# Geospatial Solutions for Supporting ADS FY20 Field Season: Webinar Agenda

## Day 1: May 27, 12-2 pm MDT

### Framework Overview (20 min)

* GTAC will provide an overview of the general framework for using geospatial and remote sensing technologies to supplement ADS work for the FY20 season. [An organizational flowchart of the framework is located at the end of this agenda.](#_Framework_Flowchart)
* Hierarchical Levels of Production Work
	+ Broad Level – Goal is to identify targeted areas of interest; tools include but are not limited to historic assessment data (e.g., ADS data), LCMS, ForWarn II, LandTrendr, etc. This level will use data in the 30-250 m spatial resolution range.
	+ Moderate Level – Goal is to identify and confirm areas of change that were previously identified at the Broad Level. Tools like HiForm and manual interpretation of imagery (swiping) can be leveraged. This level will use data in the 10-20 m spatial resolution range.
	+ Fine Level – Goal is to map features of interest using DMSM and high resolution imagery; imagery is acquired based on disturbance confirmations at the Moderate Level. This level will use data in the 0.5 - 5 m spatial resolution range.

### Awareness Overviews (25 min each)

#### Historic Perspective

Are there any general areas of local concern ([NIDRM](https://www.fs.fed.us/foresthealth/applied-sciences/mapping-reporting/national-risk-maps.shtml)) in the Region/Area/State? What data sets can we leverage to organize the Region or landscape into more manageable chunks (e.g., IDS)? We will review how to leverage ADS Products & LCMS data for identifying areas with historic precedent for survey work this year.

#### Coarse and Quick Near Real-time Assessments

Are there any areas within the areas of historic precedent that should be targeted areas of interest? Based on results from change tools / products that use relatively shorter time intervals for analysis (like ForWarn II), where should this year’s efforts be focused?

#### Detecting and Monitoring Change

We can use imagery with slightly higher temporal and spatial resolutions to confirm and further hone in on change events. We can use multi-date imagery (e.g., Sentinel-2) to visualize and identify locations of change in GIS or image processing software, like ArcGIS or ERDAS Imagine. We can also plot the spectral values from the imagery over time and note deviations in slope, which are indicators of potential change (e.g., HiForm, LandTrendr, TimeSync).

#### Mapping Infestations

Once change has been visually confirmed, we can use existing high resolution data where it exists and potentially task commercial satellites to acquire additional high resolution imagery and use image interpretation skills to map where those polygons of change or disturbance exist. We can digitize directly within DMSM, or we can use “pan and scan” or “scoot and sketch” techniques in ArcGIS.

## Day2: May 28, 12-2 pm MDT

### Training Capacity Building – 3 concurrent sessions (2 hr each).

Some individuals may be tasked with learning multiple components of the geospatial framework presented in this webinar; each webinar will be recorded, so individuals will be able to review all materials at a later date. Please do not register for more than one track in order to ensure that we can maximize attendance and participation.

#### Track I: Historic Perspective, Coarse and Quick Near Real-Time Assessments

* + Historic Assessments – previous ADS products and LCMS data
	+ Near Real-Time Assessments – using ForWarn II
	+ Monitoring Change with Plotted Data – LandTrendr; TimeSync

#### Track 2: Confirming Change, Tasking Satellites, and Sharing Imagery

* + Using Sentinel-2 imagery to confirm the presence of change / disturbance
	+ Making high resolution satellite imagery requests
	+ Preparing imagery for large audiences: creating TPKs (DMSM) and/or creating image services (ArcGIS)

#### Track 3: Mapping Infestations

* + Setting up your working environment (DMSM & ArcGIS)
	+ Imagery usage: orientation in aircraft versus interpretations at home
	+ Image interpretation skills and tips and tricks
	+ “Pan and Scan” or “Scoot and Sketch” workflows (DMSM & ArcGIS)

## Framework Flowchart

