

Getting to Know Web GIS Supplement

About this supplement

This supplement documents updates, changes, additions, and corrections for *Getting to Know Web GIS (GTKWebGIS)*, first edition (2015). This contents of this supplement are mainly based on the ArcGIS Online September 2015 release and ArcGIS 10.3.1.

Web GIS is a trend in GIS and is a rapidly changing field. Web GIS products, especially online products like ArcGIS Online and Portal for ArcGIS, have frequent releases, as short as a few months. This supplement aims to document the major changes or updates, such as the user interface change with the introduction of smart mapping (released in ArcGIS Online March 2015), and thus skips small discrepancies that are relatively easy for users to figure out.

If you encounter errors or have questions, please email esripress@esri.com. We appreciate your feedback.

How to use this supplement

When you work through a chapter of the *GTKWebGIS* book, first scan this supplement's corresponding section (identified by chapter number), looking for changes as provided by page and step numbers of the workbook.

A good practice is to make a mark in the workbook for each change or addition in this supplement, and then when you come to a marked location in the workbook, read and use the material in this supplement.

Chapter 1:

Page 14, step 5

Before step 5, zoom the map in to the street level (using your mouse roller or clicking the + zoom in button).

Page 18, step 4

Replace with: In the **Change Style** panel, click **Cancel**.

This is to exit the smart mapping user interface. You will learn smart mapping in the next chapter.

Page 20, step 2

Replace **Make a Web Application** button with **Create a Web App** button.

This change applies to other steps in other chapters that involve this button.

Page 21, step 4

Replace **Save & Publish** button with **Done** button.

Notice that the check box (Share this app in the same way as the map), is selected by default.

Create a New Web App

Specify a title, tags, and a summary for the new web app.

Title: Relands City Tour (Pinde)

Tags: Redlands x map tour x Getting to know Web GIS x
Add tag(s)

Summary: Main points of interests in the City of Redlands

Save in folder: pin/webgis

Share this app in the same way as the map (Everyone)

BACK DONE CANCEL

Page 21, step 5

You are presented with the app configuration mode. You will learn more on this in the next section. As for now, let's learn item details first.

Replace step 5 with the following:

- Click your web browser's back button until you see ArcGIS Online main menu (as illustrated), click **My Content**.

Home Gallery Map Scene Groups My Content My Organization

- In your content list, find the app you just created, and click it. This will lead you to the item details page.

Page 33, step 1

Delete: and then click the **Share publicly** button.

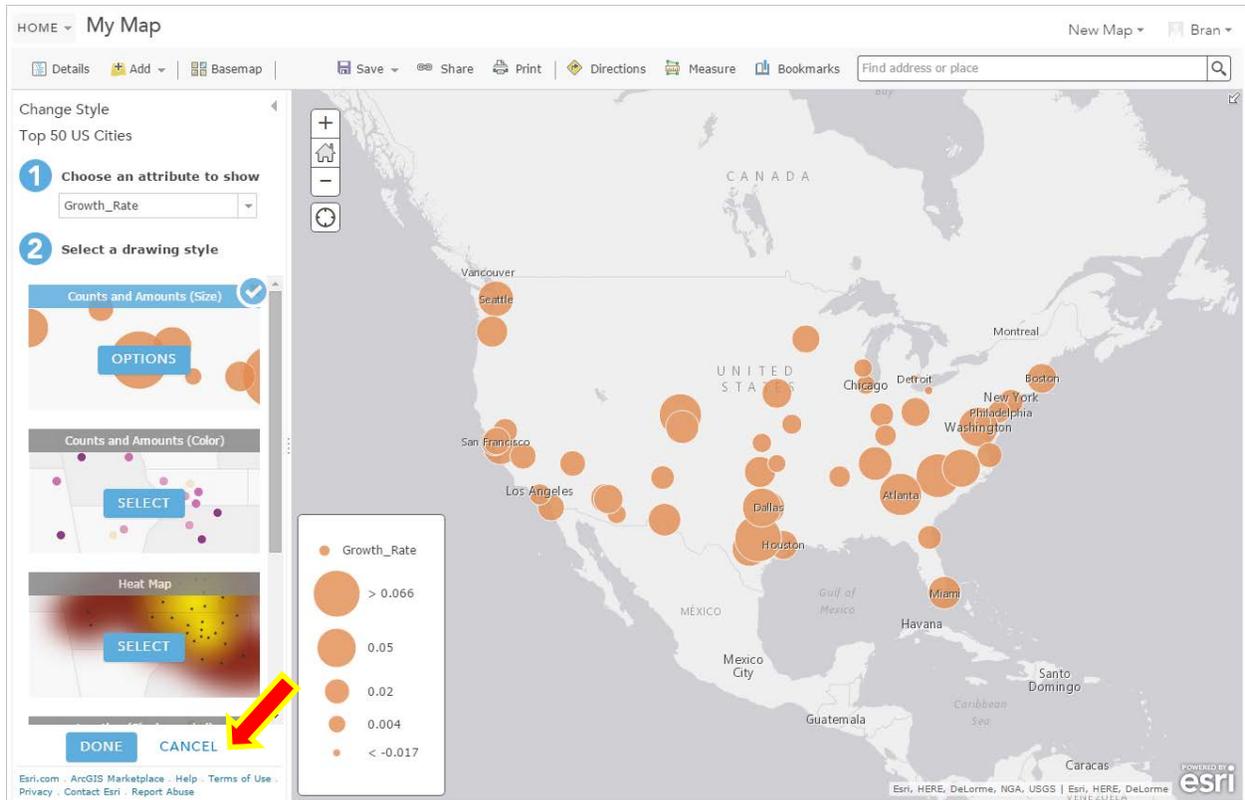
Chapter 2

Page 44, step 1

Path to data is incorrect, so delete \CSV from the path.

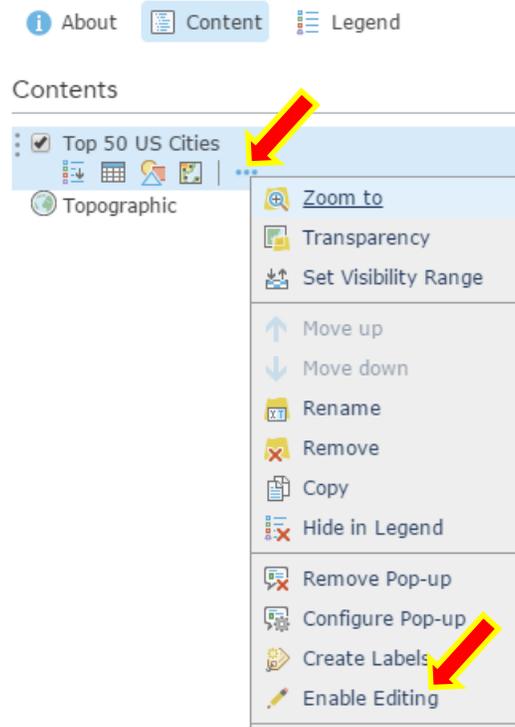
Page 46, step 7

Add a step: Click **Cancel** at the lower left corner of the page, which will close the **Change Style** panel so you can see the **Content** panel.



Page 47, step 2

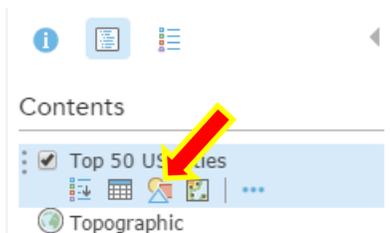
Replace with: In the map viewer TOC, point to the **Top 50 US Cities** layer, click the **More Options** button (⋮), and then click **Enable Editing**.



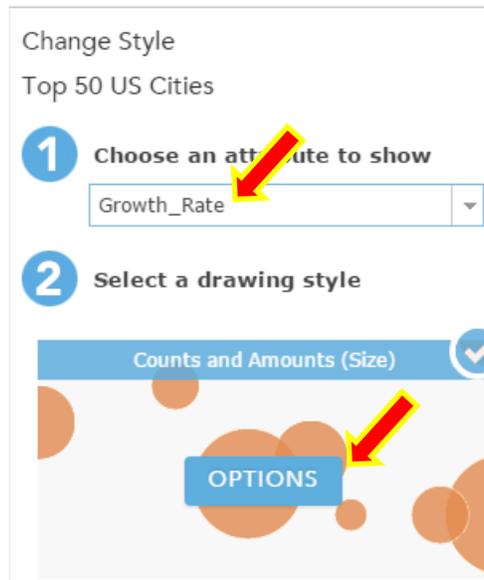
Pages 50–54, steps 1–10

This section has major changes because of the introduction of smart mapping (you can learn more about it at <http://blogs.esri.com/esri/arcgis/2015/03/02/introducing-smart-mapping/>). The steps below illustrate how to change class breaks and configure symbols manually.

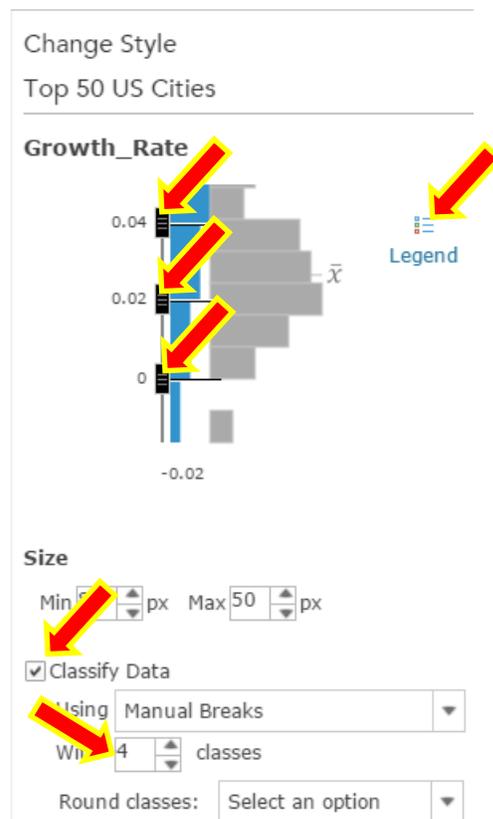
1. With the ArcGIS Online map viewer open, in the Content panel, point to the **Top 50 US Cities** layer, and click the **Change Style** button ().



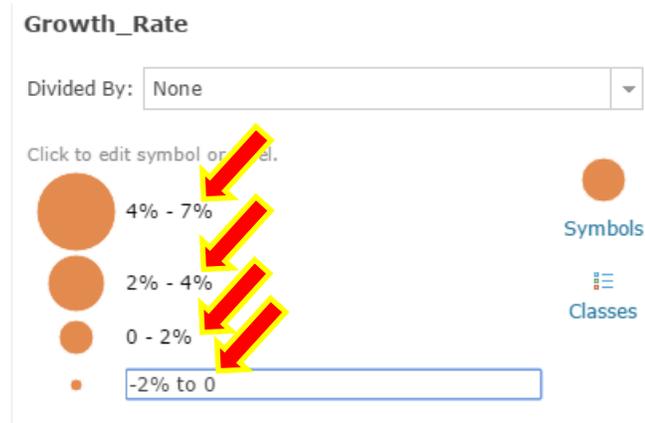
2. In the **Change Style** panel, choose **Growth_Rate** as the attribute to show. For a drawing style, under **Counts and Amounts (Size)**, click **Options**.



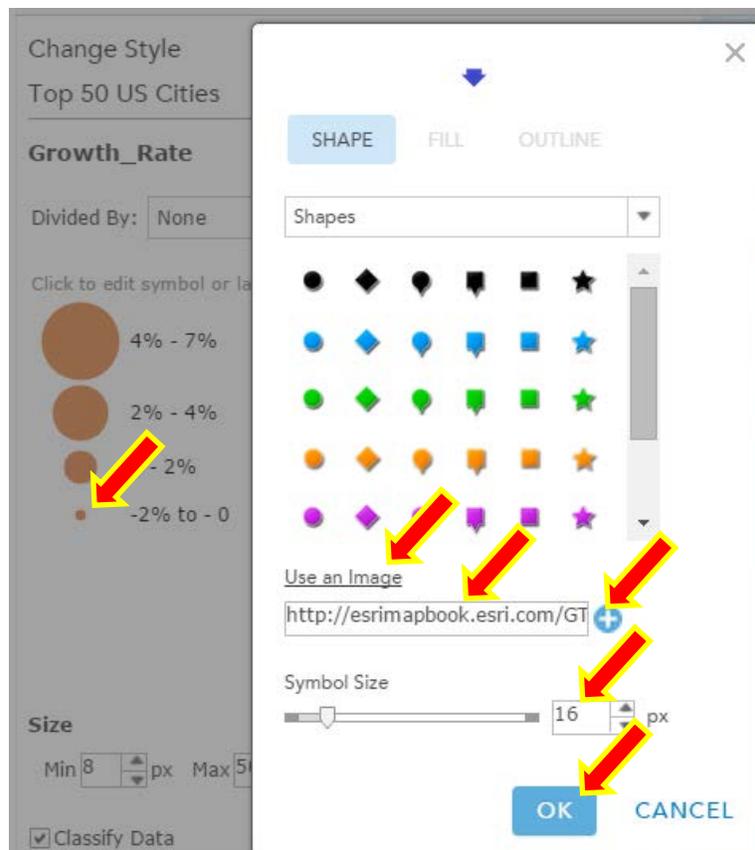
3. Select the **Classify Data** check box, and choose 4 classes. Move the break dividers to 0, 0.02, and 0.04 (or click the break values and type 0, 0.02, and 0.04). This breaks **Growth_Rate** into 4 classes, <0, 0 – 0.02, 0.02 – 0.04, and > 0.04. Click the **Legend** button. This will allow you to set the symbols and labels for each class.



- Click each of the labels, and change them as illustrated.



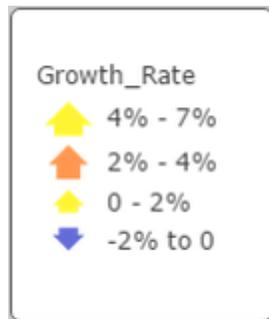
- Click the symbol for -2% to 0. Click **Use an Image**, specify http://esrimapbook.esri.com/GTKwebgis/chapter2/blue_down.gif as the URL, and then click the + button. Set its size to **16**, and then click **OK**.



- Repeat the above step to change the symbol icons for the other classes.

- For 0 – 2%, use http://esrimapbook.esri.com/GTKwebgis/chapter2/yellow_up.gif and size 16.
- For 2 – 4%, use http://esrimapbook.esri.com/GTKwebgis/chapter2/orange_up.gif and size 20.
- For 4 – 7%, use http://esrimapbook.esri.com/GTKwebgis/chapter2/yellow_up.gif and size 24.

The new legend should look like this illustration.



7. In the **Change Style** panel, click **OK**, and then click **Done**.
8. Continue to page 54 step 11.

Page 55, step 2

Replace with: In the Content panel, point to the **Top 50 US Cities** layer, click the **More Options** button (⋮), and click **Enable Pop-up**.

Page 55, step 3

Replace with: In the Content panel, point to the **Top 50 US Cities** layer, click the **More Options** button (⋮), and click **Configure Pop-up**.

Page 67, step 5

Replace with: Fill in the appropriate title, tags, and summary information, and then click **Done**.

Page 68, step 6

You are presented with the app configuration mode. You will learn more on this in the next section. As for now, let's learn item details first.

Replace step 6 with the following:

- Click your web browser's back button until you see ArcGIS Online main menu (as illustrated), click **My Content**.

- In your content list, find the app you just created, and click it. This will lead you to the item details page.

Page 69, step 9

Replace **General Settings** with **App Settings**.

Page 70, step 13

Replace with: Click **Done**, and you will be directed to the web app's item details page.

Page 70, step 14

Skip this step.

Page 74, Assignment 2

In the third paragraph, replace the URL with:

http://earthquake.usgs.gov/earthquakes/feed/v1.0/summary/2.5_week.csv

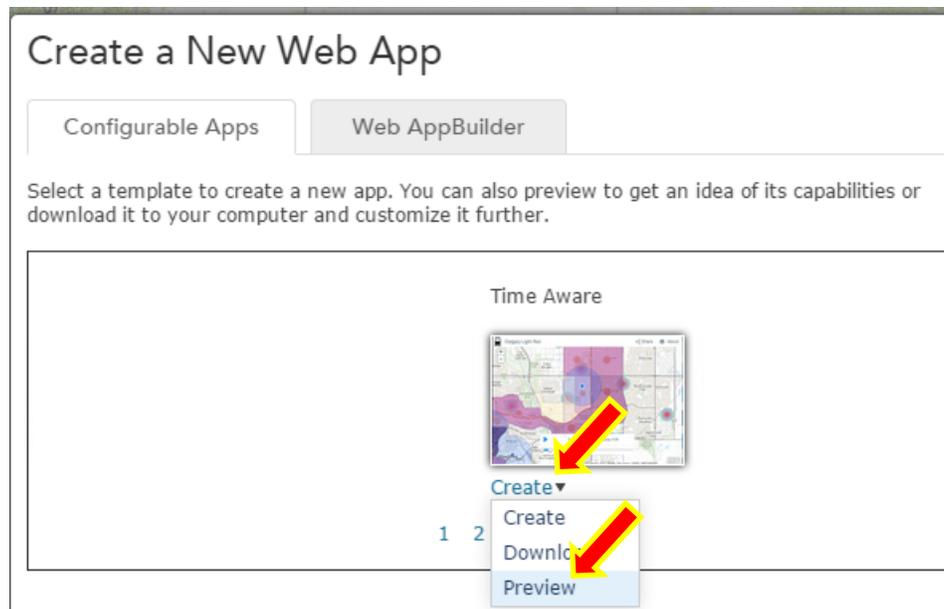
Chapter 3

Page 82, Data stores

Data stores here refers to ArcGIS Server data stores. ArcGIS 10.3 introduced an additional type of data store, which is for Portal for ArcGIS. These two types of data stores are related but different.

Page 111, step 4

Replace with: In the Templates gallery, find the **Time Aware** template. Click **Create** and choose **Preview**.



Page 112, step 7

Replace with: In the Templates gallery, find the **Time Aware** template again, click **Create**, and choose **Create**.

Page 112, step 8

Replace with: In the **Create a New Web App** window, fill in the appropriate Title, Tags, and Summary, and click **Done**. You will be presented with the app configuration mode. Make appropriate configuration changes if you wish.

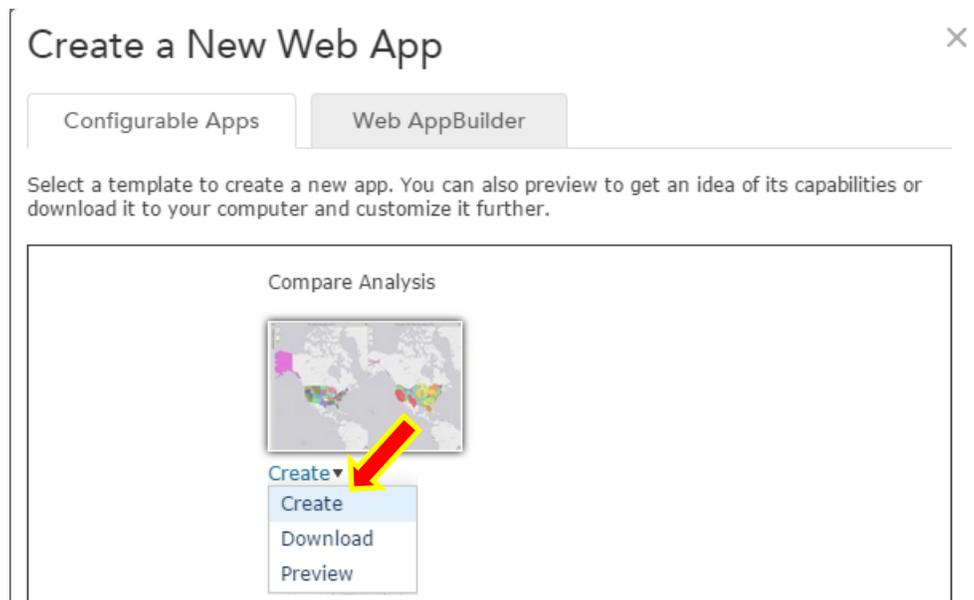
Page 113, step 9

Replace with: Click **Save** and then click **Done** to go to the item details page of your new web app.

Chapter 4

Page 148, step 10

Replace with: In the Templates gallery, find the **Compare Analysis** template, and click **Create > Create**.



Page 149, step 11

Skip this step.

Page 149, step 12

Replace click **Save & Publish** with click **Done**.

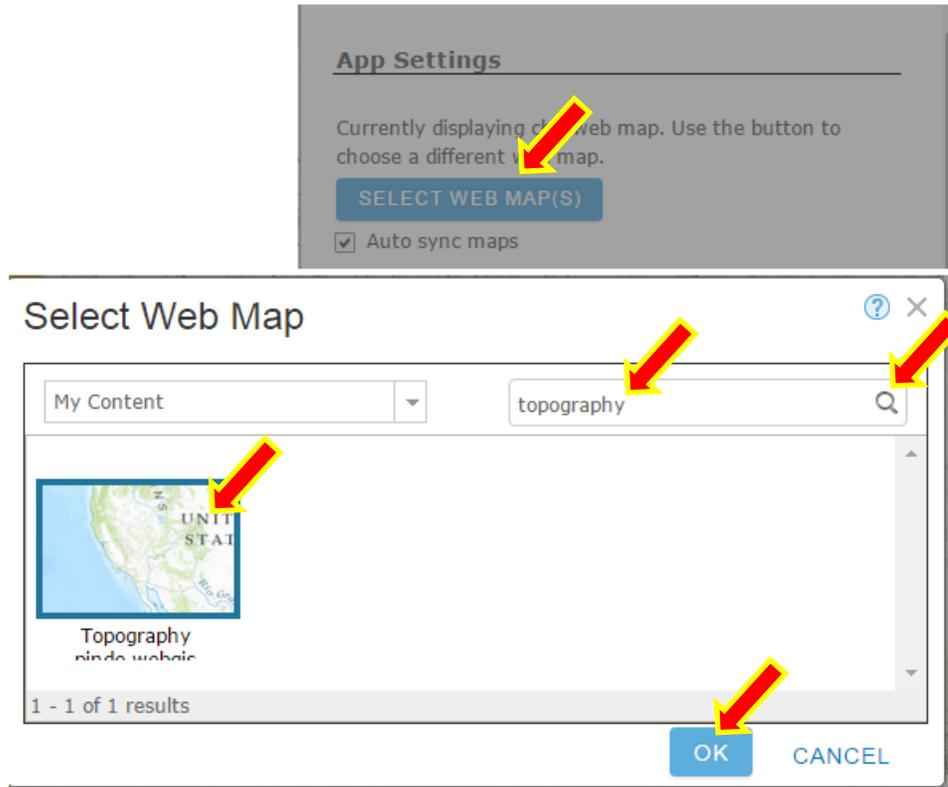
You will be presented with the app configuration mode of your app.

Pages 149–150, steps 13–17

Skip these steps.

Page 150, step 18

Replace with: Click **Select Web Map(s)**. In the Select Web Map window, search for Topography in **My Content**. Click the resultant **Topography** web map, and click **OK**. The web map will be added to the comparison web app you are creating. In case you want to unselect a web map, hold the Ctrl key and click the web map.



Page 151, steps 19-20

Replace with the following steps:

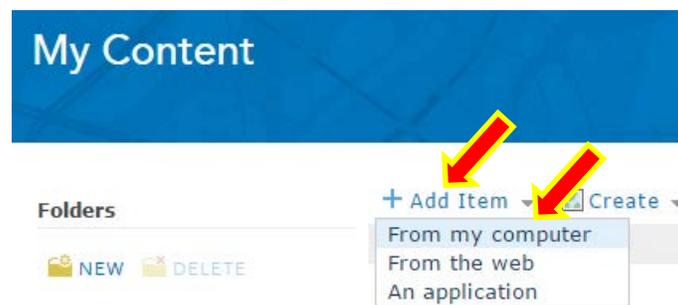
- Under **Side Panel Settings**, set **Title** as **Compare FIA Samples with Topography**.
- Click **Save** on the lower right corner of the page. You can preview your app, which compares two web maps now.
- Click **Done** on the lower right corner of the page. You will be directed to the item details page of your app.

Chapter 5

In many places, ArcGIS Online has replaced the term “feature service” with “feature layer” or “hosted layer”. This supplement document won’t update all places involving this term change, but just be aware of it.

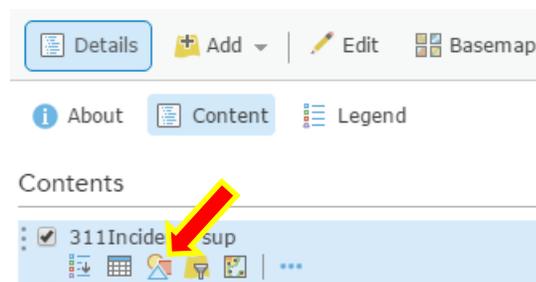
Page 169, step 2

Replace with: Click **My Content**, and then click the **Add Item** button and choose **From my computer**.



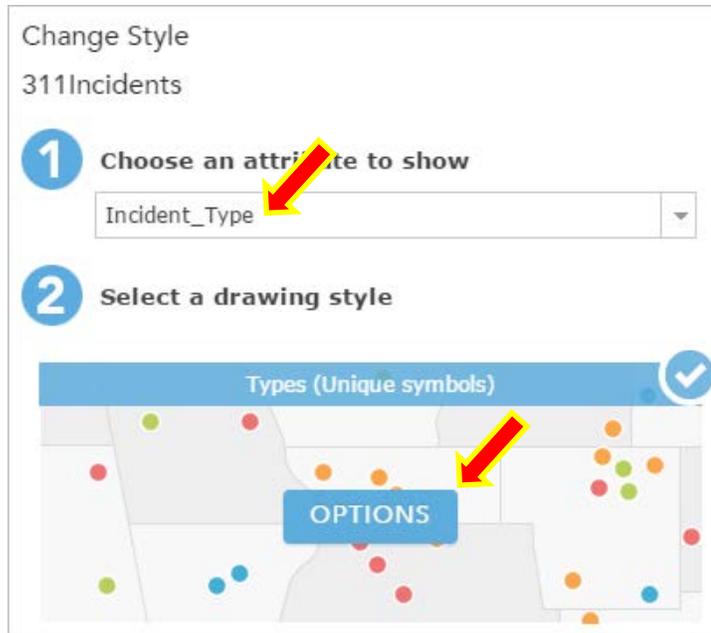
Page 172, step 2

Replace with: In the **Content** page, point to the **311 Incidents** layer, and click the **Change Style** button (📍).



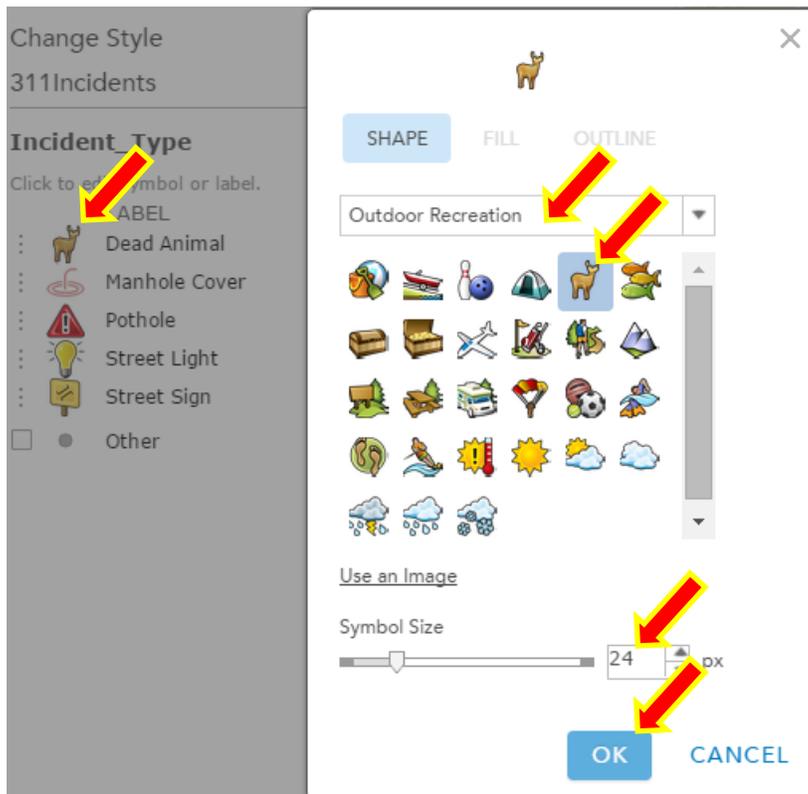
Page 173, step 3

Replace with: In the **Change Style** panel, choose **Incident_Type** as the attribute to show. For a drawing style, under **Types (Unique symbols)**, click **Options**.



Page 173, step 4

Replace the screen capture with the following.



Page 174, step 4

- In the first bullet, replace, **Outdoor Creation** with **Outdoor Recreation**.

Page 174, step 5

Replace with: Click **OK** and then click **Done** to finish changing style.

Page 174, step 6

Skip this step.

Page 179

The screen capture is different. You won't see the symbol icons, instead you will see the style definition.

Page 182, step 6

Replace click **Save & Publish** with click **Done**.

Page 183, steps 7–8

Skip these steps.

Page 184, step 12

Replace with: Click **Done** to go to the app's item details page.

Delete: You can get there using the browser's back button.

Page 184, step 13

Skip this step.

Page 184, step 16

Replace first sentence with: Switch into edit mode by clicking the **Edit** button ()

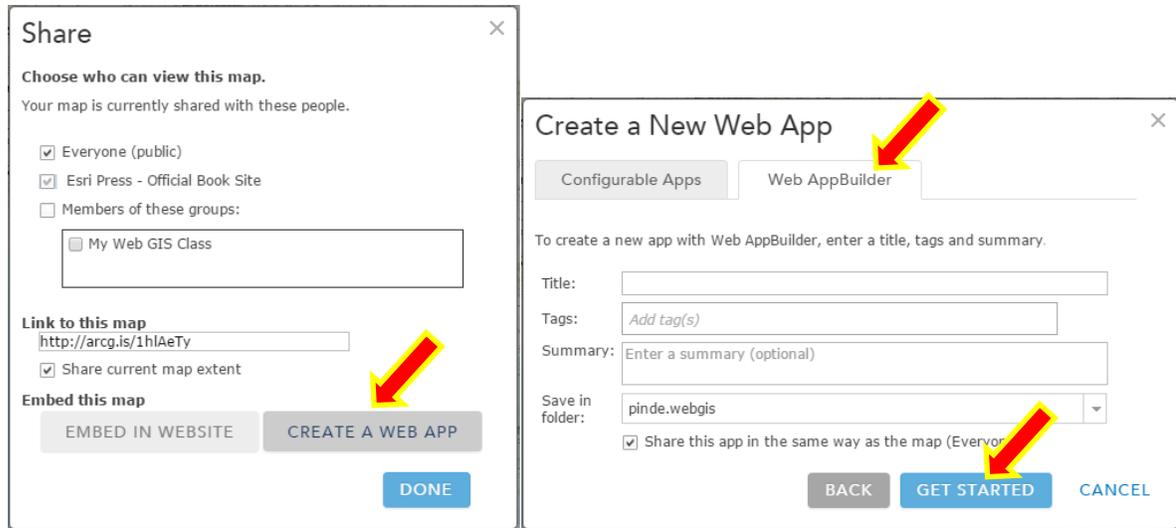
Chapter 6

Page 198, System requirements

Delete the third bullet: Optionally, Apache Tomcat

Page 199, step 1

If you are using the integrated edition, log on to ArcGIS Online or your Portal for ArcGIS, open an existing web map (you will have chances to change it later), or create a new web map (e.g., an empty web map—you will have chances to change it later), and save/share it, and then click **Create a Web App**. In the **Create a New Web App** window, click the **Web AppBuilder** tab; specify your app title, tags, and summary; click **Get Started**; and go to step 3..



Page 201, step 5

Add **owner:pinde.webgis** to your search phrase (i.e., search for “Historic Earthquakes and Hurricanes owner:pinde.webgis”). This will narrow your search so that you can find the web map easier.

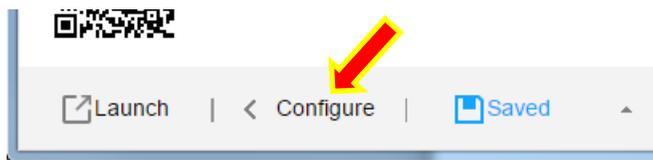
Page 204, step 12

Skip this step. The configuration window opens automatically.

Page 207, step 1

The current text in *GTKWebGIS* first edition is correct for Web AppBuilder for ArcGIS (Developer Edition).

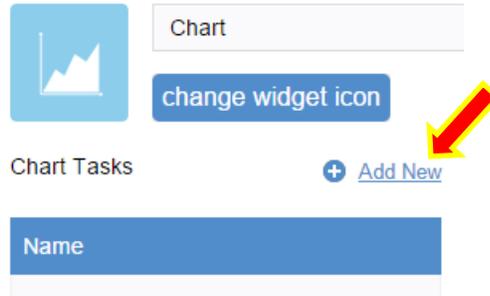
Readers using the integrated edition: If necessary, close the browser tab that opened when you clicked **Launch** in the previous section. Click **Configure**. At the top of the Widgets tab, click the link to **Set the Widgets in this controller** (as illustrated in the book).



Page 209, step 5

Replace: **Add a Chart Source** with **Add New**.

Configure Chart



Chart

change widget icon

Chart Tasks [+ Add New](#)

Name

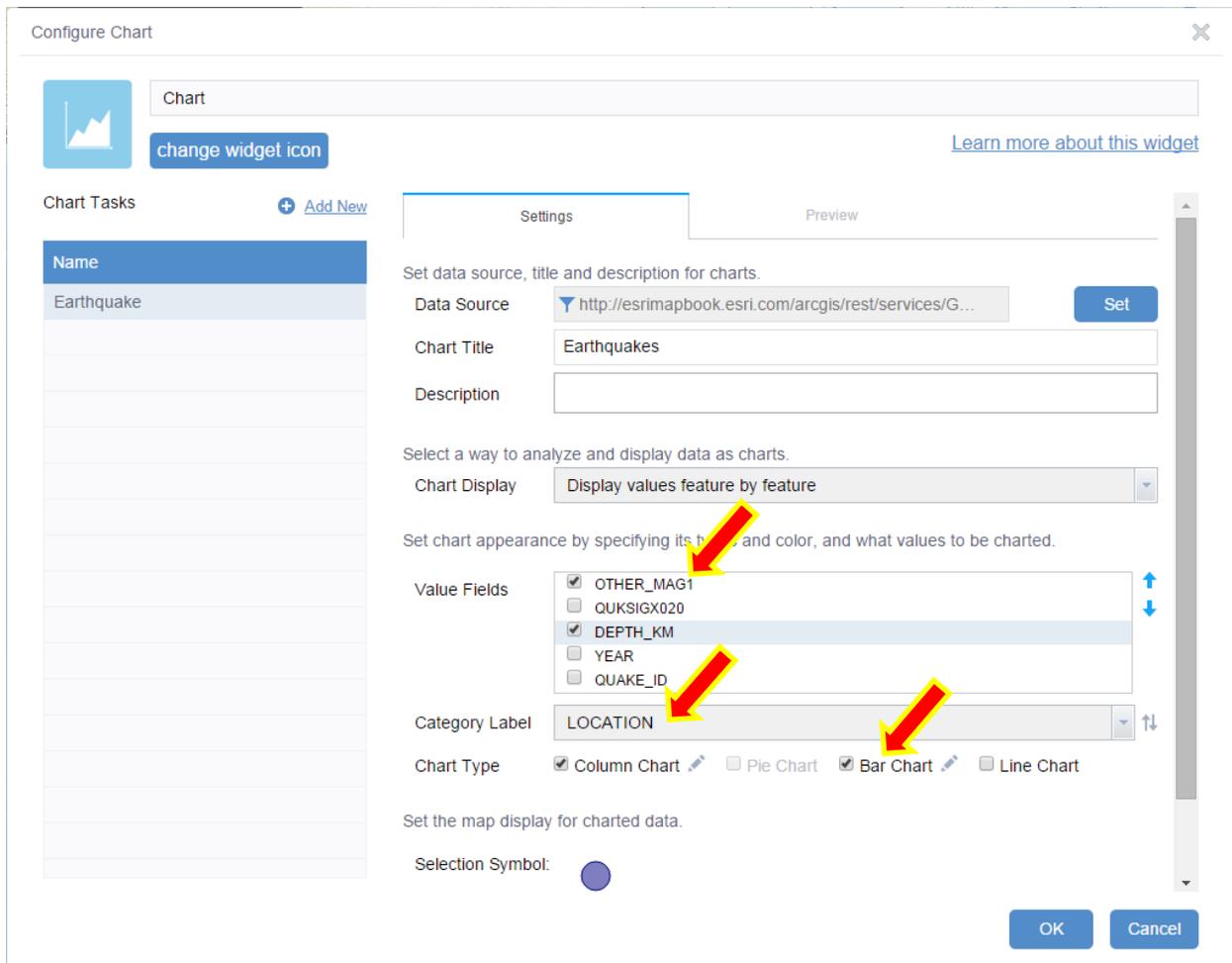
Page 210, step 6

Skip this step.

Page 210, step 8

Change to: In the Chart configuration window, perform the following to chart earthquake magnitudes and depth:

- For **Value Fields**, check **Depth_KM** and **Other_Mag1**.
- Leave the **Category Label** as **Location**.
- For **Chart Type**, check **Column Chart** and **Bar Chart**.



These settings define two charts, each displaying the magnitude and depth fields. You can also select other chart types such as Line Chart. The label field helps to identify an earthquake when a user hovers the mouse over a column or bar in the chart.

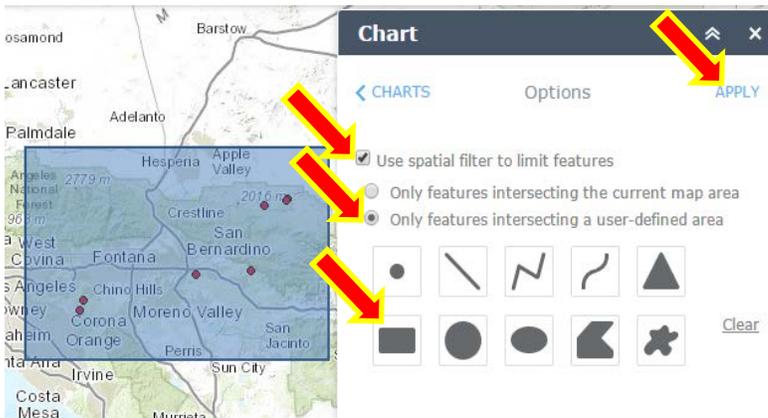
Page 212, step 10

Change to: On the toolbar of your app, click the **Chart** button, and choose **Earthquakes**. Check **Use spatial filter to limit features**, select **Only features intersecting a user-defined area**, select a shape, draw it on the map to select some earthquakes, and click **Apply**.



Click one of the following task items to execute chart.

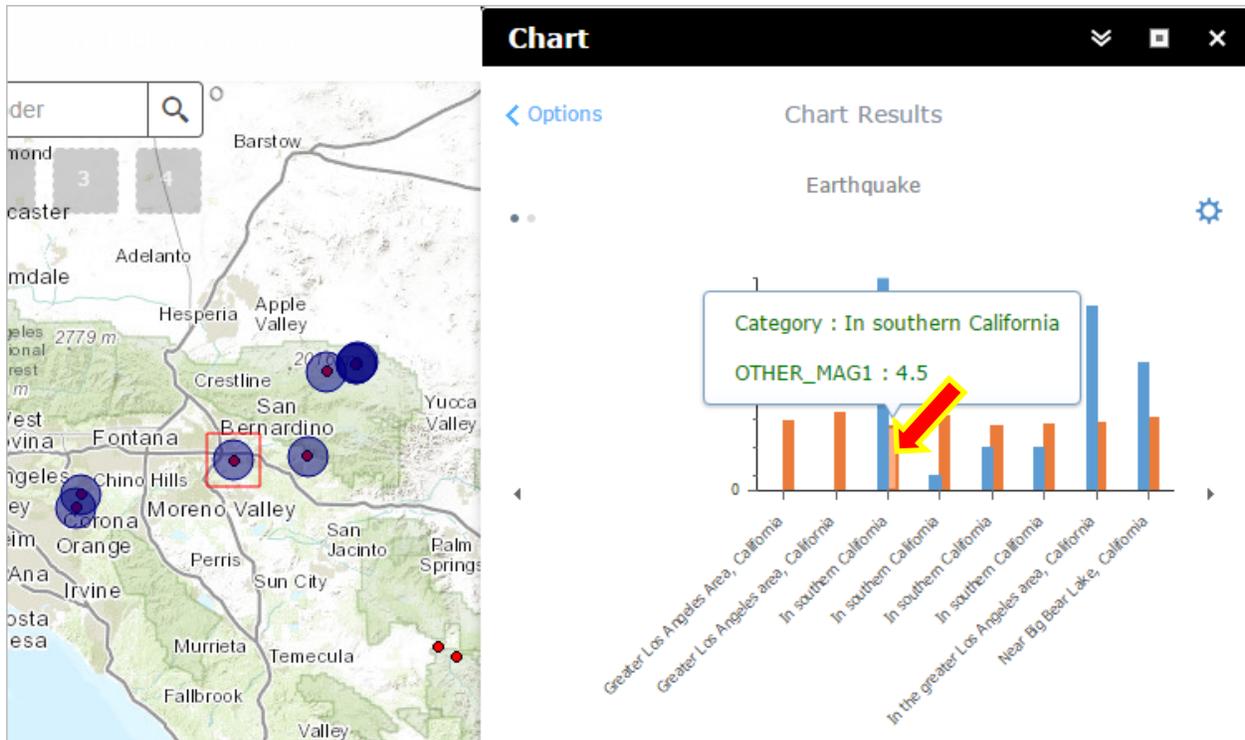
Earthquakes >



Notice that the chart widget changes to show the results and displays charts that compare magnitudes and depths of selected earthquakes.

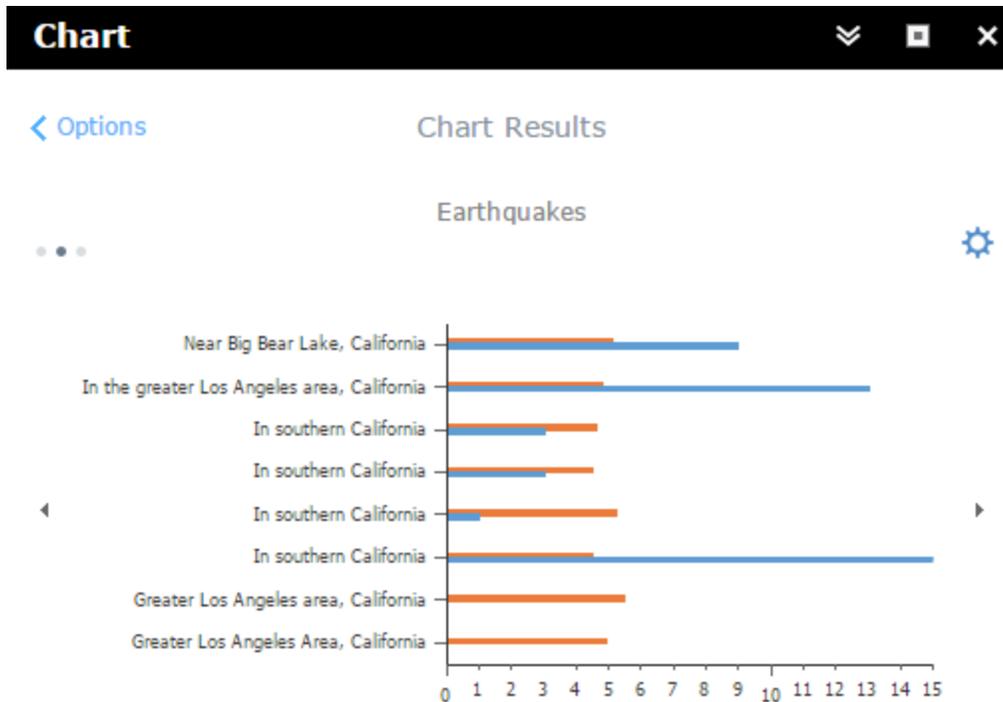
Page 212, step 11

Change to: Hover your mouse over a column in the chart. This displays a pop-up window with the location (that is, the Category Label field) and the magnitude or depth of the selected earthquake. The corresponding earthquake is also highlighted in the map.



Page 213, step 12

Change to: On the right side of the chart, click the **arrow** ▶. The second chart you configured appears. The bar chart compares the magnitudes and depths of the selected earthquakes.



Page 215, step 16

Change the second to last bullet to: Under the **Filter Definition** tab, click **Add a filter expression**.

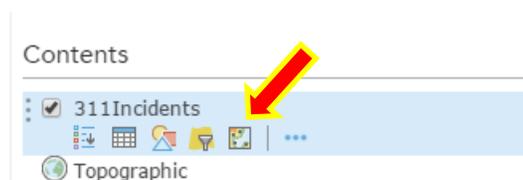
Page 220–222, section 6.4

This section is optional. It's only applicable to readers using the developer edition of Web AppBuilder for ArcGIS.

Chapter 7

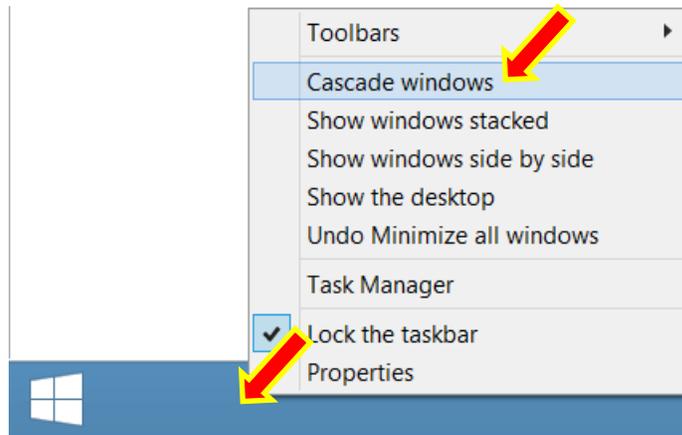
Page 227, Use ArcGIS Online analytic tools

Replace the sentence that begins, Click your layer... with: Point to a layer in your web map, and click the **Perform Analysis** button (📊), or click **Perform Analysis** on the ribbon.



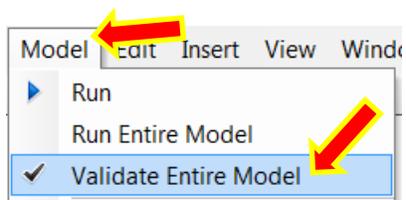
Page 234, step 4

Add a step: If you can't see the ModelBuilder window, cascade your windows (e.g., for Windows 7, right-click the taskbar, and choose Cascade windows).



Page 240, step 17

Add a step: If any of the model elements are still white, you need to validate your model. In ModelBuilder, click Model in the menu bar, and choose **Validate Entire Model**.



You may need to adjust the path of your outputs (double-click each of the green oval elements to set their output paths, if necessary).

Page 243, step 7

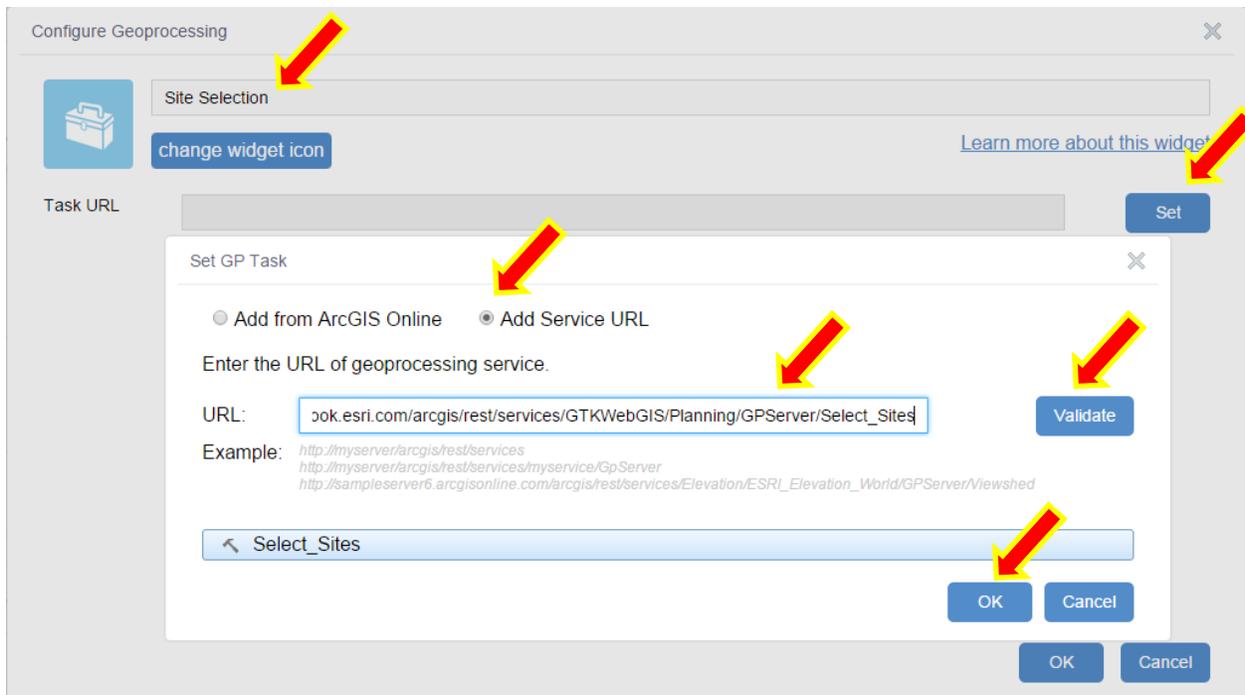
A typical error is related to the output paths. If you run into such errors, adjust the paths (double-click each of the green oval elements to set valid output paths).

Page 255, step 7

Skip this step.

Page 256, step 8

In the second bullet, replace click the **Set** button with click the **Set** button, and select **Add Service URL**.



Chapter 8

Sections 8.2–8.6 were based on ArcGIS API for JavaScript 3.10. The instructions are still valid for version 3.x

Chapter 9

Sections 9.5, 9.6 and 9.7 teach how to develop native apps for Android by writing Java programs. The IDE (Integrate Development Environment) needs to be changed from Eclipse ADT (Android Development Tools) to Android Studio. This involves a lot of details. Instead of making lots of detailed updates, this supplement replaces sections 9.5, 9.6, and 9.7 with a new and easier way to build native apps.

Page 317, Native-based apps and ArcGIS Runtime SDKs for Mobile

In the paragraph, For this approach:

- Replace Windows Phone with .Net and Qt.
- Add Navigator for ArcGIS and Survey 123 to the list of ready-to-use native apps.

In addition, AppStudio for ArcGIS allows you to build cross-platform native apps based on a selection of templates. With AppStudio, you can convert your maps into beautiful, consumer-friendly mobile apps that are ready for iOS, Android, and desktops including Mac OS, Windows, and Linux, and publish them using your own brand to all the popular app stores—no developer skills required.

Page 318, This tutorial:

Change the fourth bullet to: Section 9.5 gets you started with AppStudio for ArcGIS. You will create a simple native app based on the map tour template.

Under the System requirements heading, change Sections 9.5, 9.6, and 9.7 to:

Section 9.5:

- ArcGIS Online for Organizations account: publisher or administrator level
- Android phone or tablet

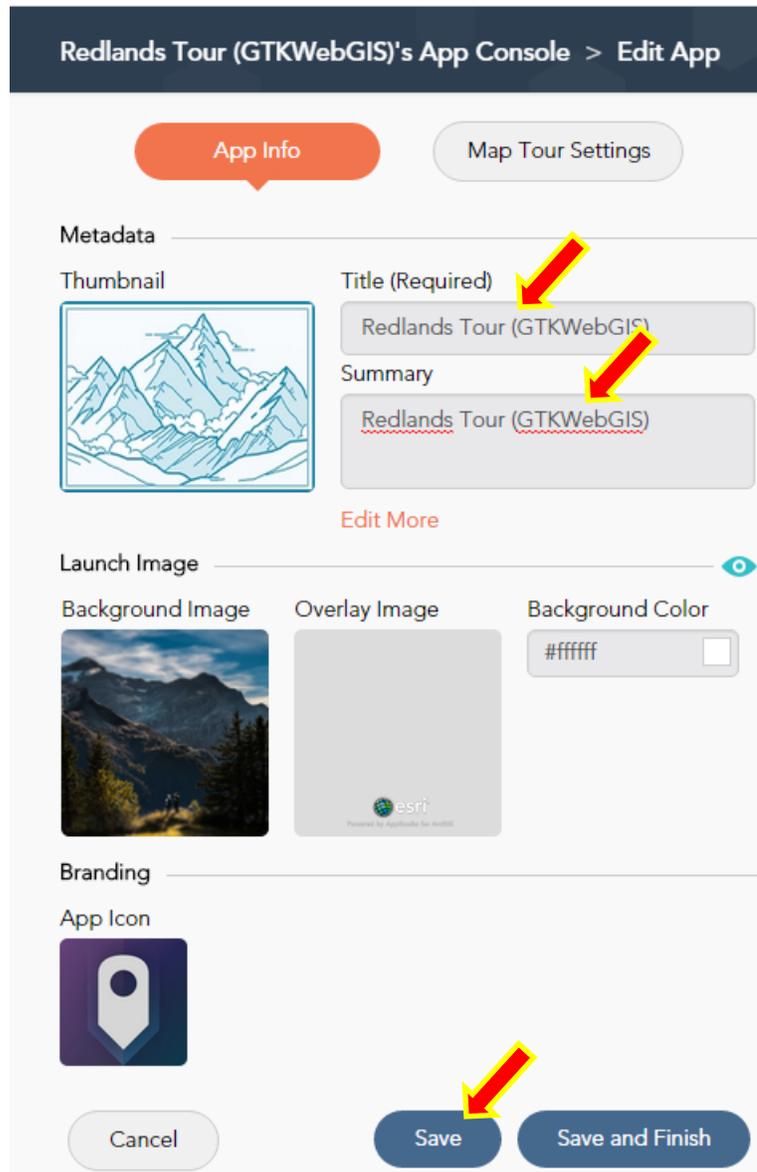
Pages 336–349, Sections 9.5, 9.6, and 9.7

Replace these sections with a new section 9.5 below.

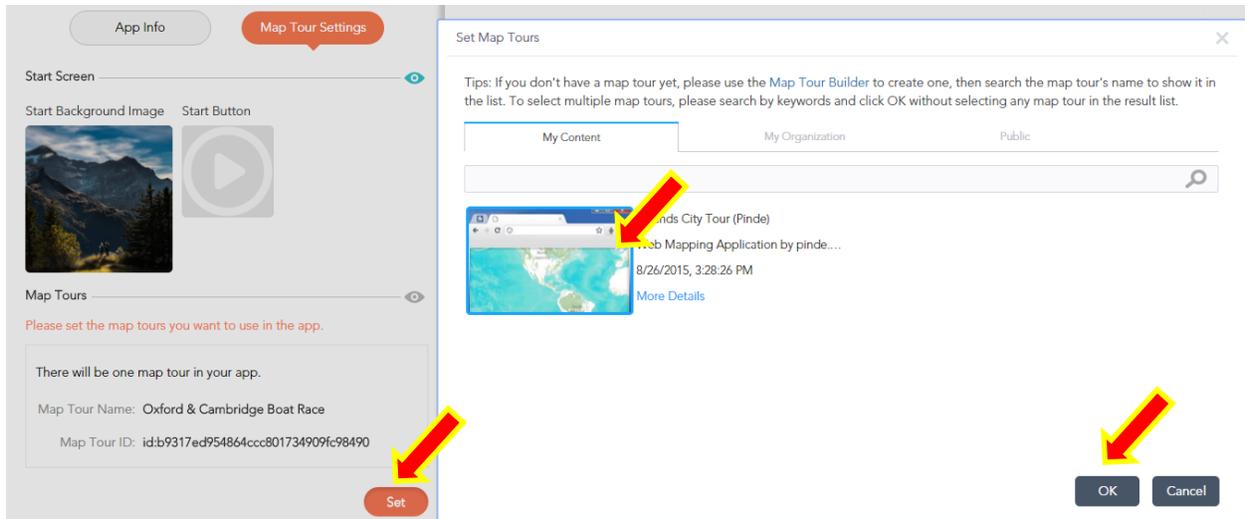
9.5 Create an app in AppStudio for ArcGIS

AppStudio for ArcGIS was in beta version at the time this new section was written. To avoid discrepancies with this fast-evolving product, this section tries to be brief to avoid details that may change in future releases.

1. Start a web browser, go to <http://appstudio.arcgis.com/>. Click **Create Your App**.
2. Choose to start with the Map Tour template. You can also browse through other templates available.
3. When prompted, log in with your ArcGIS Online for Organizations publisher or administrator account.
4. In the App Info page, specify the required information, such as Title. Optionally, you can change the App Icon and other settings. Click **Save** to save your settings.



5. Click **Map Tour Settings**.
6. Click **Set** to select a web app. In the Set Map Tours window, select **Redlands City Tour** from **My Content** (or choose a map tour web app that you created before or that others created), and then click **OK**.

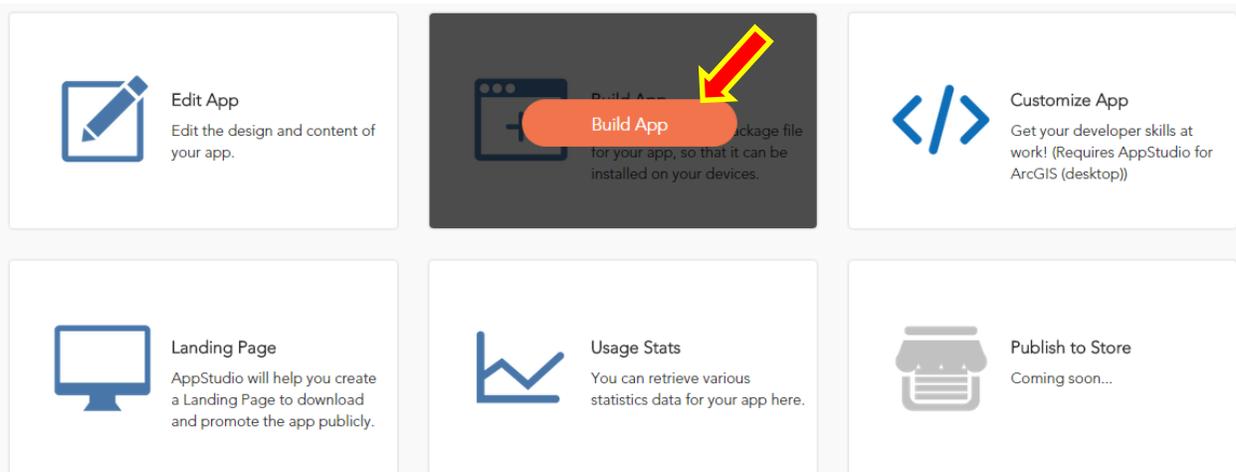


7. Click **Save and Finish**.

8. Optionally, you can preview the app on your Android device.

- On your Android device, go to Google Play or App Store, search for AppStudio Player for ArcGIS, download and install it.
- Start it, log in with the same ArcGIS Online account you used to log in above. Find your map tour app in the list, and double tap it to preview your app.

9. Continuing from step 7, in your App Console, click **Build App**.



10. Choose **Android** as the platform you want to build your app for, and click **Build**. Your request is queued to be processed. It may take a few minutes or longer for your build to be completed.

Redlands Tour (GTKWebGIS)'s App Console > Build App

Client ID

Tips: Client ID is used by ArcGIS Runtime SDK when building your app. If you leave Client ID blank, there will be watermarks on the map in your app. For more information about Client ID and how you can create one, please see [this help topic](#).

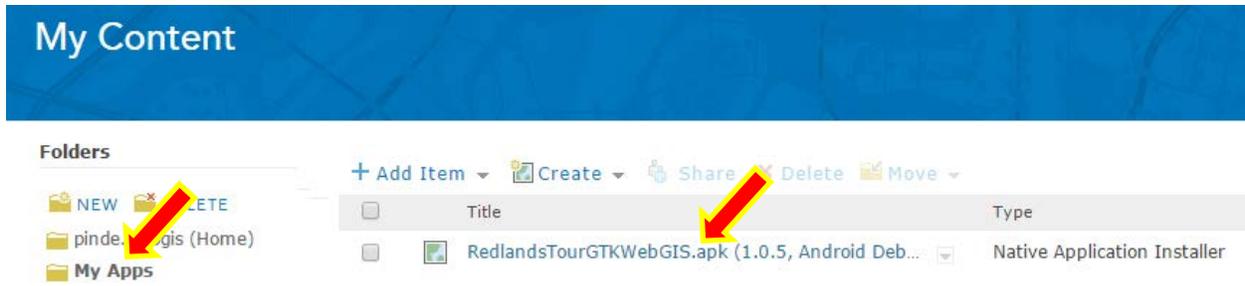
Please choose the platforms you want to build your app for:

- Android [Sign Android App](#)
- iOS(iPhone and iPad) [Sign iOS App](#)
- Linux(64 bit)
- Mac OS
- Windows x86(32 bit)
- Windows x64(64 bit)

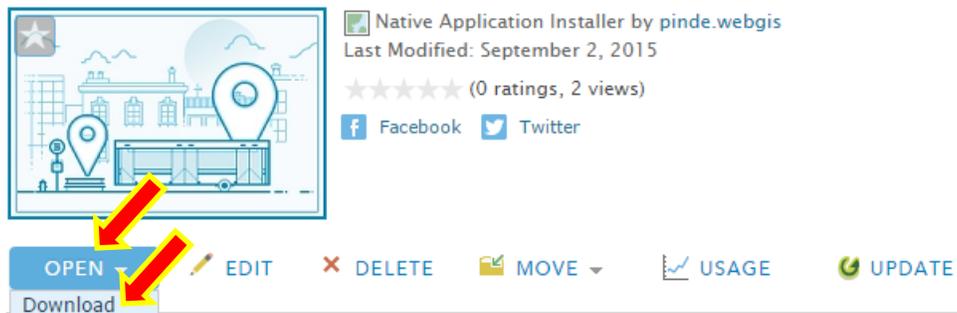
Build

You also have the options to build for other platforms. Note the iOS option is disabled, because it needs a certificate file and a provisioning profile. The certificate tells who you are and the provisioning profile indicates that code built by you is allowed to run on your mobile devices. You will need to be a registered iOS developer to generate these files.

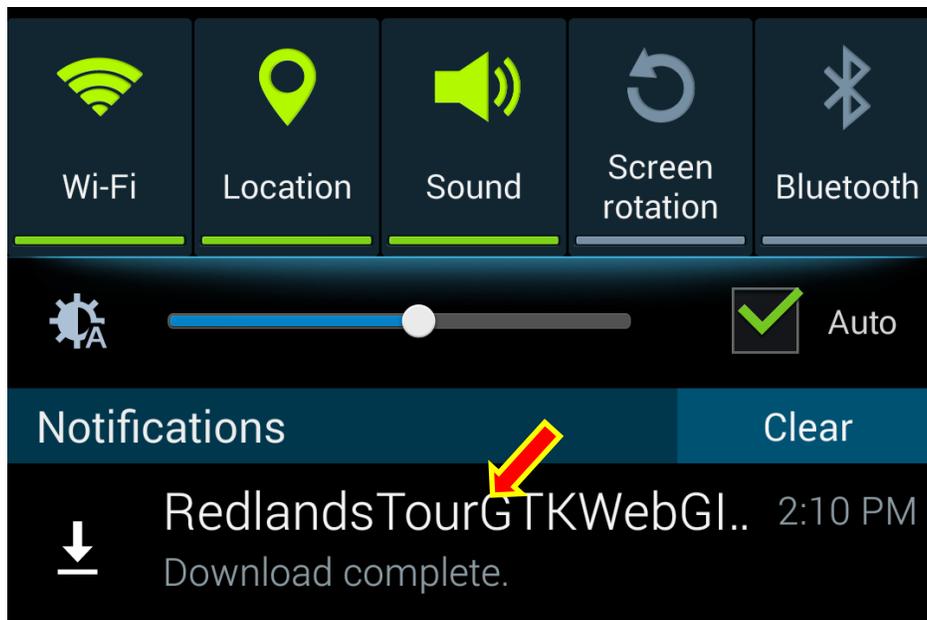
11. After your build is completed, you must transfer the Android installation package (the .apk file) to your Android device and install it. There are several ways to do so; the following method uses ArcGIS Online on your mobile device.
 - On your Android device, start the web browser and go to <http://www.arcgis.com>.
 - Click **View Full Site** at the bottom of the page.
 - Log in with the ArcGIS Online account you used above.
 - Go to **My Content**, choose the **My Apps** folder, and click the build (.apk file) that you just created above.



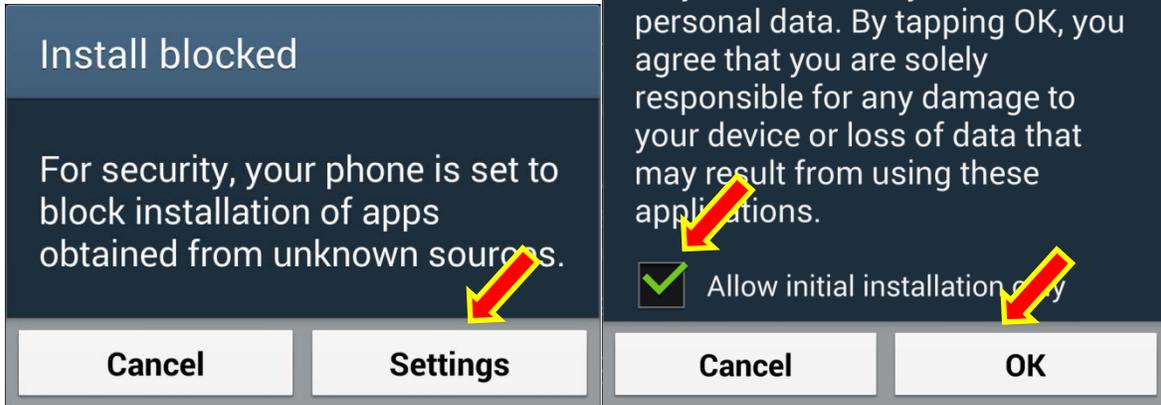
- Click Open and Download the app.



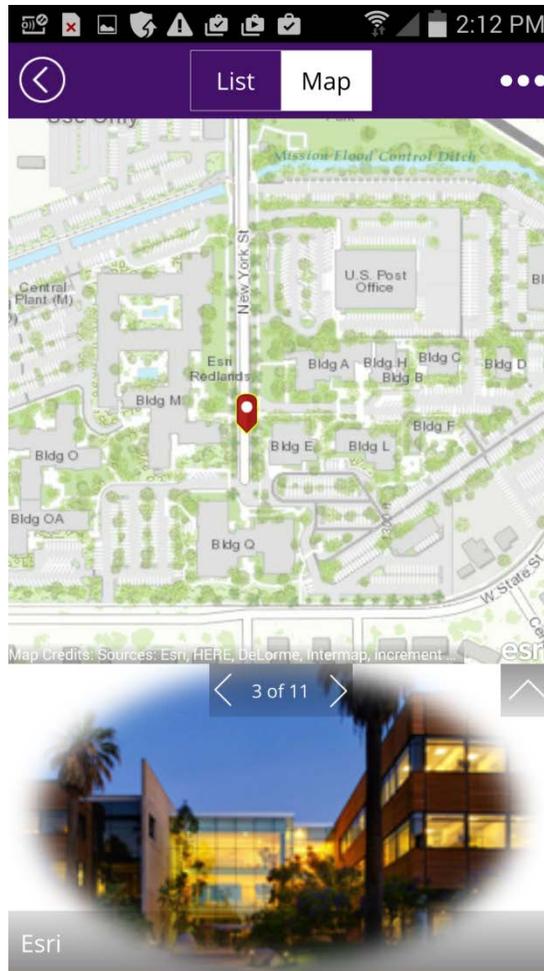
- After the .apk file is downloaded, tap it to run it.



- If you didn't enable Unknown sources for your Android to Install Apps Outside the Play Store, you will be prompted with an Install blocked message. Click **Settings**, and click **OK** to allow installing Unknown Sources.



- Follow the instruction to install the app.
- Find the app and run it.



If you need to deploy your app to a large number of users, you would typically go through Google Play and App Store. Refer to the AppStudio for ArcGIS website for more details.

Pages 351–352, assignment 9B

Replace with:

Create a native app using AppStudio for ArcGIS.

Requirements:

- Your app should use a template different from the one used in the above tutorial.
- Your app should be based on the web maps or services that you created before.

What to submit: Email your instructor with the subject line Web GIS Assignment 9B: Your name, and include the following:

- One or more screen captures of your app running on your mobile device.

- If you are using iOS but unable to deploy your app to it, you can still preview your app in AppStudio Player for ArcGIS. Make your screen captures here.
- If you don't have an Android or iOS phone, you may generate a build for Mac OS or Windows, install the build, and run the app. Make your screen captures here.

Chapter 10

The tutorials referenced in this chapter are still valid.

The 3D capability of ArcGIS Pro is quickly advancing. It can author 3D models and publish them as a scene service to ArcGIS Online and Portal for ArcGIS. You can then add the scene services to the Scene Viewer of ArcGIS Online or Portal for ArcGIS to create 3D web maps.