



PLANET BASEMAPS USER GUIDE

Table of Contents

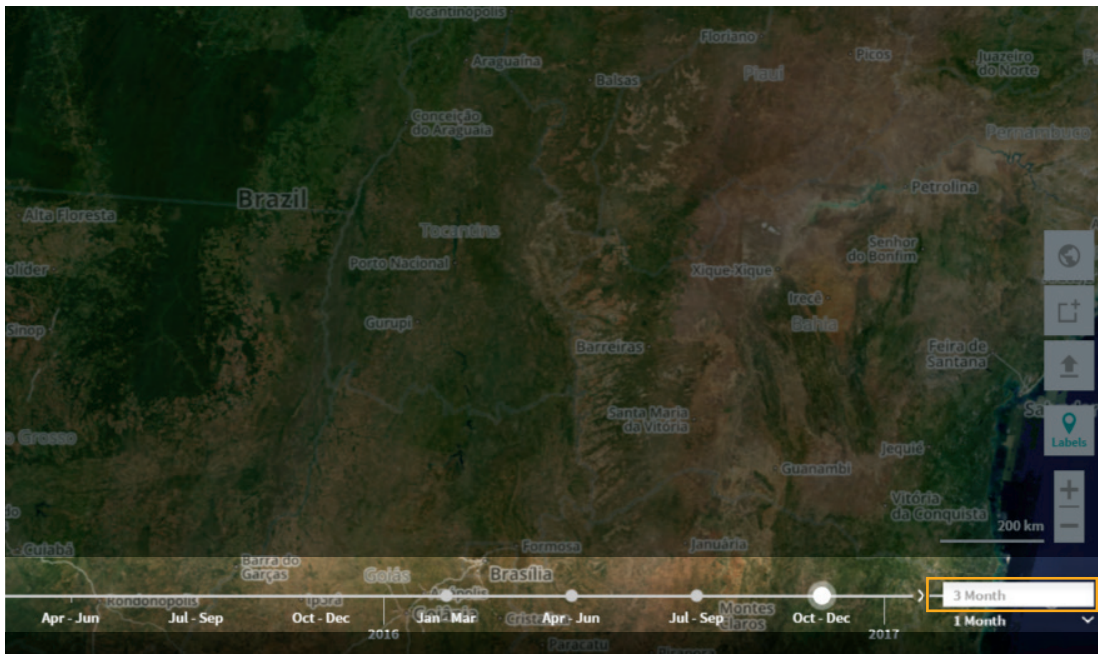
1. VIEWING GLOBAL AUTOMATED TIMELAPSE BASEMAPS IN PLANET EXPLORER	3
2. DOWNLOADING PLANET BASEMAP GEOTIFFS	5
2.1. GUI Access	5
2.2. API Access	6
3. USING BASEMAP WEB SERVICES IN OTHER APPLICATIONS	7
3.1. WMTS Tile Service in ArcGIS Pro	7
3.2. Adding an XYZ Tile Service to an ArcGIS Online Web Map	9
3.3. WMTS Service in ArcGIS Online	10
3.4. XYZ Tile Service in QGIS	12
3.5. ADDING A WMTS SERVICE TO QGIS	13

Disclaimer

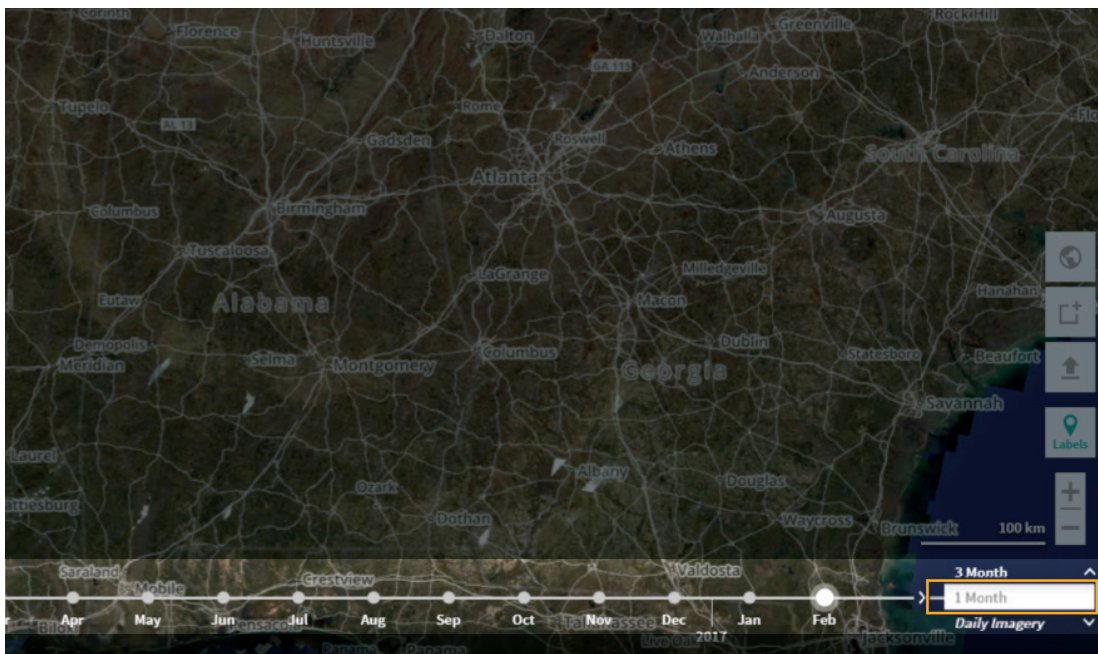
This document is designed as a general guideline for customers interested in acquiring Planet Explorer Lab products and services. Planet takes an agile and iterative approach to its technology, and therefore may make changes to the product(s) described in this document.

1. VIEWING GLOBAL AUTOMATED TIMELAPSE BASEMAPS IN PLANET EXPLORER

Planet Explorer supports the viewing of quarterly and monthly Planet Basemaps. To change which basemap you are viewing, use the time bar along the bottom of the map.



Change Quarterly



Change to Monthly View

To change to monthly view, select the dropdown list on the bottom right and the basemap options will update to show months instead of quarters and update to the most recent Planet Basemap.

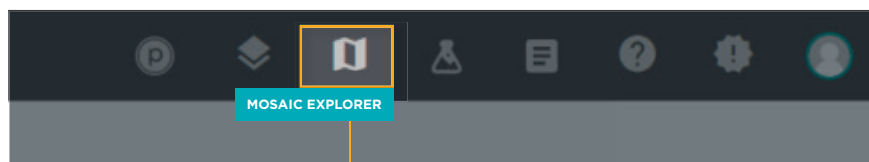
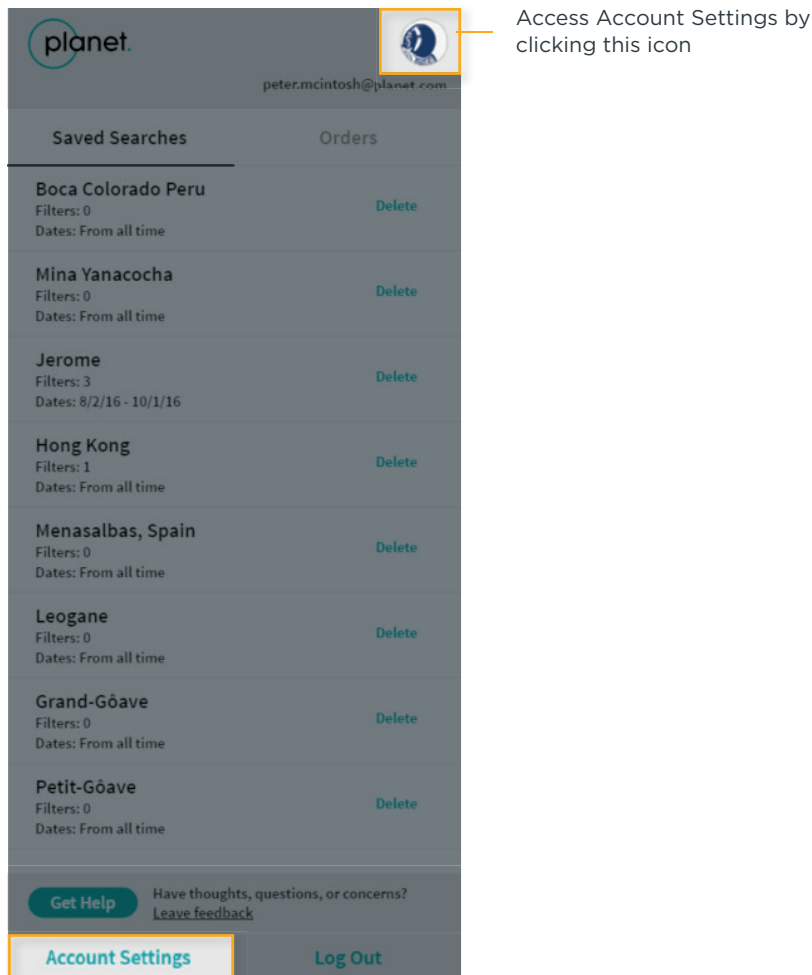


When switching to monthly view, you may start to see gaps in our Basemaps coverage. This is expected and is due to issues such as persistent cloud cover or gaps in satellite overpass (which are minimal).

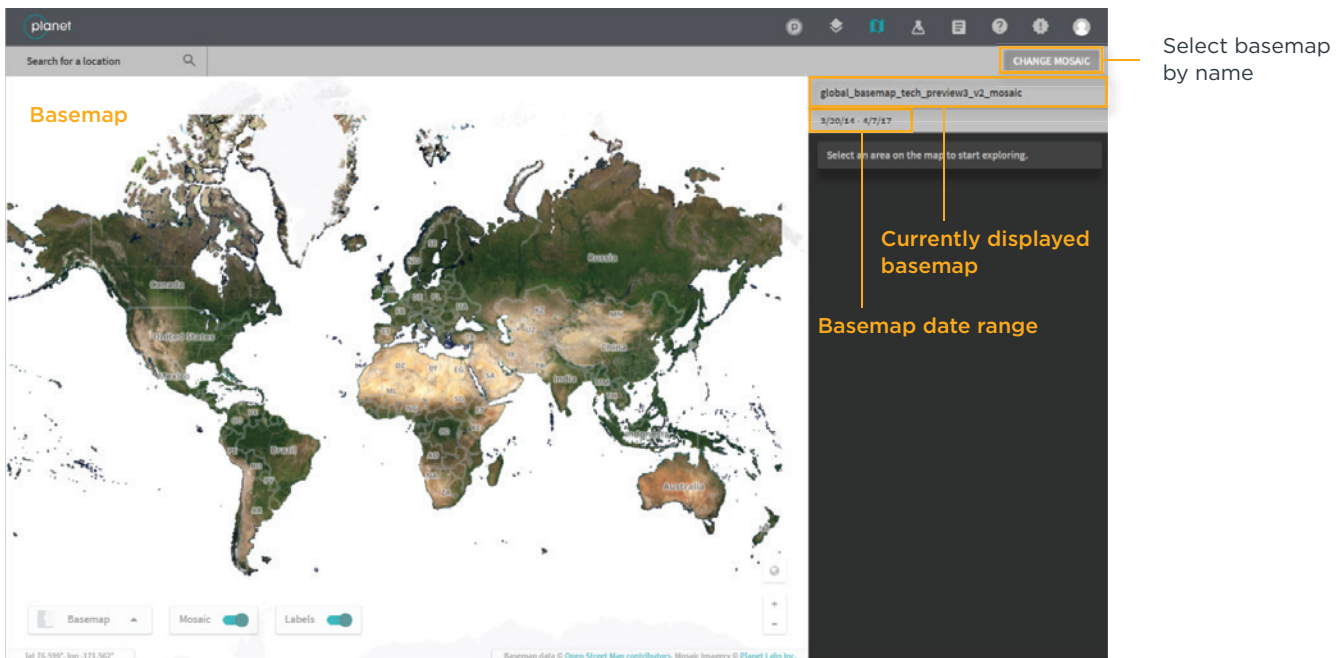
2. DOWNLOADING PLANET BASEMAP GEOTIFFS

2.1. GUI Access

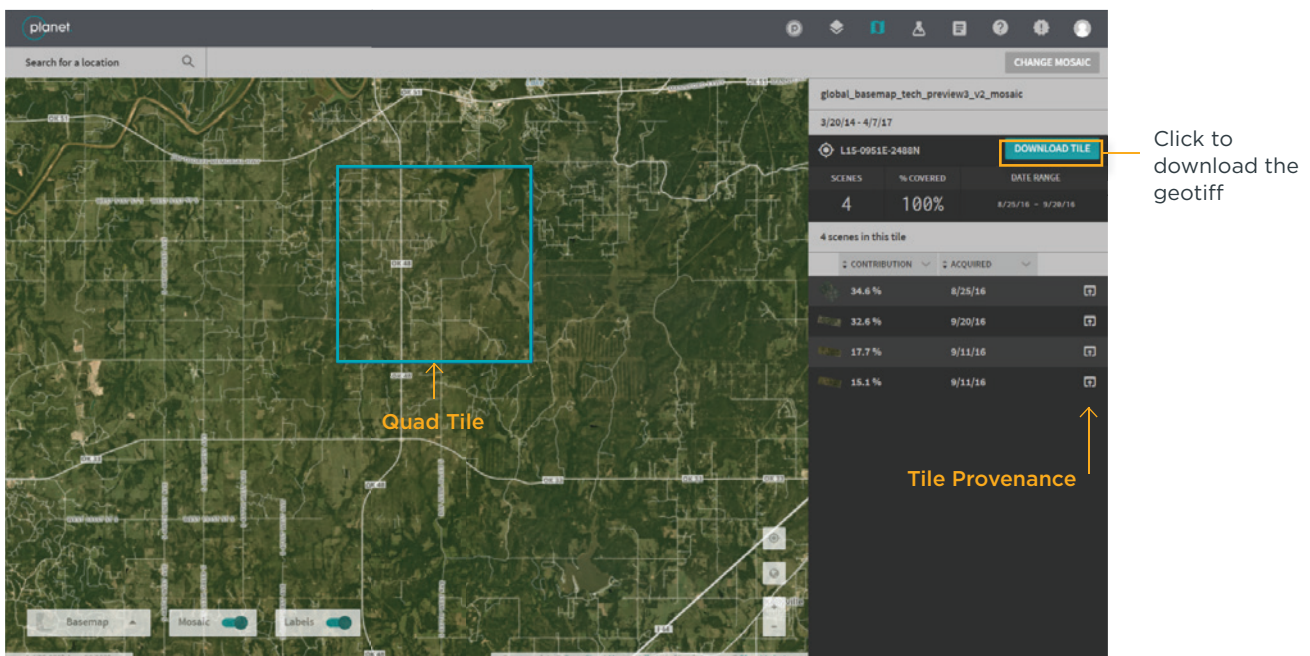
To download Planet Basemap GeoTIFFs you must change interfaces to the Mosaics Explorer GUI. In this GUI you may also view and browse all of the Planet Basemaps you are entitled to and download GeoTIFF files. To access Mosaics Explorer, follow the steps below:



Click on the button that says “Mosaics Explorer” when you hover over it.



Once you are in Mosaics Explorer, click the “Change Mosaic” button. You will see a list of all Planet Basemaps you are entitled to. Select the basemap of interest (hint: search on “global” and you will get a shorter list).



Once you have selected the basemap, zoom in on your AOI. When you are zoomed enough, you will start to see a green box outline as you move your mouse around the image. This green box represents the tile for that exact location. If you click on the green box, that tile becomes selected and the panel on the right updates with that tile’s information. You will also see a “Download Tile” button activated and you can click on that to bring the GeoTIFF file locally to your machine.

2.2. API Access

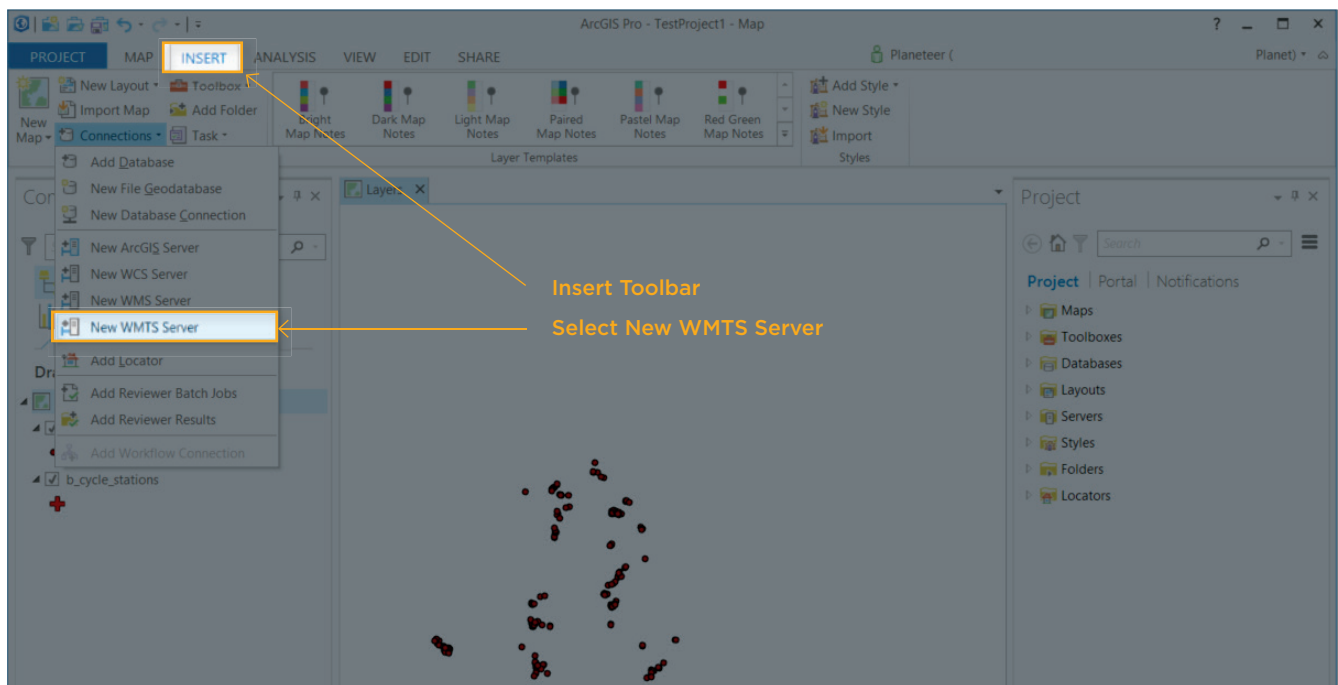
Planet basemaps and associated metadata are also downloadable through the Planet v0 RESTful API. Full details on using this API can be found at the following location: <https://www.planet.com/docs/reference/v0/>

3. USING BASEMAP WEB SERVICES IN OTHER APPLICATIONS

Below are two examples of how to add a basemap web service to a third party application. This is just a sampling - many, many applications are ready to ingest Planet Basemaps and typically only need a URL and your authentication credentials.

3.1. WMTS Tile Service in ArcGIS Pro

From the main menu on the Insert toolbar, you will see an option for “Connections”. Clicking on this will bring up the following options:



You want to select the “New WMTS Server”. You will then get the following dialog:

A dialog box titled 'Add WMTS Server Connection'. It has a close button (X) in the top right corner. The 'Server URL:' field contains 'net.com/v0/mosaics/global_basemap_tech_preview3_v2_mosaic/wmts/'. Below it, 'Examples:' shows two URLs: 'http://gisserver.example.com/arcgis/rest/services/mymap/MapServer/...' and 'http://gisserver.example.com/maps.cgi?'. A section titled 'Optional: provide a username and password' contains a 'User Name:' field with 'Isaac.Newton@planet.com' and a 'Password:' field with '*****'. There is a checkbox labeled 'Save Username / Password' which is checked. At the bottom are 'OK' and 'Cancel' buttons.

In the server URL you will enter the Planet provided URL with your Basemap name. The general format of this URL will always be:

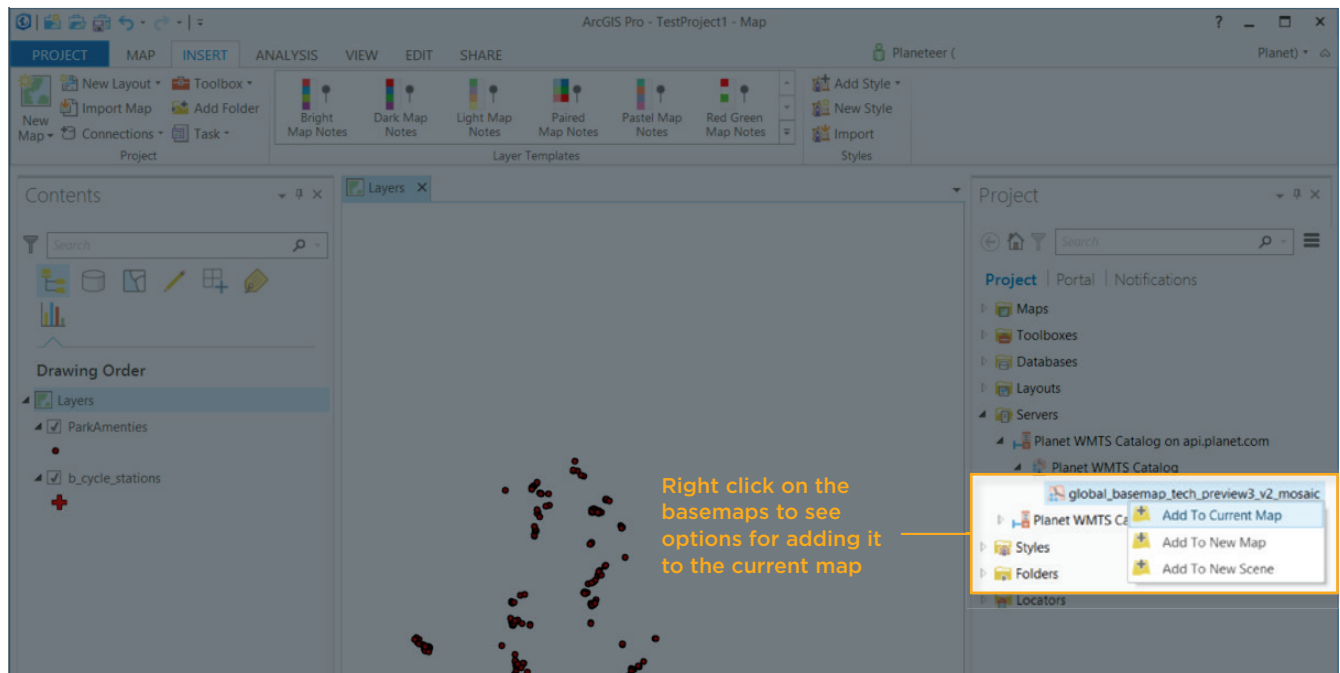
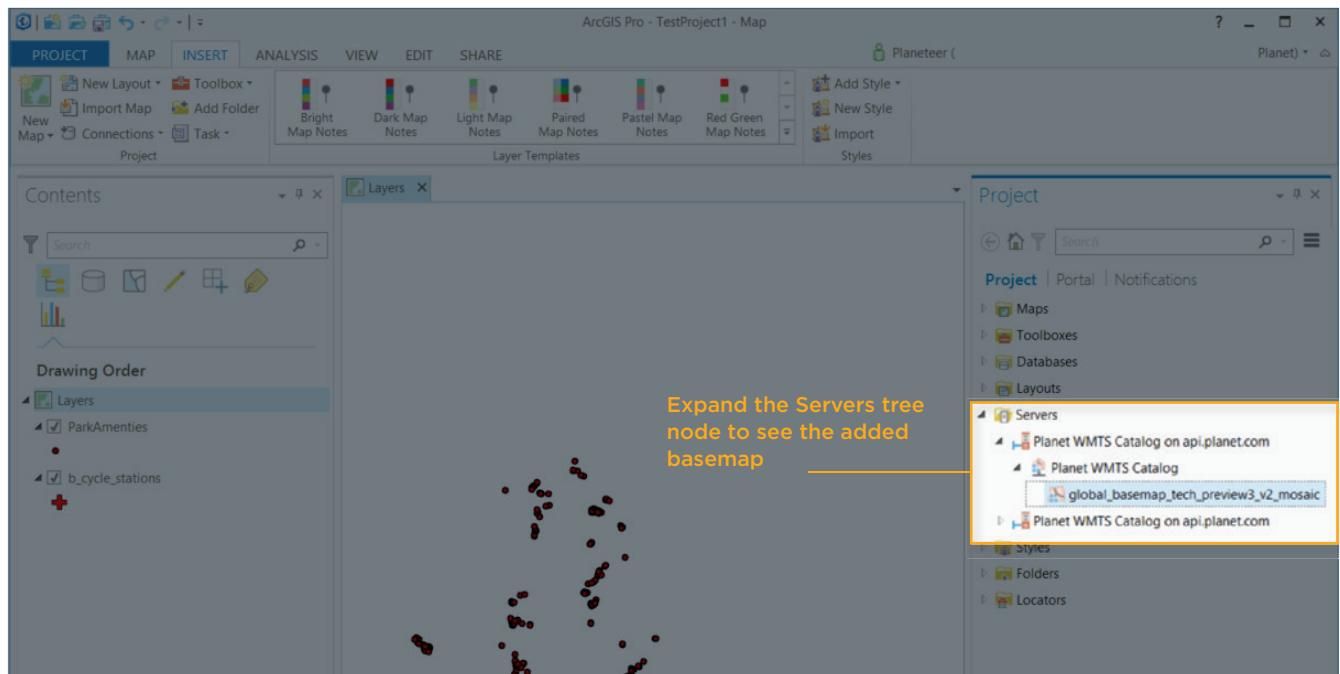
https://api.planet.com/v0/mosaics/BASEMAP_NAME_HERE/wmts/

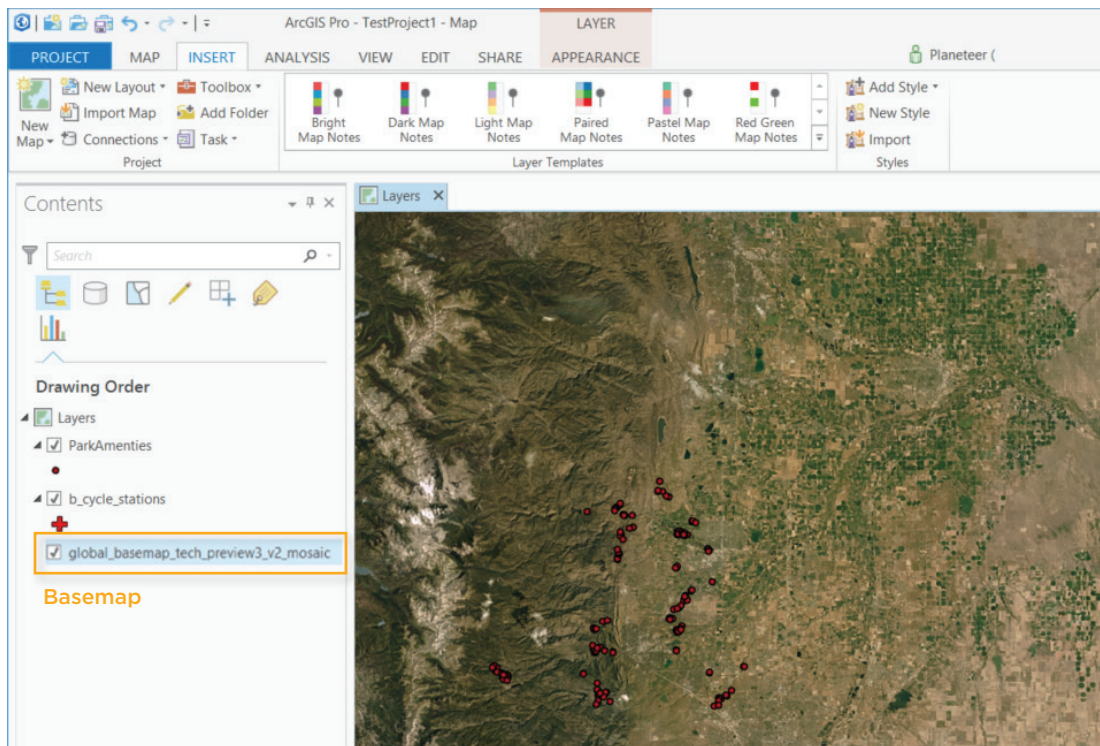
where you will enter the actual name of your Planet Basemap in place of the “BASEMAP_NAME_HERE” test. You will enter your specific credentials that you use (or were provided) to log into Planet Explorer.

For example:

https://api.planet.com/v0/mosaics/global_basemap_2017_Q1/wmts/

Once you have successfully connected to the WMTS server, navigate to the Project view and expand the Servers tree node to see the newly added basemap. Right clicking on the basemap allows you to add it to the current map view.

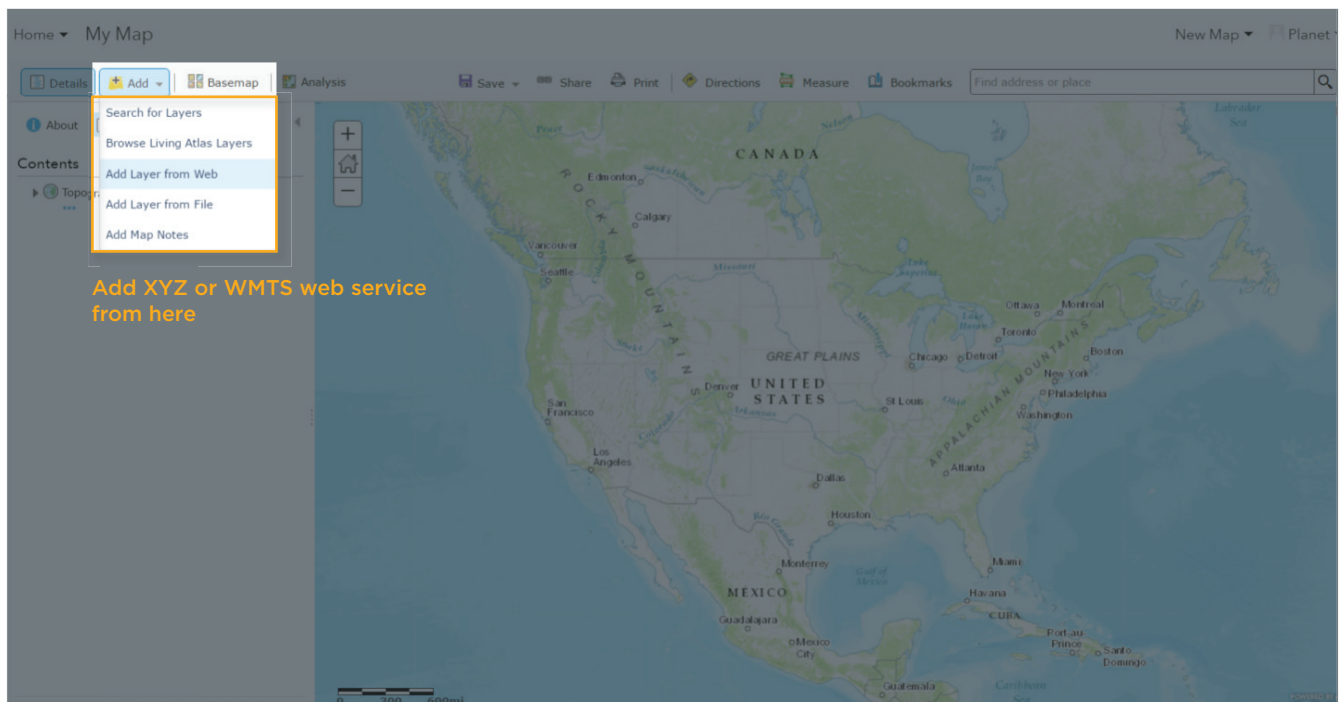


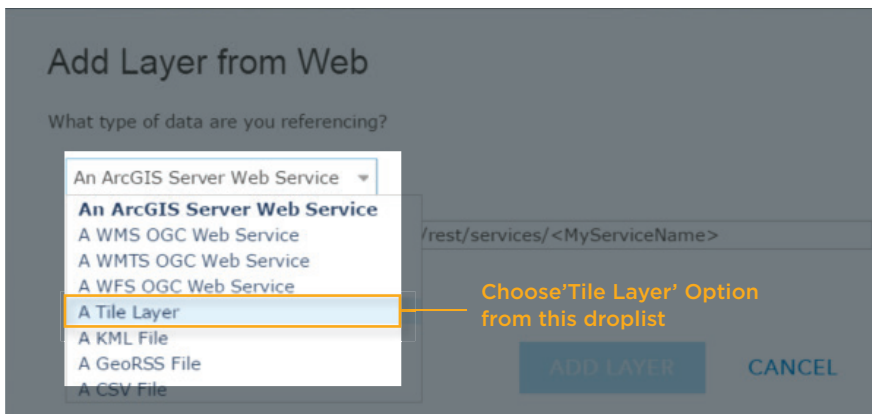


This will then create a layer that you can add to your map like any other data layer.

3.2. Adding an XYZ Tile Service to an ArcGIS Online Web Map

When logged in to ArcGIS, click on the “Add” button above the Contents panel, and select the “Add Layer from Web” option.





You will get the above dialog where you can enter the tile service URL. This will then add the basemap option to your web map. Checking the “Use as Basemap” box will optionally replace any existing basemap with this basemap, or this may be added as a standard layer.

An ArcGIS Online Tile Service Layer URL should be of the following format, where the only text modified by the user should be the sections in ALL CAPS for Mosaic (Basemap) name and their specific API key if Planet has not provided the full URL:

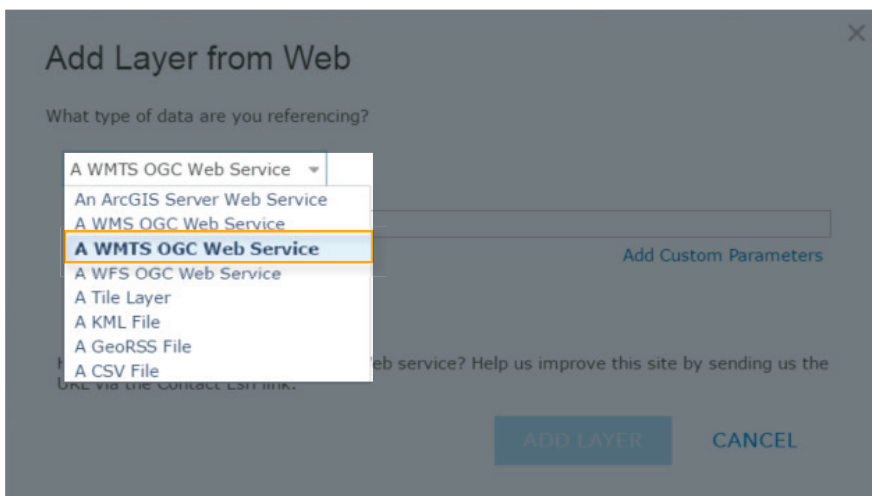
https://tiles.planet.com/v0/mosaics/MOSAIC_NAME_HERE/{level}/{col}/{row}.png?api_key=API_KEY

Hints:

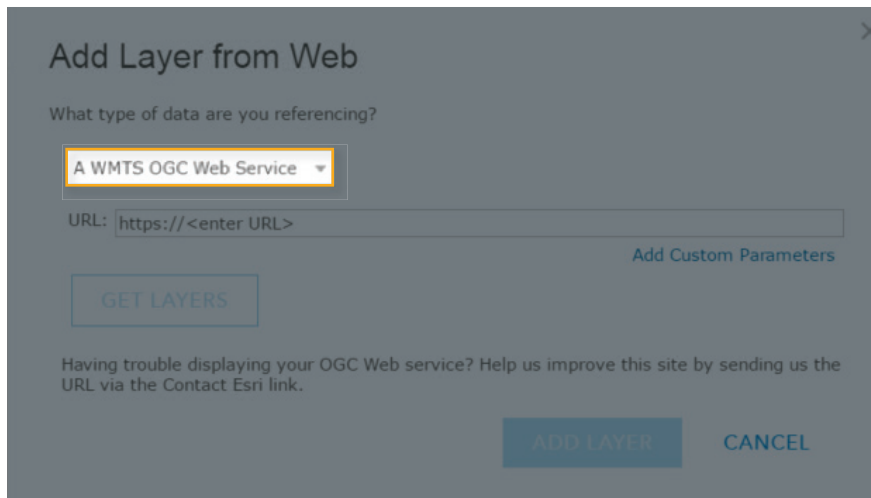
- ArcGIS Online will specifically look for URLs with the “{col}/{row}” format. Sometimes Tile Layer URL’s are expressed with {x}/{y} in place of {col}/{row}. If the web map does not display data as expected check the URL and replace as necessary.
- Tile layers using this protocol are not directly supported in ArcGIS Pro, but you can view ArcGIS Online published maps in ArcGIS Pro

3.3. WMTS Service in ArcGIS Online

To add a WMTS web service to ArcGIS Online, follow the same steps for adding an XYZ Tile Layer, except in the second stage, choose “A WMTS OGC Web Service.”



After selecting that option, you will see the following dialog where you can enter the provided WMTS URL.

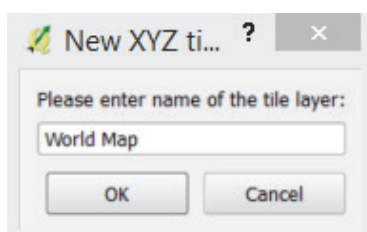
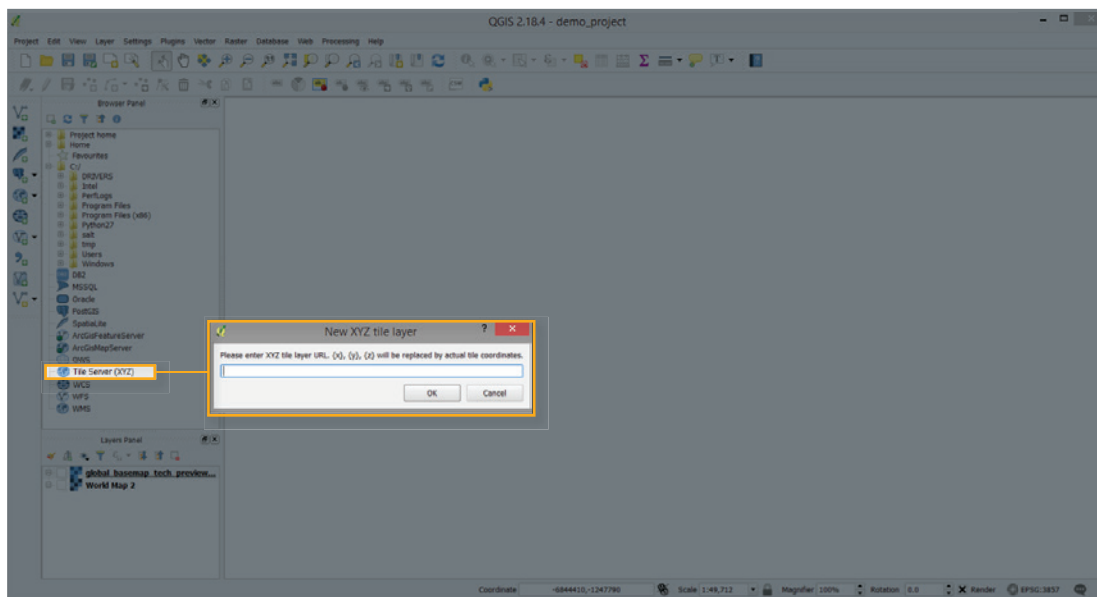


At this point ArcGIS Online will reach out to the server and you will be asked to enter your Planet authentication credentials. If you do not have Planet credentials please contact your administrator for details on how to accomplish this.

Hint: If you are not getting a prompt to log into the Planet WMTS service, you may need to add this URL to the AGOL trusted server list. Here is more information how to do that:

http://doc.arcgis.com/en/arcgis-online/administer/configure-security.htm#ESRI_SECTION1_70C-C159B3540440AB325BE5D89DBE94A

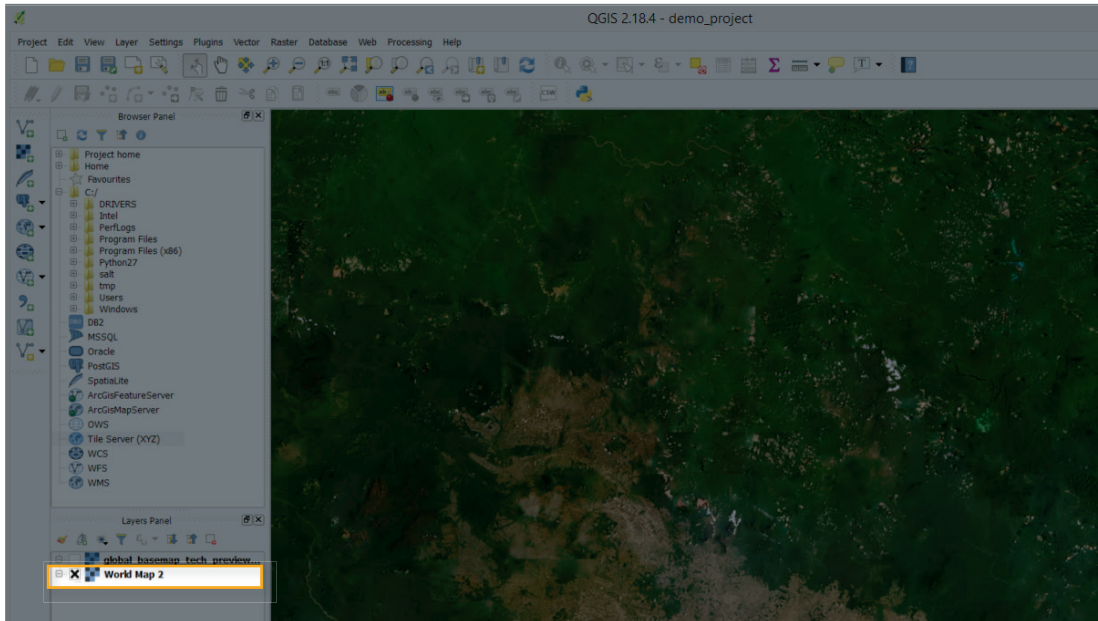
3.4. XYZ Tile Service in QGIS



In QGIS it is very easy to add a service right from the main project window. Simply paste in the URL and you will then be prompted to name the layer in your map.

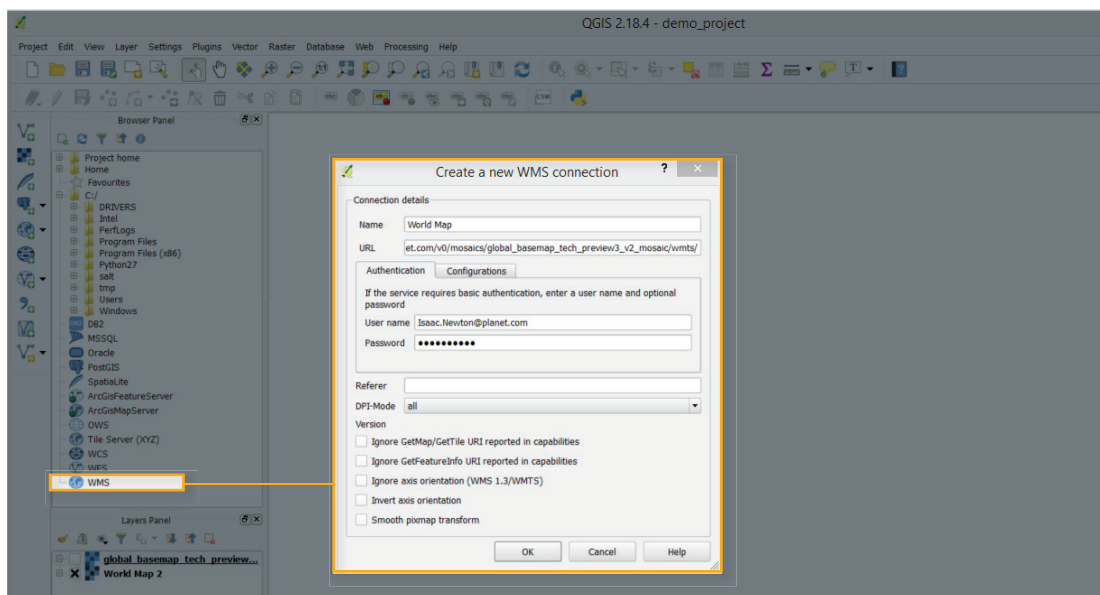
An QGIS Tile Service Layer URL should be of the following format, where the only text modified by the user should be the sections in ALL CAPS for Mosaic (Basemap) name and their specific API key:

https://tiles.planet.com/v0/mosaics/MOSAIC_NAME_HERE/{z}/{x}/{y}.png?api_key=YOUR_API_KEY_HERE



You can then add the Planet Basemap to your layer view as any other layer.

3.5. Adding a WMTS Service to QGIS



This process is quite simple too. Simply select the “WMS” option and you will receive the dialog shown here. Name the layer anything you want and enter the URL for the service provided from Planet. Your Planet Explorer credentials will be used to access the service. Once this is set up you may add it to the map like any standard layer.