

**Tennessee State Technical Committee Meeting**  
(TEAMS)  
May 10, 2022

**Members and Guests Present:**

1. Adkins, Jenny – USDA NRCS
2. Albert, Daniel – Guest
3. Baker, Robert – TDEC Water Resources Division
4. Barnes, Betty – USDA NRCS
5. Barnett, Dale – Tennessee Poultry
6. Barrett, Nels – USDA -NRCS, Amherst, MA
7. Bledsoe, Jim – TACD President
8. Boles, Dustin – U.S. Fish and Wildlife Services
9. Brasher, Derrick – USDA NRCS
10. Brazil, Kyle – Central Hardwoods Joint Venture
11. Broughton, Brandi – USDA FSA, Nashville
12. Burse, Katherine – USDA NRCS, Nashville
13. Call, Geoff – U.S. Fish and Wildlife Services
14. Carpenter, Jamie – USDA NRCS
15. Chandler, Brian – TWRA
16. Close, Alexis – ARCDC
17. Cogburn, Robert – U.S. Fish and Wildlife Services
18. Daugherty, Adam – USDA NRCS
19. Davis, Kevin – USDA NRCS
20. Diersen, Katherine – Defenders of Wildlife Services
21. Dose, Mark – USDA NRCS
22. Elbert, Daniel – U.S. Fish & Wildlife Services
23. Engle, Joshua – USDA NRCS
24. Feno, Matt – USDA NRCS
25. Ferro-Esham, Belinda – USDA NRCS
26. Flock, Brian – TWRA
27. Friend, Aaron – USDA NRCS
28. Frye, Taylor – External
29. Gibson, James (CTR) – USDA NRCS
30. Gordon, Vanessa – ARS
31. Griffin, J. W. – Guest
32. Gupton, Kelly – USDA NRCS
33. Hart, Barry – USDA NRCS
34. Harris, Morgan – USDA NRCS
35. Hawkins, Arthur – USDA NRCS
36. Henderson, Hayley – (Guest)
37. Hightower, Sheldon – USDA NRCS
38. Honicker, Leslie – USDA NRCS
39. Hoskins, Pamela – USDA NRCS

40. Hummel, Bryan – External
41. Jones, Danny – USDA NRCS
42. Kadiri, Racha – MTSU
43. Koostra, Ben – Guest
44. Leonard, Emily – USDA NRCS
45. Lincicome, David – External
46. Malone, Taylor – ARCDC
47. Mayberry, Robin – USDA NRCS
48. McClurkan, John – TDA
49. McAfee, Jason – USDA NRCS
50. Miller, Marcus – USDA NRCS
51. Mitchell, Melanie – USDA NRCS
52. Momm, Henrique – MTSU
53. Muhammad, Andrew – UTK (Guest)
54. Nelson, Christopher – USDA NRCS
55. Norfleet, Bill – USDA NRCS
56. Oliver, Mike – USDA NRCS
57. Ortiz, Linda – USDA NRCS
58. Pate, Greg – Guest
59. Richardson, Joshua – USDA NRCS
60. Richman, Alex – Guest
61. Smiley, Kyle – USDA NRCS
62. Stefanick, Emily – Panther Creek Forestry (Guest)
63. Stemmans, Charles – USDA NRCS
64. Swihart, Tammy – USDA NRCS
65. Taylor, Malone – ARCDC
66. Viers, Brittney – Quail Forever
67. Warden, Angela – Technical Service Provider (Guest)
68. Walker, Forbes – University of Tennessee Extension
69. Wolkonowski, Chris – USDA NRCS
70. Womack, John – USDA NRCS
71. Luttrell, Zach – TNC

## **Sheldon Hightower, STC – NRCS**

### **Welcome/Opening Remarks**

Good morning. Thank you all for being on the call this morning. Today's meeting will be recorded.

- We ask that everyone put your name and the agency you represent in the chat box so that we can identify and record everyone who is in attendance to today's meeting.
- If you are calling in from a telephone and do not have the capability to type your name in the chat box, go ahead and take yourself off mute and identify your name and the agency you represent.
- The chat feature is available to ask questions or to share information. If you're calling in from a telephone and do not have capability to type your name in the chat box, go ahead and take yourself off mute and identify your name and the agency you represent. Again, thank you so much for joining us today. We have a full agenda. I will provide some updates on the Operations side.

### **Personnel**

- Joshua Richardson, who was the District Conservationist in Dresden, Tennessee, has been selected as Assistant State Conservation for Field Operations in Jackson, TN. He started his new role on April 11th, replacing Curt McDaniel.
- We also selected 7 employees to participate in our 2022 and 2023 Louisiana, Mississippi, Tennessee Southeast Leadership Development Program. This is an 18-month program,

### **COVID-19 Update**

- We have some exciting news. Our USDA Service Centers and our State Office are both at the 100% staffing level. Customers are able to visit our offices without having to make an appointment.
- An update regarding the State Technical Committee. The Tennessee NRCS is currently creating an Urban Agriculture Subcommittee to increase outreach and engagement efforts with urban farmers, non-government organizations, and other institutions to expand opportunities to Urban Agriculture in Tennessee. We are looking for individuals to serve on this subcommittee. I believe you heard from Arthur Hawkins who presented information at our last State Technical Committee meeting regarding Urban Agriculture. If you are interested in serving on the Urban Agriculture Subcommittee, please type the word "urban" in the chat with your email address and we will provide you with more information. We are excited about setting up this Urban Agriculture Subcommittee to the State Technical Committee.
- The State Technical Committee continues to play a vital role in our Farm Bill implementation. NRCS depends on your knowledge and expertise to implement Farm

Bill programs that are locally led. We definitely continue to value your input and feedback on this committee.

### **Farm Bill Programs**

- Our focus over these past few months has been on delivery and implementation of our conservation programs to producers in Tennessee.
- As of May 6<sup>th</sup>, we processed a little over 3,000 payments to our Tennessee producers for approximately \$23 million. We are processing 3,000 Environmental Quality Incentives Program (EQIP) applications and we're also obligating these approved applications. We requested additional funds from our National Office. The Field Staff are working through the total of 419 Conservation Stewardship Program-Classic applications. Jamie and his team will provide more information about our EQIP obligations and additional funding during his presentation.

### **Competitive Funding Announcements**

- Tennessee has Notice of Funding Opportunities posted on the grants.gov website. All three funding announcements have an application deadline of Monday, May 16th at 11:59 PM Eastern Standard Time. Those who are interested may submit an application in response to the Notice of Funding Opportunities through grants.gov. The agency cannot accept applications directly.
- Brief summaries of the available opportunities are:
  - The Urban Agriculture - provides grants up to \$10,000 for establishment of community and urban gardens, pollinator gardens, and habitat creations and up to \$15,000 for construction of seasonal high tunnels. The agency expects to make 8 awards for a total of \$150,000 through this opportunity.
  - Outreach and Education – provides grants to accomplish a number of objectives to educate and inform NRCS customers on conservation programs to increase the delivery of conservation systems to historically underserved farmers and conduct outreach efforts. The agency expects to make 4 awards for a total of \$300,000 through this opportunity.
  - General Conservation Agreements – provides cooperative agreements to address soil health, water quality, working agricultural lands, air quality concerns, grazing land, and also forestry practices. The agency expects to make approximately 8 awards for a total of \$400,000 through this opportunity.
- The deadline to submit for these opportunities is Monday, May 16th at 11:59 PM Eastern Standard Time. We will have that information regarding our funding opportunities in the chat, specifically where to apply for these particular funding announcements.

## **Jamie Carpenter, Assistant State Conservationist for Programs - NRCS**

### **EQIP**

- We are well underway. The projection is to be at the 50% obligated with the funds by the end of this week. We are making great progress and will be working to wrap up our EQIP obligations by the end of June. Hopefully, we can then move to our Conservation Stewardship Program and start completing obligations.
- Bill will give us an update on what we received for funds assessment for this year for the month of March. The funds assessment for NRCS is our first opportunity (which usually occurs in April, however, this year it occurred earlier in March) to request more financial assistance dollars for each of our programs for unmet needs of applications not yet funded. The EQIP request was for \$11 million, and we received substantially less.
- We are looking to receive less (FA) Financial Assistance dollars for EQIP for this year. This is not due to a lack of requesting the funding, however, there are initiatives at headquarters that more funds will be allocated towards. This will drastically reduce the extra amount the states could receive, nationwide, on their financial assistance dollars for EQIP. We should fare well with CSP. .
- We have begun to look at programmatic implementation for FY23. The date we have set for our FY23 local work group meetings is October 13th. District Conservationists will be working to set those meetings up in the upcoming months to receive input from the local level. This will be merged with the input we receive from you all as members of the State Technical Committee.

## **Bill Norfleet, Resource Conservationist, Programs – NRCS**

### **EQIP Obligations**

- EQIP obligations this season so far have been challenging and exciting. The numbers to be shown in the slides will indicate where we are currently.

Question: John Woodcock regarding all local work groups meeting October 13th?

Answer: Bill Norfleet - Yes. In planning for FY23, the October 13 date should still be in effect for local work group meetings. There may be changes in time frames as well and discussions with Jamie, when Robert returns. However, we are looking towards meeting early in the new FY (October).

## **EQIP FY22 Information**

- June 29th is our obligation deadline for all EQIP, RCPP EQIP and EQIP-CIC applications. Our total allocation for EQIP so far was \$26,691,934. As of this presentation, we had obligated around \$8,579,431.52 on 324 contracts.
- The goal is to ensure we are following the administration's priorities when examining EQIP approvals in Climate, Smart Agriculture, Forestry, Historically Underserved, Racial Justice, and s Equity; also in Urban Agriculture, whenever practical. Those priorities are listed up front in these discussions and we act on preapprovals to meet the requirements of the administration and exceed those whenever possible.
- We received additional FY22 EQIP Financial Assistance Funds of only \$965,000 (considered as a drop in the bucket) compared to years past regarding EQIP for March funds assessments. Conclusively, funds we receive are turned around and preapproved back out for EQIP. The timing is at mid-point and when an estimate of 50% or more is reached by the end of the week, it is considered a very successful obligation to this point.

## **CSP and RCPP**

- Our ranking deadline for CSP is July 6th, and that includes our CPP CSP applications.
- September 7th is our obligation deadline and FY22 RCPP CSPs will follow all deadlines classic CSP has established.
- Our initial allocation for CSP Classic was \$8.6 million and \$200,000 for CSP Classic Organic.
- March funds assessment was \$965,000 of EQIP funds, however, we received \$3,500,000 in additional CSP funds which takes us over \$12 million which enables us to fund CSP applications.
- Obligations have been over \$10 million every year for the last 3-4 years for CSP.
- As of two days ago, we were up to 445 applications in ProTracts. The application deadline is closed, the numbers fluctuate.

## **FY22 Renewal Status**

- We were pre-approved at an estimate of \$2,000,000 in Ag land and over \$300,000 in non-industrial private forest land.
- We ended with approximately 43 contracts for over \$2.4 million with 97.5% obligated. Almost every dollar we received for renewals was turned around and obligated as contracts under CSP.

## **FY22 Regional Conservation Partnership Program Classic Administration Priorities**

- The priorities under EQIP is the same as CSP. We are looking to fund those areas as a top priority to follow along with the administration; Climate-Smart Agriculture, Urban Agriculture, Racial Justice and Equity, and Historically Underserved Producers.

## **FY22 Regional Conservation Partnership Program Classic Notice of Funding Opportunity (NFO)**

- Partners had until April to submit applications. Tennessee received one for review under RCPP. The team will review the application this afternoon and meet with the STC tomorrow to submit our recommendations to headquarters. Hopefully this will allow more funding within Tennessee for our CPP.

## **Pamela Hoskins, Easement Specialist - NRCS**

### **Tennessee Regions FY22 ACEP-WRE AWMA Geographical Area Rate Cap (GARC)**

- Our fiscal year 22 Geographical Area Rate Cap (GARC) map has been approved by the Easements Program Division and that copy is now available. We use this geographical rate CAP when we are acquiring our easement acreages.
  - The map is used to make purchases of our easements. We placed a dollar acre on the different geographical areas of the state. We initially start with the aerial-wide market analysis which is conducted by a private certified appraiser.
  - The appraiser gathers property sales data for the last 12 months on properties that fit in the categories that we have listed on the map.
  - Once that data is collected, the appraiser will make a summary and an average value that will be placed for each of those geographical areas in the state.
  - Tennessee has decided to provide the compensation for those easements based on 95% value of the area wide market analysis, which is rounded down \$50.00.

## **2022 Easement Applications**

- Tennessee is moving towards 14 easement applications, which represents about 1,650 acres this year.

## **Wildlife Partners**

- We have received a National Bulletin on Compatible Use Authorization (CUA) for Mowing and Haying.
- Current WRE Policy – Compatible Uses

- This Involves primary nesting season. We will be talking with our partners who are particularly concerned about wildlife.
- CUA must be approved by the STC on any easement activities conducted.
- Primary nesting season is a concern; it follows the CRP nesting season and occurs between April 15th through July 1st for Tennessee. We will review this with our Wildlife partners.
- As a new policy, all haying and mowing activities must be completed before September 1st to ensure there is vegetation and cover for winter nesting.
- Per the National Bulletin guidance, the states may establish alternative primary nesting season dates in consultation with our partners.
- We will work with Robin Mayberry State Biologist who will lead this discussion.

### **Jamie Carpenter (Coronavirus Agricultural Relief Payments - CARP)**

- A decision is being made on the possible extension of the March 30th date that pays on certain practices selected at headquarters through an economic study to provide some additional FA information once the practice is installed. We are awaiting the final word to see if it will be approved through the end of this fiscal year.

### **Sheldon Hightower**

- Per the Chief's call, they are looking at an extension to December 31st. The approval is currently going through final clearance. Hopefully, we should see a National Bulletin on this soon.

### **Dr. Andrew Mahammad, University of Tennessee Dept of Agriculture**

#### **2022 Outlook for Agricultural, Food, and Forestry Trade for Tennessee**

- **Major Agricultural Exports for the U.S. – Top Commodities**
  - Cotton is one our leading export commodities important to the state of Tennessee and is a leading export for the United States.
  - Forest products are also important products to Tennessee and the U.S.
  - There are many logs and lumber exports, nationally, around \$9.4 billion, which ranks forest product exports high with some of the major exports like corn, beef, and wheat.



- Distilled spirits is one of the leading exports in Tennessee, Jack Daniels, and other global whiskey companies. This is a major category nationally, which is about \$1 billion.

- **It All Adds Up – FY2021 Agricultural Exports by the Numbers**

- Trade in FY2021 relative to FY2020. All commodities were up in value across the board. Some of this is due to higher agricultural prices.
- The value of trade, exported at the same volume with higher prices yields an overall higher trade value.
- Some of this is due to volume, particularly volume exported to the China market with a huge recovery in terms of soybeans and corn and other feed grains as they rebuild decimated pig populations. Overall trade was up about 23%.
- In 2018, the Chinese retaliated against President Trump's trade policies with tariffs on agricultural products from the U.S. Agricultural exports declined to about \$9 billion.
- In 2020 we signed the Phase I Trade Agreement, as a result, agricultural exports to China increased to \$26 billion. The second year of the agreement it increased to \$33 billion.
- Part of what is driving record sales is this huge recovery in the Chinese market. A lot of a soybeans, corn (to a lesser degree cotton) which is going to Southeast Asia recently, Mexico has a huge recovery, as well as China and Canada. Overall we were up across the board in 2021.
- The USDA has stated an expectation for the increase to go even higher. Additionally, the prospect of agricultural exports is predicted to increase further in FY22; projected up to an estimate of \$183.5 billion. This is a forecast and may be simply due to record prices and volume increases predicted particularly, for oil seeds, cotton, wheat, and some meat products. Much of this is price driven and has occurred in spite of supply chain issues.
- To view what has happened in the state of Tennessee, the viewpoint from 2021 being slightly less than 2020. There was an increase in forest products. The state was still showing downtrend for some products like cotton, distilled spirits-higher, baked goods (a big area for the state with a lot of processed foods) - slightly down. Overall exports increased from about \$2 billion to \$2.2 billion for the state; not a huge increase, but better than the year before on average. Tennessee was higher in many categories in 2020 than 2021.
- Tennessee did not experience the national boom. One thing to note, for example; commodities, like soybeans, get consolidated in Louisiana, even though it comes Tennessee. Once consolidated, the contribution goes to the exporting state. All

cotton exported from Tennessee is not necessarily grown in Tennessee, but gets consolidated in Memphis, therefore Tennessee gets credit for it from other states in the region.

- **Tennessee's Forest Product Exports: 2018-2021**

- Mainly logs and lumber were exported regularly to China. China accounted for approximately half of U.S. exporting. To a lesser degree, barrels for whiskey and wine production-oak barrels which are being exported to Europe and the United Kingdom.
- In a positive aspect, for U.S. trade, the Forestry Sector was impacted particularly hard by the trade war.
- There is a huge decrease for China, over \$100 million in exports down to less than \$40 million in 2019. This was made even worse by the Pandemic and going down to \$30 million; beyond a decimated amount. Certain sawmills in the state completely relied on the Chinese market however, a recovery was made. Overall recovery, to include recovery in China, by no means brings us back up to pre-trade war levels.
- Moving forward, we need to think about how we diversify forest export sales. It does not appear the Chinese market is projected to fully recover soon unless there is a huge increase in 2022.
- We have a project with TDA with funding from USDA for promotion activities in Vietnam for hardwood export sales. Hopefully, this will help the state of Tennessee going forward.

- **Tennessee's Agriculture Exports (monthly): 2019-2022**

- Overall, 2022 is looking better than previous years compared to 2019. We started in January with less than 2021 in terms of export sales. The month of March yielded a good year. This is mostly due to record agricultural prices as we view this in terms of value.
- There was \$250 million in exports in the month of March, which is the most recent data. This is significantly higher than all past years even prior to the pandemic in 2019.
- We are seeing somewhat higher forestry export sales overall in 2022. This is not much higher than 2019 which shows March at approximately \$16.5 million and now it is approximately a little over \$18 million; not a significant increase.

- **Fertilizer and Production - Pressing Issues Affecting Agriculture Moving Forward**
  - We have a certain reliance on imported fertilizer. Some crops we produced are more fertilizer dependent than others; cotton, not so much as corn. Barley, corn, and sorghum are heavily dependent on fertilizer.
  - We rely on 95% of imports on potash. Ammonia and phosphate is around 15% - 20% percent, and urea around 40%.
  - We have a certain import reliance which is important due to real world events specifically in Russia, one of the largest fertilizer exporting countries, along with the challenges of an existing price crisis in the fertilizer market.
  - Fertilizer prices, Diammonium Phosphates have gone up quite a bit. This is not a view of what we saw during the ethanol boom, this is yet approaching.
  - We have seen periods of high fertilizer prices before caused by the tendency of them to move with commodity prices.
  - A caution to producers is to lock in prices in order to be able to cover higher fertilizer costs.
  
- **Global Producers – 2020 (Breakdown of Major Exporting Countries)**
  - China is major global producer; Russia is one of the leading exporters. Belarus is another major exporter of potash. We rely on both Russia and Belarus for about 1/3 or a little less than 1/3 of the potassic imports fertilizer that we import in the United States (we have trade sanctions against both of those countries). Much of what is currently occurring does not hold well for fertilizer prices moving forward.
  
- **U.S. Fertilizer Imports: Total & Top Imports (2021)**
  - We import \$9.7 billion in fertilizer. If this was counted as an Ag import (which it is not) it would be listed in the chemical and chemical manufacturing categories. This would be one of our major imports, nearly \$10 billion.
  - We rely on these imports with high prices that were previously at a high due to natural gas prices of primary input in some fertilizer production.
  - Trade actions against Russia and Belarus, as well as export control behavior and some exporting countries like China and Russia, have really led to these sustained higher prices.
  
- **Share of Commodity Exports by Shipping Mode 2003 – 2-21 Average**
  - Our major export, cotton, is primarily reliant on containerized shipping, soybean

is primarily shipped via bulk cargo.

- The pricing of containerized shipping is a challenge. Primarily for products from China that are exported to Europe and the western part of the U.S. and the east coast.
  - We have seen from 500 percent to 1000 percent increase over the last year depending on certain shipment in terms of the shipping cost.
  - As a result, there is a container shortage, rates out of the U.S. have increased and possibly doubly increased regarding shipping rates out of China to the U.S. as ships are taking back empty containers.
  - It is much more economically feasible to not wait for those containers to be filled with agricultural products and ship to China. The preference is to return to China with empty containers and refill in China and return.
  - This impacts port delays and gives reason to consider all the factors that we need to consider in the U.S. to improve our port infrastructure.
  - Major exports, like cotton, are particularly impacted as they are very reliant on container availability.
- **Global Container Freight Rate Index from July 2019 to Dec 2021 (based on U.S. dollars)**
    - In July of 2019, the cost was less than \$1,500 per shipping at the container rate at a smaller size which is now over \$10,000 per unit. It has decreased as of late however; it has increased significantly over the last 2-3 years.

#### **Baltic Dry Index: Jan 2002 – March 2022**

- In the bulk area regarding soybean shipment
  - Pricing has increased, not as much as container rates which have decreased however, not as near as the bulk container rates during the ethanol boom in 2008, 2009.

#### **Top Wheat Exporting Countries: 2020**

- Russia and Ukraine, are major wheat exporting countries
  - Much of the exportation has contributed to our agricultural prices, with problems in exporting out of the Black Sea region.

- There is a high demand in the East African region and the needs of the Middle East will go unmet because they were particularly reliant on Russian wheat and black seaweed.
- Ukraine is a major exporter of corn; hence we will see sustained commodity prices.
- In terms of fertilizer, Russia is the top exporting fertilizer country in the world along with Belarus, two countries where we have trade actions against.
- As a result, we are not importing as much fertilizer from these countries, if at all currently.

Q – Do you foresee fertilizer costs, going down in the near future?

A – Dr. Andrew Muhammad

There are a few things that is driving this. If viewed in a regression framework, there is an almost near perfect correlation between commodity prices, particularly corn and wheat and in fertilizer prices. In that sense, as long as commodity prices are high, fertilizer prices tend to be high. One thing I would advise would be to lock in fertilizer prices. The second thing, being that the world is so reliant on Russian exports, and in Chinese exports, those two countries already impose export controls. In addition, we have trade sanctions on Russia and Belarus, because of the Ukrainian invasion. There is nothing in these fundamentals that say fertilizer prices should be coming down, particularly as long as oil prices and natural gas prices remain high. At least in the near term, it seems like this is sort of the new normal. How long this will last, whether we will still be seeing sustained prices this time next year. No one can tell.

Q – Regarding the price of gas increasing in these last couple of weeks, any ideas on that Dr. Muhammad?

A – Dr. Andrew Muhammad

The actions going on in the Ukraine, in the Russian invasion, does not help. When this was first viewed, my impression was that it was a pinned-up demand from the pandemic. I assumed after Christmas, at some point, much of this would slow down, but we clearly have a lot of money going through the economy right now. These inflationary pressures are not just specific to the U.S., they appear to be global as well. The hope is the actions by the Feds can somewhat help slow things down to a degree that this is being driven by consumer demand. Overall, obviously, if OPEC agrees to increase production for the purpose of lowering prices, but mind you, why would an exporting country want to see lower prices? Why would the oil exporting countries of OPEC agree to that? Maybe they would for geopolitical reasons but very much like fertilizer. The fundamentals aren't saying that this is going to end anytime soon from my advantage point.

Q – Will the U.S. begin to increase our own mineral commodity production to decrease the reliance on Russia and Ukraine?

A – Dr. Andrew Muhammad

Yes, the Biden administration has made some investments in domestic fertilizer production for this purpose. Obviously, we are not talking about an agricultural commodity where one would

just simply plant more during the production season. It may take some time for those plants to come online. I will say as a trade economist, I am always a little hesitant to see reliance and self-reliance on solely the U.S and self-sufficiency as the answer because the truth is we could always be self-sufficient if we are simply willing to pay the higher prices. The hope is to have a more stable world where you do not have these kinds of conflicts. So the one thing I will say about fertilizer that was very much like natural resources and that some of it does require a certain ecological endowment. There is not much one can do in terms of overall production. My hope is these recent investments by the Biden administration which could at least decrease that reliance to a lesser degree. I do not see it doing it in any major way, I don't foresee the U.S being self-sufficient in the fertilizer market.

## **Brandi Broughton, Farm Service Agency - USDA**

### **Forest Management Incentive (FMI) STAC Conservation Subcommittee Updates**

- We currently have a proposal in Tennessee that's geared towards just CRP.
- For June 23rd deadline, we can submit the current proposal or make recommendations.
- These recommendations have to go through our state committee at the FSA level for their approval and then on to the National office.
- We will be reaching out in the next day or so to those on this conservation Subcommittee for more information in regard to this proposed opportunity for our SAFE program within the state.

### **Emergency Conservation Program (ECP)**

### **Emergency Forest Restoration Program (EFRP)**

- These programs are geared towards any disasters that have occurred within the state and are available at any time if a natural disaster occurs.
- We are entering tornado season and see an increase in the activity of these programs.

### **Current Disaster Signups**

- There is one sign up that has not begun, it will take place in Overton County from a tornado that occurred back in December.
- Information will be available once the signup is announced.
- If there is a file application request, they may be acceptable depending on the reason for both signups. Reach out to any of the listed county offices for more information to

determine eligibility for a late bound request application if there is an interest and the May 4<sup>th</sup> deadline cannot be met.

Q – Sheldon Hightower

I haven't heard of the TIP Program before. What does that program offer to the landowner or producer taking over management?

A – Brandi Broughton

Basically, with the Transition Incentive Program, the landowner who currently owns the land will be able to transition that over. It has to be a new beginning farmer, or a socially disadvantaged farmer by our definition at the FSA. The landowner who is transitioning their land, will receive two additional years of their conservation payments as an incentive. Even if that landowner is no longer involved, they will still be able to receive an incentive annual rental payment for the next two years for transitioning that land over. It could be on a lease basis, or it could be on a sale basis depending on the situation. The producer or new owner who will be receiving the land would move forward with either continuing the CRP or they can convert it back to crop land for commodity use, if they so choose. So there are different options for both, the landowners who are transitioning the land as well as the operator that is accepting the land.

Q – Sheldon Hightower

Noted that 99% of the offers were accepted in Tennessee when we discuss the price spikes. Is FSA looking at the cost share rate percentage? Will there be any change on that regarding when those individuals enter into an agreement as far as CRP?

A – Brandi Broughton

Regarding the 50% cost share rate, it will remain the same for now. We know things are changing and becoming very expensive. We are trying to at least, regarding our cost share rates, to maximize as much as we can possibly. Yes, it is still limited to 50% at this time.

**John McClurkan, Tennessee Department of Ag - NRCS**

### **Agricultural Resources Conservation Fund**

- We are receiving applications now for state fiscal year 2023, which begins July 1st.
- All the soil and water conservation districts will be receiving a brand-new contract.
  - We are currently in 2022 is the 5th and final year of their existing contracts. We will be writing new contracts beginning July 1st, 2022 through June 30, 2027.
- The 319, Nonpoint Source Grant that we manage through EPA, the RFP for 2023 will be announced in September of 2022.
- All interested can contact Sam Marshall in our Land and Water Stewardship group [sam.marshall@tn.gov](mailto:sam.marshall@tn.gov) for more information to get on the mailing list or if there are questions regarding that grant program.

- District operational grants are being increased for 2023.
  - A one-time \$1,500 technology grant is being offered to each district as well to support those who are working from home for laptop computers and the software needed.
- Effective July 1<sup>st</sup>, we are moving to what we call a prescribed rate approach for computing our cost-share payments.
  - This will be very similar to the USDA approach.
    - A project will be designed, an estimate calculated. The landowner will be contacted to begin implementation of the practice. Once checked for being built to the standard, monies will be distributed.
- We are moving away from the 75% of bills approach that we have had for a number of years. This will be easier to implement and easier on field staff to hopefully free them up to accomplish tasks in the field.
- In in fiscal year 2023, we have a computer team within the state government. Strategic Technology Solutions working on a Grants Management Software package that will be applicable to all state agencies.
- We are one of the first groups to go through this, our go live for the system will be in December of 2022. Training is anticipated in early calendar year 2023 to our district contracts.
- This will all be done through an Internet online secure system.
- Late April, the conservation District Employees Association held a training workshop in the Chattanooga.
  - Found 41% of landowners or farmers are unfamiliar with the programs offered; 60% are familiar. This is where we can improve and look to coordinate better with outreach.

**Dr. Racha El Kadiri, and Dr. Henrique Momm Department of Geosciences (MTSU)**

**Watershed Modeling, Evaluation and Effectiveness of Conservation Practices and Agricultural Watersheds in Tennessee.**

- The objective of the project is evaluating the effectiveness of conservation practices using watershed modeling.
- We worked a total of 10 wells. Six in western Tennessee and four in northern Tennessee.



- This watershed was selected specifically due to the impairment and the high levels of nonpoint source pollution and also because they are agricultural. Our tools are well suited for this type of watersheds.
- System One is part of the 2019 National Water Quality Initiative and System Two is part of the Mississippi River Basin Initiative. We specifically focused on soil.
  - For soil conservation
  - Soil is a proxy of other non-point source pollution transport
- We track soil to reduce movement via conservation practices and the movement of other not point source pollution types.

### **Study Area of Systems**

- In total there are four HUC 12s, but three watersheds. Red River includes HUC 12s.
- System 2 includes six HUC 12s that are connected and all flow into the fork Deer River.
- The total area is 156 acres, and the outlet is in North Fork Deer River lower.
- There were two goals in this project.
  - First Goal
    - Step #1 is evaluating the conservation practices that we apply on the ground, ensuring they are effective using computer models or watershed models (this is a more cost-effective approach for planning purposes)
    - Step #2 playing a scenario if we make changes and finding out what will be the outputs on sediment reduction
  - Second Goal - construction of our period in vegetation
    - This model shows the estimates on a daily basis of the hydrology of the watershed based on daily water balance from surface runoff.
    - AnnAGNPS are more suited for agricultural watersheds specifically and engaged watersheds which is the case of our systems.
    - Represented by two basic units concentrated flow path, which are we refer to as a Reaches and then subcatchments or where we refer to them as sales.
    - In Watershed Modeling we are technically building 5 major databases: topography, climate, land use, management, and soil.
    - Topography analysis is done with a special module called Top AGNPS and is based on DEMS.

- Data from the state were partially hydrologically correct, corrections were made using the flow charts to account for man-made structures.
- These are minor, non-minor typographical processes.
- We use satellite imagery, and many times go to the field to understand the situation better from the ground.
- After the topography database is built and we perform the topographical analysis. We get a delineation of the channel network and also of the subcatchments.
- Each subcatchment is a unit, and we describe as best as possible the conditions on the ground.
- We need daily precipitation with climate; daily maximum and minimum temperature from NOAA
- Land use is the third database, and in this case, our period of study was to try to understand the baseline condition, we studied 2008, 2018. Eleven years technically from January 2008 until December 2018.
- Used Web Soil Survey for the spatial distribution of soil classes and physical chemical properties.
- These five databases allow us to understand, once we put them all together, the baseline condition.
- These are the results for system 2
- Figures for system are just for illustration purposes. Everything shown we have duplicates for Red River Spring Creek.
- The goal is to build baseline conditions from the situation on the ground before we apply additional conservation practices
- The goal is to run scenarios representing a spectrum of conditions and evaluate how much they are effective. Various measurements were based on federal and state guidelines.
- Sediment yields of high and very high are based more on the standard deviation. Baseline conditions can determine the hotspots.
- In addition to the size and the location. We also simulated existing conditions in terms of what did we delineated in the existing buffer.

- Different scenarios were simulated with that as well in terms of how effective or how much sediment can be captured.
- Information as shown here notes the simulation ID, location description, or buffers.
- The result shows how much sediment reduction that comes from hosts using particular parameters.
- Highlights from the tables. We can obviously confirm that recovery environment for one of the most effective tools in terms of reducing sediment with a maximum reduction.
- This is the maximum that could be reduced if we put it around everywhere, but this is more a theoretical limit that we know at maximum reduction.
- Comparing all watershed, we can infer that Red River is the most serve in term of Riparian Buffer.
- Other locations were reviewed to find the best location for future sediment basin on the stream order and proximity of the stream, sediment yield, and also the length of the stream.
- A LIDAR model was used to delineate the Riparian (classification) buffer and added as a goal.
- Data can be put together from any watershed.
- The work is based is on LIDAR and LIDAR biproduct shown on the right image.
- In addition to the LIDAR, we used manually classified.
- This is the overall 360 view of the project, both goals, different steps

Q – Bryan Hummel

Do you have the ability to look at some of the Coffee County watersheds? They just won A Governor's Environmental Stewardship award and apparently there's some watersheds in Coffee County that are now more than 75% under continuous no till diverse cover cropping, they've seen the infiltration rates go from less than two inches an hour to over 10 inches an hour. So if you increase your infiltration rate, that will radically reduce your runoff ratios and your manning's in number. And I think that will affect your watershed analysis as well as any flooding. So with the flooding that we're seeing, all over the country, but in particular in Tennessee, there might be the ability to demonstrate and document and highlight how we are mitigating flooding and drought liabilities at enhanced agricultural profit, which will interest people from a much wider background than just the Ag sector.

A – Dr. El Kadiri

Coffee County was not part of our study area it was a part of another project that we did about Jensen, but not during this project. We will be interested to look at it in the future when the opportunity arises.

The tool is available for download, where we can find that so I can provide you the information. Of course, Jenny Adkins also has that same information.

Q - Sheldon Hightower

You mentioned in your presentation that the length of the buffer is more impactful than the width with that what was the width of the Riparian buffer and then the length that you all were looking at?

A – Dr. El Kadiri

In response to your question for the width, we work with three; 10-meter, 30-meter, and 60-meters. For any location condition we varied the width to see the impact or actually how much an increase or technically reduction of sediments. In terms of length, it is again based on the sizes around all streams. Is it just around agricultural fields? Is it just in highly productive areas? But, how we were able to make that conclusion is based on looking at the same area, if we look at different watershed and the same area for the buffer counting for the width and the length. We were able to get more the reduction is higher when we increase the length as opposed to when we increase the width. And so I'm not sure if I completely answered your question, but please let me know if you have further questions.

Q – Jenny Adkins

So you saw a significant change in that 30 and 60? Not so much 60 and 90 in wider the buffer?

A – Dr. El Kadiri

We see a lot of change 60 to 30 , 30 to 10, but we saw more change based on the critical factor. We had 64 scenarios that we had to compile and analyze together. We saw more impacts that collective impact based on location. So location mattered more than the width. So for an equal area same area but location would be a more deterministic factor than when the width is higher?

Q – Jenny Adkins

Regarding the cover summary. Was it the amount that made a difference? I'm sure it has some kind of impact on as well as location. What were your variables that played a significant role in cover crops?

A – Dr. El Kadiri

For cover crops for Tennessee that we were able to simulate is soybean with winter wheat. The location again is going to be the main determining factor in all this conservation practices that we applied to location. Location keeps coming back and when we look at those the hot spot in terms of sediment reduction, we always go back to the same conclusion if we go to those hotspots we always get better return for the investments.

Q – Jenny Adkins

I had a question again about location there that someone said that they didn't understand exactly and not clear on what you mean about location, location to the stream location.

A – Dr. Henrique G. Momm

Dr. Kadiri was explaining is that if you calculate the area the riparian buffer area, basically the width times the length, and you have two scenarios that have the same buffer area, the same width times length. However, you can have a higher sediment reduction, or at least a simulation, showing that you could have higher reduction with the same area based on location, and that makes sense. That's obvious if you have agriculture fields and place those at the edge of agricultural fields again, it's going to have a higher impact if you place them at a pasture or any other land cover. If you're going to implement in a particular watershed times the number of acres or riparian buffer where to place them is going to be extremely important.

A – El Kadiri

Just to go back to those different scenarios. Again, we placed the riparian buffer around streams around agricultural watershed that have what we call a medium sediment yield or a high sediment yield or a very high sediment yield. And like I'm showing here, we're vary each time the width of the buffer. So at the end what we got is all the scenarios. We don't assess one parameter a time, but a combination of factors together, because at the end how much settlement is going to go to the field will depend on the topography, on land use, not just one factor. But when we put all these scenarios together and look at the numbers, we notice a pattern. We notice that we get more reduction when we place it in strategic areas than even if we keep increasing the width or so in those strategic areas, we see a jump and increase in reduction as opposed to the other parameters, if that makes sense.

We will send the report to Jenny, but we are also writing the manuscript for publication. So it's not published yet if you mean in a peer review journal, but the reports is available with Jenny.

**Kelly Gupton, Ag Civil Engineer – NRCS**

### **NRCS Watersheds in TN**

- We will discuss the top two topics Operations and Rehab for those that aren't familiar with EWP.
- Alton Miller is our EWP program manager in Tennessee, the program has been very successful and does a lot of good work for storm recovery.
- The IIJA (Infrastructure Investments Jobs Act) funds infusion is in addition to our mandatory funds that were receiving through the Farm Bill.
- Currently, running about \$250 million a year and then the IJA funds came along.
- \$504 million for Operations, \$118 million for rehab, and \$300 million for the watershed program. These are not recurring funds. These were one-time funds.

- Today we will be looking at Operations and Rehab in Tennessee.
- The slide above shows some of the areas the act and legislation was keying in on.
  - Our Limited Resource Areas (LRAs)
  - Historically Underserved (HU) communities
  - Tribal communities
  - Ag-water management in western states, and in Tennessee as well
  - Backlog project funding
- Historically, we have a large backlog nationwide.
- The major investment in the watersheds nationwide was approximately from the 60s to the 80s and 90s.
- There's still a lot of work to be done for maintenance and rehabilitation standards, change criteria changes.
- Rehabilitation of existing structures that were designed and built by NRCS.
- We have upwards of 150 or so in Tennessee, classified in three different ways: low, medium, and high hazard structures.
- The high hazards are the ones that we key on for rehab as they come with the most risk.
- We have a lot of high hazard structures in Tennessee, probably 50 or 60 high hazard dams.
- The legislation is looking for projects that haven't authorized plan and committed sponsors.
- We are looking for projects that we can implement with the one-time funds.
- Priority is being given to funding for projects under rehab that are ready for design and construction.
- These projects have been justified and have been reassessed from the original watershed plans, accomplished 50,60,70 years ago, proven to be viable and gone through the NEPA process review.
- Alternatives have been flushed out and decided upon. So that's those would be given priority or ready to go to work.
- We are looking at limited resource areas and historically underserved communities in Tennessee. Currently, we have three LRA counties.

- We have a host of historically underserved communities and are working outreach and currently doing our best.
- The watershed program is being accessed, historically. It is a long-term approach for outreach to potential sponsors, for operations or rehab even though our program is very attractive.
- We are looking to reduce the 10-to-15-year time span; start to finish on projects.
- A five-year timespan is very ambitious, but doable. These are some long-term projects with potential barriers with the new legislation.
- The watershed knowledge, planning and staff on watershed programs has been reduced over the last 15 to 20 years. Due to possible lack of attention to the program and many staff members retiring.
- We are now working through technical staff and attempting to solve how the projects will be staffed by working with our local offices.
- Our projects go through the NEPA (full environmental) process, impact statements, and plan EAs are timely.
- Outreach is being run through the state office.
- Interested sponsors usually work through the chain through contacts in the local offices. The request is routed, and a time is set to visit the area's local sponsors. This is normally the county mayors and road superintendents.
- We ensure to have some equity in the program and have boots on the ground getting the word out.
- There is some training, and we are providing some guidance.
- We are meeting with our sponsors. The goal is after today many partners will have a little better understand or at least know who to contact for communities that can use some outreach or some additional help.
- Typical Watershed projects for operations of new projects.
- Usually in an area that has not been studied, historically or there are not currently watershed plans for it.
- It goes through the Preliminary Investigation Feasibility Report (PIFR) process.

- The PIFR helps to determine whether the project is viable and meets the policy background. If so, the PIFR and project application is submitted to headquarters for a watershed plan.
  - The NEPA process is completed and reviewed from the technical, to the economics, to the historical, or archaeology, to the biological.
  - Once those alternatives are chosen in consultation with all of our partnering agencies; state, federal, local . If an alternative is identified, it is submitted to take that alternative to design as well as construction.
- The Rehab process is similar usually with an existing watershed plan.
  - An assessment is performed on the original plan.
  - Problems are viewed, all economics are reassessed.
  - We go through the NEPA process as well with our partnering agencies to make sure of the alternatives to bring a current dam into current standards.
  - Once the process is completed, and it is a viable project, it is submitted for design and construction with rehab funding.
  - These can all be done in separate phases as they are all different requests that run through the State office and through the STC and up to headquarters.
  - One of the one of the things that's very positive about the program is the USDA financial systems that can come along with it.
  - Funds Allocations is a competitive program nationwide.
  - There is typically some cost match.
  - Some priorities are given to high hazard dams and committed sponsors that are eligible to go through for rehab.
  - Usually some cost-match is associated from local sponsors running about 35%.
  - If there is a financial piece for local sponsors that can be a challenge.
  - Project and selections are under the IJA Act are on an award basis typically on a monthly timeline.
  - Flood prevention can be a wide array of items:
    - Removal or relocation of floodplain properties



- Flood warning systems
  - Flood proofing
  - Atwater management
  - Irrigation to water supply
- This is a big issue currently in Tennessee for rural communities that have small population bases.
- There are current studies regarding rural water supply, this is not only applicable to building flood control dams.
- Being an eligible sponsor is required by policy. There's usually an eligible sponsor to be found for a project, so this is usually not a means for delay.
- Flood prevention is a big topic in Tennessee.
- The watershed planning the engineering, the design, the construction is all cost shared by the federal government about 100% within our project limits
- We have watershed limits of roughly 25,000 acres and our monetary limit on projects, about \$25 million.
- There is no activity with real property rights typically.
- Agricultural water management which can include water supply.
- Typically the planning and design for all purposes is covered by USDA, construction costs as well.
- Rehab can be taken at 100% through design, with a 35% cost match that can be in kind.
- As with other watersheds back in the 60s through the 80s, not all of our planned structures were built.
- There is a push to review some of them.
- The city of Selmer is still experiencing some recurring flooding.
  - Some structures upstream of town were never built.
  - Much of this is within the last two to three years.
- There's a lot that can be done with watersheds. The watershed program is going to be around and be supported by headquarters for the foreseeable future.

Q – John Woodcock

Is there a list of dams built with NRCS assistance?

A – Kelly Gupton

There is a list of dams built within NRCS assistance John that we can take a look at get you some info on that.

Q – Bryant Hummel

Kelly, isn't there a requirement that 50% of the ag acres upstream from these dams are implementing some agricultural practice standards.? If these conservation practices are designed to significantly increase infiltration rates and reduce erosion, sedimentation, and runoff; wouldn't these soil health practices help these flood control dams have a longer life, and help them meet their flood prevention goals well into the future?

A – Kelly Gupton

There is some Ag base, Mr. Hummel, on that I'd have to look into what the exact answer is. Yes, they could. And one of the things I mentioned in this watershed protection any of our practices that are listed in the National Conservation Practice Planning Handbook are eligible under the Watershed Protection classification of a project purpose. So you are exactly right that they could definitely help reduce erosion especially on the sediment side of things as well as the flood control.

Q – Bryan Hummel

Is Kevin Farmer your contract at HQ?

A – Kevin Farmer is a contact at headquarters. Correct. He sure is. It also depends, I have different contacts, there's a different contact for rehab as well as one for operations that if I'm not mistaken, Mr. Kevin overseas both.

**Mark Dose, State Conservation Engineer/Leslie Honicker, State Agronomist  
NRCS**

- The conservation practice standard is the overarching document that sets the minimum installation criteria for specific conservation practices. It is an extensive catalogue of items applicable here in Tennessee.
- We use them at NRCS to provide the criteria for practices and how they need be designed and installed to meet the criteria that has have been proven to be effective.
- It helps to ensure the consistency, quality and also point to what the different components of a specific practice may be.
- It also branches into interior, environmental compliance and to be able to share that information with NRCS and with our partners and other interested members of the public.

- The bigger emphasis in the latest Farm Bill was the references to ensure our conservation practice standards are reference to most relevant technology and research and is scientifically sound in its referencing.
- Shown is a live demonstration to access the NRCS Field Office Technical Guide. The guide has been revamped and looks somewhat different. Go to Google, type FOTG obviously stands for our field office technical guide.
- This is a compendium of knowledge that shows us where these practices are located. The science behind these practices, and the different resources that support the functions of the Field Office Technical Guide.

### **Section 1 Technical Guide: General Resources References**

- This is where you will find several maps, the major land resource areas, watershed information, etc.
- This is similar to a 10,000-foot overview of a little bit of a supporting knowledge for the Field Office technical guide.
- It also contains useful links to the researchers, the land grants, and various sister agencies we collaborate with on various conservation projects.

### **Section 2 Technical Guide:**

- Contains natural and cultural resources information, so this is where we start to get into a little more of the nitty gritty of the scientific side behind these practices.
- This is where you can find a lot of detailed information about the various natural resources that we are assessing as well as cultural resources and information about various protected plant and animal species, whether those are covered through the Endangered Species Act or the National Historic Preservation Act, for example.
- Here we also find our soil surveys and hydric soils interpretations, ecological site descriptions. What this information does is give support to our conservation planning decisions. They help us to assess what is occurring on the land and give us the information to support these various decisions. For example, hydric soils interpretations, are often used for our Farm bill compliance. The 1985 Farm Bill Act, which has a lot to do with wet land compliance and highly erodible lands.

### **Section 3 Technical Resource Guide**

- This is really where, as planners, we get down to business. In short, we have to justify in some way, shape, or form, the conservation that we're putting on the ground.

- The operating definition we use for that is called planning criteria. Does the land, does the resource meet planning criteria? And by that we mean what is the benchmark condition of that particular resource? For example, if we're looking at soil erosion, we have the planning criteria we use is called T. Soil Loss Tolerance shortened for T and that is used from compliance issues all the way to CSP taking conservation to the next level, to the conservationist.

## **Conservation Effects**

- This is where we see how what we have done is affecting each of our major resource concerns in this state and a couple of the presentations earlier really show where a lot of this information comes from. It really highlights the importance of the collaboration that we do as an agency.
- This is to demonstrate a typical conservation practice that we use, where it is located and just a very cursory overview of how to read and interpret a practice. Again, those are in Section 4.
- This is the area where our conservation planners are on this site probably just about every day.
- This is indexed and then here you have support tools.
- In this example, go to ecological sciences tools, there's a lot of technical information regarding adaptive management for conservation practices.
- This practice can allow an individual who desires to start a conservation practice and to take it to the next level and become a pro.
- Learning to assess that practice as it goes, making sure it can be customized to the specific resource concern on my farm over time to see improvement.
- Choose a practice (in this example) CPS is showing and a title, that means conservation practice standard. This document title shows us the standard, the state CPS, the name, and when it was last edited.
- In this example, in 2019 is when Tennessee updated it last.
- National headquarters is in the middle of hopefully being able to send another draft of this particular practice to the Federal Register for public comment.
- Most of our practices follow this particular format.
- Title in the code, a definition, a purpose. What the practice is that we're trying to perform and why are we doing it and what does that look like.
- This tool is becoming more and more important, especially as we're trying to transition to a climate smart agriculture or a management system.

- For example, it shows where a practice applies in navigating from pasture to a cropland, to seasonal cover in order to mitigate erosion around a construction site,
- The standard shown here is the criteria section, these are what national sets about (non-negotiables). If an NRCS conservation practice standard is going to be met, especially if it is going to be supported by financial assistance, each of these little points has to be covered.
- Based on the specific resource concern that is being addressed, there might be additional criteria.
- This is a sample of the consideration section; very, very helpful information that should be considered when utilizing a conservation practice.
- As planners, we help our producers plan from start to finish. This is where the plans and specifications portions of the practice come in and what that looks like in helping the producer in detail.
- All the various considerations that person might need to keep in mind.
- And last, operation and maintenance and references.
- This is where we put the conservation practice out there. This is what we need to do to ensure that it actually meets its purpose and consider in the future, if we need to revise this practice and how we planned it in order to meet the particular resource concern.
- The field office technical guide is our IR sheet or our implementation requirements. This is a type of checklist we use as planners to ensure we're following the standard.
- This is part of the conservation planning document, planning folder. We work with the landowner.
- We want to ensure that we are supporting the landowner throughout the process. So when we are planning a practice, we have distilled it down to its basic parts.
- We ensure the purpose of the practice has been stated and we give the landowners specific directions as to how to implement this and it meets our conservation practice standards.
- Our participants see what is expected of them and if we need to edit as we go along, as challenges occur with crops and planning, we have this document in place to assist our landowner.

## Dose, Mark – NRCS

How are the controversial practice standards and documents developed?

- National headquarters has discipline leads for each practice. Responsible for maintaining conservation practices and updates.
- Obtaining comments from the states, developing a draft of the conservation practice standards, practice overviews, statement of work, and network effects diagram which ties into the CPA 52, or the environmental assessment. Also ensuring their references stay up to date.
- The national conservation practice standards are on a 5-year schedule to be updated. The state staff has a responsibility to adopt the national conservation practice standards and also ensure the state level issues are addressed.
- This includes additional legal requirements or geologically specific additional criteria that needs to be established. A part of the state's responsibility is to develop and maintain the information Leslie covered.
- The state technical specialists, both on the Ecological Science staff and often the Engineering staff, update their assigned practice standards upon reviewing updates to the National Handbook of Conservation practices.
- We may also work with the national discipline leads to ensure any local issues with the national practice standards are addressed and included in the next revision and identify additional technology needs or support documents such as implementation requirements.
- Report any issues that we have to the State Technical Guidance Committee as the state has the ability to develop interim practices.
- The National Handbook of Conservation Practice standards are the nationally developed documents, whereas section four of the FOTG are the state adapted ones and locally here with NRCS, within the state of Tennessee, is our first reference when we are implementing a practice in the FOTG. The FOTG contains all those specific items.
- What is the process of adopting a national conservation practice standard? At the national level, the technical lead will update the CPS.
- It will be sent to the states for internal review where we have a chance to comment on that draft standard and then published to the Federal Register once those comments are integrated.
- If individuals are not a part of NRCS, this is an opportunity for those in the TNSTC to comment on the updates at the national level.

- Once the comments are received from the Federal Register, those changes will be considered and potentially integrated into the release draft that gets published into the National Handbook of Conservation Practices.
- Once published into the handbook, the state can either adopt or make state specific changes to the conservation practice standards.
- If no significant changes are made for the national handbook, we can simply go ahead and publish it to the FOTG.
- However, if we need to make things more stringent due to laws or regional information, etc., the State Technical Committee feedback will be requested on those potential changes in making them more stringent than the national. Once those comments are integrated, we would be looking at publishing them into the FOTG.
- An alternative route to the making of conservation practices are Interim Conservation Practice Standards.
- Interim Conservation Practice Standards often times in their society stages of adapting innovation, there are early innovators that are trying new things and experimenting.
- Then the move is the early adopters, early majority, where information is gathered from conferences, research papers etc.
- This is the stage we would start wanting to consider creating an Interim Practice Standard. It may not be something that is either allowed or available in our current handbook of conservation practices.
- We can develop those at a state level and ask for them to be adopted. There are some reporting requirements and at the end of that interim practice standard, it would be considered whether it would be added into an existing conservation practice standard or else if a new one would be created.
- This is that mechanism for field testing, new technology for adoption and there are a few examples of this
- We have a network where we can take the latest and greatest in technology and work with our various research partners to ensure that we are addressing resource concerns as they become relevant.
- One of the resource concerns that we have to pay attention to for the sake of the future of our species is climate change, carbon specifically and greenhouse gases and such.
- One of the practice codes is 336, Soil Carbon Amendment. This is utilizing specific inputs to amend or condition the soil so that it can become more of a carbon sink.

- Soil is one of the largest repositories of carbon and if we are able to properly manage and utilize our soils then we can sustain our population by having more sustainable food sources as well as ensuring that the carbon stays put and does not go on to the atmosphere.
- Over the past couple of years this interim standard has been going through the hassle of tons of internal review.
- The state of Tennessee will most likely adopt this practice and slightly adapt when it is nationally available at any time now.
- We feel it is a way for our state to become a leader in carbon sequestration.
- This practice came to be because we realized that we have limitations with our soil, especially as predictivity and its ability to capture carbon and keep it in place.
- This practice is currently undergoing a lot of research. Individuals on the Great Plains, individuals in the desert, we in the southeast, are all reviewing this process.
- There have been a great deal of good literature that has come from the University of Tennessee which is being used to help shape this practice to make sure that it is geographically relevant and pragmatic in terms of cost and viable.

Q – What options are available in a late wet spring, when cover crop becomes too thick to plant a crop?

A – Leslie Honicker

More specific questions would be; what can be done to a cover crop that has gained a lot of biomass and really wet and hard to get into the field? How can we incorporate that into our management system? It depends on what you're planting, and it depends on the time of year that you're planting.

- The the first answer is prevention is the best. For example, if you're trying to get into the field really, really early, you might want something that matures quickly, maybe try barley instead of something like rye, which puts on a ton of biomass and tends to stay away in the spring; that is one option.
- If you are in a planting system where it is wet you have too much biomass and you want to try to get in there as soon as you can. There are various different ways that you can terminate that cover crop in. It depends on your tillage system and what your conservation goals are.
- The first thing that comes to mind is ensure that whatever you're planting system is that your tools are in good shape, that they are sharpened.



- Make sure that your wheel cutters are nice and sharpened so they don't get dulled if you're using a roller crimper, ensure you have good row cleaners to ensure good from and seed to soil contact. All in all, it just depends on your cropping system.

### **Closing Remarks, Sheldon Hightower - NRCS**

- As we're coming to a close, I want to thank all of our presenters today and thank you all for just joining in on the call. A lot of great information was shared, and we try to provide a variety of topics when it comes to our State Technical Committee meetings. So at this time are there any announcements to make from individuals that are on the before we wrap up?
- We will have meeting minutes and presentations posted to our website within 30 days of this meeting. The recording will also be available from today's meeting as well.
- Our next meeting is scheduled for August 9th, and we will have an agenda and get a calendar invite to you.
- We did get the information regarding those individuals who would like to serve on our Urban Agriculture Subcommittee. We will be in touch with you regarding our next steps with the Urban Agriculture Subcommittee.
- Also, for the presentations, if you have PowerPoint presentations, please send those to Katherine Burse and she will put her information in the chat.
- This will conclude today's meeting and thanks for joining us everyone. Have a great day and we appreciate you all joining us. Thank you everyone. Take care.