

Climate-Smart Agriculture and Forestry (CSAF) Mitigation Activities List for FY2024



Highlighted activities have been added to the list in FY2024.
*Noted activities are added to the list as "provisional."^[1]

Mitigation Categories	Code	Conservation Practice Standard Name ^{[2] [3]} (practice unit)	Code	Conservation Stewardship Program (CSP) Enhancement Activities
Soil Health	327	Conservation Cover (acres)	E327A	Conservation cover for pollinators and beneficial insects ^[2]
			E327B	Establish Monarch butterfly habitat
	328	Conservation Crop Rotation (acres)	E328A	Resource conserving crop rotation
			E328B	Improved resource conserving crop rotation
			E328E	Soil health crop rotation
			E328F	Modifications to improve soil health and increase soil organic matter
			E328N	Intercropping to improve soil health
			E328O	Perennial grain crop conservation rotation
	329	Residue and Tillage Management, No Till (acres)	E329A	No till to reduce soil erosion
			E329B	No till to reduce tillage induced particulate matter
			E329C	No till to increase plant-available moisture
			E329D	No till system to increase soil health and soil organic matter content
			E329E	No till to reduce energy
	332	Contour Buffer Strips (acres)	None Available	
	336	Soil Carbon Amendment (acres)*	None Available	
	340	Cover Crop (acres)	E340A	Cover crop to reduce soil erosion
			E340B	Intensive cover cropping to increase soil health and soil organic matter content
			E340C	Use of multi-species cover crops to improve soil health and increase soil organic matter
			E340D	Intensive orchard/vineyard floor cover cropping to increase soil health
			E340F	Cover crop to minimize soil compaction
			E340G	Cover crop to reduce water quality degradation by utilizing excess soil nutrients
			E340H	Cover crop to suppress excessive weed pressures and break pest cycles
			E340I	Using cover crops for biological strip till
E340J			Cover crop to improve moisture use efficiency and reduce salts	
345	Residue and Tillage Management, Reduced Till (acres)	E345A	Reduced tillage to reduce soil erosion	
		E345B	Reduced tillage to reduce tillage induced particulate matter	
		E345C	Reduced tillage to increase plant-available moisture	
		E345D	Reduced tillage to increase soil health and soil organic matter content	
		E345E	Reduced tillage to reduce energy use	

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Soil Health	<u>386</u>	Field Border (acres)	<u>E386A</u>	Enhanced field borders to reduce soil erosion along the edge(s) of a field
			<u>E386B</u>	Enhanced field borders to increase carbon storage along the edge(s) of the field
			<u>E386C</u>	Enhanced field borders to decrease particulate emissions along the edge(s) of the field
			<u>E386D</u>	Enhanced field borders to increase food for pollinators along the edge(s) of a field
			<u>E386E</u>	Enhanced field borders to increase wildlife food and habitat along the edge(s) of a field
	<u>393</u>	Filter Strips (acres)	<u>E393A</u>	Extend existing filter strip to reduce water quality impacts
	<u>412</u>	Grassed Waterways (acres)	<u>E412A</u>	Enhance a grassed waterway
	<u>484</u>	Mulching (acres)	<u>E484A</u>	Mulching to improve soil health
			<u>E484B</u>	Reduce particulate matter emissions by using orchard or vineyard generated woody materials as mulch
			<u>E484C</u>	Mulching with natural materials in specialty crops for weed control
<u>585</u>	Stripcropping (acres)		None Available	
<u>601</u>	Vegetative Barriers (feet)		None Available	
<u>603</u>	Herbaceous Wind Barriers (feet)		None Available	
Nitrogen Management	<u>590</u>	Nutrient Management (acres)	<u>E590A</u>	Improving nutrient uptake efficiency and reducing risk of nutrient losses
			<u>E590B</u>	Reduce risks of nutrient loss to surface water by utilizing precision agriculture technologies
			<u>E590C</u>	Improving nutrient uptake efficiency and reducing risk of nutrient losses on pasture
			<u>E590D</u>	Reduce risks of nutrient losses to surface and groundwater by increasing setback awareness via precision technology
Livestock Partnership	<u>317</u>	Composting Facility (number)*		None Available
	<u>313</u>	Waste Storage Facility (number)* • Used to implement compost bedded-pack ^[4]		None Available
				None Available
	<u>366</u>	Anaerobic Digester (number)		None Available
	<u>367</u>	Roofs and Covers (number)* • Used to cover a waste management facility to capture biogas ^[4]		None Available
				None Available
<u>592</u>	Feed Management (animal unit)* • Used to reduce enteric methane emissions ^[4]		None Available	
<u>632</u>	Waste Separation Facility (number)*		None Available	

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Mitigation Categories	Code	Conservation Practice Standard Name ^[2] ^[3] (practice unit)	Code	Conservation Stewardship Program (CSP) Enhancement Activities
Grazing and Pasture	314	Brush Management (acres)* <ul style="list-style-type: none"> Used to remove woody invasive vegetation and the removed material will be mechanically treated and left onsite ^[4] 	E314A	Brush management to improve wildlife habitat*
	315	Herbaceous Weed Treatment (acres)* <ul style="list-style-type: none"> Used to release desired deep rooted perennial species ^[4]. 	E315A	Herbaceous weed treatment to create desired plant communities consistent with the ecological site*
	338	Prescribed Burning (acres)*	E338A	Strategically planned, patch burning for grazing distribution and wildlife habitat*
	512	Pasture and Hay Planting (acres)	E512A	Cropland conversion to grass-based agriculture to reduce soil erosion
			E512B	Forage plantings that help increase organic matter in depleted soils
			E512C	Cropland conversion to grass for soil organic matter improvement
			E512D	Forage plantings that help increase organic matter in depleted soils
			E512I	Establish pollinator and/or beneficial insect and/or monarch habitat
			E512J	Establish wildlife corridors to provide habitat continuity or access to water
			E512L	Diversifying forage base with interseeding forbs and legumes to increase pasture quality
	528	Prescribed Grazing (acres)	E528A	Maintaining quantity and quality of forage for animal health and productivity
			E528F	Stockpiling cool season forage to improve structure and composition or plant productivity and health
			E528G	Improved grazing management on pasture for plant productivity and health with monitoring activities
			E528H	Prescribed grazing to improve/maintain riparian and watershed function-elevated water temperature
			E528I	Grazing management that protects sensitive areas -surface or ground water from nutrients
			E528J	Prescribed grazing on pastureland that improves riparian and watershed function
			E528L	Prescribed grazing that improves or maintains riparian and watershed function-erosion
			E528M	Grazing management that protects sensitive areas from gully erosion
			E528N	Improved grazing management through monitoring activities
E528O	Clipping mature forages to set back vegetative growth for improved forage quality			

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Grazing and Pasture	528	Prescribed Grazing (acres)	E528P	Implementing Bale or Swath Grazing to increase organic matter and reduce nutrients in surface water
			E528R	Management intensive rotational grazing
			E528S	Soil Health Improvements on Pasture
			E528T	Grazing to Reduce Wildfire Risks on Forests
			E528U	Contingency Planning for Resiliency
	550	Range Planting (acres)	E550A	Range planting for increasing/maintaining organic matter
E550B			Range planting for improving forage, browse, or cover for wildlife	
Agroforestry, Forestry and Wildlife Habitat	311	Alley Cropping (acres)	None Available	
	342	Critical Area Planting (acres)	None Available	
	379	Forest Farming (acres)	None Available	
	380	Windbreaks/Shelterbelt Establishment and Renovation (feet)	None Available	
	381	Silvopasture (acres)	E381A	Silvopasture to improve wildlife habitat
	383	Fuel Break (acres)*	E383A	Grazing-maintained fuel break to reduce the risk of fire*
	384	Woody Residue Treatment (acres)*	E384A	Biochar production from woody residue*
	390	Riparian Herbaceous Cover (acres)	E390A	Increase riparian herbaceous cover width for sediment and nutrient reduction
			E390B	Increase riparian herbaceous cover width to enhance wildlife habitat
	391	Riparian Forest Buffer (acres)	E391A	Increase riparian forest buffer width for sediment and nutrient reduction
			E391B	Increase stream shading for stream temperature reduction
			E391C	Increase riparian forest buffer width to enhance wildlife habitat
	420	Wildlife Habitat Planting (acres)*	E420A	Establish pollinator habitat*
			E420B	Establish monarch butterfly habitat*
422	Hedgerow Planting (feet)	None Available		
612	Tree-Shrub Establishment (acres)	E612B	Planting for high carbon sequestration rate	
		E612C	Establishing tree/shrub species to restore native plant communities	
		E612G	Tree/shrub planting for wildlife food	
643	Restoration of Rare or Declining Natural Communities (ac)* • Used to restore floodplain hydrology ^[4]	E643D	Low-tech process-based restoration to enhance floodplain connectivity*	
666	Forest Stand Improvement (acres)*	E666A	Maintaining and improving forest soil quality*	
		E666D	Forest management to enhance understory vegetation*	
		E666E	Reduce height of the forest understory to limit wildfire risk*	
		E666F	Reduce forest stand density to create open stand structure*	

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Agroforestry, Forestry and Wildlife Habitat	666	Forest Stand Improvement (acres)*	E666H	Increase on-site carbon storage*
			E666I	Crop tree management for mast production*
			E666J	Facilitating oak forest regeneration*
			E666K	Creating structural diversity with patch openings*
			E666L	Forest Stand Improvement to rehabilitate degraded hardwood stands*
			E666P	Summer roosting habitat for native forest-dwelling bat species*
			E666R	Forest songbird habitat maintenance*
	E666S	Facilitating longleaf pine regeneration and establishment*		
Restoration of Disturbed Lands	453	Land Reclamation, Landslide Treatment (acres)	None Available	
	543	Land Reclamation, Abandoned Mined Land (acres)	None Available	
Energy, Combustion, & Electricity Efficiency	372	Combustion System Improvement (number) <ul style="list-style-type: none"> Used for stationary or mobile engine replacement or repower to electric motor 	E372A	Switch to Renewable Power Source
			E372B	Renewable Energy Source for Large Internal Combustion Engines
	374	Energy Efficient Agricultural Operation (number)*	None Available	
	430	Irrigation Pipeline (feet)* <ul style="list-style-type: none"> Used to reduce energy use^[4] 	None Available	
	441	Irrigation System, Microirrigation (acres)* <ul style="list-style-type: none"> Used to reduce energy use^[4] 	None Available	
	442	Sprinkler System (acres)* <ul style="list-style-type: none"> Used to reduce energy use^[4] 	None Available	
	533	Pumping Plant (number)* <ul style="list-style-type: none"> Used to reduce energy use^[4] 	E533C	Install VFDs on pumps*
			E533D	Complete pumping plant evaluation for energy savings*
	672	Energy Efficient Building Envelope (number)*	None Available	
	670	Energy Efficient Lighting System (number)*	None Available	
Wetlands	657	Wetland Restoration (acres)*	None Available	
Rice	449	Irrigation Water Management (acres)* <ul style="list-style-type: none"> Used as part of an alternated wetting and drying (AWD) system in rice fields 	E449B	Alternated Wetting and Drying (AWD) of rice fields

Notes

In addition to the designated CSAF conservation activities listed, conservation practices that facilitate the management or the function of a CSAF activity but may not achieve the desired effects on their own (and may not have a quantifiable benefit), may be planned as applicable in consultation with your local professional conservation planner. Examples: Tree-Shrub Establishment (612) may need facilitating practices such as Tree/Shrub Site Preparation (490) or Access Control (472). Conservation Crop Rotation (328) may need facilitating practices such as Pest Management Conservation System (595), Cover Crops (340), or Irrigation Water Management (449). Waste Separation Facility (632) may need facilitating practices such as Waste Transfer (634) or Roofs and Covers (367). Prescribed Grazing (528) may need facilitating practices such as Watering Facility (614), Stream Crossing (578), Brush Management (314), Fence (382), or Livestock Shelter Structure (576).

[1] Provisional activities and their associated enhancements are added under the premise that they may provide benefits, and a quantification methodology will be evaluated during the fiscal year. Practices may be removed from the mitigation practice list in a subsequent fiscal year if quantification is not possible. Unless otherwise noted, listed practices have quantifiable carbon sequestration and/or GHG reduction methodologies described in COMET-Planner (comet-planner.com). New practices will be added as science progresses and scientifically defensible quantification methodologies are identified to accompany existing and new NRCS conservation practice standards.

[2] The included Conservation Practice Standard and Conservation Stewardship Program links provide national information. Please consult the NRCS office at your local USDA Service Center for any local and state level criteria. Visit farmers.gov/service-locator to find contact information for your local office.

[3] The following were removed from the list for FY2024: Conservation Practice Standard Upland Wildlife Habitat and Management (Code 645) and Enhancements (E645B) Manage existing shrub thickets to provide adequate shelter for wildlife, (E645C) Edge feathering for wildlife cover, (E328G) Crop rotation on recently converted CRP grass/legume cover for soil organic matter improvement, (E528D) Grazing management for improving quantity and quality of food or cover and shelter for wildlife, and (E528E) Improved grazing management for enhanced plant structure and composition for wildlife. Two enhancements were archived and are no longer available within CSP: (E512E) Forage and biomass planting that produces feedstock for biofuels or energy production and (E512K) Establishing native species into forage base to improve diversity for both livestock and wildlife. Bundles for CSP are no longer listed in this document, refer to program guidance for CSP information on the use of appropriate bundles.

[4] The practice is considered a mitigation activity only when implemented in the specified way. A brief description of the specific implementation is identified and associated narratives for conservation planning purposes are included at the end of the document. When a specific implementation is not specified, any narrative of the practice may be used for planning under the assumption that it will provide mitigation benefits.



NRCS Narrative Crosswalk for Conservation Planners

Code	Conservation Practice Standard	Code	Narrative
313	Waste Storage Structure	01N	Compost Bedded Pack waste storage facility - a livestock agricultural waste storage fabricated structure where manure is composted within the animal housing
314	Brush Management	01N	Remove woody (non-herbaceous and succulent) invasive vegetation to maintain or enhance deep rooted native perennial grass and forb communities, woody material will be mechanically treated/chipped and left onsite to mitigate above ground carbon loss
315	Herbaceous Weed Treatment	01N	Removal of herbaceous weeds to release desired deep rooted perennial grass and forb species
367	Roofs and Covers	01N	Capture Biogas - Place a rigid, semirigid, or flexible manufactured membrane, composite material, or roof structure placed over a waste management facility to capture biogas and reduce odor
372	Combustion System Improvement	02N	Stationary engine to electric motor replacement or repower - Replace or repower an existing stationary engine with an electric motor
372	Combustion System Improvement	05N	Mobile internal combustion engine to electric motor replacement - Replace an existing on-farm mobile device (i.e., tractor, loader, forklift, etc.) powered by an internal combustion engine with a new mobile device powered by an electric motor
430	Irrigation Pipeline	01N	Replacement of an earthen channel that is supplied by pumping water with a closed conduit, resulting in enhanced conveyance efficiency and reduced energy use
441	Irrigation System, Microirrigation	01N	Switching from higher to lower pressure irrigation system, resulting in enhanced application efficiency and reduced energy use
442	Sprinkler System	01N	Utilization of variable rate irrigation (VRI) technology, switching from higher to lower pressure irrigation systems, and sprinkler head renozzling without increasing irrigated acres, resulting in enhanced application efficiency and reduced energy use
449	Irrigation Water Management	01N	Managing water levels in rice fields to include dry down between full flood conditions prior to re-flooding (alternated wetting and drying) to minimize greenhouse gas production in accordance with an irrigation water management plan
533	Pumping Plant	01N	Replacing existing pumps with high-efficiency pump
592	Feed Management	03N	Reduce enteric methane emissions from animal feeding operations by manipulating the quantity and quality of dietary nutrients, incorporating feed additives and feed ingredients, or adjusting concentrate to forage ratio in livestock and poultry diets to lower methane produced and emitted during digestion
643	Restoration of Rare or Declining Natural Communities	01N	Restoration of streams and associated floodplains using low-tech structures (such as beaver dam analogs or other stick-and-stone structures) to kick-start natural ecological and hydrologic processes required for maintenance of healthy and functioning streams and associated floodplains