



Forest Adaptation Planning and Practices Online Course

Welcome to the course! Here's what you need to know...

You're signed up for the Forest Adaptation Planning and Practices online course! We're excited to have you in our winter 2018 class, and we look forward to helping you integrate climate change information into your real-world management projects. Through this workshop, you'll be able to:

- Identify locally-important climate change impacts, challenges, and opportunities
- Develop specific actions to adapt forests to changing conditions
- Use the [Adaptation Workbook](#) to create your own "climate-informed" projects
- Better communicate with stakeholders about key climate change impacts, challenges, and opportunities
- Access post-training support from NIACS staff during project planning and implementation

Course Format

This course uses a five-step process to develop climate change adaptation projects using the online Adaptation Workbook (www.adaptationworkbook.org). One step of the course will be introduced during each of the first five weeks of the course to allow participants to create their own adaptation project; the last two weeks will be dedicated to polishing and communicating the adaptation project to share with colleagues and stakeholders. Each week of the course contains three activities: (1) a presentation of adaptation concepts and tutorial for using the adaptation workbook, (2) an assignment for individuals and groups to complete one step of the workbook, and (3) active discussion among participants to share ideas and ask questions.

IMPORTANT! Do not use Internet Explorer when working within the Adaptation Workbook website, as the website functions do not work properly when using this as your browser. Chrome and Firefox function fine.

The web meetings will take place on Wednesdays at 1:00-2:45pm (EST). We will meet from 1:00-1:45pm for an interactive discussion of the previous week's work, then start back up following a 15 minutes break from 2:00-2:45 for the week's lecture. Mark your calendars for meetings on these dates: January 17 and 24, and 31, and February 7, 14, 21, and 28.

Connection details are:

- Web meeting room: <https://michigantech.zoom.us/j/342646286>
(Please join first session a bit early; your computer may need to install a small add-on before entering the room. You will be able to connect audio by telephone from within the Zoom meeting window.)
- Phone (if using): (646) 876-9923 or (669) 900-6833
- Meeting ID: 342-646-286

Course Schedule

Course Preparation — Complete by January 16

To make sure you're really ready to dive into the course during our first session on January 17, we have set up a basic account on the Adaptation Workbook site for each project. An account can be shared among multiple users for group projects. You will receive an email instructing you how to sign in to your account for the first time.

- Select a forest or natural resource management project to use for the training.
 - Assemble relevant materials and information your project (maps, inventory information, fact sheets, management plans, easement documents, etc.) for use during the course.
 - Review the [Forest Adaptation Resources, 2nd edition](#). Read the Introduction (pgs. 1-9) and the Adaptation Workbook (Chapter 5, pgs. 74-89).
 - Review examples of [adaptation projects](#)
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Week 1: Course Introduction; Defining Project Goals and Objectives

Discussion 1 — January 17, 1:00-1:45p pm

Topic: Introduction to course instructors and participants. Please come prepared to introduce yourself and share some basic details about your course project.

Presentation 1 — January 17, 2:00-2:45 pm

Topics: Introduction to the Online Course and Adaptation Workbook; defining management goals/objectives

- Course objectives, instructors, and agenda
- How to use Zoom for the online course
- Introduction to the Adaptation Workbook online tool
- Developing an adaptation project and defining management goals/objectives
- What you need to know for Step 1 (Define project goals and objectives.)

Assignment 1 — Complete by January 23

Complete the following tasks by Tuesday, January 23. Set aside 2-4 hours for completion, as time will vary based upon your project.

- Record your intro on Flipgrid: <https://flipgrid.com/a22c33>
- Complete Step 1 of the Adaptation Workbook
- Complete the Homework section following Step 1
- Review regional climate impacts to prepare for Step 2. You can either view [this recorded presentation](#) or read one of the following reports for your region:

- The [vulnerability assessment for New England and northern New York](#), particularly chapters 4 and 5 (Pre-release copy: do not share!)
 - [Changing Climate, Changing Forests: The Impacts of Climate Change on Forests of the Northeastern United States and Eastern Canada](#) (for NY and northeast Canada)
 - [Pennsylvania Climate Impacts Assessment Update](#) (for PA)
 - Be prepared to introduce your project in no more than 3 minutes in our next discussion
 - Optional reading: Millar et al. 2007 adaptation paper "[Climate Change and Forests of the Future: Managing in the Face of Uncertainty](#)"
 - Optional: CFE credits – email [Maria](#) your SAF member number and/or state forestry license number
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Week 2: Understanding and Evaluating Climate Change Vulnerabilities

Discussion 2 — January 24, 1:00-1:45 pm

Please come prepared to share your project ideas. Each project team will have about 3 minutes to describe the location of their project, the most important forest types or management topics, and the overarching management goals.

Presentation 2 — January 24, 2:00-2:45 pm

Topic: Understanding and Evaluating Climate Change Vulnerabilities

- Defining climate change impacts, adaptive capacity, and vulnerability
- What you need to know for Step 2 (Assess climate impacts and vulnerabilities.)

Assignment 2 — Complete by February 30

Complete the following tasks by Tuesday, January 30. Set aside 3-4 hours for completion since this is a more involved step.

- If needed, continue reviewing regional climate impacts to prepare for Step 2. You can either view [this recorded presentation](#) or read one of the following reports for your region:
 - The [vulnerability assessment for New England and northern New York](#), particularly chapters 4 and 5 (Pre-release copy: do not share!)
 - [Changing Climate, Changing Forests: The Impacts of Climate Change on Forests of the Northeastern United States and Eastern Canada](#) (for NY and northeast Canada)
 - [Pennsylvania Climate Impacts Assessment Update](#) (for PA)
 - Complete Step 2 of the Adaptation Workbook.
 - Complete Homework 2 at the end of Step 2.
 - Optional reading: Review the [Forest Adaptation Resources, 2nd edition](#). Read Chapter 2 (pgs. 10-28) on assessing climate change vulnerabilities and developing vulnerability assessments.
 - Additional resources: You may also want to look for additional vulnerability assessments or studies for your state or region at www.adaptationworkbook.org/resources. Select 'Climate Impacts' from the Subject dropdown.
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Week 3: Evaluating Management Challenges and Opportunities

Discussion 3 — January 31, 1:00-1:45 pm

Please come prepared to discuss the most important climate impacts for your project!

Presentation 3 — January 31, 2:00-2:45 pm

Topic: Evaluating Management Challenges and Opportunities

- Identifying management challenges and opportunities for your project
- Re-considering and revising management goals/objectives in light of climate challenges
- What you need to know for Step 3 (Evaluate objectives considering climate impacts.)

Assignment 3 — Complete by February 6

Complete the following tasks by Tuesday, February 6. Set aside 2-4 hours for completion, as time will vary based upon your project.

- Complete Step 3 of the Adaptation Workbook.
 - Complete Homework 3 at the end of Step 3.
 - Read the Adaptation Strategies and Approaches chapter (pgs. 29-54) of the [Forest Adaptation Resources, 2nd edition](#) before we begin step 4. The menu is also available [online](#) for you to reference.
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Week 4: Identifying Adaptation Strategies, Approaches, and Tactics

Discussion 4 — February 7, 1:00-1:45 pm

Please come prepared to discuss how potential climate change impacts will affect your ability to achieve your management goals and objectives

- What are the biggest challenges that you identified for meeting your management objectives?
- What are the biggest opportunities?
- How feasible are your management goals? Do any need to change in light of climate change?

Presentation 4 — February 7, 2:00-2:45 pm

Topic: Identifying Adaptation Strategies, Approaches, and Tactics

- Adaptation concepts: resisting change, enhancing resilience, and facilitating transitions
- Developing specific actions for climate-change adaptation
- What you need to know for Step 4 (Identify adaptation approaches and tactics.)

Assignment 4 — Complete by February 13

Complete the following tasks by Tuesday, February 13. Set aside 3-4 hours for completion since this is a more involved step.

- If you have not already, read the Adaptation Strategies and Approaches chapter (pgs. 29-54) of the [Forest Adaptation Resources, 2nd edition](#) . The menu is also available [online](#) for you to reference.
 - Complete Step 4 of the Adaptation Workbook.
 - Complete Homework 4 at the end of Step 4.
 - Optional: You can also [read summaries](#) or [view videos](#) describing other adaptation projects if you want to see how other natural resource professionals have developed their actions.
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Week 5: Monitoring and Evaluating Effectiveness

Discussion 5 — February 14, 1:00-1:45 pm

Please come prepared to discuss your adaptation actions.

- What were some of the key strategies you selected? What adaptation options do these represent?
- Were there tactics you evaluated but did not select? Why?
- Are there challenges that you are not able to address?

Presentation 5 — February 14, 2:00-2:45 pm

Topic: Monitoring and Evaluating Effectiveness

- Tools for measuring effectiveness of implemented adaptation actions
- Capitalizing on existing data, inventory or monitoring processes/partnerships
- What you need to know for Step 5 (Monitor effectiveness of implemented actions.)

Assignment 5 – Complete by February 20

Complete the following tasks by Tuesday, February 20. Set aside 2-4 hours for completion, as time will vary based upon your project.

- Read [Janowiak et al. 2017: Assessing Stand-Level Climate Change Risk Using Forest Inventory Data and Species Distribution Models](#)
 - Complete Step 5 of the Adaptation Workbook.
 - Complete Homework 5 at the end of Step 5.
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Week 6: Telling your Adaptation Story, Part 1

Discussion 6 — February 21, 1:00-1:45 pm

Please come prepared to discuss your monitoring plans for you adaptation project.

- How does your monitoring fit with existing monitoring activities? Are there new variables?
- Are there monitoring items you didn't include because of lack of time/ funding/ resources?
- Did thinking about monitoring cause you to alter any tactics?

Presentation 6 — February 21, 2:00-2:45 pm

Topic: Telling your Adaptation Story, Part 1

- Completing the Adaptation Workbook
- Tips for talking about climate change with co-workers, stakeholders, and clients

Assignment 6 — Complete by February 27

Complete the following tasks by Tuesday, February 20. Set aside 3-4 hours for completion of this assignment, or potentially more if you have to return to some previous steps.

- Go back and tie up any loose ends within the Adaptation Workbook so that you have a final copy of your adaptation plan. Then try to save/export your plan as a PDF.
- Complete Homework 6 at the end of the Adaptation Workbook
- Prepare a short (<3 min) summary of your project using the Adaptation Story Template Slides, which you will present (one presentation per project) during the February 28 discussion.

- Record a closeout message on FlipGrid:
 - Recommended reading:
 - [Moser et al. 2017: Communicating Climate Change Adaptation and Resilience](#)
 - [Climate Outreach 2014: Communicating climate change adaptation – A practical guide to values-based communication](#)
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Week 7: Telling your Adaptation Story, Part 2

Discussion 7 — February 28, 1:00-1:45 pm

Please come prepared to share your adaptation project with everyone!

Presentation 7 — February 28, 2:00-2:45 pm

Topics: Telling your Adaptation Story, Part 2 and Course Wrap-up

- Next steps for moving toward implementation
- How we can help you in the future

This course is approved for 15.0 category 1 Society of American Foresters Continuing Forestry Education credits. Let Maria Janowiak (mjanowiak02@fs.fed.us) know if you will need a certificate.

This course is a collaboration among the Northern Institute of Applied Climate Science, the US Forest Service, and the USDA Northern Forests Climate Hub.



**United States Department of Agriculture
Northern Forests Climate Hub**



Instructors & Contact Information

Maria Janowiak, Northern Institute of Applied Climate Science & US Forest Service



Maria Janowiak is Deputy Director for the Northern Institute of Applied Climate Science. She coordinates for the New England Climate Change Response Framework, serving the states of New York, Vermont, New Hampshire, Maine, Massachusetts, Connecticut, and Rhode Island. Maria has been working with land managers on issues related to climate change and adaptation since 2007. Outside of work, Maria is often found spending time with her bicycles and garden.

Email: mjanowiak02@fs.fed.us Phone:

Todd Ontl, USDA Northern Forest Climate Hub & US Forest Service



As a Fellow for the Northern Forests Climate Hub at NIACS, his primary role is to add capacity to the education and outreach efforts of the Climate Change Response Framework while conducting research on understanding forest adaptation decision making of land managers and woodland owners throughout the Midwest and New England. Todd spends his free time woodworking and planting as many fruit trees as his wife allows him to purchase for their property.

Email: tontl@fs.fed.us Phone: 906-482-6303 x1324

Setting up Your Account and Course Project

Please set up your Adaptation Workbook account (if you haven't already done so) by January 17 so that we can make the course features available to you before you start.

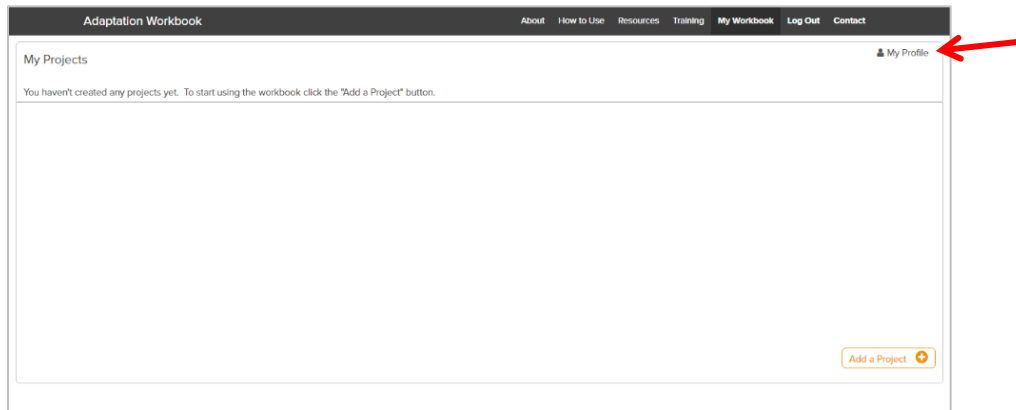
- **IMPORTANT! Do not start a course project before getting confirmation from an instructor that you've been added to the course or you may have to start over from the beginning.**
- If you have a small team, use one person's email address to create an account that you can share among the group. You can then take turns working on the course project and decide how to tackle course assignments among your team.

Setting up an Account

- Navigate to www.AdaptationWorkbook.org. Click on "Log In" on the top of the screen.



b. Enter the email of the account you provided when you registered for the course, along with the temporary password (temp123). Once logged in, you will see your Workbook dashboard. Change your password by clicking “My Profile” in the top right corner, then select “Edit account information” and enter your new password.



IMPORTANT!

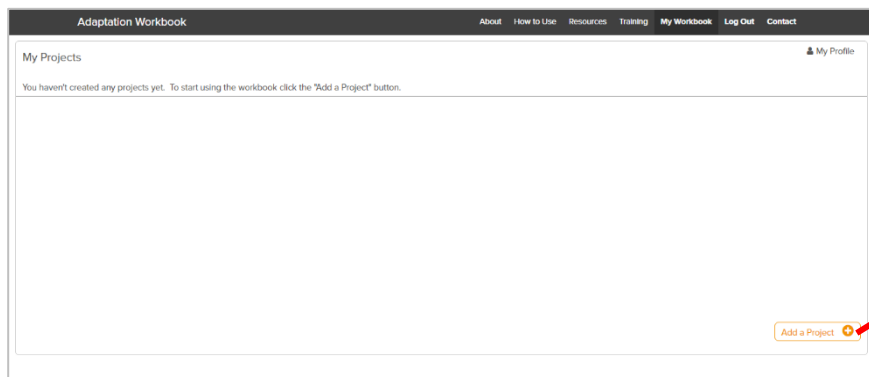
Although you can use the Adaptation Workbook in its regular configuration at any time, you will need to create a course project to use during the Forest Planning and Practices course in order to access course content and additional materials.

Starting a Course Project

After you have been added to the course, you will be able to start a course project.

a. When you log into the Adaptation Workbook, you will be sent to the project dashboard.

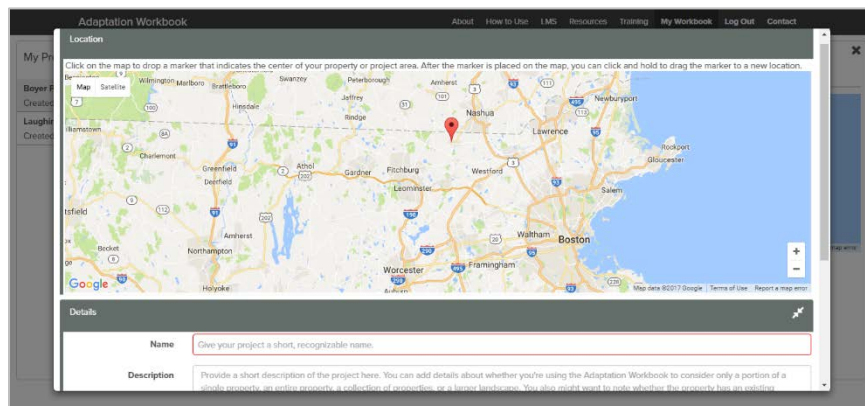
b. Click on the orange “Add a Project” button and then click on the “A Project for ‘Forest Adaptation Planning and Practices – Winter 2017’” button.



IMPORTANT! You must select the “A Project for ‘Forest Adaptation Planning and Practices – Winter 2017’” button to start.

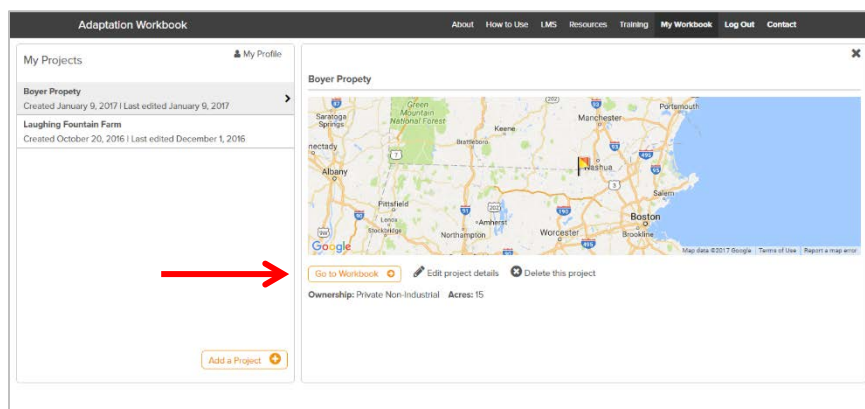
c. Place a marker at the approximate location of the project. Note that if you want to maintain privacy, you can select a nearby intersection or town. Some tips for placing the marker are:

- Use the (+) and (-) buttons to zoom in and out.
- Click and hold the map to pan the view.
- A single click will place the marker on the map.
- To move the marker, click and drag it to the desired location.

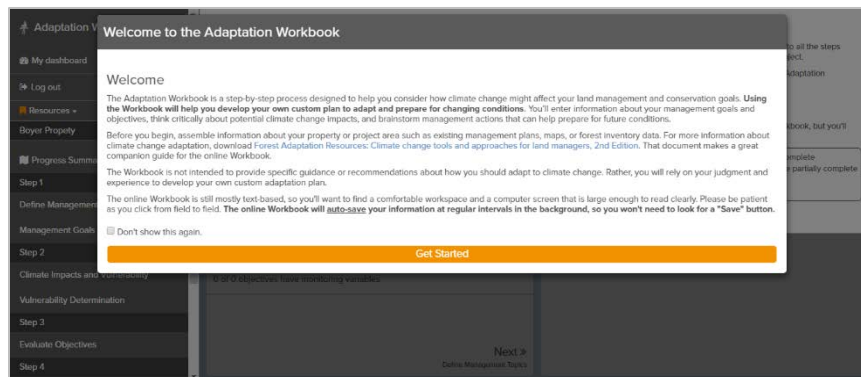


d. Enter a project name, description, acreage, and ownership. The level of detail that you provide is up to you—this information will be included in the project summary report that you may want to produce upon completion.

e. This project will now appear in your dashboard. To begin your project, click “Go to Workbook.”



b. A short dialog will appear with more information about the course. Read the information and click “Get Started.”



Any questions or issues? Contact Maria at mjanowiak02@fs.fed.us or 906-482-6303x29.