



# FEMC

Forest Ecosystem Monitoring Cooperative

# FIELD STANDARDS OF PRACTICE

## FOREST HEALTH MONITORING

*Written by the Diversity, Equity, Inclusion, and Justice Committee*

*Updated March 2022*

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## INTRODUCTION

The mission of the Forest Ecosystem Monitoring Cooperative (FEMC) is to serve the northeast temperate forest region through improved understanding of long-term trends, annual conditions, and interdisciplinary relationships of the physical, chemical, and biological components of forested ecosystems.

In 2017, the Vermont Monitoring Cooperative (VMC) became the FEMC. The VMC founded on the premise that a commitment to long-term environmental monitoring and research is essential to collecting baseline data needed to detect changes in conditions and trends and help identify new threats to our forested ecosystems. The Forest Ecosystem Monitoring Cooperative (FEMC) carries this commitment forward by increasing the scale of the work that the VMC established in Vermont. Long-

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term environmental monitoring has been a hallmark of the FEMC. The FEMC has maintained a significant commitment and history of continued support for monitoring, research, and data accessibility over this duration.

## THE FOREST HEALTH MONITORING PROGRAM

The Forest Health Monitoring (FHM) Program was established in 1991 as a joint effort between the Vermont Department of Forests, Parks and Recreation (FPR) and the Vermont Monitoring Cooperative (as of March 2017 renamed to FEMC) to monitor the condition of a range of tree species in Vermont. Plot design follows the structure set by the National Forest Health Monitoring Program with additional metrics added to reflect improvements in monitoring technologies and additions to monitoring objectives set forth by our regional partners and committees.

Annually, the FHM program collects data on forest stand composition and structure, canopy condition and crown health, crown closure, tree regeneration, and forest stressors and threats using a variety of field collection tools and protocols.

Three field crews of 3-4 technicians collect data on plots in each of our 7 partner states with support from FEMC's staff and state coordinators. Crews will train with FEMC staff and state agency personnel to learn the data collection protocols, methods, and techniques. Following training, crews will be responsible for planning daily trips, maintaining equipment, traveling to and from field sites, conducting field work, contributing to FEMC social media outlets, and entering quality assured data.

**As our field program grows, we recognize the need for a guiding Standards of Practice (SOP) document.** This document allows FEMC to expand our safety protocol plan and hold the FEMC staff and field technicians accountable for all actions taken during the field program planning and execution.

**The FEMC is firmly committed to practicing the principles of Diversity, Equity, Inclusion, and Justice (DEIJ).** We believe that this document is made complete by incorporating DEIJ principles into all aspects of the field program. We recognize that we still have so much learning to do in this sphere, as individuals and as an organization, and therefore we are committed to modifying this document as frequently as needed to reflect that.

This document is a guide for all participants in the FHM program: FEMC staff, field technicians, and state partners. Annual edits by the Monitoring Coordinator and other FEMC staff will keep the document up to date with current FHM activities. Other FEMC staff will approve the document annually prior to the field season. As part of their contract, Field technicians will sign off that they have read and agreed to this document. Finally, we hope that this document will provide an example for our partner organizations and cooperators to incorporate this work into their field seasons. **Continuing a community of practice around DEIJ in field science will only make our work more high-quality and robust.**

## PRE-SEASON PLANNING

The monitoring coordinator (MC) is responsible for reviewing the SOP document in its entirety annually prior to creating the position description for the following season. The FEMC's Director and DEIJ committee must approve the SOP once the monitoring coordinator has finalized it. The following items must also be finalized and approved before posting the position description.

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1. The MC will review the Code of Conduct, drafted in the pre-season of 2022. The MC will update this document with any relevant information based on feedback from the prior season.
  - a. The MC will ensure that the Code of Conduct clearly outlines disciplinary actions that will occur if the Code of Conduct is broken.
2. The MC will review the Hazard and Risk Report and update this document with any relevant information based on feedback from the prior season.
3. The MC will meet with the Director to discuss the pay scale.
  - a. Note: In the past, FEMC has relied on the UVM pay scale to prioritize UVM students. In the future, FEMC staff could decide not to use the UVM pay scale, which would allow FEMC to pay technicians at a higher rate but exclude UVM students from participating.
4. It is imperative that our field technicians have access to organizational identification when they are out in the field. Some options are: FEMC branded gear, FEMC magnets to put on vehicles while in the field, business card of the MC and/or printed letter from MC explaining the work of the technicians. The MC will ensure that these materials are ordered or prepared by the time of the field season.
  - a. In 2022, FEMC will be providing branded baseball caps to all technicians.
5. If possible, the MC will coordinate a medical training program for the field technicians
6. The MC will prepare first aid kits and vehicle safety kits and procure any items that were depleted or broken the previous season.
7. All Field Technicians will have worker's compensation benefits from the University of Vermont.

## HIRING/ON-BOARDING

### Recruitment

The MC will coordinate and delegate the following recruitment tasks prior to the field season:

1. Ensure that the field technician position description is up to date and as clear as possible.
  - a. Consider the following: how are we defining our required skills vs. our desirable skills? Do we need to change this to best reflect the position itself?
2. Aim to recruit from a broad audience. Can we build upon our network to include more institutions/organizations each year?
3. Include a statement in the application asking how applicants will contribute to the role of DEIJ in scientific field research. For example:
  - a. *Describe your understanding of DEIJ and its relation scientific field work/this position.*
  - b. *What does an inclusive community look like to you? Ideas, goals on this?*
4. Review and modify the weighted grading scale for the interview selection process, which eliminates some bias by scoring everyone on a presence/absence system for certain skills. The interviewing team will define these skills and their weights before reviewing applications annually.
5. Appoint an interviewing team and finalize interview questions.
  - o Ensure that the interviewers are prepared to provide clarity about what is expected in the field

### Post-hiring

After the recruiting and interviewing process concludes, the MC will begin onboarding the selected field technicians. Clear communication with field technicians before the start date is important because it promotes preparedness amongst the field crew.

1. The MC will ensure that they have received the following prior to the start date:
  - a. Signed Contract including
    - i. Field SOP
    - ii. Code of Conduct
    - iii. Hazard and Risk Report
  - b. Emergency Contact Forms
  - c. Accessibility Information
  - d. Religious Holiday Accommodations Information
  - e. Medical Training Certifications (if applicable)
2. The MC will check in with each field technician to make sure they have access to
  - a. Gear (send gear list)
  - b. Housing assistance information:
    - i. UVM housing information
    - ii. Housing contacts from past FEMC technicians
  - c. FEMC branded gear in their size
  - d. List of expected expenses

During the first week of the field season, the field crews will complete the following trainings (during paid hours):

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1. [Harassment and Discrimination Prevention](#)
2. [Sexual Harassment](#)
3. Medical training (first aid, wfa) if possible
4. Driver's Certification Training

## FIELD SAFETY

Prior to a site visit, field crews will ensure that they have the following gear prepared using this document:

<https://docs.google.com/document/d/1gA6SnJmYK7FYKH7g2AGQlqvqsgfi4ZINZwqNT2G9DKg/edit>

If any of these items are lost, broken, or depleted during the site visit, it is the responsibility of the field crew to notify the MC so that they can be replaced efficiently.

The field crews will follow these field protocols for site visits:

- In the morning: check in with FEMC office phone/MC with your plan for the day providing an ETA and updating accordingly if those plans change.
- Read the field notes from the previous year- they often have helpful tips on where to park.
- Download offline maps for the site's area.
- Check the site risk assessment notes.
- Once parked, put FEMC magnets on car doors.
- Make sure every technician knows who has the first aid kit and car keys.
- Wear your FEMC identification gear
- Carry your FEMC identification letter.
- Check in with FEMC office phone/supervisor when headed back to camp.

Contact List/Protocol:

- Is this an emergency? (I.e. threat of life or limb)
  - o Call 911 then call FEMC phone
- Is this an urgent question (medical, field site related, etc.?)
  - o Call FEMC office phone
  - o If no answer, call Monitoring Coordinator personal phone
- Is this a non-urgent question related to logistics?
  - o Text FEMC office phone

## INCIDENT REPORTING

- The first point of contact for incidents in the field is the MC.
  - o In 2022 the MC is Ben Porter.
- If a technician is uncomfortable bringing an issue up to the MC they should have other contacts within FEMC.

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- In 2022 technicians are welcome to contact Naomi Cutler (ECO Americorps Member) or Elissa Schuett (Interim Director)
- If a technician is uncomfortable discussing their concern with FEMC staff, they may also go directly to [UVM HR](#).

## AFTER THE FIELD SEASON

There are often opportunities for field technicians to continue working for FEMC after their contracted end date. Should these opportunities arise, the MC will contact the field technicians as early as possible. In the past, technicians have stayed at FEMC to work on data entry, sprint projects, and other FEMC projects.

FEMC will provide the participants with ample feedback opportunities at the end of the summer. The MC or other staff will conduct exit interviews with each field technician before their scheduled end date. The MC will also prepare and send a survey to all technicians to be completed anonymously. The MC will capture this feedback for the next field season.

FEMC is continuing to consider the impacts of our field season. Including but not limited to:

- Whose land are we on and what do they know about us? What to do if we encounter a problematic situation?
- We recognize that ethics go beyond the legal ownership of the land. The DEIJ committee is at its beginning stages of considering how we can continue conducting FHM more ethically with regards to relationships with Indigenous communities in the FEMC region.
- What is our carbon footprint? We can take steps to mitigate this by:
  - Considering what kind of vehicles we rent and their MPG.
  - Continuing to increase local crews in each state that can take on plots nearby.



# CODE OF CONDUCT

## FOREST HEALTH MONITORING

*Written by the Diversity, Equity, Inclusion, and Justice Committee*

*Updated March 2022*

### Forest Ecosystem Monitoring Cooperative Mission

The mission of the Forest Ecosystem Monitoring Cooperative (FEMC) is to serve the northeast temperate forest region through improved understanding of long-term trends, annual conditions, and interdisciplinary relationships of the physical, chemical, and biological components of forested ecosystems.

The FEMC also promotes the efficient coordination of multi-disciplinary environmental monitoring and research activities among federal, state, university, and private-sector agencies with common interests in the long-term health, management, and protection of forested ecosystems.

FEMC works towards its mission and goals with a professional staff, web-based Project Library and Database, education and outreach programs, and continuing efforts to support and coordinate the region's forest ecosystem interests.

### Purpose of this document

The Forest Ecosystem Monitoring Cooperative Code of Conduct is a document that guides all staff, field technicians, and AmeriCorps members regarding the Forest Health Monitoring Program. This document is intended to outline the standard of professionalism upheld by all members of the FEMC. We expect that this group follows the [University of Vermont student code of conduct](#). This document is meant to provide more detail on how FEMC members will conduct the annual Forest Health Monitoring program.

### Our Values

**We value open communication:** We want our members to feel comfortable voicing their concerns, questions, comments, inputs with their crew and supervisors. We value a team that hears these concerns and responds thoughtfully.

**We empower one another:** We want our supervisors and members to feel supported in their endeavors. We value a team that celebrates each other's successes.

**We trust – and hold space for – one another:** We recognize that fieldwork requires trust in each other and the work. We build this trust through open communication. We value a team that allows each member to be human and make mistakes while striving to be better teammates and field scientists.

**We take responsibility for our actions:** We accept that we may come across challenges in the field. We expect that each member and supervisor will be accountable for themselves.

**We continuously strive to be inclusive:** We recognize that inclusivity is a lifelong process requiring action from all staff, technicians, and partners of FEMC. We want to foster an environment of belonging for all who participate.

**We treat our natural world with care:** We expect that our staff and crew will treat nature with the utmost respect. We recognize that our field season has an impact on the natural world, and we hope to minimize the negative impacts as much as possible.

**We respect ourselves and each other:** We take care of ourselves and each other. We embody kindness amongst ourselves and others. We celebrate the chance to connect with each other in nature!

## Expected Behavior

- **Public Communication:** Members will represent FEMC professionally when encountering others during field work. If an interaction turns negative or hostile, the member will refer the public to a supervisor as soon as possible.
- **Integrity:** Members will take responsibility for their contributions to professional activities. Members will acknowledge others who made contributions to professional activities.
- **Environment:** Members will create a safe, open, and productive professional environment.
- **Inclusivity:** Members will not discriminate or exclude for any reason. Members will value the input of others.
- **Intent vs. Impact:** Members will consider the impact of their words and actions before contributing them. Members recognize that the impact of a contribution can be different than the intent.
- **Field Season Impact:** Members will minimize their impact on nature by following the principles of Leave No Trace. FEMC will continue to consider the impact of conducting scientific research on stolen land. While the organization has not taken any action to mitigate this impact yet, it will be a priority of our Diversity, Equity, Inclusion, and Justice plan.
- **Drugs and Alcohol:** Members will not use alcohol or illegal drugs (or be under the influence) during work hours. Misuse of substances that endangers yourself or others may result in removal from the program.
- **Reporting:** Members have a responsibility to promptly report misconduct they witness or of which they become aware. Expectations of reporting are outlined in the Field Standards of Practice document.



## Unacceptable Behavior

- **Misconduct:** Members will not engage in discrimination, harassment, bullying, dishonesty, fraud, misrepresentation, coercive manipulation, censorship, or other misconduct.
- **Microaggressions:** are the everyday verbal, nonverbal, and environmental slights, snubs, or insults which communicate hostile, derogatory, or negative messages to target persons based solely upon their group membership. These messages may invalidate the group identity or experiential reality of targets, marginalize or demean them on a personal or group level, communicate they are lesser human beings, suggest they do not belong, threaten and intimidate, or relegate them to inferior status and treatment. Micro-aggressions are less overt and are often related to discrimination, harassment or bullying, but may also occur in well-intentioned individuals who are unaware that they have engaged in an offensive act or made an offensive statement.
- **Discrimination, Harassment, and Sexual Misconduct:** FEMC abides by the [University of Vermont's policy](#). Should a violation occur, FEMC supervisors will conduct appropriate community remedies for the Forest Health Monitoring field season.

## Resources

CSCCE policies and guidelines: <https://www.cscce.org/about-cscce/policies-and-guides/>

How to write a code of conduct: [https://serc.carleton.edu/advancegeo/resources/codes\\_conduct.html](https://serc.carleton.edu/advancegeo/resources/codes_conduct.html)

Example codes of conduct:

- <https://wp.las.iastate.edu/ge-at-camp/wp-content/uploads/sites/48/2016/02/Code-of-Conduct-2019.pdf>
- <https://policy.ku.edu/CLAS/code-of-conduct-CSTEM#Introduction>



# FIELD SITE SAFETY ASSESSMENT

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### Purpose of this document

The Forest Ecosystem Monitoring Cooperative Field Site Safety Assessment is a document that identifies key hazards and risks in our Forest Health Monitoring plot areas. It is intended to be used by the FHM field technicians and staff to raise awareness about how to best prevent these risks. This document will be paired with our plot risk assessment notes, which will be printed annually on the field sheets. We also provide the location of the nearest hospital to each plot on the sheet in case of an emergency. We recognize that field work is inherently risky and that this is not a comprehensive list of all risks. We urge field technicians to notify the monitoring coordinator (MC) should they encounter a risk hazard not listed, so that the MC can add it to this list.

## Potential Hazards

Hazard	Risk	Prevention
Ticks	Lyme's disease, other tick-borne diseases	<ul style="list-style-type: none"> <li>- Learn how to identify ticks <a href="#">here</a>.</li> <li>- Do a nightly tick check, have colleagues check your neck and hairline and other hard-to-see areas.</li> <li>- Remove tick immediately if found with tweezers (to capture the head) and monitor area for rash.</li> </ul>
Cold weather/ Rain/Thunderstorms	Hypothermia, frostbite	<ul style="list-style-type: none"> <li>- Bring extra warm non-cotton top and bottom layers</li> <li>- Bring raincoat/hard shell top and bottom layers</li> <li>- Check the weather before going out for the week/day.</li> <li>- Plan to be near the car if thunderstorms are possible.</li> </ul>
Heat/sun	Heat exhaustion/heat stroke, sunburns	<ul style="list-style-type: none"> <li>- Check weather before going out for the week/day. Plan to be in the shade or indoors during extreme heat</li> <li>- Stay hydrated and well-fed throughout the day. Bring extra water in the car.</li> <li>- Wear sunscreen/hats/sun shirts/sunglasses to protect from the sun</li> </ul>
Challenging hiking terrain	Strains, sprains, fractures etc.	<ul style="list-style-type: none"> <li>- Wear sturdy shoes</li> <li>- Navigate terrain carefully and slowly, take lots of breaks</li> <li>- Consider using hiking poles</li> <li>- Take a trail if possible</li> <li>- Work in the daylight</li> </ul>
Interacting with the Public	Potential for misunderstandings, hostile situations, etc.	<ul style="list-style-type: none"> <li>- Wear FEMC branded gear</li> <li>- Approach public interactions with kindness and openness</li> <li>- If an interaction is negative, do your best to remove yourself from the situation and contact</li> </ul>

		your supervisor immediately. Your safety is the priority over the science!
Animals (snakes, spiders, mosquitos, mammals)	Injury to you or the animal	<ul style="list-style-type: none"> <li>- Wear protective footwear, watch where you are stepping</li> <li>- If you encounter a wild animal, leave it be</li> <li>- If you encounter a domestic animal, give it space unless given explicit permission from its owner to interact</li> </ul>
Roads/driving	Accidents (both while driving and while walking as a pedestrian)	<ul style="list-style-type: none"> <li>- Drive only when well-rested and alert</li> <li>- Pay attention to weather conditions, if visibility is low, pull over and call the MC to make a plan</li> <li>- Wear bright reflective clothing and minimize time spent near roads at night</li> <li>- Walk on the shoulder opposite of traffic</li> </ul>

## Individual Site Hazards and Risks

Here is a spreadsheet with each plot listed and its potential hazards and risks. If a field technician encounters any other risks in this area, they will report them to the MC. We also have included a list of the closest hospitals to each site.