AMENDMENT NUMBER ONE
TO THE
PROTOTYPE PROGAMMATIC AGREEMENT
BETWEEN THE
US DEPARTMENT OF AGRICULTURE
MINNESOTA NATURAL RESOURCES CONSERVATION SERVICE STATE OFFICE
AND THE
MINNESOTA HISTORIC PRESERVATION OFFICE
REGARDING CONSERVATION ASSISTANCE

WHEREAS, the Minnesota PPA was executed among NRCS and the Minnesota SHPO on March 22, 2017 to establish efficiencies in the administration of NRCS programs in Minnesota; and

WHEREAS, the signatories to the PPA have requested to amend the Minnesota PPA and have consulted in accordance with Stipulation XIII; and

WHEREAS, the signatories have agreed that additional practices are appropriate for inclusion in Appendix A; and

WHEREAS, the NRCS Minnesota will send a copy of this executed amendment to the PPA to the Minnesota SHPO, the ACHP and the NRCS Federal Preservation Officer for their records; and

NOW THEREFORE, in accordance with Stipulation XIII of the PPA, the Minnesota NRCS and the Minnesota SHPO agree to amend the Minnesota PPA as follows:

1. The Minnesota PPA will be amended to include the following revisions so that it reads as follows: [See attached Appendix A]

2. All other provisions of the State PPA remain unchanged and NRCS will implement them in accordance with the terms of the original PPA.

Signatory Parties

Curtis A. Elke — 6/15/18

Curtis Elke — Date
Acting State Conservationist - Minnesota
USDA Natural Resources Conservation Service

[signature] — 6.26.18

Amy Spong — Date
Division Director and Deputy State Historic Preservation Officer
Minnesota State Historic Preservation Office

APPENDIX A

Natural Resources Conservation Service (NRCS) Minnesota Activities, Enhancements, and Practices With Little or No Potential to Affect Historic Properties

Pursuant to Stipulation V.a of the NRCS Minnesota State-based agreement, and in accordance with 36 CFR Part 800. 3(a)(1), NRCS Minnesota has determined that the following conservation activities, enhancements, and practices constitute undertakings with little or no potential to affect historic properties. This determination has been made in consultation with the NRCS Minnesota State Conservationist, NRCS Conservation Specialists, and the Minnesota Historic Preservation Office (MnHPO). If a conservation activity, enhancement, or practice is not listed as part of this Appendix, and if the exceptions found in Part III of this Appendix do not apply, then the conservation activity, enhancement, or practice will be considered as having potential to affect cultural resources. Therefore, a cultural resources investigation should be completed.

I. General NRCS Minnesota Practices with Little or No Potential to Affect Historic Properties:

NRCS Minnesota has determined that the following general practices have little or no potential to affect historic properties, and thus require no further consultation under Section 106.

a) Conservation Planning or Technical Assistance when NRCS Exercises No Control Over Implementation. NRCS Minnesota has determined providing general conservation planning and technical assistance to its Cooperators has little or no potential to affect historic properties. This assistance is primarily focused on management and is completed in the office or in the field. Planning and technical assistance involves no ground disturbance activities that would necessitate a cultural resources inventory.

b) Conservation Activity Plans. NRCS Minnesota has determined that the development of Conservation Activity Plans (CAPs) has little or no potential to affect historic properties. CAPs are written plans prepared for Cooperators utilizing financial assistance provided by the NRCS. The CAPs are used to identify conservation measures that are needed to address specific resource concerns, and CAPs can be used to help cooperators apply for financial assistance from the NRCS. As with general conservation planning, the development of CAPs involves no ground disturbance activities that would necessitate a cultural resources inventory.

c) Highly Erodible Land and Wetland Determinations. NRCS Minnesota has determined that the determination of Highly Erodible Lands (HEL) and Wetlands has little or no potential to affect historic properties. These determinations are primarily completed in the office and involves no ground disturbance activities that would necessitate a cultural resources inventory. Wetlands determinations are occasionally completed in the field utilizing a hand-dug test pit to identify redoximorphic features. Under such

circumstances, Conservation Planners will shift the location of test pits to avoid impacts to cultural resources.

d) NRCS Minnesota Soil Survey, Natural Resource Inventory (NRI), and Geotechnical Testing. NRCS Minnesota has determined that limited soil survey testing utilizing hand-dug test pits, hand probes, and/or augers has little or no potential to affect historic properties, provided that such testing is shifted to avoid impacts to cultural resources, and provided that the testing is located on privately-owned land. Similarly, NRCS Minnesota has determined that limited geotechnical auger testing of sediment fill and earthen fill structures associated with dam rehabilitation work has little or no potential to affect historic properties, provided that such geotechnical testing is shifted to avoid impacts to cultural resources, and provided that the geotechnical testing is located on privately-owned land. If either activity is located on Federal, State, or Tribal-Administered lands, or if heavy equipment (i.e., backhoes, tractors, excavators, etc.) will be used as part of the testing process, then the activities are considered to have potential to affect historic properties.

II. Specific NRCS Minnesota Activities, Enhancements, and Practices with Little or No Potential to Affect Historic Properties:

NRCS Minnesota has determined that the conservation activities, enhancements, and practices displayed in Table 1 of this Appendix have little or no potential to affect historic properties, and that further consultation under Section 106 is unnecessary. These conservation activities, enhancements, and practices are considered to have little or no potential to affect historic properties provided that NRCS Minnesota has been determined to be the lead Federal agency for the purposes of Section 106; that no extenuating circumstances exist; and that the undertaking occurs exclusively on privately-owned lands. If any of the conservation practices described in Table 1 are associated with undertakings occurring on public or Tribal lands, or involve extenuating circumstances as defined in Appendix B of the NRCS Minnesota State-based agreement, then consideration of the effects of the undertaking is necessary and coordination with the NRCS Cultural Resources Specialist (CRS) is required.

III. NRCS Minnesota Conservation Activity, Enhancement, and Practice Exceptions.

NRCS Minnesota has determined that a conservation activity, practice, or enhancement has little or no potential to affect historic properties when the following Exceptions apply:

a) Conservation activities, enhancements, or practices are limited to management.

b) Conservation activities, enhancements, and practices are applied through aerial, chemical, or biological means.

c) Conservation activities, enhancements, and practices are applied manually or with hand-tools.

d) Conservation activities, enhancements, and practices are applied to the modern ground surface and involve no subsurface disturbance.

e) Conservation activities, enhancements, and practices occur within existing tilled soils,

croplands, or areas of surface disturbance, and will not exceed the existing depth of tillage or previous disturbance.

If, through the planning process, Conservation Planners determine that a conservation activity, enhancement, or practice does not meet the criteria for one of the five exceptions listed above, and that no extenuating circumstances exist, then planners shall submit an *NRCS Minnesota (MN-CPA-048) Cultural Resources Review Form* to the NRCS State CRS for further review. The form shall include a list of all conservation activities, enhancements, and practices that are being planned for the undertaking, and it shall also include a clear justification for why an exception should be applied. Use of any exception shall require approval from the NRCS State CRS. Approval from the NRCS State CRS may require consultation per Section 106 and it's implementing regulations under 36 CFR Part 800 before an exception can be applied.

IV. Conservation Stewardship Program (CSP) Enhancements

CSP conservation practice enhancements will follow guidance listed under the applicable conservation practice standard codes. This includes all E-conservation practice standard-based enhancements. CSP bundles will be reviewed based on each enhancement applicable to the bundle.

V. Annual Updates to this Appendix

NRCS Minnesota recognizes that the standards and definitions for the conservation activities, enhancements, and practices are subject to changes on an annual basis. Similarly, NRCS Minnesota also recognizes that additional conservation activities, enhancements, and practices are added on an annual basis as the focus of conservation changes over time. To address these changes, NRCS Minnesota will submit an updated version Table 1 of this Appendix to MnHPO and other consulting parties, as appropriate, on an annual basis. As specified in Stipulation V.b of the NRCS Minnesota SPPA, the list of undertakings provided in this Appendix may be modified through consultation and written agreement between the NRCS Minnesota State Conservationist and the MnHPO without requiring an amendment to the NRCS Minnesota SPPA.

Table 1. FY 2018 NRCS Minnesota Conservation Activities, Enhancements, and Practices with Little or No Potential to Affect Historic Properties

Undertaking: Planners shall submit an *NRCS Minnesota (MN-CPA-048) Cultural Resources Review Form* to the NRCS State CRS for further review.

Exempt: No further action needed if exemption criteria are applicable.

Not Listed: Planners shall submit an *NRCS Minnesota (MN-CPA-048) Cultural Resources Review Form* to the NRCS State CRS for further review.

Practice	Name	Description	Exemption Criteria
311	Alley Cropping	Trees or shrubs planted in a set or series of single or multiple rows with agronomic, horticultural crops or forages produced in the alleys between the rows of woody plants.	**Exempt** when implemented within areas of previous disturbance and does not exceed the existing depth of disturbance.
313	Waste Storage Facility	A waste storage impoundment made by constructing an embankment and/or excavating a pit or dugout, or by fabricating a structure.	**Undertaking**
314	Brush Management	The management or removal of woody (non-herbaceous or succulent) plants including those that are invasive and noxious.	**Exempt** when implemented within areas of previous disturbance and does not exceed the existing depth of disturbance or when the practice only involves the application of chemical or biological agents. **Undertaking** when using mechanical means and soil subsurface will be disturbed in areas not previously disturbed.
315	Herbaceous Weed Control	The removal or control of herbaceous weeds including invasive, noxious and prohibited plants.	**Exempt** when implemented within areas of previous disturbance and does not exceed the existing depth of disturbance or when the practice only involves the application of chemical or biological agents. **Undertaking** when using mechanical means and soil subsurface will be disturbed in areas not previously disturbed.
316	Animal Mortality Facility	An on-farm facility for the treatment or disposal of livestock and poultry carcasses for routine and catastrophic mortality events.	**Undertaking**
317	Composting Facility	Facility to compost	**Undertaking**
324	Deep Tillage	Performing tillage operations below the normal tillage depth to modify adverse physical or chemical properties of a soil.	**Undertaking**
325	High Tunnel System (Former Seasonal High Tunnel System for Crops)	A seasonal polyethylene covered structure that is used to cover crops to extend the growing season in an environmentally safe manner.	**Exempt** when implemented within areas of previous disturbance and does not exceed the existing depth of disturbance.
326	Clearing and Snagging	Removal of vegetation along the bank (clearing) and/or selective removal of snags, drifts, or other obstructions (snagging) from natural or improved channels and streams.	**Exempt** when implemented within areas of previous disturbance and does not exceed the existing depth of disturbance. **Undertaking** when using mechanical means and soil subsurface will be disturbed in areas not previously disturbed.
327	Conservation Cover	Establishing and maintaining permanent vegetative cover.	**Exempt** when implemented within areas of previous disturbance and does not exceed the existing depth of disturbance.
328	Conservation Crop Rotation	Growing crops in a recurring sequence on the same field.	**Exempt** when implemented within areas of previous disturbance and does not exceed the existing depth of disturbance.
329	Residue and Tillage Management, No-Till/Strip Till/Direct Seed	Managing the amount, orientation and distribution of crop and other plant residue on the soil surface year-round while limiting soil-disturbing activities to only those necessary to place nutrients, condition residue and plant crops.	**Exempt** when implemented within areas of previous disturbance and does not exceed the existing depth of disturbance.

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Practice	Name	Description	Exemption Criteria
330	Contour Farming	Aligning ridges, furrows, and roughness formed by tillage, planting and other operations to alter velocity and/or direction of water flow to around the hillslope.	**Exempt**
332	Contour Buffer Strips	Narrow strips of permanent, herbaceous vegetative cover established around the hill slope, and alternated down the slope with wider cropped strips that are farmed on the contour.	**Exempt** when implemented within areas of previous disturbance and does not exceed the existing depth of disturbance.
338	Prescribed Burning	Applying controlled fire to a predetermined area.	**Exempt** when implemented within areas of previous disturbance.
340	Cover Crop	The planting of crops such as grasses, legumes and forbs to provide seasonal cover that will reduce erosion, improve soil organic matter, promote efficient nutrient cycling, fix nitrogen in the soil, suppress weeds, increase biodiversity and/or provide food and cover for wildlife.	**Exempt** when implemented within areas of previous disturbance and does not exceed the existing depth of disturbance.
342	Critical Area Planting	Establishment of permanent vegetation on sites that have or are expected to have high **erosion** rates, and on sites that have physical, chemical or biological conditions that prevent the establishment of vegetation with normal practices.	**Exempt** when implemented within areas of previous disturbance and does not exceed the existing depth of disturbance. **Undertaking** when shaping and grading exceed original depth of disturbance.
345	Residue and Tillage Management, Reduced Till	Managing the amount, orientation and distribution of crop and other plant residue on the soil surface year-round while limiting the soil-disturbing activities used to grow crops in systems where the entire field surface is tilled prior to planting.	**Exempt** when implemented within areas of previous disturbance and does not exceed the existing depth of disturbance.
350	Sediment Basin	A basin constructed with an engineered outlet, formed by an embankment or excavation or a combination of the two.	**Undertaking**
351	Water Well Decommissioning	The sealing and permanent closure of an inactive, abandoned, or unusable water well.	**Exempt** when implemented within areas of previous disturbance and does not exceed the existing depth of disturbance.
356	Dike	A barrier constructed of earth or manufactured materials.	**Undertaking**
360	Waste Facility Closure	The decommissioning of facilities, and/or the rehabilitation of contaminated soil, in an environmentally safe manner, where agricultural waste has been handled, treated, and/or stored and is no longer used for the intended purpose.	**Exempt** when implemented within areas of previous disturbance and does not exceed the existing depth of disturbance.
362	Diversion	A channel generally constructed across the slope with a supporting ridge on the lower side.	**Undertaking**
366	Anaerobic Digester	A component of a waste management system that provides biological treatment in the absence of oxygen.	**Undertaking**
367	Roofs and Covers	A rigid, semi-rigid, or flexible manufactured membrane, composite material, or roof structure placed over a waste management facility.	**Exempt**
372	Combustion System Improvement	Installing, replacing, or retrofitting agricultural combustion systems and/or related components or devices for air quality and energy efficiency improvement.	**Exempt**

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Exempt: No further action needed if exemption criteria are applicable.
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Practice	Name	Description	Exemption Criteria
374	Farmstead Energy Improvement	Development and implementation of improvements to reduce, or improve the energy efficiency of on-farm energy use.	**Exempt**
378	Pond	A water impoundment made by constructing an embankment, by excavating a dugout, or by a combination of both.	**Undertaking**
380	Windbreak/Shelterbelt Establishment	Windbreaks or shelterbelts are single or multiple rows of trees or shrubs in linear configurations to reduce surface wind speeds to control wind erosion, manage snow deposition, reduce the spread of odors, reduce pesticide spray drift and/or provide wildlife food and cover.	**Exempt** when implemented within areas of previous disturbance and does not exceed the existing depth of disturbance.
382	Fence	A constructed barrier to animals or people.	**Exempt** when implemented within areas of previous disturbance and when installed by hand, when it is temporary, and when installed without the use of heavy equipment to clear vegetation and obstructions.
383	Fuel Break	A strip or block of land on which the vegetation, debris and detritus have been reduced and/or modified to control or diminish the risk of the spread of fire crossing the strip or block of land.	**Exempt** when implemented within areas of previous disturbance and does not exceed the existing depth of disturbance.
384	Woody Residue Treatment	The treatment of residual woody material that is created due to management activities or natural disturbances.	**Exempt** when implemented without physical ground disturbance or burning. **Undertaking** when mechanized equipment will disturb subsurface.
386	Field Border	A strip of permanent vegetation established at the edge or around the perimeter of a field to provide a buffer between cropland and non-cropped areas to reduce cropland impacts and provide wildlife food and cover.	**Exempt** when implemented within areas of previous disturbance and does not exceed the existing depth of disturbance.
390	Riparian Herbaceous Cover	Grasses, sedges, rushes, ferns, legumes, and forbs tolerant of intermittent flooding or saturated soils, established or managed as the dominant vegetation in the transitional zone between upland and aquatic habitats.	**Exempt** when implemented within areas of previous disturbance and does not exceed the existing depth of disturbance. **Undertaking** when implemented in areas not previously disturbed.
391	Riparian Forest Buffer	An area predominantly trees and/or shrubs located adjacent to and up-gradient from watercourses or water bodies.	**Exempt** when implemented within areas of previous disturbance and does not exceed the existing depth of disturbance. **Undertaking** when implemented in areas not previously disturbed.
393	Filter Strip	A strip or area of herbaceous vegetation established on cropland that removes contaminants from overland flow.	**Exempt** when implemented within areas of previous disturbance and does not exceed the existing depth of disturbance.
394	Firebreak	A permanent or temporary strip of bare or vegetated land established to retard the movement of fire.	**Exempt** when implemented within areas of previous disturbance and does not exceed the existing depth of disturbance.
395	Stream Habitat Improvement and Management	Maintain, improve or restore physical, chemical and biological functions of a stream, and its associated riparian zone, necessary for meeting the life history requirements of desired aquatic species.	**Undertaking**

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Practice	Name	Description	Exemption Criteria
396	Aquatic Organism Passage	Modification or removal of barriers that restrict or impede movement of aquatic organisms.	**Undertaking**
397	Aquaculture Ponds	A water impoundment constructed and managed for farming of freshwater and saltwater organisms including fish, mollusks, crustaceans and aquatic plants.	**Undertaking**
410	Grade Stabilization Structure	A structure used to control the grade and head cutting in natural or artificial channels.	**Undertaking**
412	Grassed Waterway	A shaped or graded channel that is established with suitable vegetation to convey surface water at a non-erosive velocity using a broad and shallow cross section to a stable outlet.	**Exempt**
422	Hedgerow Planting	Establishment of dense vegetation in a linear design to achieve a natural resource conservation purpose	**Exempt** when implemented within areas of previous disturbance and does not exceed the existing depth of disturbance.
430	Irrigation Pipeline	A pipeline and appurtenances installed to convey water for storage or application, as part of an irrigation water system.	**Exempt** when implemented within areas of previous disturbance and does not exceed the existing depth of disturbance or confined to the modern surface. **Undertaking** when buried below existing depth of disturbance or in areas not previously disturbed.
432	Dry Hydrant	A non-pressurized permanent pipe assembly system installed into a water source that permits the withdrawal of water by suction	**Undertaking**
441	Irrigation System, Microirrigation	An irrigation system for frequent application of small quantities of water on or below the soil surface: as drops, tiny streams, or miniature spray through emitters or applicators placed along a water delivery line.	**Exempt** when implemented within areas of previous disturbance and does not exceed the existing depth of disturbance or confined to the modern surface. **Undertaking** when buried below existing depth of disturbance or in areas not previously disturbed.
442	Irrigation System, Sprinkler	A distribution system that applies water by means of nozzles operated under pressure.	**Exempt**
449	Irrigation Water Management	The process of determining and controlling the volume, frequency and application rate of irrigation water in a planned, efficient manner.	**Exempt**
466	Land Smoothing	Removing irregularities on the land surface.	**Undertaking**
468	Lined Waterway or Outlet	A waterway or outlet having an erosion-resistant lining of concrete, stone, synthetic turf reinforcement fabrics, or other permanent material.	**Exempt** If adding a liner to a previously disturbed waterway (e.g. adding a liner on top of a waterway and anchoring with staples) **Undertaking** if new installation
472	Access Control	The temporary or permanent exclusion of animals, people, vehicles, and/or equipment from an area.	**Exempt** when confined to the modern surface, or with no new construction.
484	Mulching	Applying plant residues or other suitable materials produced off site, to the land surface.	**Exempt**

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Exempt: No further action needed if exemption criteria are applicable.

Not Listed: Planners shall submit an *NRCS Minnesota (MN-CPA-048) Cultural Resources Review Form* to the NRCS State CRS for further review.

Practice	Name	Description	Exemption Criteria
490	Tree/Shrub Site Preparation	Treatment of areas to improve site conditions for establishing trees and/or shrubs.	**Exempt** when implemented within areas of previous disturbance and does not exceed the existing depth of disturbance.
500	Obstruction Removal	Removal and disposal of buildings, structures, other works of improvement, vegetation, debris or other materials.	**Undertaking**
511	Forage Harvest Management	The timely cutting and removal of forages from the field as hay, green-chop or ensilage.	**Exempt**
512	Forage and Biomass Planting	Establishing adapted and/or compatible species, varieties, or cultivars of herbaceous species suitable for pasture, hay, or biomass production.	**Exempt** when implemented within areas of previous disturbance and does not exceed the existing depth of disturbance. **Undertaking** when area is not previously disturbed
516	Livestock Pipeline	A pipeline and appurtenances installed to convey water for livestock or wildlife.	**Exempt** when implemented within areas of previous disturbance and does not exceed the existing depth of disturbance or confined to the modern surface. **Undertaking** when buried below existing depth of disturbance or in areas not previously disturbed.
521A	Pond Sealing or Lining, Flexible Membrane	A manufactured hydraulic barrier consisting of a functionally continuous layer of synthetic or partially synthetic, flexible material.	**Exempt** when installed within the footprint of an existing pond.
527	Karst Sinkhole Treatment	The treatment of sinkholes in karst areas to reduce contamination of groundwater resources, and/or to improve farm safety	**Undertaking**
528	Prescribed Grazing	Managing the harvest of vegetation with grazing and/or browsing animals	**Exempt**
533	Pumping Plant	A facility that delivers water at a designed pressure and flow rate. Includes the required pump(s), associated power unit(s), plumbing, appurtenances, and may include on-site fuel or energy source(s), and protective structures	**Exempt** when updating or replacing an existing pump or pump component and no ground disturbance is involved. **Undertaking** when involving ground disturbance.
550	Range Planting	Establishment of adapted perennial or self-sustaining vegetation such as grasses, forbs, legumes, shrubs, and trees.	**Exempt** when implemented within areas of previous disturbance and does not exceed the existing depth of disturbance. **Undertaking** when area is not previously disturbed.
554	Drainage Water Management	The process of managing water discharges from surface and/or subsurface agricultural drainage systems.	**Exempt** when using existing water control structures.
558	Roof Runoff Structure	A structure that will collect, control and convey precipitation runoff from a roof.	**Exempt** provided that the structure is determined to be less than 50 years old.
560	Access Road	A travel-way for equipment and vehicles constructed as part of a conservation plan.	**Undertaking**

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Exempt: No further action needed if exemption criteria are applicable.
Not Listed: Planners shall submit an *NRCS Minnesota (MN-CPA-048) Cultural Resources Review Form* to the NRCS State CRS for further review.

Practice	Name	Description	Exemption Criteria
561	Heavy Use Area Protection	Heavy Use Area Protection is used to stabilize a ground surface that is frequently and intensively used by people, animals, or vehicles.	**Exempt** when implemented within areas of previous disturbance and does not exceed the existing depth of disturbance or confined to the modern surface (example: installing gravel base foundation with minimal surface disturbance) **Undertaking** when the existing depth of disturbance is exceeded or not confined to the modern surface in areas not previously disturbed. (example: installing concrete foundation)
570	Stormwater Runoff Control	Controlling the quantity and quality of stormwater runoff.	**Undertaking**
574	Spring Development	Collection of water from springs or seeps to provide water for a conservation need.	**Undertaking**
575	Trails and Walkways	Established lanes or travel ways that facilitate animal movement.	**Undertaking**
578	Stream Crossing	A stabilized area or structure constructed across a stream to provide a travel way for people, livestock, equipment, or vehicles	**Undertaking**
580	Streambank and Shoreline Protection	Treatment(s) used to stabilize and protect banks of streams or constructed channels, and shorelines of lakes, reservoirs, or estuaries.	**Undertaking**
582	Open Channel	Construction, improvement, or restoration of a natural or artificial water channel.	**Undertaking**
584	Channel Bed Stabilization	Measure(s) used to stabilize the bed or bottom of a channel.	**Undertaking**
585	Stripcropping	Growing row crops, forages, small grains, or fallow in a systematic arrangement of equal width strips across a field.	**Exempt** when implemented within areas of previous disturbance and does not exceed the existing depth of disturbance.
587	Structure for Water Control	A structure in a water management system that conveys water, controls the direction or rate of flow, maintains a desired water surface elevation or measures water.	**Undertaking**
588	Cross Wind Ridges	Ridges formed by tillage, planting or other operations and aligned perpendicular to prevailing wind direction during critical wind erosion periods.	**Exempt** when implemented within areas of previous disturbance and does not exceed the existing depth of disturbance.
589C	Cross Wind Trap Strips	Herbaceous cover established in one or more strips typically perpendicular to the most erosive wind events.	**Exempt** when implemented within areas of previous disturbance and does not exceed the existing depth of disturbance.
590	Nutrient Management	Managing the amount (rate), source, placement (method of application), and timing of plant nutrients and soil amendments.	**Exempt**
595	Integrated Pest Management (IPM)	A site-specific combination of pest prevention, pest avoidance, pest monitoring, and pest suppression strategies.	**Exempt**
600	Terrace	An earth embankment, or a combination ridge and channel, constructed across the field slope.	**Undertaking**
601	Vegetative Barrier	Permanent strips of stiff, dense vegetation along the general contour of slopes or across concentrated flow areas.	**Exempt** when implemented within areas of previous disturbance and does not exceed the existing depth of disturbance.

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Practice	Name	Description	Exemption Criteria
603	Herbaceous Wind Barriers	Herbaceous vegetation established in rows or narrow strips in the field across the prevailing wind direction.	**Exempt** when implemented within areas of previous disturbance and does not exceed the existing depth of disturbance.
604	Saturated Buffer	A subsurface, perforated distribution pipe used to divert and spread drainage system discharge to a vegetated area to increase soil saturation	**Exempt** when implemented within areas of previous disturbance and does not exceed the existing depth of disturbance. **Undertaking** when area is not previously disturbed.
605	Denitrifying Bioreactor	A structure that uses a carbon source to reduce the concentration of nitrate nitrogen in subsurface agricultural drainage flow via enhanced denitrification.	**Undertaking**
606	Subsurface Drain	A conduit installed beneath the ground surface to collect and/or convey excess water.	**Undertaking**
612	Tree/Shrub Establishment	Establishing woody plants by planting seedlings or cuttings, direct seeding, or natural regeneration.	**Exempt** when implemented within areas of previous disturbance and does not exceed the existing depth of disturbance.
614	Watering Facility	A permanent or portable device to provide an adequate amount and quality of drinking water for livestock and or wildlife.	**Exempt** when implemented within areas of previous disturbance and does not exceed the existing depth of disturbance or confined to the modern surface.
620	Underground Outlet	A conduit or system of conduits installed beneath the surface of the ground to convey surface water to a suitable outlet.	**Undertaking**
629	Waste Treatment	The mechanical, chemical or biological treatment of agricultural waste.	**Exempt**
632	Solid Liquid Waste Separation Facility	A filtration or screening device, settling tank, settling basin, or settling channel used to separate a portion of solids from a liquid waste stream.	**Undertaking**
634	Waste Transfer	A system using structures, pipes or conduits installed to convey wastes or waste byproducts from the agricultural production site to storage/treatment or application.	**Exempt** when using existing structures, conduits, or equipment, and without new construction.
635	Vegetated Treatment Area	An area of permanent vegetation used for agricultural wastewater treatment.	**Exempt** when implemented within areas of previous disturbance and does not exceed the existing depth of disturbance.
638	Water and Sediment Control Basin	An earth embankment or a combination ridge and channel generally constructed across the slope and minor watercourses to form a sediment trap and water detention basin.	**Undertaking**
642	Water Well	A hole drilled, dug, driven, bored, jetted or otherwise constructed to an aquifer for water supply.	**Undertaking**
643	Restoration and Management of Declining Habitats	Restoring and managing rare and declining habitats and their associated wildlife species.	**Exempt** when implemented within areas of previous disturbance and does not exceed the existing depth of disturbance or when limited to management.

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Practice	Name	Description	Exemption Criteria
644	Wetland Wildlife Habitat Management	Retaining, developing or managing wetland habitat for wetland wildlife.	**Exempt** when implemented within areas of previous disturbance and does not exceed the existing depth of disturbance or when limited to management. **Undertaking** when installing water control structures or performing earthmoving activities.
645	Upland Wildlife Habitat Management	Provide and manage upland habitats and connectivity within the landscape for wildlife.	**Exempt** when implemented within areas of previous disturbance and does not exceed the existing depth of disturbance or when limited to management.
647	Early Successional Habitat Development/Management	Manage early plant succession to benefit desired wildlife or natural communities by increasing plant community diversity.	**Exempt** when implemented within areas of previous disturbance and does not exceed the existing depth of disturbance. **Undertaking** when using mechanical means and soil subsurface will be disturbed in areas not previously disturbed.
649	Structures for Wildlife	A structure installed to replace or modify a missing or deficient wildlife habitat component.	**Exempt** when implemented within areas of previous disturbance and does not exceed the existing depth of disturbance or confined to the modern surface.
650	Windbreak/Shelterbelt Renovation	Replacing, releasing and/or removing selected trees and shrubs or rows within an existing windbreak or shelterbelt, adding rows to the windbreak or shelterbelt or removing selected tree and shrub branches.	**Exempt** when implemented within areas of previous disturbance and does not exceed the existing depth of disturbance **Undertaking** when disturbance is significant (e.g. using heavy equipment to clear stumps and/or bury woody debris)
655	Forest Trails and Landings	A route, travel-way or cleared area within a forest.	**Undertaking**
656	Constructed Wetland	An artificial ecosystem with hydrophytic vegetation for water treatment.	**Undertaking**
658	Wetland Creation	The creation of a wetland on a site location that was historically non-wetland.	**Undertaking**
659	Wetland Enhancement	The augmentation of wetland functions beyond the original natural conditions on a former, degraded, or naturally functioning wetland site; sometimes at the expense of other functions.	**Undertaking**
657	Wetland Restoration	The return of a wetland and its functions to a close approximation of its original condition as it existed prior to disturbance on a former or degraded wetland site.	**Undertaking**
660A	Tree Shrub Pruning	Removing all or parts of selected branches from trees and shrubs.	**Exempt**
666	Forest Stand Improvement	The manipulation of species composition, stand structure and/or stand density by cutting or killing selected trees and/or understory vegetation to achieve desired forest conditions.	**Exempt** when implemented within areas of previous disturbance and does not exceed the existing depth of disturbance or when confined to the modern surface.
670	Lighting System Improvement	Complete replacement or retrofitting of one or more components of an existing agricultural lighting system.	**Exempt**
672	Building Envelope Improvement	Modification or retrofit of the building envelope of an existing agricultural structure.	**Exempt** provided that the structure is determined to be less than 50 years old.

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Practice	Name	Description	Exemption Criteria
CSP Enhancements			
AIR03	Replace burning of prunings and other crop residues with non-burning alternatives	The use of non-burning alternatives to include chipping, mowing, shredding or composting.	**Exempt**
AIR04	Use drift reducing nozzles, low pressures, lower boom height and adjuvants to reduce pesticide drift	Use drift reduction technologies to reduce the drift of agricultural chemicals away from the intended target when spraying.	**Exempt**
AIR07	GPS, targeted spray application (SmartSprayer), or other chemical application electronic control tech	Utilize electronically-controlled or managed chemical spray application technology to more precisely apply agricultural pesticides to their intended targets.	**Exempt**
AIR08	Nitrification inhibitors or urease inhibitors	The use of an ammonia or ammonium fertilizers with a substance that inhibits the biological oxidations of ammoniacal nitrogen to nitrate nitrogen or the use of surface applied urea products with a substance that inhibits hydrolytic action on urea by urease enzyme that when applied to soils results in less urea nitrogen lost by ammonia volatilization (AAPFCO). This enhancement is only applicable to nitrogen applied within 30 days of planting or after consecutive warm days (i.e., greater than 75°F). This does not apply to “pop-up” or starter nitrogen sources applied at planting time.	**Exempt**
ANM03	Incorporate native grasses and/or legumes into 15% or more of the forage base	Improve pasture by increasing native grasses and/or legumes to 15% of herbage dry matter (productivity by weight) using adapted species and varieties, appropriate seeding rates, and timing of seeding. Pastures containing about 15% native grasses and/or legumes by weight dry matter are approximately equal to 30% foliar cover.	**Exempt** when implemented within areas of previous disturbance and does not exceed the existing depth of disturbance
ANM05	Extending riparian forest buffers for water quality protection and wildlife habitat	Where existing riparian forest buffers (i.e., buffers) are utilized, extend them to gain more efficiency in intercepting overland flow, reducing the transport of nutrients, pesticides and agro-chemicals, and for wildlife habitat.	**Exempt** when implemented within areas of previous disturbance and does not exceed the existing depth of disturbance. **Undertaking** when implemented in areas not previously disturbed.
ANM07	Extending existing field borders for water quality protection and wildlife habitat	Where existing field borders are utilized, extend them to gain more efficiency in intercepting overland flow and reducing the transport of nutrients, pesticides and agro-chemicals, and for wildlife habitat.	**Exempt** when implemented within areas of previous disturbance and does not exceed the existing depth of disturbance.

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Practice	Name	Description	Exemption Criteria
ANM09	Grazing management to improve wildlife habitat	Implement a grazing management plan that allows for rest periods to provide adequate residue for nesting and fawning cover and increase diversity of vegetation structure to benefit a variety of wildlife species.	**Exempt**
ANM10	Harvest hay in a manner that allows wildlife to flush and escape	Harvesting hay using conservation measures that allow wildlife to flush and escape. These measures include timing of haying to avoid periods when upland wildlife are nesting or fawning, idling hay land during the nesting or fawning period, and applying haying techniques that reduce mortality to wildlife.	**Exempt**
ANM11	Patch-burning to enhance wildlife habitat	Use prescribed burning with livestock grazing to create patches of different vegetation structure and species composition for the benefit of wildlife.	**Exempt** when implemented within areas of previous disturbance and does not exceed the existing depth of disturbance or when confined to the modern surface.
ANM12	Shallow water habitat	Construct or renovate small, shallow sites to impound or hold water seasonally, typically from late winter through early summer (e.g., vernal pools).	**Undertaking**
ANM17	Monitoring nutritional status of livestock using the NUTBAL PRO system	Use of the NUTBAL PRO software to determine if current diet is sufficient to meet livestock nutritional needs. This requires the collection and laboratory analysis of forage or fecal samples to determine the nutritional value of grazing forages.	**Exempt**
ANM21	Prairie restoration for grazing and wildlife habitat	This activity consists of restoring/renovating prairie habitat by establishing native vegetation and managing the restored plant community.	**Exempt** when implemented within areas of previous disturbance and does not exceed the existing depth of disturbance. **Undertaking** when area is not previously disturbed
ANM23	Multi-species native perennials for biomass/wildlife habitat	This enhancement consists of establishing native perennial vegetation for biomass production and wildlife habitat.	**Exempt** when implemented within areas of previous disturbance and does not exceed the existing depth of disturbance. **Undertaking** when area is not previously disturbed
ANM25	Stockpiling Forages to Extend the Grazing Season	Livestock are excluded from forages on specified acres during the growth season. The “stockpiled” forages are grazed at a later time using strip grazing to allow animals to utilize the forage within a strip for a specified period of time.	**Exempt**
ANM26	Managing calving to coincide with forage availability	This enhancement uses a controlled breeding season to match livestock nutrient requirements to available pasture forage and reduce supplemental feeding. This enhancement is applicable to all grazing livestock.	**Exempt**
ANM27	Wildlife Friendly Fencing	This enhancement involves the use of wildlife friendly fencing techniques that allow free passage of daily wildlife movement and seasonal migration; and/or increase visibility to prevent entanglement and mortality. Selection of this enhancement requires the activity to be planned concurrently on all eligible land use acres.	**Exempt** when implemented within areas of previous disturbance and does not exceed the existing depth of disturbance or when installed by hand, and when installed without the use of heavy equipment to clear vegetation and obstructions.

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Practice	Name	Description	Exemption Criteria
ANM29	On-farm forage based grazing system	A forage based grazing system that supplies all roughage (forage and supplemental hay) requirements for a livestock operation.	**Exempt**
ANM31	Drainage water management	This enhancement consists of seasonal hydrology management during non-cropping periods for wildlife habitat on working lands.	**Exempt** when using existing water control structures.
ANM32	Extend existing filter strips or riparian herbaceous cover for WQ protection and wildlife habitat	Where existing filter strips or riparian herbaceous covers (i.e., buffers) are utilized, extend them to gain more efficiency in intercepting overland flow and reducing the transport of nutrients, pesticides and agro-chemicals, and for wildlife habitat.	**Exempt** when implemented within areas of previous disturbance and does not exceed the existing depth of disturbance. **Undertaking** when implemented in areas not previously disturbed
ANM33	Riparian buffer, terrestrial and aquatic wildlife habitat	This activity consists of managing riparian zones by utilizing select conservation measures (such as re-locating equipment operations, trails, or livestock; establishing diverse native vegetation and controlling invasive species; fencing; and extending the width of the riparian zone to enhance wildlife habitat adjacent to riparian zones of steams, ponds, lakes, or wetlands) to achieve stream side cover and vegetative diversity and structure to improve terrestrial and aquatic wildlife habitat.	**Exempt** when implemented within areas of previous disturbance and does not exceed the existing depth of disturbance. **Undertaking** when implemented in areas not previously disturbed
ANM34	Leave standing grain crops un-harvested to benefit wildlife	Implement a crop management plan that will allow a portion of grain crops to be left in fields un-harvested to provide food and cover for wildlife during winter months.	**Exempt**
ANM35	Enhance habitat on expired CRP acres or acres with perennial vegetated cover managed as hayland	Implement a focused habitat management plan for the benefit of selected wildlife species on expired CRP grass/legume covered acres that has CRP conservation cover or acres with similar perennial vegetated cover managed as hayland.	**Exempt**
ANM36	Enhance habitat on expired CRP acres or acres with woody cover managed as forestland	Implement a focused habitat management plan for the benefit of selected wildlife species on expired CRP tree covered acres that has CRP conservation cover or acres with similar woody cover managed as forestland.	**Exempt**
ANM37	Prescriptive grazing management system for grazed lands	Implement a prescriptive grazing management system for all grazed lands and for all eligible land uses in the operation. This includes expired CRP grass/legume or tree covered acres that are now converted to a grazing system. Selection of this enhancement requires the activity to be planned concurrently on all eligible land use acres.	**Exempt**
ANM38	Retrofit watering facility for wildlife escape and enhanced access for bats and bird species	Retrofit all existing watering facilities (troughs, tanks, etc.) to allow for the escape of wildlife that become trapped while trying to drink and to remove obstructions above the watering facility such as boards and wires. Selection of this enhancement requires the activity to be planned concurrently on all eligible land use acres.	**Exempt**

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Practice	Name	Description	Exemption Criteria
CCR99	Resource-Conserving Crop Rotation	Resource-conserving crop rotation means a crop rotation that: 1) Includes at least one resource conserving crop as determined by the State Conservationist, 2) Reduces erosion, 3) Improves soil fertility and tilth, 4) Interrupts pest cycles, and 5) In applicable areas, reduces depletion of soil moisture or otherwise reduces the need for irrigation. Resource-conserving crop means a crop that is one of the following: 1) A perennial grass, 2) A legume grown for use as forage, seed for planting, or green manure, 3) A legume-grass mixture, and 4) A small grain grown in combination with a green manure crop consisting of a grass, legume, forbs, or grass-forbs mixture, whether interseeded or planted in rotation.	**Exempt**
ENR01	Fuel use reduction for field operations	This enhancement is for fuel savings of 20% or more achieved by a reduction in field operations when compared to existing management system.	**Exempt**
ENR09	Variable frequency drive electric motors	This enhancement activity is for upgrading of existing single speed electric motors through the addition of variable frequency electric drives. A motor replacement may also be included in some cases. The primary use of this enhancement is for irrigation water pumping. This enhancement is not intended for farmstead or animal housing applications.	**Exempt**
ENR10	Using N provided by legumes, animal manure and compost to supply 90 to 100% of the N needs	This enhancement involves using nitrogen (N) produced by legumes and/or available animal manure and compost to supply 90 to 100% of N nutrient needs for crops, hay and/or forages produced on the farm.	**Exempt**
ENR11	Improving energy feedstock production using alley cropping systems with short rotation woody crops	This enhancement involves the use of short rotation woody plants that produce energy feedstock planted in multiple rows with crops or forages produced in the alleyways between the woody rows.	**Exempt** when implemented within areas of previous disturbance and does not exceed the existing depth of disturbance.
ENR12	Use of legume cover crops as a nitrogen source	This enhancement is for the use of legume cover crops as a primary source of nitrogen in a cropping system. Use of legume cover crops is applicable to conventional, specialty and organic crop production systems.	**Exempt**
FPP02	On-farm pilot projects		**Exempt**
FRD01	On-farm research and demonstrations		**Exempt**
PLT02	Monitor key grazing areas to improve grazing management	Adjust grazing management based on monitoring data. Monitor key grazing areas to determine if current grazing management is meeting management goals and objectives. A key grazing area is a small area of a grazed field that is identified as being representative of the entire field.	**Exempt**

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Practice	Name	Description	Exemption Criteria
PLT05	Multi-story cropping, sustainable management of non-timber forest plants	This activity involves the manipulation of forest species composition, structure, and canopy cover to achieve or maintain a desired native plant community to facilitate the sustainable management of native non-timber forest plant(s) (e.g., goldenseal, ramps, mushrooms, ginseng, ferns, "sugarbush", etc.).	**Exempt** when implemented within areas of previous disturbance and does not exceed the existing depth of disturbance or confined to the modern surface.
PLT06	Renovation of a windbreak or shelter belt, or hedgerow for wildlife habitat	This enhancement is for the renovation of existing sites that are declining in vigor, need additional woody plants (trees or shrubs) or otherwise no longer provide wildlife habitat benefits. Existing rows of woody plants may be thinned, removed or replaced with new plantings. Existing woody plants may be pruned, either branches or roots or both, to improve windbreak function, health and vigor.	**Exempt** when implemented within areas of previous disturbance and does not exceed the existing depth of disturbance **Undertaking** when disturbance is significant (e.g. using heavy equipment to clear stumps and/or bury woody debris)
PLT15	Establish pollinator and/or beneficial insect habitat	Seed or plug nectar and pollen producing plants in non-cropped areas such as field borders, vegetative barriers, contour buffer strips, waterways, shelterbelts, hedgerows, windbreaks, conservation cover, and riparian forest and herbaceous buffers.	**Exempt** when implemented within areas of previous disturbance and does not exceed the existing depth of disturbance.
PLT16	Intensive rotational grazing	This enhancement is for the harvest efficiency of grazing livestock to increase forage harvest, and to improve forage quality and livestock health. The grazing system is managed to produce high quality, nutritious forage and maintain plants with sufficient energy reserves to recover quickly when adequate soil moisture is available for regrowth. Generally, livestock are rotated through pastures in the grazing system based on the physiological growth and nutritional stage of the forage plants and the daily dry matter intake and nutritional requirements of the animal. This enhancement is for: rotational grazing systems with increased numbers of pastures or paddocks, the accompanying required infrastructure, shorter grazing periods, and increased stock density. Selection of this enhancement requires the activity to be planned concurrently on all eligible land use acres.	**Exempt**
PLT17	Creating forest openings to improve hardwood stands	Creating forest openings or patches is a silvicultural practice used to naturally regenerate over-mature and/or degraded hardwood stands while providing added cover and browse for several game and non-game species of wildlife.	**Exempt** when limited to hand tools or when no burning or physical ground disturbance is planned.
PLT18	Increasing on-farm food production with edible woody buffer landscapes	This enhancement is for the enhancing of windbreaks, alley cropping, silvopasture, or riparian forest buffer systems with trees and shrubs that produce edible products for human or wildlife consumption.	**Exempt** when limited to hand tools or when no burning or physical ground disturbance is planned.
PLT19	Herbicide resistant weed management	Adoption of multiple agronomic principles to manage herbicide resistant weeds in annually planted crop fields.	**Exempt**

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Practice	Name	Description	Exemption Criteria
PLT20	High residue cover crop or mixtures of high residue cover crops for weed suppression and soil health	Utilize biomass from a cover crop or cover crop mixture as a living or killed mulch to suppress weed seed germination and to add carbon to the terrestrial carbon pool.	**Exempt** when implemented within areas of previous disturbance and does not exceed the existing depth of disturbance.
PLT21	Forest stand improvement pre-treating vegetation and fuels preceding a prescribed fire	This enhancement is to manage the vegetation and fuels in a forested area with mechanical or manual methods in advance of a prescribed fire AND to complete one or more treatments with prescribed fire during the contract period to restore native forest conditions.	**Exempt** when limited to hand tools or when no burning or physical ground disturbance is planned.
SOE05	Intensive no-till (Organic or Non-organic systems)	This enhancement is for using an intensive no-till, strip till, or direct seeding method of planting throughout the planned rotation. High residue levels are maintained by including high residue-producing crops, or by low residue crops followed by a cover crop in the rotation. Termination of all cover crops is accomplished using chemical methods or non-chemical methods, such as flail mowing, roller crimper and frost kill.	**Exempt** when implemented within areas of previous disturbance and does not exceed the existing depth of disturbance.
SQL01	Controlled traffic system	Controlled traffic confines heavy traffic from tractor drive wheels/tracks, combine wheels, fertilizer or manure spreaders and grain carts to specific lanes in crop fields year after year.	**Exempt**
SQL04	Use of Cover Crop Mixes	This enhancement is for the use of cover crop mixes that contain two (2) or more different species of cover crops or cultivars of a single species.	**Exempt** when implemented within areas of previous disturbance and does not exceed the existing depth of disturbance.
SQL05	Use deep rooted crops to breakup soil compaction	This enhancement is for the use of deep rooted crops to break up compacted soils and improve soil quality. Deep rooted crops can be perennial plants like alfalfa or annual plants like forage radish.	**Exempt** when implemented within areas of previous disturbance and does not exceed the existing depth of disturbance.
SQL08	Intercropping to improve soil quality and increase biodiversity	This enhancement involves the use of intercropping principles (i.e., growing two or more crops in close proximity to each other during part or all of their life cycles) to promote interactions that improve soil and water quality via increased biodiversity and contribute to pest management.	**Exempt** when implemented within areas of previous disturbance and does not exceed the existing depth of disturbance.
SQL09	Conversion of cropped land to grass-based agriculture	Conversion of cropped land to grass-based agriculture is the establishment of mixtures of perennial grasses, forbs and/or legume species on cropland where annually-seeded cash crops have been grown in monocultures. Select perennial species based on species compatibility, forage quality potential, improvements to soil quality, beneficial effects for wildlife and/or production of biomass.	**Exempt**

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Practice	Name	Description	Exemption Criteria
SQL10	Crop management system on crop land acres recently converted	Implement a prescriptive crop management system on crop land acres that have been recently converted from CRP grass/legume conservation cover or similar perennial vegetated cover to a rotation of annually planted crops. Note: this enhancement is limited to acres where the conversion event took place not more than 2 years prior (not including hayland).	**Exempt** when implemented within areas of previous disturbance and does not exceed the existing depth of disturbance.
SQL11	Cover cropping in orchards, vineyards and other woody perennial horticultural crops	Grow perennial or annual cover crop mixtures of grass, legumes, native flowering plants and/or other forbs year-round to provide soil coverage, organic mulch, beneficial insect habitat, and other conservation benefits in orchards, vineyards or other perennial horticultural crops. Cover crops, once planted, are replanted annually or maintained year after year.	**Exempt**
SQL12	Intensive cover cropping in annual crops	Grow and manage *seasonal* cover crops of grasses, legumes or forbs to maintain soil coverage and other conservation benefits during all the non-crop production periods in an annual crop rotation. Intensive cover cropping is applicable to conventional, specialty and organic crop production systems.	**Exempt**
WQL01	Biological suppression and other non-chemical techniques to manage brush, herbaceous weeds and invasive species	Grow and manage seasonal cover crops of grasses, legumes or forbs to maintain soil coverage and other conservation benefits during all the non-crop production periods in an annual crop rotation. Intensive cover cropping is applicable to conventional, specialty and organic crop production systems.	**Exempt**
WQL03	Rotation of supplement and feeding areas	The proper location and regular movement of livestock concentration areas such as feeding areas and mineral blocks in a manner that will improve livestock distribution, reduce localized areas of disturbances and reduce impacts on water bodies.	**Exempt**
WQL04	Plant Tissue Testing and Analysis to Improve Nitrogen Management	Use plant tissue tests to adjust nitrogen application rates.	**Exempt**
WQL05	Apply nutrients no more than 30 days prior to planned planting date	This enhancement is for applying nutrients from fertilizer, manures and/or compost no more than 30 days prior to the planned planting date of the crop.	**Exempt**
WQL07	Split nitrogen applications 50% after crop emergence	Apply no more than 50% of total crop nitrogen needs within 30 days prior to planting or in the case of pasture or hay after green up of the dormant grasses. Apply the remaining 50% or more of the total nitrogen needs after crop emergence or pasture green up.	**Exempt**

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WQL09	Apply phosphorus fertilizer below soil surface	This enhancement is for the application of all phosphorus fertilizer at least 3 inches deep, including manure, or as a 2X2 row starter. Note: the use of this enhancement may require a revised Highly Erodible Land Conservation (HELC) plan.	**Exempt** when implemented within areas of previous disturbance and does not exceed the existing depth of disturbance.
WQL10	Plant an annual grass-type cover crop that will scavenge residual nitrogen	Plant a cover crop that will scavenge nitrogen remaining in the soil after the harvest of a previous crop. Suitable cover crops include those with at least a "Very Good" rating for scavenging nitrogen as documented in "*Managing Cover Crops Profitably, 3rd Edition*" (Sarrantonio, 1998), Chart 2 Performance & Roles, pg 67. Examples include cereal rye, barley, forage radish and sorghum sudan.	**Exempt**
WQL11	Precision application technology to apply nutrients	The use of precision agriculture technologies to apply nutrients to fit variations in site-specific conditions found within fields**.**	**Exempt**
WQL13	High level integrated pest management to reduce pesticide environmental risk	Utilize advanced Integrated Pest Management (IPM) prevention, avoidance, monitoring, and suppression techniques, and only apply the lowest risk pesticides available (or if higher risk pesticides are used appropriate mitigation techniques are used to ameliorate the risk) in an environmentally sound manner when monitoring indicates that an economic pest threshold has been exceeded. Pesticide applications must follow all label requirements.	**Exempt**
WQL14	Land application of treated manure	This enhancement is for the use of manure that has been treated to reduce both odors and pathogens prior to land application. Acceptable practices include controlled temperature anaerobic digestion (mesophilic or thermophilic), composting and chemical treatment. Waste treatment lagoons and injection of manure alone do not qualify as acceptable practices.	**Exempt** when implemented within areas of previous disturbance and does not exceed the existing depth of disturbance.
WQL17	Use of non-chemical methods to kill cover crops	This enhancement is for the use of non-chemical methods to kill cover crops prior to planting. These methods include mowing, rolling, undercutting and weather kill.	**Exempt**
WQL18	Non-Chemical Pest Management for Livestock	The use of management, monitoring, and prevention techniques to manage external livestock pests without the use of pesticides.	**Exempt**

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Practice	Name	Description	Exemption Criteria
WQL19	Transition to Organic Grazing Systems	"Transition to Organic Grazing Systems" supports the conversion of a conventional to an organic livestock grazing system. Key to the enhancement activity is following ecological and pasture-based grazing requirements, applying materials according to the National List of Allowed Synthetic and Prohibited Natural Substances, and managing livestock according to National Organic Program (NOP) rules (Subpart C – Organic Production and Handling Requirements) for organic certification. This enhancement activity facilitates compliance with NOP rules for organic certification.	**Exempt**
WQL20	Transition to Organic Cropping Systems	"Transition to Organic Cropping Systems" supports the conversion of a conventional to an organic cropping system. Key to the enhancement is the inclusion of management activities that improve water and soil quality in an "Organic System Plan (OSP)" that adheres to the National Organic Program (NOP) 205.201 criteria. Included in the plan are specifics on how producers will manage pests, weeds, diseases, and plant nutrients by following a crop rotation that incorporates cover crops and by using other cultural, biological and physical methods. The OSP also covers uses of manure and compost, measures to prevent exposure of organic crops and soils to NOP-prohibited substances, and seed sources.	**Exempt**
WQL21	Integrated pest management for organic farming	Managing pests on an organic farm, including farms transitioning to organic, with an Integrated Pest Management (IPM) system that relies on high level prevention, avoidance, monitoring, and suppression techniques that are based on an understanding of pest ecology. Organic IPM relies primarily on ecologically-based cultural and biological practices that result in healthy soil and habitat for beneficial organisms. Appropriate mitigation techniques are utilized to improve environmental risks from selected suppression techniques.	**Exempt**
WQL22	On Farm Composting of Farm Organic Waste	This enhancement consists of composting organic waste generated from the agricultural operation(s) on-farm. This includes animal manures, livestock mortality (where state or local laws allow), and waste from on-farm processing of agricultural products (e.g., slaughter by-products or vegetable culls removed from the field during harvest). It does not include any hazardous household waste, any general hazardous waste products or bio-hazard waste products. Yard waste such as grass clippings and leaves can be included but are not required. Composted products must be used in compliance with all federal, state and local laws, rules and regulations.	**Exempt**

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Practice	Name	Description	Exemption Criteria
WQL24	Apply enhanced efficiency fertilizer products	At least 50% of the pre-emergent and early post emergent nitrogen fertilizer and/or phosphorus fertilizers used for crop production must include enhanced efficiency formulations.	**Exempt**
WQL25	Split applications of nitrogen based on a PSNT	Use pre-sidedress soil nitrate test (PSNT) to determine the need and/or amount of additional nitrogen to be applied during a sidedress/topdress N application.	**Exempt**
WQL27	Drainage water management for nutrient, pathogen, or pesticide reduction	This enhancement consists of managing soil and/or surface water levels during the non-cropping season in order to reduce the loss of nutrients, pathogens, or/and pesticides from a crop field through drainage systems and into downstream receiving waters. This enhancement may also be utilized to reduce the oxidation of organic matter in the soil and/or reduce wind erosion or particulate matter (dust) emissions.	**Exempt** when using existing water control structures.
WQT01	Irrigation system automation	This enhancement entails using GPS guided variable rate irrigation or other innovative technologies that allow irrigation water application based on variable site conditions within a field.	**Exempt**
WQT03	Irrigation pumping plant evaluation	This enhancement consists of the evaluation of the pumping plant performance and efficiency using the Nebraska Irrigation Pumping Plant Performance Criteria.	**Exempt**
WQT05	Remote monitoring and notification of irrigation pumping plant operation	A system for monitoring the status of an irrigation pumping plant and notifying the operator by a wireless connection of a change in the operating status of the irrigation system.	**Exempt**
WQT07	Regional weather networks for irrigation scheduling	Crop evapotranspiration (crop ET) information from a regional weather network is utilized as a part of the irrigation water management plan for irrigation scheduling. Water use is planned and adjustments in application rates and timing are made using the regional weather network data.	**Exempt**
WQT08	Decrease irrigation water quantity or conversion to non-irrigated crop production	This enhancement consists of reducing the total quantity of irrigation water used to produce crops and forages or the conversion of land to non-irrigated production.	**Exempt**