



Final Summary Report:

Piloting the Cornell Climate Stewards Volunteer Program in New York State

Prepared for:

**New York State Energy Research and Development Authority
Albany, NY**

Project Manager: Amanda Stevens, Senior Project Manager

Prepared by:

Cornell University, Ithaca, NY

Project Manager: Allison Chatrchyan, Sr. Research Associate

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Abstract

Modeled after successful Extension volunteer programs including Master Gardeners, Master Naturalists, and Master Forest Owner Volunteers, Cornell University (including staff from Cornell, Cornell Cooperative Extension, and Cornell New York Sea Grant) developed a new program to provide 12 weeks of research-based training for local community members on climate change science, climate impacts, mitigation, adaptation, working with local governments, and effective communication. Cornell Cooperative Extension (CCE) staff were trained and helped co-develop the curriculum. These CCE staff then recruited community members who enrolled in the program Extension volunteers for the 12-week training. After completing the training, CCE staff then will provide check ins and support to help newly trained volunteers to develop and implement local climate change volunteer projects in their own community to help with climate change education, grant writing, or completing certified actions to help their municipality become a NYS “Climate Smart Community.” This pilot funding from NYSERDA helped fund the train-the-trainer program for twelve Cornell Cooperative Extension specialists in six counties across New York in the spring of 2021: Dutchess, Monroe, New York City (Kings), Seneca, Tompkins, and Ulster counties. These educators then recruited up to ten volunteers for each county to pilot the Climate Stewards Training Program in fall of 2021. There were 52 volunteers trained from September to December 2021.

Keywords

Climate change local community action; Climate Smart Communities; New York; trained volunteers. Climate Stewards.

Acknowledgments

Cornell University and Cornell’s New York Sea Grant gratefully acknowledge the support of Amanda Stevens for her encouragement of this pilot project, through which 52 new community members across New York State were trained on climate change science, impacts, and actions, and can undertake community projects with their municipality.

Acronyms and Abbreviations

CCE	Cornell Cooperative Extension
CSC	Climate Smart Community
ft	feet
GHG	greenhouse gas
kWh	kilowatt hours
m/s	meters per second
MW	megawatts
NYS	New York State
NYSERDA	New York State Energy Research and Development Authority
W	watts

Executive Summary

Modeled after successful Extension volunteer programs including Master Gardeners, Master Naturalists, and Master Forest Owner Volunteers, Cornell University (including staff from Cornell, Cornell Cooperative Extension, and Cornell New York Sea Grant) developed a new program to provide 12 weeks of research-based training for local community members on climate change science, climate impacts, mitigation, adaptation, working with local governments, and effective communication. Cornell Cooperative Extension (CCE) staff were trained and helped co-develop the curriculum. These CCE staff then recruited community members who enrolled in the program Extension volunteers for the 12-week training. After completing the training, CCE staff then will provide check ins and support to help newly trained volunteers to develop and implement local climate change volunteer projects in their own community to help with climate change education, grant writing, or completing certified actions to help their municipality become a NYS “Climate Smart Community.” This pilot funding from NYSERDA helped fund the train-the-trainer program for twelve Cornell Cooperative Extension specialists in six counties across New York in the spring of 2021: Dutchess, Monroe, New York City (Kings), Seneca, Tompkins, and Ulster counties. These educators then recruited up to ten volunteers for each county to pilot the Climate Stewards Training Program in fall of 2021. There were 52 volunteers trained from September to December 2021. The results of comparisons of pre-post-survey data are very strong – in all of ten indicators analyzed, there was positive change in knowledge and attitudes following completion of the program.

1 Milestone Deliverable Task 1: Updating Curriculum with EJ Content

The goal of this task was to develop and pilot test content covering environmental and climate justice concepts in the Climate Stewards Curriculum, to any of the modules where it made sense. This included an introduction to the concepts and importance of environmental and climate justice, vulnerable communities, and introduction to using Sea Grant’s new Environmental Justice Mapping Tools for Use by New York State Communities (<https://seagrant.sunysb.edu/images/uploads/pdfs/EnvironmentalJustice-MappingToolsGuide.pdf>). Where feasible and relevant, the Contractor aligned the content with information from the NYS Law (*Climate Leadership and Community Protection Act – CLCPA*) and the work of the NYS Climate Action Council.

A list of the updated slides with EJ/CJ content that were included in the 12-week Cornell Climate Stewards program curriculum is included in Appendix A.

Development of new Stand-Alone Climate Justice Module

Following the pilot running off the 12-week training program, the team developed a separate module on “Climate Justice”, with its own slides, script, and activities, to address this critical topic more carefully on its own. This new module can be run as a stand-alone module (after week 3 on climate impacts) for future trainings but can also be provided to trainees as an optional, pre-recorded content that climate stewards could access and watch asynchronously through the course management system. The outline for this stand-alone session PowerPoint is provided in Appendix A.

2 Milestone Deliverable Task 2: Program Pilots

The Cornell Climate Stewards Program was conducted by the following CCE County Association offices during 2021: Dutchess County, Monroe County, New York City (Kings County), Seneca County, Tompkins County, and Ulster County. Cornell’s NYSG staff provided assistance in NYC and Ulster counties.

Subtask 2.1: Train-the-Trainer Certification

The Contractor conducted the Climate Stewards Train-the-Trainer program with the twelve educators from six CCE County Associations participating in the program, and with one Extension educator participating from Onondaga County. The training program presented was held virtually over zoom due to the ongoing COVID-19 pandemic. The materials and curriculum content and trained the CCE Educators to run the Climate Stewards program during the pilot training with volunteers in the fall of 2021 (see Appendix B). CCE Extension educators chosen for participation are those that are regularly working on climate change education and technical assistance projects in their counties, often supporting NYSERDA projects, and have strong expertise in local climate change programming. This group of county staff and Cornell NY Sea Grant staff became a team that worked together to refine and improve the Cornell Climate Stewards curriculum and program during the year.

Table 1. Certification of CCE Staff Trained in Train-the-Trainer Program

CCE County Extension Environmental and Climate Change Program Staff	Team Members
Dutchess County	Carolyn Klocker
	Hazel Robin
	Michelle Gluck
Monroe County	Adrienne Kaplan
	Christina Das
NYC	Ana Canas
Onondaga County	Camille Marcotte
Seneca County	Ave Bauder
	Nathan Kennedy
Tompkins County	Margaret Royall
	Rachel Zevin
Ulster County	Melinda Herzog
	Jim O’Connell
Cornell and Sea Grant Trainers	Allison Chatrchyan
	Kathy Bunting-Howarth
	Jessica Kuonen
	Mary Austerman
	Katie Graziano

Subtask 2.2: Volunteer Recruitment

The Contractor worked to ensure that the vendors (CCE Educators) trained in Subtask 2.1 recruited volunteers to participate in the Climate Stewards Program pilot program. Each CCE County Association recruited between 7-12 volunteers to participate in the pilot training program from September to December 2021. Every effort was made to include existing Climate Smart Communities and Clean Energy Communities coordinators in the recruitment effort, either as volunteer participants themselves or to alert their community networks of the opportunity.

There were 66 participants recruited for the program (see Appendix C).

Subtask 2.3: Volunteer Training

The Climate Stewards Program consisted of 12 modules, each including PowerPoint presentations, case studies, group activities, and additional reading and videos to provide a variety of educational media. There were ten training modules presented, followed by two modules for volunteers to design and present on their intended volunteer climate change community projects

For this project, the Educators from CCE (Vendors) trained in Subtask 2.1 piloted the Climate Stewards Program with the volunteers recruited above in Subtask 2.2, with the assistance of the Cornell and NY Sea Grant team (*Note: The volunteers will be expected to then work with their municipality to identify a project of need in the final two modules, and implement their project over the 2021-2022 year, under the guidance of their county Extension leader, but this was not part of this project scope.*)

Due to the ongoing COVID-19 pandemic, we held the training virtually by zoom once a week on Thursday evenings, from September through December 2021, for two hours. The first hour and a half was used for the live PowerPoint presentation, discussions, zoom polls, Q/A, and discussion of the material. The last half an hour of each session was used for participants from the six counties to breakout into rooms together to discuss the material and climate steward projects they were planning locally. In addition, each county CCE coordinator offered another time to meet in office hours with local trainees.

The Syllabus for the Fall 2021 Program, and final program participant data, is presented in Appendix D. All course materials were made available to students on a Canvas course page.

3 Milestone Deliverable Task 3. Evaluation, Reporting and Dissemination

The Project Director, Allison Chatrchyan, and Co-Director, Katherine Bunting-Howarth, provided program oversight, evaluation, reporting and dissemination of the project.

Subtask 3.1: Program Oversight and Evaluation

The Contractor was available to assist the County educators during program implementation. This consisted of monthly (or weekly) check-in meetings with the educators, on-demand response to inquiries from educators, provision of additional materials, and an evaluation of the implementation of the program for each County. In fact, the Project Director and CCE staff worked as a team throughout 2021 to update the Cornell Climate Stewards curriculum and offered the twelve-week program together centrally via live zoom.

The list of meetings held with the team is presented in Appendix E, along with the opening presentation slides from the workshop provided to the Cornell Climate Change Program Work Team (PWT) on September 28, 2021.

Evaluation

A Pre- and Post-Evaluation was conducted with the trainees before the first class began in September 2021, and after the final class was completed in December 2021. Initial data is provided in Appendix E2.

Demographic Data of the initial full participants is presented in the table below.

Demographic Tables for the Course Participants at the start of the course.

Race

What is your Race - Answer	%	Count
American Indian or Alaska Native	2.99%	2
Asian	7.46%	5
Black or African American	4.48%	3
Native Hawaiian or Other Pacific Islander	0.00%	0
White	85.07%	57
Total	100%	67

Ethnicity

What is your Ethnicity - Answer	%	Count
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Hispanic or Latino or Spanish Origin	7.46%	5
Not Hispanic or Latino or Spanish Origin	92.54%	62
Total	100%	67

Age

What is your Age - Answer	%	Count
18-24 years old	8.96%	6
25-34 years old	19.40%	13
35-44 years old	5.97%	4
45-54 years old	10.45%	7
55-64 years old	22.39%	15
65-74 years old	20.90%	14
75 years or older	11.94%	8
Total	100%	67

Gender

Which of the following Best Describes your Gender - Answer	%	Count
Female	70.15%	47
Male	29.85%	20
Other	0.00%	0
Prefer not to specify	0.00%	0
Total	100%	67

Highest Level of Education

What is your Highest Level of Education - Answer	%	Count
Some high school	5.97%	4
High school graduate	1.49%	1
Some college/2-year Associate degree	11.94%	8
4-year bachelor's degree	14.93%	10
Master's degree	49.25%	33

Doctorate degree	10.45%	7
Professional degree (e.g., J.D., MBA, etc.)	5.97%	4
Other	0.00%	0
Total	100%	67

Pre-Survey

There were 67 full responses to the survey, taken before any of the science and other content was presented. The survey tested understanding of key climate science concepts, understanding of climate impacts, adaptation and mitigation, and comfort with working on local climate change projects. A final open-ended question asked participants to explain what they hoped to gain from the course.

Post-Survey

There were 48 responses to the survey, since not every volunteer completed the post survey, and some volunteers had to drop the course before completion. The survey tested understanding of key climate science concepts, understanding of climate impacts, adaptation and mitigation, and comfort with working on local climate change projects. A final open-ended question asked participants to explain if they had gained what they hoped from the course.

For every measure (ten questions) of understanding of climate change concepts, or comfort with material, and connectedness, our program returned positive increases in knowledge and attitudes between participants before taking the course and after (measuring understanding, capacity, comfort leading projects, and connections to other community members) – See Appendix E2.

Summary of Open-ended Responses from the Post-Survey:

Did you achieve what you hoped to out of this program?

Of the 43 responses, most respondents, 34, answered (yes) that they did get what they hoped out of the program (80%). Eight respondents answered (somewhat) that they got what they hoped out of the program (19%). only one participant answered (no) that they did not get what they hoped out of the program (0.02%).

A few of the positive responses are included here:

- “Yes!!! Through the program I found a meaningful way to volunteer.”
- “Yes, I have a better understanding of the depth of the climate change science. Also, I have a sense that I can support community projects even if I am not a

scientist. There are opportunities to address climate change for everyone who is interested and motivated to help!

- “I loved this program. I still have a lot to learn but this was a great, well organized, and well- presented program that has motivated me and set me on a path to community engagement and advocacy.”
- “I was glad to be connected to a community of folks who can act as a support network for carrying out climate change actions at the community scale.”

Evaluation from the Cornell/CCE Team

Our CCE/Cornell team worked closely for a year on this project and learned a lot in the process. Overall feedback from the CCE educators that completed the train-the-training sessions to learn the curriculum, was that the PowerPoint slides were still very dense and there was a lot of material being presented. Some educators felt that they still would not be comfortable leading all of the content sessions on their own. We addressed these issues by working to reduce the number of words on slides, adding more photographs, deleting some slides, and clarifying concepts that were unclear (between the January 2021 train-the-trainer sessions) and the fall 2021 volunteer training. Ultimately, we also decided to hold the training all together in the fall 2021, and we divvied up the teaching across our team, with Cornell/Sea Grant staff and CCE educators co-facilitating each session with the topics they were most comfortable with. This worked well, as each member of the team could present one or two of the sessions that they knew the most about, and we were able to share the responsibility for the 12-week training across many educators to reduce the overall burden of work.

For the fall, 2021 volunteer training, we also have had informal discussions amongst our team and with several volunteers on the format and level of content. These are some overall impressions:

- Team members felt that the 12-module course, stretched from September to December, was a lot for the educators to teach, and for the volunteers to complete. We were happy that 52 volunteers stayed with the program from beginning to the end, even though many were dealing with job stress, family challenges, and the COVID pandemic; it was a lot to complete.
- We implemented a comprehensive pre- and post-course survey but realize we should have included questions on the course format and level of content and suggestions for presentations.
- Informal feedback from volunteers included:
 - o they would like a refresher “webinar” on the science and impact and solutions because the material is so complex.
 - o They would like more practical examples of climate smart projects – maybe guest speakers to talk about the projects they are doing – so that volunteers have a better sense of their ability to actually “do something”
 - o There was so much information presented that it was overwhelming – and there was not enough time for discussion & reflection where real learning can occur.

- Some of the new presenters were not as comfortable with the material – there wasn't enough time for Q/A
- The quizzes should be reworked into discussion or reflection questions, rather than testing facts
- There should be more time for discussion, collaboration, and breakout groups
- Make sure to define acronyms – include an acronym cheat sheet

As a result of this feedback, our team is planning to make some important modifications to the program for the next iteration. These plans include:

- Developing a one-hour “refresher webinar” to offer current volunteers on climate science, impacts, and solutions, so that they can stay current with the material.
- Plan to include some short guest lectures during the next training so that volunteers can hear from local officials or volunteers that are working on CSC projects.
- Flip the [presentation of materials: pre-record shorter PPT presentations as videos that volunteers will have to watch ahead of the meeting, and then use the zoom presentation time for discussions and reflection, collaboration, and breakout groups
- Rework the quizzes into discussion or reflection questions,
- Create an acronyms cheat sheet and make sure to define acronyms and terms on slides

Appendix A. Module EJ Updates to Climate Stewards Curriculum

The entire 12-week Cornell Climate Stewards curriculum was reviewed for how to incorporate Environmental Justice and Climate Justice issues. The following slides in each week's presentation were added or updated:

Module 1: Orientation

- Slide: Class Rules: Diversity of views: Listen respectfully; Listen actively and with an ear to understanding others' views; avoid assumptions about any member of the class or generalizations about social groups.
- Slide: Share your climate story! Share and listen to peers' stories of climate change impacts and climate injustice in various communities
- Slide: Code of Conduct for Volunteers: Climate stewards agree to respect and uphold the rights and dignity of all staff, other volunteers, and all individuals who participate in CCE programs recognizing that people's values, beliefs, customs, and strengths differ; Encourage participation of and respect for individuals of diverse backgrounds, cultures, and perspectives; agree to Cornell and CCE's commitment to creating a learning and working environment free from bias, discrimination, harassment, and sexual and related misconduct; these behaviors are illegal and will not be tolerated.
- Slide: Cornell and CCE Values
- Slide: Indigenous Land Acknowledgement: Cornell University is located on the traditional homelands of the Gayogohó:nq' (the Cayuga Nation).
- Slide: Cornell University and Cooperative Extension commitment to Equal Program Opportunities

Module 3: Climate Impacts

- Slide: Global Impacts to Humans with emphasis on disproportionate impacts to indigenous people
- Slide: Environmental Justice, an introduction to concept, EPA definition, and its link to human health

Module 3: Climate Impacts

- Slide: History of Environmental Justice
 - A timeline
 - Dr. Robert Bullard: "Father of environmental Justice"
- Slide: Implications for Climate Change
 - Treeless and tree neighborhood because of historic housing policy
 - Definition of social vulnerability and how demographic indicators can be used
- Slide: EJ Mapping Tools Guide
 - An introduction to what it is
- Environmental Mapping Tools Group Activity

Module 4: Local Government

- CLCPA Act & Focus on Environmental Justice

Module 5: Introduction to Mitigation

- Slide: Climate Justice concerns: Mitigation

Module 7: Introduction to Adaptation

- Slide: Traditional ecological knowledge/Indigenous efforts
- Slide: Available community Grants – keep in mind EJ communities

Module 8: Local Community Adaptation Projects

- Slide: Green gentrification

Module 9: Communication

- Slide: Where do climate myths come from?
- Slide: Understanding Greenwashing

Module 10: Planning Local Climate Stewards Projects

- Slide: Remember Priority Issues for Projects:
 - GHG Emissions Reductions
 - Adaptations to reduce risk and make the community less vulnerable
 - Particularly vulnerable areas or segments of the community (based on differing levels of Exposure, Hazards (or Climate Impacts), and Vulnerability)

Modules 11 and 12:

- *These modules did not provide content, as Steward trainees present their proposed climate steward projects, and get feedback in week 11; and complete training and next steps and recognition in week 12.*

Development of new Stand-Alone Climate Justice Module

Following the pilot running off the 12-week training program, the team decided to create a separate module on “Climate Justice”, with its own slides, script, and activities – to address this critical topic more carefully on its own. This new module can be run as a stand-alone module (after week 3 on climate impacts) for future trainings but can also be provided to trainees as an optional, pre-recorded content that climate stewards could access and watch asynchronously through the course management system.

Outline for the New Climate Justice Module PowerPoint Slides:

- Acknowledge of Indian Nations in NYS and Climate Justice: Indigenous Land Acknowledgement of Cornell University. “Cornell University is located on the traditional homelands of the Gayogohó:nq' (the Cayuga Nation). We

acknowledge the painful history of land dispossession and honor their ongoing connection to these lands and waters.”

- History of the environmental movement and environmental justice concerns
- Development of the environmental justice movement – key developments by date
- Definitions of EJ and Climate Justice
- Explanations of climate justice concepts
- Featured reading and short videos that focus on four NYS climate community stories that cover climate and environmental impacts and EJ concerns in Syracuse, the Bronx, Niagara Falls, and St. Lawrence County, NY – and a group activity to discuss the climate justice issues in these communities
- Class Activity: Discuss climate justice examples in NYS
- Class Activity: Environmental justice mapping tools guide: An introduction to the tool and how to use it to assess vulnerable areas in communities.
- Remember Priority Issues for Projects: GHG Emissions Reductions; Adaptations to reduce risk and make the community less vulnerable; Particularly vulnerable areas or segments of the community (based on differing levels of Exposure, Hazards (or Climate Impacts), and Vulnerability)
- Conclusions: Q/A, Resources for Climate Justice

Appendix B. Train-the-Trainer Workshop Agenda

Cornell Climate Stewards Train-the-Trainer Webinar Schedule

January 11-February 4, 2021

Date/Time	Week – Activities	Who	Equipment
1/11/21	Introduction to the Program – Introduction to Canvas, Box, and Program Orientation		
9:00	Introductions and Overview of Training	Kathy and All	Zoom
9:20	Background on the Course <ul style="list-style-type: none"> • NIFA Needs Assessment and Development Process • Outline of Course and Individual Weeks • Facilitator’s Guides 	Allison	Facilitators guides Canvas Accounts
9:40	Introduction to Canvas and Box		
10:00	Week 1: Orientation <ul style="list-style-type: none"> • Review Learning Outcomes and Materials on Canvas • PowerPoint Slides 		Week One Facilitator Guide
10:30	Break		
10:45	Week 2: Climate Science – Part One <ul style="list-style-type: none"> • Review Learning Objectives and Canvas • PowerPoint Slides • Q/A 	Jessica	Week Two Facilitators Guides Handout for case study
Noon	Adjourn		
1/12/21	Climate Science Part 2 and Climate Impacts		
9am	Recap		
9:10	Week 2: Climate Science – Part 2 <ul style="list-style-type: none"> • Case Study • Bingo • Q and A 	Jessica	Email Bingo Cards to participants
10:10	Break		
10:10	Week 3: Climate Impacts <ul style="list-style-type: none"> • Review Learning Objectives • PowerPoint Slides 	Jessica	Week 3 Facilitators Guide
11:00	Break		
11:15	Week 3: Climate Impacts <ul style="list-style-type: none"> • Case Study • Group Activity 	Jessica	Data Tools: CSF, Voyager,

	<ul style="list-style-type: none"> • Q&A 		Communities at Risk -Art project
Noon	Adjourn		
1/13/21	Local Governments and Review		
9:00	Recap	Jessica	
9:10	Week 4: Local Governments <ul style="list-style-type: none"> • Review Learning Objectives • PowerPoint Slides 	Allison (Katie Assist)	Week 4 Facilitators Guide
10:15	Break		
11:15	Week 4: Local Governments <ul style="list-style-type: none"> • Review Case Study • Large Group Discussion • Q&A 	Allison (Katie Assist)	Week 4 Facilitators Guide
11:15	Review: Using Canvas and Box, Resources, and Feedback	Allison and Jessica	
Noon	Adjourn		
1/21/21	Climate Change Mitigation I and II		
9:00	Recap		
9:10	Week 5: Introduction to Mitigation <ul style="list-style-type: none"> • Review Learning Objectives • Discuss what's in the Resources for Homework • PowerPoint Slides • Case Study (Ecological Footprint Calculator) • Discussion 	Allison	Week 5 Facilitators Guide and Case Study
10:15	Break		
10:30	Week 6: Local Mitigation Strategies <ul style="list-style-type: none"> • Review Learning Objectives • Overview of Homework and Questions • PowerPoint Slides • Q & A 	Allison	Week 6 Facilitators Guide
Noon	Adjourn		
1/27/21	Climate Mitigation II and Adaptation I		
9:00	Recap		
9:10	Week 6: Local Mitigation Strategies <ul style="list-style-type: none"> • Case Study • Group Activity • Q&A 	Allison	Week 6 Facilitators Guide
10:10	Break		

10:30	<p>Week 7: Introduction to Adaptation and Adaptation Planning</p> <ul style="list-style-type: none"> • Review Learning Objectives • Overview of Homework and Questions • PowerPoint Slides • Q & A 	Allison	Week 7 Facilitators Guide
Noon	Adjourn		
2/1/21	Climate Adaptation II: Local Adaptation Strategies		
9:00	Recap		
9:10	<p>Week 8: Local Adaptation Strategies</p> <ul style="list-style-type: none"> • Review Learning Objectives • PowerPoint Slides 	Allison	Week 8 Facilitators Guide
10:10	Break		
10:30	<p>Week 8: Local Adaptation Strategies</p> <ul style="list-style-type: none"> • Case Study • Group Activity • Q&A 	Mary	<p>-Week 8 Facilitators Guide</p> <p>-Case Study Materials</p> <p>-Group Activity Materials</p>
Noon	Adjourn		
2/3/21	Communication and Volunteer Projects		
9:00	Recap		
9:10	<p>Week 9: Effective Communication</p> <ul style="list-style-type: none"> • Review Learning Objectives • PowerPoint Slides • Video 	Kathy	Week 9 Facilitators Guide
10:10	Break		
10:30	<p>Week 9: Effective Communication</p> <ul style="list-style-type: none"> • Group Activity • Group Discussion • Q&A 	Kathy	<p>Week 9 Facilitators Guide</p> <p>Group Activity</p>
11:00	Week 10: Planning Volunteer Projects	Allison	Week 10 Facilitators Guide
Noon	Adjourn		
2/4/21	Volunteer Presentations, Evaluation & Recognition, and Stewards Training Evaluation		
9:00	Recap		
9:10	Weeks 11 and 12: Volunteer Projects – Presenting, Evaluation and Recognition of Volunteer Projects	Allison	-Weeks 11 and 12 Facilitators Guide

			- Materials on Box
10:10	Break		
10:30	Feedback on the Stewards Training & Next Steps	Allison Kathy	
Noon	Adjourn		

Appendix C. Participants Recruited for Training

Number	Last Name	First Name	Number	Last Name	First Name
Dutchess County			Seneca County		
1	Curlee	J.	1	Carvalho	P.
2	Duncan	F.	2	Eisman	J.
3	Kassner	K.	3	Ellison	H.
4	Kustas	C.	4	Hallock	R.
5	Mattocks	R.	5	Jastran	M.
6	McNary	D.	6	Meek	R.
7	Miner	R.	7	Mendizabal	A.
8	O'Grady	H.	8	Scott	N.
9	Persely	J.	9	Toole	M.
10	Plotnik	M.	10	VanVleet	L.
11	Severns	N.	Tompkins County		
12	Slomin	M.	1	Gifford	Kitty
Monroe County			2	Gooding	Patricia
1	Davison	M.	3	Jacobson	Nancy
2	Done	L.	4	Jones	Clare
3	Fleury	K.	5	Jurado	Samuel
4	Halstead	C.	6	Keller	Megan
5	Liapitch	D.	7	Payne	Holly
6	Maharaj	B.	8	Raymer	Annalisa
7	Martin	T.	9	Sharif	Maysoon
8	Meyer	M.	10	Wagenknecht-Wiesner	Alice
9	Rice	A.	Ulster County		
10	Romeo	K.	1	Bailey	Lynne
11	Smith	A.	2	Bartosik	Henry
12	Welch	J.	3	Hansen	Kip
13	Zeise	E.	4	Lama	Siddhartha
New York City			5	Leiching	Susan
1	Batiaeov	D.	6	Londa	Joseph
2	Brown	A.	7	Moran	Erin
3	Brown	J.	8	Peotter	Janelle

4	Gutierrez	A.	9	Percy	Valerie
5	Herlihy	P.	10	Rakov	Ian
6	Jacobson	J.			
7	Luarca-Reyes	M.			
8	Martinez Esparragoza	M.			
9	Mukhin	A.			
10	Randrianarisoa- Arnold	I.			
11	Tannen	J.	66	Total Participants Recruited	

Appendix D. Syllabus & Participants for Fall '21 Climate Stewards Training

Cornell Climate Stewards Course Syllabus Fall 2021



Course Details

- Weekly Class: Most Thursday evenings during the Fall of 2021, 6:00-8:00pm, by Zoom
- Zoom Link for Every Class: (Meeting ID: 972 0175 4774, Passcode: climate)
- <https://cornell.zoom.us/j/97201754774?pwd=ampNY2FJSXR0M2FicGdDYVZsVE5MQT09>
- Breakout groups with volunteers in your county
- Check-in meeting with County Coordinators

Course Instructor Team

Climate Stewards Program at Cornell:

- Allison Chatrchyan, amc256@cornell.edu
- Kathy Bunting-Howarth, keb264@cornell.edu
- Climate Science and Impacts: Jessica Kuonen, NY Sea Grant, jak546@cornell.edu

CCE County Coordinators:

- Dutchess and Ulster County CCEs: Hazel Robin, dr598@cornell.edu (with Carolyn Klocker, Melinda Herzog, and Jim O'Connell)
- Monroe County CCE: Christina Das, md325@cornell.edu
- New York City CUCE: Ana M. Cañas, ac2649@cornell.edu
- Seneca County CCE: Ave Bauder, bauder@cornell.edu
- Tompkins County CCE: Rachel Zevin, raz47@cornell.edu

Cornell Teaching Assistants:

- Isabella Eclipse, ime24@cornell.edu
- Gabriella D'Erasmus, gd369@cornell.edu

Course Objective and Goals

The goal of the Cornell Climate Stewards Volunteer Program is to provide research-based training on climate change science, impacts, mitigation, and adaptation for volunteers working with Cornell Cooperative Extension in New York State. Participants in the Climate Stewards Program will complete 12-weeks of online training with

volunteers from six counties throughout NY in partnership with Cornell Cooperative Extension.

After completing the training, volunteers will implement a climate change project to support their local community to become a “Climate Smart Community” in New York State. Enrolled volunteers commit to working on an individual or group community climate action project for 40 hours over a one-year period. The target audience for the program includes community members interested in addressing climate change at the local level, community leaders, local conservation advisory council members, or local municipal officials. For more information, see our website:

<https://climatestewards.cornell.edu/>

Mission & Vision

The **Mission** of the Cornell Climate Stewards Program provides cutting-edge and research-based training of volunteers who can support their communities to become “Climate Smart Communities” by planning and implementing climate change mitigation, adaptation, and education projects at the local level. The **Vision** of the Cornell Climate Stewards Program builds stakeholder capacity and works toward a future where communities are resilient in the face of a rapidly changing climate and have reduced their impacts on the climate system.

Learning Objectives

After completing the twelve-week Cornell Climate Stewards Curriculum and completing 40 hours of volunteer climate action in their community, a Cornell Climate Steward will have gained an:

- Understanding of the importance of climate change and how climate change is affecting different communities from experts at Cornell, and through peer-to-peer learning.
- Knowledge of the basics of climate change science, including the earth’s systems, greenhouse gases emissions, and anthropogenic emissions.
- Understanding of the global, national, and local impacts of climate change.
- Knowledge of the need for climate action at the local level.
- Understanding of how to interact with local government officials and organizations to efficiently work on climate change projects in the community.
- Knowledge of the concepts of mitigation, co-benefits, and mitigation strategies at a household, national and global level.
- Understanding of the concepts of adaptation, resiliency, co-benefits, and adaptation planning.
- Knowledge of local strategies for climate change mitigation and adaptation in communities.
- Ability to confidently communicate the science of climate change and the benefits of mitigation and adaptation.
- Ability to develop a detailed, robust project plan prior to implementation and understand the elements in a volunteer project plan that are essential to success.
- Gaining stronger knowledge, capacity, and a sense of self-efficacy in order to contribute to local climate change efforts.

- Understanding the next steps, project contacts, project check ins and logging of hours; and hands-on experience working on a local climate project in their community.

Getting Started & Class Policies

All of the course materials will be presented in twelve weekly Modules on our Canvas Site (<https://canvas.instructure.com/courses/2604358>), including the PowerPoint Presentation for the week, and any Resources for that session. There are several links to useful climate change resources in the Course Resources & Links page. We will send out any course updates through the **Announcements** function of Canvas and will post Discussion Questions each week using the **Discussion Board**. Please introduce yourself in the Discussion Board. For more on **How to Use Zoom**, see: <https://support.zoom.us/hc/en-us/articles/360034967471-Getting-started-guide-for-new-users>

CLASS POLICIES

Zoom Etiquette:

- Stay on Mute during the presentations; keep your Video on if possible: we like to see everyone!
- Use the Chat to ask questions, but please send materials you'd like to share to the county coordinators first so that we can double check accuracy. The Cornell Climate Stewards curriculum, links and resources have been carefully reviewed for accuracy.
- Please do not Direct Message the Instructors during the presentation - we can't answer Direct Messages and present the material at the same time!
- Please listen and participate respectfully – let everyone be heard!
- If we can't immediately answer your question, we'll get an answer to you.

The COVID Pandemic:

We are still living through an extraordinary time and are reconfiguring courses and our lives as best as we can. Please take care of yourself and communicate to us if any life issues arise during the semester that need your attention. We also ask that you be patient, flexible, and understanding of your professors and fellow students in juggling coursework and life circumstances during the ongoing pandemic. We will also do our best to be understanding and patient with all of you taking this class.

Respect for Diversity/ Inclusive Learning Environment:

It is our intent that students from all diverse backgrounds and perspectives will be well served by this course, that students' learning needs will be addressed both in class, online, and out of class, and that the diversity that students bring to this class will be viewed as a resource, strength, and benefit. The course will consider how differences in ethnicity, race, culture, socioeconomic status, etc. affect how climate change impacts different populations, and the ability of different communities to adapt and mitigate

climate change. We will develop ground rules for appropriate classroom interactions and discussions together to ensure that interactions remain civil, respectful, and supportive of diverse perspectives and backgrounds. At a minimum, we ask students to: share their experiences, values, and beliefs; be open to, and respectful of, the views of others; appreciate the opportunity that we have to learn from each other; value each other's opinions and communicate in a respectful manner; and let a member of the teaching team know if you feel that the class environment is not respectful or inclusive.

READINGS & MATERIALS

Canvas Site: All final course information (including meeting dates, readings, assignments, and discussion questions) is posted on the course Canvas page.

Please check Canvas a few days before each Thursday lecture for announcements, updates, and assignments. Meeting dates, readings, recorded lectures, and assignments may be subject to change – so please check the Canvas site often for announcements and updates. Stewards are also encouraged to post recent news articles about climate change to the Canvas site (under the discussion board) and highlight them briefly in class if we have time.

Dates for Zoom Sessions:

- Class Meets from 6:00-8:00pm most Thursdays during the Fall of 2021 (see the full schedule below).
- Zoom Link for Every Class: (Meeting ID: 972 0175 4774, Passcode: climate)
<https://cornell.zoom.us/j/97201754774?pwd=ampNY2FJSXR0M2FicGdDYVZsVE5MQT09>

Schedule and Topics for Fall 2021 Training

Date	Topic
9/9 Th	Module 1: Orientation <ul style="list-style-type: none"> - Introduction to the Program, the need for local climate action, Cornell Cooperative Extension, and local Climate Steward projects - Share your climate story
9/16 Th	<i>No Class Today: Yom Kippur</i>
9/23 Th	Module 2: Introduction to Climate Change Science <ul style="list-style-type: none"> - Understand the essential principles of the Earth’s climate system, and the basics of climate change, including greenhouse gases and anthropogenic emissions. - Know how to assess scientifically credible information about the climate and interpret graphs. - Understand how to interpret graphs - Climate Science Bingo Game
9/30 Th	Module 3: Introduction to Climate Change Impacts <ul style="list-style-type: none"> - Understand the global, national, and regional impacts of climate change. - Understand the concepts of variability and uncertainty.; and ecological grief and anxiety. - Understand the impacts on coupled natural and human systems. - Experiment with climate change data tools; and environmental justice mapping tools
10/7 Th	Module 4: Working with Local Governments & Communities <ul style="list-style-type: none"> - Review how environmental policies function at the local, state, and national levels. Understand Home Rule in New York state and the authority communities have to address climate change. - Understand the key components of New York State’s climate policies and the Climate Smart Communities program. - Research and discuss your community (Community Scoping Exercise)
10/14 Th	Module 5: Introduction to Mitigation <ul style="list-style-type: none"> - Introduction to mitigation, co-benefits, planning, and mitigation strategies at a global and local level - Participate in En-Roads Climate Simulation

	<ul style="list-style-type: none"> - Review Personal Carbon Footprint Calculator and discuss results
10/21 Th	<p>Module 6: Local Community Mitigation Strategies</p> <ul style="list-style-type: none"> - Reviewing options for NYS CSC mitigation strategies - Drawdown Game for local climate mitigation
10/28 Th	<p>Module 7: Introduction to Adaptation</p> <ul style="list-style-type: none"> - Introduction to adaptation, resilience, co-benefits, and adaptation planning processes - Review Albany, NY Climate Action Plan and Discuss the Plan
11/4 Th	<p>Module 8: Local Community Adaptation Strategies</p> <ul style="list-style-type: none"> - Reviewing options for NYS CSC Adaptation strategies - Reviewing tools for local adaptation planning and resiliency
11/11 Th	<i>No Class Today: Veterans Day</i>
11/18 Th	<p>Module 9: Communicating Climate Change Effectively</p> <ul style="list-style-type: none"> - Responding to climate skeptics - Communicating climate change with different stakeholders in a town board meeting
11/25	<i>No Class Today: Happy Thanksgiving!</i>
12/2 Th	<p>Module 10: Local Climate Steward Volunteer Projects</p> <ul style="list-style-type: none"> - Overview of Ideas for local community projects (individual or group-based); fine tuning plans for projects
12/9 Th	<p>Module 11: Presenting Volunteer Project Plans</p> <ul style="list-style-type: none"> - Volunteers present a PowerPoint presentation of their proposed community project, and receive instructor and peer feedback
12/16 Th	<p>Module 12: Evaluation and Recognition</p> <ul style="list-style-type: none"> - Review Next Steps with Climate Steward Community Projects - Plan for Future Check in meetings, Reporting Hours, Recognition
Congratulations Climate Stewards! You made it!	

Final Summary Report: Piloting the Cornell Climate Stewards Volunteer Program in New York State

Table of Registered Attendance of Participants by County and Date														
Last Name	First I.	M/F	9/9	9/23	9/30	10/7	10/14	10/21	10/28	11/4	11/18	12/2	12/9	12/16
Dutchess County														
Curlee	J.	F	P	P	P	P	P	P	P	P	P	P	P	P
Duncan	F.	F	P	P	P	P	A	P	P	P	P	P	P	P
Kassner	K.	F	P	P	P	P	P	P	P	P	P	P	P	P
Mattocks	R.	M	P	P	P	P	P	P	P	P	P	P	P	P
McNary	D.	M	P	P	A	P	P	P	P	P	A	P	P	A
Miner	R.	F	N/A	P	P	P	A	P	P	P	P	A	P	P
O'Grady	H.	F	P	P	P	P	P	P	P	P	P	P	P	P
Persely	J.	M	P	P	P	P	P	P	P	P	P	P	P	P
Plotnik	M.	F	P	P	P	P	P	P	P	P	P	P	P	P
Severns	N.	F	P	P	P	P	P	P	P	P	P	P	P	P
Slomin	M.	F	A	P	P	A	P	P	P	P	P	A	A	P
Monroe County														
Davison	M.	F	P	P	P	P	P	P	P	P	P	P	E	P
Done	L.	F	P	P	P	E	P	P	P	P	P	P	P	P
Fleury	K.	F	P	P	P	P	P	P	P	P	P	P	E	P
Halstead	C.	F	P	P	P	P	P	P	P	P	P	P	P	P
Liapitch	D.	M	P	P	P	P	P	P	P	P	P	P	P	P
Maharaj	B.	M	P	P	P	P	P	P	P	P	P	P	P	P
Meyer	M.	F	P	E	P	P	P	P	P	P	P	P	P	P
Rice	A.	F	P	P	P	P	P	P	P	P	P	P	E	P
Romeo	K.	F	P	P	P	P	E	P	P	P	P	P	P	P
Smith	A.	F	P	P	P	P	P	P	P	P	P	P	P	P
Zeise	E.	M	N/A	N/A	P	P	P	P	P	P	P	P	P	P
New York City														
Brown	J.	F	P	P	P	P	P	P	P	P	P	P	P	P
Gutierrez	A.	F	P	P	P	P	P	P	P	P	A	P	P	P
Herlihy	P.	F	P	P	A	P	P	P	P	P	P	P	P	P
Jacobson	J.	M	P	P	A (E)	P	P	P	P	P	P	P	P	P
Luarca-Reyes	M.	F	P	P	P	P	A (E)	P	P	A(E)	P	P	P	P
Martinez Esparragoza	M.	M	P	P	P	A	P	P	P	A(E)	P	P	P	P
Randrianarisoa-Arnold	I.	F	P	P	P	P	P	P	P	P	P	P	P	P
Seneca County														
Carvalho	P.	F	P	P	P	P	E	P	P	P	P	P	P	P
Eisman	J.	F	E	P	P	P	P	P	E	P	P	P	A	E
Ellison	H.	F	P	P	P	E	P	P	P	E	P	P	P	P
Hallock	R.	F	P	P	P	P	P	P	P	P	P	P	P	P
Jastran	M.	F	P	P	P	P	P	P	P	P	P	P	P	P
Mendizabal	A.	F	E	P	P	P	P	P	E	E	P	P	P	P
Scott	N.	M	P	P	E	P	P	P	P	E	E	P	P	P
Toole	M.	F	E	P	P	P	P	P	P	P	P	P	P	P
VanVleet	L.	F	E	P	P	P	E	P	P	P	P	P	P	P

Final Summary Report: Piloting the Cornell Climate Stewards Volunteer Program in New York State

Tompkins County														
Gifford	K.	<i>F</i>	P	P	P	P	P	P	P	P	P	P	E	P
Gooding	P.	<i>F</i>	P	P	P	P	P	A	P	P	P	P	E	P
Jacobson	N.	<i>F</i>	P	P	P	P	P	P	P	P	P	P	E	P
Jones	C.	<i>F</i>	P	P	P	P	P	P	P	A	P	P	E	P
Payne	H.	<i>F</i>	P	A	P	P	P	P	P	P	P	P	E	P
Raymer	A.	<i>F</i>	P	P	P	P	P	P	P	P	A	P	E	P
Sharif	M.	<i>F</i>	P	P	P	P	P	P	P	P	P	P	E	P
Wagenknecht- Wiesner	A.	<i>F</i>	P	P	P	P	P	P	P	P	P	P	P	P
Ulster County														
Bailey	L.	<i>F</i>	P	P	P	P	P	P	P	P	P	P	P	P
Lama	S.	<i>M</i>	P	P	P	P	P	P	P	P	P	P	P	P
Leiching	S.	<i>F</i>	P	P	P	P	P	P	P	P	P	P	P	P
Londa	J.	<i>M</i>	P	P	P	P	P	P	P	P	P	A	P	P
Moran	E.	<i>F</i>	P	P	P	P	P	P	P	P	P	P	P	P
Peotter	J.	<i>F</i>	P	A	P	A	P	P	P	P	P	P	P	P
Percy	V.	<i>F</i>	P	P	P	A	P	P	A	P	P	P	P	P

Legend: P = Present; A = Absent; E = Excused from the class; N/A = not applicable/not enrolled in the class yet

Certificates of Climate Stewards Completion by County



Cornell Climate Stewards Certificate of Completion



This certifies that the following Trainees from

Dutchess County

Have completed the Cornell Climate Stewards Program Train-the-Trainer course as of December 16, 2021, and are now equipped to train New York residents to become Cornell Climate Stewards in order to support local Climate Smart Community work with their municipality:

Jean Curlee, Frances Duncan, Kathryn Kassner, Richard Mattocks, David McNary,
Rosemarie Miner, Holly O'Grady, Jack Persely, Meta Plotnik, Nancy Severns, and Margaret Slomin

A handwritten signature in black ink that reads "Allison M. Chatrchyan".

Allison M. Chatrchyan,
Sr. Research Associate, Earth & Atmospheric Sciences
Program Lead

A handwritten signature in black ink that reads "Katherine Bunting-Howarth".

Katherine Bunting-Howarth,
Associate Director, New York Sea Grant
Program Co-Lead





Cornell Climate Stewards Certificate of Completion



This certifies that the following Trainees from

Monroe County

Have completed the Cornell Climate Stewards Program Train-the-Trainer course as of December 16, 2021, and are now equipped to train New York residents to become Cornell Climate Stewards in order to support local Climate Smart Community work with their municipality:

Melanie Davison, Lea Done, Kate Fleury, Carla Halstead, Dmitry Liapitch, Brandon Maharaj,
Megan Meyer, Abigail Rice, Kimie Romeo, Ashley Smith, and Eric Zeise

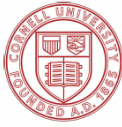
A handwritten signature in black ink, reading "Allison M. Chatrchyan".

Allison M. Chatrchyan,
Sr. Research Associate, Earth & Atmospheric Sciences
Program Lead

A handwritten signature in black ink, reading "Katherine Bunting-Howarth".

Katherine Bunting-Howarth,
Associate Director, New York Sea Grant
Program Co-Lead





Cornell Climate Stewards Certificate of Completion



This certifies that the following Trainees from

New York City

Have completed the Cornell Climate Stewards Program Train-the-Trainer course as of December 16, 2021, and are now equipped to train New York residents to become Cornell Climate Stewards in order to support local Climate Smart Community work with their municipality:

Julie-Ann Brown, Arianna Gutierrez, Patrice Herlihy, Jay Jacobson,
Marie Luarca-Reyes, Miguel Angel Martinez Esparragoza, and Irina Randrianarisoa-Arnold

A handwritten signature in black ink that reads "A. Chatrchyan".

Allison M. Chatrchyan,
*Sr. Research Associate, Earth & Atmospheric Sciences
Program Lead*



A handwritten signature in black ink that reads "K. Bunting-Howarth".

Katherine Bunting-Howarth,
*Associate Director, New York Sea Grant
Program Co-Lead*



Cornell Climate Stewards Certificate of Completion



This certifies that the following Trainees from

Seneca County

Have completed the Cornell Climate Stewards Program Train-the-Trainer course as of December 16, 2021, and are now equipped to train New York residents to become Cornell Climate Stewards in order to support local Climate Smart Community work with their municipality:

Patricia Carvalho, Jaclyn Eisman, Hollie Ellison, Rachel Hallock,
Margaret Jastran, Anisa Mendizabal, Nathan Scott, Maura Toole, and Laura VanVleet

A handwritten signature in black ink that reads "Anichatrchyan".

Allison M. Chatrchyan,
Sr. Research Associate, Earth & Atmospheric Sciences
Program Lead

A handwritten signature in black ink that reads "Katherine Bunting-Howarth".

Katherine Bunting-Howarth,
Associate Director, New York Sea Grant
Program Co-Lead





Cornell Climate Stewards Certificate of Completion



This certifies that the following Trainees from

Tompkins County

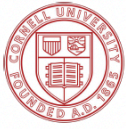
Have completed the Cornell Climate Stewards Program Train-the-Trainer course as of December 16, 2021, and are now equipped to train New York residents to become Cornell Climate Stewards in order to support local Climate Smart Community work with their municipality:

Kitty Gifford, Patricia Gooding, Nancy Jacobson, Clare Jones, Holly Payne,
Annalisa Raymer, Maysoon Sharif, and Alice Wagenknecht-Wiesner

Allison M. Chatrchyan,
Sr. Research Associate, Earth & Atmospheric Sciences
Program Lead

Katherine Bunting-Howarth,
Associate Director, New York Sea Grant
Program Co-Lead





Cornell Climate Stewards Certificate of Completion



This certifies that the following Trainees from

Ulster County

Have completed the Cornell Climate Stewards Program Train-the-Trainer course as of December 16, 2021, and are now equipped to train New York residents to become Cornell Climate Stewards in order to support local Climate Smart Community work with their municipality:

Lynne Bailey, Siddhartha Lama, Susan Leiching,
Joseph Londa, Erin Moran, Janelle Peotter, and Valerie Percy

A handwritten signature in black ink, appearing to read "A. Chatrchyan".

Allison M. Chatrchyan,
Sr. Research Associate, Earth & Atmospheric Sciences
Program Lead

A handwritten signature in black ink, appearing to read "K. Bunting-Howarth".

Katherine Bunting-Howarth,
Associate Director, New York Sea Grant
Program Co-Lead



Appendix E. Program Oversight and Evaluation

Appendix E1. Table of Dates of Check in Meetings of the Full Cornell, NYS Grant, and Extension Team

Date	Meeting
Feb 24, 2021	Team Check-in
Feb 25, 2021	Team Check-in
Mar 29, 2021	Team Check-in
April 26, 2021	Team Check-in
May 5, 2021	Team Check-in
May 24, 2021	Team Check-in
May 25, 2021	Team Check-in
May 26, 2021	Team Check-in
Jun 8, 2021	Team Check-in
Jun 11, 2021	Team Check-in
Jun 21, 2021	Team Check-in
Jun 22, 2021	Team Check-in
Jul 8, 2021	Team Check-in
Jul 12, 2021	Team Check-in
Jul 26, 2021	Team Check-in
Aug 2, 2021	Team Check-in
Aug 3, 2021	Team Check-in
Aug 10, 2021	Team Check-in
Aug 12, 2021	Team Check-in
Aug 30, 2021	Team Check-in
Sep 7, 2021	Team Check-in
Sep 9, 2021	Team Check-in and Training
Sep 14, 2021	Team Check-in
Sep 23, 2021	Team Check-in and Training
Sep 30, 2021	Team Check-in and Training
Oct 6, 2021	Team Check-in and Working Meeting
Oct 7, 2021	Team Check-in and Training
Oct 14, 2021	Team Check-in and Training
Oct 18, 2021	Team Check-in
Oct 21, 2021	Team Check-in and Training
Oct 28, 2021	Team Check-in
Nov 1, 2021	Team Check-in
Nov 4, 2021	Team Check-in and Training
Nov 10, 2021	Team Check-in
Nov 18, 2021	Team Check-in and Training
Dec 2, 2021	Team Check-in and Training
Dec 6, 2021	Team Check-in

Dec 9, 2021	Team Check-in and Training
Dec 13, 2021	Team Check-in
Dec 16, 2021	Team Check-in and Training
Jan 18, 2022	Team Check-in
Feb 7, 2022	Team Check-in
Mar 7, 2022	Team Check-in

Appendix E2. Report of Evaluation Data for Participants from each County

#	Question	Pre-Survey Response Rate (n=67)	Post-Survey Response Rate (n=48)	Change between Surveys
1	How much do you feel you know about climate science?	- Medium Amount 49%	- Quite a Bit 58%	<i>Increase in knowledge.</i>
5	How sure are you that climate change is happening	- Completely Convinced 92.7% - I don't Know 2.9%	- Completely Convinced 93.7% - I don't Know 0%	<i>Increase in understanding; decrease in the number that aren't sure if climate change is happening.</i>
6	If climate change is happening, do you think it is caused mostly by human activities, or caused mostly by natural changes in the environment?	- I don't know 4.35%	- I don't know 2%	<i>Decrease in the number that don't know the anthropogenic causes of climate change</i>
12	Which of the following is the greenhouse gas that we are most concerned about when we think of climate change?	- Correct Answer (carbon dioxide) 72.46%	- Correct Answer (carbon dioxide) 91.5%	<i>Increased understanding of science concept</i>
13	The difference between weather and climate is:	- I don't know 7.25%	- I don't know 2.0%	<i>Increased understanding of science concept</i>
25	Which one of the following do you think contributes most to global climate change?	- Correct Answer (burning fossil fuels) 76.4%	- Correct Answer (burning fossil fuels) 85%	<i>Increased understanding of science concept</i>
27	What actions has your local climate change community/municipality taken?	- I don't know 19%	- I don't know 8.7%	<i>Increase in understanding of the lay of the land on local community action</i>

29	I feel comfortable/confident in my ability to plan and implement a local climate change project in my community.	- Somewhat Confident 46%	- Somewhat Confident 58.7%	<i>Increase in volunteer comfort in working on a local climate project</i>
30	I have a clear sense of which local individuals, agencies, and/or organizations are involved in climate change work in my community and/or state.	- Very Clear Sense 4.5%	- Very Clear Sense 28%	<i>Increase in volunteer knowledge of local individuals, agencies, and/or organizations are involved in climate change work</i>
40	Do you feel well connected to a community of like-minded individuals who are working on climate change at the local level?	- Very well connected 19.4%	- Very well connected 36.96%	<i>Increase in volunteer connection to like-minded individuals</i>

Pre-Assessment Participant Input: Open Ended Question Results:

What do you hope to get out of this program?

- Learn how to become more pro-active in community & regional climate mitigation work
- Knowledge and a way to help
- Credibility :) useful information I can apply at a local level
- I would like to better assist my community in developing a climate change action plan (CSC), understand more about what I and other individuals can do working together and alone, and communicate that to others.
- More understanding of the CDC action steps.
- Knowledge and skills to support the Lodi CSC
- Lots of tools for engaging skeptics!
- Increased knowledge on how to mitigate climate change within my community. Knowledge to help whomever I can
- A better understanding of climate change and actions I can take to make change.
- strong understanding of climate change and the ability to message it
- Info
- A deeper understanding of how I can get be a better steward to mother earth.
- Strategies to communicate climate change-related topics to my community and to improve my understanding of climate science and climate mitigation strategies.

- Educated
- More trees planted in several square mile area.
- How to get involved in the community
- Enough education to educate others
- Learn more about climate change and how my family and I can help combat it
- To learn how to better communicate climate change solutions to my local community
- Networking
- Better understanding of Climate Change. Opportunity to help implement Climate Change activities. Make my grandchildren proud of me.
- Become part of a critical mass of local people acting constructively on climate change mitigation. 2. Link my work with UN & global networks of Learning Cities/Localities addressing climate change with local action
- Professional Scientific Information to Discuss and Train others about Climate Change and How to Reduce It
- You become more conversant with climate science so that I can convey this to others more accurately, as a starting point for individual and collective action
- Have more productive conversations with climate change skeptics and change hearts and minds.
- I am interested in getting involved in the community - both the school community by starting a climate club and the larger Seneca County community
- Experience in order to offer it in our county
- I hope to improve the climate education that Impact Earth's staff and customers receive from us. i.e., to better inform the Rochester community.
- Learn about my local community and create a project that will have lasting impact
- Reestablish local community garden
- Learning much more about client science in order to communicate with community member and plan actions that are reasonable and measurable regarding mitigation of climate changing problems.
- I hope to help the community and work with other people
- Actionable ways to make an impact
- How to help my community connect to meaningful actions that would mitigate adverse effects of climate change.
- Objective sharable information to be a positive change agent for a more sustainable future my community and stronger resiliency for my community and the issues we face today
- To be able to develop a plan for maintenance and protection of wetlands.
- I hope that this program will give me the knowledge and tools to communicate effectively about climate change, the causes, the impacts, and the possible mitigation actions
- Better tools to implement local legislation to reduce carbon emissions
- Learning how to work with local community stakeholders and town resources to advance mitigation of climate change!
- Confidence to take on more community action.

- I hope to learn enough to speak comfortably to people in my community about climate change and what individuals can do as well as how to support government programs and policies to mitigate climate change..
- To be able to communicate with people and agencies with confidence about what can be done to successfully slow down the climate change.
- A better understanding of climate change and what I can do about it
- Community strategies to prevent, respond, mitigate, and recover from climate change impact
- The ability to help affect climate change in urban environments.
- I hope to learn how to better communicate with others about and take collective action to address climate change.
- A better understanding of climate change & how to mitigate.
- learn more about what to do about climate change
- To be able to help citizens have a pragmatic understanding and approach to the Climate Change question
- I want to better understand the mechanics of climate change so I can effectively communicate and learn what resources are available so I can take advantage of them and hopefully share them with my community.
- Ability to motivate folks to adopt climate beneficial practices
- Ability to explain climate change and motivate change.
- I would like to learn and understand what can be done locally and help to mitigate climate change.
- Ability to make meaningful change in my local community.
- How to better engage with local level community to communicate impacts of climate change and developing locally suitable adaptation and mitigation strategies.
- I want to know how to take effective community action against climate change / in preparation of climate change.
- To improve my communication skills and knowledge to engage other to fight climate change
- Enough knowledge to speak confidently on the topic to others
- Learn how I can help
- Not sure yet.....help communities and raise awareness
- A better understanding of local solutions and 2. an association with CCE that will enable me to go talk with farmers about climate solutions.
- I want to become someone who can talk to climate skeptics (like members of my own family). I want to have the latest science at my disposal to talk to others and do what I can to help address this problem that affects us all.
- A better understanding of what programs are already in progress and where people need help connecting dots between interest and action (and how I can help do that).

Post-Assessment Participant Input: Open Ended Question Results:

Did you achieve what you hoped to out of this program?

1. Yes
2. Yes
3. *For the time spent I did not gain as much as I had hoped. I felt that the material was not presented at a high enough level.*
4. *Generally - I wanted to learn more and connect with others in the community. I did learn more, but it was challenging to connect with others in the community at the pre-determined 6pm time every week due having to care for my young child.*
5. Yes!!! Through the program I found a meaningful way to volunteer.
6. Yes, Great Job!
7. I have a better understanding of climate change and the CSC program
8. Yes!
9. *Somewhat. I thought we would have more on working within the climate smart framework and process*
10. Yes, I was mainly hoping to connect with local stewards to collaborate with and this has done that! I knew a good portion of the content that we learned.
11. Yes, the breakout groups were a great way to communicate with locals on like-minded efforts.
12. Yes - excellent
13. Yes, I learned a lot about climate change and deepened my connection and love of the Earth community.
14. *Would like to have a clearer handle on the technical information. It's now a jumble in my brain.*
15. Yes
16. Yes
17. Yes
18. No
19. *To a certain degree*
20. *Somewhat— it would have been helpful to have a list of projects in my breakout group upfront from day 1 to think through how a project could support something already in progress*
21. Yes.
22. Yes
23. *Somewhat*
24. Yes
25. Yes
26. Yes
27. Yes!
28. Yes....I got connected with the New Paltz CSC Committee
29. Yes
30. Yes
31. Yes
32. Yes

33. Yes, I have a better understanding of the depth of the climate change science. Also, I have a sense that I can support community projects even if I am not a scientist. There are opportunities to address climate change for everyone who is interested and motivated to help!
34. *Out of the lecture parts, yes. Out of the county group parts, always seemed a bit rushed/the same people talking, little room for real discussion and interaction.*
35. Yes
36. Yes
37. Yes.
38. Yes I did
39. Yes
40. Yes, although I was hoping to make more personal connections than were possible on Zoom.
41. I loved this program. I still have a lot to learn but this was a great, well organized, and well- presented program that has motivated me and set me on a path to community engagement and advocacy.
42. I was glad to be connected to a community of folks who can act as a support network for carrying out climate change actions at the community scale.
43. Yes

Appendix E3. Outreach and Information Sharing: Presentation to the Cornell Climate Change PWT was made on September 28, 2021



Cornell Climate Change Program Work Team Meeting:

Launching the Cornell Climate Stewards Program

September 28, 2021, 9:00-10:00am



Cornell University

**Cornell
Cooperative
Extension**



Today's Agenda

- 9:00-9:05: Introductions: Ave Bauder
- 9:05-9:18 Overview of Climate Stewards: Allison Chatrchyan and Kathy Bunting Howarth
- 9:18-9:25 Dutchess and Ulster County CCE: Carolyn Klocker
- 9:25-9:30 Monroe County CCE: Christina Das
- 9:30-9:35: NYC Extension: Ana M. Cañas
- 9:35-9:40: Seneca County CCE: Ave Bauder
- 9:40-9:45: Tompkins CCE: Rachel Zevin
- 9:45-10:00: Q/A & Discussion



- Use the Chat to Ask Questions; stay muted
- Discussion and Q/A at the end