and applications

Intelligent Maps

Services And Data

Supporting

• Visualization
• Editing
• Popups
• Analysis
• Time
One web map can be used anywhere

Any Device

Smart Phones

Tablets

Desktop

One Map

ArcGIS Online

Web Sites

Browsers
ArcGIS.com Map Viewer

- Lightweight JavaScript application
- Used for map authoring
  - assembly, configuration, sharing
Map ID
A unique identifier, like a social security number
Sharing and Embedding maps

Copy / Paste HTML

Embed in Website

Options
Turn web maps into Web apps

Author Map

Choose a Template

Share

Publish
Application templates
Choose from Make a Web Application gallery

More templates can be found by searching ArcGIS Online
Configure and publish from your account
Save and share like any other item in My Contents
Examples

Story Maps

America’s Diversity is Increasing Rapidly

Through growth and other factors, the diversity of the U.S. is increasing. The diversity is represented on the map below. Each dot represents a group of people. The diversity is increasing because of migration and other factors.

Social Media

Basic Viewer

Swipe
Groups

- Collections of items in groups can be embedded or displayed in configurable galleries
Examples

Storytelling with Maps

A gallery of Esri story maps
Esri publishes story maps with three goals: to showcase interesting and important topics, to explore techniques and best practices for map-based storytelling, and to help enable people to make their own story maps.

Resources & links
- Storytelling with Maps Blog
- Download story templates
- Story Maps by our Partners
- Workshops & Best Practices
- Social media

Amherst GIS Gallery

Maps and GIS Apps

Projects Under Construction

There are projects under construction throughout Utah. From roadway maintenance projects to large reconstruction projects, we're working to improve transportation and will work hard to keep you informed.
ArcGIS’ *ready-to-use* Configurable Web Apps

- Easily and quickly build Web applications
- Includes Application Builder
  - WYSIWYG user experience
- No programming, nor configuration file editing
- Ideal for novice Web application creators
- Extensible with Web mapping APIs
ArcGIS configurable web applications

- Specify data content, functionality, and appearance

ArcGIS Viewer for Flex

ArcGIS Viewer for Silverlight

http://resources.arcgis.com/content/web/web-apps
Web Mapping APIs

Building web clients

• Allow developers to easily build custom Web applications
  - ArcGIS API for JavaScript
  - ArcGIS API for Flex
  - ArcGIS API for Silverlight
• Built on a simple architecture
  - Use REST services endpoint
  - Web services based
• Choice depends on developer experience and style preference
Core WebAPI

- Map control
- Support for Webmap
- Layers
  - Tiled, Dynamic, FeatureLayer, WMS, WMTS, KML, Graphics
- Graphics
- Tasks
  - GP, Network, Geometry, Query, Locator
- Geometry
- Symbology
  - ArcGIS Server Symbology
- Toolbars
  - Edit, Draw, Navigation
Widgets – building blocks

- Northern California
- Central Pennsylvania
- Add Bookmark

- 3406 CALIFORNIA ST
  Type: Graffiti Complaint – Private Property
  Date: 09/24/2009
  Attachments: No attachments found

- 101 Hyde St
  Carob Tree
  Wikipedia Entry

- Dashboard
  Atlantic Hurricanes (2000)
  Alberto
  Hurricane windspeed

- Population in Iron
  2007: 12,750
  2007 density: 10.5
  2000: 13,138
  2000 density: 10.8
Widgets – building blocks

Switch Basemap

Legend

Waterbodies
- Lake
- Lake - Intermittent
- Lagoon
- Swamp/Marsh
- others

Measurement

Measurement Result

Press CTRL to enable snapping.
Widgets – building blocks
Summary

• Intelligent Web Map
  - Foundation for your maps and apps
  - Can be leveraged in many ways

• ArcGIS offers many ready-to-deploy solutions for creating Web applications
  - All of them work with Web Maps

• Can deploy custom applications with Web mapping APIs

• Online evaluations

www.esri.com/sessionevals
• Thank you for attending
• Have fun at UC2012
• Open for Questions

• Please fill out the evaluation:

  www.esri.com/ucsessionssurveys