

Additional Planner Guidance for FY24 Climate-Smart Agriculture and Forestry (CSAF) Mitigation Activities with Specified Implementations



This document provides a conservation planner with additional guidance to plan, design, and implement the identified CSAF Mitigation Activities with specific implementations to meet the intended goal of providing mitigation benefits. The practices in the table below are only considered CSAF Mitigation Activities when implemented according to the description in the corresponding narrative.

Code	Conservation Practice Standard Name (practice unit)	Narrative	Additional Planner Guidance/Applicability of the Practice
313	Waste Storage Structure (number)	01N Compost Bedded Pack waste storage facility - a livestock agricultural waste storage fabricated structure where manure is composted within the animal housing	<ul style="list-style-type: none"> Use 01N when specifically planning a compost bedded pack structure. When implemented this way, the practice can lead to reduced methane (CH₄) emissions resulting from the added carbonaceous bedding material and regularly tilling to promote composting, as compared to a liquid storage system. For any other waste storage structure, use 00N (which would not be a CSAF mitigation activity).
314	Brush Management (acres)	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	<ul style="list-style-type: none"> Use 03N when specifically planning the practice to remove woody (non-herbaceous and succulent) invasive vegetation to maintain or enhance native perennial grass and forb communities. Woody residue from mechanical or chemical treatments must be left onsite. When implemented this way, the practice can be used to maintain or re-establish native perennial plant communities and associated carbon stocks and carbon balance equilibrium. Restoring reference perennial plant communities may increase resistance to disturbances such as wildfire that would result in even greater carbon losses. Woody residue left on site should be treated in a manner (i.e. lop and scatter) not to cause additional resource concerns or increase wildfire hazard. When available, planners should use Ecological Site Descriptions (ESDs) to assess the potential for a plant community to address carbon sequestration. Determining if the practice can maintain or increase carbon is situational and relies on planners' professional judgment and familiarity with the ecological site being evaluated. Planning the practice in a way that addresses soil erosion and the soil organic matter depletion resource concern components should result in an application designed to re-establish an equilibrium, which may increase soil organic carbon. For any other application of brush management that does not meet these criteria, including for instance implementations that involve burn piles or hauled residue, use the appropriate narrative (which would not be a CSAF mitigation activity).

Code	Conservation Practice Standard Name (practice unit)	Narrative	Additional Planner Guidance/Applicability of the Practice
315	Herbaceous Weed Treatment (acres)	01N Removal of herbaceous weeds to release desired deep rooted perennial grass and forb species	<ul style="list-style-type: none"> Use 01N when specifically planning the practice to treat herbaceous weeds to release desired deep rooted perennial species. When implemented this way, the practice can be used to restore plant communities containing significant annual weeds to perennial dominated plant communities, which can result in increased soil organic carbon. When available, planners should use Ecological Site Descriptions (ESDs) to assess the potential for a plant community to address carbon sequestration. Determining if the practice can maintain or increase carbon is situational and relies on planners' professional judgment and familiarity with the ecological site being evaluated. Planning the practice in a way that addresses soil erosion and the soil organic matter depletion resource concern components should result in an application designed to re-establish an equilibrium, which may increase soil organic carbon. For any other application of herbaceous weed treatment that does not meet these criteria, use 00N (which would not be a CSAF mitigation activity).
367	Roofs and Covers (number)	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.	<ul style="list-style-type: none"> Use 01N when specifically planning a waste facility cover to capture biogas. When implemented this way, the practice can lead to reduced CH₄ emissions as biogas is captured and either flared or used as a natural gas substitute, as compared to an uncovered anaerobic lagoon or liquid storage system. For other applications, such as a rain exclusion cover, use the appropriate narrative (which would not be a CSAF mitigation activity).
372	Combustion System Improvement	<p>02N Stationary engine to electric motor replacement or repower - Replace or repower an existing stationary engine with an electric motor.</p> <p>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.</p>	<ul style="list-style-type: none"> Use 02N when specifically replacing or repowering an existing stationary engine (e.g., irrigation engine, emergency generator, etc.) with an electric motor. Use 05N when specifically replacing existing on-farm mobile equipment (e.g., tractor, loader, forklift, etc.) powered by an internal combustion engine with a new mobile device powered by an electric motor. For other applications of this practice, use the appropriate narrative (which would not be a CSAF mitigation activity).

Code	Conservation Practice Standard Name (practice unit)	Narrative	Additional Planner Guidance/Applicability of the Practice
430	Irrigation Pipeline (feet)	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	<ul style="list-style-type: none"> • Use 01N when specifically replacing an earthen channel system with a closed conduit system. When implemented this way, this practice enables more efficient water conveyance due to reduced seepage and evaporation, which in turn would result in energy savings that, in most cases, would lead to emission reductions. • The system must currently be supplied water by a fossil fuel driven pumping plant to provide expected energy savings. • Additional criteria in the practice standard to meet the purpose of reducing energy use is required to be met when using this narrative and to be considered a mitigation activity. • Because the potential mitigation benefits from energy efficiency and reduction assume a baseline scenario that relies on a fossil fuel-based energy source, some areas of the country (i.e., those already using solely renewable energy sources) would therefore not realize any GHG emissions benefits from the implementation of this practice. Planners must take into account local energy sources when planning the practice as a CSAF mitigation activity; existing system must be powered by a fossil fuel-based energy source. • For other applications of the practice, use 00N (which would not be a CSAF mitigation activity).
441	Irrigation System, Microirrigation (acres)	02N Switching from higher to lower pressure irrigation system, resulting in enhanced application efficiency and reduced energy use.	<ul style="list-style-type: none"> • Use 02N when specifically switching an existing system from a higher to lower pressure micro-irrigation system. When implemented this way, this practice enables more precise and efficient water use which in turn would result in energy savings that, in most cases, would lead to emission reductions. • Only applicable when changes are made to an existing system that is supplied water by a fossil fuel driven pumping plant. Do not use for implementation of a new irrigation system. • Practice implementation should not result in increased irrigated acres. • Because the potential mitigation benefits from energy efficiency and reduction assume a baseline scenario that relies on a fossil fuel-based energy source, some areas of the country (i.e., those already using solely renewable energy sources) would therefore not realize any GHG emissions benefits from the implementation of this practice. Planners must take into account local energy sources when planning the practice as a CSAF mitigation activity; existing system must be powered by a fossil fuel-based energy source. • For other applications of the practice, use the appropriate narrative (which would not be a CSAF mitigation activity).

Code	Conservation Practice Standard Name (practice unit)	Narrative	Additional Planner Guidance/Applicability of the Practice
442	Sprinkler System (acres)	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	<ul style="list-style-type: none"> • Use 02N when specifically using the practice to use variable rate irrigation (VRI) technology, to switch from higher to lower pressure irrigation systems, or to renozzle sprinkler head. When implemented this way, this practice enables more precise and efficient water use which in turn would result in energy savings that, in most cases, would lead to emission reductions. • Practice implementation should not result in increased irrigated acres. • Additional criteria in the practice standard to meet the purpose of reducing energy use is required to be met when using this narrative and to be considered a mitigation activity. • Because the potential mitigation benefits from energy efficiency and reduction assume a baseline scenario that relies on a fossil fuel-based energy source, some areas of the country (i.e., those already using solely renewable energy sources) would therefore not realize any GHG emissions benefits from the implementation of this practice. Planners must take into account local energy sources when planning the practice as a CSAF mitigation activity; existing system must be powered by a fossil fuel-based energy source. • For other applications of the practice, use the appropriate narrative (which would not be a CSAF mitigation activity).
449	Irrigation Water Management (acres)	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.	<ul style="list-style-type: none"> • Use 03N only when implementing the practice as part of an alternated wetting and drying (AWD) system in rice fields. When implemented this way, this practice may reduce methane emissions from rice production. • For other applications of the practice, use the appropriate narrative (which would not be a CSAF mitigation activity).
533	Pumping Plant (number)	02N Replacing existing pumps with high-efficiency pump	<ul style="list-style-type: none"> • Use 02N when specifically using the practice to replace an existing pump with a high-efficiency pump. When implemented this way, this practice increases pump efficiency, which in turn would result in energy savings that, in most cases, would lead to emission reductions. • Additional criteria in the practice standard to meet the purpose of reducing energy use is required to be met when using this narrative and to be considered a mitigation activity. • Because the potential mitigation benefits from energy efficiency and reduction assume a baseline scenario that relies on a fossil fuel-based energy source; some areas of the country (i.e., those already using solely renewable energy sources) would therefore not realize any GHG emissions benefits from the implementation of this practice. Planners must take into account local energy sources when planning the practice as a CSAF mitigation activity; existing system must be powered by a fossil fuel-based energy source. • If the objective is switching the power source for the pumping system and not replacing the pump itself with a high-efficiency pump, CPS 372 should be considered. • For other applications of the practice, use the appropriate narrative (which would not be a CSAF mitigation activity).



Code	Conservation Practice Standard Name (practice unit)	Narrative	Additional Planner Guidance/Applicability of the Practice
592	Feed Management (animal unit)	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.	<ul style="list-style-type: none"> Use 03N when specifically using the practice to 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. When implemented this way, this practice can lead to reduced enteric methane emissions through adjustments in animal feed and management, diet formulation, and feed additives that influence methane production during animal digestion. For applications of the practice other than methane reduction, use the appropriate narrative (which would not be a CSAF mitigation activity).
643	Restoration of Rare or Declining Natural Communities (acres)	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	<ul style="list-style-type: none"> Use 01N only when implementing the practice to restore streams and associated floodplains using low-tech structures in order to kick-start natural ecological and hydrologic processes required for maintenance of healthy and functioning streams and associated floodplains. When implemented this way, this practice can revitalize hydrologic conditions that limit the decomposition and extend the residence time of soil organic carbon and enhance organic matter input from regenerated riparian vegetation, leading to increased carbon sequestration. For any other application of 643 that does not meet those criteria, including for instance oysterbed restoration, use 00N (which would not be a CSAF mitigation activity).