

Advanced Mapping apps for Windows Store and Phone

Location, location, location

Morten Nielsen - @dotMorten

Client Dev MVP



Agenda

- ▶ Putting a map on your app - 101
 - ▶ Built-in map control
 - ▶ ArcGIS Map control
- ▶ Picking a basemap
- ▶ Adding your own data
- ▶ Putting your data in the cloud
- ▶ GPS
- ▶ The bits, licensing, misc...
- ▶ Q & A

DEMO

Building our first map app

A photograph of a map spread out on a table, with a pen resting on it. The map shows various streets, landmarks, and geographical features. The image is overlaid with a semi-transparent green filter and a decorative green geometric pattern on the right side.

Creating a simple map

Windows Phone:

```
xmlns:maps="using:Windows.UI.Xaml.Controls.Maps"
```

...

```
<maps:MapControl MapServiceToken="MYTOKEN"  
    Style="Aerial" >  
</maps:MapControl>
```

Windows Store:

```
xmlns:maps="using:Bing.Maps"
```

...

```
<maps:Map Credentials="MYTOKEN"  
    MapType="Aerial" >  
</maps:Map>
```

Creating a simple map - ArcGIS style

```
xmlns:esri="using:Esri.ArcGISRuntime.Controls"  
xmlns:layers="using:Esri.ArcGISRuntime.Layers"
```

```
...
```

```
<esri:MapView>  
  <esri:Map>  
    <layers:ArcGISTiledMapServiceLayer  
      ServiceUri="http://.../World_Imagery/MapServer"/>  
    </esri:Map>  
</esri:MapView>
```

OOTB Maps vs. Esri Maps

Windows Phone

Doesn't require additional packages

Has default map data

Shared map storage

Windows Phone only

Longitude/latitudes, always Mercator

Limited support for data

GPS location/centering: Write it yourself

Free*

Windows Store

Microsoft download

Has default map data

Map storage per app

Windows Store Only

Longitude/latitudes in Mercator

Limited support for data

Write it yourself

Free*

Esri

3rd party component

Must specify map data

Map storage per app

Phone, Store, WPF

Any projection

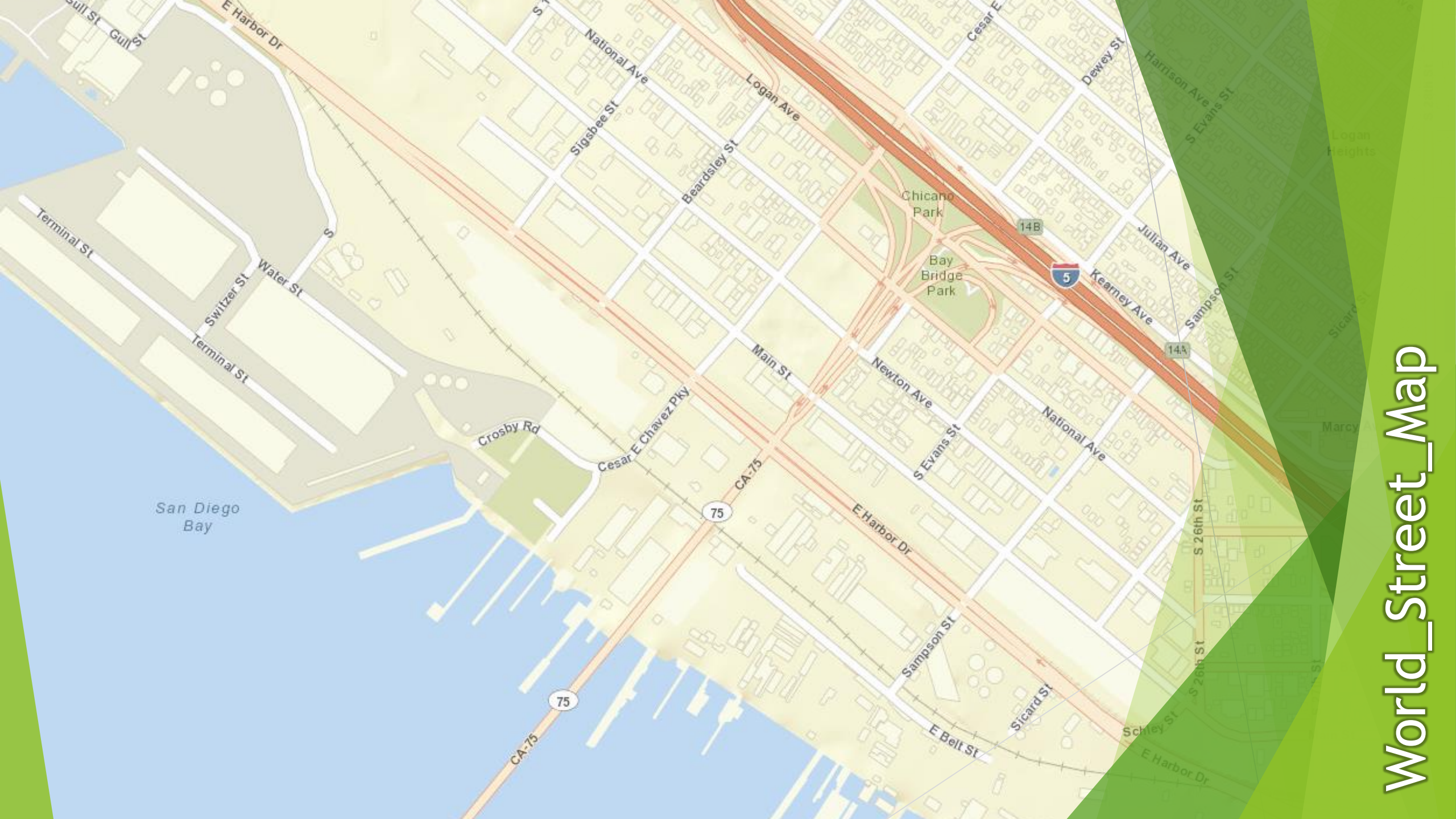
Many data formats +
extensible

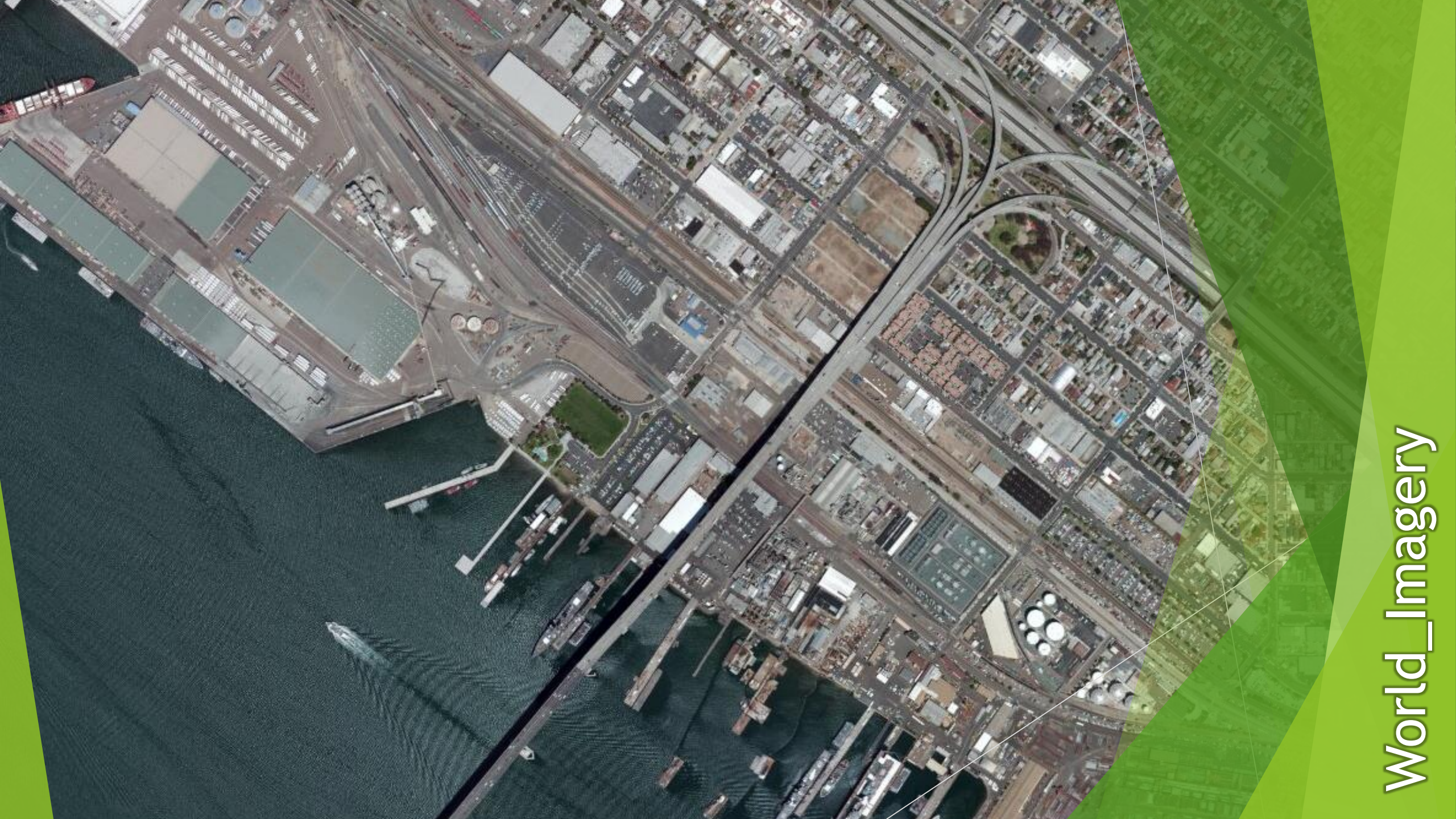
Flip a switch

Free*

Available Map Services

<http://services.arcgisonline.com/>

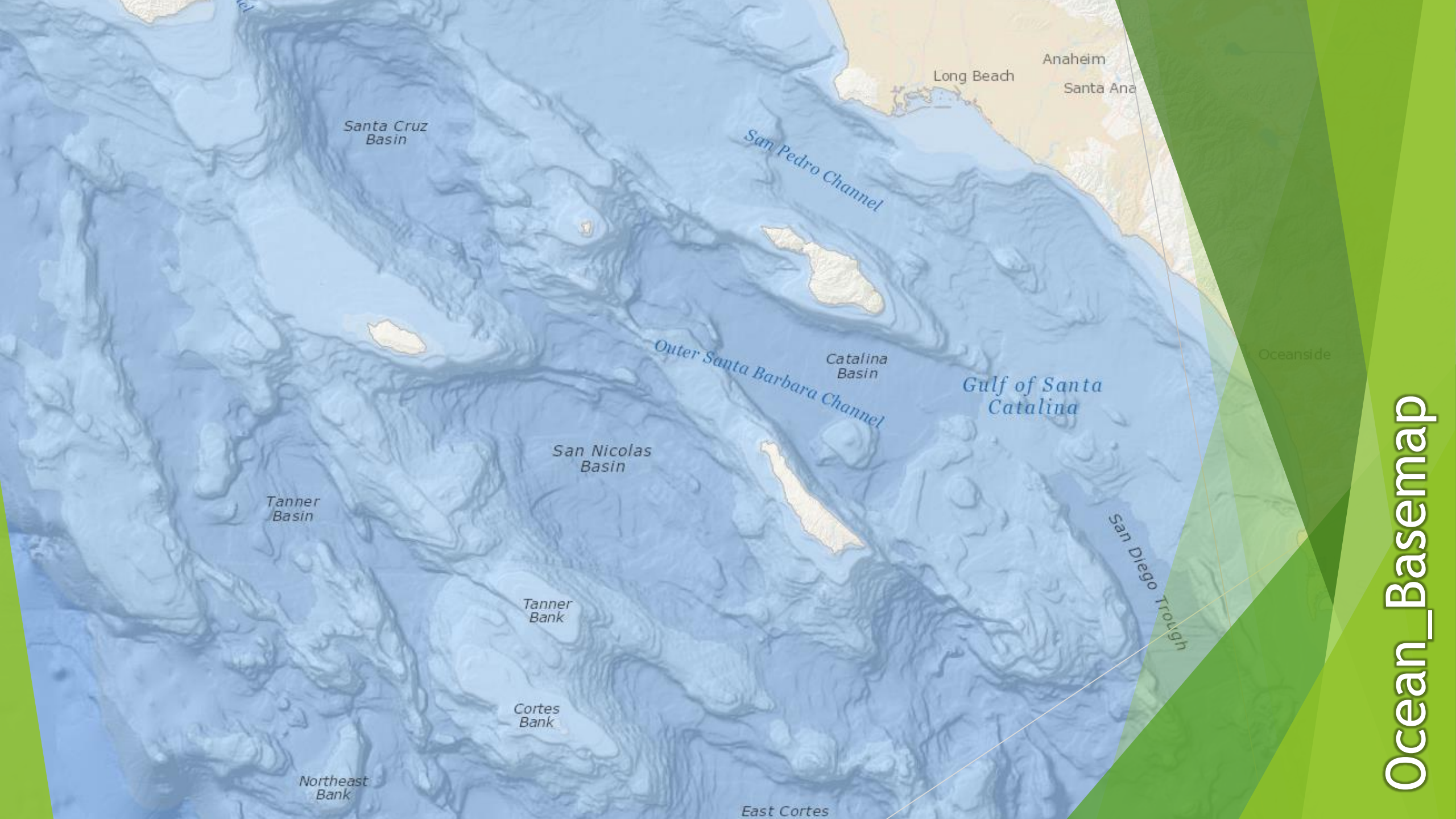




World_Imagery

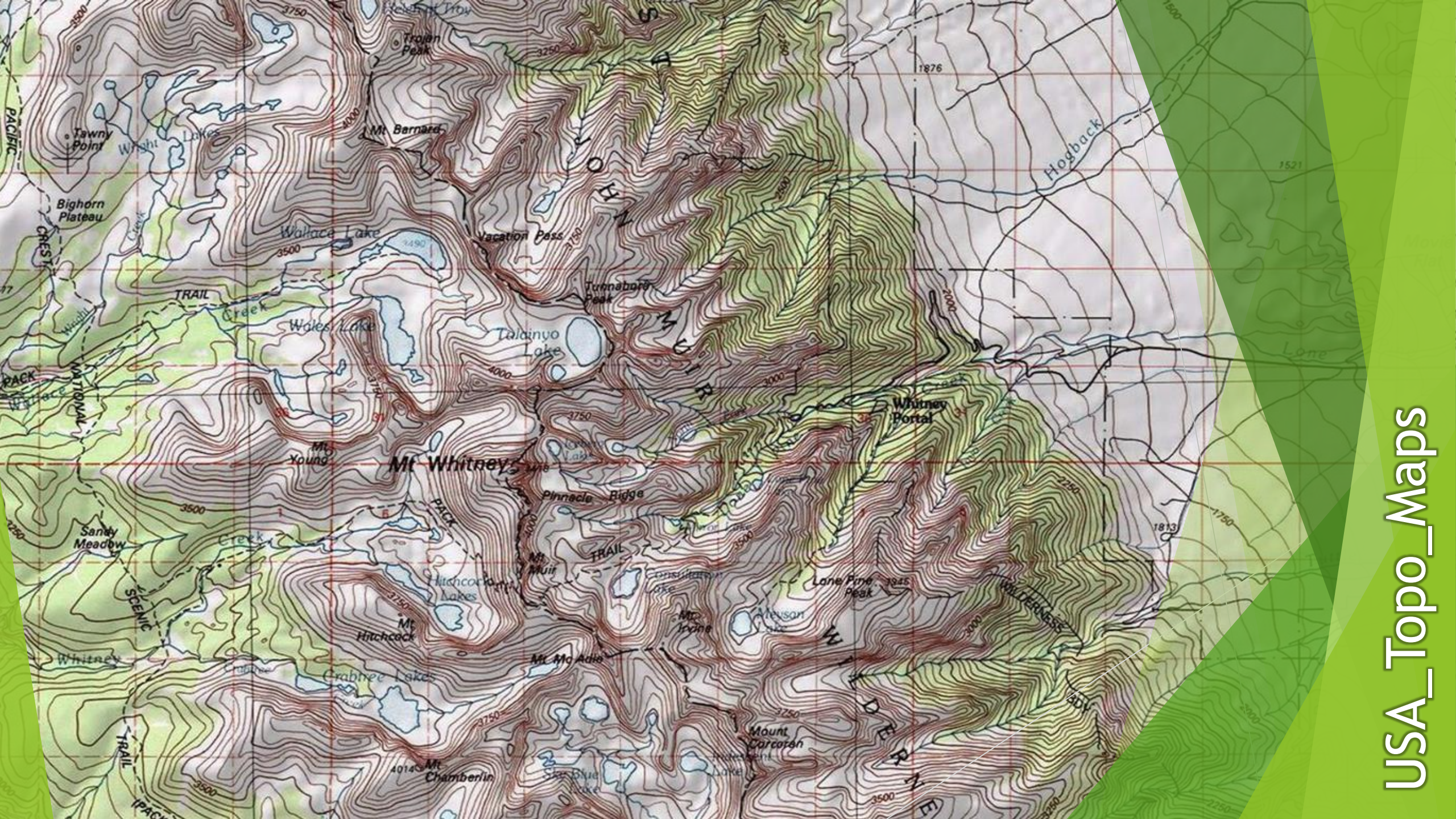


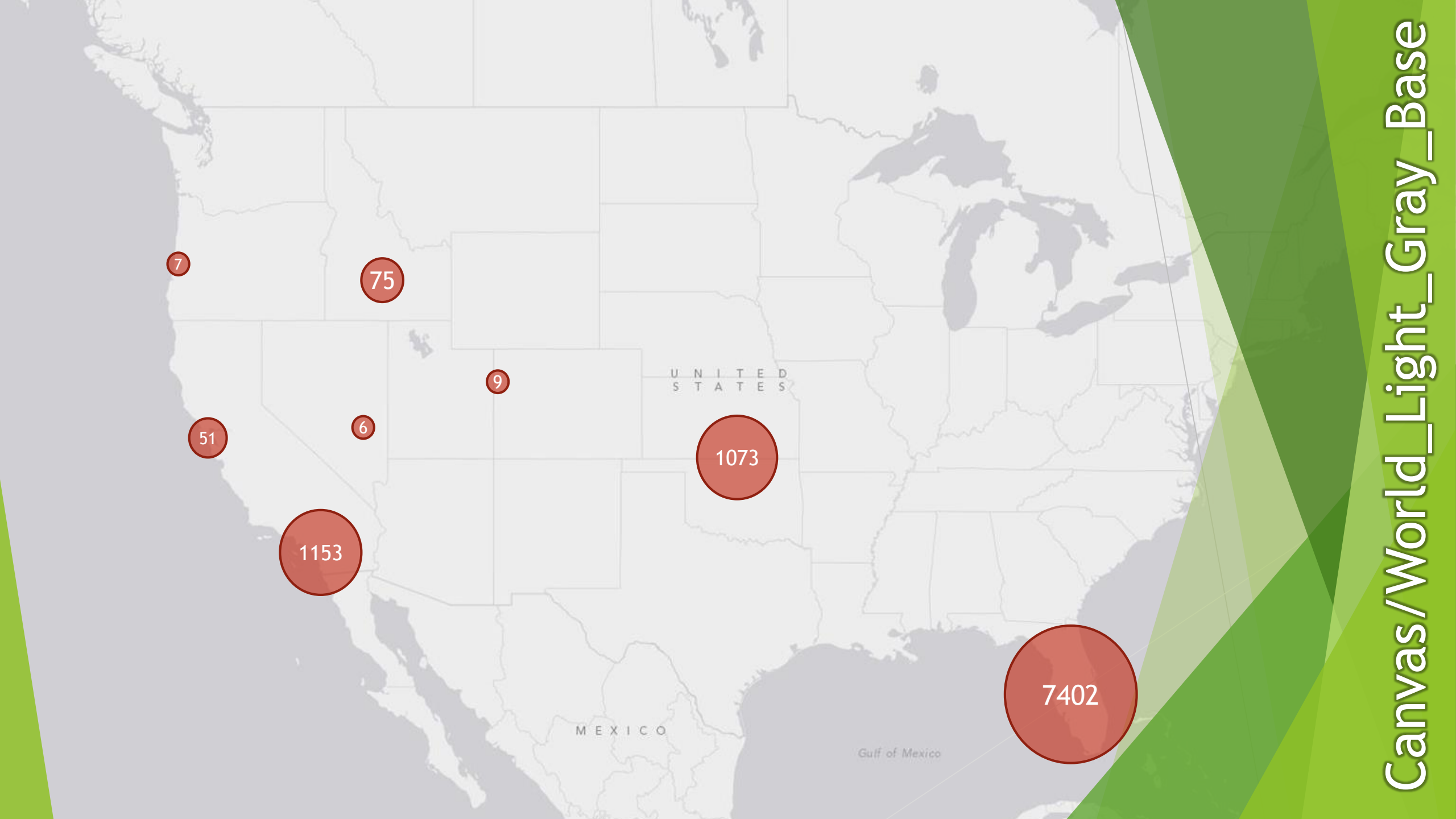
NatGeo_World_Map

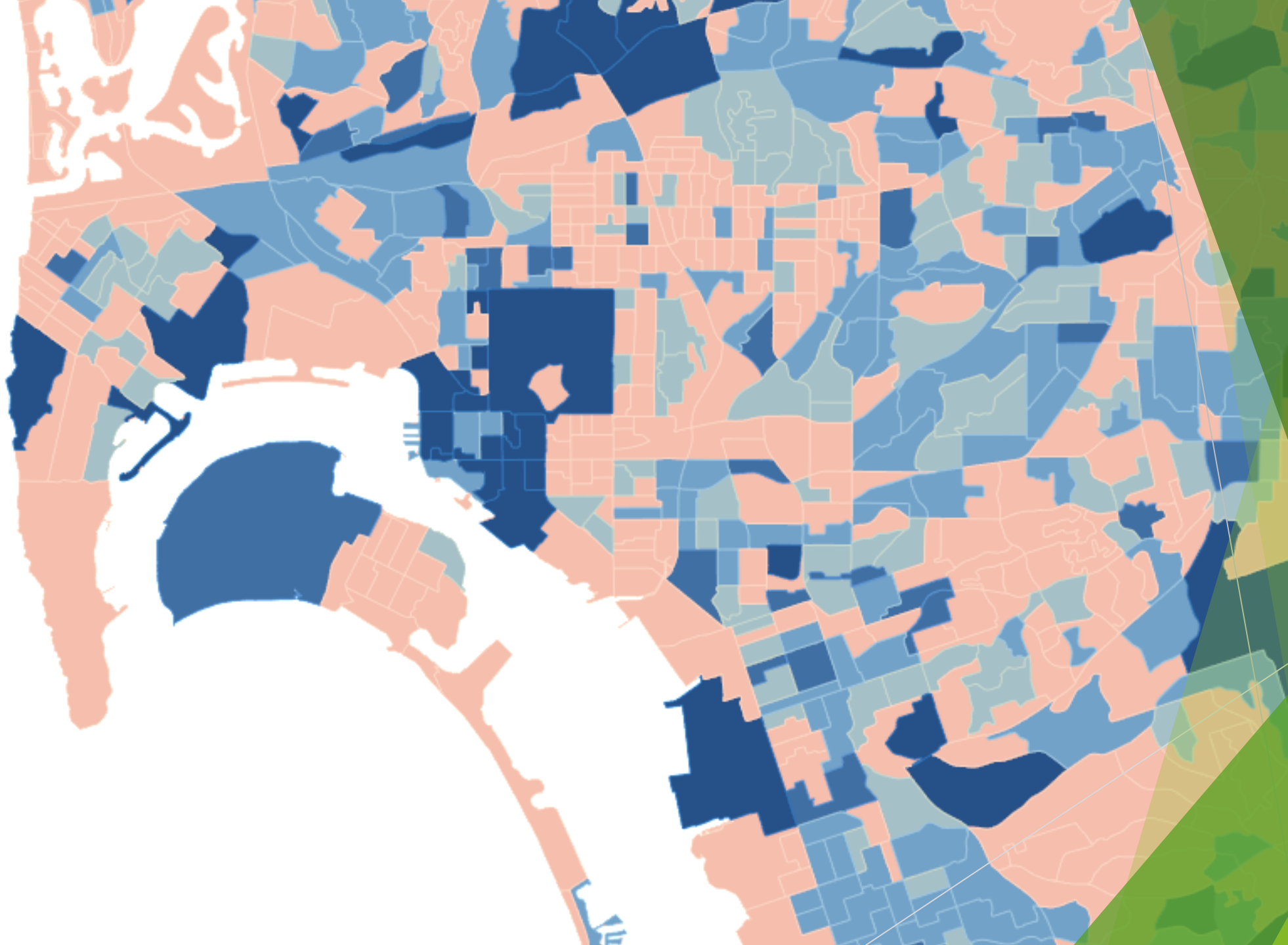


Ocean_BaseMap









Demographics/*

DEMO

Adding your data

Recap

- ▶ CsvLayer : Shows CSV tabular data
<http://www.poi-factory.com/>
- ▶ GeoRssLayer : Rss and Atom feeds with geocoded posts
- ▶ GraphicsLayer : Throw all the graphics you want on it
items require a Symbol and/or a renderer
- ▶ Sub-class GraphicsLayer and create your own
...or use the GraphicsLayer.GraphicsSource property
- ▶ GeometryEngine is your new best friend.
 - ▶ Area, Length, Distance, Buffer, Intersects, Within, Crosses, Union, Cut, Geodesic calculations...

DEMO

Moving to the cloud

Everything is going to be connected to cloud and data... - Satya Nadella

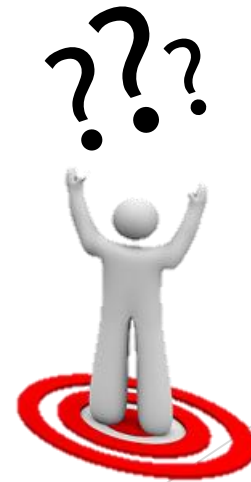
To the Cloud!

- ▶ Data in the cloud doesn't require updating the app.
- ▶ Free Developer account gives you 50 credits a month.
 - ▶ 2.4 credits used pr. 10mb of storage = 208mb storage
 - ▶ Full list: <https://developers.arcgis.com/en/credits/>
- ▶ Create from scratch: <http://developers.arcgis.com> -> Hosted Data
- ▶ Or via your personal organization (from existing data);
<http://YourUserName.maps.arcgis.com/>
- ▶ Supports taking data offline and sync updates on-demand

DEMO

Where am I?

adding location to your map



Recap: Showing Location

- ▶ Enable 'Location' capabilities in manifest.
- ▶ Use `MapView.LocationDisplay`
 - IsEnabled turns it on/off
 - AutoPanMode: Off, On, Navigation, Compass
 - LocationProvider: Custom 'GPS' or simulation

DEMO



Going universal...

...because it's pure awesome-sauce

Getting the bits

<http://developers.arcgis.com/net>

Click: “Join the beta” & sign up for the ‘ArcGIS Runtime SDK for .NET’

...or just use our nuget package :

Search for “Esri.ArcGISRuntime” under pre-releases.

Note: Does not include WPF

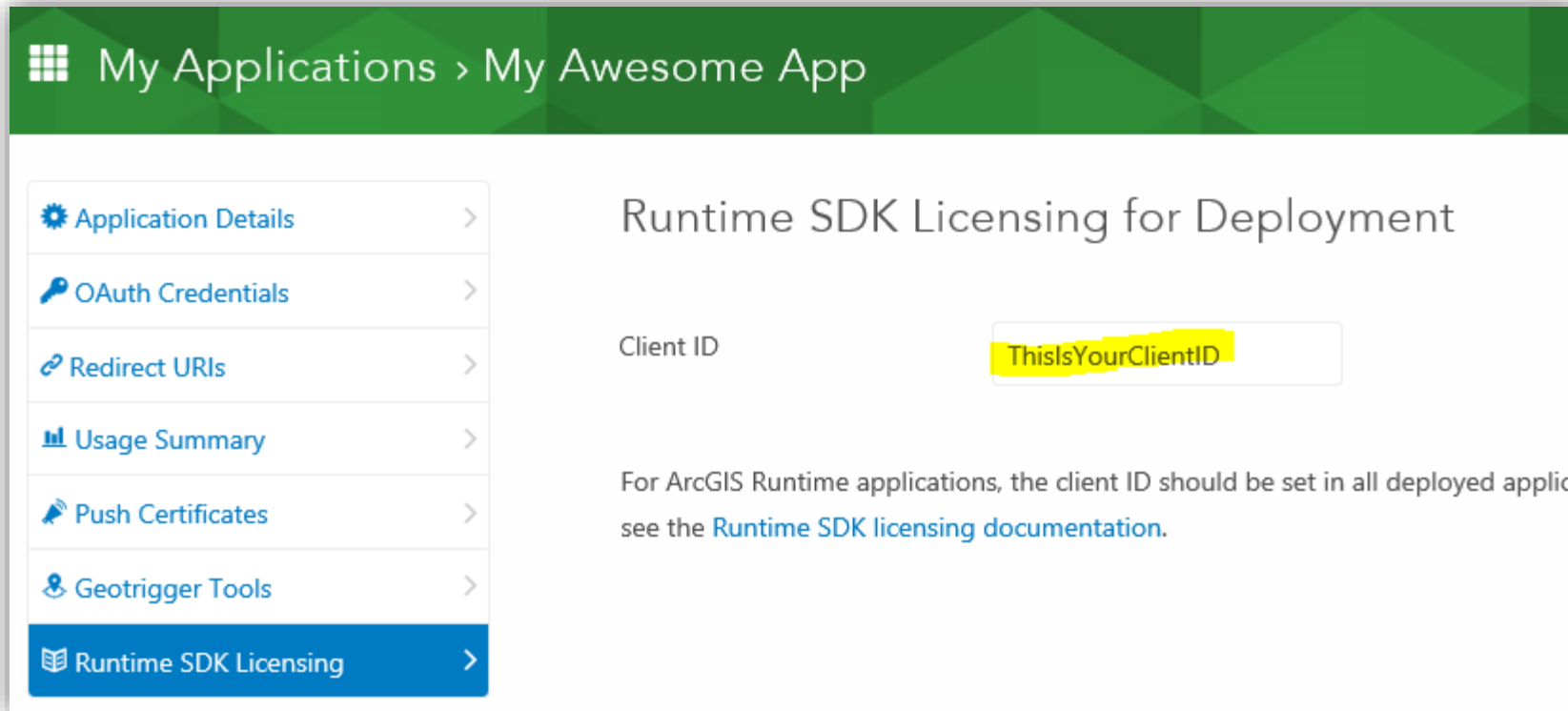
Disclaimer: Currently the beta has no “Go Live” license. Sorry ☹

Licensing your app

Create Developer Account on <http://developers.arcgis.com>

Click “Applications” Icon

Click “New Application” and fill out details



```
ArcGISRuntimeEnvironment.ClientId = "ThisIsYourClientID";
```


Resources

- ▶ Download, forums, links, documentation:

<http://developers.arcgis.com/net>

- ▶ Esri Map services: <http://services.arcgisonline.com>

- ▶ Analysis: <http://analysis.arcgis.com>

- ▶ Toolkit controls: <https://github.com/esri/arcgis-toolkit-dotnet/>

- ▶ Samples: <https://github.com/esri/arcgis-runtime-samples-dotnet/>

- ▶ Recent session recording: <http://video.esri.com/watch/3453/building-windows-store-and-phone-apps-with-arcgis-runtime-sdk>

- ▶ Blog series by Shawn Kendrot: <http://esriurl.com/shawn>

Thank you!

Morten Nielsen

twitter: @dotMorten

e-mail: mnielsen@esri.com

blog: www.sharpgis.net

web: developers.arcgis.com