

# Forest Health Monitoring Program Monthly Update October 2017

## WHAT'S NEW

**The Forest Health Monitoring (FHM) Program is now accepting proposals for Evaluation Monitoring (EM) projects.** The EM component of FHM is designed to evaluate undesirable changes in forest health. Projects funded through EM investigate the extent, severity, and/or causes of forest health problems. The call letter, proposal instructions and program guidelines, and the proposal form are now available on the Forest Health Protection [FHP Grants web site](https://www.fs.fed.us/foresthealth/grants.shtml) (<https://www.fs.fed.us/foresthealth/grants.shtml>). If you have questions or would like more information, please contact the FHM Regional Manager where you are located. Information can be found on page 2 of the proposal instructions and program guidelines. Proposals for new and continuing projects should be submitted to the appropriate FHM Regional Manager by **November 9, 2017**. Please note that links to information for all FHP special grants (Forest Health Monitoring Evaluation Monitoring [EM]; Special Technology Development Projects [STDP]; Forest Service Pesticide Impact Assessment Program [FS-PIAP]; and Biological Control of Invasive Plants [BCIP]) are listed on the [FHP Grants web site](#).

**SAVE THE DATE! The Forest Health Monitoring (FHM) Working Group Meeting to be held February 13-15, 2018 in Phoenix, AZ at the Bureau of Land Management National Training Center.** As part of the effort to revitalize the Forest Health Monitoring Program, the 2018 National Forest Health Monitoring Workshop has been announced for mid-February. This will be a working meeting with no registration fees and will draw State and Federal cooperators together to determine the future direction of the FHM Program. The main objectives are to report on forest health conditions and trends; present recent advances in forest health monitoring; and use participant focus groups to develop recommendations for improving the FHM program. Sessions are planned that cover monitoring techniques, data analyses, and technological advances in forest health monitoring. The meeting will be held in metropolitan Phoenix, with a wide variety of lodging and dining choices available for attendees. Phoenix is located in the heart of the Sonoran desert and winter weather there is famously pleasant. Phoenix averages a daily maximum temperature for February that's between 68 and 75° F with a minimum temperature between 46 and 51° F. Special efforts have been made to make this gathering as budget-minded as possible. Forest Health Monitoring funding is provided to FHM participants to support their attendance at this meeting. Please save the date now; additional travel information will be made available soon. If you have questions, please contact FHM National Program Manager, Tom Eager at [teager@fs.fed.us](mailto:teager@fs.fed.us) or 202-572-0387.

**The Forest Health Monitoring National Status, Trends, and Analysis 2016 report** is now [available online](#). The report includes chapters about insect and

disease activity in the conterminous United State, Alaska and Hawai'i; patterns of fire occurrence also in the conterminous United States, Alaska and Hawai'i; moisture deficit and surplus in the conterminous United States over three time windows; tree mortality; significant trends in changes on vegetation indicator plots; tree regeneration; validating the national insect and disease risk map using mortality estimates from Forest Inventory and Analysis data; and summaries of six recently completed evaluation monitoring projects.

## **UPCOMING** **EVENTS**

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

**October 24-26, 2017.** Park City, Utah. 2017 Forest Inventory and Analysis Science Stakeholder Meeting: Doing more with the Core. The US Forest Service, Forest Inventory and Analysis (FIA) Program is pleased to announce the 2017 FIA Science Stakeholder Meeting. The theme of the 13th biennial Science Stakeholder Meeting is *Doing More with the Core*, emphasizing innovation around how FIA analyzes, augments, and delivers information derived from its central data collection operations. The Symposium brings together international forest scientists, managers, and stakeholders to share insights on a wide variety of topics, including contemporary issues, science policy, mensuration, geospatial products, and inventory methods. Presentation abstracts were due May 5, 2017. For more information about the meeting including lodging (make reservation by October 2, 2017 to get the government rate), call for papers, author standards, and manuscript guidelines, visit [the meeting web site](#). Note that registration closed at midnight on October 6, 2017.

**October 24-26, 2017.** Knoxville, TN. Oak Symposium: Sustaining Oak Forests in the 21<sup>st</sup> Century through Science-based Management. This symposium is the third in a series that began in 1992 and continued in 2002. The purpose of the symposium is technology transfer of state-of-the-art management and research for sustainability of oaks in the Central Hardwood Region. Topics to be covered by invited speakers are prescribed fire, silviculture, economic markets, forest health, and climate change of upland oak forests. There will be a poster session (abstracts were accepted until July 15, 2017), and a field tour to showcase collaborative research among the University of Tennessee (UT) Forest Resources Research and Education Center, the UT Tree Improvement Program, and the USDA Forest Service Southern Research Station. For complete information about the symposium including lodging and registration (online registration has been extended to **October 10, 2017**), visit the [conference website](#).

**October 24-26, 2017.** Anchorage, AK. 2017 Alaska Invasive Species Workshop. Sponsored by Alaska's Committee for Noxious and Invasive Pests Management (CNIPM) and the University of Alaska Fairbanks Cooperative Extension Service. For more information about the meeting as it becomes available, visit [the Alaska invasives web site](#). The organizers of this workshop are always open to talks about the detection and management of invasives outside of Alaska. Note lodging reservations must have been made by September 23, 2017. Please contact Tricia Wurtz (U.S. Forest Service, Region 10) at [twurtz@fs.fed.us](mailto:twurtz@fs.fed.us), if you have questions.

**October 31 – November 2, 2017.** Wilmington, NC. Bottomland and Swamp Forests Symposium. Hosted by the North Carolina Forest Service and North Carolina State University. The objective of this symposium is to bring stakeholders, researchers, and other interested groups together to discuss the past and current research knowledge on bottomland and swamp forests. The symposium will include technical sessions, a poster session, and exhibits. A comprehensive field tour is also planned for November 2. The deadline for poster abstract submission was September 1, 2017. Authors will be notified on or before September 8. The deadline for making lodging reservations was September 30, 2017. For complete information about the symposium including registration, visit the [symposium web site](#) or click on the following shortcut URL (<http://go.ncsu.edu/bottomland>).

**November 15-19, 2017.** Albuquerque, New Mexico. The 2017 Society of American Foresters National Convention. For complete information about the convention as it becomes available, visit the [convention web site](#).

**August 5-10, 2018.** Mt. Sterling, OH. SAVE THE DATE! The 6<sup>th</sup> International Workshop of the Genetics of Host-Parasite Interactions in Forestry. The workshop is titled *Tree Resistance to Insects & Diseases: Putting Promise into Practice*. For more information contact the [workshop web site](#). Because the size will be limited to 110 participants, for planning purposes please contact Richard Sniezko ([rsniezko@fs.fed.us](mailto:rsniezko@fs.fed.us)) or Jennifer Koch ([jkoch@fs.fed.us](mailto:jkoch@fs.fed.us)) and specify if you plan to attend, may attend, or will not attend but want to be on the Tree Resistance mailing list. Sending this email is not a commitment to attend the meeting.

## UPCOMING WEBINARS

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

**Learn at Lunch Live Webinars:** (Sponsored by the Utah State University Forestry Extension) Past webinars are available for viewing at the following website <http://forestry.usu.edu/videos-conferences-webinars/webinars/webinars>.

\* **October 18, 2017 at 11:00 a.m. Eastern time. Evaluating Intraspecific Variation and Environmental Heterogeneity to Identify Seed Sources and Conservation Corridors.** (Sponsored by Eastern Seed Zone Forum) Speaker: Anantha Prasad (Research Ecologist, USDA Forest Service). The eighth in the Eastern Seed Zone Forum's online lecture and discussion series aimed at providing both information about the creation of seed zones in general and a forum in which professionals, experts, and interested parties discuss the possibility of drafting seed zone guidelines for the eastern United States. In this webinar, Anantha Prasad will evaluate current and future habitat-fitness and colonization potential of intraspecific genetic zones from inferred evolutionary lineages. He will also illustrate how the colonization of suitable habitats can be modeled opportunistically in the landscape to identify potential future conservation corridors. No pre-registration is required! CEU applied for: Georgia Master Timber Harvester – 1 hour CLE Continuing Logger Ed Credit; New York Logger Training – .25 hour NYLT TLC Credit; Society of

American Foresters - 1 hour Category 1 Credit. To access this free webinar, visit the [webinar information site](#) for more details. Plan to join the webinar 15 minutes early.

**\*November 1, 2017 at 1:00 p.m. Eastern time. Hardwood Forest Management for Health and Productivity.** (Sponsored by Southern Regional Extension Forestry) Speaker: Dr. Wayne Clatterbuck (Professor of Silviculture and Forest Management, University of Tennessee). Proper hardwood forest management in the southeastern U.S. is critical to preserving the ecology, health, and vitality of the forest. Poor management tactics (e.g., high-grading) can result in forests with substandard timber and poor health. This webinar will discuss hardwood forest management in the southern states, with an emphasis on proper and accepted management techniques that both promote forest health and productivity. No pre-registration is required! CEU available: 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. CEU applied for: New York Logger Training – .25 hour NYLT TLC Credit. 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.**

- **October 17, 2017 at 10:00 am – 4:00 pm (Mountain Time) [Introduction to Geospatial Scripting](#) (**Technical – Remote Sensing**)** Geospatial scripting allows you to write scripts for quick processing of lots of data. These scripts also have the advantages of being reusable and providing automatic documentation for your projects. Introduction to Geospatial Scripting is a 1 day technical webinar designed to present basic concepts of scripting to new users. No previous programming experience is required. This course allows users to choose between one of three scripting languages, JavaScript, Python, or R. Participants will be walked through simple scripts, learning some syntax and vocabulary of their language of choice before writing a geospatial script to learn some useful applications.

- **October 18, 2017 at 10:00 am – 4:00 pm (Mountain Time)** [Introduction to Forest Service Geospatial Resources](#) (**Awareness - GIS**) [Forest Service Only](#) **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.
- **October 19, 2017 at 10:00 am – 4:00 pm (Mountain Time)** [ArcGIS 10.3 Editing](#) (**Technical - GIS**) This class demonstrates editing environment in ArcGIS Desktop 10.3. 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.
- **October 24, 2017 at 10:00 am – 4:00 pm (Mountain Time)** [Introduction to ArcGIS Online](#) (**Technical - GIS**) [Forest Service Only](#) This course covers how the Forest Service administers ArcGIS Online using roles and privileges, and how we leverage Forest Service data in this WebGIS platform. Participants will learn how to use AGOL to create simple web maps, create and manage groups, create a Story Map Journal web app, and learn how to work with ArcGIS Collector. Included in the course is an optional lesson on further exploring Story Maps by creating a Tour App. **\*\*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.
- **October 25, 2017 at 10:00 am – 4:00 pm (Mountain Time)** [Collector for ArcGIS in the Forest Services](#) (**Technical - GIS**) **NEW Course!** Bring your mobile device and get comfortable with the Collector App. The Collector for ArcGIS app is a map-based data collection application used to collect GPS data on a tablet or smart phone. This webinar covers both setting up hosted editable features and how to use the app to collect data. Demonstrations and field exercises included. Suggested audience has experience with GIS concepts, ArcGIS for Desktop, and ArcGIS Online (AGOL).
- **October 25, 2017 at 10:00 am – 4:00 pm (Mountain Time)** [Introduction to eCognition Image Analysis Software](#) (**Technical – Remote Sensing**) eCognition is a powerful image segmentation and object-based image analysis software that can be used for vegetation mapping, stand delineation, and other applications. This Introduction to eCognition course is designed to introduce students to the software. Topics will include installation, project setup, image segmentation with some exposure to advance techniques, and basic image classification. Upon completion of the class, students should have the software installed on a local computer, be able to load and segment an image, and be able to perform simple classifications of features such as water or trees/nontree. The course is structured around PowerPoint lectures and hands-on exercises. The course will be limited to a maximum of 15 students because of a limited number of eCognition licenses.
- **October 26, 2017 at 10:00 am – 4:00 pm (Mountain Time)** [ArcGIS 10.3 Cartographic Tools](#) (**Technical – GIS**) Participants will learn how to work with various cartographic related properties in ArcGIS. The course covers how to set Layer and Data Frame properties, work with Layer files, assign

classification symbology, work with labeling and annotation, and create a final map product.

- **October 31, 2017 at 10:00 am – 4:00 pm (Mountain Time) [ArcGIS 10.3 Advanced Editing \(Technical - GIS\)](#)** NEW Course! 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.
- **November 2, 2017 at 10:00 am – 4:00 pm (Mountain Time) [Using the Terrestrial Ecological Unit Inventory \(TEUI\) Toolkit \(Technical – Remote Sensing\)](#)** The TEUI Toolkit is a national application based on the Forest Service's Terrestrial Ecological Unit Inventory Technical Guide. However, the Toolkit can be used for any polygon and raster based mapping efforts. Its benefits are to help users utilize geospatial data, visualize landscapes, characterize environmental conditions, assess product quality through validation, and do so in a consistent and repeatable manner. In this class, students will learn to install the TEUI Toolkit ArcGIS Add-In, manage their data, run statistics, visualize the data with graphs and charts, design a sampling scheme, produce a connotative legend, and more.
- **November 7, 2017 at 10:00 am – 4:00 pm (Mountain Time) [Introduction to Random Forests \(Technical – Remote Sensing\)](#)** 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.
- **November 8, 2017 at 10:00 am – 4:00 om (Mountain Time) [ArcGIS 10.3 Geoprocessing \(Technical - GIS\)](#)** Do MORE with your data! The Analysis toolbox puts POWERFUL tools right at your fingertips. This course covers 19 of the 21 tools in the Analysis toolbox found right in ArcMap. Whenever you need to solve a spatial or statistical problem, look to the Analysis toolbox.
- **November 9, 2017 at 10:00 am – 4:00 pm (Mountain Time) [ArcGIS 10.3 Editing \(Technical - GIS\)](#)** This class demonstrates editing environment in ArcGIS Desktop 10.3. 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.

## PUBLICATIONS OF INTEREST

1. **Potter, Kevin M.; Conkling, Barbara L., eds.** 2017. Forest health monitoring: national status, trends, and analysis 2016. Gen. Tech. Rep. SRS-222. Asheville, NC: U.S. Department of Agriculture, Forest Service,

Southern Research Station. [Available online.](https://www.srs.fs.fed.us/pubs/54586)  
(<https://www.srs.fs.fed.us/pubs/54586>)

2. **Potter, K.M.; Campbell, A.R.; Jossierand, S.A.; Nelson, C.D.; Jetton, R.M.** 2017. Population isolation results in low genetic diversity and high differentiation in Carolina hemlock (*Tsuga caroliniana*), an imperiled Southern Appalachian endemic conifer. *Tree Genetics & Genomes*. 13(105). DOI: 10.1007/s11295-017-1189-x.
3. **Singleton, Ryan; Oblinger, Brent W.** 2017. Prioritizing young western white pine stands for blister rust pruning on the Warm Springs Reservation. *Journal of Forestry*. 115: 385-392. [Available online.](https://doi.org/10.5849/jof.2016-054)  
(<https://doi.org/10.5849/jof.2016-054>)
4. **Snieszko, Richard A.; Smith, Jim.** 2017. Back to the future: genetics and our northwest forests. *Western Forester*. 62 (3): 1-4. [Available online.](#)
5. **Snieszko, Richard A.; Man, Gary; Hipkins, Valerie; Woeste, Keith; Gwaze, David; Kliejunas, John T.; McTeague, Brianna A., tech. cords.** 2017. Gene conservation of tree species—banking on the future. Proceedings of a workshop. Gen. Tech. Rep. PNW-GTR-963. Portland, OR: U.S. Department of Agriculture, Forest Service, Pacific Northwest Research Station. 206 p. [Available online.](https://www.fs.usda.gov/treearch/pubs/55062)  
(<https://www.fs.usda.gov/treearch/pubs/55062>)

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or access both via the [USDA Forest Service homepage](#)