



NORAD supported project in MRRD covering  
Capacity Building and Institutional Cooperation in the  
field of Hydrogeology for Faryab Province  
Afghanistan

# **GIS Course 4.4**

## **Introduction to Online Maps**

By Andreas de Jong  
September 2014

# PURPOSE OF THIS COURSE

The main purpose of this course is to:

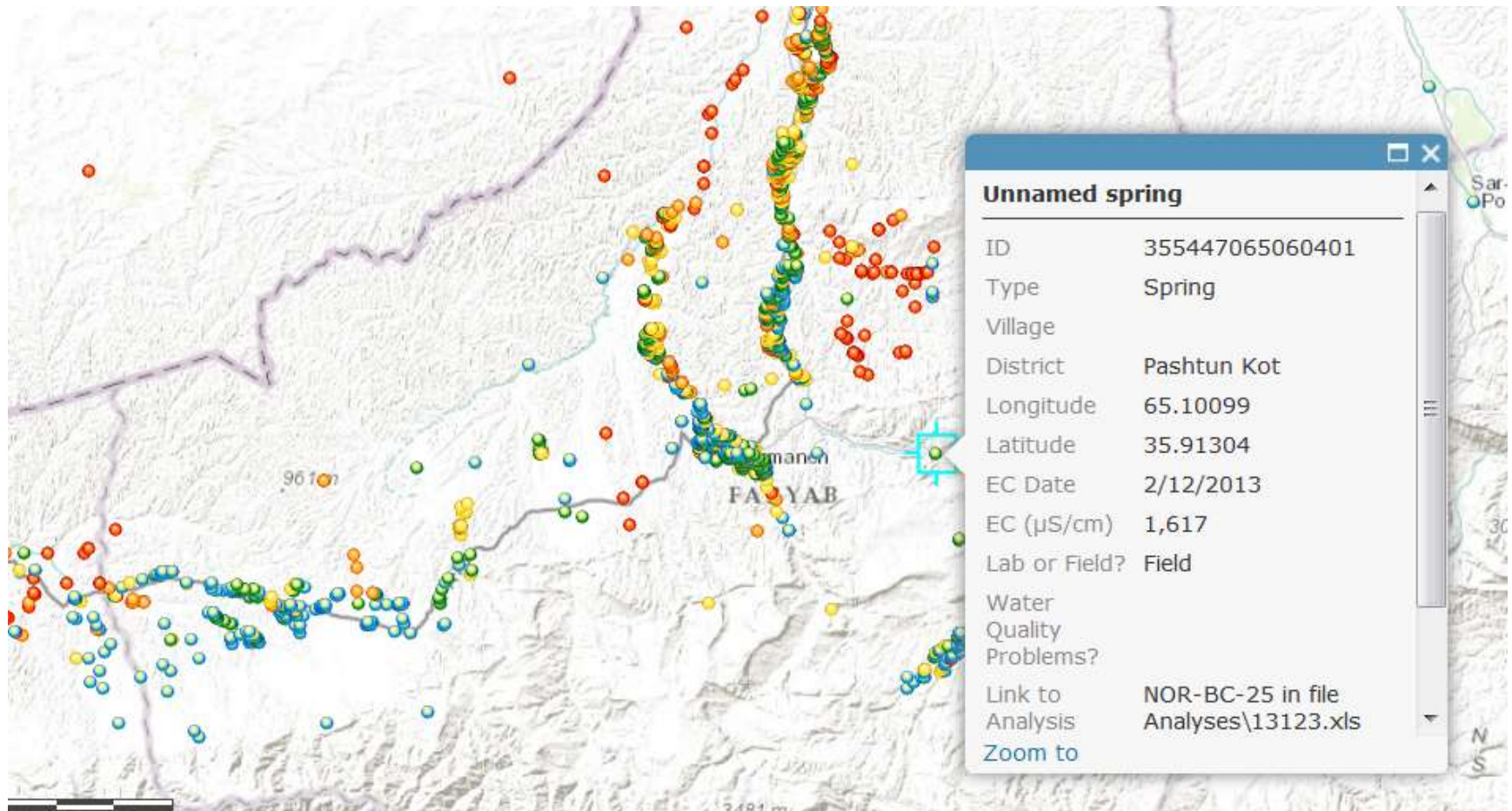
- a) Introduce course participants to online GIS maps using the ArcGIS Online utility.
- b) Demonstrate the use of ArcGIS Online in making hydrogeological maps of Faryab province.

# KEY REFERENCES

**ESRI ArcGIS Online:** *<https://www.arcgis.com/features/>*

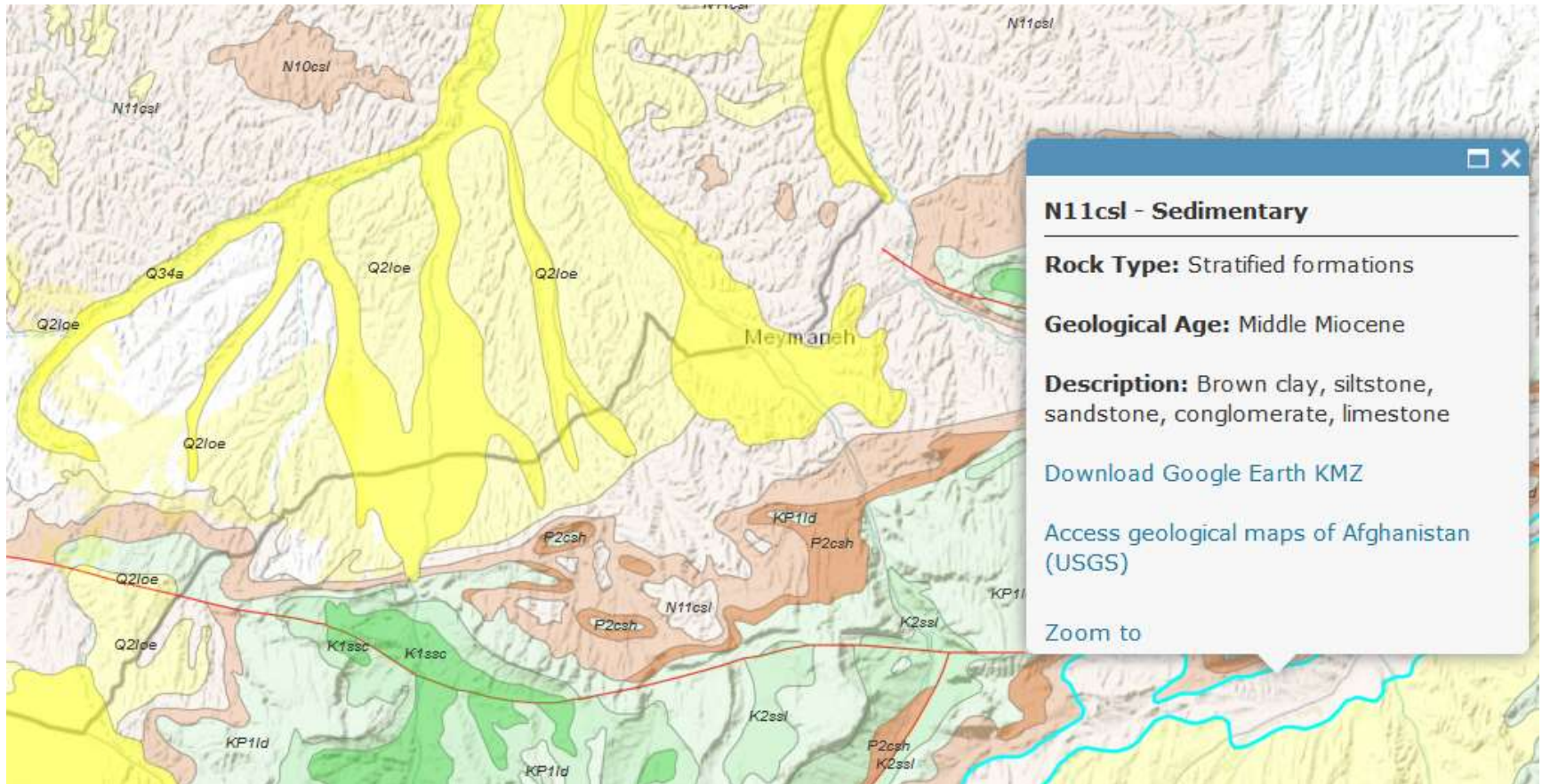
**ESRI Get Started with ArcGIS Online tutorial:**  
*<http://learn.arcgis.com/en/projects/get-started-with-arcgis-online/>*

# EXAMPLE OUTPUT BY END OF COURSE



EC map of Faryab

# EXAMPLE OUTPUT BY END OF COURSE



Geology map of Faryab



# What you will need for this course



Internet (Fast!)



Internet  
Browser



MS Excel



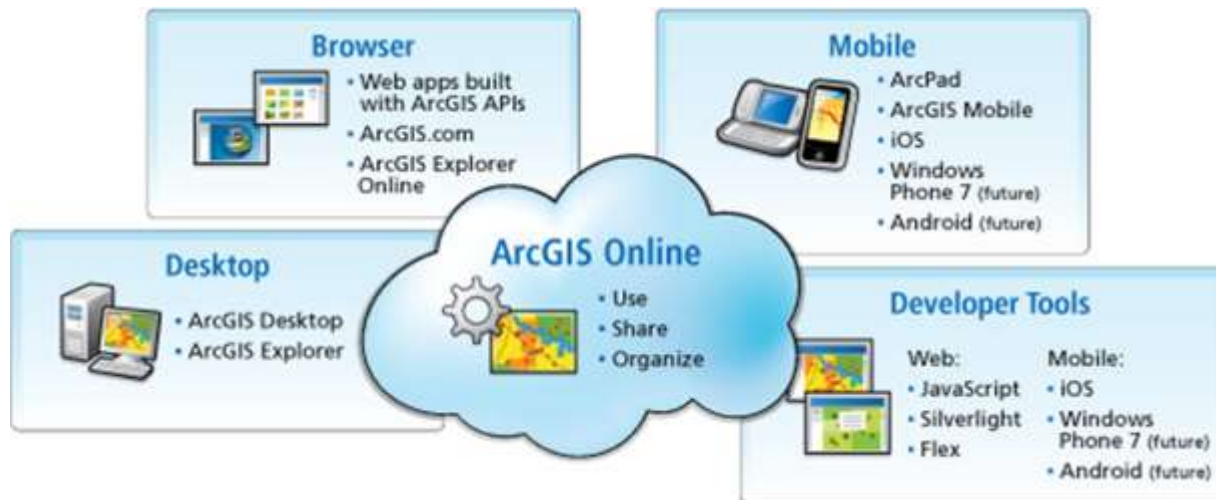
ArcGIS 10.0

# Tentative Course Schedule

Day	Date	Activity
1	Tuesday 16/09/2014	Opening & Introduction
		Presentation: Introduction to Online GIS Maps
		Practical 1: Get Started with ArcGIS Online
2	Wednesday 17/09/2014	Practical 2: Make your own online map of hydrogeological features in Faryab Province.
		Workshop: Discussion on the impact and use of online GIS maps in Afghanistan.
		Presentation of certificates

# GIS Course 4.4 – Introduction to Online Maps

1. What is ArcGIS Online?
2. ArcGIS Online features
3. ArcGIS Online Tutorial





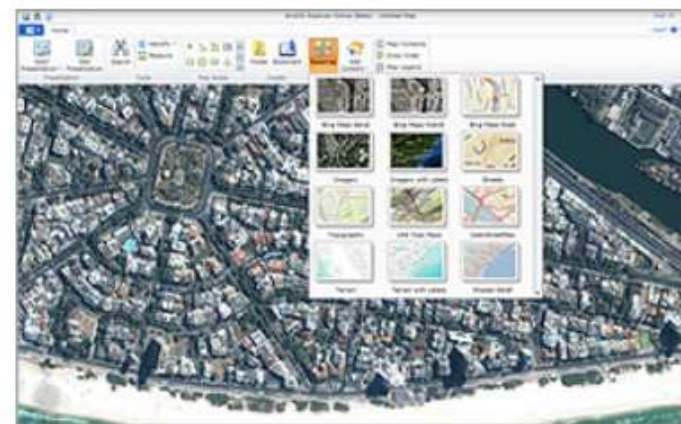
# PART 1 – What is ArcGIS Online?

1. ArcGIS Online is a simple, cloud-based utility for producing, editing, and sharing geospatial data.
2. ArcGIS Online is a Web-based mapping solution for everyone from GIS professionals to those with no formal GIS training.

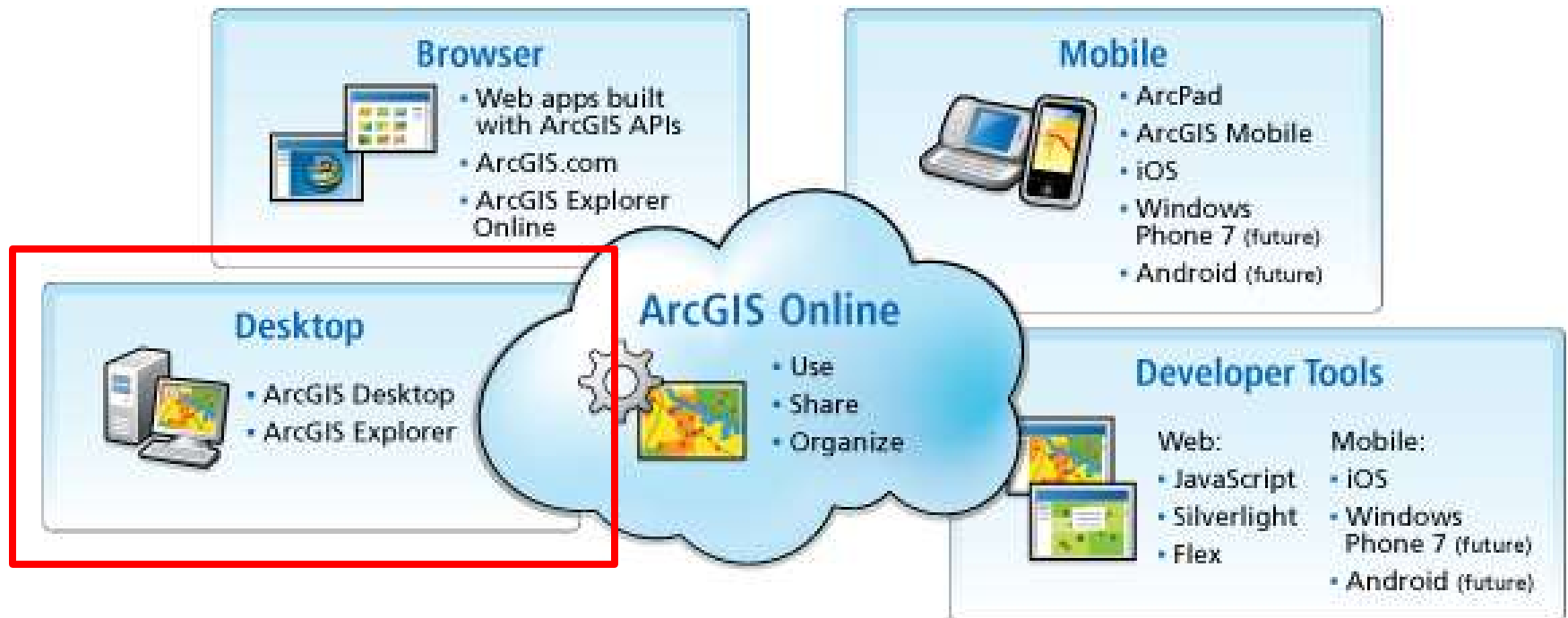


# With ArcGIS Online you can:

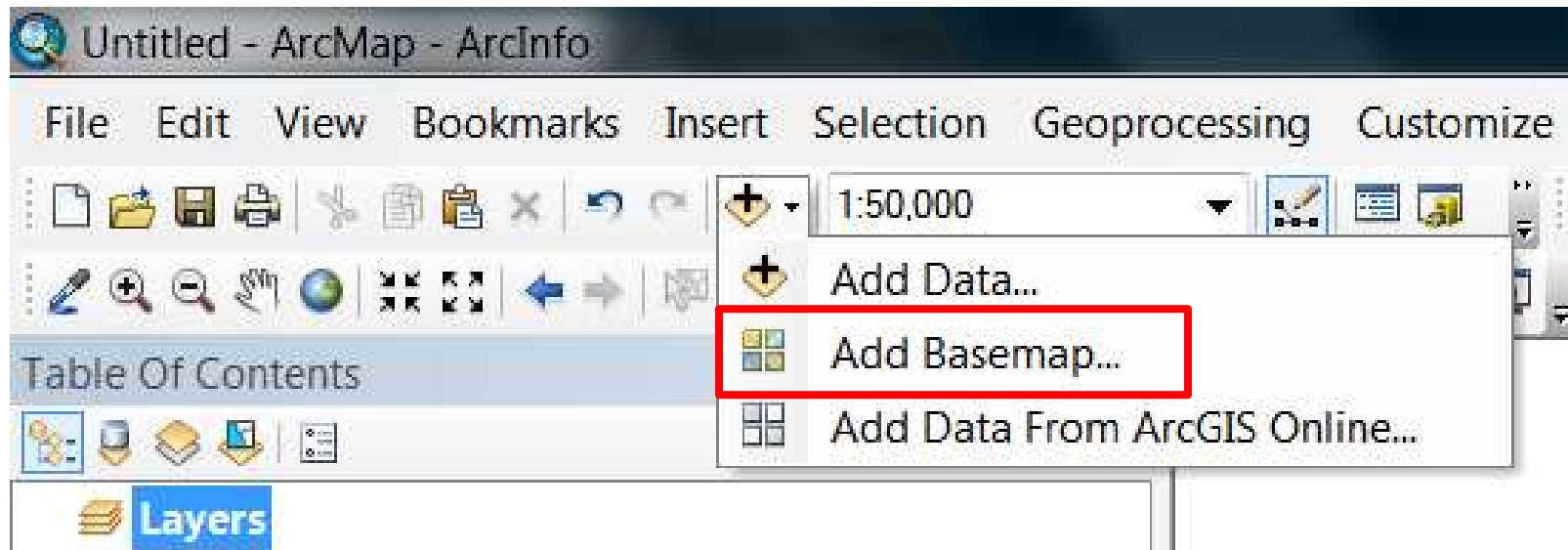
1. Upload and manipulate data
2. Map points, lines, and polygons
3. Create point and other thematic maps
4. Embed maps in web sites
5. Share maps and map layers in many ways
6. View maps on mobile devices



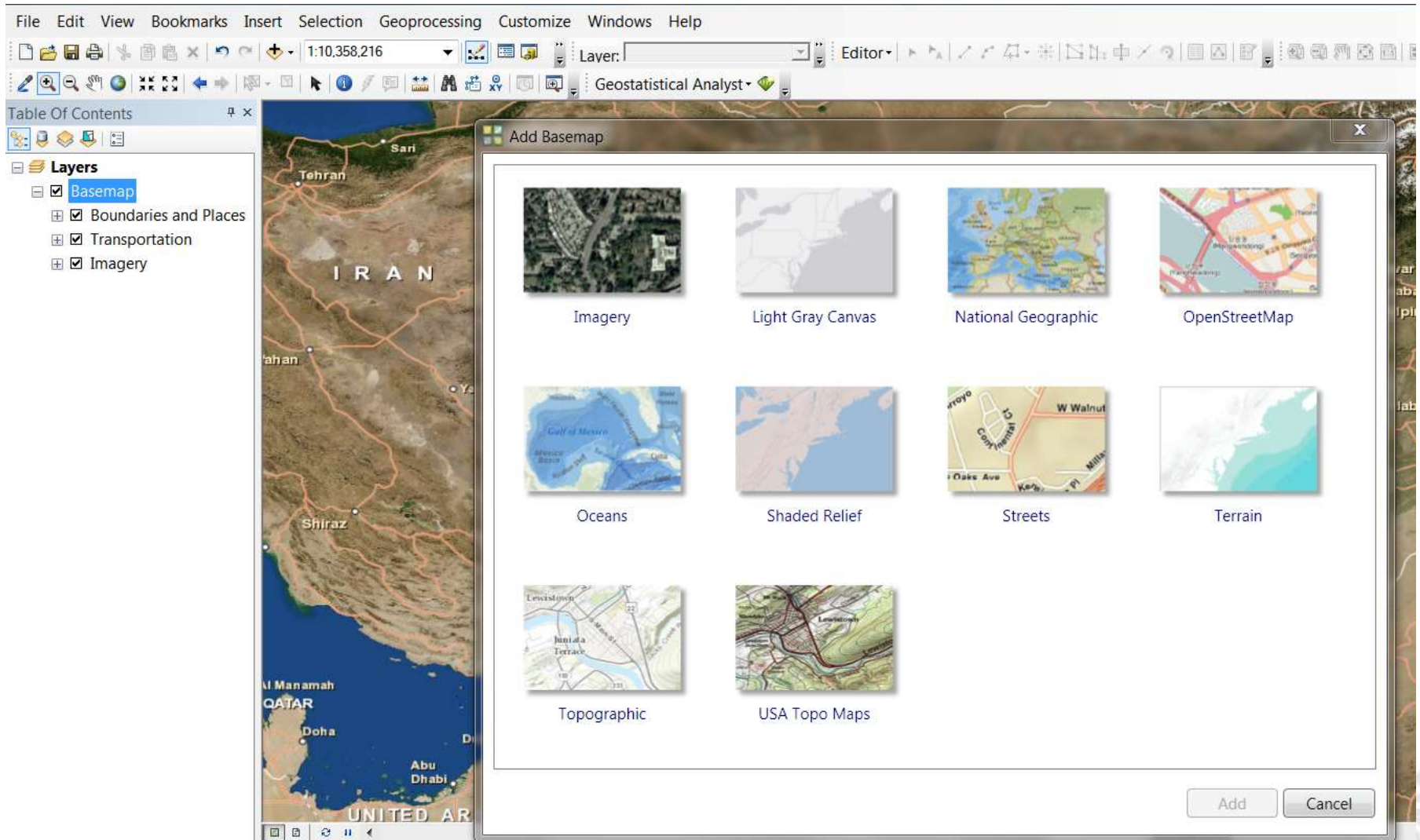
# What is ArcGIS Online?



# Access ArcGIS Online in ArcMap

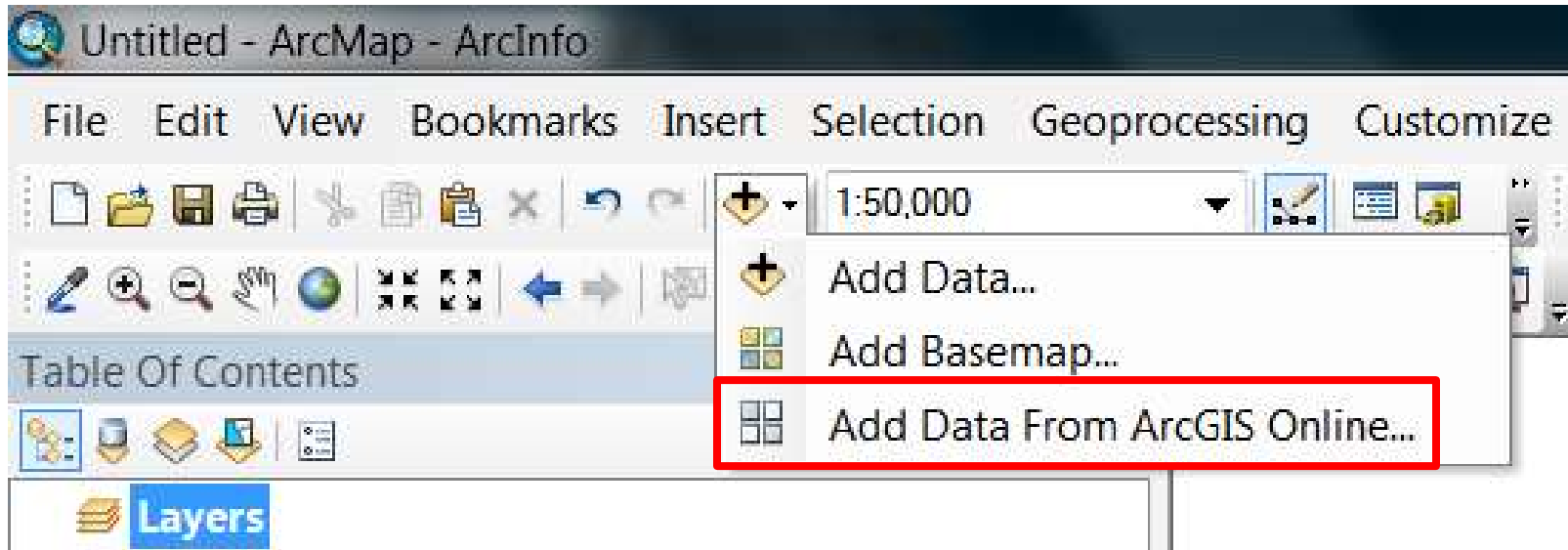


# Access ArcGIS Online in ArcMap



52 228 37

# Access ArcGIS Online in ArcMap





# Access ArcGIS Online in ArcMap



# What is ArcGIS Online?



# Access ArcGIS Online in your browser

Browser address bar: [www.arcgis.com/home/group.html?owner=AfghanMaps&title=Faryab Maps](http://www.arcgis.com/home/group.html?owner=AfghanMaps&title=Faryab%20Maps) DuckDuckGo

Navigation: Most Visited Getting Started Latest Headlines Google




ArcGIS FEATURES PLANS GALLERY MAP HELP Sign In

## Faryab Maps

JOIN THIS GROUP SHARE

Maps of Faryab Province, Afghanistan ▼

### Group Content

	Title ▲	Owner	Rating	Views	Date
<b>All Results</b> Maps Layers Apps Tools Files  <input type="checkbox"/> Show ArcGIS Desktop Content		Faryab Geology Map			
	Geological Map of Faryab, Afghanistan				
	Web Map by AfghanMaps				
	Last Modified: 11 July 2014				
		Faryab Groundwater Quality (EC)			
	Electrical Conductivity Map of Faryab Province, Afghanistan.				
	Web Map by AfghanMaps				
	Last Modified: 10 September 2014				
		Faryab Monitoring Wells			
	Monitoring Wells in Faryab Province, Afghanistan				
	Web Map by AfghanMaps				
	Last Modified: 11 September 2014				

Facebook Twitter

#### Group Details

AfghanMaps

Status: public

Contributors: All me

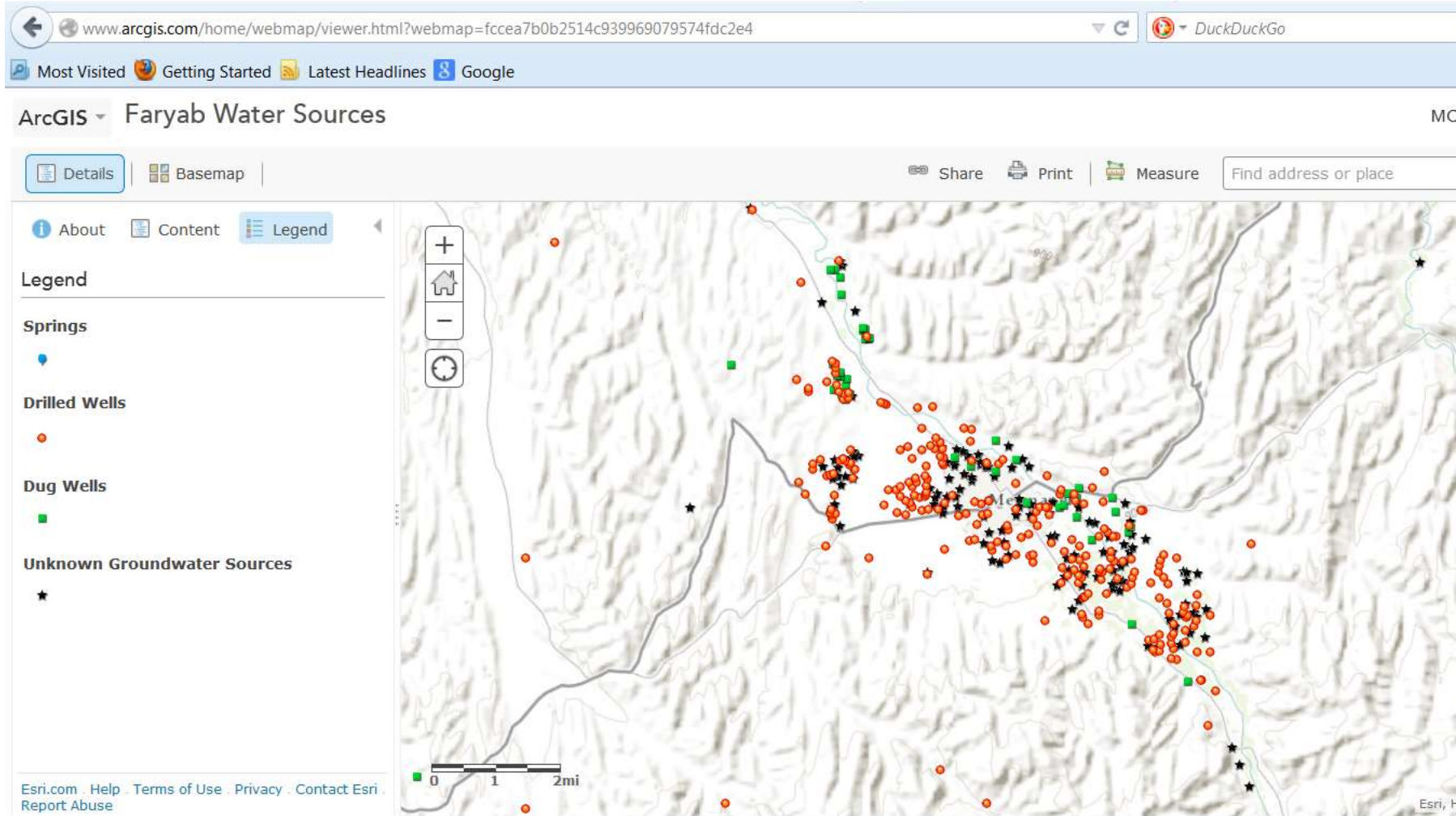
Tags:

Faryab, Afghanistan

1 Member

AfghanMaps

# Access ArcGIS Online in your browser






# Access ArcGIS Online in your browser

ArcGIS ▾ Faryab Water Sources

Details | Basemap

Share | Print | Measure



(2 of 2)

**Imagery provider: DigitalGlobe**

DATE (YYYYMMDD)	20110718
RESOLUTION (M)	0.50
ACCURACY (M)	10.20
DATA SOURCE	WV02

[Zoom to](#)

# Access ArcGIS Online via a web site

Project News Flash - Mozilla Firefox

Project News Flash

norplan.af/PageNewsflash.html

DuckDuckGo

Norplan in Afghanistan from 2012

HOME OBJECTIVE ACTIVITIES OUTPUTS FARYAB GENDER KEY ACTORS NEWS CONTACT US


RuWatSIP STAFF COORDINATION HYDROGEO. GIS-MIS WAT-SAN TRAINING MANAGEMENT PROGRESS

## PROJECT NEWS.


In this section, key project and sector events are listed for update of project progress.

**Key issues/dates:**

Project start Jan 2012



**Web Maps Online : September 2014**

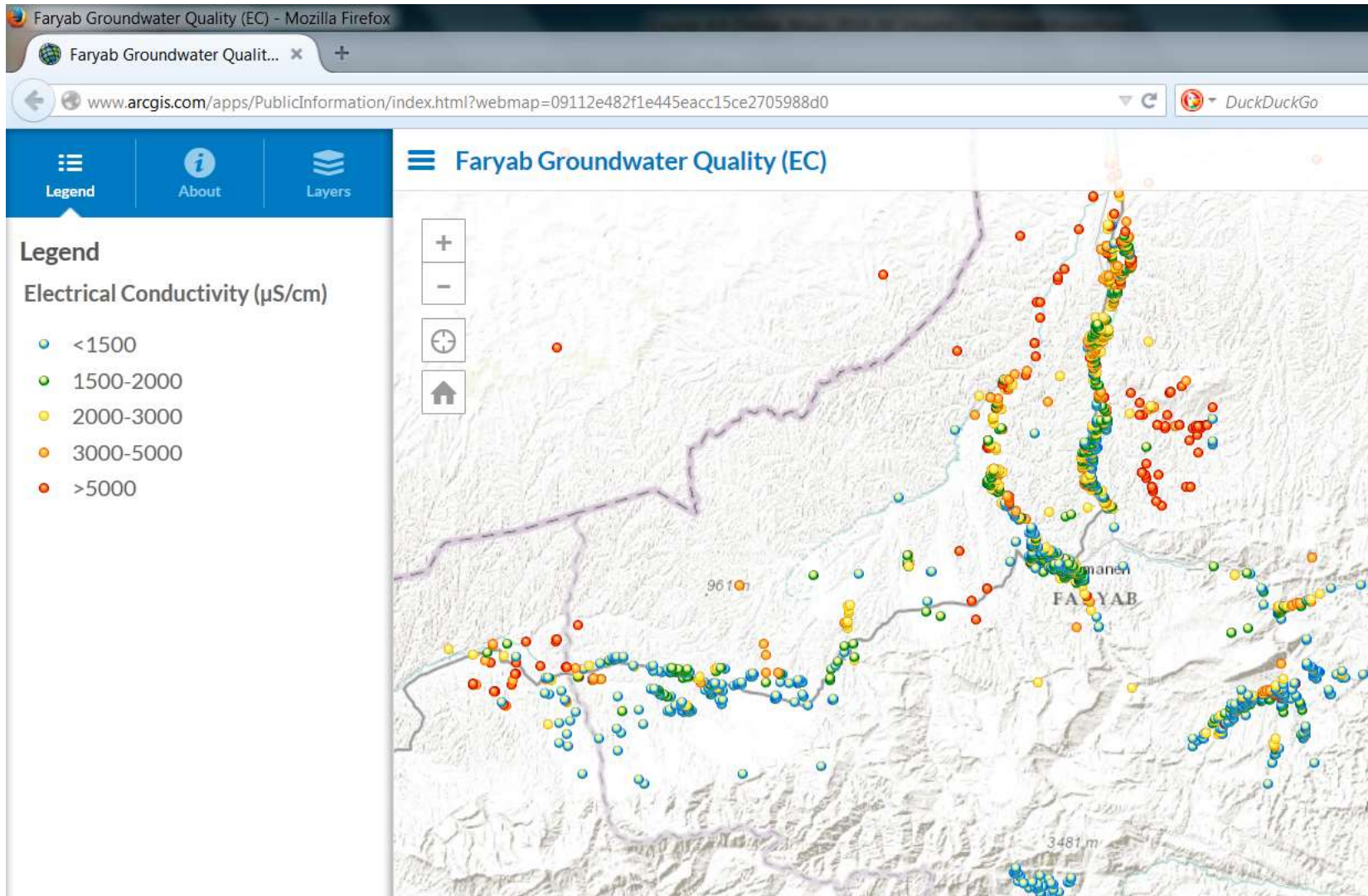


Now the first web maps have been put online. At the moment the online maps cover location and type of water points, depth to static water level, electrical conductivity and geology. Where other information is available such as well logs and water quality analysis these can be accessed online through direct links.

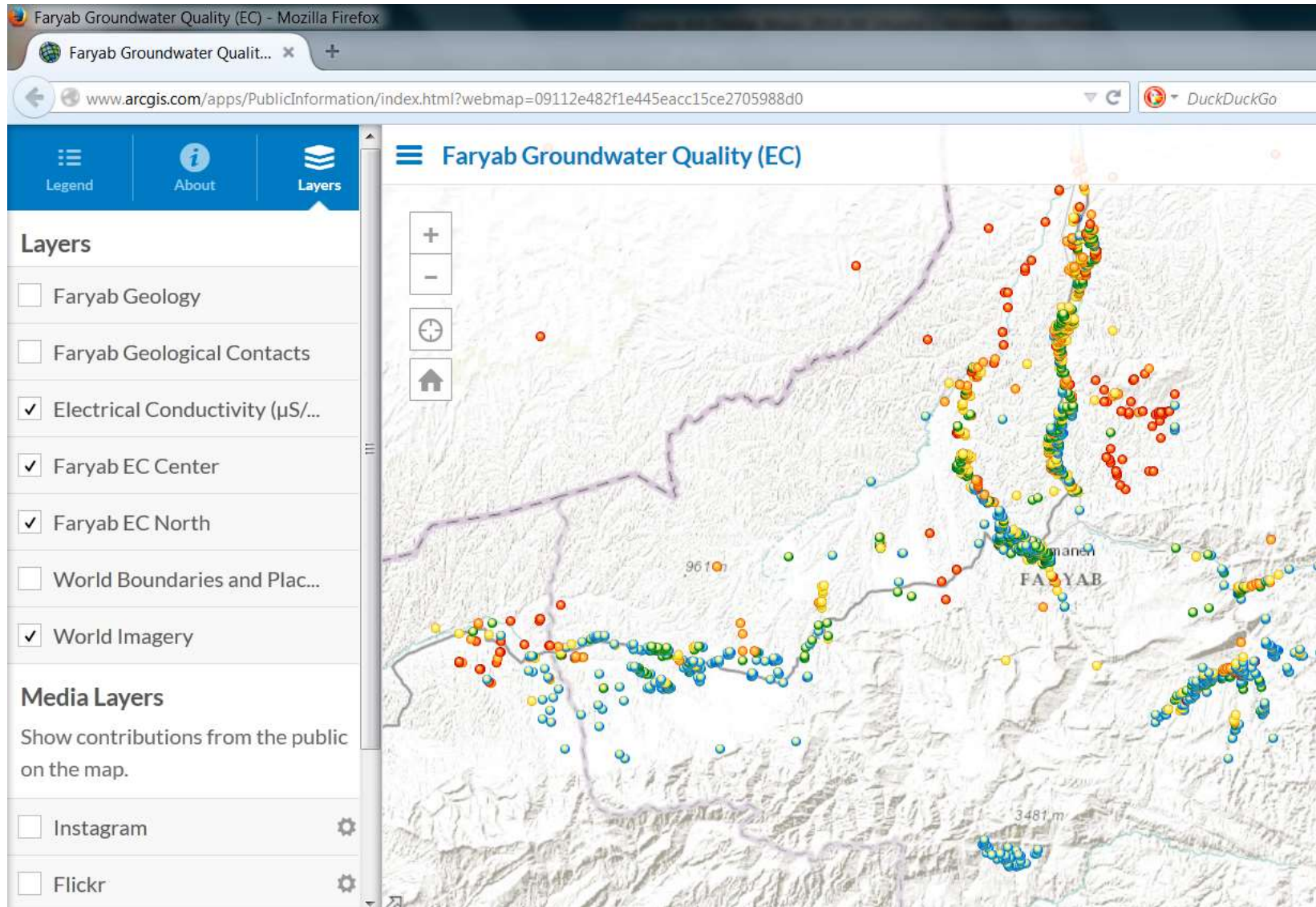
As you zoom in below scale of 1:80,000, high resolution images will appear to facilitate navigation and show where water points are relative to features such as building, canals and roads. Click to view links to [online maps](#)



# Access ArcGIS Online via a web site



# Access ArcGIS Online via a web site



# What is ArcGIS Online?



# Access ArcGIS Online on your phone



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# ArcGIS Online Accounts

The screenshot shows the ArcGIS Online Sign In page. A green arrow labeled '1' points to the '30-DAY FREE TRIAL' button under the 'Don't have an account?' section. A second green arrow labeled '2' points to the 'CREATE A PUBLIC ACCOUNT' button under the 'Not ready to subscribe?' section. To the right, a separate box shows the 'Sign In' form with fields for Username and Password, a 'Keep me signed in' checkbox, a 'SIGN IN' button, and links for 'Forgot username or password?' and 'Sign in with your enterprise login'.

https://www.arcgis.com/home/signin.html

ArcGIS FEATURES PLANS GALLERY MAP HELP

## Sign In

Don't have an account?

**Sign up for an ArcGIS subscription**

An ArcGIS subscription allows you to set up an online mapping portal for your organization.

**30-DAY FREE TRIAL**

**Not ready to subscribe?**

You can create an ArcGIS Public Account with limits on usage. Note that if you have an Esri Account then you already have an ArcGIS Public Account and you can just sign in.

**CREATE A PUBLIC ACCOUNT**

**Sign In** esri

**Username**

**Password**

☐ Keep me signed in

**SIGN IN**

[Forgot username or password?](#)

[Sign in with your enterprise login](#)

1. Subscription account (\$\$\$)
2. Public account



# ArcGIS Online accounts

	Subscription (Commercial and Non-Commercial Use)	Public Account (Non-Commercial Use Only)
	<a href="#">Free Trial</a> <a href="#">More Info »</a>	<a href="#">Sign Up Free</a> <a href="#">More Info »</a>
<a href="#">Access, share, and manage content</a>	✓	✓
Add your own data to maps	✓	✓
Add Geometry Service to maps & apps	✓	✓
Store maps, apps, and data in Esri's cloud	✓	2 GB Limit
Create private groups	✓	
Make maps in Excel with Esri Maps for Office	✓	
Perform spatial analysis	✓	
Add World Geocoding to maps & apps	✓	
Add World Network Analysis to maps & apps	✓	
Access ArcGIS Portal and Web Mapping APIs	✓	
Publish hosted services in Esri's cloud	✓	
Manage user roles, access, and security	✓	
Monitor usage information	✓	
Add your organization's logo and banner to your ArcGIS Online homepage	✓	
Display your organization's maps on your ArcGIS Online homepage	✓	
Create a custom URL for your ArcGIS Online homepage	✓	
Includes Technical Support	✓	
	<a href="#">Free Trial</a> <a href="#">More Info »</a>	<a href="#">Sign Up Free</a> <a href="#">More Info »</a>

# ArcGIS Online accounts – annual costs

Subscription Plan	Users Included (up to)	Service Credits Included	Price
Level 1	5	2,500	\$2,500
Level 2	50	10,000	\$10,000
Level 3	100	17,500	\$17,500

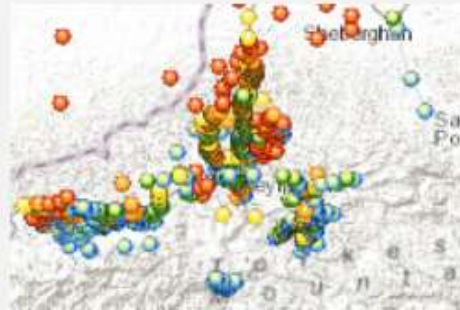
## Service

Map Tile Generation	1 credit per 1,000 tiles generated
Feature Services Storage	2.4 credits per 10 MB stored per month
Tile and Data Storage	1.2 credits per 1 GB stored per month
Geocoding	40 credits per 1,000 geocodes
Simple Routes	0.04 credits per simple route
Optimized Routes	0.5 credits per optimized route
Drive-Times (Service Areas)	0.5 credits per drive-time
Closest Facilities	0.5 credits per closest facilities route
Multi-Vehicle Routes (VRP)	1 credit per multi-vehicle route
Demographic and Lifestyle Maps	10 credits per 1,000 map requests
Data Enrichment	10 credits per 1,000 data variables (attributes)
Infographics	10 credits per 1,000 views
Reports	10 credits per report
Spatial Analysis	1 credit per 1,000 features

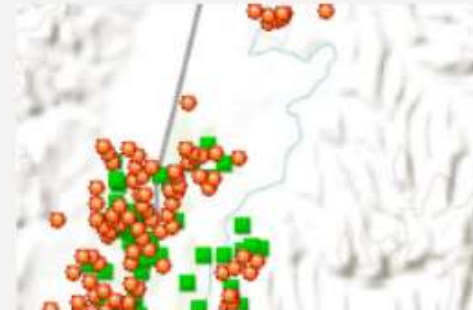
# All online Faryab maps use a free Public Account



Faryab Monitoring Wells



Faryab Groundwater Quality ...



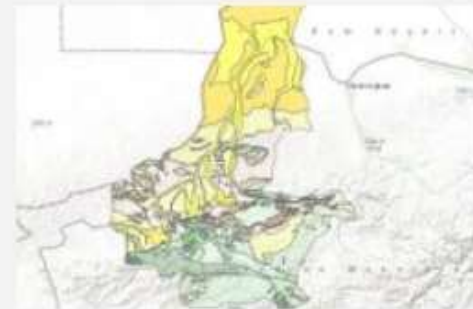
Faryab Water Sources



Faryab Rest Water Levels



Faryab Wells With Logs



Faryab Geology Map

Find them in the **Faryab Maps** group



# ArcGIS Online data types

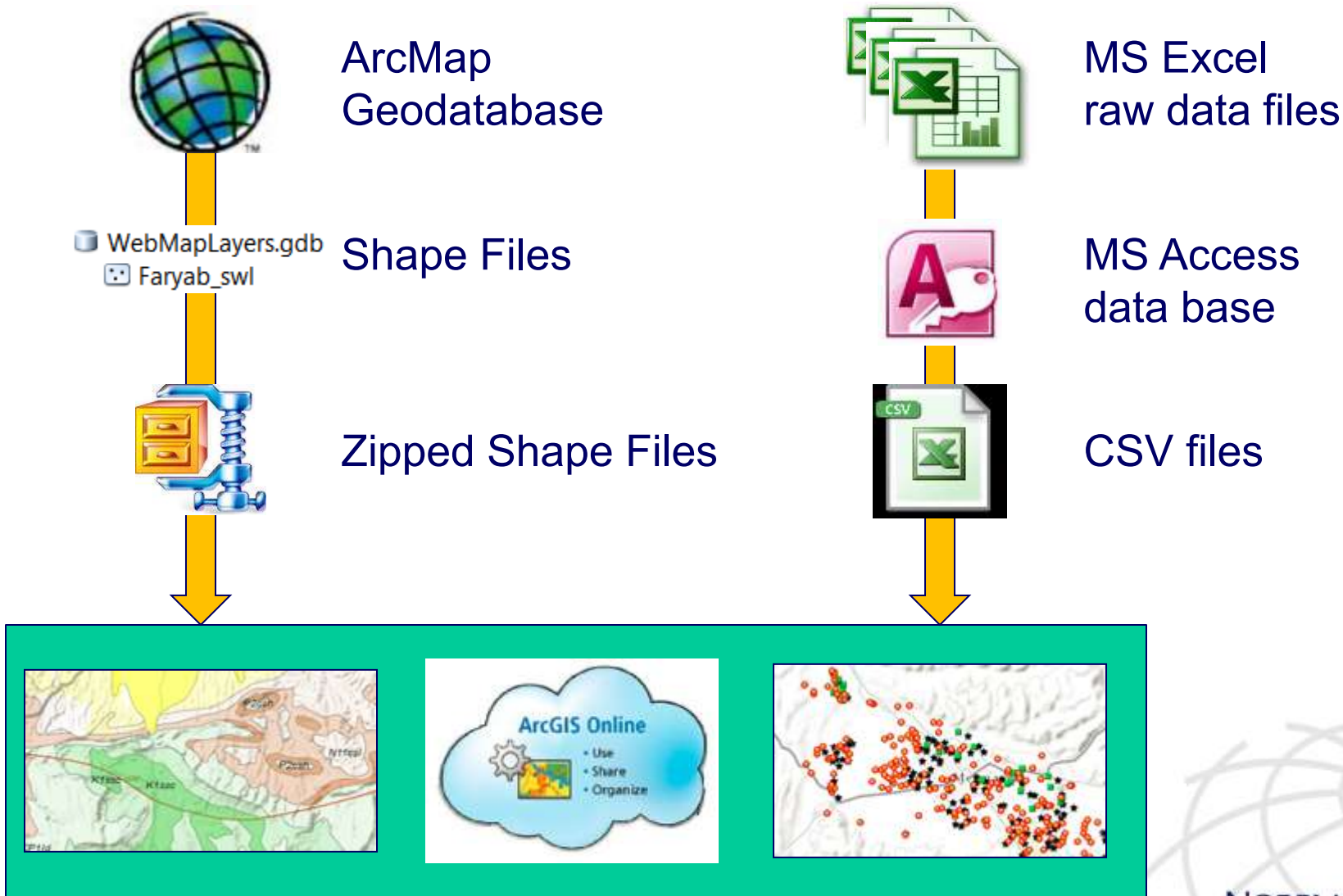


# Data limitations for free Public Accounts

1. You can upload a maximum number of 1,000 data points using latitude and longitude coordinates. These must be in decimal degrees.
2. You cannot upload rasters.  
Connect to WMS instead.
3. Be careful with date fields.  
They should be in the yyyy-mm-dd format.
4. Shapefiles should be in a zipped archive and have an uncompressed size of <10MB, and contain <1000 features.
5. An online map should have <10,000 features in total.

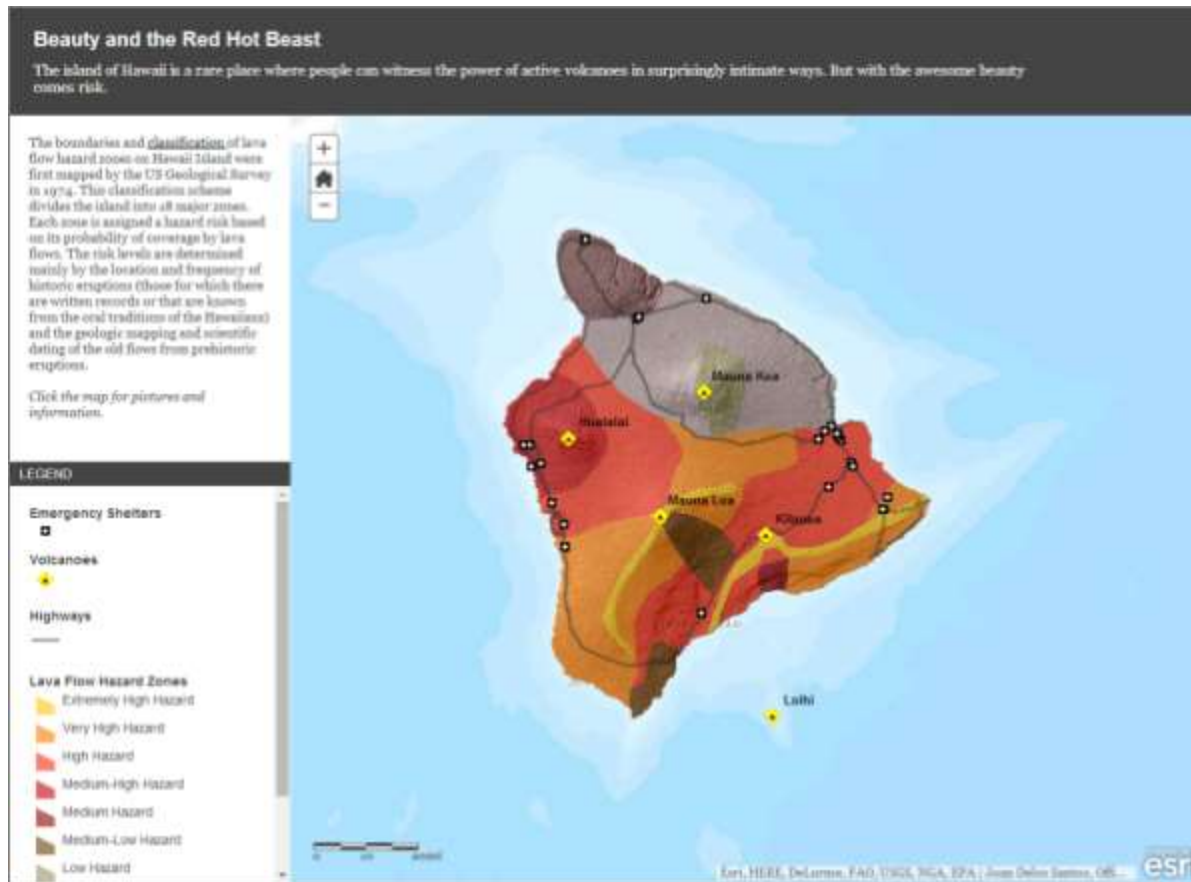


# Faryab Maps - Data Flow Paths





# PART 3 – ArcGIS Online tutorial



<http://learn.arcgis.com/en/projects/get-started-with-arcgis-online/>

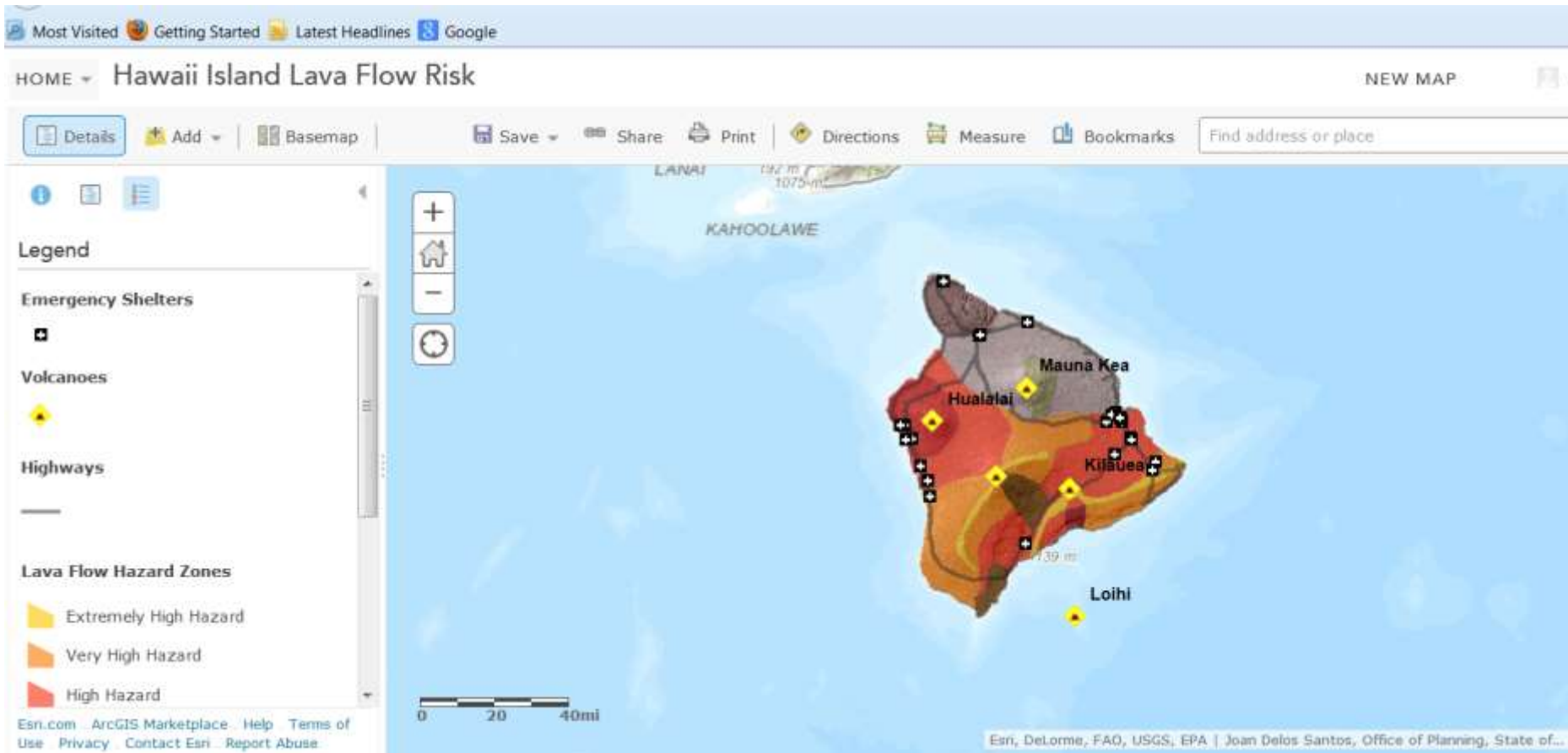
# Tutorial overview

1. Explore a map (15 minutes)
2. Create a map (30 minutes)
3. Add a layer from a CSV file (30 minutes)
4. Configure pop-ups (45 minutes)
5. Make an app (30 minutes)

Total time required ~ 2 ½ hours

You will need to open an account at:

*<http://learngis.maps.arcgis.com/home/index.html>*



**Good luck with the tutorial!**

**Thank you  
for your attention!**