

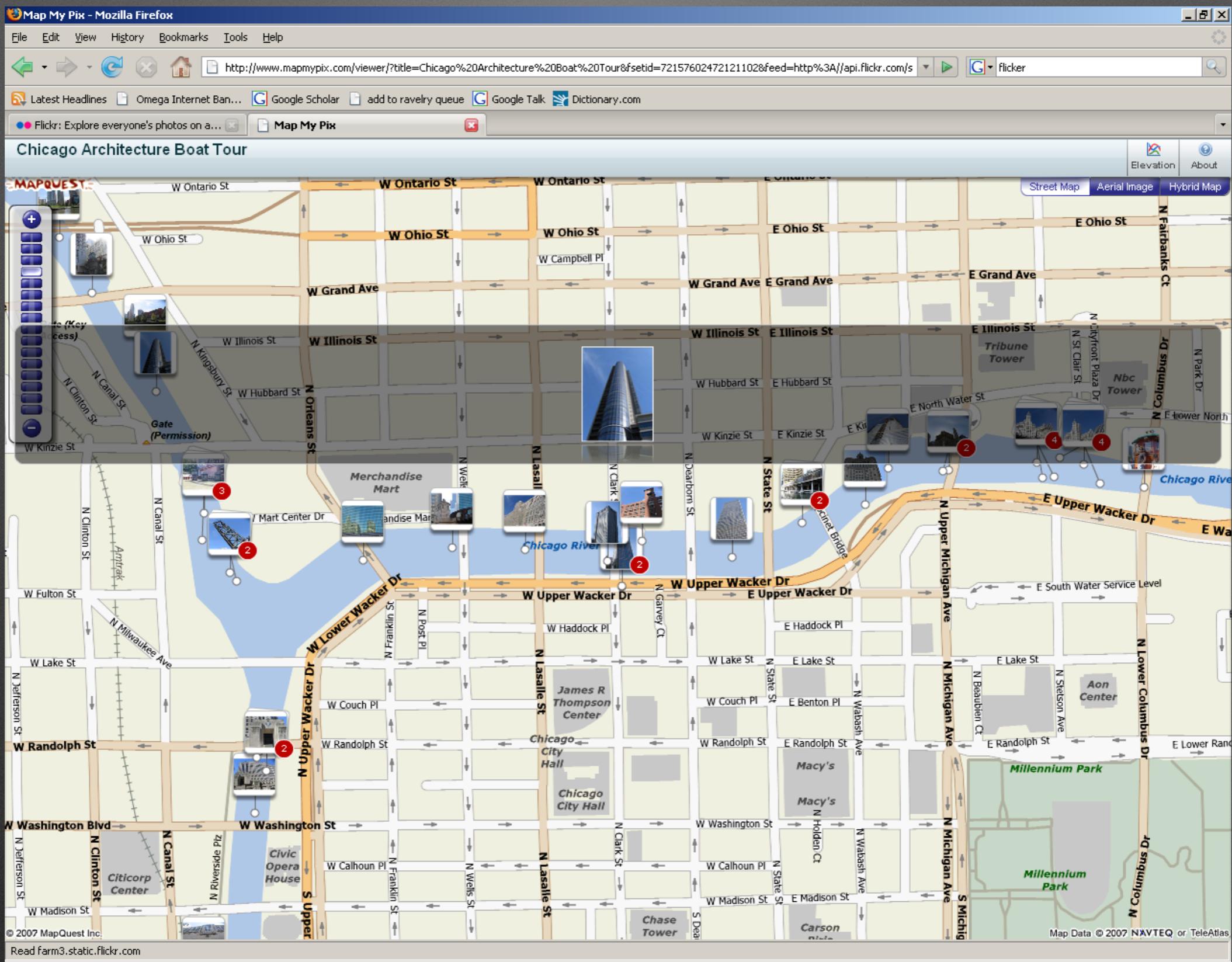
Mapping Mashups

Web Mapping APIs

“Mashups”

- What is a mashup?
- Heterogeneous data and software components combined to create a new application

Mashups



Mapping Mashups

Live Sports Map — Fan Bash - Mozilla Firefox

File Edit View History Bookmarks Tools Help

http://fanbash.com/map/ google maps mashup state college

Latest Headlines Omega Internet Ban... Google Scholar add to ravelry queue Google Talk Dictionary.com

FANBASH
SPORTS LISTS ANYONE CAN EDIT

Sports lists anyone can rank and edit
Coming soon — [find out more](#)

Live Sports Map

Live updating sports scores and news, plotted on a Google map with stadium/arena satellite views.

[Sports Lists](#) [Sports Blogs](#) [Athlete Blogs](#)

[Live Sports Map](#) [Send to friend](#)

Click the score **S** and news **N** indicators next to each sport to turn mapping on and off. Stadium and arena satellite zooms are available with all scores.

[MLB](#) [S N](#) [NASCAR](#) [N](#) [NBA](#) [S N](#) [NCAA Baseball](#) [N](#) [NCAA Basketball](#) [N](#) [NCAA Football](#) [N](#) [NCAA Hockey](#) [N](#) [NFL](#) [S N](#)
[NHL](#) [S N](#) [Olympic](#) [N](#) [Tennis](#) [N](#) [World Soccer](#) [N](#)

Map Satellite Hybrid

Mashups

Peruse Examples -

<http://googlemapsmania.blogspot.com>

Enabling Mashups

- Many data/software components easy to incorporate
- Some require programming (i.e javascript)
- Many do not
- Commercial open API and open source

Open API

- API – Application Programming Interface
- Closed source code
- Accessible to the public for use though
- Google Maps etc.

Google Maps API — Google Developers - Mozilla Firefox

File Edit View History Bookmarks Tools Help

google.com https://developers.google.com/maps/ Convert

Google Maps API — Google Developers

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Google Maps API Feedback on this document

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Developer Showcase

Explore the most innovative sites built using the Google Maps API.

Easily add maps functionality to your site in three steps.

InstaEarth Conan O'Brien Blimp Tracker Domestos Flush Tracker Street with a View

Maps Without Maps Zappos STREET CYCLONE

Add a map to your site!

Done

<https://developers.google.com/maps/>

Bing Maps APIs, SDK, and application development tools - Mozilla Firefox

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Convert

M Bing Maps APIs, SDK, and application...

bing

Home Product Details Customer Gallery Solutions For Developers For Partners Learn More Search this site bing

 Marriott

See Featured Solutions

BING MAPS NOW *EASIER THAN EVER*

Mapping development just got a whole lot easier. With the Bing Maps AJAX Control 7.0, Spatial Data Services, and mobile SDKs, you can build simple or complex maps that render fast, feature stunning imagery, and are pinpoint accurate.

What else is new?

- Mobile SDKs for Windows Phone 7, Android, and iOS.
- Unique Bird's eye view and rich aerial photography that brings your map to life.
- Customizable nav controls that give Bing Maps APIs increased flexibility.

Upcoming Events

[Bing Maps Platform in the Enterprise: Experience the Value \(EPG339CAL\)](#)

[Microsoft's Geospatial Tool Kit – Bing Maps & SQL Server \(EPG340CAL\)](#)

Bing helps **you** create powerful websites.

Transferring data from www.microsoft.com...

<http://www.microsoft.com/maps/>

Location and Maps | Android Developers - Mozilla Firefox

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Location and Maps | Android Developers

Developers Design Develop Distribute Strategies --> Open Distribution

Android Training API Guides Reference Tools

Overview -->

App Components

User Interface

App Resources

Animation and Graphics

Computation

Media and Camera

Location and Sensors

Location and Maps

Location Strategies

Sensors Overview

Location and Maps

Location and maps-based applications are compelling for mobile device users. You can build these capabilities into your applications using the classes of the `android.location` package and the Google Maps external library. The sections below provide details.

Location Services

Android gives your applications access to the location services supported by the device through the classes in the `android.location` package. The central component of the location framework is the `LocationManager` system service, which provides APIs to determine location and bearing of the underlying device (if available).

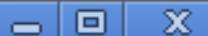
QUICKVIEW

- Android provides a location framework that your application can use to determine the device's location and bearing and register for updates
- A Google Maps external library is available that lets you display and manage Maps data

TOPICS

[Location Strategies](#)

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ArcGIS Web Mapping

[JavaScript](#)[Flex](#)[Silverlight/WPF](#)[Pricing](#)

Design Web Maps on Your Preferred Platform

ArcGIS Web Mapping APIs is a collection of APIs to build and embed interactive maps in your website. You can mashup online services, GeoRSS and social media feeds, and tools and widgets to create custom web maps.

The Web Mapping APIs are

- [ArcGIS API for JavaScript](#)
- [ArcGIS API for Flex](#)
- [ArcGIS API for Silverlight/WPF](#)

Development with the APIs is free. Deployment is also free under certain conditions. Find out more about [pricing](#).

Live User Sites

[Savannah Development Agency](#)

Apple - iOS 6 - All-new, Apple

www.apple.com/ios/maps/

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Store Mac iPod iPhone iPad iTunes Support

iOS Overview What's New What is iOS



Maps

Maps take a whole new turn.

Designed by Apple from the ground up, Maps gives you turn-by-turn spoken directions, interactive 3D views, and the stunning Flyover feature.¹ All of which may just make this app the most beautiful, powerful mapping service ever.



<http://www.apple.com/ios/maps/>

Comment

45

Like

128

Tweet

445

Share

18

+1

25

Apple: iOS 6 Maps Is A First Attempt, We're "Just Getting Started"



DARRELL ETHERINGTON

Thursday, September 20th, 2012

45 Comments



Apple has finally broken silence on the customer reaction to Maps in iOS 6, which **spawned** **Tumblrs**, fake Twitter accounts and generally a lot of mockery and confusion. The statement, provided to **AllThingsD** from Apple spokeswoman Trudy Miller, essentially says this is a first try, and Apple knows there's lots to do to make it better.

Here's the statement in full:

Customers around the world are upgrading to iOS 6 with over 200 new features including Apple Maps, our first map service. We are excited to offer this service with innovative new features like Flyover, turn

by turn navigation, and Siri integration. We launched this new map service knowing it is a major initiative and that we are just getting started with it. Maps is a cloud-based solution and the more people use it, the better it will get. We appreciate all of the customer feedback and are working hard to make the customer experience even better.

Understandably, this downplays the bad and tries to put focus back on the features of iOS 6 Maps that Apple has wanted to focus on all along. But the fact remains that irate users are unlikely to get over things owing to a simple call for patience. I'm thinking this isn't the last we'll hear from Cupertino on this issue, which isn't likely to go away overnight.

Open Source

- Source Code Available
- Community of developers add value
- Examples – GeoServer, WorldWind

Welcome - GeoServer

geoserver.org/display/GEOS/Welcome

BT Bookmarks Google Bookmark Other bookmarks

Log In

GeoServer

About | Blog | Download | Documentation | Search GeoServer...

Dashboard GeoServer Welcome

Welcome

December 20, 2010: [GeoServer 2.1-beta3 released!](#) See what's new...

GeoServer is an open source software server written in Java that allows users to share and edit geospatial data. Designed for interoperability, it publishes data from any major spatial data source using open standards.

Being a community-driven project, GeoServer is developed, tested, and supported by a diverse group of individuals and organizations from around the world.

GeoServer is the reference implementation of the Open Geospatial Consortium (OGC) Web Feature Service (WFS) and Web Coverage Service (WCS) standards, as well as a high performance certified compliant Web Map Service (WMS). GeoServer forms a core component of the Geospatial Web.

[Learn more about GeoServer](#)

CERTIFIED OGC® COMPLIANT

WCS 1.0
WMS 1.1.1
WFS 1.0

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Documentation » Users Manual » Developers Manual

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geoserver.org

<http://geoserver.org>

GeoTools The Open Source Java GIS Toolkit

geotools.org

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 **GeoTools**



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GeoTools The Open Source Java GIS Toolkit

GeoTools is an open source Java library that provides tools for geospatial data.

 [Quickstart](#)  [Documentation](#)  [Get Involved](#)  [About GeoTools](#)

News

[Help the swing module to speak your language](#)
We are adding support for localized text strings to the gt-swing module to ...
[Current work on the gt-swing module](#)
The gt-swing module, which provides GUI widgets for GeoTools applications, ...
[GeoTools 8.0-M1 Released](#)
The GeoTools 8.0-M1 release is now available on sourceforge for download:ge...





If you are looking for [geotools.com](#) or [geotools.net](#) you are in the wrong spot!

<http://geotools.org/>

World Wind JAVA SDK

worldwind.arc.nasa.gov/java/

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NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

NASA World Wind

open source * cross platform * open standards

World Wind Java SDK

Welcome:
Here you will find the World Wind SDK for Java. With this, developers can embed World Wind technology in their own applications.

Many resources are available at goworldwind.org to help you understand and use World Wind.

Current releases:

[World Wind Java SDK 1.2](#)
[World Wind Java SDK Daily Builds](#)

Developer links:

[Developer resources and more at goworldwind.org](#)
[World Wind Java public SVN server](#)

Download World Wind Java SDK 

View Online HTML API Documentation

NASA World Wind Java Demo Applications & Applets 

<http://worldwind.arc.nasa.gov/java/>

Open Standards

- Open Geospatial Consortium (OGC)
- Standards to allow mapping applications to “talk to each other”
- New way to share all data type we talked about earlier in semester
- Rooted in raster, vector GIS data models
- XML based (in most cases)



<http://www.opengeospatial.org/>

WMS

- Web Map Services
- XML based
- Official OGC Standard
- Defines protocols for sharing maps over the internet

Google News - Mozilla Firefox

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http://news.google.com/nwshp?hl=en&tab=wn

Latest Headlines Omega Internet Ban... Google Scholar add to ravelry queue Google Talk Dictionary.com

flickrvision Google News

Web Images Maps News Shopping Gmail more ▾

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Google News Search News Search the Web

Search and browse 4,500 news sources updated continuously.

News archive search | Advanced news search | Blog search

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Edit this personalized page

Zimbabwe Opposition Blocked From Filing Lawsuit New York Times - 4 hours ago

By THE NEW YORK TIMES JOHANNESBURG, South Africa - Police officers prevented lawyers representing the opposition party, which claims to have won a national election on March 29, from entering Zimbabwe's High Court on Saturday to file a lawsuit to force ...

Mugabe Faces an Uphill Battle in Presidential Runoff (Update5) Bloomberg

Tsvangirai Accuses Mugabe of Preparing 'War' Against Zimbabweans Voice of America

The Associated Press - Times Online - BBC News - Los Angeles Times all 4,096 news articles »

President Bush in Russia for Talks with President Putin Voice of America - 2 hours ago

By VOA News US President George W. Bush has arrived in Russia's Black Sea resort of Sochi for talks with President Vladimir Putin on future relations between their two countries as both men conclude their terms of office.

Video: Bush arrives in Sochi for farewell talks with Putin RussiaToday

Missile plan on Bush-Putin agenda BBC News

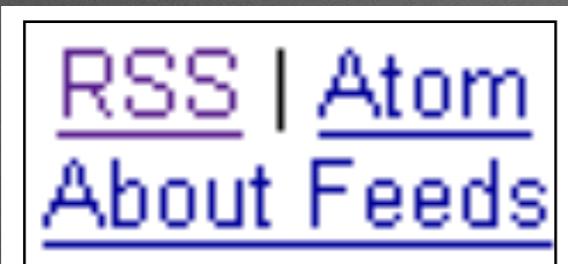
CNN International - ABC Online - Bloomberg - Monsters and Critics.com all 1,573 news articles »

In The News

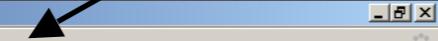
Vladimir Putin Roy Williams

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Done



Closeup



Google News - Mozilla Firefox

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http://news.google.com/nwshp?hl=en&tab=wn&output=rss&ned=:ePkh8BM9EwLbwQq0w4CFOFuMBN5P:

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Zimbabwe Opposition Blocked From Filing Lawsuit - New York Times

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Video: Bush arrives in Sochi for farewell talks with Putin RussiaToday

Missile plan on Bush-Putin agenda BBC News

CNN International - ABC Online - Bloomberg - Monsters and Critics.com all 1,573 news articles »

GeoRSS

- GeoRSS – RSS with Geographic Component
- GML – Geographic Markup Language

```
<georss:where>
  <gml:Point>
    <gml:pos>45.256 -71.92</gml:pos>
  </gml:Point>
</georss:where>
```

<http://www2.monroecounty.gov/911/rss.php>

Server-based Data Import URLs

- <https://viewer.nationalmap.gov/services/>
- WMS - <https://basemap.nationalmap.gov/arcgis/services/USGSTopo/MapServer/WMSServer?request=GetCapabilities&service=WMS>
- ArcGIS Server- <https://basemap.nationalmap.gov/arcgis/rest/services/USGSTopo/MapServer>

ArcGIS JavaScript API

- There have been many different viewer technologies and the latest is html5 and JavaScript which has replaced flex and silverlight
- There are a few reasons
 - No plugins needed
 - Mobile friendly
 - Robust tools
 - Easily customizable



Active Shooter Drill 2014 Points

H
Helicopter Landing Zone

ICP
Incident Command Post

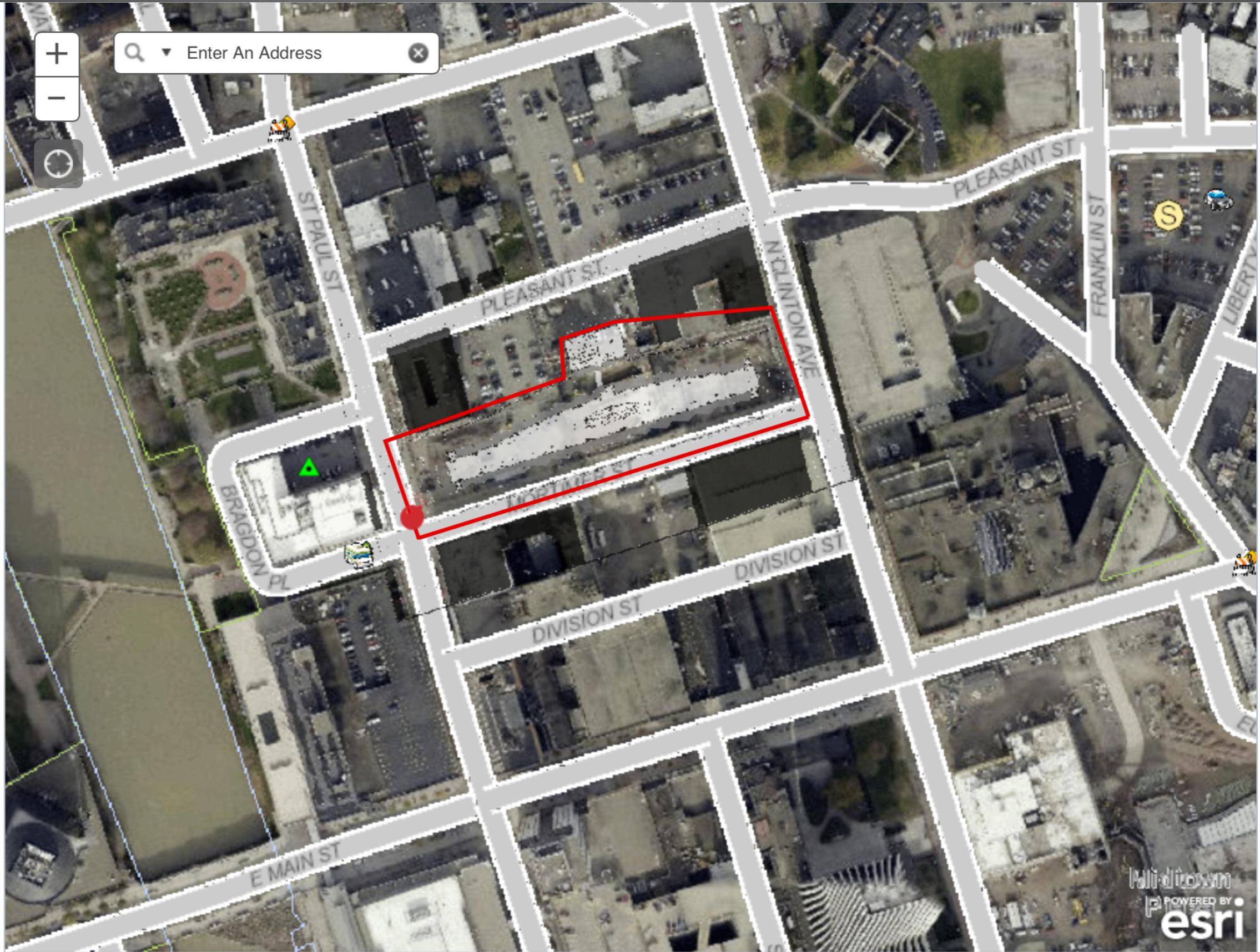
RB
Road Block

EMS

MCU-4

Team

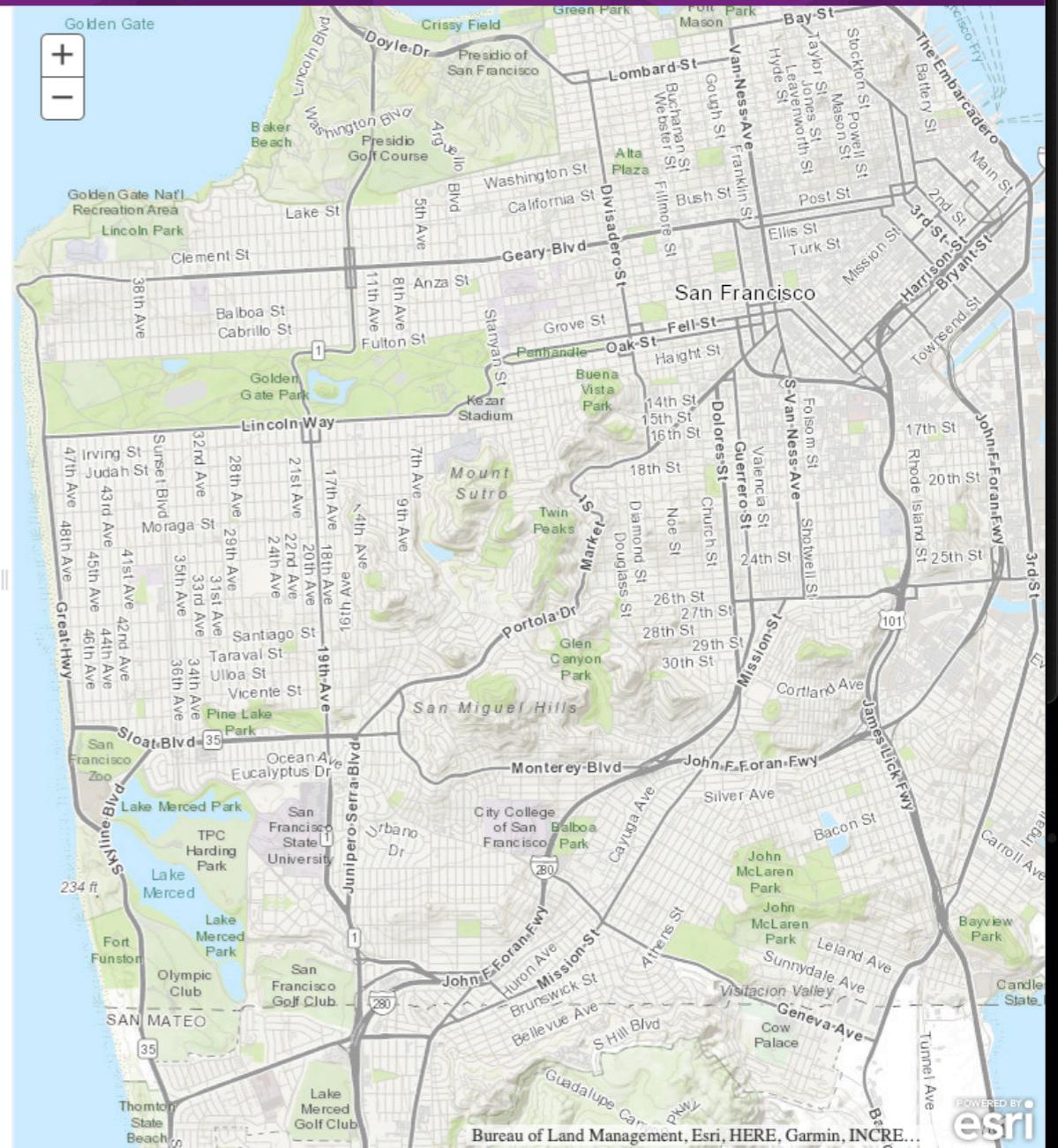
S
Shooter



ArcGIS API for JavaScript Sandbox

[DESCRIPTION](#)[DOWNLOAD](#)[CODEPEN](#)[REFRESH](#)

```
1 <!DOCTYPE html>
2 <html>
3   <head>
4     <meta http-equiv="Content-Type" content="text/html; charset=utf-8">
5     <meta name="viewport" content="initial-scale=1, maximum-scale=1,user-scalable=no"/>
6     <title>Simple Map</title>
7     <link rel="stylesheet" href="https://js.arcgis.com/3.34/esri/css/esri.css">
8     <style>
9       html, body, #map {
10         height: 100%;
11         margin: 0;
12         padding: 0;
13     }
14   </style>
15   <script src="https://js.arcgis.com/3.34/"></script>
16   <script>
17     var map;
18
19     require(["esri/map", "dojo/domReady!"], function(Map) {
20       map = new Map("map", {
21         basemap: "topo", //For full list of pre-defined basemaps, navigate to http://arcg.is/1JV06Wd
22         center: [-122.45, 37.75], // longitude, latitude
23         zoom: 13
24       });
25     });
26   </script>
27 </head>
28
29 <body>
30   <div id="map"></div>
31 </body>
32 </html>
```



Open "<https://developers.arcgis.com/javascript/3/>" in a new tab

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<https://developers.arcgis.com/javascript/3/sandbox/sandbox.html>

Hands on Activity

- Using the JavaScript Sandbox we are going to make a basic web application.
- https://developers.arcgis.com/javascript/jshelp/intro_firstmap_amd.html
- After you create your first application we will use an ArcGIS Web Map as a base
- https://developers.arcgis.com/javascript/jshelp/intro_agstemplate_amd.html

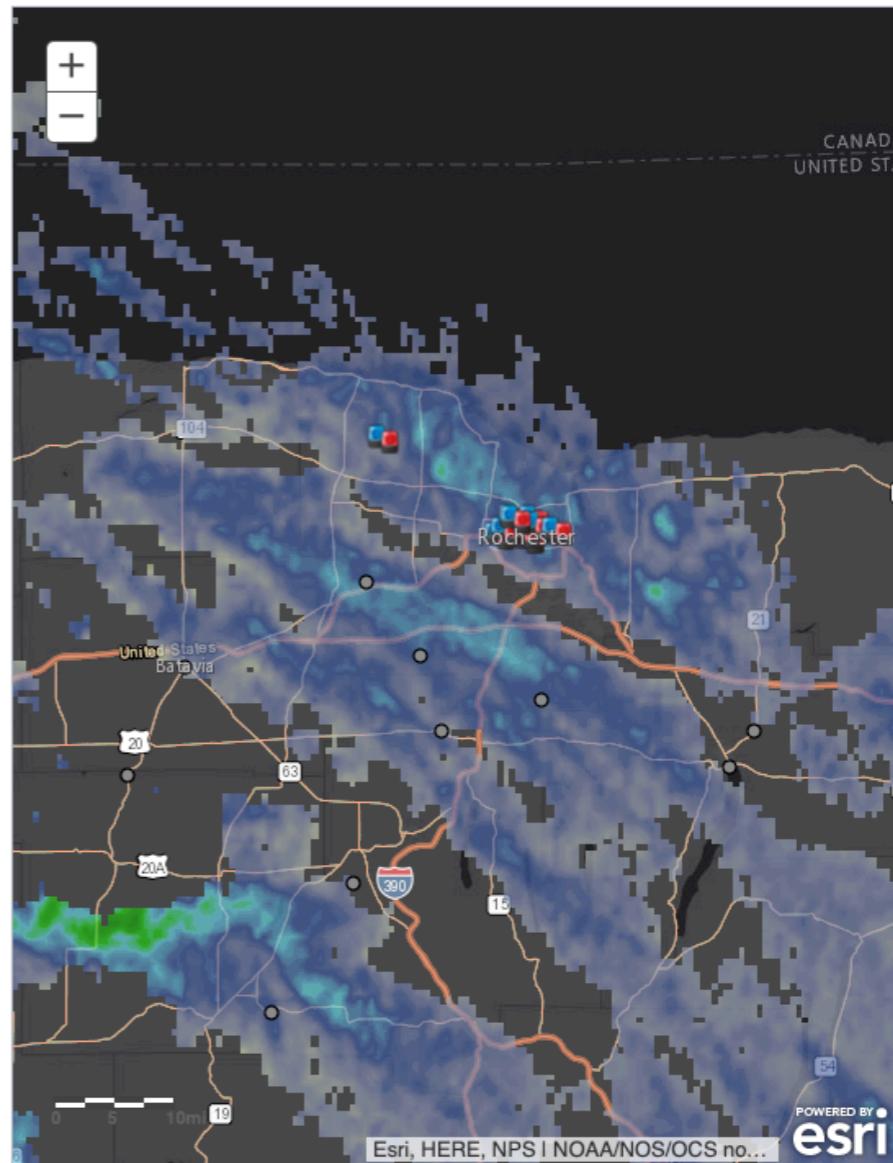
Using an ArcGIS WebMap

- Build it in ArcGIS Online
- In your application change webmapId = "1a40fa5cc1ab4569b79f45444d728067"; to your webmapID
- To find the web map ID look at the URL
- <https://ritarcgis.maps.arcgis.com/home/webmap/viewer.html?webmap=a1c1954f39ce451c8d5711673c806f96>

```

17 "dijit/layout/BorderContainer",
18 "dijit/layout/ContentPane",
19 "dojo/dom",
20 "esri/map",
21 "esri/urlUtils",
22 "esri/arcgis/utils",
23 "esri/dijit/Legend",
24 "esri/dijit/Scalebar",
25 "dojo/domReady!"
26 ], function (
27   parser,
28   ready,
29   BorderContainer,
30   ContentPane,
31   dom,
32   Map,
33   urlUtils,
34   arcgisUtils,
35   Legend,
36   Scalebar
37 {
38   ready(function () {
39     parser.parse();
40     //if accessing webmap from a portal outside of ArcGIS Online, uncomment and replace path with
41     //portal URL
42     //arcgisUtils.arcgisUrl = "https://path/to/portal/sharing/content/items";
43     arcgisUtils.createMap("20c168f5937142ffa245c7710a8a77f3", "map").then(function (response) {
44       //update the app
45       dom.byId("title").innerHTML = response.itemInfo.item.title;
46       dom.byId("subtitle").innerHTML = response.itemInfo.item.snippet;
47
48       var map = response.map;
49
50       //add the scalebar
51       var scalebar = new Scalebar({
52         map: map,
53         scalebarUnit: "english"
54       });
55
56       //add the legend. Note that we use the utility method getLegendLayers to get
57       //the layers to display in the legend from the createMap response.
58       var legendLayers = arcgisUtils.getLegendLayers(response);
59       var legendDijit = new Legend({
60         map: map,
61         layerInfos: legendLayers
62       }, "legend");
63       legendDijit.startup();
64     });
65   });
66 }
67 );
68 });
69 });
70 
```

Weather Status



- NYSEG Outages**
- | Color | Level |
|--------|-------|
| Blue | Low |
| Yellow | High |
- Forecast River Flood Status (AHPS)**
- Major Flooding
 - Moderate Flooding
 - Minor Flooding
 - Near Flood
 - No Flooding
 - Flood
 - Category Not Defined
 - At or Below
 - Low Water Threshold
 - Forecasts
 - Are Not Current
 - No Forecast Within

Using the Applications Outside Of Sandbox

- Click Download or Copy the Code to a text editor
- Change the extension to html
- Copy to your web folder
- type in url and see how it works

Discussion Assignment

- Create a JavaScript Web Mapping Application using the esri JavaScript API and the sandbox.
- I would suggest using the Webmap that you created for the hydrants because you already have it, but you can create a new one if you want.
- Post a screenshot of your sandbox application