Forest Health Monitoring Program
Monthly Update
November 2020

WHAT'S NEW

Get to know FHM This month get to know **the current Forest Health Monitoring (FHM) Program Core Management Team.** There have been several changes in membership and the current core team is listed below. The core Management Team consists of the National Program Manager, located in Washington D.C., the five Regional Program Managers (one for each FHM region), State representatives, (one from each FHM 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). 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.

Position	Name and Title	Affiliation	Email Address
National Lead	**Tom Eager** National Program Manager Forest Health Monitoring (FHM)	US Forest Service, Forest Health Protection, Washington Office	tom.eager@usda.gov
Regional Lead	**Chris Asaro** South Regional Program Manager	US Forest Service, Forest Health Protection, Region 8	christopher.asaro@usda.gov
Regional Lead	**Stephen Burr** Northeast Regions Program Manager	US Forest Service, Forest Health Protection, Region 9	sburr@usda.gov
Regional Lead	**Stephen Burr** North Central Regions Program Manager	US Forest Service, Forest Health Protection, Region 9	sburr@usda.gov
Regional Lead	**Ryan Hanavan** Interior West Regional Program Manager	US Forest Service, Forest Health Protection, Region 1/4	ryan.hanavan@usda.gov
Regional Lead	**Karen Ripley** West Coast Regional Program Manager	US Forest Service, Forest Health Protection, Region 6	karen.ripley@usda.gov
State Representative	**Vacant** South Mega-Region		
State Representative	**Joshua Halman,** Northeast Mega-Region	Vermont Department of Forest, Parks and Recreation	Joshua.Halman@vermont.gov

State Representative	**Phillip Marshall** Northcentral Mega-Region	Indiana Division of Forestry	pmarshall@dnr.in.gov
State Representative	**John Formby** Interior Mega-Region	New Mexico Department of Natural Resources and Conservation	John.formby@state.nm.us
State Representative	**Tom Smith,** West Coast Mega-Region	California Department of Forestry	tom.smith@fire.ca.gov
Other Forest Service Representative	**Frank Koch** Research Ecologist, Forest Health Monitoring Research Unit	Southern Research Station	frank.h.koch@usda.gov
Other Forest Service Representative	**James Ellenwood** Acting Forest Inventory and Analysis (FIA), National Program Leader	Research and Development, Washington Office	james.ellenwood@usda.gov
Other Forest Service Representative	**Marla Downing** Representative from Forest Health Protection (FHP), FHAAST	Forest Health Assessment & Applied Sciences Team (FHAAST)	mdowning@usda.gov

FHM is pleased to announce that Ryan Hanavan joined the FHM Management team as the new Regional Program Manager for the Interior West FHM Mega-region. He started as the Region 1 / Region 4 Forest Health Monitoring Coordinator position in January 2020 after spending 11 years as an entomologist with Forest Health Protection in Region 3 and Region 9. Ryan is taking over the Regional FHM Program position from Jeri Lyn Harris, who retired in October 2020 after many years of service on the Management Team. Please welcome Ryan!

Mediterranean Oak Borer has been confirmed in a new county in California. The Mediterranean oak borer (MOB), *Xyleborus monographus*, is an invasive ambrosia beetle first confirmed in Napa County, California in late 2019, followed by Lake and Sonoma Counties in early 2020, and Sacramento County in September 2020. In California, MOB has been found infesting two species of white oak. Several species of fungi have been found in MOB specimens in Napa County, and research is underway to determine if these fungi cause tree diseases. MOB galleries are often:

- trellis-like
- very crowded and intersecting
- fanning out in a single plane
- 1.2-1.5 mm in diameter

Other signs and symptoms of MOB tunneling activity include boring dust in cracks of the tree bark, and sometimes oozing sap ("sap flux"). Cooperative work is ongoing to (1) provide information regarding the origin, distribution, and age of the infestations, (2) determine estimated rate of spread, (3) identify the locations of un-infested susceptible oaks to develop a broader tree inventory in order to estimate potential economic losses as this invasive insect continues to

spread, (4) evaluate the flight periodicity, flight height, and efficacy of two lures, and (5) provide training to a variety of audiences regarding MOB identification and management.

The Washington State Department of Agriculture Plant Protection Division Pest Program has made available the most recent Asian Giant Hornet Stakeholder Update (#15), dated October 26, 2020. This update contains details and images from the recent Asian giant Hornet (AGH) nest eradication.

UPCOMING WEBINARS

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

***December 3, 2020 at 1:00 p.m. Eastern time. Tribal Lands: Treaties, Federal Trust Obligation, & Opportunities for Cross-Boundary Collaboration.** (Sponsored by Southern Regional Extension Forestry) Speakers: Dr. Alicia Bell-Sheeter (Management & Program Analyst, Office of Tribal Relations, USFS) and Lexie Rue-Harris (Office of Tribal Relations, USFS) This is the second webinar in a six-part series that informs forestry and natural resource professionals of the full scope of land management approaches used by Native Americans across the country. Federal agencies have a unique political relationship with tribes as fellow sovereigns, and as current stewards of traditional homelands. This presentation will discuss that relationship, legal obligations of federal trustees, and opportunities for collaboration with Tribes across boundaries and land jurisdictions to achieve landscape scale benefits. Pre-registration is not required! CEU available: Certificate of participation. Plan to **join the webinar** 15 minutes early.

***December 7, 2020 at 12:00 p.m. Eastern time. Intermediate Stand Management Options for Pines & Hardwoods.** (Sponsored by University of Georgia, Warnell School of Forestry and Natural Resources) Speaker: David Clabo, Ph.D. (Silviculture Outreach/Extension, Warnell School of Forestry & Natural Resources) This is first in a series of five webinars. This presentation will cover management activities that will keep established pine and hardwood stands productive and healthy. Timing of these activities as well as when to use them will be covered. These activities include thinning, prescribed fire, and crop tree release. Pre-registration is not required! CEU available: Certificate of participation; Georgia Master Timber Harvester - Continuing Logger Ed. (GaMTH CLE) - 1 hour CLE - MTH Category B Credit; Society of American Foresters - Certified Forester Education (SAF-CFE) - 1 hour Category 1 Credit. CEU applied for: New York Logger Training - Trained Logger Certification (NYLT-TLC) - .25 hour NYLT TLC Credit. Plan to **join the webinar** 15 minutes early.

***December 8, 2020 at 12:00 p.m. Eastern time. Managing Native Plants for Wildlife Habitat and Ecological Integrity Alongside Traditional Forestry.** (Sponsored by University of Georgia, Warnell School of Forestry and Natural Resources) Speaker: Holly Campbell (Public Service Assistant, Warnell School

of Forestry & Natural Resources) This is the second webinar in a five-part series. Georgia contains an immense variety of native plants that can support diverse management objectives alongside traditional forestry. Georgia native plants support quality wildlife habitat for hunting, conservation, and ecological integrity. This can be demonstrated in management of longleaf pine ecosystems, where timber and understory management occur simultaneously to support both economic and ecological goals. The understory that can occur under these management systems supports diverse and abundant wildlife. Longleaf pine ecosystem management often includes prescribed fire use, mid-story removal/ reduction, wiregrass propagation, and encouragement of other understory herbaceous plants. In more traditional loblolly/ slash pine forest management, native plants that support wildlife and ecological integrity can be encouraged in buffer zones or marginal areas of a stand. In these areas, native plants that support wildlife habitat, such as fruit and nut-bearing native trees and shrubs and beneficial insect-attracting plants, can be encouraged. This webinar will provide an overview of diverse native plants that can be managed alongside different types of forest management, with a focus on species that create quality wildlife habitat. Pre-registration is not required! CEU available: Certificate of participation; Georgia Master Timber Harvester - Continuing Logger Ed. (GaMTH CLE) - 1 hour CLE - MTH Category B Credit; Society of American Foresters - Certified Forester Education (SAF-CFE) - 1 hour Category 1 Credit. CEU applied for: New York Logger Training - Trained Logger Certification (NYLT-TLC) - .25 hour NYLT TLC Credit. Plan to **join the webinar** 15 minutes early.

***December 9, 2020 at 12:00 p.m. Eastern time. Invasive Species in Southern Forests: Problems and Solutions.** (Sponsored by University of Georgia, Warnell School of Forestry and Natural Resources) Speaker: Chuck Bargeron (Senior Public Service Associate & Co-Director, Center for Invasive Species & Ecosystem Health, Warnell School of Forestry & Natural Resources & the Department of Entomology, University of Georgia) This is the third of five webinars in a series. An invasive species is a non-native species (including seeds, eggs, spores, or other propagules) whose introduction causes or is likely to cause economic harm, environmental harm, or harm to human health. The term "invasive" is used for the most aggressive species. These species grow and reproduce rapidly, causing major disturbance to the areas in which they are present. In addition to the threats to production agriculture and forestry, invasive species can decrease your ability to enjoy hunting, fishing, camping, hiking, boating, and other outdoor recreational activities. The United States suffers from $120 billion per year in economic losses due to invasive species. Approximately 42% of Threatened or Endangered species are at risk due to non-native, invasive species. The presentation introduces the problem, why you should care, and tools to help identify, monitor and prevent the spread of invasive species. Pre-registration is not required! CEU available: Certificate of participation; Georgia Master Timber Harvester - Continuing Logger Ed. (GaMTH CLE) - 1 hour CLE - MTH Category B Credit; Society of American Foresters - Certified Forester Education (SAF-CFE) - 1 hour Category 1 Credit. CEU applied for: New York Logger Training - Trained Logger Certification

(NYLT-TLC) - .25 hour NYLT TLC Credit. Plan to **join the webinar** 15 minutes early. .

*December 10, 2020 at 12:00 p.m. Eastern time. Beneficial and Pest Insects in Our Forests: Management Recommendations.** (Sponsored by University of Georgia, Warnell School of Forestry and Natural Resources) Speaker: Elizabeth McCarty, Ph.D. (Assistant Professor, Forest Health Specialist, Warnell School of Forestry & Natural Resources, University of Georgia) This is four of five webinars in a series. Many different types of insects inhabit our forests, both beneficial and pest insects. Native insects like bark beetles, pine tip moth, and Deodar weevil can cause problems in pine stands. The distinction of when a native insect becomes a pest insect be highlighted. Management options including habitat management, thinning, burning, and pesticide use will be discussed. Pre-registration is not required! CEU available: Certificate of participation; Georgia Master Timber Harvester - Continuing Logger Ed. (GaMTH CLE) - 1 hour CLE - MTH Category B Credit; Society of American Foresters - Certified Forester Education (SAF-CFE) - 1 hour Category 1 Credit. CEU applied for: New York Logger Training - Trained Logger Certification (NYLT-TLC) - .25 hour NYLT TLC Credit. Plan to **join the webinar** 15 minutes early.

*December 11, 2020 at 12:00 p.m. Eastern time. Water Quality Best Management Practices & Watershed Management.** (Sponsored by University of Georgia, Warnell School of Forestry and Natural Resources) Speaker: Jay Shelton, Ph.D. (Associate Professor, Fisheries, Warnell School of Forestry & Natural Resources, University of Georgia) This is the fifth of five webinars in a series. Georgia's water resources include 44,056 miles of perennial streams, 4.8 million acres of wetlands and hundreds of thousands of acres of impoundment. This talk will explore the ways in which integrated watershed management can benefit forest landowners. We will explore water quality BMPs and how they relate to management objectives including fisheries, aesthetics and sustainability. Pre-registration is not required! CEU available: Certificate of participation; Georgia Master Timber Harvester - Continuing Logger Ed. (GaMTH CLE) - 1 hour CLE - MTH Category B Credit; Society of American Foresters - Certified Forester Education (SAF-CFE) - 1 hour Category 1 Credit. CEU applied for: New York Logger Training - Trained Logger Certification (NYLT-TLC) - .25 hour NYLT TLC Credit. Plan to **join the webinar** 15 minutes early.

*December 11, 2020 at 1:00 p.m. Eastern time. Caring for All Relations: Tribal Wildlife Management.** (Sponsored by Southern Regional Extension Forestry) Speakers: Dr. Serra Hoagland (USDA Forest Service Rocky Mountain Research Station Fire, Fuels & Smoke Program) and Dr. Michael Kohl (Wildlife Extension Specialist & Assistant Professor for Wildlife Management at Warnell School of Forestry & Natural Resources, UGA) This webinar is third in a six-part series providing insights on the history of native lands and their management ranging from treaties to wildlife, fisheries, forestry, fire management and more. Information will highlight the differences between

cultural, commercial, and subsistence management practices that occurs both on and off tribal lands. Tribal models of land stewardship that balance the triple bottom line of social, environmental and economic needs of the community will be discussed. This presentation will also introduce participants on the incorporation of Traditional Ecological Knowledge (TEK) into tribal and non-tribal wildlife management practices as well as the need for tribal engagement in all natural resource management decision making. Pre-registration is not required! CEU available: Certificate of participation. 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 17, 2020 at 10:00am – 4:00pm (Mountain Time). Survey123 Form Creation, An Introduction** (**Technical** - **GIS-Mobile**) **Forest Service Only**
- **November 17, 2020 at 10:00am – 4:30pm (Mountain Time). ArcMap – Geoprocessing** (**Technical** - **GIS-Desktop**) The Analysis toolbox contains a powerful set of tools that perform the most fundamental GIS operations. In this course you will perform overlays, create buffers, calculate statistics, perform proximity analysis, and much more
- **November 17-18, 2020 at 10:00am – 4:00pm (Mountain Time). Introduction to Change Detection** (**Technical** - **RS**).
- **November 18, 2020 at 10:00am – 4:00pm (Mountain Time). ArcMap – 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. .

- **November 19, 2020 at 10:00am – 4:00pm (Mountain Time). ArcGIS Pro for ArcMap Users** (**Technical - GIS-Desktop**). **Forest Service Only** A general understanding of GIS and a working knowledge of ArcGIS Desktop is required. This course is designed as a crosswalk between using ArcMap to 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.
- **November 19, 2020 at 10:00am – 4:00pm (Mountain Time). ArcMap – Spatial Analyst** (**Technical - GIS-Desktop**) ArcGIS Spatial Analyst provides a broad range of powerful spatial modeling and analysis capabilities. You can create, query, map, and analyze cell-based raster data; perform integrated raster/vector analysis; derive new information from existing data; query information across multiple data layers; and fully integrate cell-based raster data with traditional vector data sources.
- **December 1, 2020 at 10:00am – 4:00pm (Mountain Time). Introduction to WebGIS Using 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.
- **December 1, 2020 at 10:00am – 11:30am (Mountain Time). Unmanned Aircraft Systems (UAS's) for Resource Applications** (**Lightning talk-RS**).
- **December 2, 2020 at 10:00am – 4:00pm (Mountain Time). Intermediate Web GIS Using ArcGIS Online** (**Technical - GIS-Web**) **Forest Service Only** A general understanding of ArcGIS Online 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 the 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 is to expose users to the breadth of AGOL and improve their skill set to utilize AGOL as an additional GIS tool
- **December 2-3, 2020 at 10:00am – 4:00pm (Mountain Time). Lidar Derivatives: Processing and Analysis** (**Technical - RS**).
- **December 3, 2020 at 10:00am – 1:00pm (Mountain Time). Story Maps** (**Technical - GIS-Web**) **Forest Service Only** Story Maps have become a go to platform for interactive presentations. Using story maps, you can create scrolling stories that capture an audience's attention and allow for adding geospatial information as well as pictures, videos, and text. In this 3

or 4 hour course, we will explore how story maps work, what they are best suited for, and how to build one.

- **December 4, 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.
- **December 8-9, 2020 at 10:00am – 4:00pm (Mountain Time). ArcMap – 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 9, 2020 at 10:00am – 4:00pm (Mountain Time). SAR Processing** (**Technical - RS**).
- **December 10, 2020 at 10:00am – 4:00pm (Mountain Time). ArcMap – 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 provides a central repository for all the project data. The course covers the process of finding, creating, managing, and analyzing GIS data in order to prepare outputs for NEPA specialist reports.
- **December 15, 2020 at 10:00am – 4:00pm (Mountain Time). Survey123 Form Creation, An Introduction** (**Technical - GIS-Mobile**) **Forest Service Only**.

*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.

*Webinars and other information from **U.S. Forest Service, Southern Research Station, Science in Practice** are posted on the Science in Practice (https://www.srs.fs.usda.gov/webinars/science-in-practice/) website. These 30-minute webinars focus on practical takeaways for land managers. Visit the web site for more information.

Publications Of Interest

1. **Šebesta, J.; Rogers, P.; Maděra, P.; Koutecký, T.; Dufour, S.; Řepka, R.** 2021. Long-term effects of mechanical site preparation on understorey plant communities in lowland floodplain forests. Forest Ecology and Management. Vol. 480: 118651.

For More FHM Information

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