

# 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."<sup>[1]</sup>

Mitigation Categories <sup>[5]</sup>	Code	Conservation Practice Standard Name <sup>[2] [3]</sup> (practice unit)	Code	Conservation Stewardship Program (CSP) Enhancement Activities
Soil Health	<a href="#">327</a>	Conservation Cover (acres)	<a href="#">E327A</a>	Conservation cover for pollinators and beneficial insects <sup>[2]</sup>
			<a href="#">E327B</a>	Establish Monarch butterfly habitat
	<a href="#">328</a>	Conservation Crop Rotation (acres)	<a href="#">E328A</a>	Resource conserving crop rotation
			<a href="#">E328B</a>	Improved resource conserving crop rotation
			<a href="#">E328E</a>	Soil health crop rotation
			<a href="#">E328F</a>	Modifications to improve soil health and increase soil organic matter
			<a href="#">E328N</a>	Intercropping to improve soil health
			<a href="#">E328O</a>	Perennial grain crop conservation rotation
			<a href="#">329</a>	Residue and Tillage Management, No Till (acres)
	<a href="#">E329B</a>	No till to reduce tillage induced particulate matter		
	<a href="#">E329C</a>	No till to increase plant-available moisture		
	<a href="#">E329D</a>	No till system to increase soil health and soil organic matter content		
	<a href="#">E329E</a>	No till to reduce energy		
	<a href="#">332</a>	Contour Buffer Strips (acres)		None Available
	<a href="#">336</a>	<b>Soil Carbon Amendment (acres)*</b>		None Available
	<a href="#">340</a>	Cover Crop (acres)	<a href="#">E340A</a>	Cover crop to reduce soil erosion
			<a href="#">E340B</a>	Intensive cover cropping to increase soil health and soil organic matter content
			<a href="#">E340C</a>	Use of multi-species cover crops to improve soil health and increase soil organic matter
			<a href="#">E340D</a>	Intensive orchard/vineyard floor cover cropping to increase soil health
			<a href="#">E340F</a>	Cover crop to minimize soil compaction
			<a href="#">E340G</a>	Cover crop to reduce water quality degradation by utilizing excess soil nutrients
			<a href="#">E340H</a>	Cover crop to suppress excessive weed pressures and break pest cycles
			<a href="#">E340I</a>	Using cover crops for biological strip till
			<a href="#">E340J</a>	<b>Cover crop to improve moisture use efficiency and reduce salts</b>
			<a href="#">345</a>	Residue and Tillage Management, Reduced Till (acres)
	<a href="#">E345B</a>	Reduced tillage to reduce tillage induced particulate matter		
	<a href="#">E345C</a>	Reduced tillage to increase plant-available moisture		
<a href="#">E345D</a>	Reduced tillage to increase soil health and soil organic matter content			
<a href="#">E345E</a>	Reduced tillage to reduce energy use			

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Soil Health	386	Field Border (acres)	E386A	Enhanced field borders to reduce soil erosion along the edge(s) of a field
			E386B	Enhanced field borders to increase carbon storage along the edge(s) of the field
			E386C	Enhanced field borders to decrease particulate emissions along the edge(s) of the field
			E386D	Enhanced field borders to increase food for pollinators along the edge(s) of a field
			E386E	Enhanced field borders to increase wildlife food and habitat along the edge(s) of a field
	393	Filter Strips (acres)	E393A	Extend existing filter strip to reduce water quality impacts
	412	Grassed Waterways (acres)	E412A	Enhance a grassed waterway
	484	Mulching (acres)	E484A	Mulching to improve soil health
			E484B	Reduce particulate matter emissions by using orchard or vineyard generated woody materials as mulch
			E484C	Mulching with natural materials in specialty crops for weed control
E484D			Lowbush Blueberry Mulching for Moisture Management	
585	Stripcropping (acres)		None Available	
601	Vegetative Barriers (feet)		None Available	
603	Herbaceous Wind Barriers (feet)		None Available	
Nitrogen Management	590	Nutrient Management (acres)	E590A	Improving nutrient uptake efficiency and reducing risk of nutrient losses
			E590B	Reduce risks of nutrient loss to surface water by utilizing precision agriculture technologies
			E590C	Improving nutrient uptake efficiency and reducing risk of nutrient losses on pasture
			E590D	Reduce risks of nutrient losses to surface and groundwater by increasing setback awareness via precision technology
Livestock Partnership	317	Composting Facility (number)*		None Available
	313	Waste Storage Facility (number)* • Used to implement compost bedded-pack <sup>[4]</sup>		None Available
				None Available
	366	Anaerobic Digester (number)		None Available
	367	Roofs and Covers (number)* • Used to cover a waste management facility to capture biogas <sup>[4]</sup>		None Available
				None Available
592	Feed Management (animal unit)* • Used to reduce enteric methane emissions <sup>[4]</sup>		None Available	
632	Waste Separation Facility (number)*		None Available	

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

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Grazing and Pasture	<a href="#">528</a>	Prescribed Grazing (acres)	<a href="#">E528P</a>	Implementing Bale or Swath Grazing to increase organic matter and reduce nutrients in surface water
			<a href="#">E528R</a>	Management intensive rotational grazing
			<a href="#">E528S</a>	Soil Health Improvements on Pasture
			<a href="#">E528T</a>	Grazing to Reduce Wildfire Risks on Forests
			<a href="#">E528U</a>	Contingency Planning for Resiliency
	<a href="#">550</a>	Range Planting (acres)	<a href="#">E550A</a>	Range planting for increasing/maintaining organic matter
		<a href="#">E550B</a>	Range planting for improving forage, browse, or cover for wildlife	
Agroforestry, Forestry and Wildlife Habitat	<a href="#">311</a>	Alley Cropping (acres)		None Available
	<a href="#">342</a>	Critical Area Planting (acres)		None Available
	<a href="#">379</a>	Forest Farming (acres)		None Available
	<a href="#">380</a>	Windbreaks/Shelterbelt Establishment and Renovation (feet)		None Available
	<a href="#">381</a>	Silvopasture (acres)	<a href="#">E381A</a>	Silvopasture to improve wildlife habitat
	<a href="#">383</a>	Fuel Break (acres)*	<a href="#">E383A</a>	Grazing-maintained fuel break to reduce the risk of fire*
	<a href="#">384</a>	Woody Residue Treatment (acres)*	<a href="#">E384A</a>	Biochar production from woody residue*
	<a href="#">390</a>	Riparian Herbaceous Cover (acres)	<a href="#">E390A</a>	Increase riparian herbaceous cover width for sediment and nutrient reduction
			<a href="#">E390B</a>	Increase riparian herbaceous cover width to enhance wildlife habitat
	<a href="#">391</a>	Riparian Forest Buffer (acres)	<a href="#">E391A</a>	Increase riparian forest buffer width for sediment and nutrient reduction
			<a href="#">E391B</a>	Increase stream shading for stream temperature reduction
			<a href="#">E391C</a>	Increase riparian forest buffer width to enhance wildlife habitat
	<a href="#">420</a>	Wildlife Habitat Planting (acres)*	<a href="#">E420A</a>	Establish pollinator habitat*
			<a href="#">E420B</a>	Establish monarch butterfly habitat*
	<a href="#">422</a>	Hedgerow Planting (feet)		None Available
	<a href="#">612</a>	Tree-Shrub Establishment (acres)	<a href="#">E612B</a>	Planting for high carbon sequestration rate
<a href="#">E612C</a>			Establishing tree/shrub species to restore native plant communities	
<a href="#">E612G</a>			Tree/shrub planting for wildlife food	
<a href="#">643</a>	Restoration of Rare or Declining Natural Communities (ac)* • Used to restore floodplain hydrology <sup>[4]</sup>	<a href="#">E643D</a>	Low-tech process-based restoration to enhance floodplain connectivity*	
<a href="#">666</a>	Forest Stand Improvement (acres)*	<a href="#">E666A</a>	Maintaining and improving forest soil quality*	
		<a href="#">E666D</a>	Forest management to enhance understory vegetation*	
		<a href="#">E666E</a>	Reduce height of the forest understory to limit wildfire risk*	
		<a href="#">E666F</a>	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) • 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)* • Used to reduce energy use <sup>[4]</sup>	None Available	
	441	Irrigation System, Microirrigation (acres)* • Used to reduce energy use <sup>[4]</sup>	None Available	
	442	Sprinkler System (acres)* • Used to reduce energy use <sup>[4]</sup>	None Available	
	533	Pumping Plant (number)* • Used to reduce energy use <sup>[4]</sup>	E533C	Install VFDs on pumps*
			E533D	Switch fuel source for pumps*
	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)* • 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](https://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](https://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.

**[5]** Mitigation categories are for organizational purposes only and do not indicate land use restrictions for the practice.



## 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	03N	Remove woody (non-herbaceous and succulent) invasive vegetation to maintain or enhance deep rooted native perennial grass and forb communities, leaving treated woody material onsite to mitigate above ground carbon loss
315	Herbaceous Weed Treatment	01N	Remove or treat 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	02N	Switching from higher to lower pressure irrigation systems without increasing irrigated acres, resulting in enhanced application efficiency and reduced energy use
442	Sprinkler System	02N	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	03N	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	02N	Replacing existing pump with high-efficiency pump resulting in reduced energy use
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