

Federal GIS Conference 2014

February 10–11, 2014 | Washington DC



# Using the ArcGIS Landscape Analysis Tools and Services

Suzanne Foss, Esri

# What are the ArcGIS Landscape Services?



# ArcGIS Content – a living atlas

Imagery



Infrastructure



Biological



Climate



Basemaps



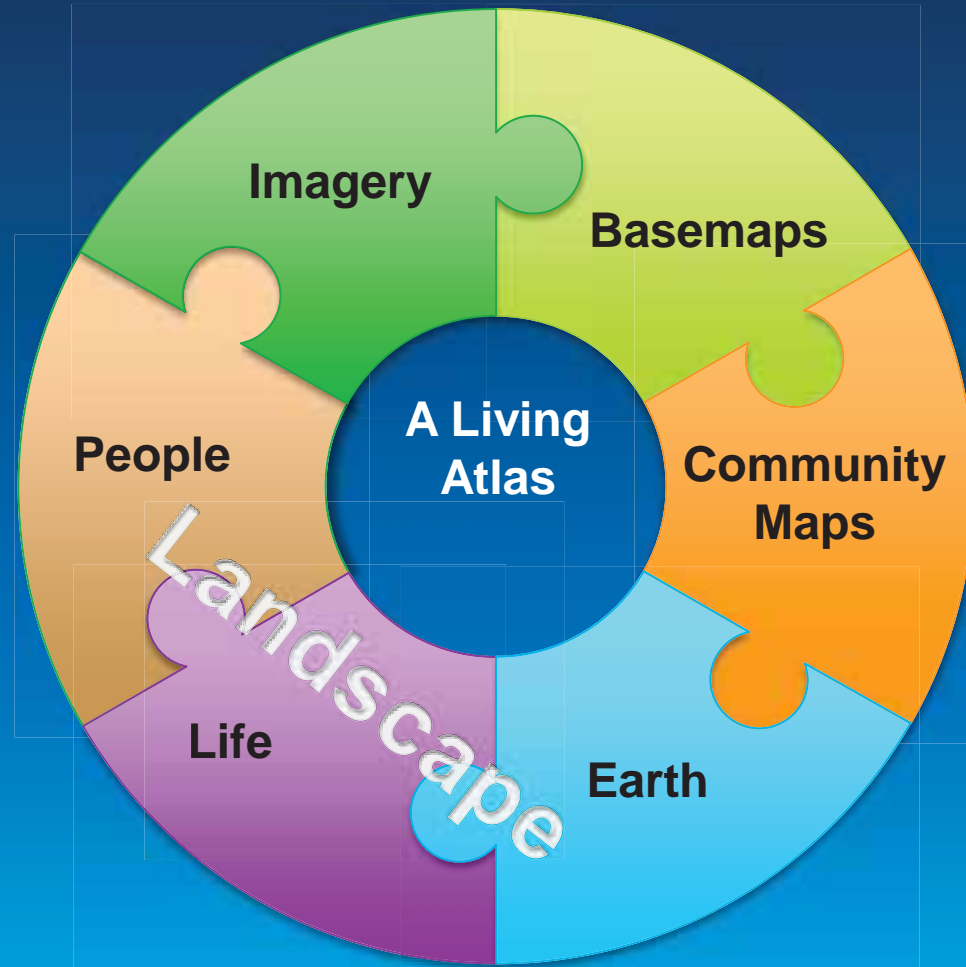
Demographics



Physical

# ArcGIS Content

Landscape maps and layers



# ArcGIS Landscape Services

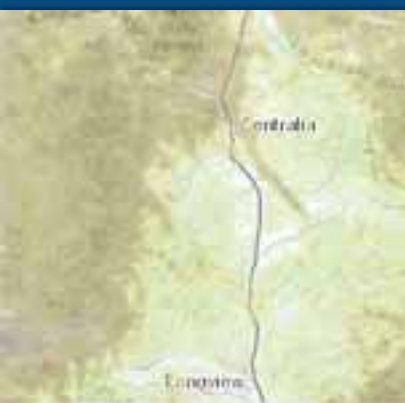
Life and Earth



Elevation



Soils



Federal Lands



Land Cover



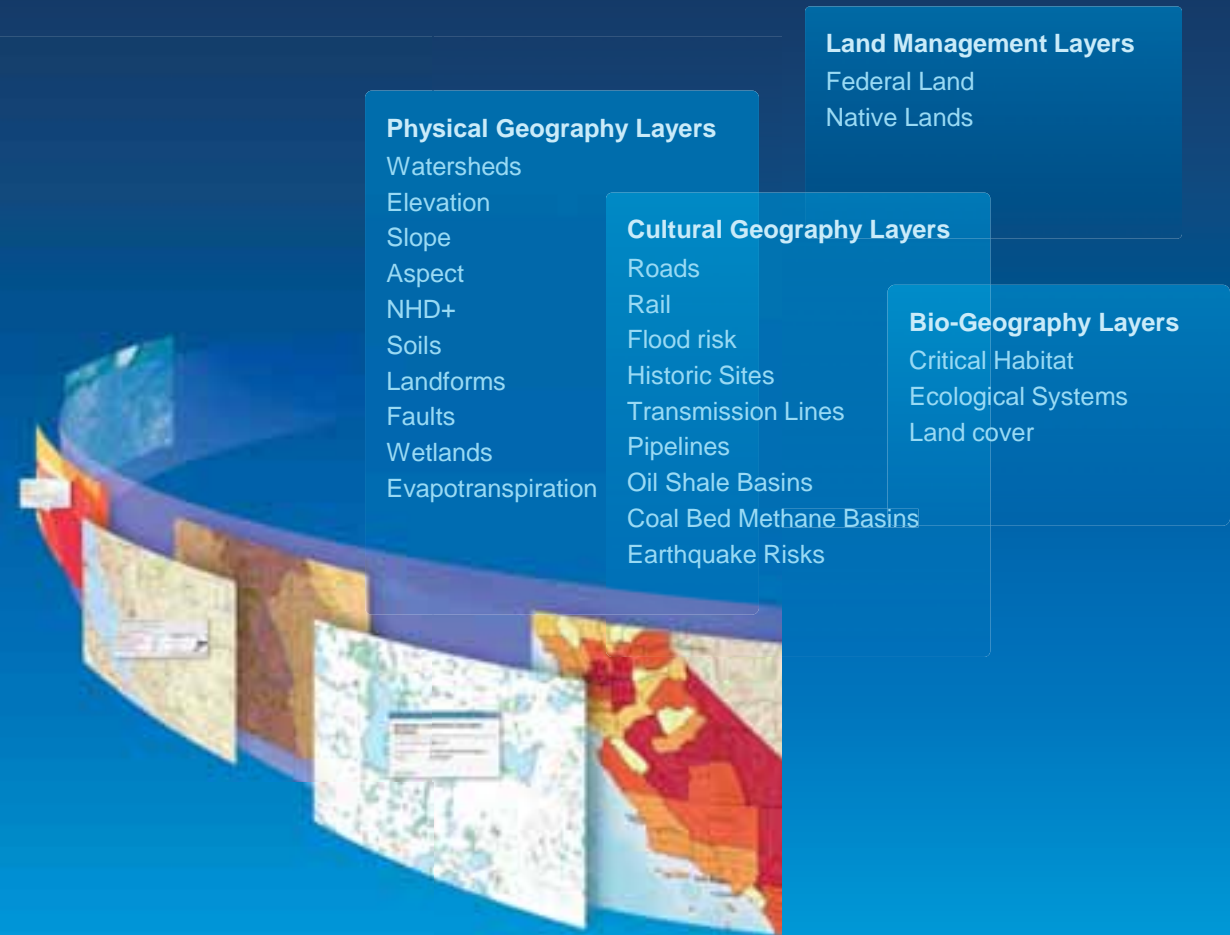
Habitat

Climate

# ArcGIS Landscape Services

Content to support decision makers across many industries

- **Planners**
- **Policy makers**
- **Scientists**
- **Analysts**
- **Educators**



**Modeling the land around us**

# ArcGIS Landscape Services

Content In Progress (U.S.)

<b>CRITICAL HABITAT</b>	<b>GAP SPECIES RANGES</b>	<b>SSURGO ATTRIBUTES</b>	<b>OTHER LAYERS</b>
Critical Habitat - All	California condor	Albedo	Forest species (USFS)
Bighorn sheep (Peninsular bighorn)	Marbled murrelet	Drainage class	Croplands (CDL)
Bull trout	Mexican spotted owl	Erosion hazard of forest roads and trails	NCED (easements)
California condor	Northern spotted owl	Erosion class	Protected Areas
Chinook salmon	Bighorn sheep	Farmland class	Unprotected Areas
Chum salmon	<b>GAP SPECIES DISTRIBUTIONS</b>	Flooding frequency	Aquifers
CH - Unified salmon	American Crocodile	Forage suitability group	Surface Mining Areas
Delta smelt	Desert Tortoise	Hydric soils classification	Coal Fields
Atlantic salmon	Black Footed Ferret	Initial subsidence	Hazardous Waste Sites
Marbled murrelet		Runoff	Road Type
Northern spotted owl		Corrosion	
West Indian manatee			

Coming Soon

# ArcGIS Landscape Services

Content over Africa

<b>LAND</b>
Harmonized World Soils
Topographic Moisture Potential
Global Land Cover
Surficial Lithology
Hydro Flow Direction

<b>LIFE</b>
Population Density
Infant Mortality
Terrestrial Ecosystems
Global Biodiversity Index
Global Crop Harvest Data
Isobioclimates
Carbon Biomass

<b>CLIMATE</b>
Climate Change Severity 2020
Climate Change Severity 2020
Mean Temperature
Mean Precipitation
Evapotranspiration

**Available April 1**



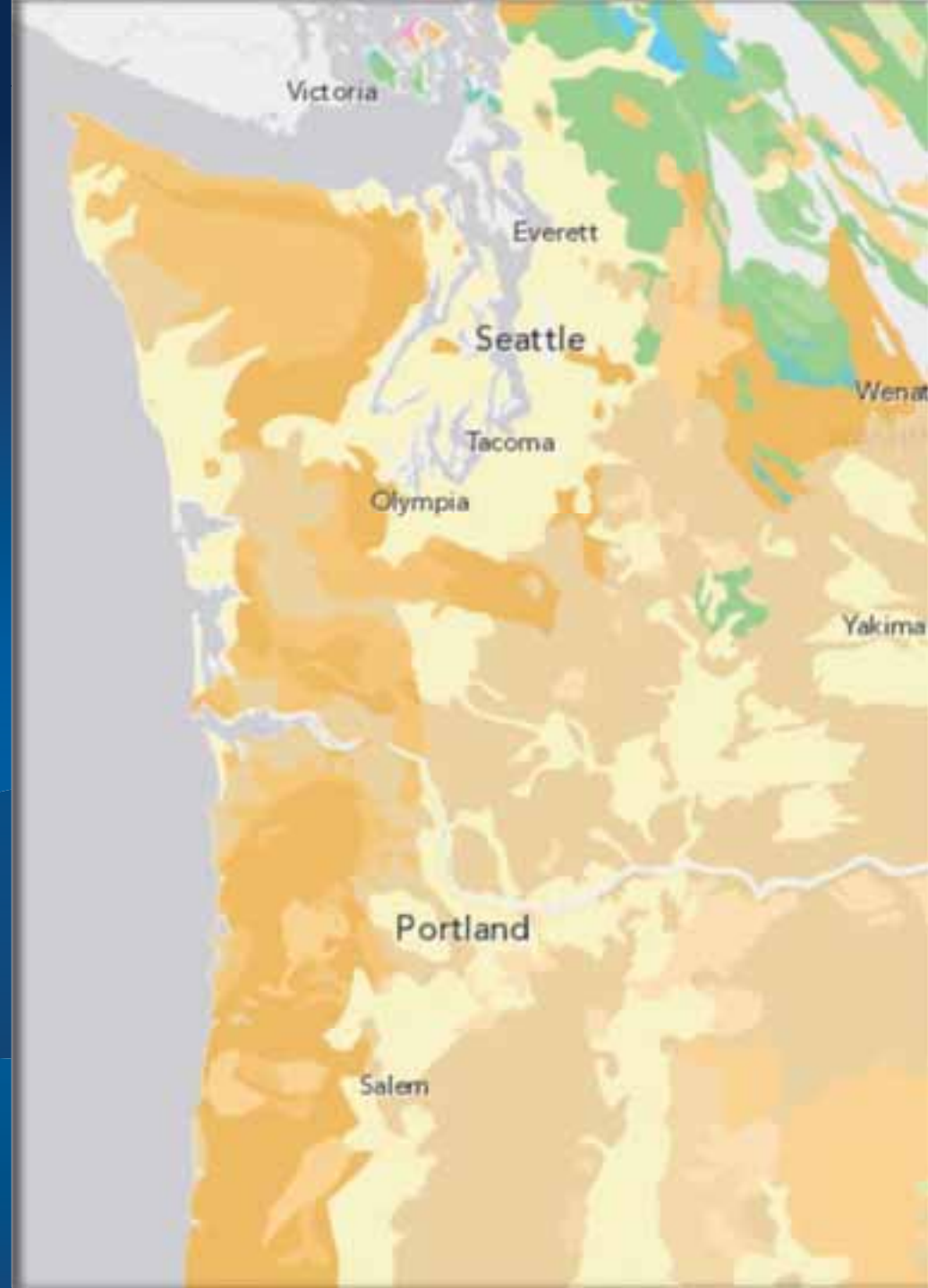
# How Do I Get Access?

## Landscape Services

- **Use of Landscape Services requires ArcGIS Online subscription**
- **Discoverable through**
  - **ArcGIS Online**
    - **Featured Groups**
    - **Map Viewer (Add Esri Map Layers)**
    - **Living Atlas webpage**
  - **Samples & Models published in Resource Center**

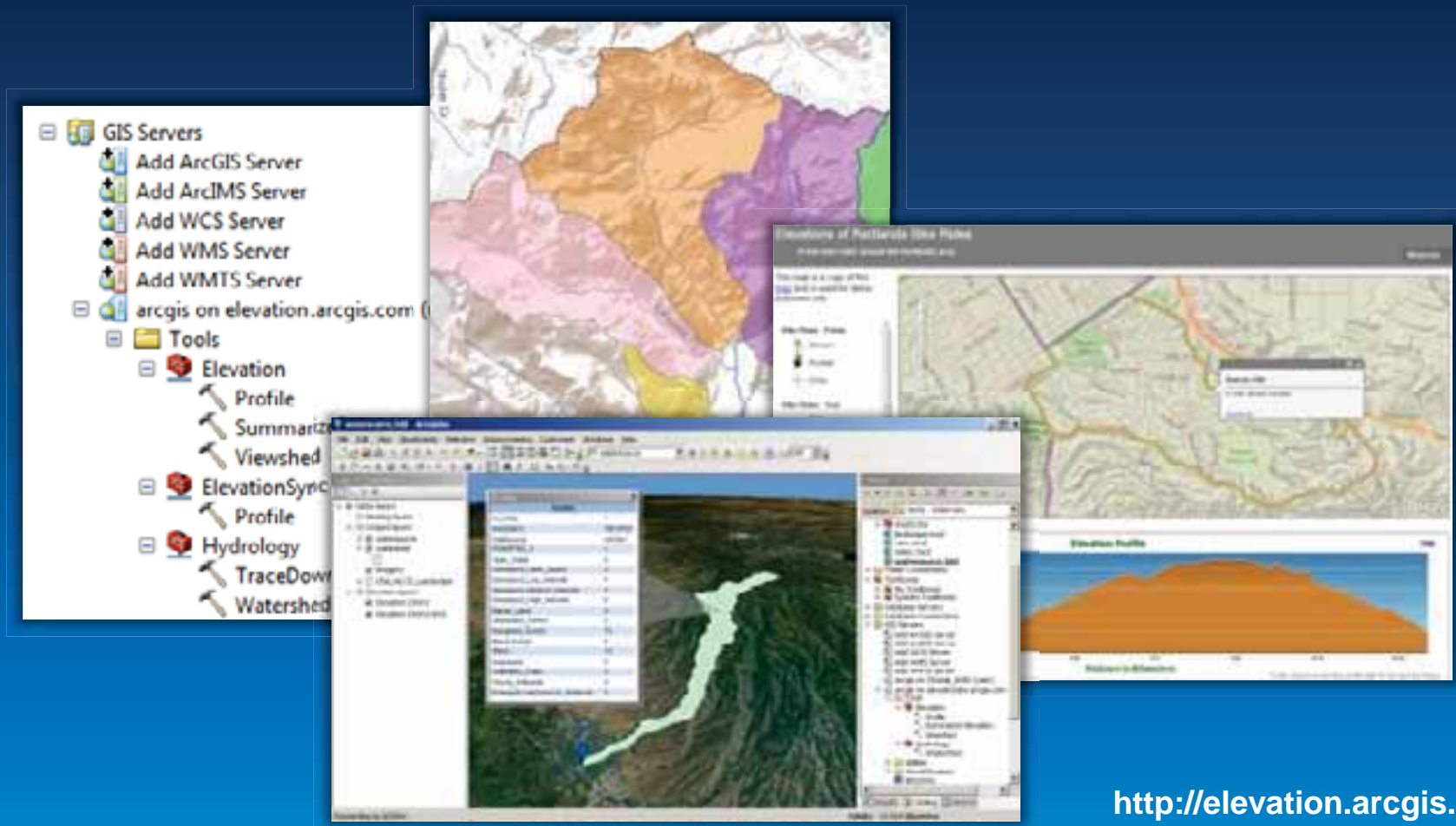
Demo

# Finding and Using the Landscape Services



# What are the ArcGIS Landscape Tools?

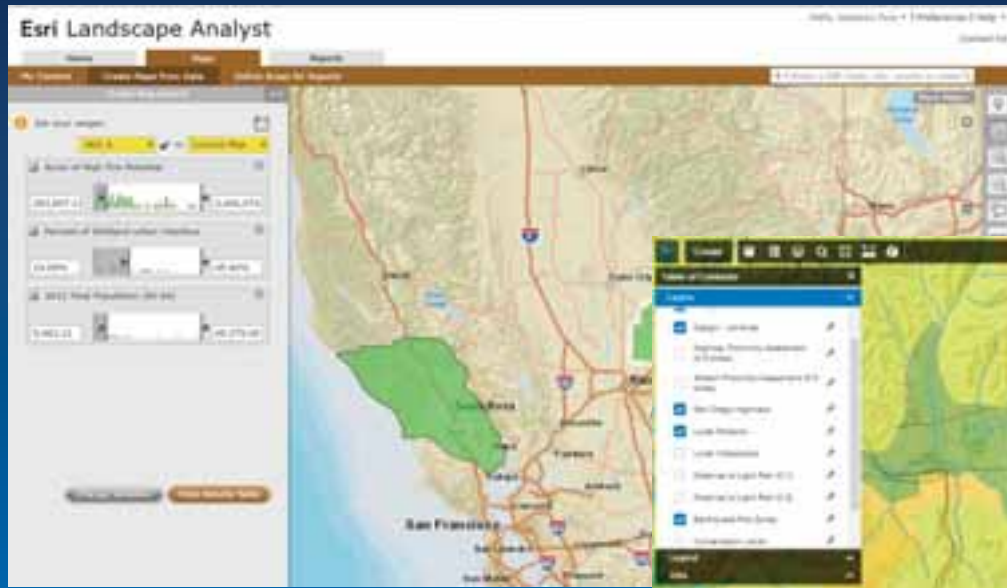




<http://elevation.arcgis.com/arcgis/services>  
<http://landscape1.arcgis.com/arcgis/services>

Landscape Tools – a set of Geoprocessing Services that optimize standard landscape workflows

## Landscape Analyst



## Landscape Modeler



## Landscape Planner

Landscape Apps – a suite of lightweight apps that leverage the Landscape Services

# ArcGIS Landscape Analyst

Understand where landscape conditions meet criteria, at various scales

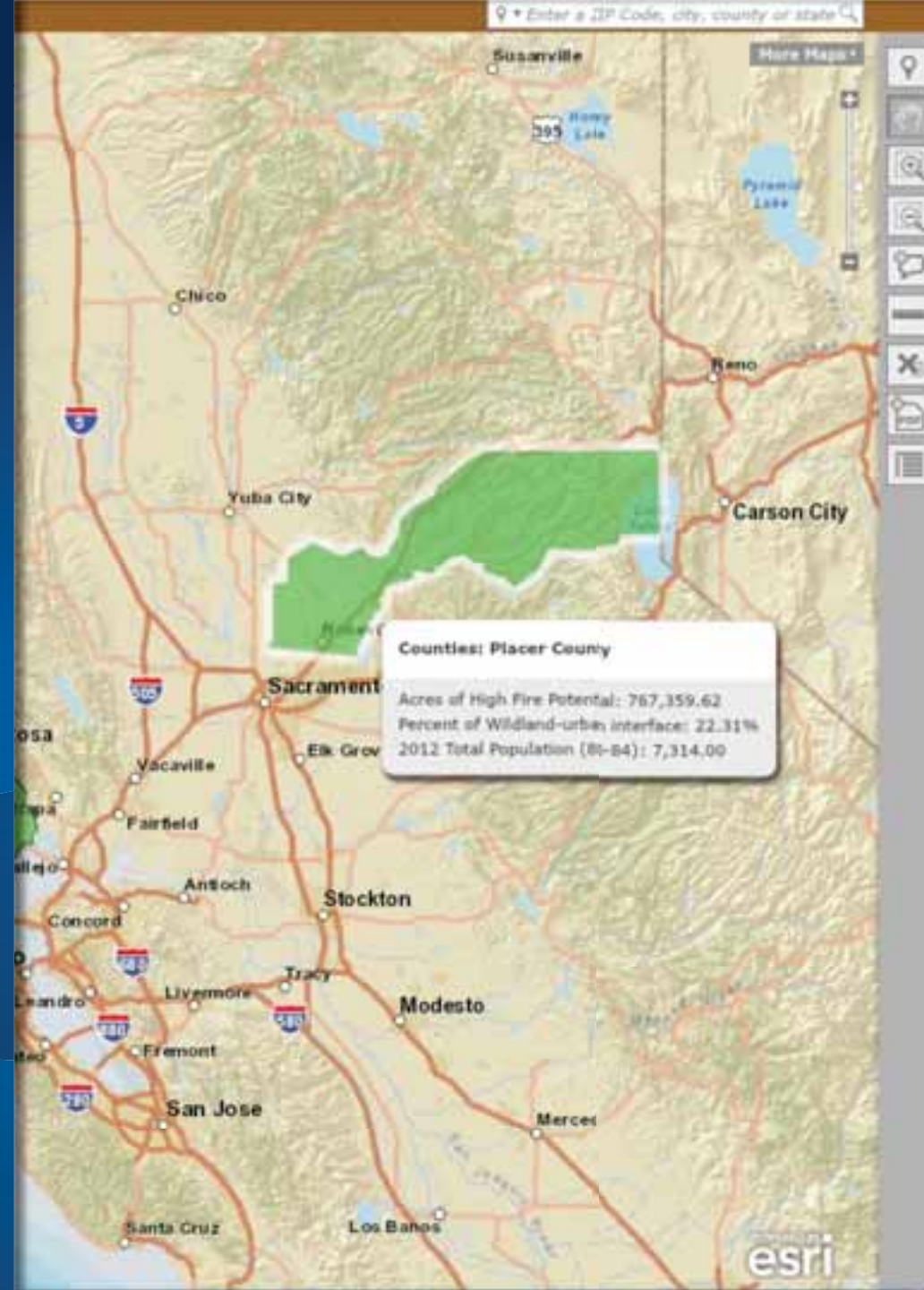
- Location analytics application
- Landscape variables summarized by states, counties, & watersheds
- Capabilities
  - Create Color Coded Maps
  - Smart Map Search
  - Reporting



Demo

# Landscape Analyst

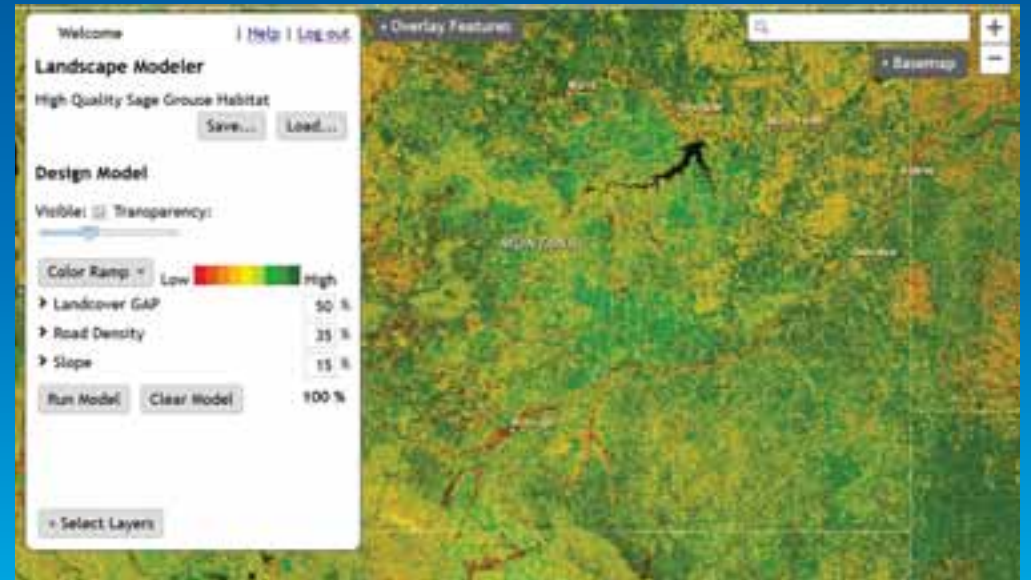
Wildfire Risk



# ArcGIS Landscape Modeler

Help determine which locations are best suited for certain uses

- Robust suitability analysis application
- Consumes Landscape layers as image services
- Capabilities
  - Preview & choose Landscape layers
  - Adjust Model Bias & Weights
  - Overlay Additional Data
  - Save & Load Models from ArcGIS Online

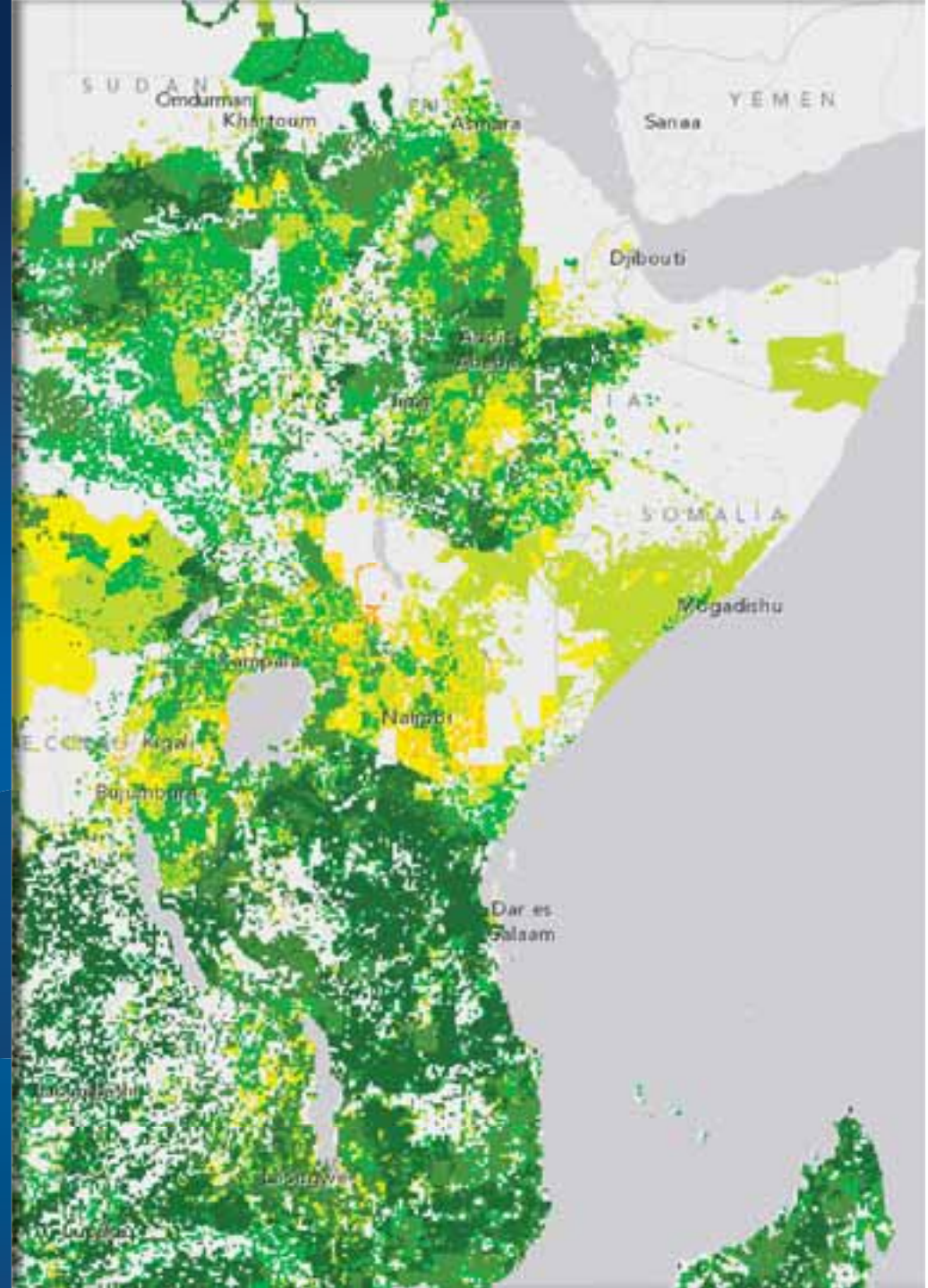




Demo

# Landscape Modeler

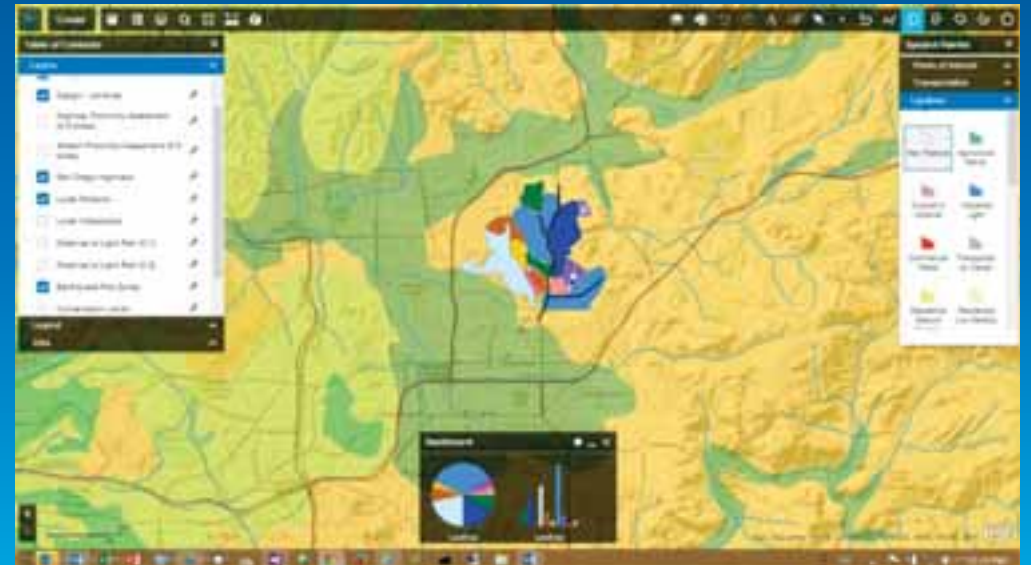
Africa & Climate Change



# ArcGIS Landscape Planner

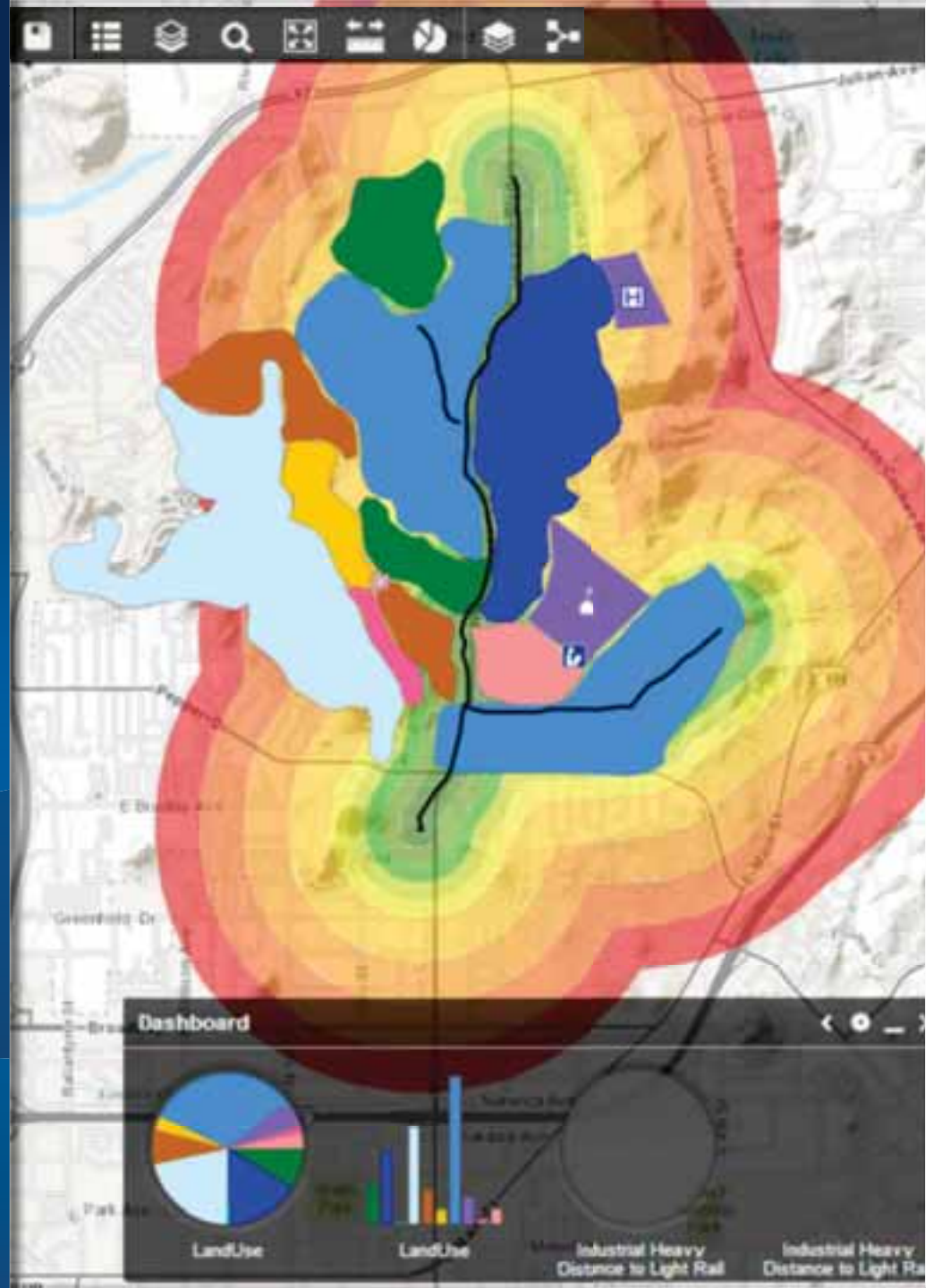
Design and evaluate plans against landscape criteria

- Planning and design application
- Consumes Landscape Modeler analysis
- Capabilities
  - Create plans and scenarios
  - Mash up content from ArcGIS Online
  - Analyze data
  - Evaluate designs against criteria
  - Run reports



Demo

# Landscape Planner



# How Do I Get Access?

## Landscape Tools & Apps

- **Landscape Tools (geoprocessing services)**
  - <http://elevation.arcgis.com/arcgis/services>
  - <http://landscape1.arcgis.com/arcgis/services>
- **Landscape Apps - Discoverable via ArcGIS Marketplace**
  - **Landscape Modeler and Landscape Analyst**
    - Require ArcGIS Online subscription
  - **Landscape Modeler → Open Source, available on GitHub**
    - <https://github.com/Esri/landscape-modeler-js>
  - **Landscape Planner**
    - Currently in Public Beta
    - Premium App

# ArcGIS Content – a living atlas

Imagery



Infrastructure



Biological



Climate



Basemaps



Demographics



Physical

**Federal GIS Conference 2014**

February 10–11, 2014 | Washington DC



**Don't forget to complete  
a session evaluation form!**

**Federal GIS Conference 2014**

February 10–11, 2014 | Washington DC



# Networking Reception

## Smithsonian National Museum of Natural History

Tuesday, 6:30 PM–9:30 PM

Bus Pickup located on L Street

Federal GIS Conference 2014

February 10–11, 2014 | Washington DC



# Print your customized Certificate of Attendance!

Printing stations located in Hall B  
and the 140/150 Room Concourse.



Federal GIS Conference 2014

February 10–11, 2014 | Washington DC



# GIS Solutions EXPO, Hall B

Monday, 12:30 PM–6:30 PM

Tuesday, 10:45 AM–4:00 PM

- Exhibitors
- Hands-On Learning Lab
- Technical & Extended Support
- Demo Theater
- Esri Showcase

Federal GIS Conference 2014

February 10–11, 2014 | Washington DC



## Interested in diving deeper into Esri technology?

Add a day to your Fed GIS experience and register to attend the Esri DevSummit Washington DC. Stop by the registration counter to sign up.



Understanding our world.