

Forest Health Monitoring Program Monthly Update November 2019

WHAT'S NEW

Get to know FHM. This month get to know the kinds of evaluation monitoring (EM) projects currently funded by FHM. In 2018, EM projects were chosen for funding by FHM in all FHM regions. Some examples by region follow: Northeast Region – *Evaluating the Spread of Spotted Lanternfly (*Lycorma delicatula*) and Its Impact on Native Species in the Mid-Atlantic Region*; North Central Region – *What's Alive? Understanding the Relationship Between Eastern Larch Beetle and Tamarack Regeneration*; South Region – *Evaluation of Temporal Changes in Invasive Plant Abundance and Invasion Risk in Southern Forests*; Interior West Region – *Monitoring Juniper Mortality in the Four Corners Region*; West Coast Region – *Characterizing Grand Fir Decline and Mortality Caused by Balsam Woolly Adelgid in North Coastal California*. These projects are representative of the EM part of the FHM Program, including studying effects and spread of insects and disease, effects of climate and weather, and potential of applying ‘new’ techniques to forest health problems. FHM continues to receive proposals containing excellent ideas from a variety of sources resulting in production of high quality work.

FHM is pleased to announce that Stephen Burr will be joining the FHM program as the new Regional Program Manager for the Northcentral and Northeast FHM Mega-regions. He will begin as the Forest Health Monitoring Coordinator with the Eastern Region’s Forest Health and Economics Program in Milwaukee, WI on January 6, 2020. Stephen will be taking over the Regional FHM Program from Jim Steinman, who retired in July, 2019. Please welcome Stephen to the FHM Program!

UPCOMING EVENTS

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

SAVE THE DATE! February 25-27, 2020. Raleigh, North Carolina. **The National Forest Health Monitoring (FHM) Workshop.** To be held at the Nature Research Center at the North Carolina Museum of Natural Sciences in downtown Raleigh, NC. This will be a working meeting that will draw State and Federal cooperators together to discuss forest health issues and make recommendations about the future direction of the FHM Program. Please save the date now; the agenda, and lodging and travel materials will be available as soon as possible on the [workshop webpage](#). Please check the site periodically for updated information. You may also contact Chris Asaro (FHM South

Regional Program Manager) at christopher.asaro@usda.gov or 404-347-2718 with questions.

November 19-21, 2019. Knoxville, Tennessee. 2019 Forest Inventory and Analysis Science Meeting: Celebrating Progress, Possibilities, and Partnerships. The USDA Forest Service, Forest Inventory and Analysis (FIA) Program is pleased to announce the 2019 FIA Science Meeting, hosted by the U.S. Forest Service Southern Research Station and the National Council for Air and Stream Improvement, Inc. (NCASI). The theme of the 14th biennial Science is *Celebrating Progress, Possibilities, and Partnerships*, emphasizing innovation in maximizing use of the FIA “annual” sample design; development of delivery tools to meet client needs and take advantage of ever-expanding options for data visualization and communication; assuring data continuity and tools that support a variety of land management and National Forest System planning needs; integrating more powerful and efficient monitoring technologies and statistical techniques into established analysis lines; and supporting FIA’s expansion into areas such as enhanced timber product monitoring, improved carbon/biomass estimates, enhanced ownership study, land cover/use research, urban inventory, monitoring of Interior AK, and small area estimation. The Symposium brings together international forest scientists, managers, and stakeholders with regional, national, and international inventory and monitoring missions. The deadline for oral presentation abstracts was July 15, 2019, and for digital engagement abstracts was extended to September 16, 2019. Make lodging arrangements by October 28, 2019 to take advantage of the block rate. For more information, contact the meeting organizers at fia_science@fs.fed.us or visit the [symposium web site](#).

January 8-10, 2020. Valparaiso, Chile. 2020 World Conference on Natural Resource Modeling. This conference is organized annually by the Resource Modelling Association and brings together scientists, stakeholders, and students interested in mathematical modeling of renewable and exhaustible resources. The theme of the 2010 conference is *Decision support methods for natural systems at risk*. Early registration is open until **November 29, 2019**. The deadline for abstracts was October 15, 2019. For complete information, visit the [conference web site](#).

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.

***November 19, 2019 at 12:00 p.m. Mountain time. Health Benefits of City Trees: Research Evidence and Economic Values.** (Sponsored by Utah State University Forestry Extension and TREE Fund) Speaker: Dr. Kathleen Wolf (Research Social Scientist, University of Washington, College of the Environment, School of Environmental and Forest Sciences, associate: USDA Forest Service, Pacific Northwest Research Station. The evidence is out now - nature is good medicine. But what about the specific health benefits of trees? These more detailed studies are underway. Collaborators at the University of Washington, University of British Columbia, Health Canada and Natural Resources Canada have reviewed the existing studies about urban trees and human health response. Dr. Wolf will share the findings, and will talk about the economic consequences of the evidence. CEU available the day of the webinar: Society of American Foresters OR International Society of Arboriculture OR receive a letter confirming your attendance at the webinar. To register for this free webinar, visit the [webinar registration site](#). Plan to join the webinar 15 minutes early.

***November 26, 2019 at 2:00 p.m. Eastern time. LiDAR for Resource Management.** (Sponsored by USDA Natural Resources Conservation Service Conservation Webinars) Speakers: Dr. Mark Tomer (Agroecosystems Management Research Soil Scientist, USDA ARS NLAE, Ames IA) and Dwain Daniels (GIS Specialist, USDA NRCS, Central National Technical Support Center, Ft. Worth, TX). Join this webinar to get a better understanding of how terrain and hydrology derivatives can be used for Resource Assessment. Simple applications will be presented that can be easily accessed where LiDAR (Light Detection and Ranging) elevation data is available in the NRCS Elevation Web Services. Also, one of the most advanced applications of LiDAR data use for Resource Assessment is the Agricultural Conservation Planning Framework (ACPF) Toolbox. This suite of geoprocessing workflows has been developed by staff at the ARS-National Laboratory for Agriculture and the Environment (NLAE). It includes tools to process the LiDAR-based digital elevation models for hydrologic analysis, which then allows a series of prioritization, riparian classification, and conservation-practice placement tools to be used. The result is the identification of agricultural fields most prone to deliver runoff directly to streams, map and classify riparian zones to inform whole-watershed riparian corridor management and estimate the extent of tile drainage in the watershed. Rather than making any recommendations, ACPF provides an inventory of watershed assessment data and conservation placement opportunities across a watershed, in order to inform local watershed planning. Pre-registration is not required! CEU available: Conservation Planner (CP) – 1 hour Conservation Planning Credit; Certificate of Participation; Certified Crop Advisors (CCA) – 1

hour CCA – SW Credit; State Professional Engineer – 1 hour State Specific Approval 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.

- **November 19, 2019 at 10:00am -4:00pm (Mountain Time). Obtaining and Processing VHR Satellite Imagery (**Technical** - Remote Sensing).**
- **November 19, 2019 at 10:00am – 12:30p.m. (Mountain Time). Forest Service Geospatial Resources (**Awareness** - Data Management) **Forest Service Only**.**
- **November 20, 2019 at 11:00am – 12:00pm (Mountain Time). Get Your Message Out with Story Maps (**Lightning Talk** - GIS-Web)** The Story Maps platform has become a go-to solution for creating immersive narrative-based presentations and reports. In this lightning talk, we will go over how to create vibrant, multi-media Story Maps. Topics covered include how to create a story map using the interactive builder, how to add multi-media content, how to create narrative text, and how to effectively summarize a project using a Story Map. The objective of this course is to learn how to effectively use story maps to create engaging presentations and project summaries.
- **November 21, 2019 at 10:00am – 4:00 pm (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 Center and Citrix programs that allow for inter-discipline collaboration, and provide 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. The objectives for this course are to learn how to gather data from various sources and file types, create a geodatabase for the proposed action, prepare the data for analysis, and manage the associated metadata; to gain experience performing and documenting GIS analysis using geoprocessing tools; summary tables and simple statistics, use editing tools to alter previously collected data; to practice different methods of displaying spatial data by creating various outputs appropriate for format and audience, using correct cartographic elements in maps, and preparing GIS data for the project record.

- **November 21, 2019 at 10:00am – 4:00pm (Mountain Time). Survey123 Form Creation, An Introduction (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.
- **December 3-4, 2019 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.
- **December 5, 2019 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 within tables, query attribute data, and join and relate tables. The prerequisites for this class are the Quick Start course or basic GIS skills (Participants must be able to open projects, load data, understand Data Frame and Layer properties, and be able to manage GIS data in ArcCatalog). The objectives of this course are to analyze and manipulate tabular data using field and table properties using the summarize command, and prepare a table for a report; query and search for information in GIS data by constructing definition queries; become familiar with amp tips, and the identify, find and measure tools; learn to select items by an attribute and calculate XY coordinates and select

features by their location; learn to apply tabular and spatial joins to tables and how to relate tables.

- **December 5, 2019 at 10:00am – 4:00pm (Mountain Time).**
Introduction to Geospatial Scripting (Technical - Remote Sensing).
- **December 10, 2019 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 management. Participants will walk through common workflows previously performed in ArcMap/Catalog such as navigation, editing, analysis, sharing, symbolizing, creating a layout, geoprocessing, importing maps and data, and querying. ArcGIS Pro is a projects based application. A project contains maps, layouts, layers, tables, tasks, tools, and connections to servers, databases, folders, and styles. Projects can also incorporate content from your organization's Portal or ArcGIS Online accounts.
- **December 11, 2019 at 10:00am – 4:00pm (Mountain Time).** **ArcGIS 10.5 – Editing (Technical - GIS-Desktop)** This class demonstrates editing environment in ArcMap. You will be exposed to the new editing environment. The course covers editing attribute data, performing spatial edits, and creating new data (digitizing). The hands-on exercises teach basic editing functionality. The objective of the course is for students to be able to edit values from the table window, edit values outside of an edit session, edit values from the attributes dialog window, create a frequency table, prepare the edit environment, point edits, line edits, polygon edits, use map topology, create a geodatabase, create a feature class, populate a feature class with records derived from digitizing, create and populate user defined attribute fields for a feature class, and populate them with the calculate geometry function.
- **December 11, 2019 at 10:00am – 11:30am (Mountain Time).**
Unmanned Aircraft Systems (UAS's) for Resource Applications (Lightning Talk - Remote Sensing).
- **December 12, 2019 at 10:00am – 4:00pm (Mountain Time).** **ArcGIS 10.5 – Advanced Editing (Technical - GIS-Desktop)** Participants will learn how to work with the Advanced Editing Toolbar in ArcMap; practice using geodatabase topology to find and fix errors; and automate editing through a vertical integration tool that aligns Forest Service data with existing reference data. The objective of this course is to learn to use the specified tools available within ArcMap to more efficiently and accurately edit GIS data.
- **December 16, 2019 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. **Note: This is not an introductory course for ArcGIS Desktop. If you are interested in an introductory training in ArcGIS, please see our ArcGIS 10.3 Quick Start course

- **December 17, 2019 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.
- **December 18, 2019 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.
- **December 19, 2019 at 10:00am – 4:00pm (Mountain Time). Survey123 Form Creation, an Introduction (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.
- **December 20, 2019 at 10:00am – 10:30am (Mountain Time). ArcGIS Online Dashboard App Lightning Talk (Lightning Talk - GIS-Web)** A dashboard is a view of geographic information that helps you monitor events or activities. Dashboards are designed to display multiple

visualizations that work together on a single screen. They offer a comprehensive and engaging view of your data to provide key insight for at-a-glance decision-making. This lightning talk will introduce you to what a dashboard is and how to design and create one. We will look at dashboard examples and demonstrate how to create and use a dashboard.

- **December 20, 2019 at 11:00am – 12:00pm (Mountain Time). Get Your Message Out with Story Maps (Lightning Talk - GIS-Web)** The Story Maps platform has become a go-to solution for creating immersive narrative-based presentations and reports. In this lightning talk, we will go over how to create vibrant, multi-media Story Maps. Topics covered include how to create a story map using the interactive builder, how to add multi-media content, how to create narrative text, and how to effectively summarize a project using a Story Map. The objective of this course is to learn how to effectively use story maps to create engaging presentations and project summaries.

Job Opportunities

The U.S. Forest Service, Eastern Region, State and Private Forestry anticipates filling a permanent, full-time GS-0401-11 plant biologist position. The position will be located at the Morgantown Field Office in Morgantown, WV. PLEASE NOTE: The purpose of this Outreach Notice is to inform prospective applicants of this potential employment opportunity, and also to establish the appropriate recruitment method and area of consideration for the advertisement. The grade levels identified in this outreach may not be those that are eventually advertised for the position. The vacancy announcement will be posted on USAJOBS (www.usajobs.gov) when the job opens. Individuals that respond to this outreach will be contacted with specific vacancy announcement information when the job is advertised on USAJOBS. The plant biologist in this position works independently, as well as on a team of entomologists, pathologists and technicians that reports to the Forest Health Group Leader in the Morgantown Field Office. Primary roles of this position include serving as the Morgantown Field Office point of contact for all forest health matters pertaining to the identification, culture and function of both native and non-native herbaceous and woody plant vegetation. Some of the activities in this role include the preparation of biological evaluation documents as they relate to vegetation priorities; non-native invasive plant species (NNIPS) management and control; and support, leadership and technical assistance to NNIPS partnerships; CWMAs; coordinating management activities with other State and Federal agencies; participation in local, State and Federal technical and operational meetings. This work requires a significant amount of overnight travel. Other duties associated with this position include the following:

- Plans, coordinates and conducts detection, evaluation, prevention and suppression projects for native and non-native plant species.

- Provides site-specific technical assistance to land managers concerning forest pests, including the development of pest management recommendations, biological evaluations and alternatives to reduce pest impacts.
- Organizes, plans and conducts NNIPS and plant identification related to training programs, presentations, or seminars related to the delivery of State and Federal programs.
- Serves as invasive plants specialist, providing assistance to the unit in matters dealing with NNIPS, noxious weed species, and the protection of threatened, endangered, and rare plant species/plant communities.

The Morgantown Office is one of three Field Offices of the Eastern Region State and Private Forestry. The field office delivers both forest health and forest management programs (stewardship, watershed, urban and community forestry) to six Mid-Atlantic States and the District of Columbia. The Forest Health staff also provides assistance to three National Forests, the Grey Towers National Historic Site, and other federal sites managed by the National Park Service, Department of Defense, and the US Fish and Wildlife Service. To express interest in this position please complete the outreach response form (attached to this Update as Attachment 1) and send it to Rick Turcotte by **November 30, 2019** at richard.m.turcotte@usda.gov, Forest Health Group Leader in the Morgantown Field Office. For more information please contact Rick by email or by phone at (304)-285-1544.

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PUBLICATIONS OF INTEREST

1. **Rogers, P.C.; Pinno, B.D.; Šebesta, J.; Albrechtsen, A.; Li, G.; Ivanova, N.; Kulakowski, D.; Kusbach, A.; Kuuluvainen, T.; Landhäusser, S.M; Liu, H.; Myking, T.; Pulkkinen, P.; Wen, Z.** 2020. A global view of aspen: Conservation science for widespread keystone systems. *Global Ecology & Conservation*. Vol. 21: e00828 Available [online](https://doi.org/10.1016/j.gecco.2019.e00828). (<https://doi.org/10.1016/j.gecco.2019.e00828>)

2. **Sniezko, Richard A.; Johnson, Jeremy S.; Savin, Douglas P.** 2019. Assessing the durability, stability, and usability of genetic resistance to a non-native fungal pathogen in two pine species. *Plants, People, Planet.* 2019; 00: 1-12. Available [online](https://doi.org/10.1002/ppp3.49). (<https://doi.org/10.1002/ppp3.49>)

FOR MORE
FHM
INFORMATION

Visit the [FHM homepage](#) and the [Forest Health Portal](#)
or access both via the [USDA Forest Service homepage](#)

OUTREACH RESPONSE

Plant Biologist GS-0401-11

Eastern Region, State and Private Forestry, Forest Health Protection

Morgantown Field Office, Morgantown, WV

Respond by (November 30, 2019) to richard.m.turcotte@usda.gov

NAME:	
E-MAIL ADDRESS:	
MAILING ADDRESS:	
CITY, STATE, ZIP CODE:	
TELEPHONE:	

CURRENT STATUS:

Agency:	
Type of Appointment:	<input type="checkbox"/> Permanent <input type="checkbox"/> Temporary <input type="checkbox"/> Term <input type="checkbox"/> VRA <input type="checkbox"/> PWD <input type="checkbox"/> Other
Region:	
Forest:	
District:	
Series:	
Grade:	
Position Title:	

If you are not currently a permanent (career or career conditional) employee, are you eligible to be hired under any of the following special authorities?

People with Disabilities	
Veterans Readjustment Authority	
Disabled Veterans w/30% Compensable Disability	
Veterans Employment Opportunities Act of 1998	
Former Peace Corps Volunteer	
Student Career Experience Program/Pathways	
Other	

Please list formal education (degree received & date attained) & briefly describe why you will be a quality candidate for this position in the box below.

