

# Forest Health Monitoring Program Monthly Update February 2017

## UPCOMING EVENTS

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

**June 5-9, 2017.** Bangor, Maine. 18<sup>th</sup> International Boreal Forest Research Association Conference. The theme of the conference is “Our Boreal, Our Future: The Science, Policy and Practice of addressing change. The 18th international conference of the International Boreal Forest Research Association (IBFRA) is being hosted by the USDA Forest Service and the University of Maine in Bangor, Maine. Invited keynote speakers, scientific sessions (oral and poster) and panel discussions will explore new scientific findings and their linkages with policy relating to the addressing change in boreal forests. Designed to engage and inform scientists, resource managers and policy makers, the conference themes will address the current and emerging challenges for the boreal, the role of science in addressing those challenges and the links between science, policy and practice. The first call for abstracts has been issued; the deadline for submission is **January 22, 2017**. Registration will open in early January 2017. For more information about the conference and submitting an abstract, visit the [conference web site](#).

\***November 15-19, 2017.** Albuquerque, New Mexico. The 2017 Society of American Foresters National Convention. The call for presentations is now available. Submit your proposal **before March 31**. For complete information about the convention as it becomes available, visit the [convention web site](#).

## UPCOMING WEBINARS

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

\***Update to the 2010 Resources Planning Act (RPA) Assessment Overview.** (Sponsored by the U.S. Forest Service). This webinar will present an overview of the RPA Assessment highlights. The *Future of America's Forests and Rangelands: Update to the Forest Service 2010 Resources Planning Act Assessment* is now available [online](#). This report is an interim update to the 2010 RPA Assessment, and builds upon the 2010 RPA Assessment to provide more recent information and new analyses about resource conditions and trends on the Nation's forests and rangelands. The RPA Assessment Update examines how land development, climate change, and natural disturbances continue to influence the extent, pattern, and conditions of forest and rangeland ecosystems. The interaction of socioeconomic and biophysical drivers affects the productivity of forest and rangeland ecosystems and their ability to meet increasing demands for goods and services. These effects vary regionally and locally, requiring flexible adaptation and management strategies. The webinar will be presented at **Thursday, February 9, 2017** from 1-2 PM Eastern Time,

1-888-844-9904; participant code 4167967#, join the [webinar](https://usfs.adobeconnect.com/rpa-500/) online (<https://usfs.adobeconnect.com/rpa-500/>).

**\*Integrative Forest Management for Wildlife and Forest Health.** (Sponsored by Southern Regional Extension Forestry / Forest Health and Invasive Species Program) Speaker: Dr. Mark McConnell (University of Georgia, D.B. Warnell School of Forestry and Natural Resources). This webinar will discuss forest management strategies to improve wildlife habitat in forests while maintaining productivity and health. Different methods to meet these objectives will be covered. No pre-registration is required! CEU are available as follows: Georgia Master Timber Harvester - 1 hour CLE - Environment Credit; Mississippi Professional Logging Manager - 1 hour Other Credit; Texas Pro Logger Program - 1 hour Other Credit; Society of American Foresters – 1 hour Category 1 Credit. This webinar will be conducted at **1:00 p.m. (EST) on February 15, 2017**. To access this free webinar, visit [the webinar information site](#) for more details. Plan to join the webinar 15 minutes early.

**\*Successful Buffer Restoration: Initial Establishment Methods and Post-Planting Care.** (Presented by USDA Natural Resources Conservation Service – Science and Technology, National Technology Support Centers) Speaker: David Wise (Watershed Restoration Manager, Stroud Water Research Center, Avondale, PA). Participants will learn proven successful methods for establishing riparian forest buffers at a landscape scale and the critical post-planting care details needed for success. No pre-registration is required! CEU are available as follows: Conservation Planner - 1 hour Conservation Planning Credit; Georgia Master Timber Harvester - 1 hour CLE - Environment Credit; Society of American Foresters - 1 hour Category 1 Credit; The Wildlife Society – 1 hour TWS Category 1 Credit. This webinar will be conducted at **2:00 p.m. (EST) on February 22, 2017**. To access this free webinar, visit [the webinar information site](#) for more details. Plan to join the webinar 15 minutes early.

**The Sustainable Forest Roundtable** offers periodic webinars. For information about accessing past and future webinars, please visit [the Webinar Portal for Sustainable Forests](#).

**\*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. **GIS** listed after presentation type indicates GIS training. **RM** listed after the presentation type indicates remote sensing training. **Note: If you don't have access to the Forest Service Intranet, the registration links will not work. Please email Brenna Schwert ([bmschwert@fs.fed.us](mailto:bmschwert@fs.fed.us)) directly to make accommodations.**

- [Introduction to Image Interpretation](#) - (**Technical - RM**) The human brain-eye system remains the most sophisticated image interpretation system available. High-resolution digital imagery is an important source of information for forestland and rangeland managers and image interpretation from aerial photography or other high spatial resolution imagery is possible once you understand the basic concepts of image interpretation and how to apply them to a workable classification scheme. RSAC has developed a suite of ArcMap Add-In's that emulate the tasks performed by the image analyst using acetate mylar overlays on hard-copy imagery such as aerial photographs. This course will cover the basics of aerial photography, image interpretation and how to use the digital tools that assist an interpreter during PI work. Those tools are: Image Sampler, Cover Interpreter and Canopy Cover Add-In's for ArcMap v10. **10:00 am – 4:00 pm (MST) on February 9, 2017**
- [ArcGIS 10.3 Geodatabases](#) - (**Technical - GIS**) 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. **10:00 am – 4:00 pm (MST) on February 14, 2017**
- [Introduction to Forest Service Geospatial Resources](#) - (**Awareness - GIS**) NEW! This course is for people who are new to the Forest Service or new to GIS and need to learn about the geospatial data, protocols, and platforms available in the Forest Service. PLEASE NOTE: This course will not teach you how to use specific GIS software. If you are new to GIS, we recommend you take the GSTC ArcGIS 10.3 Quick Start class, or the Introduction to ArcGIS Online course. **10:00 am – 12:00 pm (MST) on February 15, 2017**
- [Introduction to Random Forests](#) - (**Technical - RM**) Random forests is a sophisticated classification algorithm developed by Leo Breiman and Adele Cutler. While it offers many improvements over existing supervised classification algorithms (e.g., easy to parameterize and run, doesn't overfit models as classification trees do, minimizes training bias, etc.), the algorithm can be difficult to grasp conceptually. In this webinar, we will walk participants through the steps that a random forests algorithm takes to arrive at a classification, teach them how to parameterize a model, and run a model in two different environments (R and Google Earth Engine) in order to create a simple land-cover layer. **10:00 am – 4:00 pm (MST) on February 15, 2017**
- [Introduction to ArcGIS Online](#) - **Introduction to ArcGIS Online** (**Technical - GIS**) Participants will learn: the basic functionality of ArcGIS Online, and how to create simple web maps/web applications. The course also covers the administration of ArcGIS Online including: administrative roles, managing content, group creation, how to share content with others, the role of ArcGIS Online as a component of the US Forest Service's implementation of web-based GIS services. **10:00 am – 4:00 pm (MST) on February 16, 2017**
- [ArcGIS 10.3 Editing in SDE](#) - (**Technical - GIS**) In a multiuser editing environment, SDE is used to centrally store data and user edits without duplicating data. Versioning allows you to avoid the creation of redundant data while maintaining data snapshots and alternate views. In this webinar, you learn basic concepts and Forest Service workflows of versioning and techniques used to maintain database performance. This course will provide an overview of ArcGIS SDE geodatabases and discuss different methods of editing in a multi-user / SDE environment. **10:00 am – 4:00 pm (MST) on February 16, 2017**

- [ArcGIS10.3 Geoprocessing](#) - (**Technical - GIS**) Participants will learn how to work with geoprocessing tools found in the Analysis toolbox within ArcToolbox. This course covers how to set the geoprocessing environments, how to navigate in ArcToolbox, and how to utilize a number of geoprocessing tools to complete numerous natural resource management tasks. **10:00 am – 4:00 pm (MST) on February 21, 2017**
- [Raster Data in the RDW and FS Image Services](#) - (**Awareness - GIS**) This 1-hour awareness session is about how to access and use raster data available on the FS Image Services and the Raster Data Warehouse. This raster data includes NAIP imagery, lidar derivatives, and many other continuous and thematic datasets which are useful for resource applications. Various ways to process and analyze the data in ArcMAP will be demonstrated. **10:00 am – 11:00 am (MST) February 22, 2017**
- [ArcGIS 10.3 Thematic Data I – Development and Classification](#) (**Technical - GIS**) Learn the fundamentals of raster data and imagery including data extraction and exploration techniques and how to perform image classification using the ArcGIS Spatial Analyst extension and the Image Classification toolbar. Students will become familiar with - remote sensing principles such as: Raster types, their resolutions and essential properties; Concepts of multi band imagery including the display and interpretation of Landsat 7 & Landsat 8 Imagery; Data extraction and exploration techniques such as classifications and reclassifications to create valuable thematic datasets for use in project analysis. **10:00 am – 4:00 pm (MST) on February 22, 2017**
- [Sentinel Satellites](#) - (**Awareness - RM**) The European Space Agency (ESA) has developed a new family of satellites called the Sentinel Satellites. Each of these satellites are designed with specific objectives in mind. This awareness session will go over the Sentinel program and specifically focus on the first two Sentinel Satellites and how they may be used in forest applications. The data from these satellites is being provided for free and may be of great use. Sentinel 1 is a radar imaging satellite and Sentinel 2 is a multi-spectral sensor very similar to the Landsat satellites. **10:00 am – 12:00 pm (MST) on February 23, 2017**
- [ArcGIS 10.3 Thematic Data II – Analysis and Modeling](#) (**Technical - GIS**) 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 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. **10:00 am – 4:00 pm (MST) on February 23, 2017**
- [ArcGIS 10.3 Editing](#) (**Technical - GIS**) This class demonstrates the editing environment in ArcGIS Desktop 10.3. The course covers basic editing concepts using ArcGIS 10.3. You will be exposed to the editing environment and discuss and practice; editing attribute data, performing spatial edits, and creating new data (digitizing). The hands on exercises teach basic editing functionality. **10:00 am – 4:00 pm (MST) on February 28, 2017**
- [Introduction to Change Detection Tools](#) - (**Technical - RM**) Participants will have the opportunity to learn fundamental concepts for conducting change analyses and be introduced to a variety of tools for acquiring and processing imagery and mapping changes in land-cover. This course focuses primarily on bi-temporal (two-date) change detection methods appropriate for moderate and coarse resolution satellite data (e.g., Landsat), though concepts will be

applicable to more advanced change detection workflows. The objectives of this two-day webinar are to: (1) provide a foundation in change detection concepts; (2) introduce the participants to best practices in image processing; (3) introduce a suite of tools for conducting change detection analyses; (4) use case studies and examples of contemporary work within the Forest Service to expose participants to the breadth of change detection workflows. **10:00 am – 4:00 pm (MST) on February 28-March 1, 2017**

## **Job Opportunities**

**The Arizona Department of Forestry and Fire Management (DFFM)** is currently advertising for a Forestry Program Coordinator to be located in Phoenix, AZ. The Forestry Program Coordinator is part of the Cooperative Forestry Team and will be a key component for implementation of a comprehensive and robust statewide forest health program. Major position emphasis will be in forest health, though the position may also work in other general grant-funded forestry-related functions including: urban forestry, invasive species management, fire-wise implementation, conservation education; public outreach; forest inventory; forest land management plan assistance; forest stewardship; geographical information systems mapping; and fuels mitigation. The Forestry Program Coordinator will:

- Provide forest health project oversight and direction, natural resource technical assistance and outreach to community groups, local governments, landowners, related businesses, and Native American tribal organizations.
- Manage Western Bark Beetle Initiative grant projects.
- Develop and maintain a digital library of forest health training modules and other public presentations for the public, and project partners. Respond to requests for technical assistance from state and private landowners and managers (urban and non-urban).
- Oversee and participate in all aspects of cost assistance projects, which may include field forestry work, remote sensing, data collection, data reporting, and tracking accomplishments of specific grant projects.
- Maintain project records and financial documents; prepare needed paperwork, for assigned projects. Compile accomplishment reports and other publications as necessary.
- Coordinate and direct the planning, development and implementation of the transfer of forestry information to the public including tree and forest evaluation, disease prevention, tree pest identification, tree maintenance and promotion of urban forestry information and ideas.
- Assist with urban interface forestry management planning, including forest health and maintenance (insect and disease prevention).

If you are interested in this position, please see the full position announcement [online](#). To be considered, applications for this position must be submitted through the online [state job portal \(www.azstatejobs.gov\)](http://www.azstatejobs.gov); use the search term “Forestry” or use the position number “28280” to quickly find the position. The post date was 02/03/2017 and the close date is **02/10/2017**. *Arizona State Government is an EOE/ADA Reasonable Accommodation Employer.*

## PUBLICATIONS OF INTEREST

1. **Dodds, K.J.; Hanavan, R.P.; DiGirolomo, M.F.** 2017. Firewood collected after a catastrophic wind event: the bark beetle (*Scolytinae*) and woodborer (*Buprestidae, Cerambycidae*) community present over a 3-year period. *Agricultural and Forest Entomology*. [DOI: 10.1111/afe.12210](https://doi.org/10.1111/afe.12210).
2. **Guo, G.; Iannone, B.V.; Nunez-Mir, G.C.; Potter, K.M.; Oswald, C.M.; Fei, S.** 2017. Species pool, human population, and global vs. regional invasion patterns. *Landscape Ecology*. DOI: 10.1007/s10980-016-0475-6.
3. **Munck, I.A.; Wyka, S.A.; Bohne, M.J.; Green, W.J.; Siegert, N.W.** 2017. First report of *Diplodia corticola* causing bleeding cankers on black oak (*Quercus velutina*). *Plant Disease*. 101: 257.
4. **Rogers, P.C.; Gale, J.A.** 2017. Restoration of the iconic Pando aspen clone: emerging evidence of recovery. *Ecosphere*. 8:e01661. [DOWNLOAD HERE](#)
5. **USDA Forest Service.** 2016. Future of America's forests and rangelands: update to the 2010 resources planning act assessment. Gen Tech. Report WO-GTR-94. Washington, DC. 250p. Available [online](#).
6. **Willyard, A.; Gernandt, D.; Potter, K.M.; Hipkins, V.D.; Marquart, P.; Maholovich, M.F.; Langer, S.K.; Telewski, F.; Cooper, B.; Douglas, C.; Finch, K.; Karemera, H.; Lefler, J.; Lea, P.; Wofford, A.** 2017. *Pinus ponderosa*: A checkered past obscured four species. *American Journal of Botany*. 104(1):161-181. DOI: 10.3732/ajb.1600336.

## FOR MORE FHM INFORMATION

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