UASD Tasks for OWA UAS Type 1 Support

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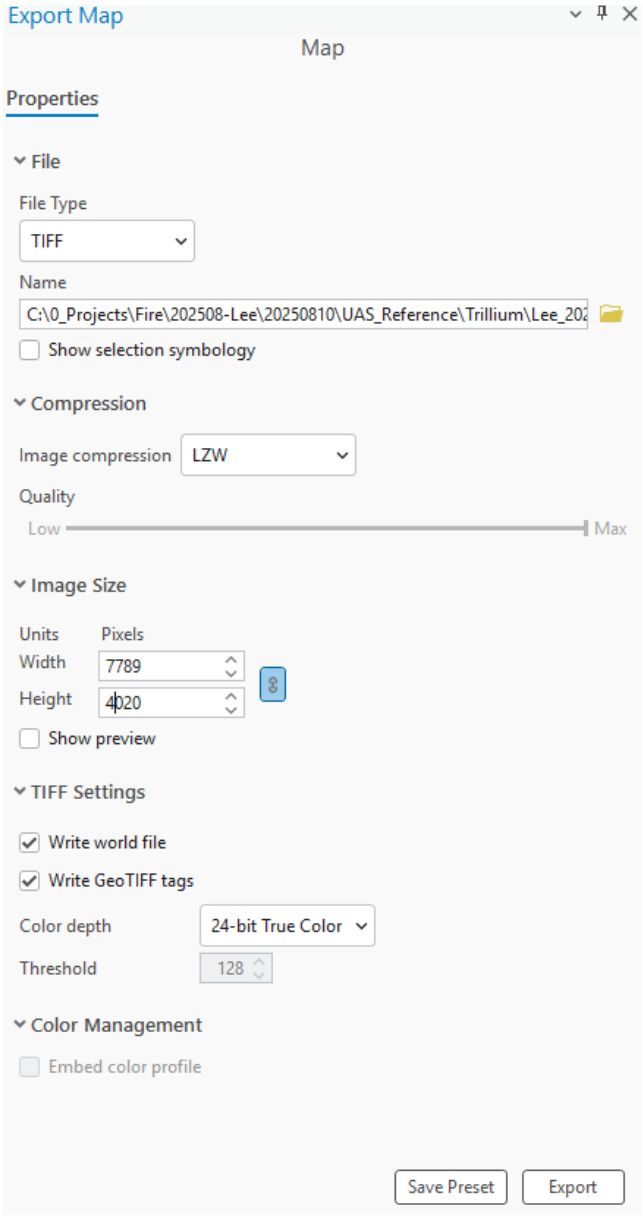
OWA Daily UASD Ops Summary

I. Provide Base Data for GCS (Trilium and Webmap) and Piccolo.
II. Synthesize and Provide data to perspective clients.
    a. Coordinate with SIT or other operations clients prior to launch.
    b. Direct GCS visual navigator for data collection.
    c. Connect to FMV.
    d. Use Trillium or FMV georeferenced images or video to create data products.
III. Check NIROPs
    a. Check NIROPs roster for current fire: https://fsapps.nwcg.gov/nirops-iaa
    b. Search for Tailnumber in ADS-B Exchange: https://globe.adsbexchange.com/
    c. Wait for data to drop!

I. Provide Base Data for GCS

1. Trillium GCS – Provide Ops Map for Tillium GCS for cockpit and on-scene customers.
    a. Trilium Basemap Resolution Formula
        i. Download Current Ops Basemap from ftp
        ii. Convert PDF to Tif (default settings)
        iii. Bring Tif into Arcpro – Add anything missing (e.g. TFR).
        iv. Export (Share>Export)
            1. Image Size, Link Width and Height
            2. Add a zero to one of the values
            3. Half one of the values.
            4. Target 50-100MB

5. 

   b.

2. Piccolo (current perimeter and TFR)
   a. Grab Perimeter
      i. Select Nifs
      ii. Selection – Make Layer from Selected Feature
   b. Data – Export Shapefile
      i. Environment Settings – Picolo wants UTM
   c. TFR can be grabbed from NIFS or FAA TFR Page
      i. https://tfr.faa.gov/tfr3/?page=map_5_9776
3. Webmap Production for OWS Web tool.
   a. Convert current Ops map to Webmercator Tif.

b. Include in the “UAS Reference” folder.

4. Connect to the GCS network drive to drop GCS files
    a. Network Drive
        i. Connecting to OWA Internal Storage (Map Network Drive)
            1. \\PAYLOAD-WS\GCS1_Storage
            2. PW: Payload
    b. GCS File Location
        i. "Z:\2025-WY-Red-Canyon\UAS_Reference"

II. Synthesize and Provide data to perspective clients.

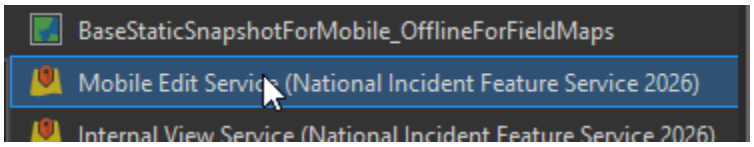
1. Image Collection Then Upload to EGP – By Area (e.g. Division)
   The goal is to collect photos of the active fire line, or target features and upload to EGP with a mission title that reflects one or more divisions. The idea is a division is able to effectively located photos of their area of interest easily.
    a. Collect Images
        i. Impossible to stress enough how important quality imagery collection is over quantity. If we aren’t producing quality product people will grow wary of our products. Also, sorting through the crap is very time consuming when time matters most: before morning brief.
    b. Organize images by areas of interest:
        i. Run “Create Footprint from Images” Geoprocessing tool in Arcpro.
        ii. Create area of interest feature classes by spatial select.
        iii. Create folders for areas of interest.
        iv. Run “CopyPhotoByFootprint” script to move images into respective folders.
        v. Sort, filter, and QC images.
        vi. Note EGP will accept images after the initial upload
    c. Run the EGP Upload tool (egp-airborne-uploader 1.0.2.exe)
        i. Create Mission Name
            1. Example: UT-FS-FIF-COTTONWOOD-UAS-DIV-C-H-N170WA_20260629_0457Z
        ii. Upload images, videos, data products, etc. by mission
            1. Note the current tool has been slow to get all the images uploaded, when using the OWA wired connection, requiring many “Reload” attempts.
            2. Tool works great with good connection.

3. Features must be KML (KMZ doesn't work).

2. Direct Edit "MobileEdit_NIFS_2025 – Fire Edge (Field Collection)"

This is a real-time process where we are using current surveillance to update the active fire line in real-time.

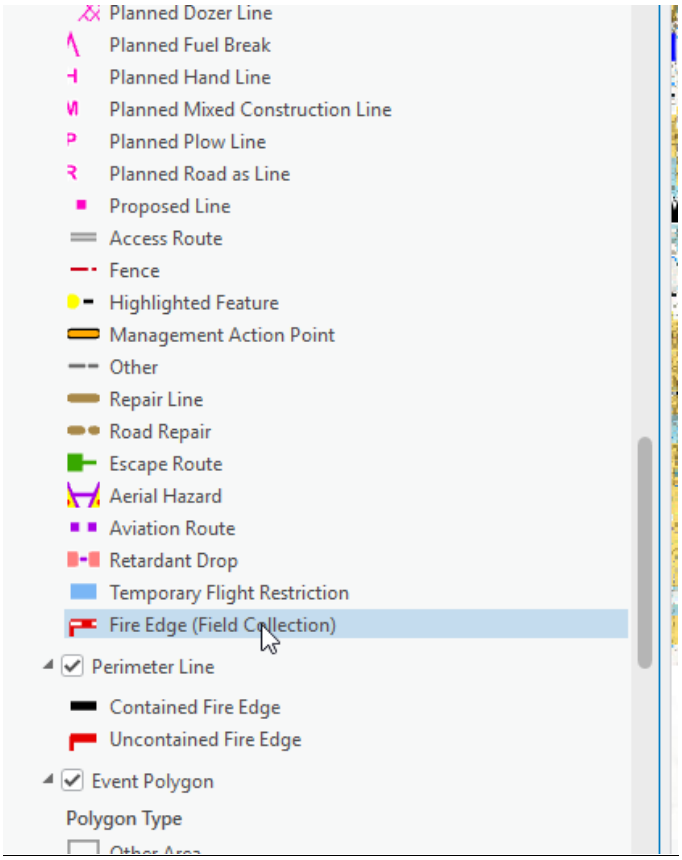
a. Set up your ArcPro Basemap
b. Add MobileEdit_NIFS_2025
c. Select "Event Line" from MobileEdit_NIFS_2025 in the Map Table of Contents
d. Select the Edit Tab
e. Click on the Fire Edge (Field Collection) feature.
f. On the Map tab, click "Download Map" to save an offline copy.
g. Make edits.
h. Save Edits (saves to local copy).
i. Map tab, Offline section, click "Sync" to push edits to the online feature or click "Remove" to discard edits.

3. Edit Mobile Edit Service NIROPs Fire Perimeter
   a. Set up your ArcPro Basemap
   b. Add MobileEdit_NIFS_FireYear
   c. 

   d. Open the Attribute table for IR Polygon.
   e. Find your fire and Select the IR Heat Perimeter row.
   f. Export the IR Heat Perimeter. Make the name relevant to you.
   g. Update the (1) "Comments", (2) "Create Name", and (3) "Edit Name" columns.
      i. See Appendix A.
      ii. Comments example: "IR Flown on 07/05/2026 at 0223 MDT. Aircraft/Sensor: N270WA / Tillium HD80."
   h. Edit and update the perimeter based on what you see and capture during the mission.
   i. Once edits are complete, save and:
      i. Paste the new perimeter into the Mobile Edit Service.
         1. Select your new perimeter feature class.
         2. Go to the Map tab in Arcpro.
         3. Click Copy.
         4. Paste Properties
      ii. Upload Mission to EGP.

4. Edit into a Feature Class, zip it and deliver via Teams or Email.

This is least favorable method to be avoided if possible. EGP is the way to go.



Sharing Data with SIT

The OWA Agency team has created an AGOL Feature Layer for sharing data products with the incident GIS team.

This is the “View” to share with SIT/GISS for new polygons within 15 hours:

https://services3.arcgis.com/T4QMspbfLg3qTGWY/arcgis/rest/services/UAS_Type_1_IR_(view_only_within_15_hrs)/FeatureServer

Showing Clients Where We’ve Looked

On Red Canyon and Lee (2025), SIT asked to see where we looked whether we found heat or not. OWA can deliver a CSV at the end of the night demonstrating where the GIMBAL looked all night.

- Trilium – "Convert Replay to CSV"
    1. This spits out three CSV files
    2. The "Analysis" csv has a tgtlon and tgtlat
    3. Convert to event points.
    4. Display as heat map.

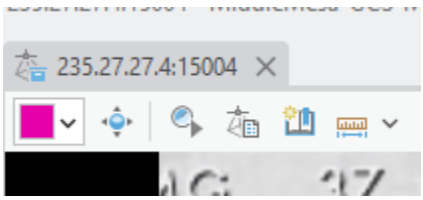
Working with FMV

Be sure not to utilize FMV for main map project as FMV can cause persistent map load failure -Run FMV is separate ArcPro project.

Trilium live feed URL.

(N170WA) Arcgis URL - udp://235.27.27.4:15004 Source URL - udp://235.17.17.4:15004

(N270WA) Source URL - udp://235.168.10.17:15004



This is where some FMV snaps have been saved: C:\0_Projects\Fire\202508-Lee\20250814\UAS_Collection\Trilium_FMV\235027027004_15004\235027027004_15004_6867.jpg

Determine where Arcpro saves FMV Snaps – Arcpro Options, FMV, Image Exports

1. Create New Arcpro project with Local Scene.
2. Add background data, such as:
    a. Perimeter, Streams, trails, roads, buildings

Consider Screen Recording from Teams

1. Set up a screen with the FMV viewer and Local Scene.
2. Start a Teams meeting.
3. Share the FMV screen.
4. Record the meeting (start and stop the recording when appropriate).
5. Download the recordings (there should be one recording available for download for each time you start recording).
6. Convert your .MP4 to a .ts file. (Powershell ffmpeg is free, fast and effective.)
7. Upload to a mission in EGP.

Option 1 — Winget

Open Command Prompt or PowerShell and run:

PowerShell

```
winget install Gyan.FFmpeg
```

Then close/reopen PowerShell and test:

PowerShell

```
ffmpeg -version
```

Option 2 — Download

Go to the FFmpeg download page, get a Windows build, unzip it, and add the `bin` folder to your Windows PATH.

Once installed, you can run:

PowerShell

```
ffmpeg -i "C:\path\video.mp4" -c copy "C:\path\video.ts"
```

Appendix A: Email from Brandt Hines on updating UAS data collection in the Mobile Edit Service Comments

Hey all,

I'm working an IRIN role and the protocol of UAS folks using the NIFS/IR feature service has been brought up. Just passing on the importance and reminder of using the comments to clarify that it is a UAS so people know where it's coming from. We've seen IR points being used without comments and eventually figured out it came from a UAS Mod. I assume they chatted with SIT but using those comments helps everyone easily identify, and not delete, the data. It's standard practice for IRINs to delete out their IR Points and IR Polygons each evening before doing interpretation so they have a clean slate, and so SIT knows what the latest data is in the morning. Using the comments will identify other sources of IR data so it can be a conversation with SIT on how they want to handle/display these.

The standard comments for IRINs looks like this:

IR Flown on 6/27/2026 at 2212 MDT. Aircraft/Sensor: N181Z / Phoenix

A UAS example would/should look like this:

IR Flown on 6/27/2026 at 2212 MDT. Aircraft/Sensor: UAS Alta X / Wiris

Please help pass the word.

Thanks,