2/29/2024

CSEC NG9-1-1 GIS Data Hub Training

Agenda

- Benefits of the GIS Data Hub Upgrade
- GIS Data Hub / HubHelper Tool Overview
- Quality Control Checks Overview
- Exception Codes
- Additional Important Information
- Demo
- Next Steps

GIS Data Hub Benefits

GEOCOMM

Benefits of the GIS Data Hub Upgrade

Efficient quality control processing

- Typically, complete within 30 minutes or less

Access to previous QC results & GIS Data Summary Report

- Current and last 20+ results

Access to a Statewide Dataset

- Can be downloaded

Dynamic dashboard

- Viewing critical and warning errors over various time periods (up to 12 months)

Full QC no longer needed

- Error reports are generated differently and do not produce the same false errors

GIS Data Hub Overview

GEOCOMM

GIS Data Hub Overview

***Most results will be available within 30 minutes or less.**

GEOCOMM

Access to GIS Data Hub

GIS Data Hub Link

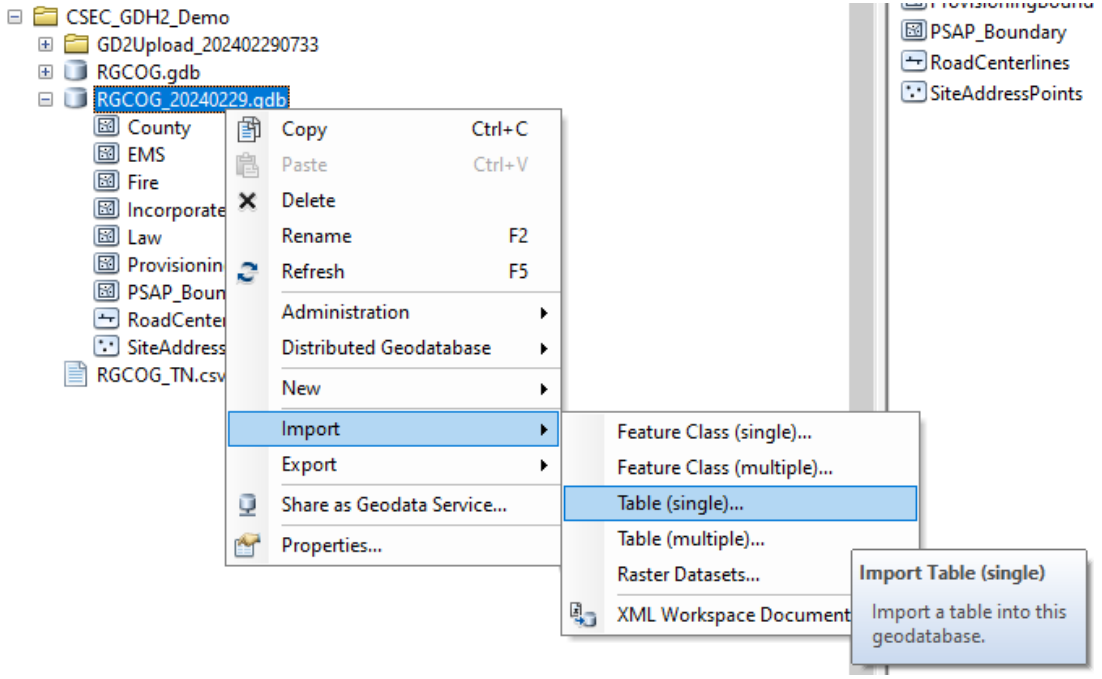
- https://csec-tx.gdh.geocomm.cloud/

User Accounts

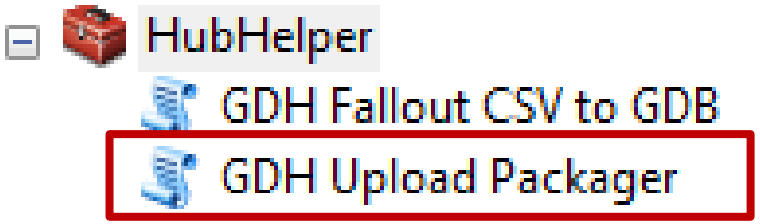
- Accounts set up for current GDH 1 users
- Permissions are set to allow individual users to upload data, download results, and receive notifications

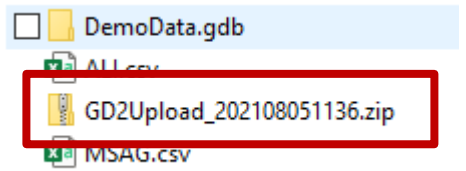
Preparing GIS Data without HubHelper

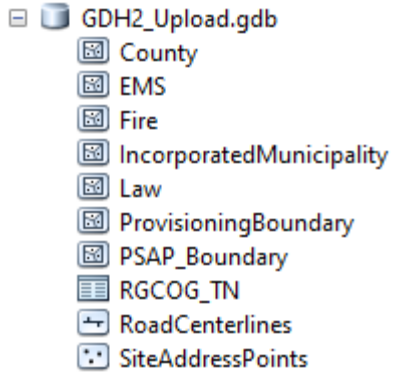
- Create a folder for you upload with a blank .gdb inside
  - Do not create a feature dataset
- Import your NG911 features into the .gdb
- Import your ALI as a .gdb Table
- Zip your upload folder

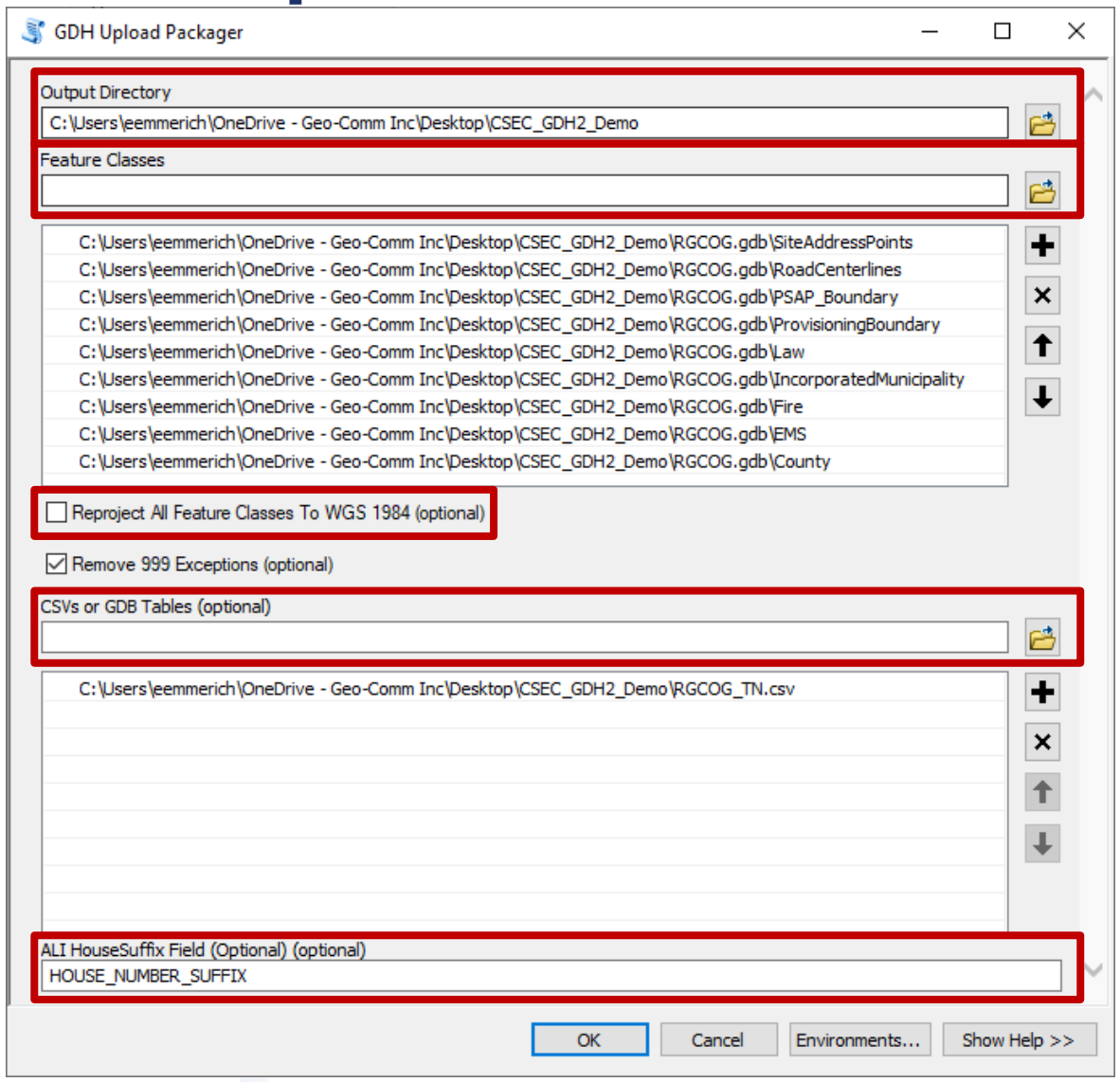


Preparing GIS Data with HubHelper







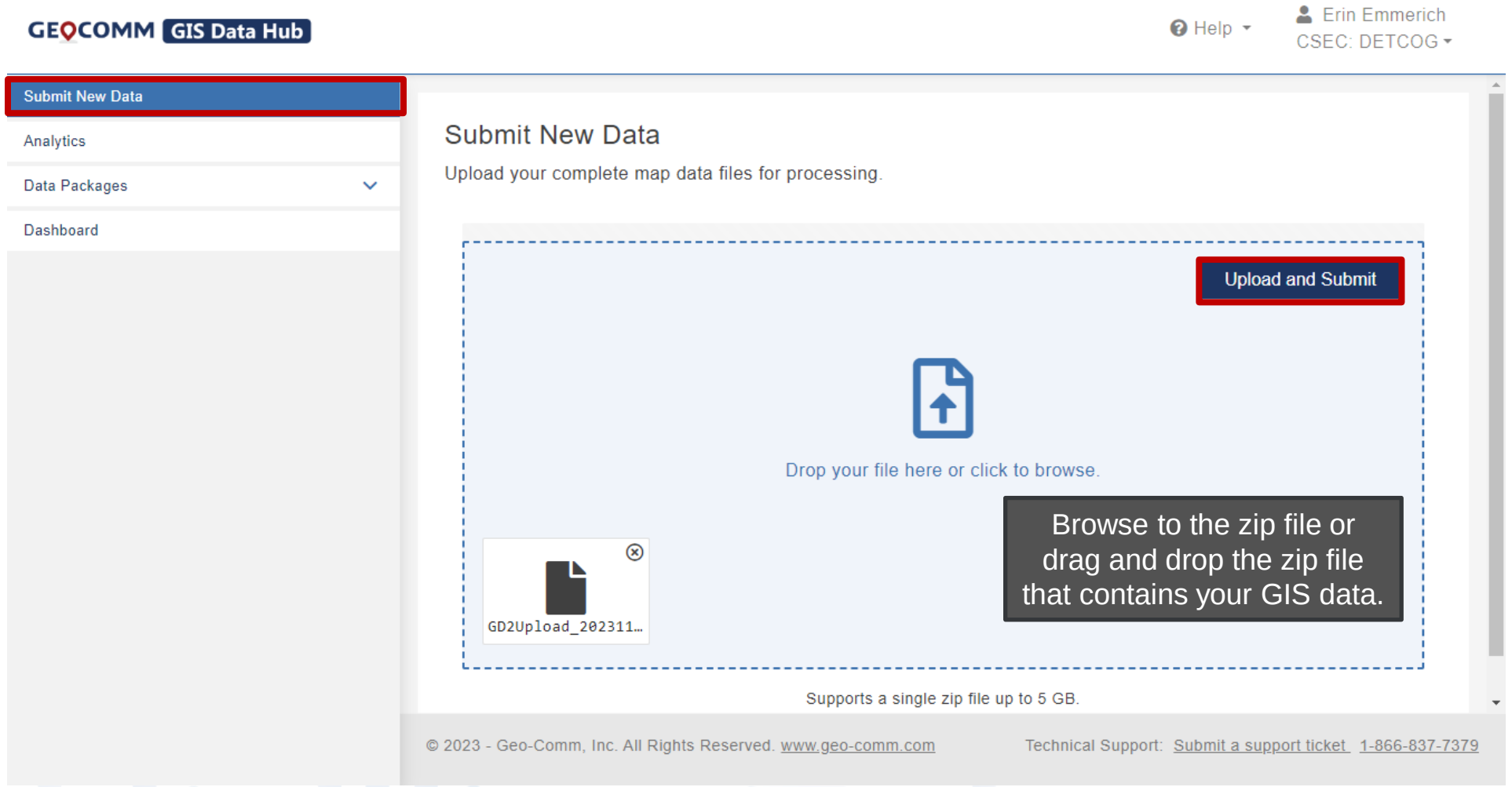


Important! If HubHelper fails, ensure there are no spaces or hyphens in the directory location. If additional assistance is needed, please contact GeoComm (csecteam@geocomm.com).

GEOCOMM

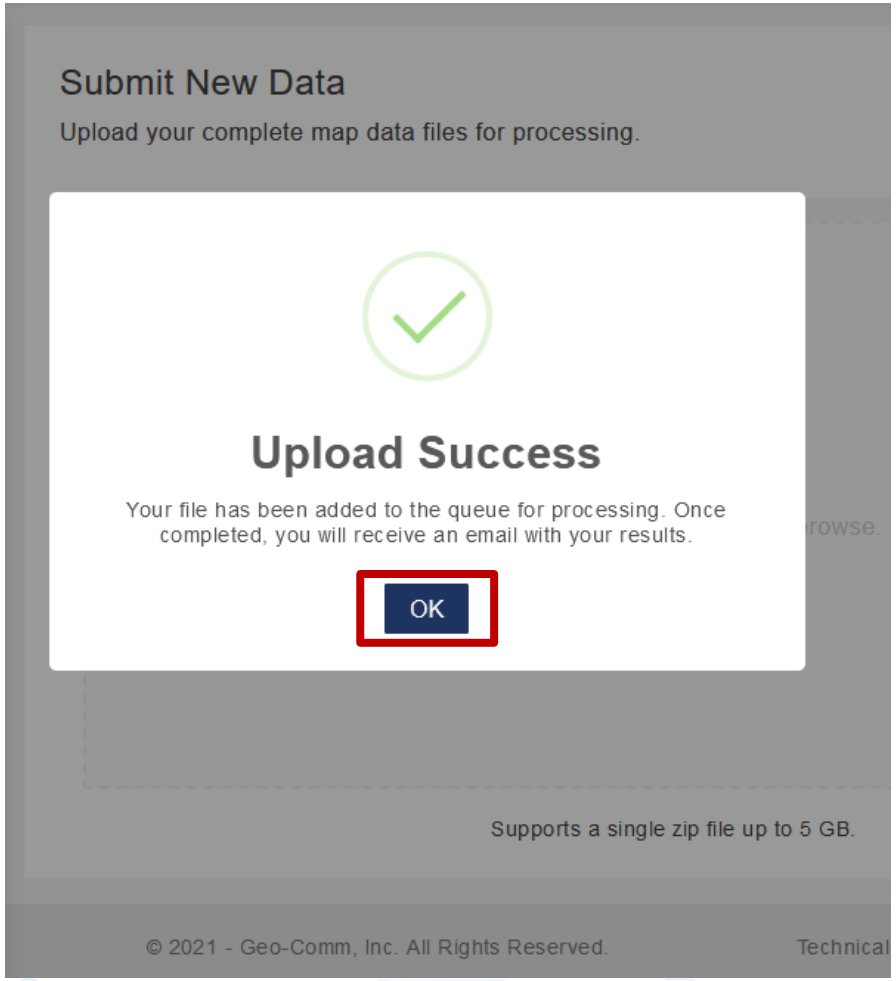
Access to GIS Data Hub

GIS Data and Database Uploads | Consistency is Important!



GEOCOMM

GIS Data and Database Uploads



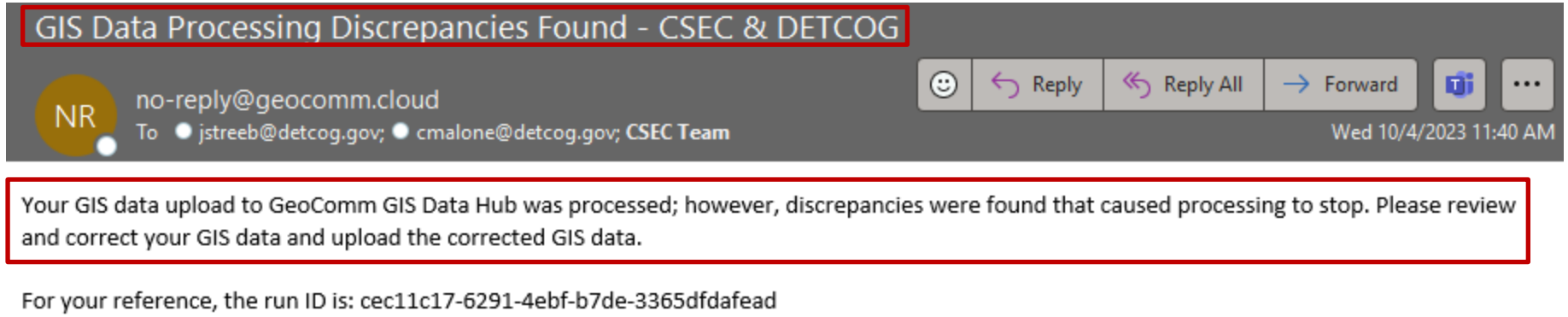
GIS Data and Database Uploads

- Feature class names must remain the same each upload.
- If you make a change to the feature class name or fields, please notify GeoComm via email at CSECTeam@geocomm.com to indicate what field mapping changes are needed
- Multiple feature data sets will result in halting QC

- All feature classes and tables must be uploaded every time
  - **EMS**
  - **Fire**
  - **Law**
  - **Provisioning Boundary**
  - **PSAP Boundary**
  - **Road Centerlines**
  - **Site/Structure Address Points**
  - **ALI**
  - County Boundary (optional)
  - Incorporated Municipality Boundary (optional)

QC Results Notification E-mail

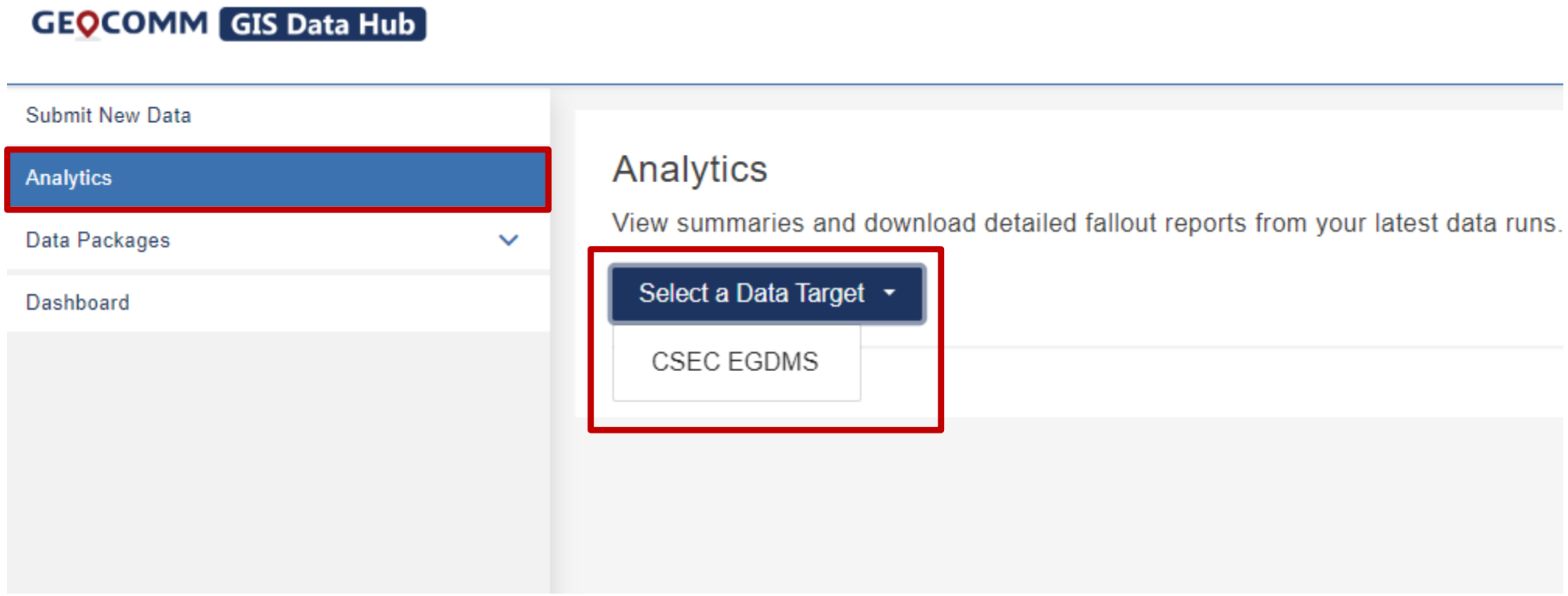
Message when datasets contain critical errors:



Message when datasets are critical error free:

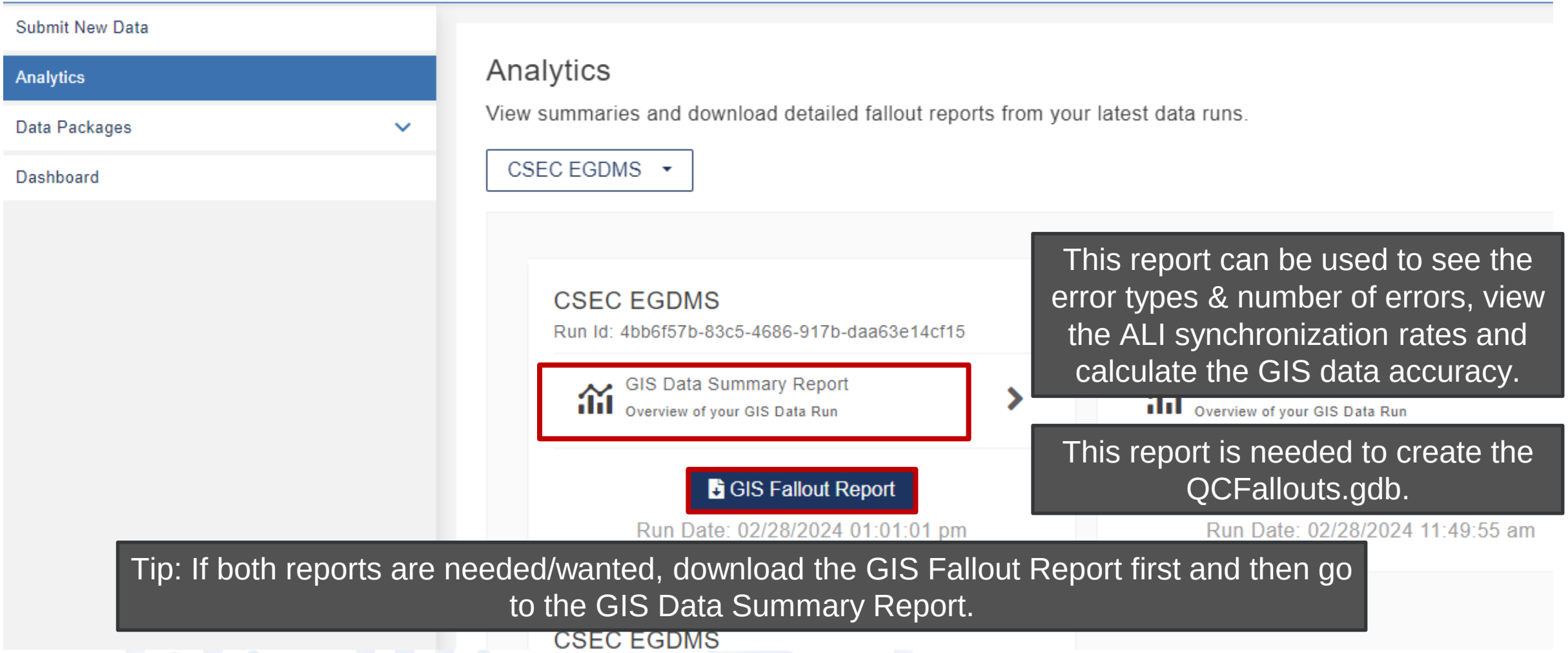
Once received, log into GIS Data Hub and navigate to the Analytics tab and select a Data Target > CSEC.

Downloading Results



Downloading Results

GEOCOMM GIS Data Hub

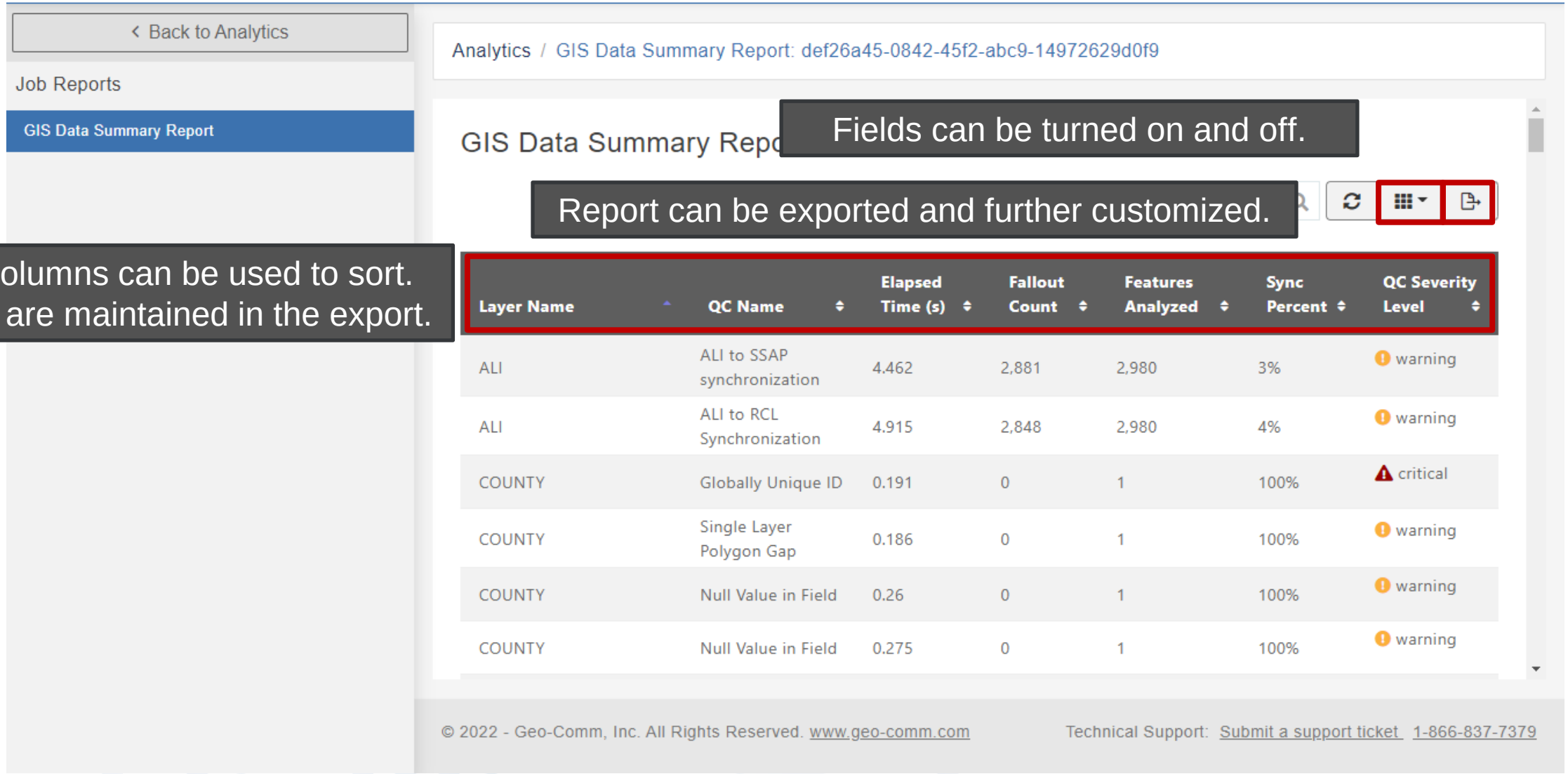


This report can be used to see the error types & number of errors, view the ALI synchronization rates and calculate the GIS data accuracy.

This report is needed to create the QCFallouts.gdb.

Tip: If both reports are needed/wanted, download the GIS Fallout Report first and then go to the GIS Data Summary Report.

Using the GIS Data Summary Report



Using the GIS Data Summary Report

Elapsed Time (s) is simply the amount of time in seconds the check was processing.

To calculated the GIS accuracy:

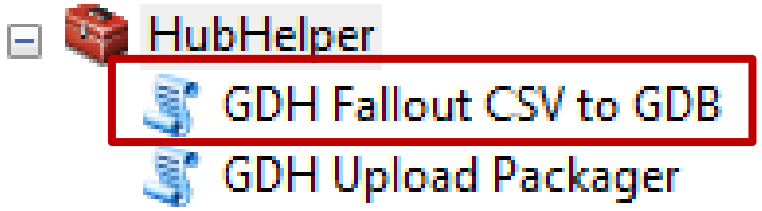
- Move the ALI to SSAP synchronization

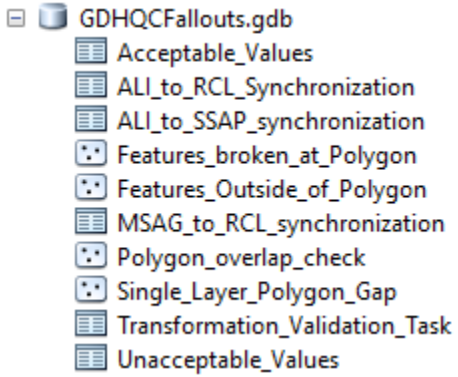
The synchronization rates for the ALI and MSAG can be found under the Sync Percent column)

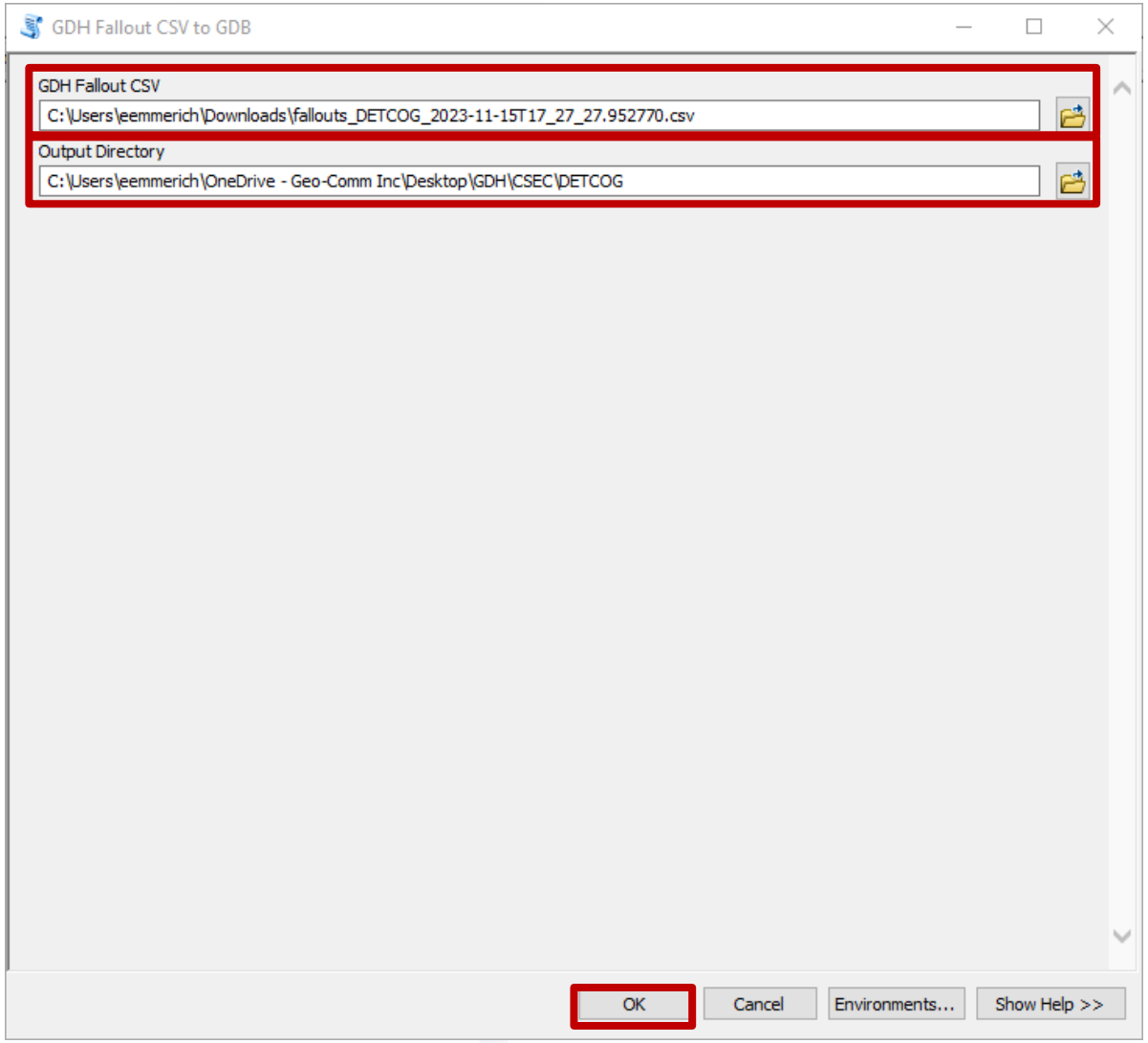
- Use the following calculation:
- +((SUM(E2:E154)-(SUM(D2:D154))))/SUM(E2:E154)

	A	B	C	D	E	F	G
1	Layer Name		Elapsed Time (s)	Fallout Coun	Features Analyzed	ync Percent	QC Severity Level
2	ALI		1.563	56	3388	0.833	warning
3	MSAG		1.672	38	892	0.573	warning
4	SSAP		3.723	30	7158	0.957	warning
5	PSL	Segment Snapped to adjacent segment - Same level	2.26	8	2680	0.968	warning
6			0.635	5	3388	0.984	warning
7			1.322	1	7158	0.998	critical
8			0.139	7	2680	0.997	warning
9			0.706	6	2680	0.998	warning
10			0.084	6	2686	0.998	critical
11			0.5	3	2680	0.999	warning
12			0.624	2	2680	0.999	critical
13			1.294	1	2680	1	critical
14			0.093	0	1	1	critical
15			0.332	0	6	1	critical
16			0.097	0	6	1	critical
17	ESB_EMS	Null Value in Field	0.117	0	6	1	critical
18	ESB_EMS	Null Value in Field	0.095	0	6	1	critical
19	ESB_EMS	Null Value in Field	0.125	0	6	1	critical
20	ESB_EMS	Null Value in Field	0.344	0	6	1	critical
21	ESB_EMS	Null Value in Field	0.099	0	6	1	critical
22	ESB_EMS	Null Value in Field	0.096	0	6	1	critical
23	ESB_EMS	Null Value in Field	1.391	0	6	1	critical
24	ESB_EMS	Acceptable Values	0.191	0	6	1	critical
25	ESB_EMS	Polygon Compare (Overhangs)	0.384	0	6	1	critical
26	ESB_EMS	Single Layer Polygon Gap	0.349	0	6	1	warning
27	ESB_EMS	Complex Geometry	0.254	0	6	1	warning
28	ESB_EMS	Polygon overlap check	0.112	0	6	1	warning
29	ESB_EMS, ESB_FIRE, ESB_LAW	Globally Unique ID	0.407	0	21	1	critical

Creating a GDB from the CSV

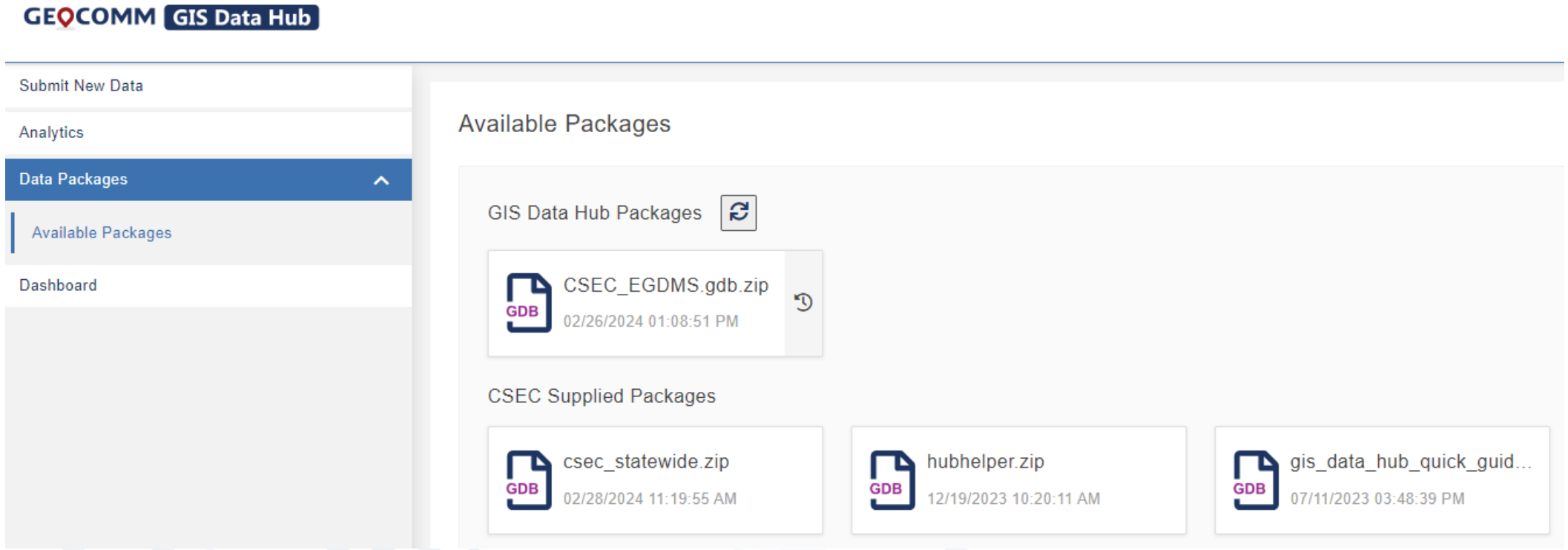






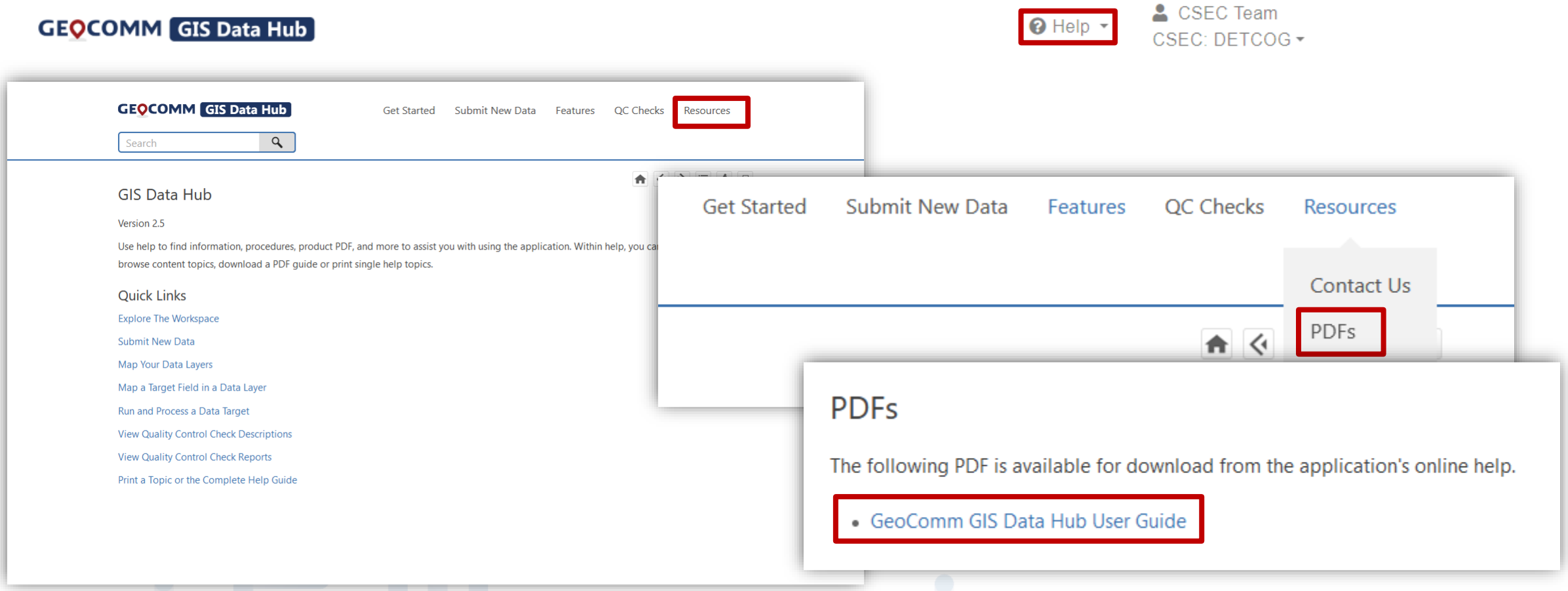
Data Packages

- Jurisdiction's last critical error free geodatabase
  - Named CSEC_EGDMS.gdb.zip
- HubHelper Tool
- GIS Data Hub Quick Guide
- Statewide Geodatabase



Available Documentation

- GIS Data Hub Help



GEOCOMM

Quality Control Checks

Quality Control Check

- Ingest failures
- Critical QC checks
- Warning QC checks

Quality Control Check – Ingest Failures

Process stopped/GeoComm Team notified

- Corrupt data in a file geodatabase
- Tables uploaded that are not .gdb tables
- Data schema changes
  - layer name and field name changes
- Missing projection of GIS Data

Process continues and information provided in results

- Invalid geometry in any layers
  - empty and invalid
- Stacked address points with the exact same attributes

Quality Control Check – Critical QC Checks

QC Check Name	Description	QCed Layers	Severity
Polygon Compare (Overlaps)	Compares one polygon layer to another for overlap coverage	PSAP, Fire, Law and EMS against Provisioning	Critical
Polygon Compare (Gaps)	Compares one polygon layer to another for gap coverage	PSAP, Fire, Law and EMS against Provisioning	Critical
Polygon Overlap Check	Checks for overlaps within the same polygon layer	PSAP, Fire, Law, and EMS	Critical
Null Value in Field	Checks for null values in all mandatory fields	PSAP, Fire, Law, EMS, SSAP, and RCL	Critical
Feature Outside of Polygon	Checks for features that outside of the boundary of the Provisioning Layer	SSAP and RCL	Critical
Duplicate Values	SSAP Duplicate check using MSAG Community as refinement	SSAP	Critical
Address Range Overlaps	Checks for overlapping ranges using MSAG Community as refinement. Two checks are set up to find overlaps in both the legacy fields and CLDXF fields	RCL	Critical
Global Unique ID	Checks that Unique IDs are globally unique across the entire dataset	All Layers	Critical

Quality Control Check – Warning QC Checks

QC Check Name	Description	QCed Layers	Severity
Null Value in Field	Checks for null values in all mandatory fields	Provisioning, Incorporated Municipality	Warning
Polygon Overlap Check	Checks for overlaps within the same polygon layer	Provisioning, Incorporated Municipality	Warning
Single Layer Polygon Gap	Checks for gaps within the same polygon layer	EMS, Fire, Law, and PSAP	Warning
Feature Broken at Polygon	Checks for roads not broken at polygon layers	EMS, Fire, Law, PSAP, Inc Muni, County, Provisioning	Warning
Field Comparison	Checks for ranges that are higher in the to field than the from field	RCL	Warning
Segment Snapped to adjacent segment – same layer	Checks for connectivity between line segments	RCL	Warning
SSAP to RCL Synchronization	Checks that the roads and address points are synchronized using MSAG Community and ESN	SSAP and RCL	Warning

Quality Control Check – New QC Checks

QC Check Name	Description	QCed Layers	Severity
Acceptable Values	Verifies the correct Discrepancy Agency ID is populated	All Layers	Warning
Acceptable Values	Verifies the correct County values are populated	County	Warning
Acceptable Values	Verifies the correct State values are populated	County, Fire, Law, EMS, PSAP, SSAP, RCL	Warning
Acceptable Values	Verifies the correct Country values are populated	County, RCL	Warning
Acceptable Values	Verifies the correct Service URI values are populated	Fire, Law, EMS, and PSAP	Critical
Acceptable Values	Verifies the correct Service URN values are populated	Fire, Law, EMS, and PSAP	Critical
Acceptable Values	Verifies the correct Parity values are populated	RCL	Warning
No Value	Verifies a value is populated for the Service URI and Service URN	Fire, Law, EMS, and PSAP	Critical
Multipart Geometry	Warning error that returns features with multi-parts	County, Fire, Law, EMS, PSAP, Inc Muni, Provisioning	Warning
Empty Geometry	Warning error that returns features with empty geometry	All Layers	Warning

Quality Control Check – Legacy Database Synchronization

- **ALI** to **Road Centerline** Synchronization
  - *ALI to RCL*
- **ALI** to **Site/Structure Address Points** Synchronization
  - *ALI to SSAP*

MSAG Community is utilized for refinement

GIS Data Exceptions

GEOCOMM

GIS Data Exceptions

- **At the current time GIS Data Hub does not have the ability to process exception codes**
  - *Except* for the 999 code to remove features from processing

- Additional exception codes will be available for use directly within GIS Data Hub in the future.
- Recommendations for migration:
  - Leave existing data as is, package and upload to see which critical errors must be resolved
  - For Duplicate Address Points where 402 exist, add the 999 exception code | 402,999

Additional Important Information

Important Information

- Google Chrome should be used
- Legacy Fields must always be in all caps
  - Legacy Street Name Pre Directional
  - Legacy Street Name
  - Legacy Street Name Type
  - Legacy Street name Post Directional
  - MSAG Community
  - *If the values are not in all caps, the ALI to Site/Structure Address Point and Site/Structure Address Points to Road Centerline Synchronizations will not process correctly*
- Acceptable Values check also finds leading and trailing spaces.
  - If an error is found but visually looks correct, check for spaces

Important Information

- ServiceURN
  - No longer auto populated through GIS Data Hub. RPCs are responsible for populating this now

	AT&T	Motorola
Fire	urn:nena:service:responder.fire	urn:emergency:service:sos.fire
Law	urn:nena:service:responder.police	urn:emergency:service:sos.police
Medical	urn:nena:service:responder.ems	urn:emergency:service:sos.ems
PSAP	urn:nena:service:responder.psap	urn:emergency:service:sos.psap

Important Information

- ServiceURI
  - New QC check will check this value against the uploading jurisdiction to make sure the correct value is with the correct jurisdiction
- Global Unique ID
  - This check now checks against all UIDs in your dataset
- Discrepancy Agency ID & Agency ID should be a valid URL
  - All DAID values have been configured in GDH 2

Demo of GIS Data Hub 2

GEOCOMM

Next Steps

Transition Schedule

December	March
CVCOG	AACOG
DETCOG	ATCOG
GCRPC	BVCOG
NRPC	CBCOG
PBPRC	CTCOG
PRPC	ETCOG
RGCOG	HOTCOG
SETRPC	MRGDC
SPAG	TCOG
STDC	
WCTCOG	

Next Steps for March RPCs

- Go to GIS Data Hub: https://csec-tx.gdh.geocomm.cloud/ and reset your password
- Download HubHelper and GIS Data Hub Quick Guide from GIS Data Hub (under Data Packages)
- Package your GIS data and ALI
- Upload package to GIS Data Hub
- Once email notification is received, log into GIS Data Hub
- Download the results under Analytics
- Convert results to a geodatabase using HubHelper
- Correct any critical errors
- Upload to GIS Data Hub

Questions + Discussion

FOR MORE INFORMATION CONTACT:

GeoComm CSEC Team Email: CSECTeam@geocomm.com