USDA Northeast Climate Hub
U.S. DEPARTMENT OF AGRICULTURE

NEEDS ASSESSMENT OF NRCS STAFF

CLIMATE CHANGE MITIGATION OUTREACH AND EDUCATION | PHASE 1 | JUNE 2025

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In alignment with USDA, the Northeast Climate Hub develops and delivers science-based, region-specific information to agricultural and natural resource managers. In doing so, the Hub improves resiliency, increases productivity, and supports local communities. To provide key information and technologies to stakeholders, the Northeast Climate Hub partners with other USDA agencies, universities, non-profit organizations, state and private partners, as well as with tribes, and federal, state, and local organizations.

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Summary

The Climate Change Mitigation Outreach and Education (CCMOE) project utilizes the USDA Climate Hubs to support USDA Natural Resources Conservation Service staff so that they can better service farmers and forest managers.

This report describes the results from the needs assessment (Phase 1), and identifies NRCS staff needs, limitations, and preferences.

In Phase 1, a needs assessment was done through listening sessions with USDA Natural Resources Conservation Service (NRCS) staff across the Northeast to identify their needs, knowledge gaps, and preferred learning formats. The assessment found that planners need support with technical skills, confidence when communicating about climate science, and more knowledge about the benefits from practices on the FY25 CSAF Activities List.

Based on Phase 1 results, future work (Phases 2 and 3) will include the creation of tiered training and new materials like factsheets and success stories. Specific guidance for energy and agro-forestry practices will be developed, and will address how CSAF practices provide economic and environmental benefit. Other products will include tools to streamline energy-related planning, success stories from other planners, and quick reference guides to help planners make more confident decisions when they are not familiar with a CSAF practice.

MT. TOBY FARM, IN SUNDERLAND, MA WORKED WITH USDA NRCS TO CREATE THEIR CONSERVATION PLAN THAT INCLUDES THE USE OF (512) PASTURE AND HAY PLANTING TO ESTABLISH THEIR COOL SEASON GRASSES IN A CROP FIELD.

Project Goal

The goal of CCMOE is to support NRCS with climate-related outreach and education so that staff can better service Northeast farmers and forest managers.

Through CCMOE, staff will gain the skills and confidence to help regional land managers implement practices that can help reduce their operational risk while also maintaining farm and/or forest productivity.

1

PHASE 1

Listening sessions to learn NRCS staff needs, limits, and preferences.

2

PHASE 2

Create and share training materials developed based on the needs found in Phase 1.

3

PHASE 3

Investigate ways to help NRCS address economic benefit and operational resilience.

SANG LEE FARMS CO-OWNER WILLIAM LEE AND DISTRICT CONSERVATIONIST, LIZ CAMPS, LOOK OVER A RECENLTY INSTALLED ACCLIMA SOIL MOISTURE SENSOR FOR IRRIGATION WATER MANAGEMENT ON THE FARM IN PECONIC, NY.

Methods

Listening Sessions

To better understand what NRCS staff need, a role-type analysis was done to determine how different roles within NRCS can be supported. This strategy was based on a similar analysis done by the Office of Sustainability and Climate for the USDA Forest Service. Listening sessions were held with various groups within NRCS, and listening session guests were asked a series of five questions (**Appendix: Table 1**). Listening sessions were hosted on Microsoft Teams, and all calls were recorded.

The two groups involved included NRCS Climate Points of Contact (POC) or state-level management and technical experts, and NRCS District Conservationists or Field Staff. POCs from across eleven states in the Northeast took part in listening sessions in July 2024. These conversations gave insight on leadership's perspective of staff needs. To get a broader picture, listening sessions with 65 Field Staff from ten Northeast states took place in August, 2024. Conversations with Field Staff gave insight into what was needed by staff working directly with regional land managers.

Data Analysis

Transcripts from POC and Field Staff listening sessions were reviewed using a Gap Analysis. A multi-criteria scoring tool (**Appendix: Table 2**) was used to give each state a score on 22 climate topics, skills, and proficiencies. The scores from all states were then averaged and compared to the ideal score for each category. The **Results** of the Gap Analysis are shown in Charts 1 through 6.

A Thematic Analysis was also done on transcripts. Each was analyzed for common themes. Topics that came up at least three times in a conversation were considered a theme for that state. If a topic was a theme in three or more states, it was added to the **Top Topics List**. Separate lists were made for Climate POC and Field Staff listening sessions (**Table 3**).

Timeline
(2024 - 2025)

1. JULY
   Interviews with POCs
2. AUGUST
   Interviews with Field Staff
3. SEPTEMBER
   Data Analysis
4. OCTOBER - DECEMBER
   Training Development
5. NOVEMBER - DECEMBER
   National and Regional NRCS Leadership Presentations
6. DECEMBER - APRIL (2025)
   Agroforestry Sessions
7. DECEMBER - JUNE (2025)
   Energy Guidance Planning and Development

● Phase 1
○ Phase 2

I think energy has been a consistent challenge... in terms of our staff, just having that knowledge base of those practices is something that is definitely lacking.

TRACTOR SEEDING INTO NO-TILL FIELD WITH LIVING COVER CROP
PHOTO BY NH STATE AGRONOMIST FOR USDA NRCS, CHAD COCHRANE

Results

The data analysis showed three main areas of support needed by NRCS in the Northeast.

It also showed that POCs and Field Staff have different views. For example, Field Staff showed less need for technical and analytical skills, but had larger gaps in confidence and communication compared to POCs.

1. NEED 1
   Technical and analytical skills
2. NEED 2
   Confidence and communication skills
3. NEED 3
   Foundational knowledge

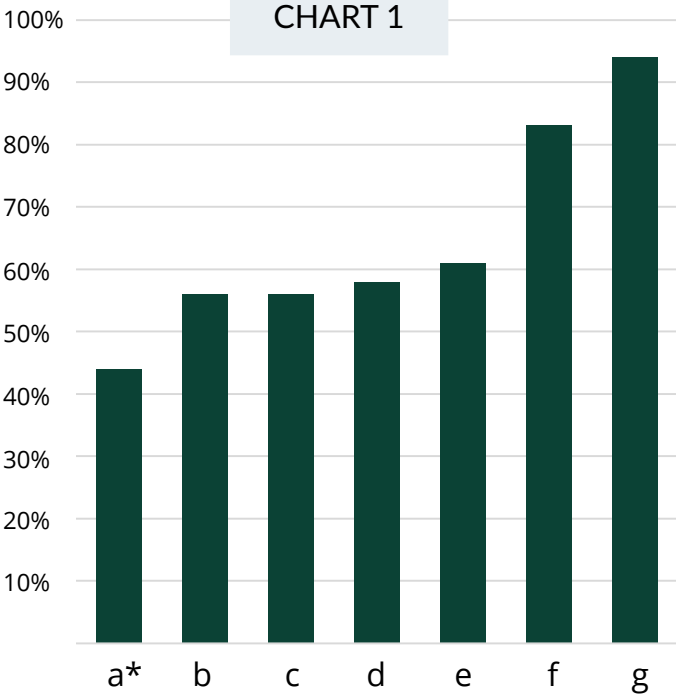
SUMMARY OF KEY NEEDS IDENTIFIED BY NEEDS ASSESSMENT	
Need	Description
Different Roles Need Different Support	Training and tools should be tailored to the specific needs of specialists, Field Staff, and new employees.
Planners Need Help with Climate Science Communication	Discussing climate science is hard. Planners want support with getting a deeper understanding of the science and better ways to talk about climate change and mitigation.
Reasons for Hope	Planners have a strong desire to understand the practice benefits. Many are overwhelmed by the workload and are unclear about how CSAF practices help producers. Better understanding of the short-term and long-term benefits can help them stay motivated.
Energy	More guidance needed on energy practices for all NRCS roles.
Agroforestry	More guidance needed on agroforestry practices for all NRCS roles.

Technical and Analytical Skills

Field Staff

The biggest skill gap was planner inability to navigate narratives, contracts, supporting practices, and scenarios related to the practices on the CSAF list. Planners also struggled with understanding the mitigation benefits of CSAF practices, and knowing what is needed for best results, especially in agroforestry, livestock, and energy.

CHART 1

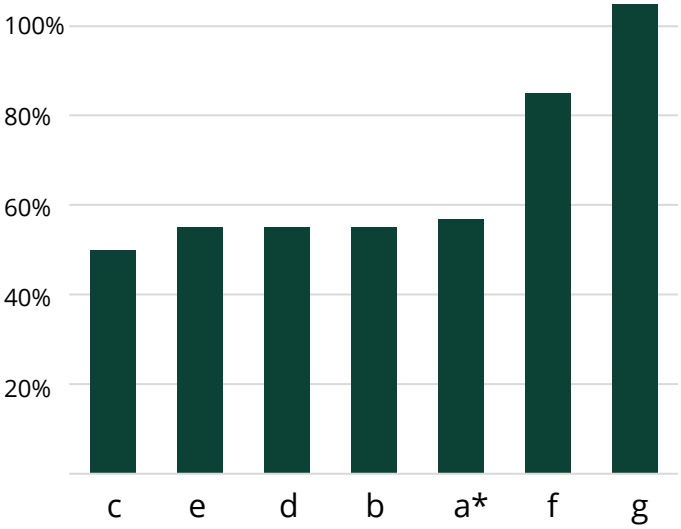


(a) Navigating Narratives, Contract, and Scenarios
*Guidance clarified in FY25
(b) Considerations for Agroforestry
(c) Ability to Assess for Mitigation

Climate Points of Contact

POCs felt that the biggest skill gaps were related to understanding how CSAF practices help reduce greenhouse gases, and knowing what's needed for successful use of practices in agroforestry, livestock, and energy. The next biggest gap was the ability to work with narratives, contracts practice scenarios and support tools. This is different from the Field Staff, who saw this as the biggest gap. Both groups agreed that planners are much stronger at understanding practices for forest and crop production.

CHART 4



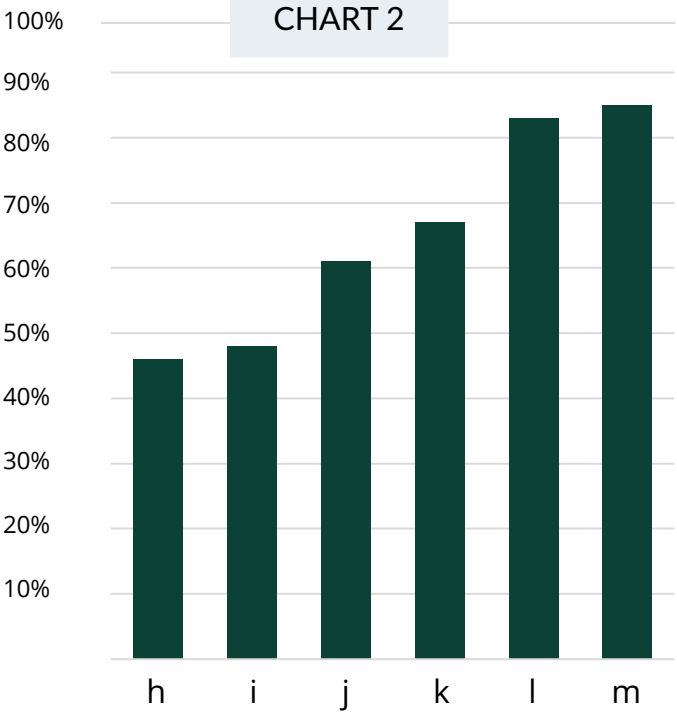
(d) Considerations for Livestock Farmers
(e) Considerations for Energy
(f) Considerations for Forest Owners
(g) Considerations for Crops

Confidence and Communication Skills

Field Staff

Planners felt least confident talking about climate change and believing that CSAF practices mitigate greenhouse gasses. Confidence gaps were identified in explaining the benefits of CSAF practices and discussing with producers when a practice is a good fit. Planners said they need better understanding of the economic benefits of CSAF practices to support producer decision making. Overall, planners feel confident implementing most CSAF practices, but not all. Many are uncomfortable planning practices that have been underused in their states.

CHART 2

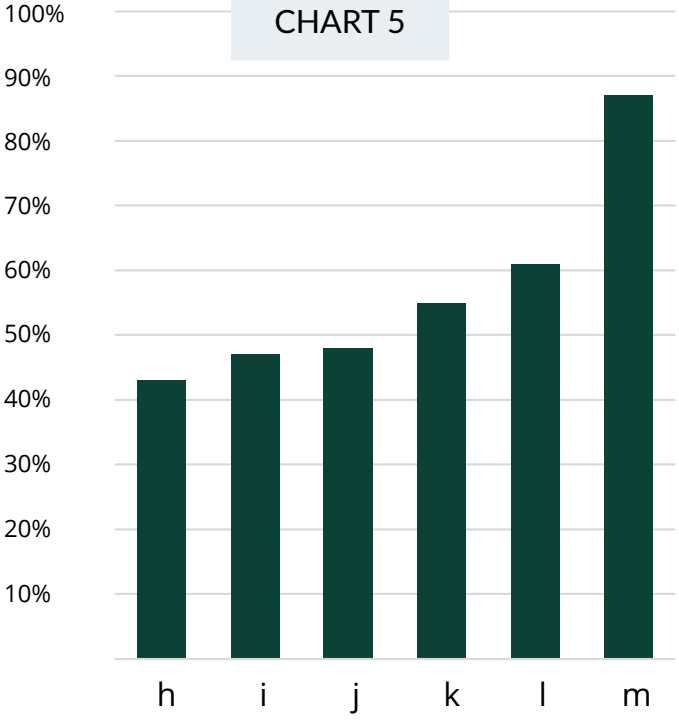


(h) Climate Communication
(i) Reasons for Hope
(j) Benefits and Co-Benefits
(k) Selling the Practices

Climate Points of Contact

Like Field Staff, POCs said planners need the most help with talking about climate change and feeling confident that CSAF practices have mitigation benefits. They said that planners struggle with explaining the benefits and co-benefits of practices, selling the practices to producers, and understanding and discussing economic benefits of practices. Planners are fairly comfortable with planning and implementing most practices, but some are uncommon in the region. POCs said overall comfort implementing practices is just below the ideal level.

CHART 5



(l) Economic Benefit of Practices
(m) Planning and Implementing

Foundational Knowledge

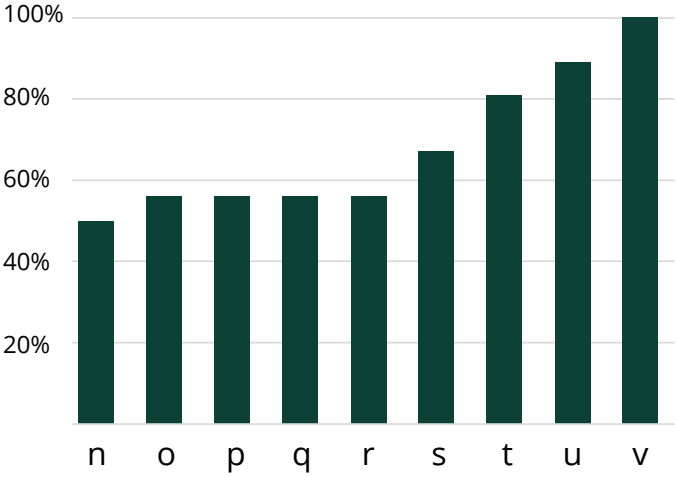
Field Staff

Most planners have a good understanding of basic climate science and could talk about how and why the climate is changing. However, they are less sure about mitigation benefits, how the carbon and nitrogen cycles work, and how biodiversity and soil health connect with climate change. Their understanding of climate models and science overall was at a sufficient level.

Climate Points of Contact

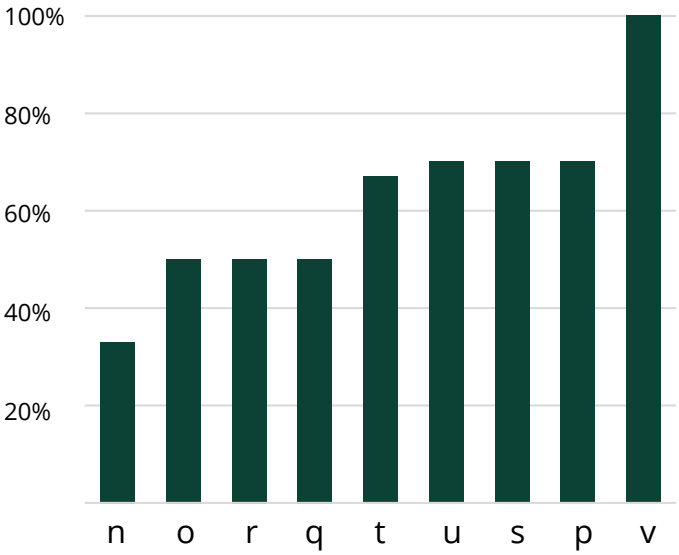
POCs said the biggest knowledge gaps were in understanding how CSAF practices reduce climate change, and how the nitrogen cycles and carbon cycles work. POCs felt planners did not have a sufficient understanding of how and why the climate is changing, and how biodiversity and soil health affect climate change. They agreed that planners do have sufficient general understanding of climate science and models.

CHART 3

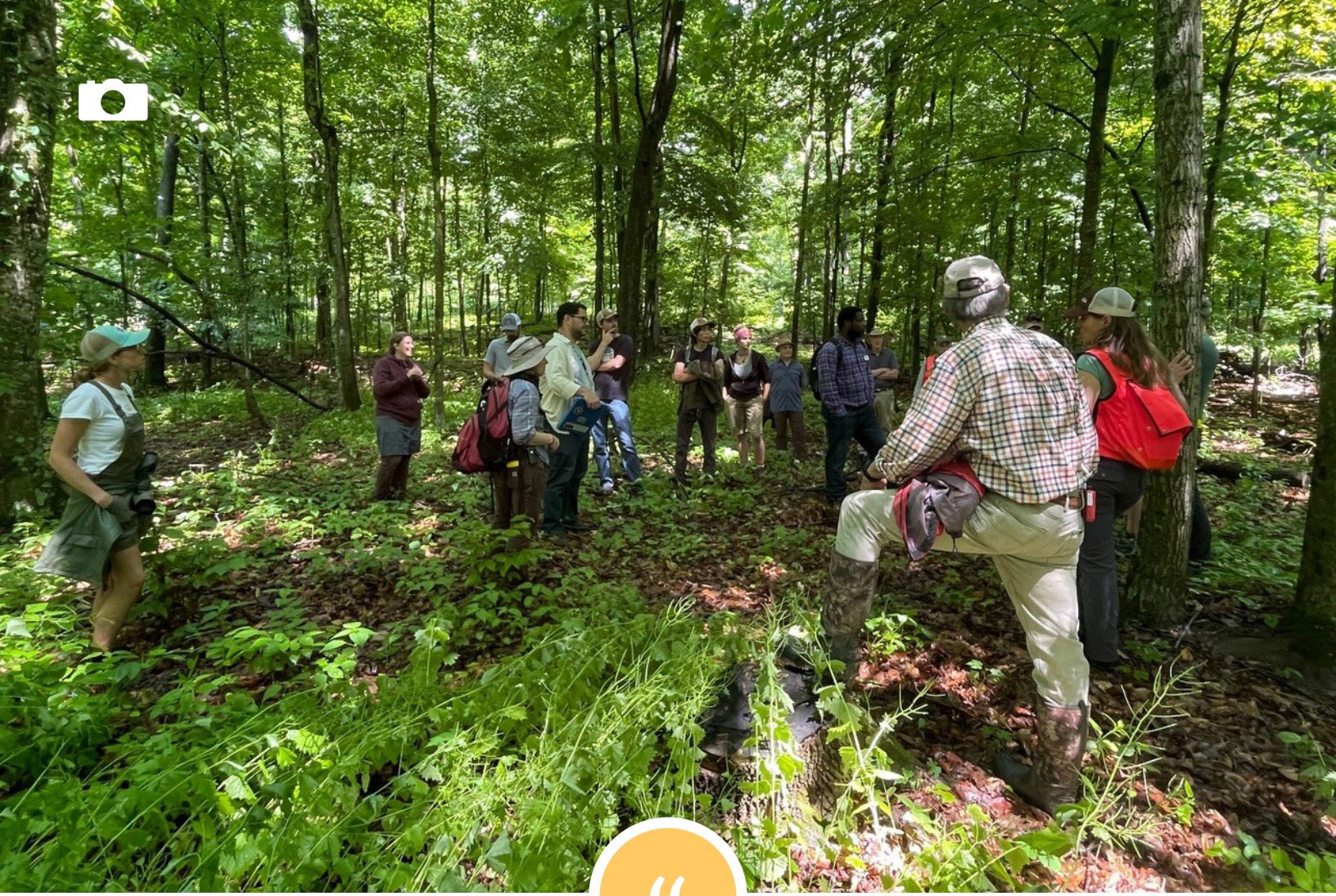


(n) Climate Change Mitigation
(o) Carbon Cycle
(p) Impact of Biodiversity on Climate
(q) Mitigation Potential
(r) Nitrogen Cycle
(s) Impact of Soil Health on Climate

CHART 6



(t) How is the Climate Changing?
(u) Why is the Climate Changing?
(v) Climate Change and Models



My staff have asked for some training on forest farming... it's a big subject within the small farming community.

Top Topics

Table 3. Top Topics List

Themes from listening sessions and the number of states that each theme came up in.

FIELD STAFF		CLIMATE POINTS ON CONTACT	
Description	# of States	Description	# of States
Energy Practice Guidance	7	Agroforestry/Forestry	7
Climate Change Communication	5	Climate Change Communication	6
Climate Change and Mitigation Basics	5	Tiered Training	6
Economic Benefits Sell Practices	5	Navigating Narratives, Scenarios, and Supporting Practices	5
Benefits and Co-Benefits of Practices	5	Technical Service Providers	5
Better Communication with National Leadership	4	Planners are Overwhelmed	4
Storytelling	4	Energy Guidance	3
Planners Want ‘Why’	3	Planners Want ‘Why’	3
Technical Service Providers	3		
Agroforestry Practices	3		

Top Shared Themes

Energy Practice Guidance

Field Staff said they need help with energy-related CSAF practices. Many have received outdated training, have limited guidance from their state, and/or low familiarity with the practices. While this was one of the top needs from the Field Staff perspective, this was only a 'Top Topic' in a few POC conversations.

Climate Change Communication

Both Field Staff and POCs said NRCS staff have strong relationships with producers, but need help starting and then navigating conversations about climate change.

Planners Want 'Why'

Field Staff and POCs noted that planners with science backgrounds want to know why a practice is on the list and how it works in real life.

Techincal Service Providers (TSPs)

POCs and Field Staff highlighted a need for more TSPs in the region to do energy audits and help with energy/agroforestry practices.POCs suggested that TSPs be trained with NRCS staff to make working together more nimble.

Agroforesty Practices

While planners are comfortable with forestry, many said that agroforestry is newer and more guidance is needed to confidently talk about and implement those practices. This was noted by POCs and Field Staff, but at different levels. POCs felt that it would be a top priority, while Field Staff felt it was a lower priority.

Top Field Staff (Left) and POC (Right) Themes

Mitigation Basics

Field Staff noted planners often lack confidence in understanding how mitigation works. Some suggested more training on the science and mechanisms behind the practices

Economic Benefits

Field Staff highlighted a need for better information about the economic value of CSAF practices. Planners are hesitant to promote them without knowing how they benefit producers financially.

Storytelling

Field Staff emphasized the value of learning from eachother. Hearing real examples of success from other planners is one of the best ways that staff said they learn.

Understanding the Benefits and Co-Benefits

Field Staff said planners want to better understand CSAF practice benefits so they can recommend them more effectively.

Communication with National Leadership

Field Staff often have questions only National Leadership can answer. They want better communication and coordination to remove barriers faster.

Tiered Training

Climate POCs noted that multiple staff positions are involved in working on CSAF practices. Ideally, each would work with producers who match their specific focus and needs.

Planners are Overwhelmed

POCs mentioned that many of their planners felt overwhelmed by the large amount of funding tied to CSAF practices. With so many responsibilities already, they worried about whether they could implement enough practices to spend the money in time.

Navigating Narratives, Scenarios and Supporting Practices

POCs felt that a significant need was supporting planners with the difficult planning process associated with the CSAF list. Hurdles in connecting all the dots related to CSAF often stall progress and slow implementation.

The real world cost of energy improvements are quite a bit higher than our financial assistance and the farms are running into some issues as far as affordability.

Future Work

Technical Training

Technical training will reduce challenges associated with energy and agroforestry for field staff and specialists. Information from training will be delivered in a way that encourages attendees to bring it back to their offices.

> *A series of agroforestry sessions will help planners understand forest farming, alley cropping, windrows, and silvopasture. Sessions will discuss when a practice is right for a producer, how to implement, and how to address common challenges.*

> *Energy training will bring updated information on energy efficiency, how to reduce energy use, and how to use decision making tools to choose the right practices for a producer.*

Factsheets and Technical Guides

Quick reference guides will help planners make confident decisions in the planning process, especially when they are unfamiliar with a practice.

> *An energy guide tool will help planners evaluate energy needs, select the best practices for a producer, and plan more efficiently with step-by-step support.*

Tiered Training

Tiered training will be created for three distinct groups within NRCS; Specialists, Field Staff, and new staff.

New Materials

Factsheets, stories, and training will bring climate change related training, technical training, and additional guidance on CSAF practices.

Reasons for Hope

Creation of a training focusing on the science behind the CSAF list, showing how practices reduce climate impacts, and how they benefit producers. This will help planners feel more energized, confident, and connected to the work surrounding CSAF practices.

Storytelling

Real-life examples will show how CSAF practices have worked, what challenges were overcome, and how planners helped producers succeed.

Note: Outputs were put on pause from January to April 2025 due to administrative directives. They restarted mid-April 2025.

Appendix

TABLE 1: CLIMATE POC AND FIELD STAFF LISTENING SESSION INTERVIEW QUESTIONS

	CLIMATE POC QUESTIONS	FIELD STAFF QUESTIONS
1	What type of training do you think is needed related to climate change mitigation or implementing CSAF practices in your states?	What type of training do you think is needed related to climate change mitigation or implementing CSAF practices in your states?
2	What have you heard about how NRCS staff are allocating IRA funds and implementing CSAF practices in the state? Any particular successes or challenges?	Tell me about implementing CSAF practices in your state – What success have you had? What are the greatest challenges? Can you describe a few creative ways planners have found to allocate funds?
3	What climate-related training(s) have current NRCS staff in your region received? How comfortable do you think current NRCS staff in your state are with climate change mitigation science and CSAF practices?	What climate-related training(s) have current NRCS staff in your region received? How comfortable do you think NRCS staff in your state are with climate change mitigation science and CSAF practices?
4	We are trying to assess the needs of NRCS, who else do you think we should be talking to? Which roles within NRCS would be the right audience for training(s) and support tools? And what aspects of their job are best to target?	Which categories on the CSAF list are most challenging for planners? Relevant Scenarios? Useful Narratives?
5	Tell me about a climate project or program you've worked on recently with NRCS staff? What skills were most important for your success? What thoughts or tips do you have that might help set us up for success?	What do you think are the types of support NRCS staff in your states need to more effectively allocate CSAF practices in your states?

TABLE 2: MULTI-CRITERIA SCORING TOOL FOR CLIMATE CHANGE AND CLIMATE CHANGE MITIGATION LITERACY TOPICS

Category	Topic Title	Description of Expected Competency and Knowledge
Foundational Knowledge	Climate Change Mitigation	Planners have significant understanding of climate change mitigation methods and can make planning decisions to support effective mitigation projects.
	Mitigation Potential	Some knowledge of the degree to which CSAF practices can mitigate climate change.
	Nitrogen Cycle	Basic familiarity with the nitrogen cycle and its mechanics. Some ability to apply concepts to real-world decision making.
	Carbon Cycle	Basic familiarity with the carbon cycle and its mechanics and real-world application.
	How is the Climate Changing?	Can discuss and answer questions about how the climate has changed and impacts on producers, as well as future climate changes and impacts on producers.
	Why is the Climate Changing?	Has basic familiarity with anthropogenic climate change concepts.
	Climate Change and Models	Has little understanding of the science behind anthropogenic climate change. Is aware of models, but has little understanding of how they work.
	Impact of Soil Health on Climate	Soil health impact on GHG reduction and sequestration are concepts planners utilize frequently in work and feel comfortable discussing and making decisions on.
	Impact of Biodiversity on Climate	Biodiversity's impact on GHG reduction and sequestration are concepts that planners utilize frequently in their work and feel comfortable discussing and making decisions on.

Category	Topic Title	Description of Expected Competency and Knowledge
Confidence and Communication Skills	Reasons for Hope	Planners are able to highlight the specific ways that climate change mitigation practices can support the reduction of climate change and can see a direct correlation between their work and the future climate benefits.
	Benefits and Co-benefits	Planners are able to identify and discuss benefits and co-benefits for most CSAF practices.
	Planning and Implementing	Understands CSAF practices and can plan and implement them to effectively receive climate benefits with few questions.
	Climate Communication	Planners are able to discuss climate change and climate change mitigation with a high level of competency.
	Selling the Practices	Able to communicate about the practices on the CSAF list and able to highlight additional benefits and co-benefits of the practices.
	Economic Benefits of Practices	Planners have a moderate level of knowledge of economic benefits of CSAF practices.
Technical and Analytical Skills	Ability to Assess for Mitigation	Moderate level of knowledge of CSAF practice and mechanisms enables planners to assess for mitigative benefits for some practices.
	Considerations for Forest Owners	Moderate ability to identify particular considerations necessary for effectively implementing forest-related CSAF practices.
	Considerations for Energy	Moderate ability to identify particular considerations necessary for effectively implementing energy-related CSAF practices.
	Considerations for Crops	Moderate ability to identify particular considerations necessary for effectively implementing crop-related CSAF practices.

Category	Topic Title	Description of Expected Competency and Knowledge
Technical and Analytical Skills	Navigating Narratives, Contracts, and Scenarios	High level of ability to navigate narratives, contracts, supporting practices, and scenarios.
	Considerations for Livestock Farmers	Moderate ability to identify particular considerations necessary for livestock farmers implementing CSAF practices. Some ability to identify and plan practices that are most appropriate for livestock farmers.
	Considerations for Agroforestry	Moderate ability to identify particular considerations for effectively implementing agroforestry-related CSAF practices.