Forest Health Monitoring Program
Monthly Update
March 2020

WHAT'S NEW

Get to know FHM. This month get to know **the Forest Health Monitoring (FHM) Program Management Team (MT).** The core MT consists of the National Program Manager, located in Washington D.C., the four Regional Program Managers (one for each FHM mega-region), State representatives, (one from each FHM mega-region), a representative from the Southern Research Station's Forest Health Monitoring Research Unit, the National Program Leader of the Forest Service's Forest Inventory and Analysis (FIA) Program, and the Director of the Forest Service's Forest Health Assessment & Applied Sciences Team (FHAAST). Other members of the MT include representatives from various U.S. Forest Service Forest Health Protection (FHP) regions. The MT is responsible for coordinating the activities of FHM throughout the U.S and Pacific Islands. This includes communication with current and potential State partners, Federal partners and academic cooperators. The MT also makes or contributes to decisions about the focus and future plans of FHM. You can contact any of these members for more information about the FHM activities happening in your area or anywhere in the United States and related Pacific Islands. The list of members and contact information is available on the FHM website at the Management Team link.

The 2020 biennial National Forest Health Monitoring Workshop was held February 25-27, 2020 at the Nature Research Center at the North Carolina Museum of Natural Sciences in downtown Raleigh, NC. This was a working meeting that successfully drew together State, Federal, and academic cooperators to discuss forest health issues and make recommendations about the future direction of the FHM Program. Nearly 90 forestry professionals (Federal, State, academic, and non-government organization) learned about new tools and technology being used both for data collection and for integrating FHM and Forest Inventory & Analysis (FIA) data. Results from six Evaluation Monitoring projects were presented as were results from projects within The U.S. National Forest System, and State and private lands. Discussion groups focused on aerial detection survey standards, and on a vision for future FHM reporting. Other plenary sessions focused on citizen science and forest health, climate and FHM, and analyses of 20 years of insect and disease survey data. Time was spent looking at what actions have taken place to address action items from the 2018 FHM Workshop, and presenting/discussing new action items and resolutions submitted to the FHM Management Team. A poster session included nearly 30 posters from current and recent Evaluation Monitoring projects. The workshop ended with a field trip that took participants to the Hemlock Bluffs at Cary Nature Center (near Raleigh), and to learn about research projects on-site in a pure stand of planted ash with mature emerald ash borer infestation, both important forest health issues in North Carolina. A report including information

about all of the presentations and discussion groups is being prepared and will be available on the FHM web site. A link to this information will be included in a future Monthly Update.

UPCOMING WEBINARS

(Items beginning with * indicate a new listing or new information)

*Webinars and other information from **The National Academies of Sciences, Engineering and Medicine study, *The Potential for Biotechnology to Address Forest Health***, are posted on the study web site. Visit the web site for more information.

*Webinars and other information about **Citizen Science and the U.S. Forest Service** are posted on the Citizen Science web site. Visit the web site for more information.

***March 18, 2020 at 12:00 p.m. Eastern time. Management and Economic Considerations for Mixed Stand Management: Reassessing a Forgotten Stand Type in the Southeastern United States.** (Sponsored by USDA Forest Service and Mississippi State University) Speakers: Shaun Tanger (Assistant Professor, Department of Forestry Coastal Research and Extension Center, Mississippi State University) and Dr. Michael Blazier (Professor, Forestry Research Project Leader, LSU AgCenter Hill Farm Research Station, Louisiana State University) The 2nd webinar in this series discusses preliminary results from a research study in Louisiana that combines Pine-Hardwood mixes in plantations. We also provide a caution for landowners considering adopting mixed stand strategies in the southeast. Pre-registration is not required! CEU available: Georgia master Timber Harvester – Continuing Logger Ed. (GaMTH CLE) – 1 hour CLE-MTH Category B Credit; Texas Dept of Ag - Pesticide Safety Continuing Ed (PSE) - 0 hour NA Credit. CEU applied for: New York Logger Training – Trained Logger Certification (NYLT-TLC) - .25 hour NYLT TLC credit; Society of American Foresters - Certified Forester Education (SAF-CFE) - 1 hour Category 1 Credit. Plan to **join the webinar** 15 minutes early.

***Webinars offered by the U.S Forest Service Geospatial Technology and Applications Center (GTAC)** include three varieties. The lightning talks (**Lightning Talk**) are very short presentations that will last approximately 15-30 minutes; they will focus on specific geoprocessing tasks and are designed to provide concise and useful information in a very efficient manner. The Awareness Sessions (**Awareness**) are designed to build your knowledge base on the particular topic and enable you to further explore the technology with realistic expectations. The Technical Training Webcasts (**Technical**) are designed to provide you with the technical skills and tools to complete geospatial tasks. The courses are also divided into five categories. The categories are indicated after each web link in the list below as follows: **GIS-Desktop; GIS-Web; GIS-Mobile; Remote Sensing; and Data management**.

All class registrations can be accessed via the CATALOG WEBPAGE.

Note: If you don't have access to the Forest Service Intranet, the registration links will not work. Please email what class you want to take to (SM.FS.geotraining@usda.gov) and they will register you manually.

- **March 11, 2020 at 10:00am – 4:00pm (Mountain Time). Introduction to eCognition (Technical – Remote Sensing) Forest Service Only.**
- **March 11, 2020 at 10:00am – 4:00pm (Mountain Time). Introduction to ArcGIS Online (Technical - GIS-Web) Forest Service Only.**
- **March 17, 2020 at 10:00am – 12:00 pm (Mountain Time). Sentinel Satellites (Awareness - Remote Sensing).**
- **March 25, 2020 at 10:00am – 4:00pm (Mountain Time). Survey123 Form Creation (Technical - GIS-Mobile) Forest Service Only** What is Survey123? Part of the ESRI Geospatial Cloud, Survey123 for ArcGIS is a complete, form-centric solution for creating, sharing, and analyzing surveys. Use it to create smart forms with skip logic, defaults, and support for multiple languages. Collect data via web or mobile devices, even when disconnected from the Internet. Analyze results quickly, and upload data securely for further analysis. This webinar introduces the Survey123 App and the tools used to create forms. Come explore this data collection workflow and see if it is the right tool for your project. The objective of this course is to build and publish survey forms for use in the Survey123 field app. The Survey123 website and Survey 123 Connect for desktop will be used to create simple smart forms with drop down lists.
- **March 24, 2020 at 10:00am – 4:00pm (Mountain Time). Intermediate ArcGIS Online (Technical - GIS-Web) Forest Service Only** **US Forest Service organizational account for AGOL required, see other information listed in catalog for more details** A general understanding of ArcGIS Online (AGOL) and ArcMap is assumed for this course. This course will look at some of the more advanced options available in AGOL A closer look at map and feature services will be explored. An examination and exploration of the Living Atlas will be conducted. Lastly, an overview of the analysis tools and geocoding will be covered. The objective of this course is to expose users to the breadth of AGOL and improve their skill set to utilize AGOL as an additional GIS tool.
- **March 25, 2020 at 10:00am – 4:00pm (Mountain Time). ArcGIS 10.5 – Working with Tables (Technical - GIS-Desktop)** Participants will learn how to work with tabular information in ArcGIS. The course covers how to use different commands and functions with tables, query attribute data, and join and relate tables. Suggested Background: The prerequisites for this class are the Quick Start course or basic GIS skills (participants must open projects, load data, understand Data Frame and Layer properties, and be able to manage GIS data in ArcCatalog).

- **March 26, 2020 at 10:00am – 4:00pm (Mountain Time). ArcGIS 10.5 – Using Citrix for GIS Projects (Technical - GIS-Desktop) Forest Service Only** Participants will learn how to use GIS data to analyze a vegetation project proposal and prepare information for a NEPA analysis. Students will use the Forest Service Data Canter and Citrix programs that allow for inter-discipline collaboration, and provides a central repository for all the project data. This course covers the process of finding, creating, managing, and analyzing GIS data in order to prepare outputs for NEPA specialist reports.
- **March 26, 2020 at 10:00am – 11:00 am (Mountain Time). Raster Data in the RDW and FS Image Services (Awareness – Data Management) Forest Service Only.**
- **March 31, 2020 at 10:00am – 4:00pm (Mountain Time). Collector for ArcGIS in the Forest Service (Technical - GIS-Mobile) Forest Service Only** This introductory webinar covers GPS data collection using the Collector app on a tablet or cell phone. The GIS data and online map setup for Collector are also introduced.
- **March 31, 2020 at 10:00am – 4:00pm (Mountain Time). ArcGIS 10.5 – Spatial Statistics (Technical - GIS-Desktop)** Participants will learn the basics of Spatial Statistics and ways in which you can explore spatial data using the Spatial Statistics toolset. This course covers measuring the distribution and relationship of spatial features and any significant patterns that may exist. Participants will also learn how to analyze patterns in spatial data and identify locations of statistically significant spatial clusters and/or dispersion.
- **April 1, 2020 at 10:00am – 4:00pm (Mountain Time). Introduction to ArcGIS Online (Technical - GIS-Web) Forest Service Only** This course covers the basics of using ArcGIS Online (AGOL). Students will learn how to make a map in AGOL, how to work in groups, what roles are, and then how to take a map offline to use in a mobile app like collector. Finally we will create a web app to view our completed map. The objectives of this course are to understand the role of ArcGIS Online as a component of the US Forest Service's implementation of web-based services; and to gain an understanding of the administration of ArcGIS Online, publishing of map services, and the process to create web maps and web applications that we can share with others.
- **April 1, 2020 at 10:00am – 4:00pm (Mountain Time). Introduction to Random Forests (Technical – Remote Sensing).**
- **April 2, 2020 at 10:00am – 4:00pm (Mountain Time). ArcGIS Pro for ArcMap Users (Technical - GIS-Desktop) Forest Service Only** **USFS organizational account for AGOL and ArcGIS Pro required, see other info for more details** This course is designed as a crosswalk between using ArcGIS Desktop and ArcGIS Pro. This course provides a hands on introduction to participants of Pro's new user interface and project platform. Participants will walk through common workflows previously performed in ArcMap/Catalog such as navigation, editing, analysis, sharing, symbolizing, creating a layout, geoprocessing, querying and

importing maps and data. The objective is to expose participants to the ARCGIS Pro user interface and assist in the transfer of common workflows from ArcMap to ArcGIS Pro.

- **April 7, 2020 at 10:00am – 10:15 am (Mountain Time). Spectral Signatures and Band Combinations for Viewing Remotely Sensed Imagery (Lightning Talk - Remote Sensing).**
- **April 7-8, 2020 at 10:00am – 4:00pm (Mountain Time). ArcGIS 10.5 – QuickStart (Technical - GIS-Desktop)** Participants will learn how to get started using ArcGIS Desktop's Primary applications, ArcMap and ArcCatalog. The course covers fundamental GIS concepts and basic functionality to view and manipulate display properties. The hands-on exercises teach basic viewing functionality and GIS data types and their properties.
- **April 8, 2020 at 10:00am – 4:00pm (Mountain Time). ArcGIS 10.5 – Geodatabases (Technical - GIS-Desktop)** Participants will learn how to create a File Geodatabase and import existing data, how to create attribute domains and edit table-attribute values that are linked to those domains, and how to create Topologies. These topologies will be used to verify the vertical integration of spatially coincident feature classes.
- **April 8, 2020 at 10:00am – 1:00 pm (Mountain Time). Using BARC for BAER Support (Awareness - Remote Sensing).**

Job Opportunities

The U.S. Forest Service, State and Private Forestry Forest Health Protection is currently advertising three total vacant GS-0401-9/11 Biological Scientist positions. One position is located at each of the following locations: Flagstaff, AZ; Albuquerque, NM; and Lakewood, CO. This position serves primarily as Aerial Survey Specialist for the Regional Forest Health Protection (FHP) Aerial Survey Program and is responsible for planning, coordinating and conducting the annual FHP aerial detection survey for the Region. Duties, listed at full performance level:

- Conduct follow-up ground surveys to verify aerial survey results.
- Provide survey quality control to ensure survey results are valid.
- Prepare and write reports to present survey data including maps, summary tables and graphic displays to show insect and disease caused damage.
- Plan, coordinate and/or conduct the annual aerial Forest Insect and Disease (FID) detection project to survey a large geographic forested area.
- Coordinate with Aerial Survey Program Manager, GIS coordinator and other survey participants to ensure accurate computation of survey data and maps.
- Develop cooperative agreements with Federal and State land managers and various forest health experts to determine areas to be surveyed.
- Identify and map insect and disease occurrences from aircraft to provide survey results.

- Determine survey requirements to ensure safe and effective coverage for designated forested lands.
- Implement National and Regional aerial detection survey standards and aviation safety protocols to ensure standards are followed.
- Prepare aerial detection sketch-map survey data to incorporate into Regional and National databases.
- Participate in forest insect and disease field surveys to evaluate insect and disease impacts.

Travel is required at 50% or less - Occasional travel with overnight lodging may be required for meetings, training, workshops, and field/site visits. The announcement number is: 20-R3GVMAR-664501-G-SO. **The vacancy open and close dates are 03/05/2020 to 03/16/2020.** To see the full announcement and instructions for applying, visit the USAJOBS web site and the vacancy announcement. For additional information about the duties of this position, please contact Andrew Graves at 505-842-3287 or andrew.graves@usda.gov for Albuquerque, NM; Joel McMillin at 928-556-2073 or joel.mcmillin@usda.gov for Flagstaff, AZ; and Brian Howell at 303-236-8001 or brian.howell@usda.gov for Lakewood, CO.

FOR MORE FHM INFORMATION

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