

Forest Health Monitoring Program Monthly Update January 2016

UPCOMING EVENTS

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

***April 3-7, 2016.** Asheville, NC. The US_IALE 2016 Annual Meeting. The theme of this meeting is Landscape Change. Program highlights will include plenary sessions with featured speakers, symposia and contributed papers, in-depth workshops on key topics, field trips, and networking events. The plenary session and keynote speakers have been announced. Registration is now open; early registration ends **February 15, 2016**. The deadline for hotel reservations is **March 11, 2016**. For complete information, see the [meeting website](#).

***April 26-28, 2016.** Denver, CO. The Collaborative Restoration Workshop: Working Towards Resilient Landscapes and Communities. This workshop is sponsored by the National Forest Foundation (NFF) with the U.S. Forest Service as a major sponsor. The target audience is approximately 300 restoration practitioners, including FS employees, other federal agencies, state forestry, tribal, and other partners who are planning, implementing, and monitoring restoration efforts on-the-ground. The workshop will be organized around five “tracks”: Planning for Restoration; Integrating Science and Action; Community Engagement; Partnerships, and Collaboration; Implementation; and Monitoring to Guide Change, in addition to plenary sessions on the future of collaborative restoration. By bringing together Forest Service staff and partners, the event aims to enhance the outcomes of existing restoration efforts, learn from experience to achieve more effective and efficient planning and implementation, strategize for future challenges, and build relationships and networks that will last beyond the workshop. For more information, contact Emily Olsen at the National Forest Foundation – eolsen@nationalforests.org. To be added to the Forest Service email update list for the workshop, contact Susan Cook-Patton at susancookpatton@fs.fed.us. A workshop website will be launched in January.

May 9-13, 2016. Sitka, AK. SAVE THE DATE for the Western International Forest Disease Work Conference (WIFDWC)! This meeting is generally a gathering of forest pathologists and forest health specialists from the western United States and Canada. Fieldtrips and special panels are both important components of the meeting, as well as committee meetings on specific pathology topics (mistletoes, climate change, rusts, twig and foliage diseases, hazard trees, root diseases, and nursery diseases). The planning committee is working on the agenda. Among other topics, panels are likely to focus on boreal forest health and forest declines. Please see the conference website at [this address](#) for information about lodging, travel arrangements, contributed papers

and posters, graduate student introductions and presentations, field trips planned for before and during the meeting, and Meeting Management deadlines for FS participants.

***May 16-19, 2016.** Chicago, IL. Gene Conservation of Tree Species: Banking on the Future. The USDA Forest Service is sponsoring a workshop that will bring together a mix of land managers, conservation and restoration practitioners, researchers, and non-governmental organizations who share the goal of conserving tree species. The workshop will include invited and contributed presentations and posters, and a field trip hosted by The Morton Arboretum. The submission deadline for poster presentation abstracts is **March 14, 2016**. For complete information including registration and lodging deadlines, visit the [workshop website](#).

***June 21-23, 2016.** San Francisco, CA. Sixth Sudden Oak Death Science Symposium: Biosecurity, Plant Trade, and Native Habitats. The Sixth Sudden Oak Death Science Symposium brings together scientists and practitioners from throughout the world working on *Phytophthora* plant pathogens in wildlands and nurseries. The meeting will provide a scientific update on the state of our knowledge about Phytophthoras and associated diseases in urban and wildland forests as well as nurseries, landscapes, and restoration areas. This conference reflects widening concerns related to *Phytophthora* species in U.S. wildlands and the potential for spread from native and ornamental plant production facilities to restoration sites and adjacent lands. *Phytophthora ramorum*, cause of sudden oak death and other plant diseases, has killed millions of tanoak and coast live oak trees along the Pacific Coast and forced the removal of millions of Japanese larch trees in the U.K. The pathogen was inadvertently introduced to both North America and Europe on ornamental nursery stock and is a quarantined pest in over 65 countries. In California, the first U.S. detection of *P. tentaculata* in native plant nurseries and on outplanted restoration plants has heightened concern over other *Phytophthora* species in endemic plant and animal habitats. This meeting will expand the concept of the Sudden Oak Death Science Symposiums, with presentations on sudden oak death research and management progress since the Fifth Sudden Oak Death Science Symposium (June 2012, Petaluma) as well as other nursery and wildland *Phytophthora* issues. A call for abstracts of proposed papers or posters to be submitted by **January 29, 2016** has been posted on the [conference web site \(http://ucanr.edu/sites/sod6/\)](http://ucanr.edu/sites/sod6/). Symposium proceedings will be produced. Speakers are requested to provide manuscripts; extended abstracts will be accepted. Complete instructions for paper preparation will be sent out with abstract acceptance notifications. Submissions should focus on one of the following areas addressing Sudden Oak Death/*P. ramorum* or *Phytophthora* spp. in native habitats, restoration areas and wildlands: biology and pathology; organisms associated with Phytophthoras; ecology; economic, social, and environmental impacts; modeling and risk assessment; management and control strategies; monitoring; arboriculture and urban forestry; nursery management; policy; or other related topics. Applicants

will be notified by March 11, 2016 as to the acceptance of their submission. For more information, see the [conference web site](#).

UPCOMING WEBINARS

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***Learn at Lunch Live Webinar: Adapting to Climate Change in the Western National Forests.** (Sponsored by the Utah State University Forestry Extension, and Utah Division of Forestry, Fire, & State Lands) Speakers: Natalie Little (U.S. Forest Service Intermountain Region), Jessica Halofsky (University of Washington), and Dave Peterson (U.S. Forest Service Pacific Northwest Research Station). The U.S. Forest Service is leading several partnerships focused on (1) assessing the effects of climate change of natural resources, (2) developing adaptation options to reduce negative effects, and (3) implementing climate-smart resource management and planning in national forests. These partnerships have learned that building resilience to extreme weather and increased ecological disturbance will be the primary challenge for managing water, fish, vegetation, and infrastructure throughout the 21st century. The Intermountain Adaptation Partnership - currently underway in public lands in Utah, Nevada, and southern Idaho - will provide an assessment of climate change vulnerability and adaptation strategies to guide resource management across this diverse biogeographic region. Additional information can be found at <http://adaptationpartners.org/>. No registration is required! 1 CEU is available from the following organizations: International Society of Arboriculture, and Society of American Foresters. This webinar will be conducted at **12:00 p.m. (MT) on January 26, 2016**. To access this free webinar, visit [the webinar information site](#) for more details. Plan to access the site a few 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 Remote Sensing Applications Center (RSAC)** include three varieties. The lightning talks (**Lightning Talk**) are very short presentations that will last approximately 15 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 remote sensing geoprocessing tasks. **Note: If you don't have access to the Forest Service Intranet, the registration links will not work. Please email Brent Mitchell (brentmitchell@fs.fed.us) to make accommodations.**

- [RSAC Lightning Talk - Spectral Signatures and Band Combinations for Viewing Remotely Sensed Imagery](#) - (**Lightning Talk**) This Lightning Talk will explain the basic concepts for interpreting the spectral signatures of various on-the-ground features in remotely sensed imagery. We will also demonstrate how individual greyscale image bands of multispectral imagery can be combined to create true- and false-color images. Lightning Talks are short demonstration webinars meant to last 15 minutes with a Q&A session to follow. This lightning talk will be conducted from **10:00am – 10:30am (Mountain Time) on January 14, 2016**. [Click here to register or for additional information.](#)
- [Overview of ERDAS IMAGINE and IMAGINE Photogrammetry 15.1](#) - (**Awareness**) This one hour awareness webinar will provide new and experienced users of ERDAS IMAGINE with an overview of the image processing and GIS capabilities available within ERDAS Imagine and IMAGINE Photogrammetry 15.1. With increased knowledge and confidence in regards to ERDAS IMAGINE we hope this webinar will enable more users to integrate ERDAS IMAGINE into their everyday geospatial workflows. In addition to highlighting current capabilities, a brief overview of new functionality coming out in the 2016 spring release will be highlighted. This awareness webinar will be presented by Hexagon Geospatial and Intergraph Government Solutions together with RSAC from **10:00am – 11:30am (Mountain Time) on January 21, 2016**. [Click here to register or for additional information.](#)
- [Introduction to Google Earth Engine \(GEE\)](#) - (**Awareness**) Google

. This short session includes a brief presentation on Google Earth Engine's structure: the public data catalog, cloud-based computation engine, and interactive development platforms. This will be followed by a demonstration in each of the available platforms to access Earth Engine – Explorer and Code Editor. You'll

This webinar awareness session will be conducted from **10:00am – 11:30am (Mountain Time) on January 27, 2016**. [Click here to register or for additional information.](#)

- [Introduction to Python for Geoprocessing](#) - (**Technical**) The objective of this one-day introductory workshop is to help participants get started scripting in Python to streamline their geospatial workflows. The course will introduce fundamental concepts and explore a variety of Python data structures, methods, applications and resources. Participants will have the opportunity to apply their knowledge in a set of technical exercises representing simple GIS workflows using *arcpy* with an emphasis on raster geoprocessing. This webinar will be conducted from **10:00am – 4:00pm (Mountain Time) on January 28, 2016**. [Click here to register or for additional information.](#)
- [Introduction to Georeferencing Aerial Imagery](#) - (**Technical**) This one-day webinar provides an overview of georeferencing aerial imagery and explains why

it is a crucial step for extracting geospatial information from imagery. The participants are also introduced to the georeferencing tools that are freely available to Forest Service personnel. This webinar includes demos and exercises explaining how to quickly georeference aerial imagery using the ArcMap Georeferencing tool and ERDAS AutoSync. This webinar will be conducted from **10:00am – 4:00pm (Mountain Time) on February 2, 2106**. [Click here to register or for additional information.](#)

- [Introduction to eCognition](#) - (**Technical**) This one-day workshop is designed to provide a conceptual overview of eCog software and give students hands-on instruction pertaining to software installation, project setup and image segmentation workflows. In addition there will be some time spent on advanced techniques and basic image classification. This webinar will be conducted from **10:00am – 4:00pm (Mountain Time) on February 4, 2016**. *Note: The course will be limited to a maximum of 15 students because of a limited number of eCognition licenses.* [Click here to register or for additional information.](#)
- [The Terrestrial Ecological Unit Inventory \(TEUI\)](#) - (**Technical**) The Geospatial Toolkit v5.1 is an ArcGIS 10.0 and above extension used to stratify landscapes and analyze environmental characteristics with geospatial data. In this course you will learn the basics of using TEUI to access geospatial data, generate statistics and visualize them with graphs and tables, design a sampling scheme, and characterize map units. This webinar will be conducted from **10:00 am – 4:00 pm (Mountain Time) on February 9, 2016**. [Click here to register or for additional information.](#)
- [Introduction to Change Detection Tools](#) - (**Technical**) In this two-day workshop, 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 change detection methods appropriate for moderate and coarse resolution satellite data. It is recommended that participants have some remote sensing experience and are familiar with ArcGIS software. Participants will also be required to sign up for a Google Earth Engine (GEE) Trusted Tester account, though no prior experience with GEE is necessary. This webinar will be conducted from **10:00 am – 4:00 pm (Mountain Time) on February 10 and 11, 2016**. [Click here to register or for additional information.](#)
- [Advanced eCognition](#) - (**Technical**) eCognition is powerful remote sensing software, best known for its advanced segmentation capabilities (i.e. dividing an image up into homogenous features). Aside from segmentation, eCognition can be used for a host of other remote sensing related processes, such as classification, band math (i.e., NDVI and other indices), and much more. In this course we expand on the basics learned in the Introduction to eCognition webinar or tutorial, which is highly recommended as a prerequisite. You can access the "Introduction to eCognition" tutorial at the following link: (http://fsweb.geotraining.fs.fed.us/www/index.php?lessons_ID=2898). This webinar will be conducted from **10:00am – 4:00pm (Mountain Time) on February 18, 2016**. [Click here to register or for additional information.](#)

- [Orthorectification of Scanned Aerial Imagery](#) - (**Technical**) Do you have a stack of aerial photos that you would like to use in your GIS with other data? This 2-day workshop provides an overview of orthorectifying scanned imagery using ERDAS Imagine (formerly known as Leica Photogrammetry Suite). The course will also include information about scanning aerial photos and using them after they have been orthorectified. The course material includes presentations, demos, and exercises. This webinar will be conducted from **10:00am – 4:00pm (Mountain Time) on February 24 and 25, 2016**. [Click here to register or for additional information.](#)
- [Using the R Statistical Package to Explore Lidar Inventory Models](#) - (**Technical**) In this 1-day workshop, we will use RStudio to streamline the process of building statistical models with lidar data or similar datasets in R. The hands-on portion of the webinar will introduce participants to working with data in R (both a statistical package and computing language) using RStudio. Participants will gain experience exploring data, building and evaluating models and using models to make predictions. No R experience is required for this course. This webinar will be conducted from **10:00am – 4:00pm (Mountain Time) on March 3, 2016**. [Click here to register or for additional information.](#)

Job Opportunities

The U.S. Forest Service, Southwestern Region (R3) is conducting outreach for a Plant Pathologist position (GS-434-9/11/12). This is a permanent, full-time position on the Forest Health staff located in Flagstaff, AZ. The target grade is GS-434-12 and may be advertised as a GS-434-9/11/12. This position will be supervised by the Arizona Zone Leader. The major duties for this position include: plans and coordinates all aspects of a major plant pathology detection, evaluation, prevention, and suppression program with plant pathogens found in the Southwest; provides site-specific, technical assistance and information concerning forest health issues to the National Forests of Arizona and other Federal, State and Tribal lands. Site visits may require long periods of driving, frequent overnight travel, and hiking over uneven terrain in mountainous forest settings; prepares plans, organizes assigned staff members, collects field data, supervises field crews, processes and analyzes data, consults with other professionals, evaluates results, and makes recommendations to meet technical objectives; organizes, plans and conducts forest health related training programs, presentations or seminars for various Federal, State and Tribal agencies; serves as a team leader or team member of various integrated and cross-disciplinary teams; conceives and conducts special evaluations in collaboration with research relative to plant pathogen biology, ecological relationships, survey methodology or new control techniques. The Arizona Zone Office consists of 1 zone leader, 1 plant pathologist, 2 entomologists, and 1 natural resource specialist. They

maintain an active and full forest health program including all aspects of surveillance, detection, technical assistance, technology development, training, and prevention & suppression. The office is co-located with the Forest Service Rocky Mountain Research Station on the campus of Northern Arizona University. This arrangement allows for interaction with natural resource research scientists with both state and federal agencies.

If you are interested in this position, please complete the outreach response form, attached to this Update as attachment 1, and return it to John Anhold (janhold@fs.fed.us) by the close of business on **January 29, 2016**. *USDA is an Equal Employment Opportunity Provider and Employer.*

The Minnesota Department of Natural Resources, Division of Forestry is currently advertising for three Natural Resource Forestry Regional Specialist, Insect & Disease positions. The positions are located in Bemidji, Brainerd, and Grand Rapids, MN. The positions exist to manage the Forest Health Programs and the Urban and Community Forestry Programs within the regions. Responsibilities include: Collaborate with the State Forest Health Implementation Team to design, develop, and implement a comprehensive Minnesota Forest Health Program that offers training, materials, and assistance to Department of Natural Resources staff; provide administrative and technical oversight of the Region Forest Health Program; develop and manage the Urban and Community Forestry Program; design, coordinate and implement forest health surveys and assessments; develop, analyze, and interpret forest health information and management strategies to ensure management and the public are informed through public presentations, radio, television, news articles, and scientific publications; develop and deliver educational/informational resources and publications to various audiences to integrate and implement pest management practices and educate selective and proper use of pesticides; coordinate training activities with other divisions and agencies. Operational support: Monitor the work of Forestry Area Staff; develop and deliver educational programs/materials; train natural resource staff in the administration and implementation of forestry programs. Formal training: complete formal Division of Forestry classroom and field training sessions as assigned. Frequent travel is required to implement the Forest Health Program across the region, and at times, statewide. Minimum qualifications: Master's degree in forest pathology or forest entomology (or closely related Master's degree in natural science field of study); professional-level experience working with forest health-related issues for a public or private organization advising other forestry professionals; knowledge of entomology, plant pathology, plant physiology, forest management, biometry, weed science, ecology, pesticides and pesticide application technology; knowledge of forest and forest pest management and protection principles. For a complete list of required qualifications, see the full announcement will be on the [Minnesota jobs web site](#). The positions are open to all qualified job seekers. Instructions for applying are on the [Minnesota jobs web site](#). The closing date of the announcement is **January 28, 2016**. For more information, contact NE Regional Forest Manager Patty Thielen at

Patty.thielen@state.mn.us or David Thomas at david_thomas @state.mn.us. *The State of Minnesota is an equal opportunity, affirmative action, and veteran-friendly employer.*

PUBLICATIONS OF INTEREST

1. **Heath, L.S.; Anderson, S.; Emery, M.R.; Hicke, J.A.; Littell, J.; Lucier, A.; Masek, J.; Peterson, D.; Pouyat, R.; Potter, K.M.; Robertson, G.; Sperry, J.; Cordell, K.; Mockrin, M.; Stewart, S.; Bytnerowicz, A.; Geiser, L.; Jovan, S.; Musselman, R.; Schulz, B.** 2015. Indicators for Climate Change Impacts for Forests: National Climate Assessment Indicators. General Technical Report NRS-155. Newtown Square, Pennsylvania: U.S. Department of Agriculture, Forest Service, Northern Research Station. 143 p.
2. **Iannone, B.V.; Potter, K.M.; Hamil, K-A. Dixon; Huang, W.; Zhang, H.; Guo, Q.; Oswald, C.M.; Woodall, C.W.; Fei, S.** 2016. Evidence of biotic resistance to invasions in forests of the Eastern USA. *Landscape Ecology*. 31:85-99.
3. **McWilliams, William H.; Westfall, James A.; Brose, Patrick H.; Dey, Daniel C.; Hatfield, Mark; Johnson, Katherine; Lausten, Kenneth M.; Lehman, Shawn L.; Morin, Randall S.; Nelson, Mark D.; Ristau, Todd E.; Royo, Alejandro A.; Stout, Susan L.; Willard, Thomas; Woodall, Christopher W.** 2015. A Regeneration Indicator for Forest Inventory and Analysis: History, Sampling, Estimation, Analytics, and Potential Use in the Midwest and Northeast United States. Gen. Tech. Rep. NRS-148. Newtown Square, PA: U.S. Department of Agriculture, Forest Service, Northern Research Station.
4. **Potter, K.M.; Koch, F.H.; Oswald, C.M.; Iannone, B.V.** 2016. Data, data everywhere: Detecting spatial patterns in fine-scale ecological information collected across a continent. *Landscape Ecology*.31:67-84.

FOR MORE FHM INFORMATION

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

OUTREACH RESPONSE FORM ~ Plant Pathologist GS-0434-9/11/12

Please submit this form by close of business January 29, 2016 to:

Return Form To: John Anhold or janhold@fs.fed.us Fax: (928) 256-2130
USDA Forest Service Office: (928) 556-2073
2500 S. Pine Knoll Dr.
Flagstaff, AZ 86001

NOTE: The purpose of this Outreach Notice is to determine the potential applicant pool for this position and to establish the appropriate recruitment method (service-wide, region-wide, government-wide, or DEMO, i.e. non-government). Responses received from this outreach notice will be relied upon to make this determination.

NAME: _____

EMAIL ADDRESS: _____

MAILING ADDRESS: _____

TELEPHONE NUMBER: _____

Government Employee: Yes___ No___

If Yes, name of Agency: _____

Current Duty Location: _____

Current Position (title/series/grade): _____

If no, Current Position: _____

Current Location: _____

Name of Current Employer: _____

IF NOT A CURRENT PERMANENT (CAREER OR CAREER CONDITIONAL)

EMPLOYEE ARE YOU ELIGIBLE TO BE HIRED UNDER ANY OF THE FOLLOWING SPECIAL AUTHORITIES (please check those that apply):

- ___ PERSON WITH DISABILITIES
- ___ VETERANS READJUSTMENT
- ___ DISABLED VETERANS W/30% COMPENSABLE DISABILITY
- ___ VETERANS EMPLOYMENT OPPORTUNITIES ACT OF 1998
- ___ FORMER PEACE CORPS VOLUNTEER
- ___ STUDENT CAREER EXPERIENCE PROGRAM
- ___ OTHER _____

THANK YOU FOR YOUR INTEREST IN OUR VACANCY