

## FY 2023 CSP Activity List

## Practices

| Practice Code | Crop<br>(Annual and Mixed) | Crop<br>(Perennial) | Pasture | Forest | Associated<br>Ag Land | Farmstead | Practice Name                                      | Units | Lifespan | Suitable for Land Use Conversion |
|---------------|----------------------------|---------------------|---------|--------|-----------------------|-----------|--|-------|----------|----------------------------------|
| 311           | X                          | X                   |         |        |                       |           | Alley Cropping                                     | ac    | 15       |                                  |
| 314           |                            |                     | X       | X      | X                     |           | Brush Management                                   | ac    | 10       |                                  |
| 315           |                            |                     | X       | X      | X                     | X         | Herbaceous Weed Control                            | ac    | 5        |                                  |
| 319           | X                          | X                   | X       | X      | X                     | X         | On-Farm Secondary Containment Facility             | no    | 15       |                                  |
| 324           | X                          | X                   |         |        |                       |           | Deep Tillage                                       | ac    | 1        |                                  |
| 327           | X                          | X                   |         | X      | X                     | X         | Conservation Cover                                 | ac    | 5        |                                  |
| 328           | X                          |                     |         |        |                       |           | Conservation Crop Rotation                         | ac    | 1        |                                  |
| 329           | X                          |                     |         |        |                       |           | Residue and Tillage Management, No Till            | ac    | 1        |                                  |
| 338           |                            |                     | X       | X      | X                     |           | Prescribed Burning                                 | ac    | 1        |                                  |
| 340           | X                          | X                   |         |        |                       |           | Cover Crop   | ac    | 1        |                                  |
| 342           | X                          | X                   | X       | X      | X                     | X         | Critical Area Planting                             | ac    | 10       |                                  |
| 345           | X                          |                     |         |        |                       |           | Residue and Tillage management, Reduced till       | ac    | 1        |                                  |
| 374           | X                          | X                   | X       | X      | X                     | X         | Farmstead Energy Improvement                       | no    | 10       |                                  |
| 378           |                            |                     | X       |        |                       |           | Pond   | no    | 20       |                                  |
| 380           | X                          | X                   | X       |        | X                     | X         | Windbreak/Shelterbelt Establishment and Renovation | ft    | 15       |                                  |
| 381           |                            |                     | X       |        | X                     |           | Silvopasture Establishment                         | ac    | 15       |                                  |
| 382           | X                          | X                   | X       | X      | X                     | X         | Fence  | ft    | 20       |                                  |
| 383           | X                          | X                   | X       | X      | X                     | X         | Fuelbreak  | ac    | 10       |                                  |
| 384           |                            |                     |         | X      | X                     |           | Woody Residue Treatment                            | ac    | 10       |                                  |
| 386           | X                          | X                   |         |        | X                     |           | Field Border                                       | ac    | 10       |                                  |
| 390           | X                          | X                   | X       |        | X                     | X         | Riparian Herbaceous Cover                          | ac    | 5        |                                  |
| 391           | X                          | X                   | X       | X      | X                     | X         | Riparian Forest Buffer                             | ac    | 15       |                                  |
| 393           | X                          | X                   |         |        | X                     | X         | Filter Strip                                       | ac    | 10       |                                  |
| 394           | X                          | X                   | X       | X      | X                     | X         | Firebreak  | ft    | 5        |                                  |
| 395           | X                          | X                   | X       | X      | X                     | X         | Stream Habitat Improvement and Management          | ac    | 5        |                                  |
| 396           | X                          | X                   |         | X      | X                     | X         | Aquatic Organism Passage                           | mi    | 5        |                                  |
| 399           | X                          | X                   | X       | X      | X                     | X         | Fishpond Management                                | no    | 1        |                                  |
| 410           | X                          | X                   | X       | X      | X                     |           | Grade Stabilization Structure                      | no    | 15       |                                  |
| 412           | X                          | X                   | X       |        | X                     | X         | Grassed Waterway                                   | ac    | 10       |                                  |
| 420           | X                          | X                   | X       | X      | X                     | X         | Wildlife Habitat Planting                          | ac    | 5        |                                  |
| 430           | X                          | X                   | X       | X      | X                     | X         | Irrigation Pipeline                                | ft    | 20       |                                  |
| 441           | X                          | X                   |         | X      | X                     | X         | Irrigation System, Microirrigation                 | ac    | 15       |                                  |
| 442           | X                          | X                   | X       | X      | X                     | X         | Sprinkler system                                   | ac    | 15       |                                  |
| 449           | X                          | X                   | X       | X      | X                     | X         | Irrigation Water Management                        | ac    | 1        |                                  |
| 462           | X                          | X                   |         |        | X                     |           | Precision Land Forming and Smoothing               | ac    | 10       |                                  |
| 472           | X                          | X                   | X       | X      | X                     | X         | Access Control                                     | ac    | 10       |                                  |
| 484           | X                          | X                   | X       | X      | X                     | X         | Mulching   | ac    | 1        |                                  |
| 490           | X                          | X                   | X       | X      | X                     | X         | Tree/Shrub Site Preparation                        | ac    | 1        |                                  |
| 511           | X                          | X                   | X       |        |                       |           | Forage Harvest Management                          | ac    | 1        |                                  |
| 512           | X                          | X                   | X       |        | X                     | X         | Pasture and Hay Planting                           | ac    | 5        | YES                              |
| 516           | X                          | X                   | X       | X      | X                     | X         | Livestock Pipeline                                 | ft    | 20       |                                  |
| 528           | X                          | X                   | X       | X      | X                     |           | Prescribed Grazing                                 | ac    | 1        |                                  |
| 533           | X                          | X                   | X       | X      | X                     | X         | Pumping Plant                                      | no    | 15       |                                  |
| 554           | X                          | X                   |         |        | X                     |           | Drainage Water Management                          | ac    | 1        |                                  |
| 558           |                            |                     |         |        | X                     | X         | Roof Runoff Structure                              | no    | 15       |                                  |
| 561           |                            |                     | X       | X      | X                     | X         | Heavy Use Area Protection                          | sq ft | 10       |                                  |
| 570           | X                          | X                   | X       | X      | X                     | X         | Stormwater Runoff Control                          | no    | 1        |                                  |
| 574           |                            |                     | X       |        | X                     |           | Spring Development                                 | no    | 20       |                                  |
| 576           |                            |                     | X       |        | X                     |           | Livestock Shelter Structure                        | no    | 10       |                                  |

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|---------------|----------------------------|---------------------|---------|--------|-----------------------|-----------|---|-------|----------|----------------------------------|
| 578           | X                          | X                   | X       | X      | X                     | X         | Stream Crossing   | no    | 10       |                                  |
| 587           | X                          |                     |         |        |                       |           | Structure for Water Control                               | no    | 20       |                                  |
| 590           | X                          | X                   | X       |        |                       |           | Nutrient Management                                       | ac    | 1        |                                  |
| 595           | X                          | X                   | X       | X      |                       | X         | Integrated Pest Management                                | ac    | 1        |                                  |
| 604           | X                          | X                   |         |        | X                     |           | Saturated Buffer  | ft    | 15       |                                  |
| 605           | X                          | X                   |         |        | X                     |           | Denitrifying Bioreactor                                   | no    | 10       |                                  |
| 606           | X                          | X                   | X       | X      | X                     |           | Subsurface Drain  | ft    | 20       |                                  |
| 612           | X                          | X                   | X       | X      | X                     | X         | Tree/Shrub Establishment                                  | ac    | 15       | YES                              |
| 614           |                            |                     | X       | X      | X                     |           | Watering Facility   | no    | 10       |                                  |
| 620           | X                          | X                   | X       | X      | X                     | X         | Underground Outlet  | ft    | 20       |                                  |
| 643           |                            |                     |         | X      | X                     |           | Restoration and Management of Rare and Declining Habitats | ac    | 1        |                                  |
| 644           | X                          | X                   | X       | X      | X                     | X         | Wetland Wildlife Habitat Management                       | ac    | 1        |                                  |
| 645           | X                          | X                   | X       | X      | X                     | X         | Upland Wildlife Habitat Management                        | ac    | 1        |                                  |
| 646           | X                          | X                   | X       | X      | X                     |           | Shallow Water Development and Management                  | ac    | 5        |                                  |
| 647           | X                          | X                   | X       | X      | X                     | X         | Early Successional Habitat Development/Management         | ac    | 1        |                                  |
| 649           | X                          | X                   | X       | X      | X                     | X         | Structures for Wildlife                                   | no    | 5        |                                  |
| 654           | X                          | X                   | X       | X      | X                     | X         | Road/Trail/Landing Closure and Treatment                  | ft    | 10       |                                  |
| 655           |                            |                     |         | X      |                       |           | Forest Trails and Landings                                | ft    | 5        |                                  |
| 660           | X                          | X                   | X       | X      | X                     | X         | Tree/Shrub Pruning  | ac    | 10       |                                  |
| 666           |                            |                     |         | X      | X                     | X         | Forest Stand Improvement                                  | ac    | 10       |                                  |

FY 2023 CSP Supplemental Payments

| Conservation Activity Code | Resource Concern                  | Resource Concern Category   | Crop (Annual and Crop (Perennial)) | Pasture | Forest | Associated Ag Land | Farmstead | Supplemental Payment Name   | Supplemental Payment Description (NOT suitable for Voluntary Land Use Conversion)   | Units | Enhancement Lifespan   | Max years enh. can be contracted  | Information States need to Develop Prior to Signup | *Changes from 2022 to 2023. *Highlighted blocks delineate new activities. *Red font indicates revisions made.   |
|----------------------------|-----------------------------------|---|------------------------------------|---------|--------|--------------------|-----------|---|---|-------|--|---|--|---|
| E328A                      | SOIL, PLANTS                      | Sheet and Rill Erosion; Wind Erosion; Organic Matter Depletion; Compaction; Plant Pest Pressure; Soil Organism Habitat Loss or Degradation; Aggregate Instability | X                                  |         |        |                    |           | Supplemental Payment - Resource conserving crop rotation          | Establish a Resource Conserving Crop Rotation. Rotation must include AT LEAST one resource conserving crop as determined by the State Conservationist in a minimum three year crop rotation. The crop rotation will reduce soil erosion (water and wind), improve soil health, improve soil moisture efficiency, and reduce plant pest pressures.   | acre  | 1  | 5   | List of resource conserving crops.                 |   |
| E328B                      | PLANTS                            | Sheet and Rill Erosion; Wind Erosion; Organic Matter Depletion; Compaction; Plant Pest Pressure; Soil Organism Habitat Loss or Degradation; Aggregate Instability | X                                  |         |        |                    |           | Supplemental Payment - Improved resource conserving crop rotation | Improve an existing Resource Conserving Crop Rotation. Must enrich an existing rotation which already includes AT LEAST one resource conserving crop as determined by the State Conservationist in a minimum three year crop rotation. The crop rotation will reduce soil erosion (water and wind), improve soil health, improve soil moisture efficiency, and reduce plant pest pressures. | acre  | 1  | 5   | List of resource conserving crops.                 |   |
| AGM                        | SOIL, WATER, ANIMALS, PLANTS, AIR | Dependent Upon Component Enhancements   |                                    |         | X      | X                  |           | Supplemental Payment-Advanced Grazing Management (AGM)            | The Advanced Grazing Management (AGM) Supplemental Payment improves the benefit of managed grazing by integrating an additional suite of enhancements as a grazing system that address resource concerns associated on the land being contracted  | Acre  | The AGM's Life Span is dependent upon the chosen supplemental enhancement lifespan. Each Enhancement has its own individual life span and will need to be implemented accordingly. | Depending upon the supplemental enhancement selected (see column M on the enhancement tab). | See specific enhancement requirements.             | *Added forest (conifer) land use. E528H, E528L and E528T are eligible on Forest Land. For pasture, E528S and E338A have been added as an option. E645D has been added for Range, Pasture, and Forest. |
| E199A                      | TBD                               | TBD   | X                                  | X       | X      | X                  | X         | Comprehensive Conservation Plan (CCP)                             | Waiting for Job Sheet to be published   | TBD   | TBD  | No TSPs listed for MN-checked 1/17/2023   |  |   |

## FY 2023 Program Enhancement Activity List

Legend

Blue: New FY 2023 Enhancements

| Code  | Resource Concern | Resource Concern Cause   | Crop (Annual and Mixed) | Crop (Perennial) | Pasture | Forest | Associated Land | Farmstead | Full Enhancement Name   | Enhancement Description   | Units | Enhancement Lifespan | Max years enh. can be contracted | State Supplemental Information Required ++  | Suitable for Land Use Conversion | *Changes from 2022 to 2023.<br>*Highlighted blocks delineate new activities.<br>*Red font indicates revisions made.  |
|-------|------------------|--|-------------------------|------------------|---------|--------|-----------------|-----------|---|---|-------|----------------------|----------------------------------|---|----------------------------------|--|
| E314A | PLANTS, ANIMALS  | Plant Structure and Composition, Plant Pest Pressure; Terrestrial Habitat for Wildlife and Invertebrates |                         |                  | X       | X      | X               |           | Brush management to improve wildlife habitat  | Brush management is employed to create a desired plant community, consistent with the related ecological site steady state, which will maintain or enhance the wildlife habitat desired for the identified wildlife species. It will be designed to provide plant structure, density and diversity needed to meet those habitat objectives. This enhancement does not apply to removal of woody vegetation by prescribed fire or removal of woody vegetation to facilitate a land use change.   | acre  | 10                   | 5                                | State WHEG for species of concern   | NA                               |  |
| E315A | PLANTS, ANIMALS  | Plant Productivity and Health, Plant Structure and Composition, Plant Pest Pressure                      |                         |                  | X       | X      | X               |           | Herbaceous weed treatment to create desired plant communities consistent with the ecological site | Mechanical, chemical, or biological, herbaceous weed treatment will be used to control targeted, herbaceous weeds to create, release, or restore desired plant communities that are consistent with achievable, ecological site, steady state descriptions.   | acre  | 5                    | 5                                | Reproduction and other life-cycle requirements of target recorded wildlife and pollinator species   | NA                               | *Added animals as a resource concern because of terrestrial wildlife component. added terminology "wildlife and/or pollinator species" under criteria. *Added the term "weed" species and reworded the 4th bullet under criteria. *Under Implementation Requirements deleted "map of treated areas" because it was a repeated statement and payment scenario description included the term "spot" herbaceous weed treatment. |
| E327A | ANIMALS          | Terrestrial Habitat for Wildlife and Invertebrates   | X                       | X                |         | X      | X               | X         | Conservation cover for pollinators and beneficial insects   | Seed or plug nectar and pollen producing plants in non-cropped areas such as field borders, vegetative barriers, contour buffer strips, grassed waterways, shelterbelts, hedgerows, windbreaks, conservation cover, and riparian forest and herbaceous buffers.   | acre  | 5                    | 1                                | List of plants suitable for pollinator and beneficial insect habitat which emphasizes as many native species as practical.  | NA                               |  |
| E327B | ANIMALS          | Terrestrial Habitat for Wildlife and Invertebrates   | X                       | X                |         |        | X               | X         | Establish Monarch butterfly habitat   | Seed or plug milkweed (Asclepias spp.), and high-value monarch butterfly nectar plants on marginal cropland, field borders, contour buffer strips, and similar areas.   | acre  | 5                    | 1                                | Lists of larval host plants and nectar plants suitable for Monarch butterfly. WHEG for species of concern - Monarch butterfly.  | NA                               |  |
| E328C | SOIL             | Sheet and Rill Erosion, Wind Erosion   | X                       |                  |         |        |                 |           | Conservation crop rotation on recently converted CRP grass/legume cover                           | Implement a crop rotation management system on crop land acres that have recently converted from CRP grass/legume conservation cover to annual planted crops. Crop rotation minimizes disturbance resulting in a Soil Tillage Intensity Rating (STIR) less than 10 and reduces soil erosion from water and wind to below soil tolerance (T) level. The current NRCS wind and water erosion prediction technologies must be used to document the rotation, soil erosion estimate, and STIR calculations. *This enhancement is limited to acres where the conversion event took place not more than 2 years prior. Enhancement not applicable on hayland.   | acre  | 1                    | 5                                |   | NA                               |  |
| E328D | ANIMALS          | Terrestrial Habitat for Wildlife and Invertebrates   | X                       |                  |         |        |                 |           | Leave standing grain crops unharvested to benefit wildlife  | Implement a crop rotation which allows a portion of grain crops to be left in fields un-harvested to provide food and cover for wildlife during winter months.  | acre  | 1                    | 5                                | List of crops that provide food, cover, and shelter for targeted wildlife species. WHEG for species of concern.   | NA                               |  |
| E328E | SOIL             | Organic Matter Depletion; Soil Organism Habitat Loss or Degradation; Aggregate Instability               | X                       |                  |         |        |                 |           | Soil health crop rotation   | Implement a crop rotation which addresses all four principle components of soil health: increases diversity of the cropping system; maintains residue throughout the year; keeps a living root; and minimizes soil chemical, physical and biological disturbance. The rotation will include at least 4 different crop and/or cover crop types (crop types include cool season grass, warm season grass, cool season broadleaf, warm season broadleaf) grown in a sequence that will produce a positive trend in the Organic Matter (OM) sub factor value over the life of the rotation, as determined by the Soil Conditioning Index (SCI). The current NRCS wind and water erosion prediction technologies must be used to document the rotation and SCI calculations.   | acre  | 1                    | 5                                | List of high residue crops. State guidance of options to maximize living root systems in local climate and cropping systems. Determine available growing days and period of no growth, such as frozen periods in the north. | NA                               |  |
| E328F | SOIL             | Organic Matter Depletion; Soil Organism Habitat Loss or Degradation; Aggregate Instability               | X                       |                  |         |        |                 |           | Modifications to improve soil health and increase soil organic matter                             | Use of soil health assessment to evaluate impact of current conservation crop rotation in addressing soil organic matter depletion (primary assessment made in Year 1). Modifications to the crop rotation and/or crop management will be made as a result of the assessment results (adding a new crop and/or cover crop to the rotation; making changes to planting and/or tillage system, harvest timing of crops, or termination timing of cover crops). During Year 3 a follow up assessment will be completed to allow time for the modifications to show increased soil organic matter. Modified system must produce a positive trend in the Organic Matter (OM) sub factor value over the life of the rotation, as determined by the Soil Conditioning Index (SCI). The current NRCS wind and water erosion prediction technologies must be used to document the rotation and SCI calculations. | acre  | 1                    | 5                                |   | NA                               |  |

## FY 2023 Program Enhancement Activity List

Legend

Blue: New FY 2023 Enhancements

| Code  | Resource Concern | Resource Concern Cause  | Crop (Annual and Mixed) | Crop (Perennial) | Pasture | Forest | Associated | Ad Land | Farmstead | Full Enhancement Name  | Enhancement Description  | Units | Enhancement Lifespan | Max years enh. can be contracted | State Supplemental Information Required ++  | Suitable for Land Use Conversion | *Changes from 2022 to 2023.<br>*Highlighted blocks delineate new activities.<br>*Red font indicates revisions made. |
|-------|------------------|---|-------------------------|------------------|---------|--------|------------|---------|-----------|--|--|-------|----------------------|----------------------------------|---|----------------------------------|---|
| E328G | SOIL             | Organic Matter Depletion; Soil Organism Habitat Loss or Degradation; Aggregate Instability  | X                       |                  |         |        |            |         |           | Crop rotation on recently converted CRP grass/legume cover for soil organic matter improvement | Crop rotation on acres converted, no more than 2 years prior, from CRP grass/legume cover to annual crops. Diverse rotation with living roots and residue cover throughout year and minimal disturbance. Enhancement not applicable on hayland.  | acre  | 1                    | 5                                | List of high residue crops. State guidance of options to maximize living root systems in local climate and cropping systems. Determine available growing days and period of no growth, such as frozen periods in the north. | NA                               |   |
| E328I | WATER            | Nutrients Transported to Surface Water  | X                       | X                |         |        |            |         |           | Forage harvest to reduce water quality impacts by utilization of excess soil nutrients         | Establish a forage crop (single species or mix) following a primary annual crop to take up excess soil nutrients. Select forage known to effectively utilize and scavenge nutrients. Forage shall be harvested for forage, but not be grazed or burned.  | acre  | 1                    | 1                                | List of forage crops known to effectively utilize and scavenge nutrients. State guidance of options to maximize nutrient uptake in local climate and cropping systems.  | NA                               |   |
| E328J | ANIMALS          | Terrestrial Habitat for Wildlife and Invertebrates  | X                       |                  |         |        |            |         |           | Improved crop rotation to provide benefits to pollinators                                      | Improve the existing crop rotation by adding pollinator friendly crops into the rotation. The crop rotation shall include a minimum of three different crops in a minimum five year crop rotation. Each year, the pollinator friendly crop will be planted on a minimum of 5% of cropland acres contained within the agricultural operation. Use of insecticides is limited for the pollinator friendly crop.  | acre  | 1                    | 5                                | State list of pollinator friendly crops.  | NA                               |   |
| E328K | ANIMALS          | Terrestrial Habitat for Wildlife and Invertebrates  | X                       |                  |         |        |            |         |           | Multiple crop types to benefit wildlife  | Alternating crops in a systematic arrangement of strips across a field to provide diverse rotations of crops that provide wildlife food. At least two crops will be planted in adjacent strips a minimum of 0.5 acres in size.   | acre  | 1                    | 5                                | State list of wildlife food friendly crops.   | NA                               |   |
| E328L | ANIMALS          | Terrestrial Habitat for Wildlife and Invertebrates  | X                       |                  |         |        |            |         |           | Leaving tall crop residue for wildlife   | Fields may be harvested but must leave crop residue standing a minimum of 14 inches. Residue will be left through winter and into spring, providing valuable winter cover and forage for wildlife spanning late summer and through the following winter.   | acre  | 1                    | 5                                | States list of eligible crops and dates stubble must remain undisturbed.  | NA                               |   |
| E328M | ANIMALS          | Terrestrial Habitat for Wildlife and Invertebrates  | X                       |                  |         |        |            |         |           | Diversify crop rotation with canola or sunflower to benefit pollinators                        | Add canola or sunflower to existing crop rotation on minimum of 5% of cropland acres each year. No systemic pesticides allowed. Only pesticide application on canola or sunflower during pre-bloom and bloom following integrated pest management and industry best management practices.  | acre  | 1                    | 5                                | State list of pollinator friendly crops.  | NA                               |   |
| E328O | SOIL, PLANTS     | Sheet and Rill Erosion; Wind Erosion; Organic Matter Depletion; Compaction; Plant Pest Pressure; Soil Organism Habitat Loss or Degradation; Aggregate Instability | X                       |                  |         |        |            |         |           | Perennial grain crop conservation rotation   | Establish a perennial grain crop as part of a rotation with two other crops. The crop rotation will reduce soil erosion (water and wind), improve soil health, improve soil moisture efficiency, and reduce plant pest pressures.  | acre  | 1                    | 5                                |   | N/A                              |   |
| E329A | SOIL             | Sheet and Rill Erosion; Wind Erosion  | X                       |                  |         |        |            |         |           | No till to reduce soil erosion   | Establish a no till system to reduce sheet and rill and wind erosion soil loss. Field(s) must have a soil loss at or below the soil tolerance (T) level for water and wind erosion for the crop rotation and a Soil Tillage Intensity Rating (STIR) of no greater than 10 for each crop in the planned rotation. The current NRCS wind and water erosion prediction technologies must be used to calculate soil loss and STIR.                       | acre  | 1                    | 5                                |   | NA                               |   |
| E329C | WATER            | Inefficient Irrigation Water Use; Naturally Available Moisture Use  | X                       |                  |         |        |            |         |           | No till to increase plant-available moisture   | Establish a no till system to increase plant-available moisture. Each crop in the crop rotation shall have a Soil Tillage Intensity Rating (STIR) of no greater than 20. The current NRCS wind and water erosion prediction technologies must be used to document STIR calculations. Maintain a minimum 60 percent surface residue cover throughout the year to reduce evaporation from the soil surface.  | acre  | 1                    | 5                                |   | NA                               |   |
| E329D | SOIL             | Organic Matter Depletion; Soil Organism Habitat Loss or Degradation; Aggregate Instability  | X                       |                  |         |        |            |         |           | No till system to increase soil health and soil organic matter content                         | Establish a no till system to increase soil health and soil organic matter content. Each crop in the crop rotation shall have a Soil Tillage Intensity Rating (STIR) of no greater than 20. The crop rotation must achieve a soil conditioning index (SCI) of zero or higher. The current NRCS wind and water erosion prediction technologies must be used to document STIR and SCI calculations. Residue shall not be burned, grazed, or harvested. | acre  | 1                    | 5                                |   | NA                               |   |
| E338A | PLANTS           | Plant Pest Pressure, Wildfire Hazard from Biomass Accumulation  |                         |                  | X       | X      |            |         |           | Strategically planned, patch burning for grazing distribution and wildlife habitat             | Patch burn grazing is the application of prescribed fires on portions of an identified grazing unit at different times of the year. Patch burn grazing allows grazing animals to select where they want to graze creating a mosaic of vegetation structures and diversity that will maintain or enhance the wildlife habitat desired for the identified wildlife species and maintain livestock production.  | acre  | 1                    | 5                                | Define different burn seasons. State WHEG for species of concern. State specific criteria to the National Conservation Practice Standard (CPS 338) and/or CPS 338 job sheet.  | NA                               |   |

## FY 2023 Program Enhancement Activity List

Legend

Blue: New FY 2023 Enhancements

| Code  | Resource Concern | Resource Concern Cause   | Crop (Annual and Mixed) | Crop (Perennial) | Pasture | Forest | Associated | Ad Land | Farmstead | Full Enhancement Name   | Enhancement Description  | Units | Enhancement Lifespan | Max years enh. can be contracted | State Supplemental Information Required ++  | Suitable for Land Use Conversion | *Changes from 2022 to 2023.<br>*Highlighted blocks delineate new activities.<br>*Red font indicates revisions made. |
|-------|------------------|--|-------------------------|------------------|---------|--------|------------|---------|-----------|---|--|-------|----------------------|----------------------------------|---|----------------------------------|---|
| E338B | PLANTS, ANIMALS  | Terrestrial Habitat for Wildlife and Invertebrates; Feed and Forage Imbalance              |                         |                  |         | X      |            |         |           | Short-interval burns to promote a healthy herbaceous plant community                              | The controlled use of fire is applied in a forest to restore fire-adapted plants while improving wildlife habitat, wildlife food supply, and reducing the risk of damage from intense, severe wildfires. The ideal interval between prescribed burns is not often achieved. To improve the effectiveness of prescribed burning, the frequency of prescribed burning is increased appropriately, for a specified time period, to help restore ecological conditions in forests and woodlands. Short return interval prescribed burning is used to regenerate desirable tree species, improve the condition of fire-adapted plants and native herbaceous vegetation, improve wildlife food supply, create wildlife habitat (snags and den/cavity trees), limit encroachment of competing vegetation including non-native species, and reduce the future risk of damage from intense, severe wildfires. | acre  | 1                    | 5                                | State specific criteria to the National Conservation Practice Standard (CPS 338).   | NA                               |   |
| E338C | ANIMALS          | Terrestrial Habitat for Wildlife and Invertebrates   |                         |                  |         | X      |            |         |           | Sequential patch burning  | Conduct prescribed burning beneath a forest canopy (ground fire), burning a portion of the area each year to create a mosaic of vegetation in several stages of development, to provide a more diverse understory and contribute to wildlife habitat. The health of conifer and oak-conifer forests, particularly longleaf pine with a characteristic herbaceous understory, is dependent on fire or another means of controlling encroaching woody vegetation. A healthy longleaf or shortleaf pine, or pine-oak forest, can support a wide array of wildlife including pollinators and several endangered or threatened species.   | acre  | 1                    | 5                                | State specific criteria to the National Conservation Practice Standard (CPS 338). WHEG for species of concern.                      | NA                               |   |
| E340A | SOIL             | Sheet and Rill Erosion; Wind Erosion   | X                       | X                |         |        |            |         |           | Cover crop to reduce soil erosion   | Cover crop added to current crop rotation to reduce soil erosion from water and wind to below soil tolerance (T) level. Cover crops grown during critical erosion period(s). Species are selected that will have physical characteristics to provide adequate erosion protection.  | acre  | 1                    | 5                                | List of approved cover crop species for water or wind erosion protection. Guidance document on local climates and cropping systems. | NA                               |   |
| E340B | SOIL             | Organic Matter Depletion; Soil Organism Habitat Loss or Degradation; Aggregate Instability | X                       |                  |         |        |            |         |           | Intensive cover cropping to increase soil health and soil organic matter content                  | Implementation of cover crop mix to provide soil coverage during ALL non-crop production periods in an annual crop rotation. Cover crop shall not be harvested or burned. Planned crop rotation including cover crops and associated management activities must achieve a soil conditioning index (SCI) of zero or higher. The current NRCS wind and water erosion prediction technologies must be used to document SCI calculations.  | acre  | 1                    | 5                                | List of approved cover crop species. Guidance document on local climates and cropping systems.                                      | NA                               |   |
| E340C | SOIL             | Organic Matter Depletion; Soil Organism Habitat Loss or Degradation; Aggregate Instability | X                       | X                |         |        |            |         |           | Use of multi-species cover crops to improve soil health and increase soil organic matter          | Implement a multi-species cover crop to add diversity and increase biomass production to improve soil health and increase soil organic matter. Cover crop mix must include a minimum of 4 different species. The cover crop mix will increase diversity of the crop rotation by including crop types currently missing, e.g. Cool Season Grass (CSG), Cool Season Broadleaves (CSB), Warm Season Grasses (WSG), Warm Season Broadleaves (WSB).   | acre  | 1                    | 5                                | List of approved cover crop species. Guidance document on local climates and cropping systems.                                      | NA                               |   |
| E340D | SOIL             | Organic Matter Depletion; Soil Organism Habitat Loss or Degradation; Aggregate Instability |                         | X                |         |        |            |         |           | Intensive orchard/vineyard floor cover cropping to increase soil health                           | Implement orchard or vineyard floor cover crops. Cover crop shall not be harvested, grazed, or burned. Must achieve a soil conditioning index of zero or higher and produce a positive trend in the Organic Matter subfactor over the life of the rotation.  | acre  | 1                    | 5                                | List of approved cover crop species. Guidance document on local climates and cropping systems.                                      | NA                               |   |
| E340E | SOIL             | Organic Matter Depletion; Soil Organism Habitat Loss or Degradation; Aggregate Instability | X                       |                  |         |        |            |         |           | Use of soil health assessment to assist with development of cover crop mix to improve soil health | Soil health assessment (year 1) to evaluate current crop rotation in addressing soil organic matter depletion. Results are utilized to select a multi-species cover crop mix to add to the current crop rotation. Follow up assessment completed (year 3).   | acre  | 1                    | 5                                | List of approved cover crop species. Guidance document on local climates and cropping systems.                                      | NA                               |   |
| E340F | SOIL             | Compaction   | X                       | X                |         |        |            |         |           | Cover crop to minimize soil compaction  | Establish a cover crop mix that includes plants with both fibrous root and deep rooted systems. Fibrous to treat and prevent both near surface (0-4") and deep (>4") soil compaction and deep rooted to break up deep compacted soils. Cover crop shall not be harvested, grazed, or burned.   | acre  | 1                    | 5                                | List of approved cover crop species for soil compaction reduction. Guidance document on local climates and cropping systems.        | NA                               |   |
| E340G | WATER            | Nutrients Transported to Surface Water; Nutrients Transported to Groundwater               | X                       | X                |         |        |            |         |           | Cover crop to reduce water quality degradation by utilizing excess soil nutrients                 | Establish a cover crop mix to take up excess soil nutrients. Select cover crop species for their ability to effectively utilize nutrients. Terminate the cover crop as late as practical to maximize plant biomass production and nutrient uptake. Cover crop shall not be harvested, grazed, or burned.   | acre  | 1                    | 5                                | List of approved cover crop species for excess nutrient uptake. Guidance document on local climates and cropping systems.           | NA                               |   |

## FY 2023 Program Enhancement Activity List

Legend

Blue: New FY 2023 Enhancements

| Code  | Resource Concern | Resource Concern Cause   | Crop (Annual and Mixed) | Crop (Perennial) | Pasture | Forest | Associated | Ad Land | Farmstead | Full Enhancement Name  | Enhancement Description  | Units | Enhancement Lifespan | Max years enh. can be contracted | State Supplemental Information Required ++   | Suitable for Land Use Conversion | *Changes from 2022 to 2023.<br>*Highlighted blocks delineate new activities.<br>*Red font indicates revisions made. |
|-------|------------------|--|-------------------------|------------------|---------|--------|------------|---------|-----------|--|--|-------|----------------------|----------------------------------|--|----------------------------------|---|
| E340H | PLANT            | Plant Pest Pressure  | X                       | X                |         |        |            |         |           | Cover crop to suppress excessive weed pressures and break pest cycles                                    | Establish a cover crop mix to suppress excessive weed pressures and break pest cycles. Select cover crop species for their life cycles, growth habits, and other biological, chemical and/or physical characteristics. Select cover crop species that do not harbor pests or diseases of subsequent crops in the rotation. Cover crop shall not be harvested, grazed, or burned.   | acre  | 1                    | 5                                | List of approved cover crop species for weed suppression and that do not harbor pests or diseases. Guidance document on local climates and cropping systems. | NA                               |   |
| E340I | SOIL             | Compaction   | X                       |                  |         |        |            |         |           | Using cover crops for biological strip till  | Establish alternating strips of cover crops in which one strip acts as a biological strip-tiller and the adjacent strip promotes soil health with high residue cover crops. This will facilitate planting of the subsequent cash crop into the biologically strip-tilled row without the need for mechanical disturbance.  | acre  | 1                    | 5                                | List of approved cover crop species for soil compaction reduction. Guidance document on local climates and cropping systems.                                 | NA                               |   |
| E345A | SOIL             | Sheet and Rill Erosion; Wind Erosion   | X                       |                  |         |        |            |         |           | Reduced tillage to reduce soil erosion   | Establish a reduced tillage system to reduce soil loss. Field(s) must have a soil loss at or below the soil tolerance (T) level for water and wind erosion for the crop rotation and a Soil Tillage Intensity Rating (STIR) of no greater than 40 for each crop in the planned rotation. The current NRCS wind and water erosion prediction technologies must be used to calculate soil loss and STIR.   | acre  | 1                    | 5                                |  | NA                               |   |
| E345C | WATER            | Inefficient Irrigation Water Use; Naturally Available Moisture Use   | X                       |                  |         |        |            |         |           | Reduced tillage to increase plant-available moisture   | Establish a reduced till system to increase plant-available moisture. Each crop in the crop rotation shall have a Soil Tillage Intensity Rating (STIR) of no greater than 80. The current NRCS wind and water erosion prediction technologies must be used to document STIR calculations. Maintain a minimum 60 percent surface residue cover throughout the year to reduce evaporation from the soil surface.   | acre  | 1                    | 5                                |  | NA                               |   |
| E345D | SOIL             | Organic Matter Depletion; Soil Organism Habitat Loss or Degradation; Aggregate Instability   | X                       |                  |         |        |            |         |           | Reduced tillage to increase soil health and soil organic matter content                                  | Establish a reduced till system to increase soil health and soil organic matter content. Each crop in the crop rotation shall have a Soil Tillage Intensity Rating (STIR) of no greater than 80. The crop rotation must achieve a soil conditioning Index (SCI) of zero or higher and produce a positive trend in the Organic Matter (OM) subfactor over the life of the crop rotation. The current NRCS wind and water erosion prediction technologies must be used to document STIR and SCI calculations. Residue shall not be burned, grazed, or harvested. | acre  | 1                    | 5                                |  | NA                               |   |
| E381A | PLANTS, ANIMALS  | Plant Structure and Composition, Plant Productivity and Health, Terrestrial Habitat for Wildlife and Invertebrates, Aquatic Habitat for Fish and other Organisms |                         |                  | X       | X      | X          |         |           | Silvopasture to improve wildlife habitat   | Establishing a combination of trees or shrubs and compatible forages on the same acreage, providing forage, shade, and/or shelter for livestock and including a purpose of enhancing wildlife habitat.   | acre  | 15                   | 1                                | State WHEG for species of concern. List of wildlife friendly grasses, forbs, shrubs, and trees.  | NA                               |   |
| E382A | ANIMALS          | Terrestrial Habitat for Wildlife and Invertebrates   |                         |                  | X       | X      | X          |         |           | Incorporating "wildlife friendly" fencing for connectivity of wildlife food resources                    | Retrofitting or constructing fences that provide a means to control movement of animals, people, and vehicles, but minimizes wildlife movement impacts.  | ft    | 20                   | 1                                | State job sheet to record animal species of concern and wildlife movement modifications/specifications. WHEG for species of concern.                         | NA                               |   |
| E382B | SOIL             | Plant productivity and Health, Plant Structure and Composition   |                         |                  | X       |        |            |         |           | Installing electrical fence offsets and wire to facilitate cross-fencing for improved grazing management | Retrofitting conventional fences such as barb wire, with new electrical offsets and electrical wire to facilitate cross-fencing for improved grazing management.   | ft    | 20                   | 1                                | Electric Fence Design sheet and map to design enhancement; potential state supplemental guidance for the technical quality of the existing fences            | NA                               |   |
| E383A | PLANT            | Wildfire Hazard from Biomass Accumulation  |                         |                  |         |        | X          |         |           | Grazing-maintained fuel break to reduce the risk of fire   | The area has existing fuel break(s) of 30 to 60 feet in width, supporting a mixture of woody sprouts and some herbaceous vegetation. Warm-season perennial vegetation will be established on the fuel breaks, and will be over-seeded with cool-season annual forages in the fall. Grazing will be managed on the fuel breaks to remove or modify the fine fuel vegetation, thus reducing the risk of fire spread from ground fires. Ground cover will be maintained to control soil erosion and facilitate prescribed burning.                                | acre  | 10                   | 1                                | State specific criteria to the National Conservation Practice Standard (CPS 383).  | NA                               |   |
| E386A | SOIL             | Sheet and Rill Erosion; Wind Erosion   | X                       | X                |         |        | X          |         |           | Enhanced field borders to reduce soil erosion along the edge(s) of a field                               | Enhance existing field borders to a width of at least 30 feet and establish a single species or mixture of species that provide a dense ground cover along the edge(s) of the field.   | acre  | 10                   | 1                                |  | NA                               |   |
| E386B | SOIL             | Organic Matter Depletion; Soil Organism Habitat Loss or Degradation; Aggregate Instability   | X                       | X                |         |        | X          |         |           | Enhanced field borders to increase carbon storage along the edge(s) of the field                         | Enhance existing field borders to a width of at least 30 feet and establish a single species or mixture of species that provide a dense ground cover and dense rooting system along the edge(s) of the field.  | acre  | 10                   | 1                                |  | NA                               |   |

## FY 2023 Program Enhancement Activity List

Legend

Blue: New FY 2023 Enhancements

| Code  | Resource Concern | Resource Concern Cause   | Crop (Annual and Mixed) | Crop (Perennial) | Pasture | Forest | Associated Adj. Land | Farmstead | Full Enhancement Name   | Enhancement Description   | Units | Enhancement Lifespan | Max years enh. can be contracted | State Supplemental Information Required ++   | Suitable for Land Use Conversion | *Changes from 2022 to 2023.<br>*Highlighted blocks delineate new activities.<br>*Red font indicates revisions made. |
|-------|------------------|--|-------------------------|------------------|---------|--------|----------------------|-----------|---|---|-------|----------------------|----------------------------------|--|----------------------------------|---|
| E386D | ANIMALS          | Terrestrial Habitat for Wildlife and Invertebrates   | X                       | X                |         |        | X                    |           | Enhanced field borders to increase food for pollinators along the edge(s) of a field      | Enhance existing field borders to a width of at least 40 feet and establish a mixture of species that provide food for pollinators along the edge(s) of the field.  | acre  | 10                   | 1                                | List of plants suitable for pollinator habitat which emphasize as many native species as practical. WHEG for species of concern.   | NA                               |   |
| E386E | ANIMALS          | Terrestrial Habitat for Wildlife and Invertebrates   | X                       | X                |         |        | X                    |           | Enhanced field borders to increase wildlife food and habitat along the edge(s) of a field | Enhance existing field borders to a width of at least 40 feet and establish a mixture of species that provide wildlife food and habitat along the edge(s) of the field. The extended field border will also provide enhanced wildlife habitat continuity.   | acre  | 10                   | 1                                | List of wildlife friendly grasses, forbs, shrubs, and trees. WHEG for species of concern.  | NA                               |   |
| E390A | WATER            | Nutrients Transported to Surface Water; Sediment Transported to Surface Water  | X                       | X                |         |        |                      |           | Increase riparian herbaceous cover width for sediment and nutrient reduction              | Where an existing herbaceous riparian buffer is located along a river, stream, pond, lake, or other waterbody, increase the width of the buffer in order to allow a greater percentage of sediment and nutrient removal from surface and subsurface flows.  | acre  | 5                    | 1                                | List of plant species with stiff stems and high stem density that are adapted to the duration of saturation and inundation of the site.  | NA                               |   |
| E390B | ANIMALS          | Terrestrial Habitat for Wildlife and Invertebrates   | X                       | X                | X       |        | X                    | X         | Increase riparian herbaceous cover width to enhance wildlife habitat                      | Where an existing herbaceous riparian buffer is located along a river, stream, pond, lake, or other waterbody, increase the diversity of native species, control invasive species, install fencing and relocate equipment operations, trails, and livestock, and increase the width of the buffer.  | acre  | 5                    | 1                                | List of wildlife friendly grasses, forbs, and legumes. WHEG for species of concern.  | NA                               |   |
| E391A | WATER            | Nutrients Transported to Surface Water; Sediment Transported to Surface Water  | X                       | X                |         |        | X                    |           | Increase riparian forest buffer width for sediment and nutrient reduction                 | Where an existing forested riparian area is located along a river, stream, pond, lake, or other waterbody, increase the width of the buffer in order to allow a greater percentage of sediment and nutrient removal from surface and subsurface flows.  | acre  | 15                   | 1                                | List of wildlife friendly grasses, forbs, shrubs, and trees.   | NA                               |   |
| E391C | ANIMALS          | Terrestrial Habitat for Wildlife and Invertebrates   | X                       | X                | X       |        | X                    | X         | Increase riparian forest buffer width to enhance wildlife habitat                         | Where an existing riparian forest buffer is located along a river, stream, pond, lake, or other waterbody, increase the diversity of native species, control invasive species, install fencing and relocate equipment operations, trails, and livestock to increase the functional width of the buffer.   | acre  | 15                   | 1                                | List of wildlife friendly grasses, forbs, shrubs, and trees. WHEG for species of concern.  | NA                               |   |
| E393A | WATER            | Nutrients Transported to Surface Water; Pathogens and Chemicals from Manure, Bio-solids or Compost Applications Transported to Surface Water | X                       | X                |         |        | X                    |           | Extend existing filter strip to reduce water quality impacts                              | Extend existing filter strips for water quality protection. Extend the existing buffer for a total of 60 feet or more to enhance water quality functions. The extended buffers must be composed of at least 5 species of non-noxious, wildlife friendly grasses and/or perennial forbs best suited to site conditions. Include species that provide pollinator food and habitat where possible. | acre  | 10                   | 1                                | List of wildlife friendly grasses and perennial forbs.   | NA                               |   |
| E420A | ANIMALS          | Terrestrial Habitat for Wildlife and Invertebrates   | X                       | X                |         | X      | X                    | X         | Establish pollinator habitat  | Seed or plug nectar and pollen producing plants to establish or improve pollinator habitat. These areas may include, but are not limited to, field borders, vegetative barriers, contour buffer strips, shelterbelts, hedgerows, windbreaks, conservation cover, and riparian forest and herbaceous buffers.  | acre  | 5                    | 1                                | List of plants suitable for pollinator and beneficial insect habitat which emphasizes as many native species as practical. WHEG to demonstrate meeting wildlife habitat resource concern (generally) and WHEG for pollinator habitat | NA                               |   |
| E420B | ANIMALS          | Terrestrial Habitat for Wildlife and Invertebrates   | X                       | X                |         |        | X                    | X         | Establish monarch butterfly habitat   | Seed or plug milkweed ( <i>Asclepias</i> spp.) and high-value monarch butterfly nectar plants to establish or improve monarch habitat. These areas may include, but are not limited to, field borders, vegetative barriers, contour buffer strips, shelterbelts, hedgerows, windbreaks, conservation cover, and riparian forest and herbaceous buffers.   | acre  | 5                    | 1                                | Lists of larval host plants and nectar plants suitable for Monarch butterfly. WHEG for species of concern - Monarch butterfly.   | NA                               |   |
| E449C | WATER            | Inefficient Irrigation Water Use   | X                       | X                | X       |        |                      |           | Advanced Automated IWM – Year 2-5, soil moisture monitoring                               | Advanced automated irrigation water management using soil moisture or water level monitoring (installed as per IWM plan) with data loggers.   | acre  | 1                    | 5                                |  | NA                               |   |
| E449D | WATER            | Inefficient Irrigation Water Use   | X                       | X                | X       |        |                      |           | Advanced Automated IWM – Year 1, Equipment and soil moisture or water level monitoring    | Installing and monitoring soil moisture or water leveling equipment for advanced automated irrigation water management  | acre  | 1                    | 1                                |  | NA                               |   |
| E449F | WATER            | Inefficient Irrigation Water Use   | X                       | X                | X       |        |                      |           | Intermediate IWM— Year 1, Equipment with Soil or Water Level monitoring                   | This activity involves monitoring soil moisture or water levels within a irrigated field for intermediate irrigation water management include installation of equipment year 1.   | acre  | 1                    | 1                                |  | NA                               |   |



## FY 2023 Program Enhancement Activity List

Legend

Blue: New FY 2023 Enhancements

| Code  | Resource Concern | Resource Concern Cause   | Crop (Annual and Mixed) | Crop (Perennial) | Pasture | Forest | Associated | Ad Land | Farmstead | Full Enhancement Name   | Enhancement Description  | Units | Enhancement Lifespan | Max years enh. can be contracted | State Supplemental Information Required ++  | Suitable for Land Use Conversion | *Changes from 2022 to 2023.<br>*Highlighted blocks delineate new activities.<br>*Red font indicates revisions made. |
|-------|------------------|--|-------------------------|------------------|---------|--------|------------|---------|-----------|---|--|-------|----------------------|----------------------------------|---|----------------------------------|---|
| E449G | WATER            | Inefficient Irrigation Water Use   | X                       | X                | X       |        |            |         |           | Intermediate IWM — Years 2-5, Soil or Water Level monitoring  | Field currently flooded through a cascade levee system will be converted to furrow irrigation. It is required that field is leveled on the lower end and approximately 25% up the sides for furrow irrigation prior to implementing the enhancement. After the previous year's crop is harvested, elevated planting beds and furrows will be reshaped as needed to guarantee proper irrigation of the rice crop. Layflat tubing will be utilized with the correct holes or gates installed to advance water down the furrows at the appropriate rate across the length of the field as prescribed by an NRCS "PHAUCET" design, Delta Plastic® Pipe Planner® or similar.  | acre  | 1                    | 5                                |   | NA                               |   |
| E449H | WATER            | Inefficient Irrigation Water Use   | X                       | X                |         |        |            |         |           | Intermediate IWM — Years 2-5, using soil moisture or water level monitoring                         | Monitoring soil moisture or water levels within an irrigated field for implementing an intermediate irrigation water management plan using soil moisture data to facilitate management decisions.  | acre  | 1                    | 5                                |   | NA                               |   |
| E449I | WATER            | Inefficient Irrigation Water Use   | X                       | X                |         |        |            |         |           | IWM - Year 1, Retrofit Equipment with Speed Control on Sprinkler Irrigation System                  | This enhancement consists of retrofitting an existing sprinkler irrigation system to integrate variable rate irrigation (VRI) speed control where the technology is not present. The added functionality of VRI speed control equipment allows for enhanced water application precision, efficiency, and uniformity along the length of the sprinkler irrigation system by varying the irrigation system speed within the irrigation pass. Renovation of the existing sprinkler irrigation system utilizing this enhancement includes the installation of an upgraded control panel capable of speed control programming and global positioning system (GPS) technology capable of providing real-time field position. Utilization of the VRI speed control and GPS equipment will be for the entire irrigation season and be based on spatially identified parameters such as variations in past yield data, soils, crop growth, topography, or computerized irrigation scheduling recommendations.<br><br>This scenario requires that the existing sprinkler irrigation system meets Conservation Practice Standard (CPS) 442 uniformity and efficiency requirements. System equipment is installed in year 1 with this scenario and scenario E449G or E449C is used in years 2-5. | acre  | 1                    | 1                                |   | NA                               |   |
| E472A | WATER            | Nutrients transported to surface water, Pathogens and chemicals from manure, bio-solids or compost applications transported to surface water | X                       | X                | X       | X      | X          | X       | X         | Manage livestock access to waterbodies to reduce nutrients or pathogens to surface water            | Installation of structures and implementation of grazing management actions that restrict livestock access to waterbodies in order to reduce nutrient loading or reduce the introduction of pathogens from manure, bio-solids or compost to surface waters.  | ft.   | 10                   | 1                                |   | NA                               |   |
| E484A | SOIL             | Organic Matter Depletion; Soil Organism Habitat Loss or Degradation; Aggregate Instability   | X                       |                  |         |        |            |         |           | Mulching to improve soil health   | Implement a crop rotation which utilizes mulch and addresses all four principle components of soil health: increases diversity of the cropping system; maintains residue throughout the year; keeps a living root; and minimizes soil chemical, physical and biological disturbance. Plant-based mulching materials will be applied at least once during the rotation. The rotation will include at least 4 different crops and/or cover crops grown in a sequence that will produce a positive trend in the Organic Matter (OM) subfactor value over the life of the rotation, as determined by the Soil Conditioning Index (SCI). The current NRCS wind and water erosion prediction technologies must be used to document the rotation and SCI calculations.  | acre  | 1                    | 5                                | List of mulching materials with a carbon to nitrogen ratio (C:N) less than 30:1.  | NA                               |   |
| E511A | ANIMALS          | Terrestrial Habitat for Wildlife and Invertebrates   | X                       | X                | X       |        |            |         |           | Harvest of crops (hay or small grains) using measures that allow desired species to flush or escape | Harvest of crops (hay or small grains) using conservation measures that allow desired species to flush or escape. (For species list see State Wildlife Action Plan for species list) Conservation measures include timing of harvest, idling land during the nesting or fawning period, and applying harvest techniques that reduce mortality to wildlife.   | acre  | 1                    | 5                                | List of wildlife species of concern. State Cooperative Extension Service (CES) recommendations for forage harvest based on stage of maturity, moisture content, length of cut, stubble height and harvest interval. Primary nesting seasons for upland species. WHEG for species of interest. | NA                               |   |

## FY 2023 Program Enhancement Activity List

Legend

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|-------|------------------|--|-------------------------|------------------|---------|--------|---------------------|-----------|---|--|-------|----------------------|----------------------------------|--|----------------------------------|--|
| E511B | ANIMALS          | Terrestrial Habitat for Wildlife and Invertebrates   | X                       | X                | X       |        |                     |           | Forage harvest management that helps maintain wildlife habitat cover, shelter or continuity                                 | The timely cutting and removal of forages from the field as hay, green chop, or ensilage in such a way, and in time frames, to optimize both forage yield/quality and wildlife cover and shelter and/or continuity between otherwise disconnected habitats.  | acre  | 1                    | 5                                | List of wildlife species of concern. WHEG for species of concern that includes cover and shelter requirements. Cooperative Extension Service recommendations for proper stubble heights to avoid winterkill of forage species in cold climates. Appropriate harvest schedules, cover patterns, and minimum plant heights to provide suitable habitat for the specified wildlife species. | NA                               |  |
| E511C | ANIMALS, PLANTS  | Feed and Forage, Plant Productivity and Health, Structure and Composition                  |                         | X                | X       |        |                     |           | Forage testing for improved harvesting methods and hay quality  | Dry hay forage samples are collected and analyzed following LGU procedures. Analysis results are kept and used to improve harvest decisions to guide forage supplementation of on-farm livestock to meet nutritional needs and improve health and productivity.  | each  | 1                    | 5                                | State Cooperative Extension Service (CES) recommendations for forage harvest based on stage of maturity, moisture content, length of cut, stubble height and harvest interval, etc. and State Cooperative Extension Service (CES) forage nutritional requirements for livestock classes.   | NA                               |  |
| E511D | ANIMALS          | Terrestrial Habitat for Wildlife and Invertebrates   |                         | X                |         |        |                     |           | Forage harvest management to improve terrestrial habitat for wildlife and invertebrates during critical over-winter periods | Eliminate or forgo the last fall cutting of hay or haylage to optimize wildlife cover and shelter during critical over-winter periods and lengthen late season bloom period for invertebrates. Allowing late season stand maturity increases stand life and reduces risks of frost and winter damage while providing valuable wildlife habitat and extended bloom periods. | each  | 1                    | 5                                | The state's WHEG must specify cover and shelter or continuity requirements for the wildlife species of concern. The total WHEG score after installation of this practice must be 0.5 or greater  | NA                               |  |
| E512A | SOIL             | Sheet and Rill Erosion; Wind Erosion   | X                       | X                |         |        |                     |           | Cropland conversion to grass-based agriculture to reduce soil erosion   | Conversion of cropped land to grass-based agriculture to reduce soil erosion. Mixtures of perennial grasses, forbs, and legume species are established on cropland where annually-seeded cash crops have been grown.   | acre  | 5                    | 1                                |  | YES                              | *Activity Sheet edited to include new terminology "Pasture and Hay Planting" instead of previous "Forage and Biomass Planting" name. |
| E512B | SOIL             | Sheet and Rill Erosion   |                         |                  | X       |        |                     |           | Forage plantings that help increase organic matter in depleted soils  | Establishing adapted and/or compatible species, varieties, or cultivars of herbaceous species suitable for pasture, hay, or biomass production that can provide for reduced soil erosion, improving soil health.   | acre  | 5                    | 1                                | State specific planting rates, methods and dates. Livestock exclusion requirements   | NA                               | *Activity Sheet edited to include new terminology "Pasture and Hay Planting" instead of previous "Forage and Biomass Planting" name. |
| E512C | SOIL             | Organic Matter Depletion; Soil Organism Habitat Loss or Degradation; Aggregate Instability | X                       | X                |         |        |                     |           | Cropland conversion to grass for soil organic matter improvement  | Conversion of cropped land to grass-based agriculture. Mixtures of perennial grasses, forbs, and/or legume species are established on cropland where annually-seeded cash crops have been grown.   | acre  | 5                    | 1                                | State specific planting rates, methods and dates. Livestock exclusion requirements. List of noxious plants. List of persistent species that can tolerate close grazing and/or trampling  | YES                              | *Activity Sheet edited to include new terminology "Pasture and Hay Planting" instead of previous "Forage and Biomass Planting" name. |
| E512D | SOIL             | Organic Matter Depletion   | X                       | X                | X       |        |                     |           | Forage plantings that help increase organic matter in depleted soils  | Establishing adapted and/or compatible species, varieties, or cultivars of herbaceous species suitable for pasture, hay, or biomass production that can help improve soil quality of depleted sites through increase or conservation of the organic matter in the soil.  | acre  | 5                    | 1                                | State specific planting rates, methods and dates. Livestock exclusion requirements   | NA                               | *Activity Sheet edited to include new terminology "Pasture and Hay Planting" instead of previous "Forage and Biomass Planting" name. |
| E512E | PLANT            | Plant Productivity and Health  | X                       | X                |         |        |                     |           | Forage and biomass planting that produces feedstock for biofuels or energy production.                                      | Conversion of cropped land to grass-based agriculture. Mixtures of perennial grasses, forbs, and/or legume species are established on cropland where annually-seeded cash crops have been grown.   | acre  | 5                    | 1                                | State specific planting rates, methods and dates. Livestock exclusion requirements.  | YES                              | *Activity Sheet edited to include new terminology "Pasture and Hay Planting" instead of previous "Forage and Biomass Planting" name. |

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Legend

Blue: New FY 2023 Enhancements

| Code  | Resource Concern   | Resource Concern Cause  | Crop (Annual and Mixed) | Crop (Perennial) | Pasture | Forest | Associated All Land | Farmstead | Full Enhancement Name  | Enhancement Description   | Units | Enhancement Lifespan | Max years enh. can be contracted | State Supplemental Information Required ++  | Suitable for Land Use Conversion | *Changes from 2022 to 2023.<br>*Highlighted blocks delineate new activities.<br>*Red font indicates revisions made.   |
|-------|--------------------|---|-------------------------|------------------|---------|--------|---------------------|-----------|--|---|-------|----------------------|----------------------------------|---|----------------------------------|---|
| E512I | ANIMALS            | Terrestrial Habitat for Wildlife and Invertebrates                                  |                         |                  | X       |        | X                   | X         | Establish pollinator and/or beneficial insect and/or monarch habitat                                 | Establishing adapted and/or compatible species, varieties, or cultivars of herbaceous species that can provide nectar for Monarch butterflies and/or pollinators and forage and other habitat values for wildlife and livestock, particularly at times when targeted nectar, forage supply and quality, cover, and shelter are not available in other pastures.                     | acre  | 5                    | 1                                | State specific planting rates, methods and dates. Livestock exclusion requirements. WHEG for species of concern. List of wildlife friendly grasses, forbs, shrubs, and trees.   | NA                               | *Activity Sheet edited to include new terminology "Pasture and Hay Planting" instead of previous "Forage and Biomass Planting" name.  |
| E512J | ANIMALS            | Terrestrial Habitat for Wildlife and Invertebrates                                  |                         |                  | X       |        | X                   | X         | Establish wildlife corridors to provide habitat continuity or access to water                        | Establishing adapted and/or compatible species, varieties, or cultivars of perennial, herbaceous species that can provide cover needed for wildlife species of concern to move from food/cover/water sources to other food/cover/water sources as needed for their life cycles, and/or to enhance the utility of underused wildlife habitat areas.                                  | acre  | 5                    | 1                                | State specific planting rates, methods and dates. Livestock exclusion requirements. WHEG for species of concern. List of wildlife friendly grasses, forbs, shrubs, and trees.   | NA                               | *Activity Sheet edited to include new terminology "Pasture and Hay Planting" instead of previous "Forage and Biomass Planting" name.  |
| E512L | ANIMALS            | Feed and Forage Imbalance   |                         |                  | X       |        | X                   |           | Diversifying forage base with interseeding forbs and legumes to increase pasture quality             | Establishing adapted and/or compatible species, varieties, or cultivars of perennial, herbaceous species that increases the diversity to enhance livestock, forage supply and quality not available in other pastures.  | acre  | 5                    | 1                                | State specific planting rates, methods and dates. Livestock exclusion requirements.   | NA                               | *Activity Sheet edited to include new terminology "Pasture and Hay Planting" instead of previous "Forage and Biomass Planting" name.<br>*Payment schedule has been revised to reflect difference between scenario size in the base practice as compared to the scenario size for the enhancement. |
| E512M | PLANTS AND ANIMALS | Plant Structure and Composition, Terrestrial Habitat for Wildlife and Invertebrates |                         |                  | X       |        | X                   |           | Establishing native grass or legumes to improve the plant community                                  | Establishing adapted and/or compatible species, varieties or cultivars species suitable for pasture, hay or biomass production that can provide cover and shelter or structure and composition for wildlife   | acre  | 5                    | 1                                | State specific planting rates, methods and dates. Livestock exclusion requirements. WHEG for species of concern.  | NA                               | *Activity Sheet edited to include new terminology "Pasture and Hay Planting" instead of previous "Forage and Biomass Planting" name.  |
| E528A | ANIMALS            | Feed and Forage Imbalance   |                         |                  | X       |        | X                   |           | Maintaining quantity and quality of forage for animal health and productivity                        | Managing the harvest of vegetation with grazing and/or browsing animals for the purposes of maintaining desired pasture composition/plant vigor and improving/maintaining quantity and quality of forage for the animals' health and productivity following the recommendations of a qualifying professional, as detailed in the documentation and implementation requirements.     | acre  | 1                    | 5                                | Deferment (non-grazing period less than one year) and/or rest (non-grazing period equal or greater than one year) needed for critical periods of plant needs (such as post-planting or renovation, severe drought, etc.). | NA                               | *Activity Sheet edited to include statement for the new TSP protocol regarding DIA 159.   |
| E528B | ANIMALS            | Terrestrial Habitat for Wildlife and Invertebrates                                  |                         |                  | X       | X      |                     |           | Grazing management that improves monarch butterfly habitat   | Implement a grazing management plan that will increase the abundance and diversity of monarch nectar-producing perennial forbs, including milkweed, while maintaining ecosystem benefits for other wildlife and livestock.  | acre  | 1                    | 5                                | State NRCS Monarch Butterfly Wildlife Habitat Evaluation Guide (WHEG).  | NA                               |   |
| E528C | ANIMALS            | Feed and Forage Imbalance, Terrestrial Habitat for Wildlife and Invertebrates       |                         |                  | X       |        |                     |           | Incorporating wildlife refuge areas in contingency plans for wildlife.                               | A prescribed grazing plan that includes 12 month (or longer) rest (non-grazing period equal or greater than one year) of a grazing unit that consists of native grasses and/or legumes and/or perennial forbs for the purpose of meeting the needs for drought/disaster contingency plans that will also provide wildlife habitat or wildlife access to water for a period of time. | acre  | 1                    | 5                                | WHEG for species of concern.  | NA                               |   |
| E528D | ANIMALS            | Terrestrial Habitat for Wildlife and Invertebrates                                  |                         |                  | X       | X      |                     |           | Grazing management for improving quantity and quality of food or cover and shelter for wildlife      | Grazing management employed will provide the plant structure, density and diversity needed for improving the quantity and quality of cover, shelter and food for the desired wildlife species of concern.   | acre  | 1                    | 5                                | WHEG for species of concern.  | NA                               |   |
| E528E | PLANTS             | Plant Structure and Composition, Terrestrial Habitat for Wildlife and Invertebrates |                         |                  | X       | X      | X                   |           | Improved grazing management for enhanced plant structure and composition for wildlife                | Managing the harvest of vegetation with grazing and/or browsing animals for the purpose of improving the quantity and quality of the structure and composition of the plant community that is available for wildlife.   | acre  | 1                    | 5                                | WHEG for wildlife species of concern.   | NA                               |   |
| E528F | PLANTS             | Plant Productivity and Health, Plant Structure and Composition                      | X                       | X                | X       |        | X                   |           | Stockpiling cool season forage to improve structure and composition or plant productivity and health | Grazing management employed to stop grazing events of selected paddock(s) to allow pasture forages to grow to maximum vegetative biomass accumulation before the end of the growing season.   | acre  | 1                    | 5                                |   | NA                               |   |
| E528G | PLANTS             | Plant Productivity and Health   |                         |                  | X       |        |                     |           | Improved grazing management on pasture for plant productivity and health with monitoring activities  | Managing the harvest of vegetation with grazing and/or browsing animals as adjusted when following recommendations of a qualifying professional, as detailed in the enhancement criteria, generated through pasture condition scoring (PCS).  | acre  | 1                    | 5                                | Pasture condition score Assessment. Critical periods of plant needs (such as post-planting or renovation, severe drought, etc.).  | NA                               | *Activity Sheet edited to include statement for the new TSP protocol regarding DIA 159.   |

## FY 2023 Program Enhancement Activity List

Legend

Blue: New FY 2023 Enhancements

| Code  | Resource Concern | Resource Concern Cause  | Crop (Annual and Mixed) | Crop (Perennial) | Pasture | Forest | Associated | Ad Land | Farmstead | Full Enhancement Name   | Enhancement Description  | Units | Enhancement Lifespan | Max years enh. can be contracted | State Supplemental Information Required ++   | Suitable for Land Use Conversion | *Changes from 2022 to 2023.<br>*Highlighted blocks delineate new activities.<br>*Red font indicates revisions made. |
|-------|------------------|---|-------------------------|------------------|---------|--------|------------|---------|-----------|---|--|-------|----------------------|----------------------------------|--|----------------------------------|---|
| E528I | WATER            | Nutrients transported to surface water, Nutrients transported to ground water   |                         |                  | X       |        |            |         |           | Grazing management that protects sensitive areas -surface or ground water from nutrients            | Grazing management employed will provide cover and density needed in the watershed in order to protect sensitive areas such as sinkholes, streams, highly erodible areas, or locations with plants that cannot tolerate defoliation.   | acre  | 1                    | 5                                |  | NA                               |   |
| E528J | WATER            | Nutrients transported to surface water, Pathogens and chemicals from manure, bio-solids or compost applications transported to surface water, Sediment transported to surface water |                         |                  | X       |        |            |         |           | Prescribed grazing on pastureland that improves riparian and watershed function.                    | Grazing management employed will provide cover and density needed in the watershed in order to reduce runoff, improve infiltration, provide for above ground water filtration and sustain applicable fish and wildlife species habitat.  | acre  | 1                    | 5                                |  | NA                               |   |
| E528L | SOIL             | Bank erosion from streams, shorelines or water conveyance channels  |                         |                  | X       | X      |            |         |           | Prescribed grazing that improves or maintains riparian and watershed function-erosion               | Grazing management employed will provide cover and density needed in the watershed in order to reduce runoff, improve infiltration, provide for above ground water filtration and sustain applicable fish and wildlife species habitat.  | acre  | 1                    | 5                                |  | NA                               |   |
| E528M | SOIL             | Classic Gully Erosion   |                         |                  | X       |        |            |         |           | Grazing management that protects sensitive areas from gully erosion                                 | Grazing management employed will provide vegetative cover and density needed in the watershed in order to protect sensitive areas such as sinkholes, streams, highly erodible areas, or locations that cannot tolerate plant defoliation.  | acre  | 1                    | 5                                |  | NA                               |   |
| E528O | ANIMAL, PLANT    | Feed and Forage Imbalance, Plant productivity and health  |                         |                  | X       |        |            |         |           | Clipping mature forages to set back vegetative growth for improved forage quality                   | Plant maturity is the most important factor that determines forage quality. Timely clipping through mowing, swathing or some other mechanical cutting will occur on grazing lands after plants mature. This enhancement will promote increased forage palatability by setting forages that have matured back to a vegetative state for improved grazing management and forage quality.   | acre  | 1                    | 5                                |  | NA                               |   |
| E528P | SOIL, WATER      | Pathogens and chemicals from manure, bio-solids or compost applications transported to surface water, Nutrients transported to surface water, Organic Matter Depletion              | X                       | X                | X       |        |            |         |           | Implementing Bale or Swath Grazing to increase organic matter and reduce nutrients in surface water | Improve organic matter, aggregate stability and soil organism habitat in the soil by leaving the biomass harvested from the field on site for animal use, or supplementing organic matter needs with off-field forages. Grazing harvested forages in this manner, will help to incorporate organic matter, feed and diversify the soil microbiome, build better aggregation and increase soil health and critical functions such as infiltration, nutrient cycling, and weather resilience. Forages should be placed evenly throughout the field, but can be concentrated in areas where particular concerns, such as bare ground, need to be remedied. Decisions of forage placement must take into account areas that would be sensitive to such activity such as protecting surface waters from nutrients or steep slopes from erosion. | acre  | 1                    | 5                                | State supplemental guidance may be necessary to recommend feeding rates, duration in paddocks and spacing between bales.   | NA                               |   |
| E528Q | ANIMALS          | Feed and Forage Imbalance   | X                       | X                | X       | X      | X          | X       | X         | Use of body condition scoring for livestock on a monthly basis to keep track of herd health         | Body condition scoring (BCS) serves as a useful management tool to monitor livestock performance with respect to current and recent feeding or grazing programs. Body condition scoring is a numeric scoring system, producers can use to consistently evaluate animals' estimated body energy reserves through degree of fatness. This information can be used to adjust nutritional strategies to reach optimal BCS. Since body condition is closely associated with reproductive performance as well as feed efficiency, monitoring body condition can help producers reach production goals and increase the operation's bottom line. Knowledge and understanding of BCS will assist producers to adjust a supplemental feeding program to maintain animal health and nutrition on a-monthly-basis.                                    | acre  | 1                    | 5                                | Local land grant university BCS sheets   | NA                               |   |
| E528R | PLANTS           | Plant Productivity and Health, Plant Structure and Composition  |                         |                  | X       |        |            |         |           | Management Intensive Rotational Grazing   | Management intensive, multi-paddock grazing system where livestock are regularly and systematically moved to fresh forage to optimize quantity and quality of forage growth, improve manure distribution, improve wildlife cover, and improve soil health.   | acre  | 1                    | 5                                | Implementation Requirements that reduce pasture/paddock size while increasing stock density to maximize forage growth, quantity and quality; improve manure distribution; increase carbon sequestration, improve wildlife cover and protect soil from erosion. | NA                               |   |
| E528S | SOIL             | Organic Matter Depletion  |                         |                  | X       |        |            |         |           | Soil Health Improvements on Pasture   | Use of soil health assessment to evaluate impact of planned grazing in addressing organic current conservation crop rotation in addressing soil organic matter depletion, soil organism habitat and aggregate instability. Laboratory soil health tests will be completed in year 1 and year 4 of the contract. Planned modifications to the pasture forages and/or management system will be made to the benchmark grazing system to address concerns from the assessments. During sample collection, Pasture Condition Score (PSC) or Determining Indicators of Pasture Health (DIPH) assessment will be completed for the sample area.  | acre  | 1                    | 5                                |  |                                  |   |

## FY 2023 Program Enhancement Activity List

Legend

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| Code   | Resource Concern | Resource Concern Cause   | Crop (Annual and Mixed) | Crop (Perennial) | Pasture | Forest | Associated | Ad Land | Farmstead | Full Enhancement Name  | Enhancement Description  | Units | Enhancement Lifespan | Max years enh. can be contracted | State Supplemental information Required ++   | Suitable for Land Use Conversion | *Changes from 2022 to 2023.<br>*Highlighted blocks delineate new activities.<br>*Red font indicates revisions made.  |
|--------|------------------|--|-------------------------|------------------|---------|--------|------------|---------|-----------|--|--|-------|----------------------|----------------------------------|--|----------------------------------|--|
| E533A  | WATER            | Inefficient Irrigation Water Use   | X                       | X                | X       |        |            |         |           | Advanced Pumping Plant Automation  | This enhancement consists of installing a control device to a pump station that allows the user to remotely monitor and operate the pump station based on field measured data. Pumping stations may have either a combustible or electric power unit that are compatible with the control device or sensor. These devices/sensors collect field-measured data and provide this data in real time to the landowner to make irrigation decisions and adjustments to the pump operation                         | No    | 1                    | 1                                |  | NA                               |  |
| *E533C | AIR              | Energy Efficiency of Equipment and Facilities  | X                       | X                | X       |        |            | X       | X         | Install variable frequency drive(s) on pump(s)   | Install Variable Frequency Drive(s) (VFD) on Pumping Plant (Conservation Practice Standard CPS 533) with the correct sensors, on all pumps indicated in the evaluation.  | No    | 15                   | 1                                | *Verify TSP availability   | NA                               | *New Enhancement for FY-23.<br>*Replaced E374A with E533C as CPS 533 is the base practice for this enhancement. *Unit changed from horsepower to number.<br>*Scenario Feature Measure changed to "Each pump modified." This change is more equitable for all farms, including urban and small farms.<br>*Added labor and pickup truck components to payment scenario.<br>*Changed criteria from a Type 2 energy audit to a pumping plant evaluation.   |
| *E533D | ENERGY           | Energy Efficiency of Equipment and Facilities  | X                       | X                | X       |        |            | X       | X         | Switch fuel source for pumps   | Switch the fuel source for the pump motor(s) to an on-farm renewable source (wind, solar, geothermal, etc.)  | No    | 15                   | 1                                | *Verify TSP availability   | NA                               | *New Enhancement for FY-23.<br>*Replaced E374B with E533D as CPS 533 is the base practice for this enhancement. *Unit changed from horsepower to number.<br>*Scenario Feature Measure changed to "Each pump modified." This change is more equitable for all farms, including urban and small farms.<br>*Changed criteria from a Type 2 energy audit to an evaluation of the current operating conditions of the existing pump. In the description, added that the renewable source is from an on-farm source. |
| E578A  | ANIMALS          | Terrestrial Habitat for Wildlife and Invertebrates   | X                       | X                | X       | X      | X          | X       | X         | Stream crossing elimination  | Existing stream crossings on an operation are consolidated into fewer crossings in order to reduce impacts to stream habitat.  | no    | 10                   | 1                                |  | NA                               |  |
| E590A  | WATER; AIR       | Nutrients Transported to Surface Water; Nutrients Transported to Ground Water; Emission of Greenhouse Gases (GHGs) | X                       | X                |         |        |            |         |           | Improving nutrient uptake efficiency and reducing risk of nutrient losses                      | Nutrient management encompasses managing the amount, source, placement, and timing of the application of plant nutrients and soil amendments. Nutrients are currently being applied on the farm based on the 4R nutrient stewardship principles. Enhanced nutrient use efficiency strategies or technologies are utilized to improve nutrient use efficiency and reduce risk of nutrient losses to surface and groundwater and reduce risks to air quality by reducing emissions of greenhouse gases (GHGs). | acre  | 1                    | 5                                | List of nitrogen or phosphorous EEF products recommended by state Land Grant University (LGU) and concurred with by NRCS. Documentation of LGU and/or laboratory guidelines for interpretations of the results and appropriate nutrient adjustments based on in-season plant tissue sampling and analysis. | NA                               | *Revised to provide clearer guidance on the use of Enhanced Efficiency Fertilizers (EEFs).   |
| E590B  | WATER            | Nutrients Transported to Surface Water; Nutrients Transported to Ground Water                                      | X                       | X                |         |        |            |         |           | Reduce risks of nutrient loss to surface water by utilizing precision agriculture technologies | Precision application technology and techniques are utilized to plan and apply nutrients to improve nutrient use efficiency and reduce risk of nutrient losses.  | acre  | 1                    | 5                                |  | NA                               | *Revised adding "geo-referenced" to the Criteria.  |

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|-------|------------------|--|-------------------------|------------------|---------|--------|--------------------|-----------|--|--|-------|----------------------|----------------------------------|--|----------------------------------|--|
| E590C | WATER            | Nutrients Transported to Surface Water; Nutrients Transported to Ground Water  |                         |                  | X       |        |                    |           | Improving nutrient uptake efficiency and reducing risk of nutrient losses on pasture               | Nutrient management encompasses managing the amount, source, placement, and timing of the application of plant nutrients and soil amendments. Nutrients are currently being applied on the farm based on the 4R nutrient stewardship principles. Enhanced nutrient use efficiency strategies or technologies are utilized to improve nutrient use efficiency and reduce risk of nutrient losses on pasture.  | acre  | 1                    | 5                                | Documentation of LGU and/or laboratory guidelines for interpretations of the results and appropriate nutrient adjustments based on in-season plant tissue sampling and analysis. | NA                               |  |
| E595A | WATER            | Pesticides Transported to Surface Water  | X                       | X                |         |        |                    |           | Reduce risk of pesticides in surface water by utilizing precision pesticide application techniques | Utilize precision application techniques to reduce risk of pesticides in surface water by reducing total amount of chemical applied and reducing the potential for delivery of chemicals into water bodies.  | acre  | 1                    | 5                                |  | NA                               |  |
| E595B | WATER, AIR       | Pesticides Transported to Surface Water; Emissions of Ozone Precursors Pesticides                                    | X                       | X                | X       |        |                    |           | Reduce risk of pesticides in water and air by utilizing IPM PAMS techniques                        | Utilize integrated pest management (IPM) prevent, avoidance, monitoring, and suppression (PAMS) techniques to reduce risk of pesticides in water and air. Reduce the potential for delivery of chemicals into water or ozone precursor emissions.  | acre  | 1                    | 5                                |  | NA                               | *Added Pasture as a Land Use<br>*Added requirements to complete activity on Pasture Land Use.  |
| E595E | ANIMALS          | Terrestrial Habitat for Wildlife and Invertebrates   |                         |                  |         | X      |                    |           | Eliminate use of chemical treatments to control pests and to increase the presence of dung beetles | Pests and parasites can have a significant impact on the economic viability of livestock operations, by affecting the performance and health of animals. The use of broad-spectrum insecticides, pour-ons and avermectins have been shown to have a detrimental effect on dung beetle populations. Having a healthy population of dung beetles facilitates the recycling of nutrients and promotes soil and grassland health. By eliminating the application of broad-spectrum insecticides, pour-ons, and avermectins, including injectable avermectins, for pest control in and on livestock along with rotational grazing and higher stock densities has shown to increase the dung beetle population. Use of natural or alternative methods of pest control over multiple years is encouraged. | acre  | 1                    | 5                                |  | No                               |  |
| E595G | ANIMALS          | Plant Pest Pressure  | X                       | X                |         |        |                    |           | Reduce resistance risk by utilizing PAMS techniques  | Utilize integrated pest management (IPM) prevention, avoidance, monitoring, and suppression (PAMS) techniques to reduce pesticide resistance and address plant pest pressure.  | acre  | 1                    | 5                                |  | No                               | New Enhancement for FY-23.   |
| E612C | PLANTS, ANIMALS  | Plant Productivity and Health; Plant Structure and Composition<br>Terrestrial Habitat for Wildlife and Invertebrates |                         |                  |         |        | X                  |           | Establishing tree/shrub species to restore native plant communities                                | Establish trees and/or shrubs to restore elements of plant communities and diversity that have been lost. Restoring stand-level diversity and function improves health and vigor through planting resilient and/or resistant native plant communities. Additional benefits include providing diversity in wildlife habitat and forage.   | acre  | 15                   | 1                                | List of native species eliminated or reduced on the site, suitable for restoration.  | NA                               | *Applicable land use limited to forest.<br>*Added animals as a resource concerns. Tree/ shrubs may provide wildlife habitat and forage.<br>*Clarified activities needed to add tree/shrubs for human or wildlife consumption.                                      |
| E612D | PLANTS, ANIMALS  | Plant Structure and Composition<br>Terrestrial Habitat for Wildlife and Invertebrates                                | X                       | X                | X       | X      | X                  | X         | Adding food-producing trees and shrubs to existing plantings to an agroforestry system             | Plant food-producing trees and shrubs for wildlife or human consumption within windbreaks, alley cropping, multi-story cropping, silvopasture systems, and/or riparian forest buffers.   | acre  | 15                   | 1                                | Additional criteria to supplement CPS 612. State list of suitable woody plants for food/culinary use.  | NA                               | *Title changed to clarify enhancement is used on existing agroforestry systems. *Added animals as a resource concerns. Tree/ shrubs may provide wildlife habitat and forage.<br>*Clarified activities needed to add tree/shrubs for human or wildlife consumption. |
| E612E | PLANTS           | Plant Structure and Composition  |                         |                  |         | X      | X                  | X         | Cultural plantings   | Plant trees and shrubs that are of cultural significance, such as those species utilized by Tribes in traditional practices, medicinal plants, species used in basket-making, etc. (e.g., paper birch, slippery elm, witch hazel).   | acre  | 15                   | 1                                | Additional criteria to supplement CPS 612. State list of suitable woody plants for cultural uses.  | NA                               | *Removed Pasture and Range land uses.<br>*Clarified activities needed to implement the enhancement.  |
| E612F | PLANTS, ANIMALS  | Plant Structure and Composition<br>Terrestrial Habitat for Wildlife and Invertebrates                                |                         |                  |         | X      |                    |           | Sugarbush management   | Establish or maintain tree/shrub species diversity in a sugar maple (Acer saccharum) stand to enhance pollinator and wildlife needs.   | acre  | 15                   | 1                                | Additional criteria to supplement CPS 612. State list of suitable mast-producing tree species.   | NA                               | *Removed Associated Ag Land and Farmstead and uses. *Description clarified.<br>*Clarified activities needed to implement the enhancement.  |
| E612G | PLANTS, ANIMALS  | Plant Structure and Composition<br>Terrestrial Habitat for Wildlife and Invertebrates                                |                         |                  |         | X      | X                  |           | Tree/shrub planting for wildlife food  | Tree/shrub planting will provide the plant diversity, structure, and composition needed to enhance habitat and forage for identified wildlife species.   | acre  | 15                   | 1                                | Additional criteria to supplement CPS 612. List of trees and shrubs important for wildlife food. WHEG for species of concern.  | YES                              | *Removed Crop, Pasture, Range, and Farmstead land uses.<br>* Description and guide sheet revised to clarify enhancement requirements and activities.<br>*Removed foregone income from the Payment Scenario.  |

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| E643B | ANIMALS          | Terrestrial Habitat for Wildlife and Invertebrates |                         |                  |         | X      |                      |           | Restoration and management of rare or declining habitat                                      | Provide protection from adverse environmental conditions to create refugia for documented occurrences of sensitive plant communities.   | acre  | 5                    | 1                                | List of plant species listed by the State as State Endangered, State Threatened, State Sensitive or other native plant species determined to be in decline | NA                               |   |
| E645B | ANIMALS          | Terrestrial Habitat for Wildlife and Invertebrates | X                       | X                | X       | X      | X                    | X         | Manage existing shrub thickets to provide adequate shelter for wildlife                      | Existing shrub thickets provide an instant and important cover for wildlife. Various wildlife species may use shrubs as winter/thermal cover, summer shade, roosting, or as escape cover from predators. Proper management ensures that these shrubs will continue to provide the desired benefits for the local wildlife. A combination of herbicide treatments, cutting and trimming branches, and removal of other competing vegetation will occur. An eligible existing shrub thicket needs to have a canopy cover of 750 square feet, with an end goal of expanding to 1500 square feet. Any existing shrub thicket (not hand planted within the last 5 years) are eligible for this enhancement. Shrub thickets found within fence rows may now be very wide, but still meet the 750 square feet, are eligible. | Acre  | 1                    | 1                                |  | NA                               |   |
| E645C | ANIMALS          | Terrestrial Habitat for Wildlife and Invertebrates | X                       | X                | X       | X      | X                    | X         | Edge feathering for wildlife cover   | Selected trees are cut, and brush clipped along the border between a wooded area and a grassland, cropland, or idle land, creating a dense woody cover of interlocking branches at ground level. The feathered edge will be an average of 30 feet wide and a minimum of 50 feet long, resulting in an area of 1500 square feet. The width of the strip will vary to follow topographic features and to create a wavy border; the design will also consider aesthetics. Vegetative composition and cover will vary within the edge, ranging from areas with no trees and shrubs to areas with scattered trees and extensive shrub cover. The variation in vegetation structure along with variable width of the edge will create feathering. The edge may include shrub plantings for wildlife food and aesthetics.    | Acre  | 1                    | 1                                |  | NA                               |   |
| E645D | ANIMALS          | Terrestrial Habitat for Wildlife and Invertebrates | X                       | X                | X       | X      | X                    | X         | Enhanced Wildlife Habitat Management for Upland Landscapes                                   | Enhance existing upland wildlife foraging, breeding or overwintering habitat (currently meeting minimum wildlife habitat planning criteria) for locally breeding and migratory wildlife species.  | acre  | 1                    | 5                                |  |                                  | *Revision of title to clarify that this enhancement augments an existing plan.<br>*Requirement for and references to a management plan were removed and replaced with a deliverable which provides a list of the management activities to be implemented (supplementing the existing plan) and confirmation of implementation.<br>*Maximum years to be contracted is now 5. |
| E646A | ANIMALS          | Terrestrial Habitat for Wildlife and Invertebrates | X                       |                  |         |        |                      |           | Close structures to capture and retain rainfall for waterfowl and wading bird winter habitat | When flooded to shallow depths during fall and winter, agricultural fields provide ideal foraging habitat for myriad species of waterfowl and wading birds. In addition, flooded conditions promote establishment of aquatic invertebrate populations, thus providing protein-rich food sources for shorebirds as well as waterfowl and wading birds.   | acre  | 5                    | 1                                | Wildlife Habitat Evaluation Guide (WHEG) to assess habitat condition, both existing and planned score  | NA                               |   |

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| Code  | Resource Concern | Resource Concern Cause  | Crop (Annual and Mixed) | Crop (Perennial) | Pasture | Forest | Associated | Ad Land | Farmstead | Full Enhancement Name   | Enhancement Description  | Units | Enhancement Lifespan | Max years enh. can be contracted | State Supplemental Information Required ++  | Suitable for Land Use Conversion | *Changes from 2022 to 2023.<br>*Highlighted blocks delineate new activities.<br>*Red font indicates revisions made. |
|-------|------------------|---|-------------------------|------------------|---------|--------|------------|---------|-----------|---|--|-------|----------------------|----------------------------------|---|----------------------------------|---|
| E646B | ANIMALS          | Terrestrial Habitat for Wildlife and Invertebrates  | X                       |                  |         |        |            |         |           | Extend retention of captured rainfall for migratory waterfowl and wading bird late winter habitat | When flooded to shallow depths during fall and winter, agricultural fields provide ideal foraging habitat for myriad species of waterfowl and wading birds. Harvested and idled agricultural lands, notably those occurring within rice rotations, contain high densities of residual (i.e., waste) grain and natural seeds following harvest. In addition, flooded conditions promote establishment of aquatic invertebrate populations, thus providing protein-rich food sources for shorebirds as well as waterfowl and wading birds. Benefits may become greatest during late winter and early spring as birds are assimilating nutrient and fat reserves in preparation for northward migration. However, agricultural fields flooded during fall-winter are typically drained during late January or February in advance of spring planting. This often results in a rapid reduction in available habitat, and may constrain ability of migratory birds to adequately prepare for migration, with greatest impacts likely occurring during years of low winter precipitation. Retention of water on agricultural lands into early spring will produce maximum benefits to migratory waterfowl and shorebirds by providing high quality habitat during a time when habitat may otherwise be in low abundance. | acre  | 5                    | 1                                | Wildlife Habitat Evaluation Guide (WHEG) to assess habitat condition, both existing and planned score | NA                               |   |
| E646C | ANIMALS          | Terrestrial Habitat for Wildlife and Invertebrates  | X                       |                  |         |        |            |         |           | Manipulate vegetation and maintain closed structures for shorebirds mid-summer habitat            | Suitable shorebird habitat is limited during the summer and fall as birds migrate south post-breeding and providing shallow water and mud flat habitat will benefit a variety of shorebird species. Optimal conditions are created when water levels are slowly reduced through evaporation, which allows for propagation of invertebrates (typically insect larvae) used as food by shorebirds. Manipulation of vegetation, preferably through rolling, creates open conditions required by this suite of birds as a means to detect and avoid predators, and provides nutrient inputs for invertebrate production.   | acre  | 5                    | 1                                | Wildlife Habitat Evaluation Guide (WHEG) to assess habitat condition, both existing and planned score | NA                               |   |
| E646D | ANIMALS          | Terrestrial Habitat for Wildlife and Invertebrates  | X                       |                  |         |        |            |         |           | Manipulate vegetation and maintain closed structures for shorebird late summer habitat            | Suitable shorebird habitat is limited during the summer and fall as birds migrate south post-breeding. Providing shallow water and mud flat habitat will benefit a variety of shorebird species. Optimal conditions are created when water levels are slowly reduced through evaporation, which allows for propagation of invertebrates (typically insect larvae) used as food by shorebirds. Manipulation of vegetation, preferably through rolling, creates open conditions required by this suite of birds as a means to detect and avoid predators, and provides nutrient inputs for invertebrate production.  | acre  | 5                    | 1                                | Wildlife Habitat Evaluation Guide (WHEG) to assess habitat condition, both existing and planned score | NA                               |   |
| E647C | ANIMALS          | Terrestrial Habitat for Wildlife and Invertebrates  | X                       |                  |         |        |            |         |           | Maintain moist soil vegetation on cropland edges to enhance waterfowl and shorebird habitat       | The wetter or more water saturated portions of cropland fields such as areas adjacent to field drains, have the potential to produce a significant amount of moist soil plants which are a tremendously valuable source of forage and cover for many waterfowl, shorebird and wading bird species, especially during a period of time when such plants may be limited. Under normal cropland production, the native vegetation is restricted on these sites through mechanical and/or chemical control. These maintained moist soil plants also will provide filtering and improve water quality.  | acre  | 5                    | 1                                | Wildlife Habitat Evaluation Guide (WHEG) to assess habitat condition, both existing and planned score | NA                               |   |
| E647D | ANIMALS          | Terrestrial Habitat for Wildlife and Invertebrates  | X                       |                  |         |        |            |         |           | Establish and maintain early successional habitat in ditches and bank borders                     | This enhancement is to encourage the establishment of early successional, naturally occurring vegetation in ditches, side slope and bank borders to provide cover, critical nesting and brood rearing habitat as well as filtering overland flow and improving water quality. Ditches perform the critical function of removing water from agricultural lands. Allowing naturally occurring vegetation to develop along ditches, including side slopes, banks and borders, will help provide food and cover for wildlife while enhancing aquatic habitat and improving water quality. Ditches and ditch borders provide a foundation that supports a diverse wildlife community including Northern Bobwhite ( <i>Colinus virginianus</i> ) and other birds preferring early successional cover. Rabbits, furbearers, amphibians and many other species that inhabit agriculture areas will use this vegetative cover. These areas can also provide critical nesting habitat for the Mottled Duck ( <i>Anas fulvigula</i> ).  | acre  | 5                    | 1                                | Wildlife Habitat Evaluation Guide (WHEG) to assess habitat condition, both existing and planned score | NA                               |   |
| E666A | SOIL, AIR        | Organism Habitat Loss or Degradation; Aggregate Instability; Compaction; Emission of Greenhouse Gases (GHGs); |                         |                  |         | X      |            |         |           | Maintaining and improving forest soil quality   | Adopts guidelines for maintaining and improving soil quality on sites where forest management activities are practiced. These guidelines will increase soil organic matter content, improve nutrient cycling, and increase infiltration and retention of precipitation. Avoiding soil compaction will allow for greater root development and tree growth, limit windthrow, and reduce drought stress. Increasing carbon storage on site will maintain the soil microbial community and provide wildlife benefits.  | acre  | 10                   | 1                                | Any required state specific additions to CPS 666.   | NA                               |   |



## FY 2023 Program Enhancement Activity List

Legend

Blue: New FY 2023 Enhancements

| Code  | Resource Concern     | Resource Concern Cause  | Crop (Annual and Mixed) | Crop (Perennial) | Pasture | Forest | Associated All Land | Farmstead | Full Enhancement Name  | Enhancement Description   | Units | Enhancement Lifespan | Max years enh. can be contracted | State Supplemental Information Required ++   | Suitable for Land Use Conversion | *Changes from 2022 to 2023.<br>*Highlighted blocks delineate new activities.<br>*Red font indicates revisions made.   |
|-------|----------------------|---|-------------------------|------------------|---------|--------|---------------------|-----------|--|---|-------|----------------------|----------------------------------|--|----------------------------------|---|
| E666D | PLANT, ANIMAL, WATER | Plant Pest Pressure; Terrestrial Habitat for Wildlife and Invertebrates; Naturally Available Moisture Use; Nutrients Transported to Surface Water; Nutrients Transported to Ground Water; |                         |                  |         | X      |                     |           | Forest management to enhance understory vegetation   | This enhancement provides for management of the understory vegetation in a forested area by mechanical, chemical, and/or manual methods to improve the plant species mix and the health of the residual vegetation. Managing the understory vegetation increases available water to the plants, minimizes runoff and erosion, and improves water quality. An adequately stocked forest provides inputs of leaves, needles, and woody twigs and stems to the forest floor, adding to soil organic matter and contributing to forest soil health. Desirable tree species and understory vegetation, with spacing that allows ground cover to develop, will allow moisture to infiltrate and be stored in the soil, releasing moisture over longer periods of time.  | acre  | 10                   | 1                                | Any required state specific additions to CPS 666. Guidelines for species and species groups to determine spacing, density, size-class distribution, number of trees, and amount of understory species to be retained.  | NA                               |   |
| E666E | PLANT                | Wildfire Hazard from Biomass Accumulation   |                         |                  |         | X      |                     |           | Reduce height of the forest understory to limit wildfire risk                                      | Forest stand improvement that manages forest structure to reduce the risk of wildfire, and creates conditions that facilitate prescribed burning. The fire risk reduction is accomplished by reducing the height of the woody understory and midstory, creating space between the ground cover and the tree canopy. This enhancement provides for management of the understory vegetation in a forested area, using mechanical, chemical or manual methods to improve the plant species mix and the health of the residual vegetation, and reduce the risk of wildfire. In appropriate stands, the treatment creates conditions that favor prescribed burning. Forest stand improvement (FSI) activities are used to remove trees of undesirable species, form, quality, condition, or growth rate. The quantity and quality of forest for wildlife and/or timber production will be increased by manipulating stand density and structure. These treatments can also reduce wildfire hazards, improve forest health, restore natural plant communities, and achieve or maintain a desired native understory plant community for soil health, wildlife, grazing, and/or browsing. | acre  | 10                   | 1                                | Any required state specific additions to CPS 666. Guidelines for species and species groups to determine spacing, density, size-class distribution, number of trees, and amount of understory species to be retained.  | NA                               |   |
| E666F | PLANT, ANIMAL        | Plant Productivity and Health; Terrestrial Habitat for Wildlife and Invertebrates   |                         |                  |         | X      |                     |           | Reduce forest stand density to create open stand structure   | Reducing forest stand density creates open forest conditions with a low basal area which promotes the health and vigor of the residual trees. The open stand structure allows a significant amount of sunlight to reach the forest floor and stimulates the growth of understory vegetation. Understory vegetation management, along with the wide spacing between trees or clumps of trees, provides visual appeal, lowers the risk of wildfire, and provides habitat for many at-risk and listed wildlife species. The enhancement creates conditions that facilitate a follow-up treatment with prescribed burning.  | acre  | 10                   | 1                                | Any required state specific additions to CPS 666. Guidelines for species and species groups to determine spacing, density, size-class distribution, number of trees, and amount of understory species to be retained.  | NA                               |   |
| E666G | PLANT, ANIMAL        | Wildfire Hazard from Biomass Accumulation; Terrestrial Habitat for Wildlife and Invertebrates   |                         |                  |         | X      |                     |           | Reduce forest density and manage understory along roads to limit wildfire risk and improve habitat | Opening the tree canopy along roads ("daylighting"), and providing space between ground vegetation and tree crowns minimizes the spread of wildfires that often start along roads, and improves wildlife habitat and food sources for many species. Some trees near a forest road are removed through harvesting, cutting, mulching, or another option available at the site, with the objective of creating a partially open forest canopy bordering the road. A semi-open canopy allows more sunlight to reach the forest floor to promote herbaceous understory plants, and reduces maintenance needs by allowing moisture to evaporate from roads. The reduced canopy and herbaceous understory limit woodland fuel buildup and reduce fire intensity.  | acre  | 10                   | 1                                | Any required state specific additions to CPS 666. Guidelines for species and species groups to determine spacing, density, size-class distribution, number of trees, and amount of understory species to be retained. Nesting season for ground nesting birds. | NA                               |   |
| E666H | SOIL, AIR            | Emission of Greenhouse Gases (GHGs), Organic Matter Depletion   |                         |                  |         | X      | X                   | X         | Increase on-site carbon storage  | Use forest management techniques to maintain and increase on-site carbon storage. These include, but are not limited to, applying uneven-aged management, using longer rotations, retaining cavity/den trees, snags, and down woody debris, and protecting or increasing soil organic material.   | acre  | 10                   | 1                                | Any required state specific additions to CPS 666.  | NA                               | *Criteria shifted from revising a forest management plan to implementing forest management activities to increase on-site carbon storage.<br>*Payment scenarios revised to align with forest management activities. |
| E666I | PLANT, ANIMAL        | Plant Productivity and Health; Terrestrial Habitat for Wildlife and Invertebrates   |                         |                  |         | X      | X                   | X         | Crop tree management for mast production   | Forest stand improvement using crop tree management techniques to increase mast production  | acre  | 10                   | 1                                | Any required state specific additions to CPS 666.  | NA                               |   |
| E666J | PLANT, ANIMAL        | Plant Productivity and Health; Plant Structure and Composition; Terrestrial Habitat for Wildlife and Invertebrates  |                         |                  |         | X      | X                   |           | Facilitating oak forest regeneration   | Facilitate oak regeneration following a forest stand improvement treatment for natural oak regeneration (i.e., a regeneration cut). After a regeneration cut, oaks in the seedling and sapling stages are often out-competed by invasive brush and undesirable tree and shrub species. This enhancement will release seedling and sapling oaks from competing invasive plants and other undesirable species, and thin stump sprouts. A forester will monitor site conditions, treat competition, protect seedlings, and recommend additional follow-up treatments as needed. The enhancement protects investments in oak regeneration by providing for follow-up activities that require the expertise of a professional forester.  | acre  | 10                   | 2                                | Any required state specific additions to CPS 666.  | No                               |   |

## FY 2023 Program Enhancement Activity List

Legend

Blue: New FY 2023 Enhancements

| Code  | Resource Concern | Resource Concern Cause  | Crop (Annual and Mixed) | Crop (Perennial) | Pasture | Forest | Associated A/Land | Farmstead | Full Enhancement Name   | Enhancement Description   | Units | Enhancement Lifespan | Max years enh. can be contracted | State Supplemental Information Required ++   | Suitable for Land Use Conversion | *Changes from 2022 to 2023.<br>*Highlighted blocks delineate new activities.<br>*Red font indicates revisions made.        |
|-------|------------------|---|-------------------------|------------------|---------|--------|-------------------|-----------|---|---|-------|----------------------|----------------------------------|--|----------------------------------|--|
| E666K | PLANT, ANIMAL    | Plant Structure and Composition; Terrestrial Habitat for Wildlife and Invertebrates |                         |                  |         | X      | X                 | X         | Creating structural diversity with patch openings                 | Forest stand improvement that creates patch openings. Size, shape, and arrangement of patches will be based on natural features, and emulate patches that would result from natural disturbance regimes of wind or fire, varying geographically and by forest type, and by tree species desired from natural regeneration. The treatment will create diversity in stand composition and structure, increase pest resistance, and enhance wildlife food availability. Openings may provide regeneration sites and restore natural plant communities, and achieve or maintain a desired understory plant community for wildlife habitat.  | acre  | 10                   | 1                                | Any required state specific additions to CPS 666. WHEG for forest species. List of invasive species.   | NA                               | *E666M, E666N, and E666Q activities integrated into E666K including criteria for dry Western forests and pine plantations. |
| E666L | PLANT, ANIMAL    | Plant Structure and Composition, Terrestrial Habitat for Wildlife and Invertebrates |                         |                  |         | X      |                   |           | Forest Stand Improvement to rehabilitate degraded hardwood stands | Hardwood forestland has been subject to poor logging practices ("high-grading") for decades. Without professional forestry assistance the best species and individual trees are removed, often before maturity ("diameter-limit cutting"), leaving the poorest species and individual trees to regenerate the stand. Reversing this process requires cutting or killing poor quality trees while retaining any desirable species that might still be present. A combination of 3 silvicultural methods are applied: crop tree release, group selection (all trees removed from an area 0.25 to 1.0 acre in size) and small clear-cuts (all trees removed from an area 1-3 acres in size). | acre  | 10                   | 1                                | Any required state specific additions to CPS 666.  | NA                               |  |
| E666O | ANIMAL           | Terrestrial Habitat for Wildlife and Invertebrates                                  |                         |                  |         | X      | X                 | X         | Snags, den trees, and coarse woody debris for wildlife habitat    | Improve wildlife habitat through creation and retention of snags, den trees, forest stand structural diversity, and coarse woody debris on the forest floor, to provide cover/shelter for native wildlife species.  | acre  | 10                   | 1                                | Any required state specific additions to CPS 666. State Best management Practices for water quality. Guidelines for amount and spacing of snags, dens, and coarse woody debris. WHEG for species of concern. | NA                               |  |
| E666R | ANIMAL           | Terrestrial Habitat for Wildlife and Invertebrates                                  |                         |                  |         | X      | X                 | X         | Forest songbird habitat maintenance                               | Adopts guidelines and methods developed by the Forest Bird Initiative of the Vermont Audubon Society, to preserve habitat features following a forest stand improvement treatment designed to create habitat for a suite of forest-dwelling neotropical migratory songbirds. It includes developing or updating a forest management plan, inspecting and tending forest habitat, and monitoring bird populations. It protects investments in habitat creation by providing for follow-up activities that require the expertise of a professional forester or biologist. This enhancement is appropriate for states in the Atlantic Flyway and the Upper Midwest.                          | acre  | 10                   | 5                                | Any required state specific additions to CPS 666.  | NA                               |  |

FY 2023 CSP Activity List

Bundles - Not suitable for Voluntary Land Use Conversion

Blue: New Bundle for FY2023

| Bundle Code | Crop<br>(Annual and<br>Crop<br>(Perennial) | Pasture | Forest | Associated<br>Ag Land | Farmstead | Bundle Name  | Bundle Description (Bundles are NOT suitable for Voluntary Land Use Conversion)  | Units | Enhancement<br>Lifespan | Max years enh.<br>can be contracted | Information States<br>need to Develop Prior<br>to Signup |
|-------------|--|---------|--------|-----------------------|-----------|--|--|-------|-------------------------|-------------------------------------|--|
| B000BFF1    | X  | X       |        |                       | X         | Buffer Bundle #1   | Extend existing Buffers to address water quality degradation, fish/wildlife inadequate habitat, degraded plant condition plus an option for air quality impacts. Adopt E393A, E327A or E420A, and E612D as well as one of the following enhancements: <del>E612B</del> , E612G. This bundle will be applied one time and the enhancements maintained for their lifespan. | acre  | 15                      | 1                                   |  |
| B000CPL11   | X  |         |        |                       |           | YEAR 2+ Irrigated Cropland (MRBI/Ogallala)                             | Addresses water quality degradation, insufficient water, and soil erosion resource concerns. Adopt E590A, E449C, and E340A. This bundle may be applied multiple times.   | acre  | 1                       | 4                                   | See specific component enhancements.                     |
| B000CPL12   | X  |         |        |                       |           | Non-Irrigated Precision Ag (MRBI)                                      | Addresses water quality degradation, soil quality, and soil erosion resource concerns. Adopt E590B, E595A, E340A, and E329D or E345D. This bundle may be applied multiple times.   | acre  | 1                       | 5                                   | See specific component enhancements.                     |
| B000CPL13   | X  |         |        |                       |           | Non-Irrigated Cropland (MRBI)  | Addresses water quality degradation, soil quality, and soil erosion resource concerns. Adopt E590A, E595B, and E340A. This bundle may be applied multiple times.   | acre  | 1                       | 5                                   | See specific component enhancements.                     |
| B000CPL15   | X  |         |        |                       |           | YEAR 2+ Irrigated Precision Ag Cropland (MRBI)                         | Addresses water quality degradation, insufficient water, and soil erosion resource concerns. Adopt E590B, E449C, and E340A. This bundle may be applied multiple times.   | acre  | 1                       | 4                                   | See specific component enhancements.                     |
| B000CPL16   | X  |         |        |                       |           | Non-Irrigated Cropland with Water Bodies (MRBI)                        | Addresses water quality degradation, soil erosion, and soil quality resource concerns. Adopt E590A, E595B, E340A, E329D or E345D, and E390A or E393A. This bundle may be applied multiple times.   | acre  | 1                       | 5                                   | See specific component enhancements.                     |
| B000CPL17   | X  |         |        |                       |           | Non-Irrigated Cropland with Water Bodies Riparian Forest Buffer (MRBI) | Addresses water quality degradation, soil erosion, and soil quality resource concerns. Adopt E590A, E595B, E340A, E329D or E345D, and E391A. This bundle may be applied multiple times.  | acre  | 1                       | 5                                   | See specific component enhancements.                     |
| B000CPL18   | X  |         |        |                       |           | Crop Bundle #18 - Precision Ag   | Addresses water quality degradation, fish and wildlife inadequate habitat, air quality impairment, and either soil erosion or soil quality degradation resource concerns. Adopt E595A, E590B, E328D, E329A or E345A, and E340A or E340C. This bundle may be applied multiple times.  | acre  | 1                       | 5                                   | See specific component enhancements.                     |
| B000CPL19   | X  |         |        |                       |           | Crop Bundle #19 - Soil Health Precision Ag                             | Addresses water quality degradation, soil quality degradation, fish and wildlife inadequate habitat, and insufficient water resource concerns. Adopt E595A, E590B, E328D, E327A or E420A, and E329C or E345C. This bundle may be applied multiple times.   | acre  | 1                       | 5                                   | See specific component enhancements.                     |
| B000CPL20   | X  |         |        |                       |           | Crop Bundle #20 - Soil Health Assessment                               | Addresses water quality degradation, soil quality degradation, fish and wildlife inadequate habitat, and insufficient water resource concerns. Adopt E595B, E590A, E328F, E327A or E420A, and E329C or E345C. This bundle may be applied multiple times.   | acre  | 1                       | 5                                   | See specific component enhancements.                     |
| B000CPL21   | X  |         |        |                       |           | Crop Bundle #21 - Crop Bundle (Organic)                                | Addresses soil quality degradation, water quality degradation, and degraded plant condition resource concerns. Adopt E484A, E595B, E590A, E393A, and E612D. This bundle may be applied multiple times.   | acre  | 1                       | 5                                   | See specific component enhancements.                     |
| B000CPL22   | X  |         |        |                       |           | Crop Bundle #22 - Erosion Bundle (Organic)                             | Addresses soil quality degradation, water quality degradation, soil erosion, and fish and wildlife inadequate habitat resource concerns. Adopt E328E, E345D, E595B, E590A, E340A, and E327A or E420A. This bundle may be applied multiple times.   | acre  | 1                       | 5                                   | See specific component enhancements.                     |

FY 2023 CSP Activity List

Bundles - Not suitable for Voluntary Land Use Conversion

Blue: New Bundle for FY2021

| Bundle Code | Crop<br>(Annual and<br>Crop<br>(Perennial)) | Pasture | Forest | Associated<br>Ag Land | Farmstead | Bundle Name  | Bundle Description (Bundles are NOT suitable for Voluntary Land Use Conversion)  | Units | Enhancement<br>Lifespan | Max years enh.<br>can be contracted | Information States<br>need to Develop Prior<br>to Signup |
|-------------|---|---------|--------|-----------------------|-----------|--|--|-------|-------------------------|-------------------------------------|--|
| B000CPL23   | X   |         |        |                       |           | Crop Bundle #23 – Pheasant and quail habitat             | Addresses wildlife habitat, either water quality or air quality, and either soil health or plant pest pressure resource concerns. Adopt E393A or E386C or E390A, E340C or E340H or E386B, E328D or E328L, and E645B or E612G or E386E or E328K or E328J or E511A. This bundle may be applied multiple times. | acre  | 1                       | 5                                   | See specific component enhancements.                     |
| B000CPL24   | X   |         |        |                       |           | Crop Bundle #24 – Cropland Soil Health Management System | Addresses soil health, water quality (or water quality and air quality), and either soil erosion, soil compaction, or plant pest pressure resource concerns. Adopt E329D, E328F, E590A or E590B, and E340A or E340F or E340H. This bundle may be applied multiple times.                                     | acre  | 1                       | 5                                   | See specific component enhancements.                     |
| B000CPL25   | X   |         |        |                       |           | Crop Bundle 25 - Climate Smart Advanced Soil Health      | Improve crop land soil health by increasing plant diversity and minimizing soil disturbance. Adopt E595B, and E345D or E329D or E590A, and E328K or E328J, and E340B or E340C or E340E   | acre  | 1                       | 5                                   | See specific component enhancements.                     |
| B000FST1    |   |         | X      |                       |           | Forest Bundle#1  | Addresses forest management on sites that are not adapted to natural fire disturbances. Address soil quality degradation, degraded plant condition, fish/wildlife inadequate habitat, and insufficient water. Adopt E666A, E666I, E666O, E612G, and E666D.   | acre  | 15                      | 1                                   | See specific component enhancements.                     |
| B000FST2    |   |         | X      |                       |           | Forest Bundle #2 – Post-fire Management                  | Address forest management on sites that have been burned in a natural fire disturbance. Address soil quality degradation, degraded plant condition, fish/wildlife inadequate habitat, and insufficient water. Adopt E666G, E315A and E666E or E666F.   | acre  | 5                       | 1                                   | See specific component enhancements.                     |
| B000FST3    |   |         | X      |                       |           | Forest Bundle #3   | Address forest management on sited degraded through poor logging practices. Address soil quality degradation, degraded plant condition, fish/wildlife inadequate habitat, and insufficient water. Adopt E666A, E666L, E666O and E314A.   | acre  | 15                      | 1                                   | See specific component enhancements.                     |
| B000FST4    |   |         | X      |                       |           | Forest Bundle #4   | Improve forest health for wildlife habitat and pollinator conservation. Address degraded plant condition, fish/wildlife inadequate habitat, and insufficient water. Adopt E666D, E666K, E666O, E612G, and E327A or E420A.  | acre  | 10                      | 1                                   | See specific component enhancements.                     |
| B000LLP2    |   |         | X      |                       |           | Longleaf Pine Bundle#2                                   | Improve conifer forest health through prescribed burning and forest stand management. Address insufficient water, degraded plant condition, and fish/wildlife inadequate habitat. Adopt E666D, E666K, E666O, E338C, and E420A <del>or E645A.</del>   | acre  | 1                       | 5                                   | See specific component enhancements.                     |

Blue: New Bundle for FY2021

FY 2023 CSP Activity List

Bundles - Not suitable for Voluntary Land Use Conversion

| Bundle Code | Crop<br>(Annual and<br>Crop<br>(Perennial) | Pasture | Forest | Associated<br>Ag Land | Farmstead | Bundle Name            | Bundle Description (Bundles are NOT suitable for Voluntary Land Use Conversion)  | Units | Enhancement<br>Lifespan | Max years enh.<br>can be contracted | Information States<br>need to Develop Prior<br>to Signup |
|-------------|--|---------|--------|-----------------------|-----------|------------------------|--|-------|-------------------------|-------------------------------------|--|
| B000LLP4    |  |         | X      |                       |           | Longleaf Pine Bundle#4 | Improves forest health and wildlife habitat through conversion of forest stands that are not predominantly longleaf pine. Address insufficient water, degraded plant condition, and fish/wildlife inadequate habitat. Adopt E666D, E338C, E666K, E666O, and E666F.   | acre  | 1                       | 5                                   | See specific component enhancements.                     |
| B000PSTX    |  | X       |        |                       |           | Pasture Bundle 6       | By implementing a combination of three enhancements (E528A, E315A, and E512D) together, a synergy is achieved that should result in more conservation benefits than would be expected from implementing the enhancements individually. This bundle maybe applied multiple times to address degraded plant condition, plant pest pressure, soil health and erosion resource concerns. | Acre  | 1                       | 5                                   | See specific component enhancements.                     |