United States Department of Agriculture

Natural Resources Conservation Service

CART Version 1.0 Resource Concern Assessment Feedback FAQ

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UNITED STATES DEPARTMENT OF AGRICULTURE
Natural Resources Conservation Service
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Overview

Over 1800 comments were received on the first draft of the CART Resource Concern Assessment document that was sent out for review and a 45-day comment period via National Bulletin 440-19-9. The comments provided a wealth of information from a broad cross-section of the agency, helping illustrate how challenging it can be to address so many different resource concerns. CART is scheduled to be implemented in the next Fiscal Year and the comments received will help make it the best it can be for both its initial release and the long term. Most of the comments received fell into two broad categories: Technical concerns and policy concerns.

- **Technical Concerns** – The feedback focused on the challenge of simplifying the way we look at complex resource issues. CART will provide a consistent platform to document the technical determination for each resource concern. Concerns were expressed that CART will eliminate the need for trained technical planners, as well as the need to conduct on-site resource inventory. Therefore, it is important to note that CART does not replace the value of a trained technical conservation planner and the need for on-site inventory. CART will guide the planner in capturing site information in a streamlined fashion and then passing the information for ranking purposes. The ranking portion of CART will help prioritize program delivery and manage practice application workload. As has been discussed in comments, there is a need for strong training and support to field staff on this new approach. An in-person Train-the-Trainer training with Conservation Desktop (CD) is being planned for October 1st through the 4th and a webinar Train-the-Trainer based on the same lesson plans will take place October 8th-10th. More information on these trainings, as well as preliminary webinars, is available in National Bulletin 440-19-19. In addition, the lesson plans, user guidance, and webinar recordings will also be available via a CART Help USDA Connect webpage.
- **Policy** – Feedback emphasized the need to address CART streamlining in all our policy and procedures. Policy updates will be coming out prior to production of CART to support CART integration and streamlining and prevent duplication of effort. As CART development continues, there will likely be additional need to address policy changes.

Note that, where applicable, resource concerns names have been updated to reflect the revised list. The resource concerns have also been re-arranged to fit the Soil, Water, Air, Plants, Animals and Energy (SWAPA+E) order. This FAQ document does not address every comment received but attempts to address high-level and common questions/concerns.

General CART Assessment Questions

1. What is the CART mandate? Why is CART being developed?

Secretary Perdue has made providing more efficient customer service the primary goal of all USDA agencies. Undersecretary Northey has echoed that direction for the Farm Production and Conservation (FPAC) mission area. This goal was further emphasized by Chief Lohr in his recently released list of FY2019 agency priorities. At the same time, feedback from all levels of the agency collected as part of the NRCS of the Future efforts identified balancing the need to obligate mandatory Farm Bill funds (primarily EQIP and CSP) in a consistent, well-documented, and timely fashion as one of the primary challenges facing the agency. Findings from both internal and external audits have also documented that

a large percentage of agency employees are not following established policies and procedures related to the use of specific assessment tools for planning. Informal feedback indicates that most feel these procedures are not tenable in the face of level staffing and increasing workload. This has led many offices to move from planning for priority resource concerns to planning for program(s) and has taken the agency further away from its core mission of working collaboratively with farmers to get the best conservation on the ground.

In order to address some of these issues, a small team was formed to look at how the agency could better leverage the increasing amounts of available geospatial data and the power of computer-based decision support systems (DSS) to develop a tool that would increase the efficiency of the planning process and provide more time for field staff to focus on working directly with clients to understand their objectives, identify appropriate practices, and facilitate implementation and maintenance to ensure the maximum benefit of those practices. These discussions led to the development of the Conservation Assessment and Ranking Tool (CART) concept. CART is a decision support system that is designed to:

- Provide a consistent, replicable, framework for steps 1-6 of the conservation planning process based on geospatially referenced information ("big data"), client provided information, field observations as appropriate and planner expertise
- Support program neutral planning – plan first, fund as appropriate
- Directly and consistently transfer inventory and assessment information and client decisions related to conservation practice adoption to the ranking tool, if the client is interested in financial assistance, to avoid duplication, increase prioritization on critical areas based on geospatial priorities and site-specific data, and provide better outcomes and a framework for continuous improvement
- Automatically rank applications in multiple funding pools to provide the most advantageous situation for the client and to help planners prioritize workload toward those clients who are most likely to receive funding

2. Will states have opportunities to Beta test CART prior to it being mandatory?

There will not be a formal Beta test of CART. Extensive user acceptance testing (UAT) is already underway by staff from over 20 states and that will continue until the system is deployed in October 2019. Unlike the Toolkit to Conservation Desktop (CD) transition, the transition from the current application ranking processes for Farm Bill programs to a CART based process cannot be phased in. Statute, rules, and policy all mandate that applications be rated and ranked on a consistent basis. So, we need to make a full and complete switch nationwide.

3. How does CART affect the Planning Criteria Assessments currently in use?

A revised set of resource concerns will be released prior to the production deployment of CART. Work is currently under way to synchronize the planning criteria associated to the new resource concerns with the assessment criteria in CART. The revised resource concern information will become official through changes to policy and the National Planning Procedures Handbook (NPPH). While CART is based on the planning criteria, no tool can completely cover all potential situations and CART will allow for a planner override of a resource concern, which should be based on the planning criteria and supported by an alternate assessment method identified in the planning criteria.

4. How is the Planner Override intended to be used?

The planner override feature will allow a planner to override the determination made by CART of whether the threshold was met or not based on the threshold, existing condition, and existing practices. The override can occur in both directions (ex: going from unmet to met, or vice versa). At the time of override, the planner will choose the reason for the override from a choice list and can write in additional details into a text box. There will not be a required secondary approval to use overrides, as all plans must be signed by a certified conservation planner. During the regular review of a conservation plan, the certified conservation planner will review overrides and makes changes as necessary.

Is there a "Planner Override option for the Existing Condition assessment?

Yes, planners will have the option to override if the system says an existing condition meets or does not meet the resource concern planning criteria.

How does a planner override impact ranking?

Since the planner override is used to determine if a site does or does not meet a resource concern, that could determine eligibility and appropriateness of a practice which does have the ability to impact ranking. At this time, planners will not have the ability to use the override to directly affect points for the planning portion within CART but this will be reviewed for future versions of CART based on Planner Override use in CART 1.0.

Is the planner override option the only method that documents a client concern which is not adequately assessed by CART methodology?

If a client concern is related to one of the established NRCS resource concerns and is not being adequately addressed, then the planner override is the method that should be used to document the issue. This may be supported by alternative tools or methodology identified in the planning criteria.

5. Is there a concern that conservation practice selections will be used to "game the system"?

All systems have the possibility for users to "game the system". Steps have been made to minimize the potential for gaming the system, but like current systems, NRCS relies on the professionalism of our technical staff. CART will also provide an extensive data set to allow targeted quality assurance of both planning and ranking functions.

6. How can CART be tailored to the local level?

CART is a decision support system that is designed to assist planners to work more efficiently and effectively with clients, systematically document assessment activities, and better prioritize workload. It is designed to provide general information and is not intended to replace the need for local knowledge to determine the most appropriate course of action for a specific client on a given site. If the results of the assessment are deemed to be inaccurate by the planner, the "planner override" function is available.

- CART v1.0 allows states to incorporate state-specific information into the ranking process through the development and implementation of specific ranking pools. These are extensively customizable with geospatial and planner data and should allow for effective prioritization of program delivery.
- Further customization of the assessment protocols in CART is being explored for future versions and will be evaluated based on feedback from CART v1.0 and a study of the override activity.

How will local fund pools and ranking questions be incorporated in the CART process?

Each State Program Manager will be able to create State-specific ranking pools, based off National Templates in year 1. Ranking pool customization will allow states to focus funding on priority resource concerns and initiatives particular to that state or other subdivision. This should be informed through the locally-led process.

Will States be able to modify the assessment elements to reflect State policy or essentially will State policy have to be modified to suit CART?

CART version 1.0 will have one national set of assessment questions but answer sets will be at a high level to allow states to provide more detail and reflect state specific policy. This additional detail will initially be in supporting documentation, but this functionality will be expanded in future versions based on feedback.

Can states modify the practice list if the state does not offer the practice (i.e. grazing land mechanical treatment or livestock shade structure)?

Yes, States will be able to modify the practice list by each program ranking pool.

7. How will CART deliver scientifically sound, defensible planning?

The responsibility for delivering scientifically sound, defensible planning continues to rely on the expertise of our local conservation planning staff. CART is only a tool to provide planners with additional information in an organized manner to help inform their discussions with clients and landowner decisions. To combine the many tools and methods in the planning criteria into a streamlined evaluation, the existing methods needed to be modified to fit the point system to allow streamlined and efficient capture of the planner's observations and site data. This is not intended to change the expected outcome of planning to the planning criteria on a given land unit but does quantify many of the observations and documents them in a single compatible system which can be utilized for planning, ranking, outcomes reporting, and environmental assessment.

In general, the evaluation method used to assess and document a resource concern falls into one of three categories:

- Client Input/Planner Observation
- Planner Assessment Guides
- Model Simulations

Client Input/Planner Observation: Many of the resource concerns fall into this first category of planner criteria. Within the CART system, to the extent possible, a streamlined choice list or lists of options will be presented to the planner to document the client input and/or planner observation. These observations will then be compared against the threshold. The majority of these resource concerns will have a threshold of 50 within the CART system. If the existing condition choice is below 50, then the threshold is not met. Likewise, if the existing condition choice is above 50, then the threshold is met. In some cases, geospatial interpretations will be available to set a threshold. In these situations, the variable threshold attempts to communicate a higher risk or priority for this site, which is likely to require additional conservation to address to the threshold and also communicate additional priority to ranking and the environmental assessment.

Planner Assessment Guides: A large group of the remaining resource concerns fall into this category and either reference a tool which consists of an inventory which leads to a determination or have a list of inventory-like criteria in the planning criteria write-up. Within the CART system, to the extent possible, a streamlined choice list which either replicates or approximates the data captured in the referenced tools is incorporated. Because of the local variability in state tools, these choices will be broad in nature to allow states to more carefully align them with State conditions. As above, many of these have a set threshold of 50, but may have variable thresholds for the same reasons as above.

Model Simulations: The remaining group of resource concerns are assessed using interactive model simulation. The CART systems attempt to replicate the outcomes related to the planning criteria being met or not compared to the model outputs. Most of these have variable thresholds related to the intrinsic site conditions which reflect significant impacts on the model outputs.

CART is intended to provide an initial resource concern assessment and the conservation practice effectiveness. A significant advantage of the CART system is it will capture the data within a system which will allow for continuous improvement of the assessment methods.

In addition, adoption of CART will allow NRCS to more clearly identify where our resource concern and conservation practice related information is insufficient or incorrect. By establishing a standard, replicable procedure that is automatically documented, NRCS will be able to identify priority areas where additional information is needed and can move forward with targeted collaborative efforts to obtain that information (internally, working with partners) that can then be used to improve CART-based estimates.

8. How are threshold points set?

How will planners explain to customers when they are "under threshold" or "meeting threshold"? How are the thresholds and assessment points justified and defendable?

The thresholds represent the amount of conservation effort needed to achieve planning criteria for a given resource concern assuming no management or treatment is presently applied. The threshold is a relative number, not an absolute number. It will be important for our planners to understand and convey that to producers. A high threshold indicates that the site has a higher intrinsic risk of a resource problem and is likely to need higher levels of treatment/management to address. This higher need may already be addressed by existing management, so the threshold by itself does not reflect the actual existing site conditions.

Each resource concern in CART has either a static threshold or a variable threshold. Static thresholds do not vary by site intrinsic characteristics and are typically set at 50. Most of the resource concerns have a static number and the existing condition and existing practice assessment determines if the site meets or does not meet the resource concern. This may mean that the question is essentially a yes/no question, such as Gully Erosion. You either have or do not have a gully which is uncontrolled and the solution is frequently implementation of a practice, or system with supporting practices, which meets the threshold. For example, a grade stabilization structure would garner 50 points toward addressing the gully erosion resource concern and meet the threshold. For other resource concerns, such as bank erosion, the planning criteria sets a static threshold, but the SVAP2 question divides the answers into 4 choices. Two of which meet planning criteria and two of which do not. The answers do lend an

understanding of the level of effort needed to meet the criteria and will help a planner choose practices and prioritize sites.

Variable thresholds represent the relative differences in conservation effort needed to address a resource concern with relationship to site intrinsic characteristics. Variable thresholds could range from 1-100. These thresholds are likely to be based on soils interpretations or other inherent characteristics such as climate. For example, a steep slope site with a high amount of rainfall would need more conservation effort to prevent water erosion that a site with no slope and low rainfall. Additionally, the variable threshold allows prioritization of sites by the resource concern vulnerability. The specific values for variable thresholds are being determined iteratively by comparing existing tools and models to combinations of thresholds, existing conditions, and practice effects.

As mentioned above, this will not cover every site or combination of practices and is meant to support planning decisions. A planner will always have the option to use the planner override to make the final resource concern decision.

9. How are conservation management practice points assigned?

Conservation practice management points were assigned by teams of volunteer subject matter experts from national, regional, state, and local level. The points were assigned based on the relative effectiveness of a given conservation practice to address the identified resource concern. Practice points are relative to the thresholds and existing condition questions and cannot be set in isolation. Practices that are generally believed to be highly effective were assigned high point values; those that are generally believed to be less effective were assigned lower point values.

- Conservation practices may reflect effects across multiple resource concerns and may differ based on their application to different land uses.
- Conservation practice points were assigned relative to the threshold for a given resource concern. Consequently, a practice may receive 20 points to address Resource Concern (RC) 1 but only 10 points when applied to address RC 2.
- Conservation practice purpose statements as well as the current Conservation Practice Physical Effects (CPPE) values were utilized in assigning practice points. However, a direct comparison of the practice points to CPPE values (e.g. a CPPE value of 1 is equivalent to 10 points in CART) is inappropriate.
- Conservation practice points also represent the best professional judgment of the team members informed by external data (e.g. Conservation Effects Assessment Program (CEAP) results) where available and have been reviewed by discipline specialists.

10. Will all Resource Concern assessments be needed or only those identified by the producer's objectives?

- *For example, would cropland be required to be assessed for inadequate wildlife habitat, even if the client is only interested in addressing gully erosion?*
- *Can you turn off assessments not used or needed in a fund pool and how will that impact other fund pool availability?*
- *If you do not evaluate all resource concerns and run each assessment on every land use, how will that impact ranking?*

CART provides flexibility for planners to work with clients to assess any and all resource concerns that are deemed relevant for a given client's situation. Where geospatial data is available, some resource concerns may be triggered for consideration in the background based on a combination of the client's location and basic questions about their operation. This information will be available to the planner, but the planner is not required to move forward if the concern is not a producer objective. The information does, however, allow the planner to potentially suggest other opportunities for the client of which they may not be aware.

The ranking tool portion of CART allows states to identify the specific land use(s) resource concern(s) and conservation practice(s) that determine eligibility for and ranking within a given funding pool or pools.

11. Will our current assessment tools (e.g. IET, WinPST, PCS, RHA, etc.) be incorporated into CART? If so, how will the results from them be incorporated in CART? If not incorporated into CART, will they be a part of the override or reported and documented in a different way?

At this time, our current agency assessment tools will not be directly incorporated into CART. However, the CART assessment points have been influenced by these tools. In some cases, the answers to the questions that are asked in CART contain language taken from the tools (e.g. RHA, PCS) and may require that the tool be run outside of CART to be able to answer the question. CART is designed such that the answers given for existing conditions are used to evaluate all multiple applicable resource concerns.

12. How will the current assessment tools be used in the future?

Planning criteria policy is currently being revised and will incorporate the CART assessment as an accepted method of documenting resource concerns. The current assessment tools will continue to be available and would primarily be used in situations where the CART assessment does not adequately capture the local condition. Use of additional tools may also be necessary to complete implementation requirements and/or designs. NRCS will also continually be updating the CART assessment using tool outcomes to test assumptions and points. State discipline specialists will also likely use the tools to develop and provide general guidance to field planners in how to answer CART questions. Tools will also continue to be utilized to provide training to new employees to help them identify how site conditions influence the presence and magnitude of a resource concern.

13. Where does a field site visit fit into the flow of CART?

CART is designed as a planning decision-support tool and does not change the planning process with regards to the need for a field visit. Field visits are an essential part of the planning process.

14. Where are the client's objectives, goals, and/or concerns documented and assessed?

The client's objectives, goals, and concerns will continue to be documented as part of the planning process. The specific location of that documentation will change as we complete the switch from Toolkit to Conservation Desktop, but the principles remain the same. CART provides flexibility to assess resource concerns, as well as to identify additional potential concerns that the planner can share with the client to provide them with a more holistic picture of their situation.

15. Currently, the assessment seems very focused on crop. Why were other land uses not addressed in as much detail?

The CART assessment is built around the current planning criteria, which frequently varies in detail by land use. There was no intent to short-change other land uses in the CART process, however, the amount of information, particularly geospatial information, varies by land use. One of the goals of future versions of CART is to continue to expand the assessment capabilities for all land uses and additional resource concerns.

16. How CART will integrate with Conservation Desktop?

CART is designed to integrate with Conservation Desktop (CD) and all information is captured in context of the client and land unit. Ultimately, CART functionality will be fully included within CD.

17. How will ranking be determined in CART? The closer to the threshold you are, the higher you are ranked?

For a given resource concern, CART will establish a site vulnerability and a planned practice score. Site vulnerability is determined by subtracting the existing condition and existing practice scores from the thresholds. The planned practice score will be based on the sum of the planned practice on that land unit which address the particular resource concern. These two scores will be weighted by a ranking pool to address the resource concerns prioritized by that ranking pool. This is only part of the overall ranking score, which includes local and state resource and programmatic priorities.

18. What is State capacity to add geospatial layers to CART?

States will have the capacity to upload geospatial layers to CART. State Geospatial Specialists with the NRCS Geoportal Publisher role will be responsible for uploading and managing the State geospatial layers. In CART v1.0, State geospatial layers will only be available for use as part of the ranking tool portion of CART. The hope is that State-level geospatial layers can be integrated into the assessment portion of CART in future versions of the tool.

19. Why do some resource concerns default to "assessed" and others to "not assessed"? Shouldn't they all default to the same one way or the other for consistency?

The default is based on whether or not a resource concern was assessed by geospatial data. The CART steering team determined that, if an assessment could be provided based on geospatial data, it should be provided to the planner for their information. Even if this assessment identifies a likely resource concern, the level to which that concern will be addressed in the conservation plan remains the decision of the planner and the client.

20. How will CAPs (Conservation Activity Plans) be treated in the CART? How will the need for plans such as FMPs (Forest Management Plans) or CNMPs (Conservation Nutrient Management Plans) be achieved with CART?

CAPs will not be explicitly incorporated into CART v1.0 except as practices. The component plan is the implementation requirements and design phase (Step 7 of the planning process) and is outside of the purview of CART.

21. How are supporting practices determined? How will they be documented?

Supporting/facilitating practices are determined by the planner if they are needed to help implement a planned practice that is being used to address a resource concern. They will be tagged for funding with the primary practice but will not have environmental benefits practice points applied.

22. Will existing practices be documented once or for each Resource Concern?

Once a practice has been documented as occurring on a given PLU, that information will be automatically shared across all resource concerns where that practice is applicable.

23. Describe how "credits" are used, as opposed to "points"?

In the CART documentation, we have used the term “points” exclusively in the context of how NRCS conservation practices impact a given resource concern. We have used “credits” in all other situations (e.g. identifying the relative reduction in wind erosion risk provided by crop residue).

24. Within a plan/contract, how will CART cross-check point totals across resource concerns when a practice is implemented to benefit one resource concern but negatively affects another?

Recognizing and amending potential negative effects of conservation practices on other resource concerns is an important part of conservation planning. Due to development time constraints, this functionality will not be available in CART v1.0. Planners will have to use their judgment to identify and address these situations. However, the functionality to automatically provide this information is a high priority for future versions of CART.

25. Is Job Approval Authority (JAA) needed in CART?

CART v1.0 does not have any rules written into it for JAA. However, all current rules in policy still apply. As NRCS moves towards more integrated systems, we will review JAA for use explicitly in CART.

26. How were the resource concern descriptions determined?

The resource concern descriptions come directly from the National Planning Procedures Handbook (NPPH) and were developed by the National Discipline Lead assigned to the resource concern. It is not in the scope of CART development to change these descriptions. However, a revised list of the resource concerns and associated planning criteria will be released prior to CART implementation.

Soil

27. What consideration will be given in CART for areas without soils data or a published soil survey?

The CART Team worked with the soils division to review the soil interpretations and have greatly reduced the number of sites that will return a no answer. For areas without soils data, the planner override can be used and CART has default threshold values.

28. Why doesn't CART use modern erosion models like RUSLE2, WEPP, WEPS, and IET (i.e. CART is using factors from USLE and WEQ)?

CART is designed as a high-level streamlined decision support system to help planners assess whether a resource concern exists or not. Once a resource concern has been identified, practices that will resolve the resource concern are identified. CART is designed to provide a generalized ranking of erosion into 4 classes from High to Low, not tons/acre. CART is not meant to provide practice design/implementation information. As stated above, if the planner feels that CART does not provide an adequate assessment that a resource concern exists or does not exist, they can override the system. Tools/models may still be needed when developing implementation requirements. CART will continually look for improvements in interpretations while focusing on streamlined planning.

29. The Wind and Water Erosion section uses SSURGO data. Can local data be imported or accessed?

At this time there is no provision to import or access local data. If CART does not provide the correct determination, the planner can override the system and indicate Yes or No to the existence of a resource concern. The ability to use updated site-specific soils information is a future goal.

30. We have better tools at our disposal than the representative slope in SSURGO that provide a more accurate and site-specific answer. Why not use slope derived from readily available Digital Elevation Models (DEMs)?

The SSURGO value for representative slope is used to ensure national consistency in risk determination. Locally developed DEMs are not available for the entire country. When DEM coverage is available nation-wide for all current soil surveys then use of DEM data will be possible.

31. Why are we separating ephemeral gully erosion from classic gully erosion?

CART utilizes the resource concerns as approved by the National Technical Guide Committee.

32. How will aerial photos and lidar data be used in the system?

Aerial photos can be used now as they have always been. They are typically used to identify potential areas in a field where a concern might exist, particularly if the photo is from a wet year. Once identified, then the planner can conduct an on-site visit to those locations. In the future we hope to use lidar data in a similar manner as we use aerial maps. Lidar data isn't typically used to determine if a concern exists or not but to direct the planner to site locations where a potential concern might exist.

33. How will CART be used to determine the severity of gully erosion?

CART is not used to determine the severity or extent of any type of erosion other than sheet and rill and wind erosion on cropland. The variable threshold for wind and sheet and rill erosion on cropland generally identifies the severity of the erosion.

34. Across several of the soil health resource concerns, commenters noticed assessment methods were provided for cropland, but still needed for other land uses- especially pasture and range.

Assessment thresholds and existing point criteria suitable for other land uses have been added. Use of RHA and PCS assessment factors have been incorporated for those land uses.

35. Commenters suggested existing condition for Compaction should rely on in-field observations more than SSURGO interpretations of vulnerability to compaction.

Evaluating of existing condition on cropland, forest associated ag. land, and farmstead are now related to in-field observation of restrictive layers or surface ponding after rainfall or irrigation. Use of appropriate RHA and PCS assessment factors has been incorporated for those land uses.

36. Commenters expressed concern about risk of over-reliance on soil interpretation over observation/information about in-field management for identification of where Organic Matter Depletion might occur.

Any land evaluated for this resource concern, regardless of soil, will have a threshold of 50 set. Existing conditions on Cropland will be evaluated using Soil Conditioning Index criteria that are also used for evaluation of sheet, rill and wind erosion. Existing conditions on pasture and range will be evaluated using evaluation elements from PCS and RHA, respectively. Forest existing condition will be evaluated using a simple visual observation of material covering the forest floor. Other land use conditions will be assessed according to whether or not a Soil Health Management System (SHMS) that address organic matter depletion is being followed, or a soil test shows organic matter, labile carbon, or labile nitrogen at or above typical value for the specific soil map unit and in site condition, or soil test results show improved organic matter over multiple years of results.

37. Commenters asked for more comprehensive, precise, and descriptive criteria to evaluate existing conditions for Concentration of Salts and Other Chemicals.

Soil or irrigation water test indicting crop specific EC, pH, or SAR thresholds have been exceeded, visual observation of plant tissue salt injury, and salt concentrations outside what is expected for ecological sites on pasture and range have been added.

38. Soil Organism Habitat Loss and Degradation and Aggregate Instability were added to the CART assessment framework after the first version was released for review.

The thresholds for both resource concerns will be set to 50 for all land uses. Assessment of existing conditions for both resource concerns will rely on use factors from the in-field Soil Health Assessment Worksheet for cropland. Existing condition points for range will rely on in-field assessment of departure from expected reference condition and stability class assessment. Existing condition points for other land uses will rely on the aggregate stability criteria from the In-Field Soil Health Assessment Worksheet for cropland.

Water

39. Many of the comments provided for the Ponding and Flooding, Seasonal High-Water Table, and Seeps resource concerns focused on the potential for activities that address these resource concerns to be in direct conflict with both statutory and policy guidance related to the use and management of wetlands.

CART utilizes the resource concerns as approved by the National Technical Guide Committee.

Field staff must be relied on to act in compliance with all applicable statues, rules, and policies. CART in no way empowers field conservationists to violate Federal, State, local laws, or NRCS policy. As is the case with all NRCS activities, adherence to laws and policy are required unless proper procedures are followed to request policy waivers or permits are acquired, such as Nationwide Permits issued by the USACOE under the Clean Water Act.

40. Comments were received questioning the appropriateness of the Drifted Snow resource concern and noting that the effects of drifted snow can be positive or negative depending on the situation.

CART utilizes the resource concerns as approved by the National Technical Guide Committee. Comments are noted and a simple, client-based assessment of whether the resource concern exists will be used.

41. What if FEMA Maps are unavailable to evaluate Ponding and Flooding? FEMA maps are not available everywhere that crops are grown.

SSURGO soil survey data will be the primary assessment tool. FEMA maps aren't essential to assess this resource concern. The FEMA maps would be used as a secondary assessment tool if SSURGO soil survey data are not available for the PLU.

42. Will this assessment identify any component in the map unit with a flooding frequency? Or only dominant component?

The assessment will identify map units where any major component has flooding frequency of occasional, frequent, or very frequent; or ponding frequency of occasional or frequent.

43. Multiple comments were made regarding the inter-relationships between soil and crop management and irrigation water use efficiency.

These comments are noted. However, the current resource concern, "Inefficient Irrigation Water Use" focuses exclusively on the irrigation system itself. Planners are required to use their knowledge of the entire system to help clients better understand and address these issues in a holistic manner. CART will not do that automatically

44. For Irrigation System Type there was not a way in the assessment to show that the existing irrigation system meets the threshold without running FIRI.

FIRI has been removed as an assessment criteria. States may use it as a ranking criteria if they choose to do so.

45. For seeps, will CART set a minimum amount that must be present to register (i.e. greater than 10% of the PLU)?

CART will give an indication of the likely presence of seeps and it will be up to the conservationist to decide if it is a resource concern. States may provide additional guidance to the planner.

46. For Insufficient Water-Naturally Available Moisture Use, comments recommend including assessment tools (Pasture Condition Score and Rangeland Health Assessment) for pasture and range land uses to establish the threshold.

Questions in CART are derived from portions of the Pasture Condition Score and Rangeland Health Assessment.

47. How is irrigation induced erosion considered?

CART version 1.0 will adjust the vulnerability for sheet and rill erosion for a site based on irrigation. Irrigation induced erosion occurring greater than the predicted amount will be handled through planner override in version 1.0.

48. Concerns with the Crop Rotation Credit Ranges and Descriptions

To address comments, adjustments were made in the classes and the descriptions, including SCI ranges: States may provide additional guidance to categorize specific cropping systems.

Crop Rotation Cover/Residue/Biomass Credit

Existing Condition - Crop Rotation Credit Existing condition credits are based on system benefits for cover/residue/biomass of all crops and cover crops in the rotation combined with the effects of harvesting, grazing and tillage. Individual credits for associated practices like crop rotation, cover crop and residue management are added to this system level credit.	Sheet and Rill Erosion Points
None – Rapidly Depleting Soil Organic Matter • Soil Conditioning Index is well below zero • Generally fallow, or crops with no durable residue or cover crops, with up to full field tillage.	0
Low – Depleting Soil Organic Matter • Soil Conditioning Index is just below zero • Generally, crops with durable residue or cover crops, or part of the rotation in high residue conserving use crops, with up to full field tillage.	5
Moderate – Maintaining Soil Organic Matter • Soil Conditioning Index is zero or above • Generally, crops with durable residue or cover crops, or part of the rotation in high residue conserving use crops, with reduced tillage or no-till.	15
High – Building Soil Organic Matter • Soil Conditioning Index is well above zero	40

• Generally high residue conserving use crops or perennial crops with full ground cover, not tilled or tilled infrequently.	

49. Sediment impacts to Water Quality from gullies

To address sediment impacts to WQ from gullies, a new RC component has been added that is driven the same way the gully erosion RC is addressed. Water Quality mitigation points have been added for gully mitigation practices.

50. Fertilizer storage and handling losses

To address fertilizer storage and handling losses, a new RC component similar to the one for pesticide storage and handling has been added.

Air

51. Why are less points given to clients who intend to apply additional practices than those who do not intend to apply additional practices?

The initial thought behind this point allotment was to allow clients to self-identify as having a resource concern. After further consideration, the team agrees that this approach was confusing and has simplified the analysis where client intent is included.

52. Why is there a 25 brake horsepower threshold on combustion equipment? Doesn't that exclude non-engine combustion equipment?

The 25 brake horsepower (bhp) threshold was chosen to reduce the burden on the planner from having to identify and evaluate every single piece of combustion equipment at the site. 25 bhp is large enough to have significant emissions and therefore warrant further evaluation. Although the phrase "or equivalent" was included to include those pieces of combustion equipment that are not measured in bhp, we have now split the analyses for diesel engines from non-engine combustion sources in CART and simplified how we evaluate each of those sources (i.e., now primarily based on particulate matter nonattainment status, EPA Tier rating [for diesel engines], hours of operation, and fuel use).

53. Why are we encouraging the reduction of prescribed fire? Since prescribed fire is an essential ecological restoration tool, shouldn't we be encouraging its use?

There was never an intent to promote the reduction of prescribed fire. The primary approach is to utilize good management for prescribed fire, including the use of Basic Smoke Management Practices (BSMPs) for any prescribed fire that is applied. As long as that is happening, there is no resource concern. The only other alternative to reducing emissions from fire is to reduce the amount of fire. If a client decided that was a direction they would rather go, then we wanted to provide an opportunity to help them with that. After further consideration, the team agrees that this language was confusing and could be interpreted as being anti-fire. The language has been simplified to solely focus on including BSMPs when prescribed fire is applied.

54. What are BSMPs?

Basic Smoke Management Practices, or BSMPs, are actions that can be taken to mitigate the impacts of smoke from prescribed fire and other forms of open burning. NRCS collaborated with the US Forest

Service to develop a BSMP document (https://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb1046311.pdf) back in 2011 that describes the six primary BSMPs for use with prescribed fire: Evaluate Smoke Dispersion Conditions; Monitor Effects on Air Quality; Recordkeeping/Maintain a Burn/Smoke Journal; Communication – Public Notification; Consider Emission Reduction Techniques; Share the Airshed – Coordination of Area Burning.

55. Why are complaints included as an assessment methodology? They would seem to be very subjective. Who is complaining, why are they complaining, and how do we know if it is a legitimate issue or just someone that doesn't like what's going on?

Complaints are highly-subjective, and it is quite difficult to ascertain the validity and/or extent of the issue involved in the complaint. The initial thought was that complaints at least give an indication of a potential resource concern, and while true, complaints can be taken into account via client input or planner observation. As such, we have removed complaints from the various air quality assessment methodologies specifically, although complaints may continue to inform client concerns and planner observations.

56. How does a nutrient management plan help with nitrogen volatilization?

Nitrogen is obviously a very important nutrient for air, water, soil, and plants and can move through these media in various forms quite readily. A nutrient management plan that focuses on nitrogen inputs and transformations can limit the total nitrogen in the system, as well as how that nitrogen moves through the system.

57. What is Airborne Reactive Nitrogen?

Airborne reactive nitrogen is a new air quality resource concern that is intended to address the various atmospheric chemistry and deposition impacts from agricultural emissions of ammonia and oxides of nitrogen.

Plants

58. If ecological sites have not been developed, what assessment tools do we use?

Ecological Sites is the preferred option. However, if ecological sites have not been developed, use other approved documentation that demonstrates represented plant communities.

Interpreting Indicators of Rangeland Health, Version 5 (IIRH) is the tool NRCS uses for rangeland health assessments. If IIRH cannot be completed without a reference sheet, and a reference sheet cannot be generated without an ecological site description with which it is associated, a protocol called "describing indicators of rangeland health" (DIRH) may be completed to document information on the soil profile and the current status of IIRH indicators. Instructions for completing DIRH are found in the Interpreting Indicator of Rangeland Health manual.

59. Are we using the most current Pasture Condition Score and Rangeland Health Assessment matrixes?

Yes, States may also provide more guidance based on state specific tools to answer CART questions.

60. How do planned changes to crop rotation affect the existing condition points?

Existing condition points should not be affected by planned changes since CART will compare the "before and after" conditions, and existing conditions should be accurately depicted by the planner.

Animals

Aquatic Habitat for Fish and Other Organisms

61. Assessment guidelines were clarified based on comments received, including:

- Reworded initial guidance to broaden the definition of a priority aquatic habitat area to include multiple relevant federal and state level designations
- Reworded initial guidance to explicitly clarify how existing assessments should be used to complete the CART assessment
- Made editorial changes to the preliminary questions to increase clarity

62. If a State has already run an Assessment on the stream (SVAP2 or other State approved assessment protocol), does the Planner need to answer the Preliminary Aquatic Habitat Assessment Questions found in the CART tool?

No - If SVAP2 or other State approved assessment protocol have already been run on the PLU, the Planner may match the score from that assessment document with answers from the Aquatic Habitat Existing Condition Question and the preliminary assessment questions do not need to be answered. Per the Existing Condition Question, PLUs rating as Excellent habitat quality will receive 70 points, Good receive 50 points, Fair receive 30 points, and Poor receive 10 points.

Terrestrial Habitat for Fish and Other Organisms

63. What role do State-develop WHEGs have in CART and what is the purpose of the Land Use Preliminary Assessments?

State-developed Wildlife Habitat Evaluation Guides (WHEGs) are incorporated in CART. If a State WHEG or other external assessment is available, the planner should use that instead of answering the preliminary land use assessment questions. The planner would select State WHEG or external assessment, and then select the answer for the corresponding existing condition in CART.

States that do not have State WHEGs are encouraged to development them as State WHEGs allow for a more specific assessment to the area. In many instances, the land use preliminary assessment questions may not be applicable to a specific state or area (i.e. the tropics). However, the preliminary land use assessments are an alternative for planners to use to evaluate terrestrial habitat when no State WHEG exists. These questions a broad and open to some interpretation on the part of the planner, but they are a stop-gap in lieu of not having an assessment at all if there is not a WHEG available.

64. What should planners use to evaluate terrestrial habitat if their state does not have species-specific/priority species or land use/habitat-based WHEGs?

Species-specific or priority species WHEGs can be used where they exist for Threatened/Endangered (T/E) species, Working Lands for Wildlife (WLFW), or common species of interest by producers. For

individual species concerns, if a WHEG does not exist, the categorical separation definitions (excellent, good, fair, etc.) allow for other State-developed external assessments. In addition, the preliminary land use assessment questions or State-developed habitat-based WHEGs can be also used to complete the assessment for Terrestrial Habitat.

65. Is habitat adjacent to a client's land considered in the evaluation?

Adjacent land to the client's operation that is outside of their control may be considered when applicable when evaluating Terrestrial Habitat in CART. However, if there are changes to that land that affect habitat on the producer's land, then the evaluation needs to be updated accordingly in CART. If using a State or species specific WHEG, refer to the guidance provided with the appropriate WHEG.

Energy

66. What are some standard energy acronyms/terms?

A comprehensive acronym list has been created for the CART Assessment but some of the energy terms you may not be familiar with include:

- AgEMP: Agriculture Energy Management Plan
- ASD: Adjusted Speed Drive (see VFD, VSD)
- Btu: British Thermal Unit (normalized energy inputs)
- EIU: Energy Use Index/Indices
- VFD: Variable Frequency Drive (see ASD, VSD)
- VSD: Variable Speed Drive (see ASD, VFD)

67. How does CART work with the CAP 128, Agricultural Management Plan (AgEMP)? Our farmers really like the AgEMP Reports they get; do we have to eliminate that option?

CART allows planners to more quickly assess energy concerns which may indicate the need for an AgEMP. NRCS will continue to provide AgEMP to help address client's energy needs.

68. How do I find an Energy Use Index (EUI) and why does it matter?

An Energy Use Index is found by simple arithmetic. Add up all the significant energy inputs, then divide that total by the scale of the operation. Normalized results will use units of Btu/Lb, Btu/Acre, Btu/cwt, etc. See an overview of the process in the CART Resource Concern Assessment appendices.

EUI works a bit like a STIR (Soil Tillage Intensity Rating), ERA (Earned Run Average), or LDL (Low Density Lipoprotein) cholesterol; for similar conditions, higher values correlate to increased concerns.