Forest Health Monitoring Program
Monthly Update - Supplement
May 20, 2020

WHAT'S NEW

Colleagues, in a continuing effort to share information about the upcoming survey season, Forest Health Monitoring, Forest Health Assessment and Applied Sciences Technology (FHAAST), and the U.S. Forest Service Geospatial Technology and Applications Center (GTAC) are working together to provide more instruction on gathering forest I&D survey data during 2020. The next webinar, *Geospatial Solutions for Supporting Aerial Survey and Detection during the FY20 Field Season*, is a follow up to Webinar 1, which was held April 16, 2020. Webinar 2 will take place over 2 days, the afternoons of Wednesday, May 27 and Thursday, May 28.

Webinar 2 will be similar to the previous Webinar, presented remotely via the Internet, and available to all interested attendees. This webinar will take a "deeper dive" into this subject. The Wednesday session will be for all attendees to participate in an overview of the subject, and a potential framework for working with remote sensing will be presented. On Thursday, there will be 3 concurrent sessions that will address the wide range of informational needs. All sessions will be recorded and made available on the Internet for later review, so if you had hoped to attend 2 (or all 3!) sessions, they will be available shortly after the conclusion of the presentations. Please note that some of the presentations will be presented on WebEx while others will be provided on Adobe Connect. The provided links will direct participants to the correct site.

A big difference from the last webinar is that you **MUST REGISTER at least 24 hours before the sessions**. So, please use the attached links (attached to this Supplement as Attachment 3) to register for the sessions, by **close of business on Tuesday, May 26, 2020**. Within these links you will find additional information, including how to access the audio portion over your phone. Federal attendees may participate in the webinar on the basis of their LincPass. State, private and academic partners **must** contact Brenna Schwert of GTAC to register (brenna.schwert@usda.gov).

Please complete your registrations as soon as possible so that we can gauge audience needs. If you are in doubt as to whether you can participate, please wait until you are sure, otherwise you may take a space that someone else might have used. In any case, all the presentations will be recorded and freely available for future reference. You do not need to register if you plan on accessing these recorded sessions on a later date.

This Supplement has three attachments containing additional information for the webinars:

- Attachment 1 - **Webinar-Phase2_Agenda.pdf** (The agenda for all 4 upcoming sessions)
- Attachment 2 - **FHM_ADS_Workflow.pdf** (an illustration of the framework and steps considered by GTAC)
- Attachment 3 - **How to access the "Survey during COVID" Presentations.docx**

Please remember you **MUST REGISTER** for these sessions at least 24 hours prior to the presentations. You may register starting as soon as you receive this Supplement. Please do so to reserve your spot. Simply click on the links listed in Attachment 3, noting that **you may choose only 1 of the 3 Thursday Tracks.** All presentations will be available for later viewing.

To view Webinar 1, the Thursday, April 16 Webinar Recording of "Survey during the time of COVID-19" (an introductory webinar), play recording (1 hr 58 mins). The **Recording Password is** dDidFJq2 , which you can **copy and paste. (**If needed, the recording website is https://fs-fed.webex.com/recordingservice/sites/fs-fed/recording/playback/83ef7e01409143029696a7383e8fad73

For further information, please contact Jim Ellenwood (james.ellenwood@usda.gov), Ryan Hanavan (ryan.hanavan@usda.gov), or Tom Eager (tom.eager@usda.gov).

FOR MORE FHM INFORMATION

Visit the FHM homepage and Forest Health Assessment and Applied Sciences or access both via the **USDA Forest Service homepage**

Attachment 1

Geospatial Solutions for Supporting ADS FY20 Field Season: Webinar Agenda

Day 1: May 27, 12-2 pm MDT

GTAC will provide an overview of the general framework for using geospatial and remote sensing technologies to supplement ADS work for the FY20 season.

Framework Overview (20 min)

- ADS Organization & NFS Regional Champions – Define Roles & Coordinate Ordering Imagery
- 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, LCMS, ForWarn II, etc.
  - Moderate Level – Goal is to swipe between two dates of imagery and confirm areas of change that were previously identified at the Broad Level.
  - 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.

Awareness Overviews (25 min each)

Historic Perspective

Are there any general areas of concern in the Region? What data sets can we leverage organize the Region or landscape into more manageable chunks? 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

Is there any notable change occurring in the targeted areas of interest? We can use imagery with slightly higher temporal and spatial resolutions to confirm and further hone in on change events. We can use multidate 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 acquire even higher spatial 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.

Attachment 1

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

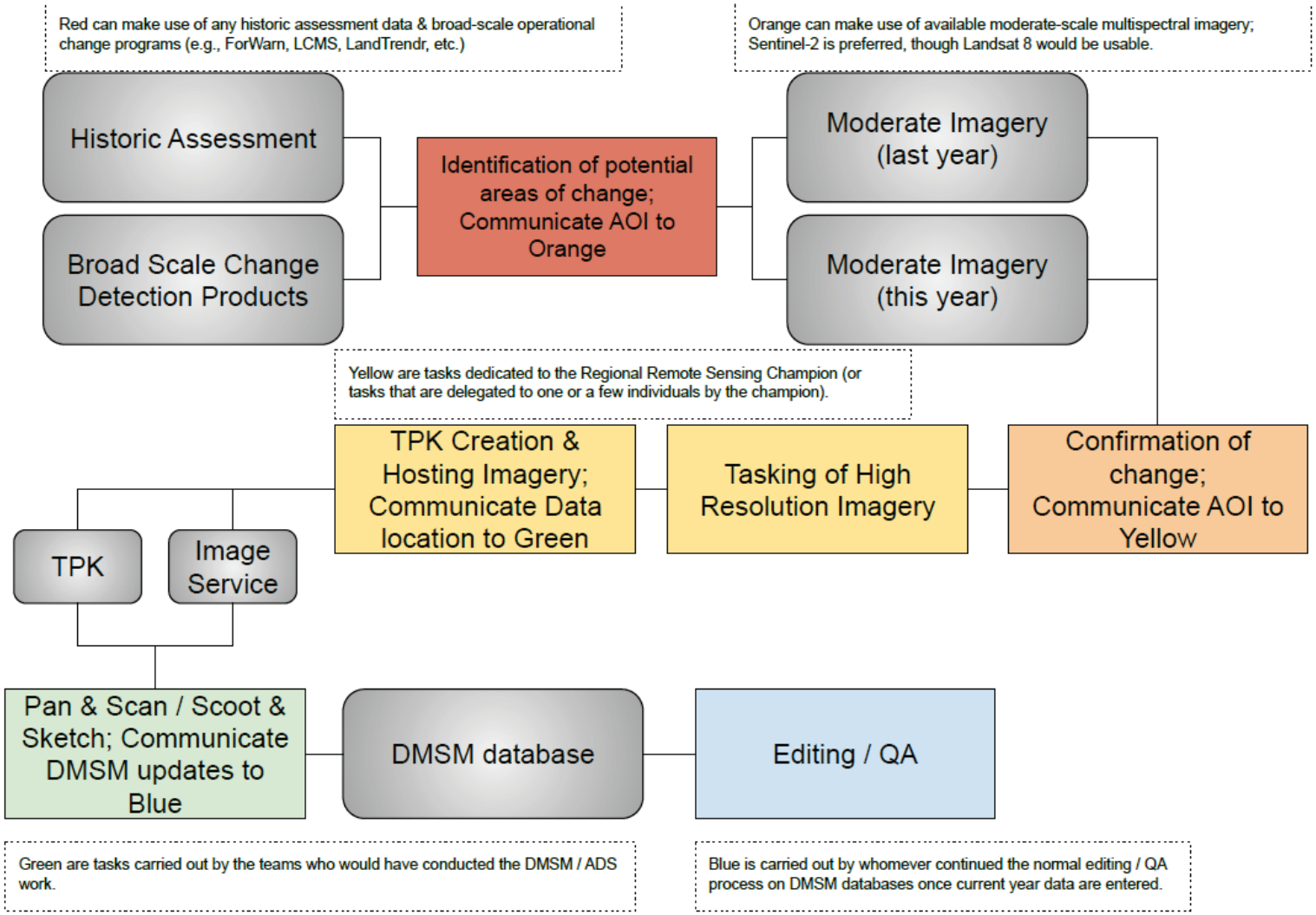
- Using Sentinel-2 imagery to confirm the presence of change / disturbance
- Making high resolution satellite imagery requests
- Preparing imagery for large audiences: creating TPKs (DMSM) and/or creating image services (ArcGIS)

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)

Attachment 2

Forest Health Monitoring Aerial Detection Survey Workflow



Attachment 3

Here are the training registration links needed to register for the webinars. Register for the single presentation on Wednesday, May 27 and register for one of the three concurrent presentations on Thursday, May 28.

Our training website is a SharePoint that uses LincPass for authentication. Anyone off the FS network (without a LincPass), such as State, private and academic partners), **MUST register by emailing Brenna Schwert directly** (brenna.schwert@usda.gov). Mention the name *Geospatial Solutions for Supporting Aerial Survey and Detection during the FY20 Field Season*, and which session(s) you want.

Wednesday May 27, 2020.

- Geospatial Solutions for Supporting ADS FY20 Field Season: Framework Overview (5/27, 12-2 pm MDT)

Thursday May 28, 2020 (register for only one)

- Geospatial Solutions for Supporting ADS FY20 Field Season: Track I, Historic Perspective, Coarse and Quick Near Real-Time Assessments (5/28, 12-2 pm MDT)
- Geospatial Solutions for Supporting ADS FY20 Field Season: Track 2. Confirming Change, Tasking Satellites, and Sharing Imagery (5/28, 12-2 pm MDT)
- Geospatial Solutions for Supporting ADS FY20 Field Season: Track 3, Mapping Infestations (5/28, 12-2 pm MDT)