

2025 NMFWA Training Course Descriptions

****Workshop Attendees are permitted to select one (1) training course only (one full-day or one ½ day). Please read course descriptions carefully as some courses have restrictions or pre-work requirements. Waitlists will only be generated once the course fills. Attendees are not permitted to register for more than once course or wait list.**

Monday, 10 March 2025

All-Day Courses

Department of Defense Participation in the Avian Knowledge Network: The Who, What, Where, When, Why, and How

Date/Time: Monday, March 10, 2025; 0800-1700

Instructors: Instructors include engineers and biologists from Point Blue Conservation Science, Klamath Bird Observatory, and U.S. Army Engineer Research and Development Center – Environmental Laboratory.

Course Description: Department of Defense (DoD), through the Legacy Program, funds participation in the Avian Knowledge Network (AKN) along with other federal partners. On 24 June 2022, the Office of the Secretary of Defense (OSD) issued a memo that endorses and requires the use of AKN by the DoD Components. AKN integrates avian monitoring data from similar standardized protocols and data structures for use in analysis, summarization, and visualization. Users have access to sharing roles that include data entry, data management, and data analysis, providing the only national enterprise system of its type for scientific observation protocols, analyzable results, long-term storage, and widespread input. Attendees will learn about how the system is organized, how to create project metadata and input data, how data sharing levels work, and how to visualize, analyze, and aggregate data for conservation purposes. They will also learn about the capabilities of pooling Military Service-specific data, regional data, and habitat-specific data including data from our federal partners. Participants will learn the who, what, where, when, why, and how of the AKN and DoD's commitment to the use of the AKN. They will leave with the capability to upload, archive, access, and use extensive avian data tools to assist in NEPA analysis and assessing impacts of readiness and non-readiness activities.

NOTE: Pre-work is required to participate in this course. Any interested participants need to commit to completing the pre-work prior to the in-person training in Louisville, KY. Participants must participate in a pre-course webinar to confirm ready datasets and gain access to AKN. All participants will need to bring laptops that can access the internet to the training. It is encouraged for participants to bring an appropriate and ready avian dataset. Registrants will be contacted by course instructors via email with more information closer to the Workshop.

An Overview of Climate-Smart Conservation

Date/Time: Monday, March 10, 2025; 0800-1700

Instructors: Hosted by the NMFWA Climate Change Working Group with instructors from the USFWS National Conservation Training Center, Shepherdstown, WV.

Course Description: Department of Defense (DoD) installations are required by DoD Manual 4715.03 to address climate change in Integrated Natural Resource Management Plans (INRMPs). This one-day overview class is being provided by the US Fish and Wildlife Service (FWS) and is based on the guide *Climate-Smart Conservation: Putting Adaptation Principles into Practice*. This publication is the product of an expert workgroup on climate change adaptation convened by the National Wildlife Federation (NWF) in collaboration with the FWS's National Conservation Training Center and other partners. (Also spearheaded by NWF, the DoD's 2019 Climate Change Adaptation for DoD Natural Resource Managers is based on the same general adaptation framework.) The course is designed to introduce climate adaptation for application to on-the-ground conservation. It will provide an overview of how to craft climate-informed conservation goals, to carry out adaptation with intentionality, and how to manage for change and not just persistence. Similar to past NMFWA climate change training courses, the 2025 "Overview of Climate-Smart Conservation" course will provide a foundational understanding of the challenges and opportunities of natural resources conservation and management within the context of climate change and the military mission. The U.S. Fish and Wildlife Service instructors bring an added perspective of navigating adaptation and resilience projects, crafting climate-informed conservation goals, and managing for change within a regulatory context for sensitive species.

Introduction to Manual Bat Acoustic Identification

Date/Time: Monday, March 10, 2025; 0800-1700

Instructors: Jillian Josimovich, USFWS.

Course Description: The initiation and continued monitoring of bat populations across DoD installations is growing in importance as more bat species become federally listed. Acoustic monitoring is a tool for inventorying and monitoring bat species at DoD installations to support INRMP goals, complete required USFWS presence/absence surveys for projects, and assist larger efforts to assess bat species population statuses and trends, such as the North American Bat Monitoring Program (NABat). An online survey/poll was offered during the 2024 NMFWA Bat Working Group (BWG) trainings, technical session, and business meeting to gauge the interests and needs of the BWG members. More than half of the respondents indicated interest in and need for a training session about manual vetting of bat acoustic data. We have found a company of bat acoustic experts, Vesper Bat Echolocation Specialists (Vesper), that is willing to offer a full day (8-hour) training session at NMFWA 2025 to provide attendees the opportunity to learn about the basics of bat acoustic identification and how bat calls can be manually vetted for some common, at-risk, and federally listed species (e.g., Indiana bat, Northern long-eared bat, gray bat, tricolored bat, little brown bat). This training is equivalent to the Echolocation 101/Best Practices, Acoustic ID of Common and Endangered High-frequency Bats, and SonoBat Data Processing for NABat courses offered by Vesper. The training will include an overview of how to deploy detectors, how to choose which calls to identify, the basics of SonoBat (a popular bat acoustic software program), the basics of AnlookW (another program useful for identifying endangered Indiana bats), and manual vetting for high-frequency bat species in SonoBat. All skill levels are welcome to this training, including wildlife professionals and students. This training would be conducted onsite within the training classroom and provide presentations, handouts, and opportunities for Q/A. All course materials and

recordings from the training would be provided for free to course participants. Students would be asked to each bring a laptop computer and download some materials beforehand. Vesper also offers affordable online trainings that students could pursue independently after the meeting according to their skill levels and regional species needs.

Monday, 10 March 2025

Half-Day Morning Courses: 0800-1200

NHPA Section 106 Training Session for Natural Resources Managers

Date/Time: Monday, March 10, 2025; 0800-1200

Instructors: Michelle Volkema, Deputy Federal Preservation Officer, U.S. Department of Defense

Course Description: Instructors will tailor a standard introduction to National Historic Preservation Act (NHPA) Section 106 compliance training course to meet the needs of Natural Resources Managers (NRMs). The course will walk participants through the four step Section 106 process, providing opportunities for applying knowledge and asking questions after each step. The instructor will also provide additional tools to navigate unanticipated cultural resources challenges. Participants who would best benefit from this course are NRMs who have cultural resources as other duties as assigned or NRMs who might encounter Section 106 questions during a workday.

Living Shoreline & Coastal Resiliency Training

Date/Time: Monday, March 10, 2025; 0800-1200

Instructors: Tom Olexa, Natural Resources Manager, Naval Weapons Station Yorktown; C. Scott Hardaway, Jr., Senior Research Scientist, Shoreline Studies Program, Virginia Institute of Marine Science, William & Mary; Donna Milligan, Associate Research Scientist, Shoreline Studies Program, Virginia Institute of Marine Science, William & Mary.

Course Description: Introductory training for marine and natural resources professionals interested in beginning to understand the process and components of shoreline management focusing on living shoreline strategies. Topics will include, but not be limited to, an overview of shoreline management planning and methods; research on performance and resiliency; concept to construction project design for hybrid living shorelines with engineered structures; and site-specific design case studies. The training will allow resource managers to assess nature-based project designs for successful shore protection, ecosystem restoration, and long-term coastal resiliency. The course program will feature shoreline management and living shoreline resiliency projects implemented within the Chesapeake Bay watershed that would also be applicable to other microtidal (less than 2 m; 6 ft) coastal estuarine areas particularly along the Eastern and Southern Coasts of the US. The presenters have extensive experience in research-based analyses of estuarine coastal geomorphology and physical forces for shoreline management as well as living shoreline research, design, and performance monitoring.
<https://www.vims.edu/research/units/programs/ssp/>

Point of Use eDNA Methods for Biosecurity and Biosurveillance

Date/Time: Monday, March 10, 2025; 0800-1200

Instructors: Stephen Spear, Research Biologist, USGS Upper Midwest Environmental Sciences Center; Tyler Untiedt, Biologist (Contractor), USGS Upper Midwest Environmental Science Center; Hayley DeHart, Research Scientist, Johns Hopkins Applied Physics Laboratory; Mark Johnson, Research Biologist, USACE Engineering Research and Development Center (ERDC-CERL).

Course Description: Point of use DNA protocols that can be fully implemented in the field have the potential to facilitate more effective biosecurity and early detection of high priority species, such as invasives or threatened species. Depending on exact approach, these workflows can be completed in as fast as a half hour for single species or a few hours for multiple species. In this session, we propose to provide hands-on training and explanation of eDNA workflows for multiple sample types (aquatic, airborne, and surface/sediment) that can be fully implemented and completed on site. Participants will be introduced to and learn 1) the variety of methods used to collect and isolate aquatic and terrestrial eDNA; 2) rapid methods for DNA and RNA extraction; and 3) running species-specific genetic tests using field-stable reagents. We will also demonstrate the state of the art in field-based multispecies DNA sequencing that is currently being optimized for fully autonomous sampling. We will also provide an overview of important considerations for eDNA sampling design for biosurveillance and present advantages and disadvantages of fully portable eDNA workflows. Hands-on component will consist of rotations for each of the specific methods. This course is especially relevant to personnel responsible for biosecurity and biosurveillance at ports or other locations where rapid assessment or inspection can prevent spread of invasive species or other harmful organisms. However, anyone with an interest in environmental DNA and detection of secretive or rare species in the field would benefit as the methods can be applied to species detection in general.

Half-Day Afternoon Courses: 1300-1700

NHPA Section 106 Training Session for Natural Resources Managers

Date/Time: Monday, March 10, 2025; 1300-1700

Instructors: Michelle Volkema, Deputy Federal Preservation Officer, U.S. Department of Defense

*****NOTE:** This course is a repeat offering from the morning

Course Description: Instructors will tailor a standard introduction to National Historic Preservation Act (NHPA) Section 106 compliance training course to meet the needs of Natural Resources Managers (NRMs). The course will walk participants through the four step Section 106 process, providing opportunities for applying knowledge and asking questions after each step. The instructor will also provide additional tools to navigate unanticipated cultural resources challenges. Participants who would best benefit from this course are NRMs who have cultural resources as other duties as assigned or NRMs who might encounter Section 106 questions during a workday.

Bumble Bee Atlas Training

Date/Time: Monday, March 10, 2025; 1300-1700

Instructors: Hosted by the NMFVA Pollinator Working Group

Course Description: North America is home to around 50 different bumble bee species. However, many of our bumble bees are in trouble and face an uncertain future. Several species have been petitioned for protection under the Endangered Species Act, and many more are recognized in State Wildlife Action Plans as Species of Greatest Conservation Need. The potential listing of these species have the potential to impact military training missions. Understanding what habitats are most important, where to protect them, and where to restore them, are where our Atlas projects will provide essential information.

Navy GRX Training

Date/Time: Monday, March 10, 2025; 1300-1700

Instructors: Caitlan Dowling, NAVFAC SW GIS Analyst, Environmental

****NOTE: This course is ONLY open to US Navy Employees and Navy Approved Contractors**

Course Description: Representatives from the Environmental GIS Community will present a half day Monday training to Navy personal on the Georeadiness Explorer and larger ESRI Portal Enterprise environment. Topics include viewing deliverables, simple map making, and reviewing BASH GIS data currently available in the GRX System. This is open to US Navy employees and approved Navy contractors only. Participants must bring a CAC enabled laptop as this is a hands-on training and expected to log into the ESRI Portal to establish an account prior to the class.

Friday, 14 March 2025

Half-Day Morning Courses: 0800-1200

Monarch Butterfly Assessments on Military Installations

Date/Time: Friday, March 14, 2025; 0800-1200

Instructors: Mercy Manzanares, Monarch Joint Venture

Course Description: Part 1: Learn about the current status of monarch butterfly populations and how that can impact habitat management and other activities on military installations. Share how monarchs have already been incorporated into some INRMPs and discuss how to address local factors (e.g., habitat, military activity) when considering monarch resource management. Part 2: Learn about several methods of assessing monarch habitat and activity on military lands, including what is already underway at certain installations. Focus on a nationwide monarch & pollinator monitoring protocol, the Integrated Monarch Monitoring Program (IMMP), which includes flexible options for monitoring nectar plants, milkweed, monarch reproduction, and adult monarch activity and sharing data among installations. Hear how IMMP has been successfully applied at over 50 military installations and discuss how this or other methods can function for their sites of interest.

Avian Carcass Searches to Document An Ecological Incident

Date/Time: Friday, March 14, 2025; 0800-1200

Instructors: Nimish Vyas, US Geological Survey Eastern Ecological Science Center

Course Description: Background: An ecological incident is an adverse effect caused by a stressor on wildlife. Documentation of an incident provides real-world evidence of the adverse effect. Documenting the magnitude of an incident is essential for estimating the losses of federal and state listed and trust species. Quantification of the magnitude of injury can also serve as a reality check on regulatory and management decisions. Additionally, the magnitude of an incident is a critical element of the prosecution for environmental crimes. Thus, searches for dead and debilitated wildlife are an essential component for documenting and estimating the magnitude of injury. Proficiency at detecting carcasses is a function of experience, as novice searchers are more likely to miss carcasses than experienced searchers. Goals: (1) Attendees will have a greater understanding of the challenges faced when documenting incidents. (2) Attendees will gain a greater appreciation for the value of incident reports. Objectives: The overarching objective of this training is to provide participants real-world experience in searching for and collecting avian carcasses. Training will include an oral presentation and a field exercise. Specific objectives of the oral presentation: (1) Provide an overview of the challenges of documenting incidents. (2) Explain how these challenges may underestimate the magnitude of the incident. (3) Use published studies and case reports to example ecological incidents. (4) Highlight the importance of timeliness in collecting incident evidence, ensuring the sufficiency of evidence, and maintaining the integrity of the evidence collected. Specific objectives of the field search: (1) Provide real-world experience of carcass search and collection using avian carcasses that I will have planted at the field exercise site about two days prior to the search. (2) Introduce novice searchers to carcass searching and provide a refresher for experienced searchers. (3) Before beginning the search, briefly discuss personal protection equipment and personal safety. (4) After the search, discuss search results with respect to the methods used and the potential biases in the results.

Novel Approaches to Ground-based Forest Measurements - Seeing the Forest by Measuring the Trees

Date/Time: Friday, March 14, 2025; 0800-1200

Instructors: Nathan Beane, US Army Corps of Engineers

Course Description: This training is aimed at reviewing foundational approaches to measuring vegetation while showcasing advancements in forestry tools that can increase efficiencies and improve the quality of data collected. With fast-paced advances in remote sensing technologies, opportunities to acquire high-resolution imagery and LiDAR data of forested areas abound. How does one decipher what they are seeing in the imagery without performing ground-based validation? Collecting accurate forest and vegetation community structure and condition is not only essential for mapping/modeling needs, but also critical information used to guide forest and wildlife management decision-making. The course will be geared to showcase common foundational forest sampling methods and to demonstrate the use of traditional and new innovative tools used to assess forest and vegetation community structure and condition. This learning and hands-on opportunity will discuss method selection while also demonstrating novel tools used to perform forest stand evaluations. This training is applicable to any natural resources manager in any geographic region. This training will provide 1.5 hours of lecture materials, and 2.5 hours of hands-on learning. Attendees are not required to have any prior or specific knowledge of the subject area, but if you hug trees (to measure them as part of your day job), this training will be beneficial to you.