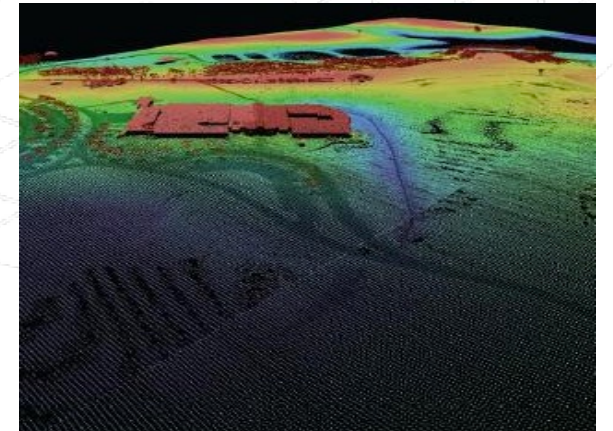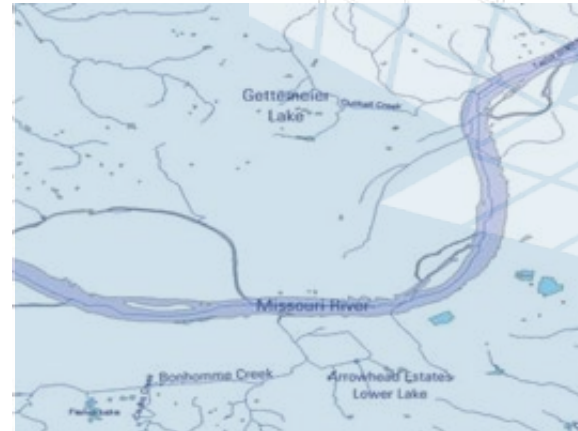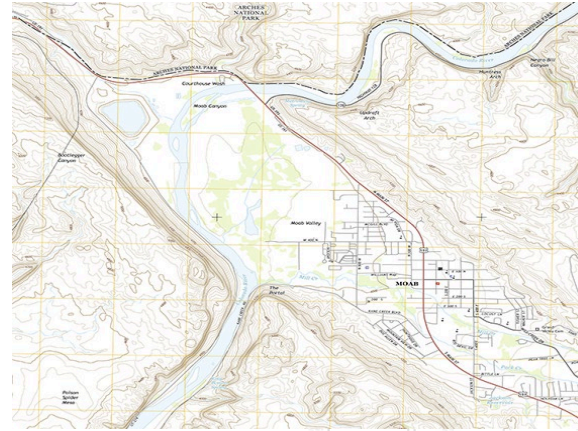# ArcGIS Online 3DEP Contractor Acquisition and Production Status Application Overview

Geospatial Planning and Services Contractors

Barry Miller, GISP
Martha Bearskin
National Geospatial Technical Operations Center

March 19, 2024

Outline

- ArcGIS Online 3DEP Contractor Acquisition and Production Status Application

- Account Set Up

- Understanding the Data Layers

- Data Entry

- Common Errors

- Demonstration of the Dashboard and Data Entry

USGS science for a changing world

The National Map
Your Source for Topographic Information

ArcGIS Online 3DEP Contractor Acquisition and Production Status Application

Overview

- Esri ArcGIS Online (AGOL) web application

- Intended to convey the status of 3DEP acquisition and data production to USGS stakeholders

- Contractors working on 3DEP projects add content to an Esri Geodatabase

- USGS users access this content using AGOL dashboards or with ArcGIS Pro

- Primary layers are:
  - Projects – the defined project area (DPA) with a unique PTS ID
  - Flight Lines – convey the status of aerial acquisition
  - Data Extent polygons – represent the spatial extents of production blocks of data

What is the ArcGIS Online 3DEP Contractor Acquisition and Production Status Application

Initial Data Delivery Dashboard

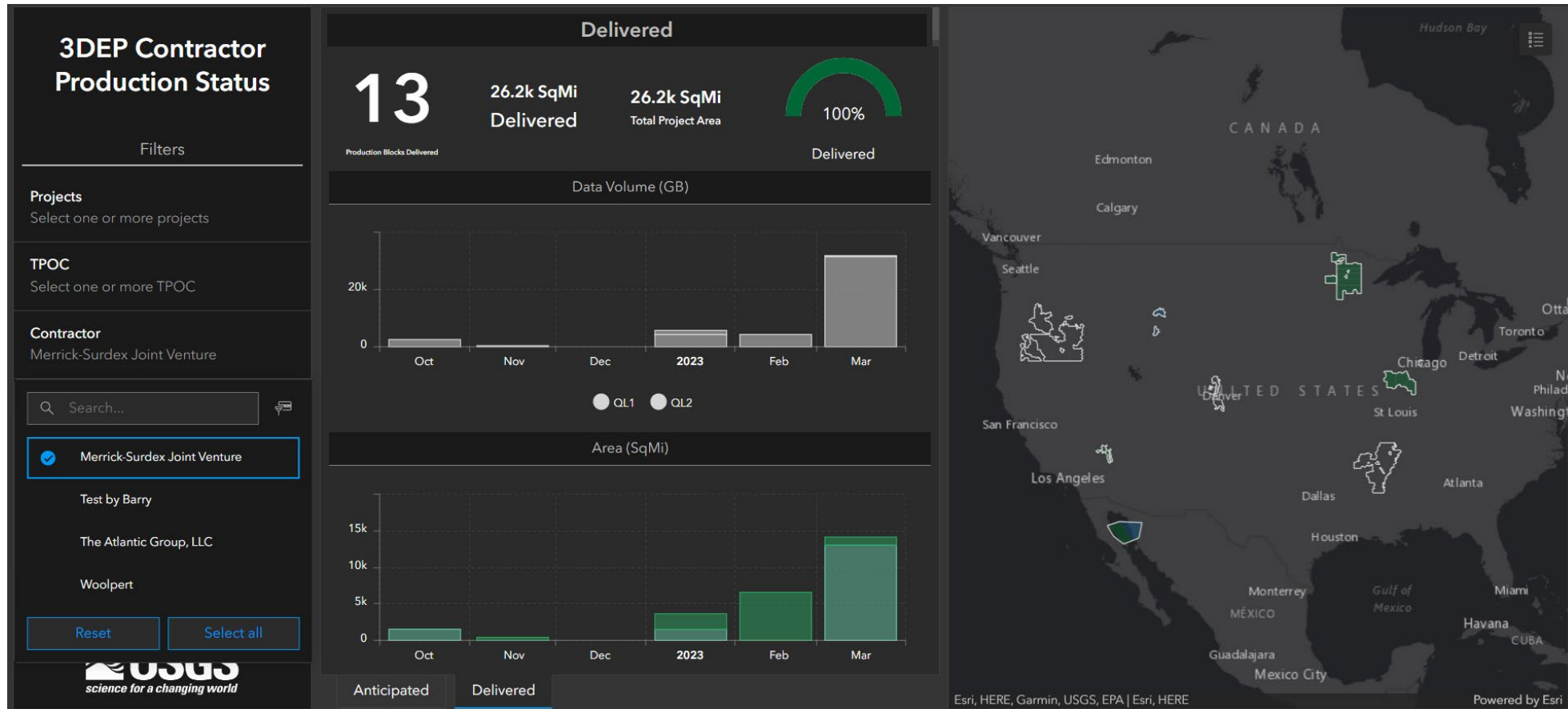- Shows the square mileage and data volume anticipated and delivered by month
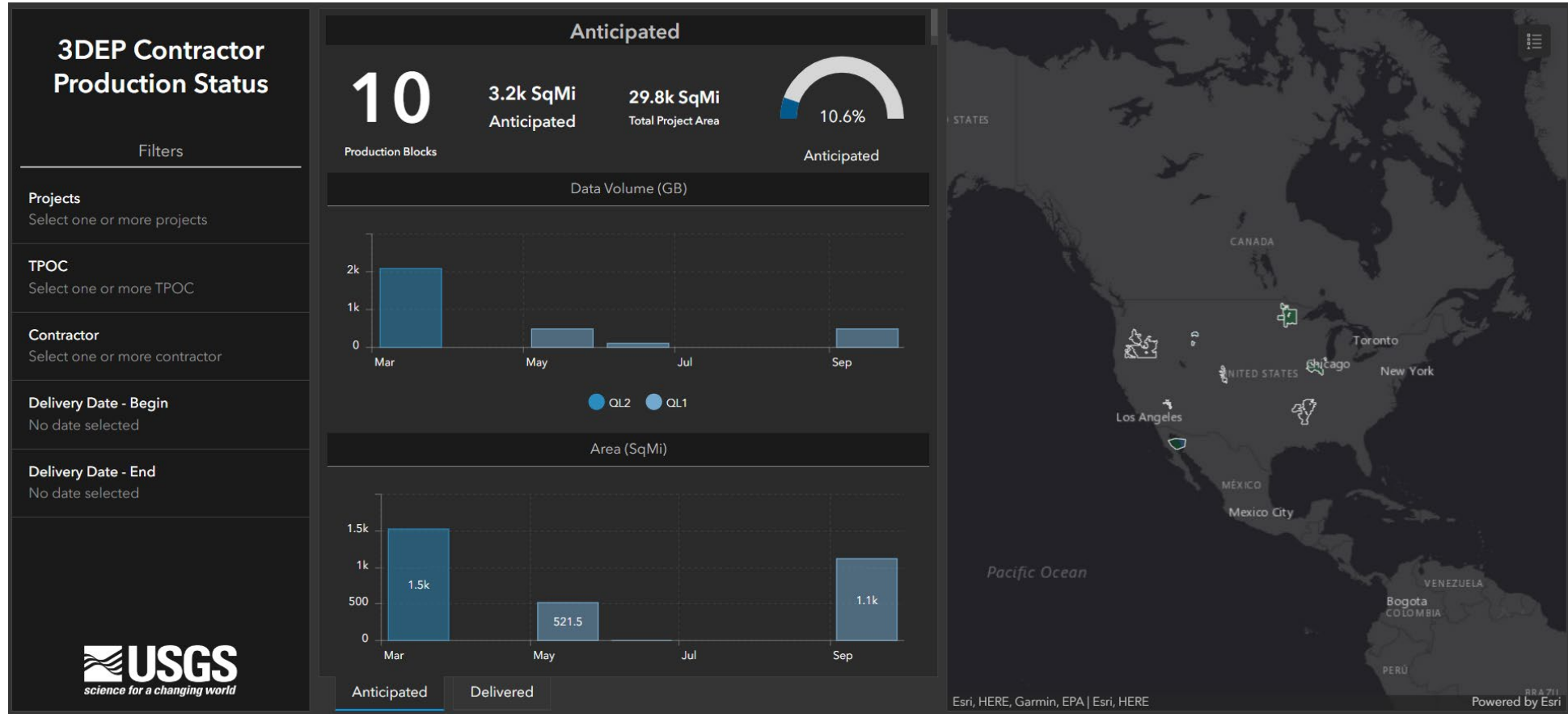
What is the ArcGIS Online 3DEP Contractor Acquisition and Production Status Application

Initial Data Delivery Dashboard

- Can filter based on project name, TPOC, contractor, or dates

What is the ArcGIS Online 3DEP Contractor Acquisition and Production Status Application

Data Acquisition Dashboard

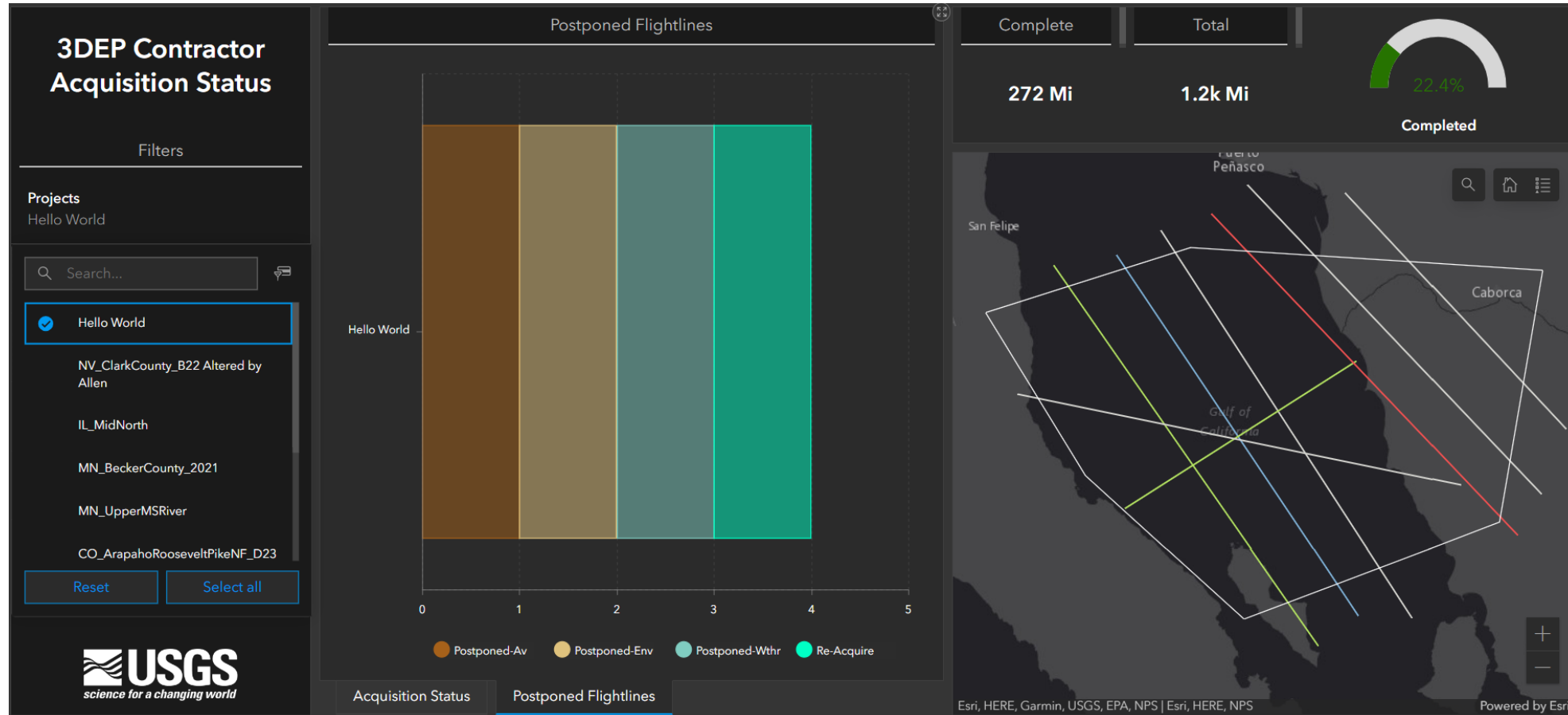- Shows the status of aerial flight line acquisition

What is the ArcGIS Online 3DEP Contractor Acquisition and Production Status Application

Data Acquisition Dashboard

■ Will show postponed flight line status as well

Account Set Up

3DEP Contractors Group

- USGS will send an Esri ArcGIS Online (AGOL) invitation to join the "3DEP Contractors" group

- Recommend each company set up one group account for all project managers to use

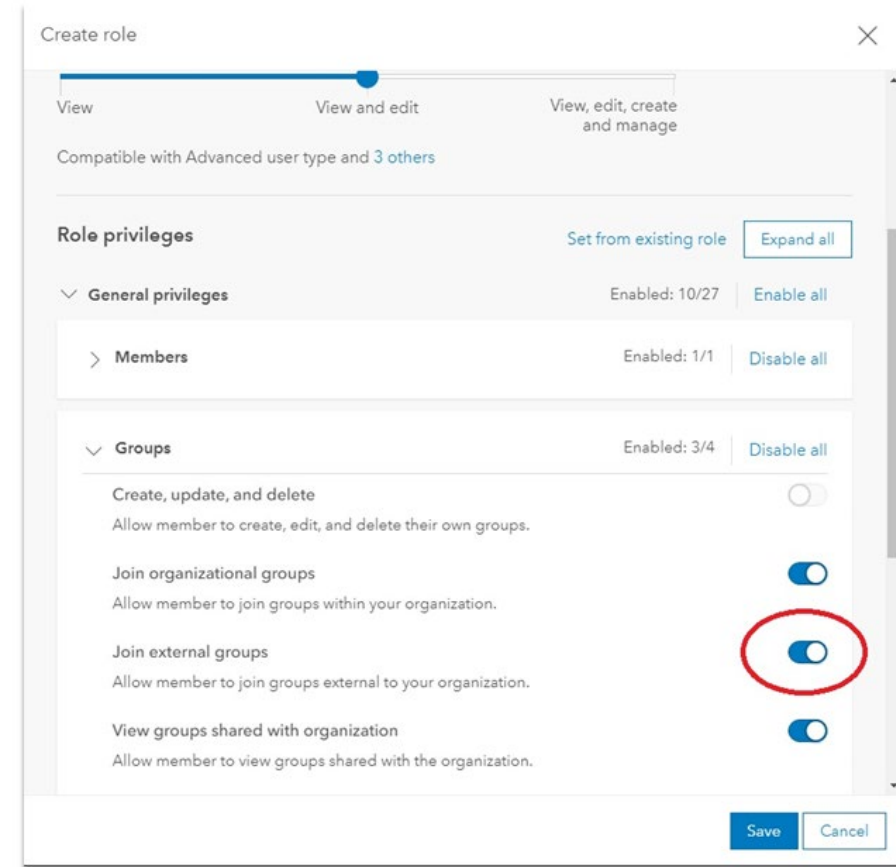- Otherwise, an individual can only see and edit their own features

Account Set Up

Join External Groups

- Ensure your ArcGIS Online administrator sets your account to be able to join external groups

"Join organizational groups" and "View groups shared with organization" should be enabled.

In the Groups privileges enable "Join external groups"
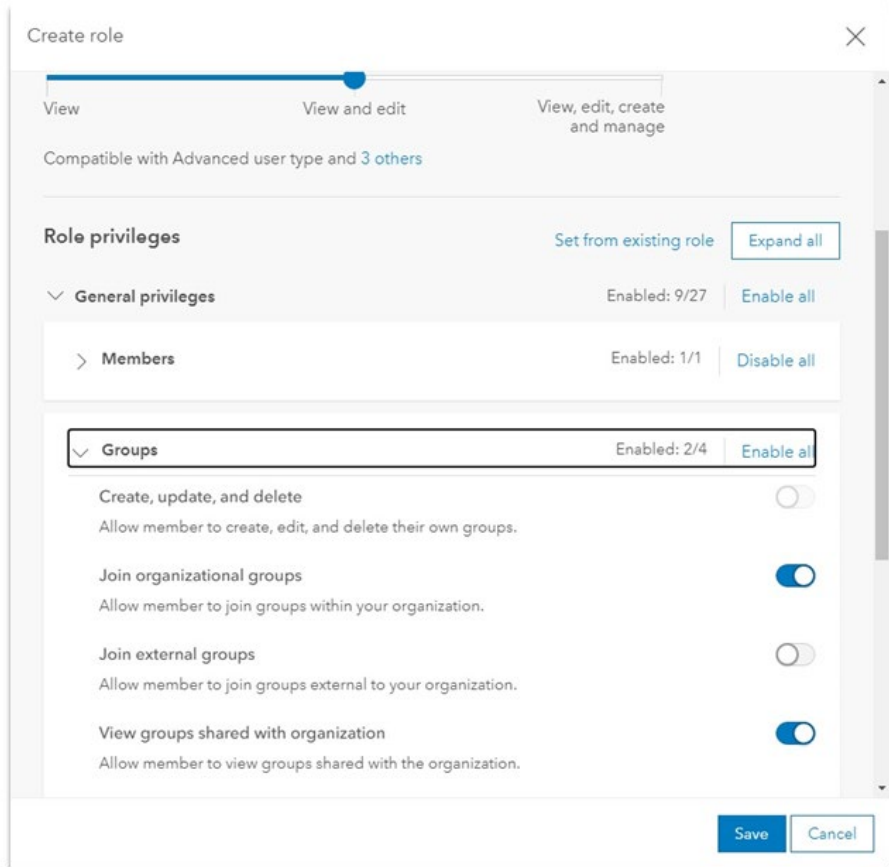
Understanding the Data Layers

Overview

- Data is entered by contractors

- Each contractor organization should use one AGOL account

- Each contractor can only see and edit their own data

- USGS can see all data and certain USGS power users can edit

- Refer to the feature template provided by the USGS Commercial Partnerships Team (CPT)

projects
- PTS ID
- name
- contractor
- task order number
- sq mi
- notes
- technical point of contact

1:m

1:m

flightlines
- flightline ID
- PTS ID
- line miles
- acquisition status
- acquisition date
- postpone reason
- notes

data_extents
- PTS ID
- sq miles
- data volume
- CRS EPSG
- Quality level
- Delivery date
- Status date
- notes

USGS
science for a changing world

The National Map
Your Source for Topographic Information

Understanding the Data Layers

Projects feature class

- Use the defined project area geometry

- All fields except Notes must be populated

- PTS ID should be provided by the USGS CPT Project Manager (TPOC)

- Use the official name for the project as specified in the task order

- The Notes field can hold 1,000 characters and is where USGS will put edit updates

projects

projects
PTS ID
name
contractor
task order number
sq mi
notes
technical point of contact

Field: Add Calculate   Selection: Select By Attributes   Zoom To   Switch   Clear   Delete   Copy

	OBJECTID *	PTS ID *	Name	Contractor	Task Order Number	SqMi	Notes	Technical Point of Co...	
1	65	231598	AR_NorthEast_D22	The Atlantic Group, LLC	140G0222F0247-AR_NorthEast_D22	749.5635	Barry added the PTS ID	Leslie Lansbery	
2	64	300128	CO_ArapahoRooseveltPikeNF_D23	Woolpert	140G0221D0013-CO_ArapahoRooseveltPikeNF_D23	3379	Barry corrected the con...	Dan Vincent	

USGS
science for a changing world

The National Map
Your Source for Topographic Information

Understanding the Data Layers

Flight Lines feature class

- The PTS ID is still required for this dataset as it is joined to other layers in the dashboards

- Populate a unique flightline_id and calculate the line_miles

- Refer to the acquisition status and postpone reasons table below

	OBJECTID *	flightline_id *	pts_id_prj *	line_miles	acq_status	acq_date	postpone_reason ▾	notes
44	5422	549	300147	46.95227	Postponed	1/7/2024	Re-Acquire	Barry calculated the line miles
45	5430	541	300147	46.95418	Postponed	1/7/2024	Re-Acquire	Barry calculated the line miles

Field: ▦ Add ▦ Calculate **Selection:** ▦ Select By Attributes ▦ Zoom To ▦ Switch ▦ Clear ▦ Delete ▦ Copy

flightlines
- flightline ID
- PTS ID
- line miles
- acquisition status
- acquisition date
- postpone reason
- notes

Flightlines:

acq_status			postpone_reason
Actual code value	**Display**		Actual code same as display value
done	Done		- Postponed-HW [hardware-related]
qc_ip	QC In-Progress		- Postponed-Av [aviation-related]
not_done	Not Done		- Postponed-Wthr [weather-related]
postponed	Postponed		- Postponed-Env [environmental conditions-related]
			- Re-Acquire

USGS science for a changing world

The National Map
Your Source for Topographic Information

Understanding the Data Layers

Data Extents feature class

- This feature is intended to convey the extent of production blocks of data in work and does not necessarily equate to USGS-defined work units

- USGS prefers the data extents be split by crs_epsg and quality_level where possible

- Please populate the data volume (an estimate is fine) and the anticipated or actual delivery date (you can change these later, if necessary, be conservative +/- 2 weeks)

data_extents

- PTS ID
- sq miles
- data volume
- CRS EPSG
- Quality level
- Delivery date
- Status date
- notes

Field: ▦ Add ▦ Calculate   Selection: ▦ Select By Attributes ▦ Zoom To ▦ Switch ▤ Clear ▦ Delete ▦ Copy

	OBJECTID *	pts_id_prj * ▲	sq_mi	data_volume	crs_epsg	quality_level	delivery_status	delivery_date	notes
18	176	230958	3729.6	8910	6344	QL1	Actual	3/29/2023	<Null>
19	179	231598	228.04	324	6344	QL2	Anticipated	3/14/2024 3:00:00.000 PM	<Null>

Data Extents:

pts_id_prj [pts id provided by USGS]		delivery_status	
sq_mi [sq mi of data extent]		Actual code value same as display value	
data_volume [total of tiled LAZ in GB]		- Anticipated [initial selection]	
crs_epsg [- epsg code of grid projection and reference frame]		- Actual [change to 'Actual' when	
quality_level			
Actual code value same as display value		delivery is imminent]	
- QL0	- QL2		
- QL1	- QL3		

USGS science for a changing world   The National Map Your Source for Topographic Information

Data Entry

Add the 3DEP_project_features_Contractor_View into ArcGIS Pro

- Log into the named user account in usgs.maps.arcgis.com and make this your active portal

Data Entry

Add the 3DEP_project_features_Contractor_View into ArcGIS Pro

- In the Catalog pane, click on the Portal tab >> My Organization and search for *dfcbd51c9a6b45f286ec1d7c989300f5*

- In the search results, right-click on the 3DEP_project_features layer and add it to a new map
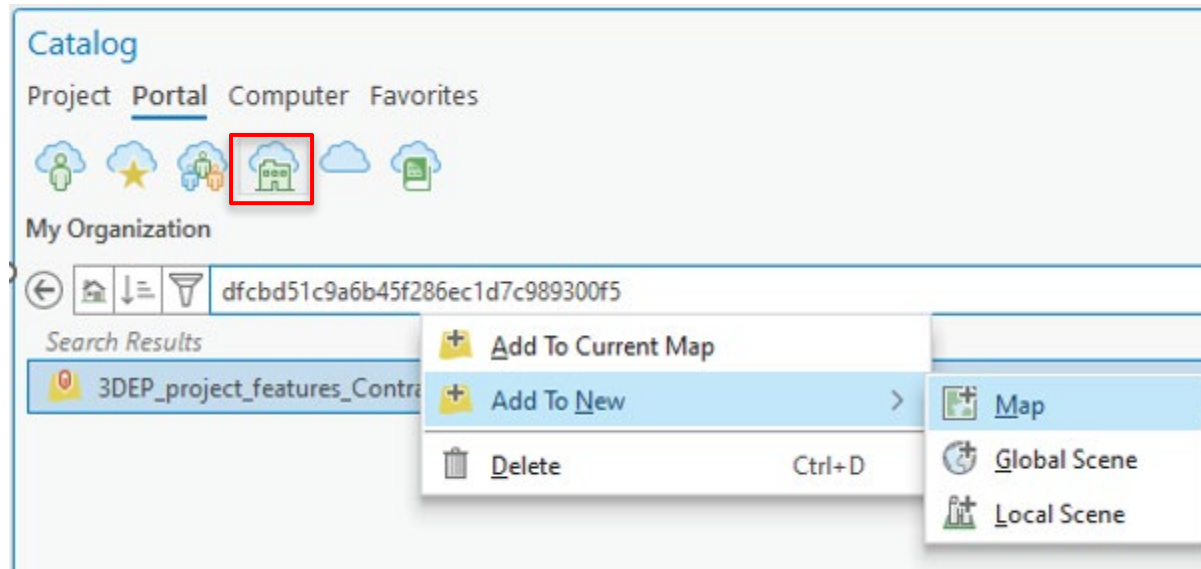
Data Entry

Manually edit the three layers or Append

- You can manually edit the three layers: projects, flightlines, and data extents
  - Better for small updates to existing projects

- We recommend you create an empty feature class with the same schema as the template

- Append your data into this feature, make sure everything looks good and is populated correctly

- Then append this copy to the corresponding feature in the 3DEP_project_features_Contractor_View layer
  - For Field Matching Type, choose: "Use the field map to reconcile differences"
  - If you have a lot of flight lines, you may want to break the feature into smaller subsets

- You can fix attributes after the append but cannot delete the record
  - Contact USGS if you need us to delete a record loaded in error
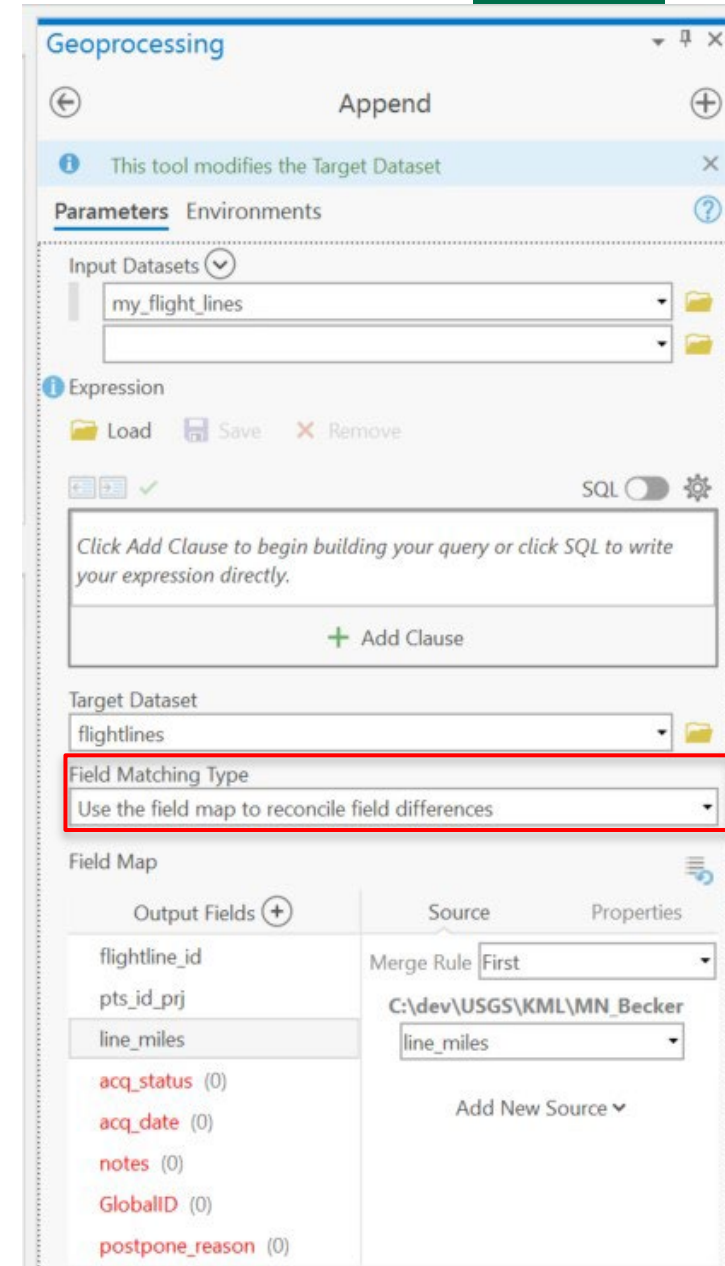
Common Errors

Don't forget to fill in all attributes!

- Missing PTS ID or square miles in the Projects

	OBJECTID *	PTS ID *	Name	Contractor	Task Order Number	SqMi
1	55	0	Hello World	Test by Barry	12345	\<Null\>
2	67	222194	OR_SouthEast_D22	Woolpert	140G0222F0211 - OR_SouthEast_D22	32887.1

- Missing PTS ID, line miles, or acquisition date in the Flight Lines

	OBJECTID *	flightline_id *	pts_id_prj *	line_miles	acq_status	acq_date ▲	postpone_reason
1	4795	106	0	56.36314	Not Done	\<Null\>	\<Null\>
2	4796	46	300147	55.52122	Not Done	\<Null\>	\<Null\>

- Missing PTS ID, data volume, delivery date, or geometry in the Data Extents

	OBJECTID *	pts_id_prj * ▲	sq_mi	data_volume	crs_epsg	quality_level	delivery_status	delivery_date
1	177	0	400	0	6342	QL2	Actual	\<Null\>
2	178	10001	385	1000	6343	QL2	Anticipated	4/1/2024

USGS science for a changing world

The National Map Your Source for Topographic Information

Demonstration of the Dashboard and Data Entry

Summary

- ArcGIS Online 3DEP Contractor Acquisition and Production Status Application

- Account Set Up

- Understanding the Data Layers

- Data Entry

- Common Errors

- Demonstration of the Dashboard and Data Entry

Questions?

- Barry Miller – USGS NGTOC Senior Elevation Applied Researcher (bymiller@usgs.gov)

- Martha Bearskin – USGS NGTOC Applied Researcher (mbearskin@usgs.gov)

THANK YOU!