

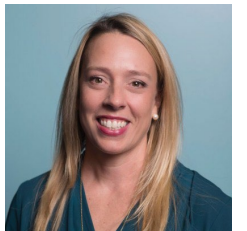
EQuIS REST API

Use Cases & Practical Application in GIS Spatial Visualization

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Agenda

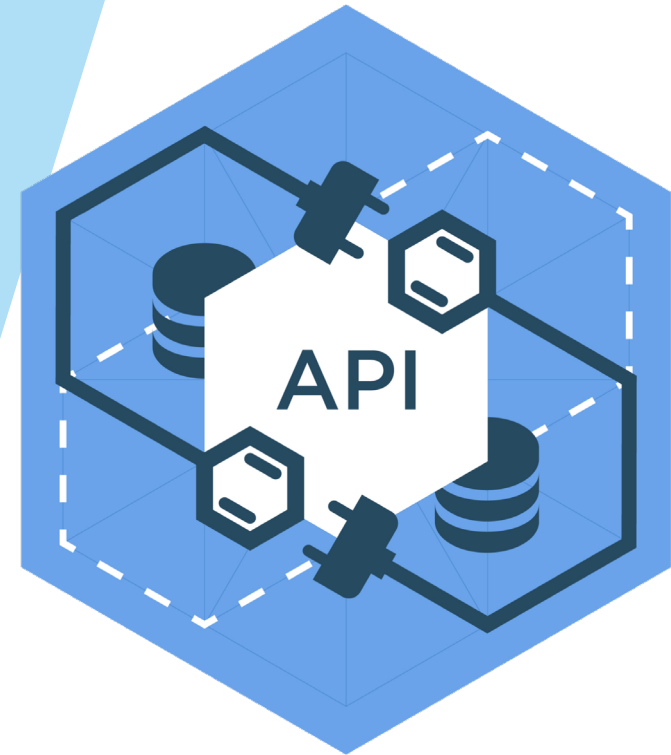
- What is the EQuIS REST API?
- History of EQuIS REST API
- EQuIS REST API Use Cases
- Why Integrate EQuIS with GIS?
- Examples of Integration
- How to Integrate EQuIS with GIS?
- Takeaway



What is the **EQuIS REST API**

- Ability to interact with EQuIS Enterprise through URL requests

<https://ddms-demo.equisonline.com/api/reports/2888083/GeoJSON>



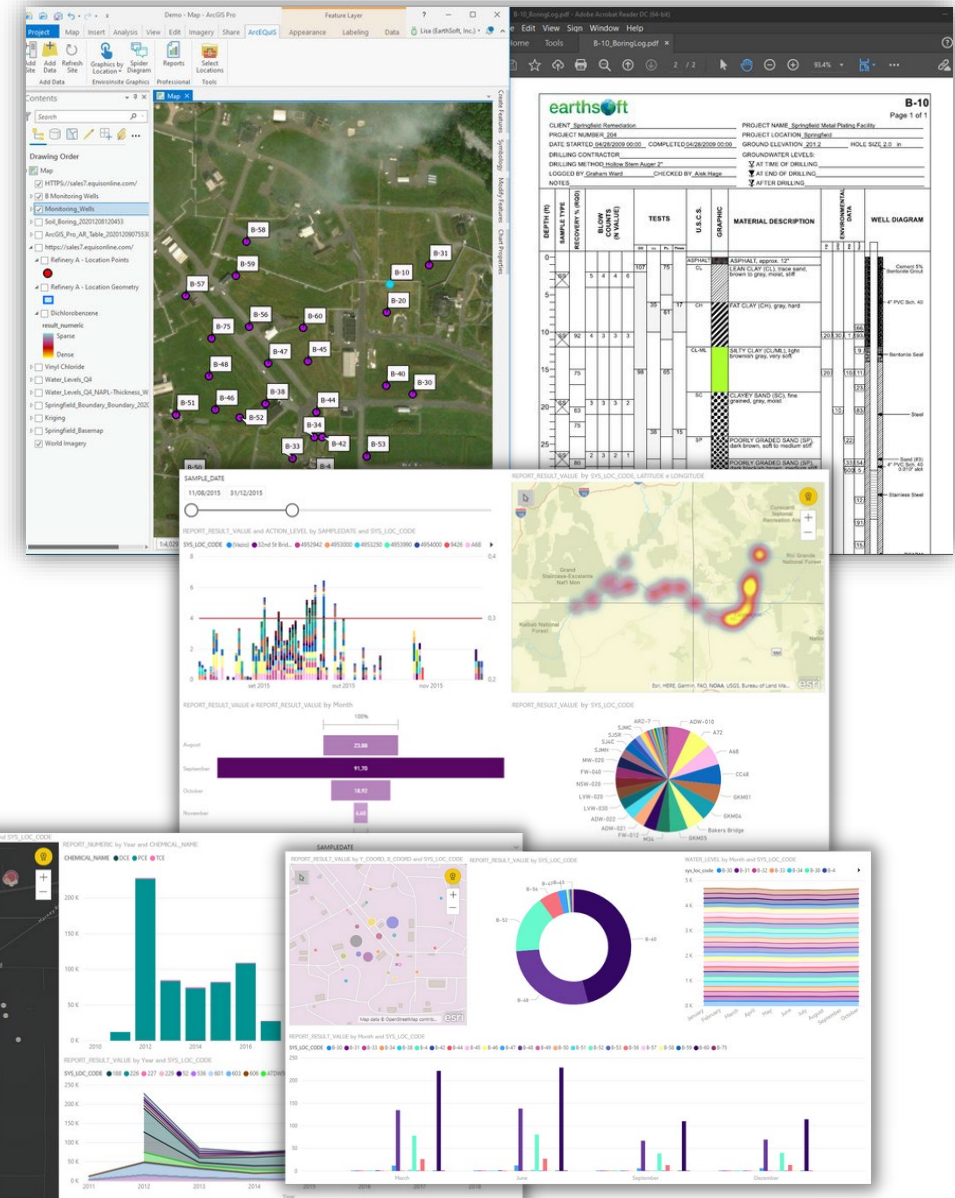
History of EQUIS REST API

Built-in Integrations

- Esri ArcGIS Pro
- Microsoft Power BI
- EnviroInsite
- Open Data Protocol (Odata)

REST API Workflows

- Data Acquisition
- Data Exchange (WebHooks)
- Data Visualization/Reporting



EQuIS REST API Use Cases – Weather Data

Workflow Stage: Data Acquisition

Problem Profile

- Australian Mining Client
- Manual weather station downloads from Campbell Scientific, post-processing, and upload to Enterprise EDP
- Hourly Avg & Max Temp, Total Rainfall, Avg Relative Humidity

Solution

- EQuIS REST API OData
- EarthSoft/Client issues API token to Campbell Scientific for select table access
- Campbell Logger interacts with API to automatically upload data into EQuIS

EQuIS REST API Use Cases – Power BI

Workflow Stage: Data Visualization

Problem Profile

- Chemical manufacturing client
- Need to combine data from EQuIS / EHS / SAP into single BI dashboard
- Manually downloading data from EQuIS, combining with other datasets in spreadsheet, using spreadsheet as data source for Power BI

Solution

- Client leveraged REST API Power BI Connector to populate environmental data visualizations in Power BI
- Client also configured API connections (not EQuIS) to integrated SAP and EHS data sources into Power BI
- End-result: all relevant datasets collated into single Power BI report

EQuIS REST API Use Cases – SCADA Integration

Workflow Stage: Data Acquisition

Problem Profile

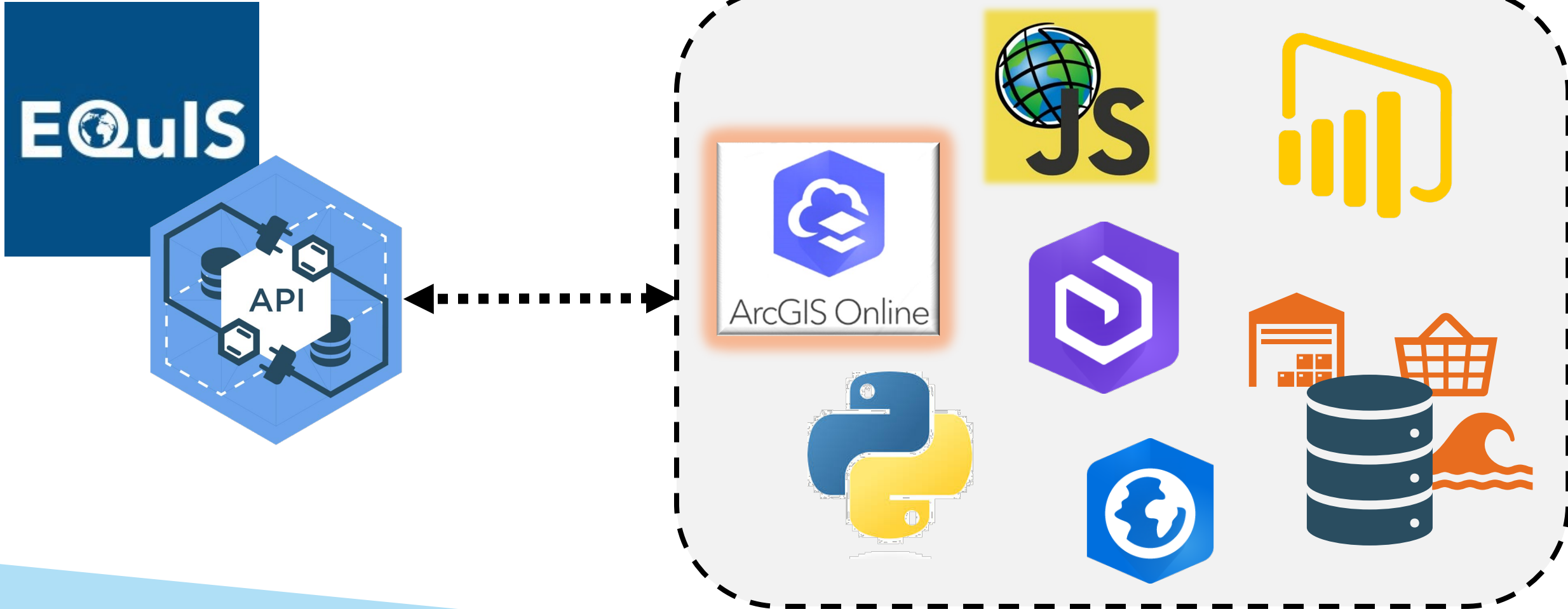
- Semiconductor Manufacturing Client
- Effluent air and wastewater data logged in SCADA, manually downloaded, post-processed into EDDs, loaded to Enterprise EDP
- Flow, Temp, Pressure, pH, other data elements

Solution

- Client configured REST API Odata and WebHooks to retrieve data from SCADA
- Time-series data automatically loaded to EQuIS by REST API
- Enterprise Dashboards make continuous and discrete data available for reporting and visualization

Integrating EQuIS With GIS

GIS Apps & Tools



Why Integrate EQulS With GIS

Data Management:

- Centralize data
- Combine sources

Accessibility & Visualization:

- Extend user reach
- Integrate layers
- Utilize visuals & tools
- Interactive dashboards

Sharing & Collaboration:

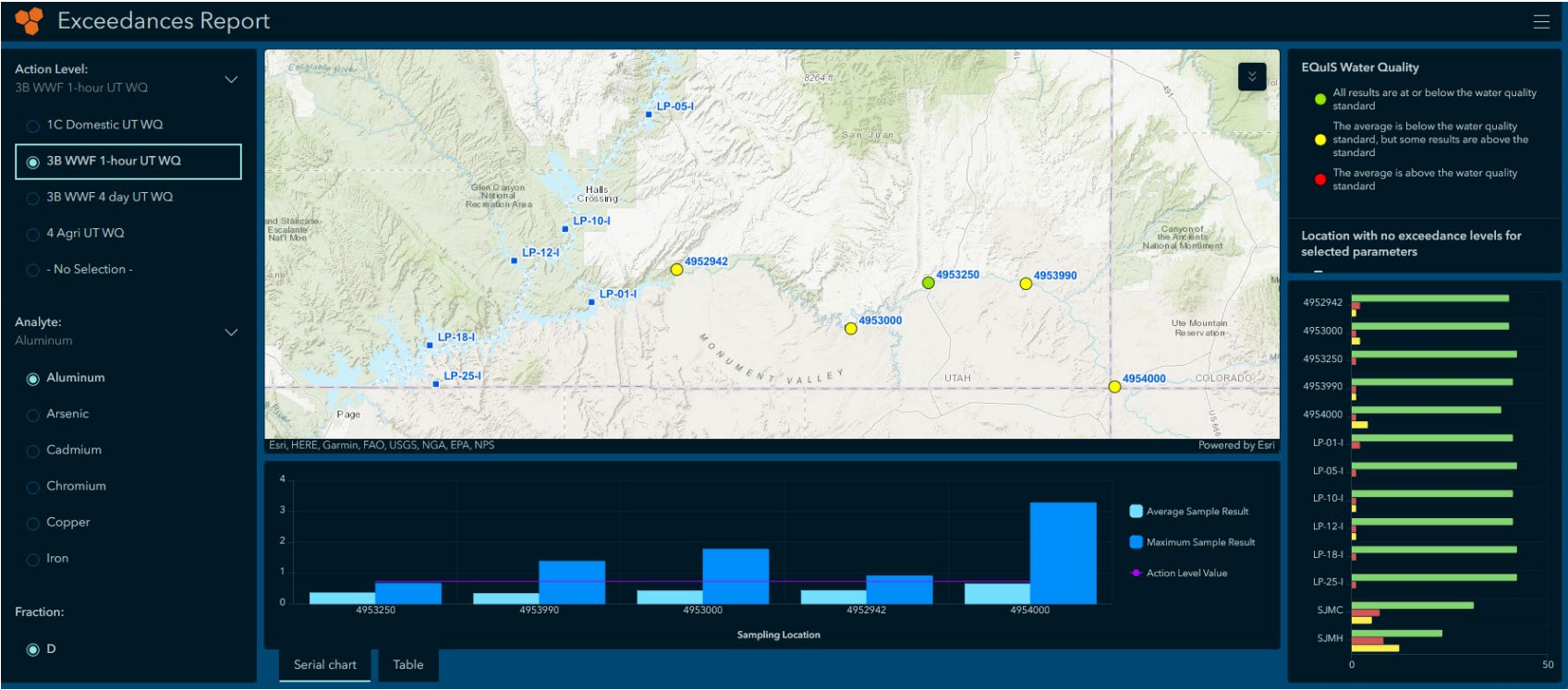
- Share via groups
- Collaborate effectively

Integrate EQUIS With GIS **Examples**

- [Analytical Exceedance Dashboard](#)
- [Analytical Result Dashboard](#)
- [Web map \(GeoJSON\)](#)

Integrate EQulS With GIS Examples

Analytical Exceedance Dashboard



Integrate EQUS With GIS Examples

Analytical Result Dashboard

ddms Report Dashboard

Facility

GKM

Matrix

WS

Location

4952942

4953000

4953250

4953990

4954000

A68

Detect Flag

Y

Chemical

Esri, HERE, Garmin, FAO, NOAA, USGS, EPA, NPS

Powered by Esri

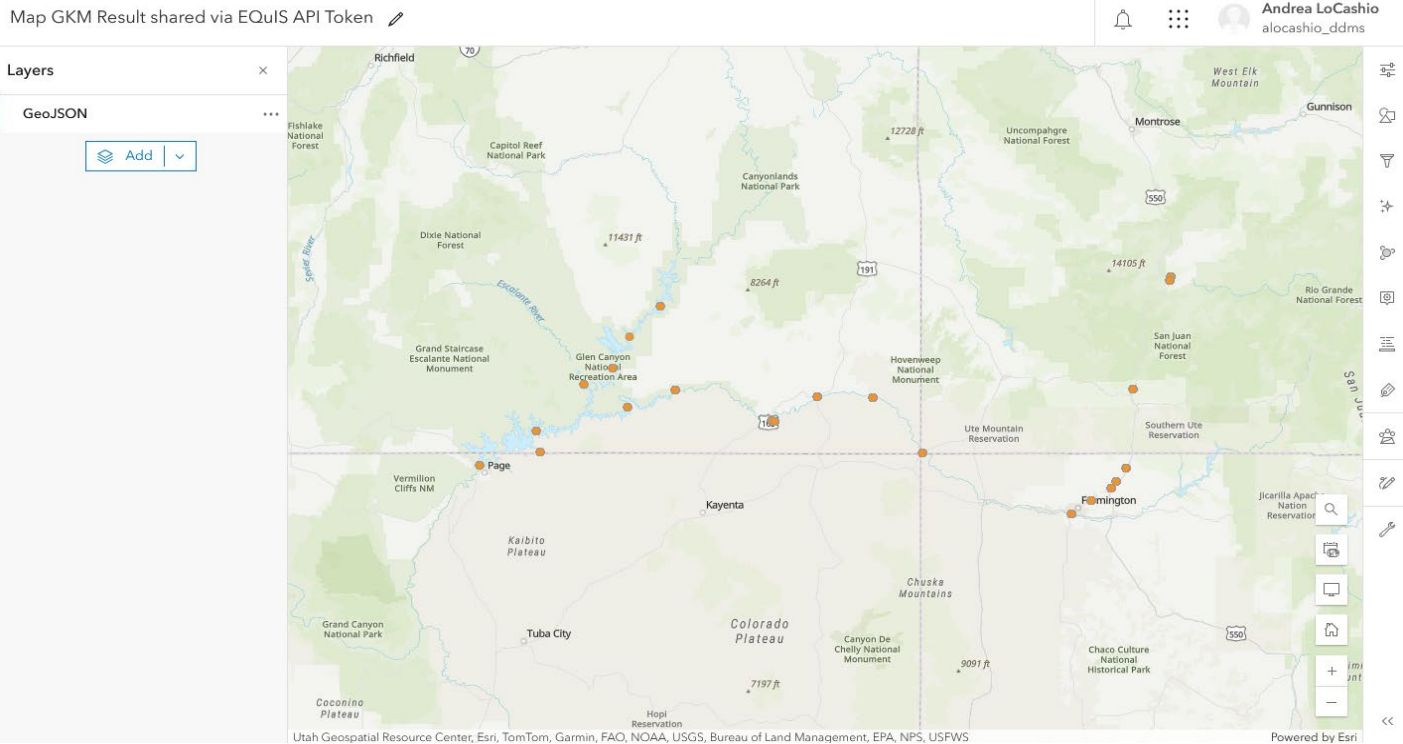
368 Results

- Result Value: 1,300,000.00 ug/L
Location: SJMH
- Result Value: 1,300,000.00 ug/L
Location: SJMH
- Result Value: 600,000.00 ug/L
Location: SJMH
- Result Value: 530,000.00 ug/L

facility_code	sys_loc_code	chemical_name	report_result_value	report_result_unit
GKM	ADW-010	Calcium	79,000.00	ug/L
GKM	ADW-010	Calcium	78,000.00	ug/L
GKM	ADW-010	Calcium	74,000.00	ug/L

Integrate EQuIS With GIS Examples

Web map (GeoJSON)



How to integrate -

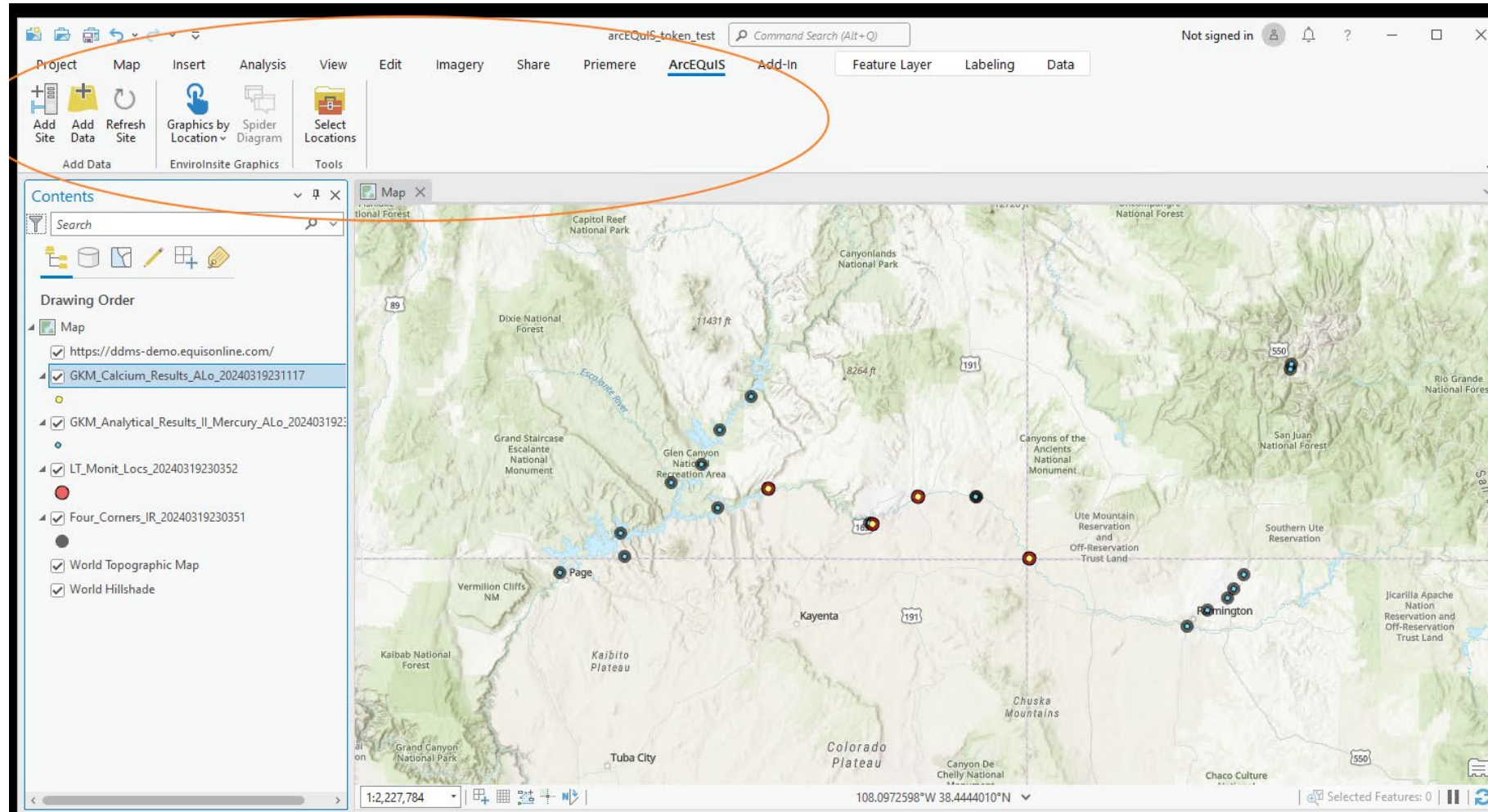
Method 1: Starting from ArcGIS Pro

ArcEQiS is an add-in tool meant to connect to an EQiS database from ArcGIS Pro

EQiS users must be assigned to the REST API role (in Enterprise) to connect to a database

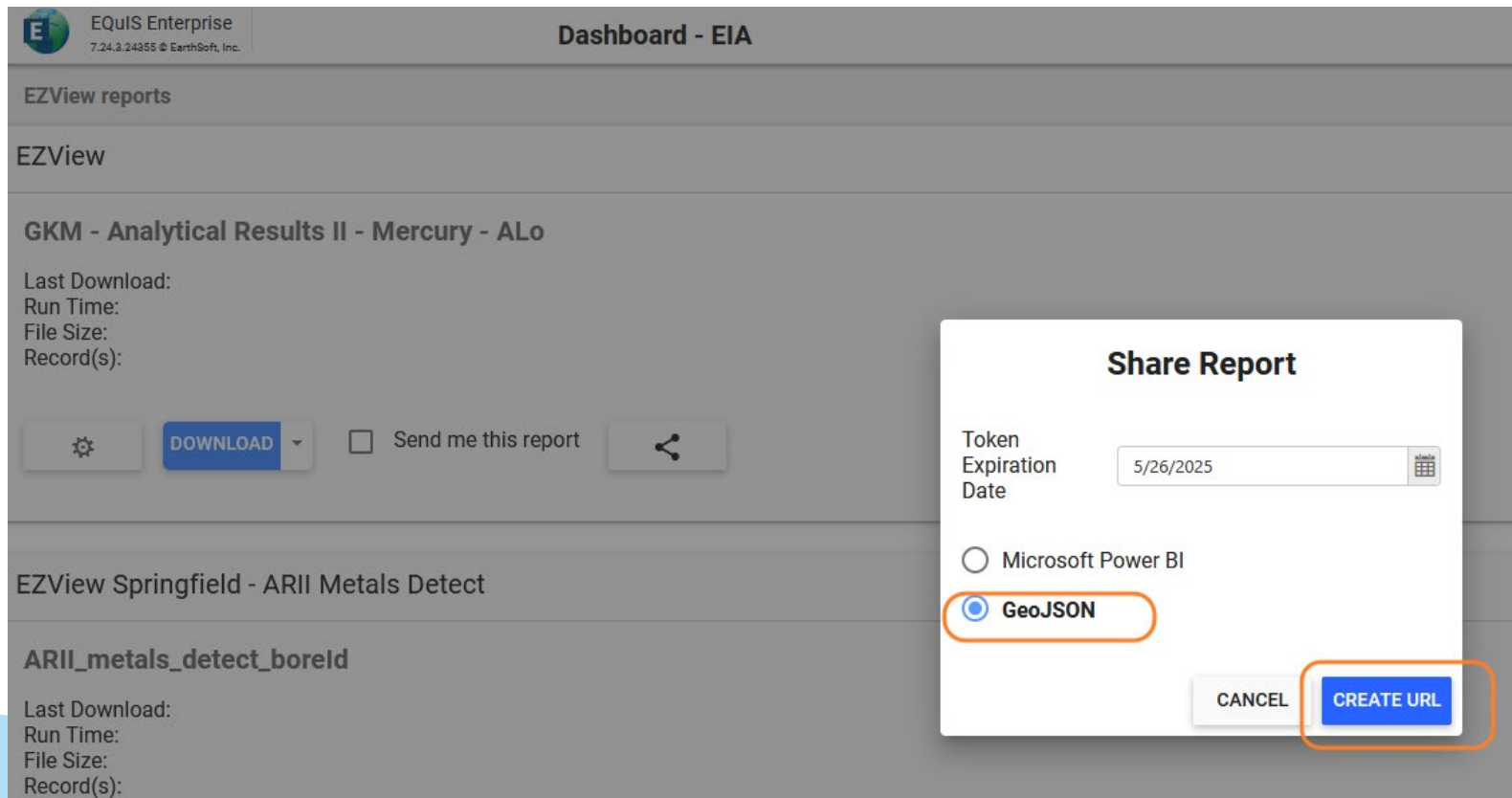
Users will need ArcGIS Pro software and licensing in addition to appropriate EQiS software and licensing

Method 1: Starting from ArcGIS Pro (ArcEQuIS)



Method 2: Starting from EQiS Enterprise (GeoJSON)

Pick up token for GeoJSON from EQiS Enterprise EZView widget at <https://ddms-demo.equisonline.com/Default.aspx?d=2628162#!/DataEntry/Forms>



The screenshot shows the EQiS Enterprise dashboard with a 'Share Report' dialog box open. The dialog box contains the following elements:

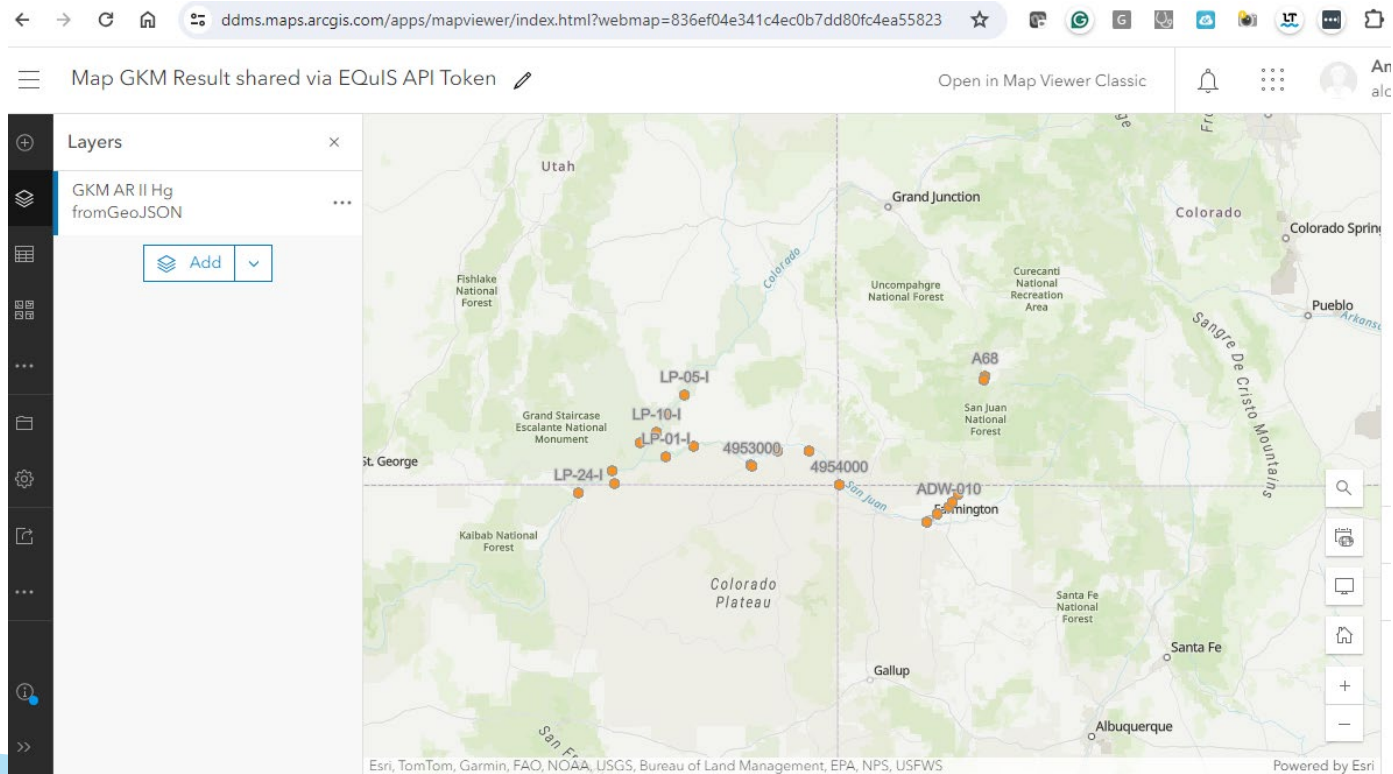
- Token Expiration Date:** A text input field containing '5/26/2025' with a calendar icon to its right.
- Share Options:** Two radio buttons are present: 'Microsoft Power BI' (unselected) and 'GeoJSON' (selected and circled in orange).
- Buttons:** At the bottom of the dialog, there are two buttons: 'CANCEL' and 'CREATE URL' (highlighted with an orange border).

The background dashboard shows the 'Dashboard - EIA' page with sections for 'EZView reports', 'EZView', and 'GKM - Analytical Results II - Mercury - ALO'. The 'GKM' section includes a 'DOWNLOAD' button and a 'Send me this report' checkbox. Below this, there are sections for 'EZView Springfield - ARII Metals Detect' and 'ARII_metals_detect_boreId'.

Method 2: Starting from EQuIS Enterprise (GeoJSON)

GKM ArcGIS Web map at

<https://ddms.maps.arcgis.com/apps/mapviewer/index.html?webmap=836ef04e341c4ec0b7dd80fc4ea55823>



Takeaway

EQuIS REST API extends your environmental data toolbox:

- Enhance (spatial) visualizations
- Combine insights from various data sources



This extended toolbox will unlock and analyze data for informed decision-making.

THANK YOU!

Discussion or Questions



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Useful Links

- Rest API - https://help.earthsoft.com/index.htm?rest-api.htm_
- Video Demonstration - <https://earthsoft.com/support/videos/>
- SwaggerUI - <https://ddms-demo.equisonline.com/swagger/UI/index>
- ArcEQulS - <https://help.earthsoft.com/index.htm?arc-arcequis-requirements-setup.htm>
- GeoJSON - https://help.earthsoft.com/ent_ezview.htm#sharereport

The End