

Conservation Stewardship Program (2011)

Conservation Enhancement / Activity & Bundle List with ND Sideboards



Applicant Name: _____

Date: _____

The Conservation Stewardship Program (CSP) encourages agricultural producers to improve conservation systems by undertaking additional conservation activities and improving, maintaining, and managing existing conservation activities. Conservation activities include enhancements and conservation practices. For more detailed information on each enhancement, check out the enhancement jobsheets located on the following NRCS website:
http://www.nrcs.usda.gov/programs/new_csp/2011_jobsheets.html

Enhancements – Conservation activities selected by producers that are used to treat natural resources and improve conservation performance.

Enhancement Bundles - Are specific enhancements whose installation as a group produce a synergy of conservation performance improvement and addresses resource concerns in a more comprehensive manner. Enhancement bundles are made up of enhancements from this list and include at least five enhancement elements.

**** System and Actual** - For additional information about the differences between System and Actual activities, please refer to the system enhancements/activities vs. Actual enhancements/activities and Applicable acres document that was included in your application packet.

 = new enhancements or bundles added or edited for 2011

Select Activities that interest you	Actual or System with Amount Acres or Number**	NRCS Code	Eligible Land Use				Enhancement Name	Enhancement Criteria	ND Implementation Sideboards	May Be Applicable on Land Adjacent to Eligible Land
			Crop	Pasture	Range	Forest				
	System Acres	AIR01	X				Injecting or incorporating manure	Injecting manure 2 inches or more below soil surface or incorporating applied manure within 24 hours to keep nutrients in place and manage odors.	All methods listed on the enhancement sheet are acceptable. No other alternatives allowed. Need to meet practice standard and specifications for 590.	No
	System Acres	AIR02	X	X			Nitrogen Stabilizers for Air Emissions Control	The use of a nitrogen stabilizer with either urea or ammonium fertilizers to control the rate of ammonia and ammonium conversion. For this enhancement "nitrogen stabilizers" includes nitrification inhibitors and urease inhibitors.	Acceptable product must contain one of the following materials: DCD - dicyandiamide Ammonium thiosulfate Nitrapyrin	No
	System Acres	AIR04	X	X			Use drift reducing nozzles, low pressures, lower boom height, and adjuvants to reduce pesticide drift	Use chemical drift reduction technologies to reduce drift of applied agricultural chemicals from the intended target. Drift reduction reduces damage to non-target desirable plants and animal habitats and reduces pollution of water bodies. Reducing chemical drift may improve air quality by decreasing particulate matter in the air, and in some cases reduce the potential for release of volatile organic compounds (ozone precursors) into the air.	All methods listed on the fact sheet are acceptable. See North Dakota Extension Bulletins for acceptable adjuvants.	No
	System Acres	AIR07	X	X	X	X	GPS, targeted spray application (SmartSprayer), or other chemical application electronic control technology	Utilize electronically-controlled or managed chemical spray application technology to more precisely apply agricultural pesticides to intended targets, which can reduce the total amount of chemical applied, and reduces the potential for chemical drift.		Yes

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	System Acres	ANM02	X				Defer crop production on temporary and seasonal wetlands	Deferring crop production on temporary and/or seasonal wetlands until after spring migratory bird season to promote early successional wetland habitat.	No cultivation/cropping from April 15 to August 1.	No
	Actual Acres	ANM03		X			Incorporate native grasses and/or legumes into 15% or more of the forage base	Incorporate native grasses and/or legumes into 15% or more of the forage base using adapted species and varieties, appropriate seeding rates, and timing of seeding.	Tame pasture only; incorporate only native legumes; needs to meet practice standards and specifications for 528 and 550.	Yes
	Actual Acres	ANM04	X	X			Extend existing filter strips for water quality protection and wildlife habitat	Extend existing filter strips to gain more efficiency in intercepting overland flow and reducing the transport of nutrients, pesticides and agro-chemicals. Wider filter strips provide more effective habitat for terrestrial animals and provide more inputs to benefit instream habitats.	150 ft. max. width; "A" list species; trees and shrubs not applicable. Need to meet practice standard and specifications for 390, 393 and 645. Minimum existing average buffer width must be 33 feet.	Yes
	Actual Acres	ANM05	X	X			Extending riparian forest buffers for water quality protection and wildlife habitat	Extend existing buffers to gain more efficiency in intercepting overland flow and reducing the transport of nutrients, pesticides and agro-chemicals. Wider buffers provide more effective riparian habitat for terrestrial animals and provide more inputs to benefit instream habitats.	150 ft. max. width; "A" list species; native tree or shrubs only - no conifers. Need to meet practice standard and specifications for 391. Wildlife management plan required. Minimum existing average buffer width must be 33 feet.	Yes
	Actual Acres	ANM06	X	X			Extending existing riparian herbaceous cover for water quality protection and wildlife habitat	Extend existing buffers to gain more efficiency in intercepting overland flow and reducing the transport of nutrients, pesticides and agro-chemicals. Wider buffers provide more effective riparian habitat for terrestrial animals and provide more inputs to benefit instream habitats.	150 ft. max. width; "A" list species; trees and shrubs not applicable. No maintenance/ management allowed from April 15 to August 1. Need to meet practice standard and specifications for 390. Wildlife management plan required. Minimum existing average buffer width must be 33 feet.	Yes
	Actual Acres	ANM07	X	X			Extending existing field borders for water quality protection and wildlife habitat	Extend existing field borders to gain more efficiency in intercepting overland flow and reducing the transport of nutrients, pesticides and agro-chemicals. Wider field borders provide more effective habitat for terrestrial animals.	150 ft. max. width; "A" list species; trees and shrubs not applicable. No maintenance/ management allowed from April 15 to August 1. Need to meet practice standard and specifications for 386. Wildlife management plan required. Minimum existing average buffer width must be 33 feet.	Yes
	Actual Acres	ANM08	X	X			Improve the plant diversity and structure of non-cropped areas for wildlife food and habitat	Improve plant diversity and structure of non-cropped areas for wildlife food and habitat through the planting and/or management of native plant species.	"A" list native species only; native tree or shrubs only; Certified TSP required to develop and implement the prescribed burn plan.	Yes

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	System Acres	ANM09		X	X	X	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.	Deferment period is May 15 to July 15; Need to meet 528 standard and specifications; can not defer same area in consecutive years.	No
	System Acres	ANM10	X				Harvest hay in a manner that allows wildlife to flush and escape	Harvest hay using conservation measures that allow wildlife to flush and escape. Includes timed haying to avoid periods when upland wildlife are nesting or fawning, idling paddocks or pastures and idling hay land during the nesting or fawning period, leaving a residual forage height conducive to wildlife nesting and fawning for the following year, and applying haying techniques that reduce mortality to wildlife.	For Option A: No haying allowed from April 15 to August 1; 8" stubble height.	No
	Actual Acres	ANM12	X	X	X	X	Shallow water habitat	Construct, manage or renovate small, shallow wetland sites to encourage water to remain seasonally, often from late winter through early summer (e.g., vernal pools).	Cannot construct in an existing wetland. Refer to practice standards 646, 638 or 356.	No
	Actual Linear Feet	ANM13	X	X	X		Non-forested riparian zone enhancement for fish and wildlife	Utilizing select conservation measures such as relocating 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 streams, ponds, lakes, or wetlands.	150 ft. max. width; "A" list native species only; trees and shrubs not applicable	Yes
	Actual Linear Feet	ANM14	X	X	X	X	Riparian forest buffer, terrestrial and aquatic wildlife habitat	Managing forested riparian zones to achieve streamside cover and vegetative diversity and structure to improve terrestrial and aquatic wildlife habitat.	150 ft. max. width; "A" list native species only; native woody species only - no conifers. Certified TSP required to develop and implement the prescribed burn plan.	Yes
	System Acres	ANM15				X	Forest stand improvement for habitat and soil quality	Creating snags, den trees, and coarse woody debris on the forest floor to a level optimum for native wildlife usage and long-term forest soil health. May be implemented separately or during thinning or harvesting.	Applicable to all forest stands in North Dakota, excluding windbreaks and shelterbelts. Forest management plan required. Need to meet practice standard and specifications for 666. Wildlife management plan required.	No
	System Acres	ANM17		X	X		Monitoring nutritional status of livestock using the NUTBAL PRO System	Use of the NUTBAL PRO software to determine if current diet meets livestock nutritional needs. Requires collection and laboratory analysis of forage or fecal samples to determine the nutritional value of grazing forages.	Minimum of 6 samples per year with NutBal Pro reports for each sample; Applies to livestock grazing pastureland and rangeland only; 528 not required; Refer to GanLab web site for more information and processing samples: http://cnrit.tamu.edu/ganlab/	No

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	Actual Number	ANM18		X	X	X	Retrofit watering facility for wildlife escape	Retrofit existing watering facilities (troughs, tanks, etc.) to allow for escape of wildlife that become trapped while trying to drink.	Refer to "Water for Wildlife: A Handbook for Ranchers and Range Managers," Bat Conservation International, provided to all offices. Available on line at: http://www.batcon.org/news2/pdf/bciwaterforwildlife.pdf	No
	Actual Acres	ANM19	X	X	X	X	Wildlife corridors	Participants will establish corridors with vegetation suited to the natural site conditions and appropriate for the kinds of wildlife present.	Corridors will be designed with similar species as habitat being connected (herbaceous corridor connecting herbaceous habitat; woody corridor connecting woody habitat). For antelope: Three wire fence - two wire barb, bottom wire is smooth and 16" from ground; all woven wire fences will be considered wildlife unfriendly.	Yes
	Actual Acres	ANM21	X	X			Prairie Restoration for Grazing and Wildlife Habitat	ac of cropland, pasture or range that historically were prairie	Not applicable to Rangeland in ND. Need to meet practices 528 and 643 standard and specifications - Includes tall grass prairie, mixed grass prairie, plus species requirements based on ESD's. Minimum of 10 native grasses and 6 native forbs. No grazing allowed from April1 to August1.	No
	Actual Acres	ANM22	X	X	X	X	Restoration and Management of Rare or Declining Habitats	ac of cropland, pasture, range or forest that have rare habitats	Need to meet practice 643 standard and specifications - Includes tall grass prairie, mixed grass prairie, and riparian forests state-wide, sage brush steppe, and aspen parkland. Certified TSP required to develop and implement the prescribed burn plan.	No
	Actual Acres	ANM23	X	X	X	X	Multi-species Native Perennials for Biomass/Wildlife Habitat	This enhancement consists of establishing native perennial vegetation for biomass production and wildlife habitat.	Biomass seeding is not applicable to rangeland. Species of concern include: American bittern, northern pintail, Swainson' s hawk, Ferruginous hawk, northern harrier, short-eared owl, upland sandpiper, Wilson's phalarope, sharp-tailed grouse, greater prairie chicken, Sprague's pipit, sedge wren grasshopper sparrow, Baird's sparrow, Nelson's sharp-tailed sparrow, LeConte's sparrow, lark bunting, bobolink, dickcissel, plains spadefoot toad, northern prairie skink, smooth green snake, western hognose snake, and plains pocket mouse. Must meet 550 or 643 or 612 if non biomass.	No

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	System Acres	ANM24				X	Forest Wildlife Structures	Artificial structures developed to enhance wildlife habitat for species or group of species native to the forest type.	Limited to artificial nest boxes or platforms for birds, bats and pollinators. See enhancement fact sheet for additional requirements.	No
	System Acres	ANM26		X	X		Managing calving to coincide with forage availability.	Controlled breeding season to match livestock nutrient requirements to available forage.	Initiate calving on April 1st or later.	No
	Actual Feet	ANM27	X	X	X	X	Wildlife Friendly Fencing	Making livestock fencing friendly to wildlife, e.g. using tags to mark barbwire fence making them more visible to wildlife reducing injury and mortality to sage grouse, prairie-chicken and other susceptible birds.	Need to meet 382 practice standards and specifications, for wildlife-friendly fences. Any areas where Sage Grouse or antelope are present.	Yes
	System Acres	ANM29		X	X	X	On-farm forage based grazing system	Promote the use of a on-farm forage based grazing system in which all forage is grown on the farm and harvested by livestock through grazing on pastures or feeding of hay harvested on the farm.	All feed or forage must be produced on farm or ranch where the livestock are located and fed or grazed. Need to meet practice 528 standard and specifications. Standards and specifications will be met for any additional conservation practices required to implement this activity (for example, 382, 516, 614) .	No
	System Acres	ANM30		X			Ultra high density grazing system to improve soil quality	Managing pastures using a high density stocking rate to improve forage and soil quality. This requires a fast rotation (less than one day) with a majority of available forage harvested, the remainder would be left or incorporated by livestock tromping.	Minimum stock density of 50,000 lbs of animal per acre with grazing periods not exceeding one day in length. This management must be implemented for at least 75% of the grazing season (primary grazing season for tame pasture in ND is identified a April 15 to June 15). Needs to meet 528 practice standard and specifications.	No
	System Acres	ENR01	X				Fuel use reduction for field operations	Fuel savings of 20% or greater achieved by a reduction in field operations.		No
	Actual Number	ENR03	X	X	X		Pumping plant powered by renewable energy	Requires the use of renewable energy—solar or wind – to power pumping plants for irrigation, drainage, livestock, or wildlife.		Yes
	System Acres	ENR05	X	X	X	X	Locally grown and marketed farm products	At least 85% of the nutrients and /or feed needed for crops and/or livestock come from sources within 100 miles of the farm. Products from the farm are retail marketed within 400 miles of the farm.		No
	Actual Number	ENR06	X	X	X	X	Upgrade of Old Diesel Powered Pumping Plants	Upgrading of diesel powered pumping plants with more efficient and cleaner alternatives that closely fit irrigation or livestock water needs.	Need to meet National Standard 372.	Yes

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	Actual Number	ENR07	X	X	X	X	On-farm energy audit	Conducting energy audits to evaluate energy use in agricultural production systems and implementing recommendations with a 2 year or less payback. Implementation is required only for findings associated with CSP land uses.	Due to limited availability of in-state energy auditors, applicants should confirm with their Field Office that they have tentatively obtained the services of an auditor and have obtained a cost estimate before contracting this item.	Yes
	System Acres	ENR08	X	X			Using nitrogen provided by legumes, animal manure and compost to supply 100% of the nitrogen needs	Reduce energy usage by providing 100% of crop nitrogen needs through the use of legumes, on farm manure or compost and/or management of rotations.	Need to meet 590 standards and specifications.	No
	Actual Number	ENR09	X	X	X	X	Variable Frequency Drive Electric Motors	Reducing energy use by incorporating variable speed drives on electric motors for fans, pumps and other motors involved with agricultural production		Yes
	Actual Acres	PLT01	X	X	X	X	Establish pollinator habitat	Establish nectar and pollen producing plants in non-cropped areas such as field borders, vegetative barriers, contour buffer strips, waterways shelterbelts, windbreaks, conservation cover, and riparian forest and herbaceous buffers.	See ND pollinator fact sheet, eFOTG, Reference Subjects, Biology; Rangeland can not be planted to pollinator habitat. Certified TSP required to develop and implement the prescribed burn plan.	Yes
	System Acres	PLT02		X	X	X	Monitor key grazing areas to improve grazing management	Monitor key grazing areas on pastureland and rangeland to determine if current grazing management meets management goals and objectives. A key grazing area is a small area of a pasture that is identified as being representative of the entire pasture.	Photo points plus apparent trend or or pasture condition score or plant productivity or key forage plant heights; 528 not required.	No
	System Acres	PLT03				X	Forest stand improvement pre-treating vegetation and fuels	Manage vegetation and fuels in a forested area with mechanical/manual methods to facilitate future treatment with prescribed fire to restore native forest condition.	Ponderosa pine in southwest ND; requires NIPF contract; state forester or ND Forest Service assistance required. State forester will determine needs and volatile plants. Certified TSP required to develop and implement the prescribed burn plan.	No

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	Actual Acres	PLT06	X	X			Renovate a windbreak or shelter belt for wildlife habitat	Renovate a windbreak or shelter belt to add diversity for wildlife habitat. Replace plants threatened by invasive pests such as the emerald ash borer.	<p>1. Windbreak must be three rows or greater</p> <p>a. Siberian elm/Russian olive rows (single row or multiple rows) may be removed and replaced with native trees or shrubs to minimum of three rows.</p> <p>2. Windbreaks less than three rows may be expanded to 3 rows or greater</p> <p>3. Windward row must contain shrubs, juniper or spruce species</p> <p>4. Leeward row must contain native shrub suckering species</p> <p>5. Fabric can not be used on suckering shrubs</p> <p>6. Existing windbreaks adjacent (within 150 ft) to wetlands are not eligible to be renovated except to remove trees with a height expectancy of greater than 20ft.</p> <p>7. Existing windbreaks adjacent to native grassland are not eligible unless one of the follow enhancements is completed:</p> <p>a. all tall trees greater than 20 ft height expectancy are removed from the existing planting or</p> <p>b. a grassland buffer (min 150 ft.) is installed between the native grassland and the first row of the shelterbelt (may require relocation of trees/shrubs to accomplish, native grass can not be destroyed to create buffer)</p> <p>8. Emphasis on native species to benefit pollinators</p> <p>9. All other 645 requirements must be met</p> <p>Wildlife species benefited: White-tailed deer, Pheasant, Mourning dove, Turkey, Grassland nesting song birds (#7 above). No woodland song birds, not a large enough block to make difference for species needing forest habitat</p>	Yes
	Actual Acres	PLT07				X	Hardwood Crop Tree Release	Crop Tree Release (CTR) technique used to enhance health and productivity of trees.	Applies to willow, cottonwood, green ash, bur oak, box elder, basswood and hackberry.	No
	Actual Acres	PLT08	X				Habitat Development for Beneficial Insects for Pest Management	0.5 ac per 40 ac of cropland	See PLT08 - ND Guidance, for list of beneficial insects and recommended plants.	Yes

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	System Acres	PLT10		X	X		Intensive Management of Rotational Grazing	States will need to establish criteria for length, intensity and frequency of grazing	Requires a minimum of 8 pastures in the rotation with individual grazing periods of 10 days or less. Rotation must meet 528 practice standard and specifications. Applicable during the growing season.	No
	System Acres	PLT12				X	Patch Harvesting	Patch Harvesting 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.	Forest management plan required.	No
	System Acres	PLT13				X	Forest Stand Improvement for Wildfire Reduction	Requiring landowners to approach wildfire management by establishing fire lines (where appropriate and applicable), fuel breaks (where appropriate and applicable), develop an approved fire plan which would include plan to maintain critical access roads, scouting, access control, identification of water sources, critical contacts, training and posting of plans and phone numbers.	TSP or ND Forest Service must develop the wildfire risk reduction management plan to be implemented. Need to meet 394 and 383 practice standards and specifications.	No
	System Acres	SOE01	X				Continuous no till with high residue	Utilize continuous no-till/strip till/direct seed in the rotation in combination with high and low residue producing crops or cover crops to maintain a high level of residue cover through critical erosion periods.	Need to meet 329 standards and specifications.	No
	Actual Acres	SOE02	X	X	X	X	Protect cultural resources sites with conservation cover	Protect cultural resources by establishing conservation cover on culturally significant sites.	"A" list species; no trees or shrubs.	Yes
	System Acres	SOE03	X				Continuous No Till Organic System		For certified organic producers or those in the process of transitioning to organic crop production and converting to a no-till planting system. Need to meet 329 standards and specifications. Refer to www.ams.usda.gov/hop/national website and the ND Department of Ag. Website: http://www.agdepartment.com/Programs/Plant/OrganicFarming.html for information.	No
	System Acres	SQL02	X				Continuous cover crops	Growing continuous seasonal cover crops of grasses, legumes or forbs following all annual crops during all the non-crop production periods of the rotation. Continuous cover cropping is applicable to conventional, specialty and organic crop production systems.	See ND list of cover crops	No
	System Acres	SQL04	X				Use of Cover Crop Mixes	Use of cover crop mixes that contain two (2) or more different species of cover crops.	See ND list of cover crops.	No

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	System Acres	SQL05	X				Use deep rooted crops to breakup soil compaction	Use deep rooted crops to break up pans in the soil to improve internal drainage.	See ND list of deep rooted cover crop mixes.	No
	Actual Acres	SQL06	X				Conversion of cropped land to grass-based agriculture	acres of cropland	Grassland will be mechanically harvested only. Need to meet 512 standards and specifications, refer to 512, Pasture and Hayland Planting, for acceptable species mixtures. For Option A: No haying allowed from April 15 to August 1; 8" stubble height.	No
	System Acres	SQL07				X	Forest Stand Improvement for Soil Quality	Management of forest activities (planting, thinning, harvesting) to minimize impact of forest soils to improve soil quality.	Applicable to all forest stands in North Dakota, excluding windbreaks and shelterbelts. Forest management plan required.	No
	System Acres	WQL01		X	X		Biological suppression and other non-chemical techniques to manage brush, herbaceous weeds or invasive species	Removal, reduction or manipulation of non-herbaceous plants with biological suppression methods.	Goats, sheep and/or beneficial insects only; no mechanical treatment; does not apply to native shrubs; does not need to meet 528.	No
	System Acres	WQL03		X	X	X	Rotation of supplement and feeding areas	Rotation of Supplementation and Feeding Areas to manage areas of concentrated livestock use to improve livestock distribution and reduce localized areas of disturbances.		No
	System Acres	WQL04	X				Stalk or leaf tissue tests for N application	Use corn stalk and/or leaf tissue tests to adjust nitrogen application rates.	Corn only. Refer to ND guidelines for implementation requirements.	No
	System Acres	WQL05	X				Apply nutrients no more than 30 days prior to planned planting date	Apply nutrients (fertilizer, manure, etc.) no more than 30 days prior to the planned planting date of the crop.		No
	System Acres	WQL07	X	X			Split nitrogen applications 50% after crop emergence	Apply 50% or more of the total nitrogen needs after crop emergence.		No
	System Acres	WQL08	X				Apply split applications of nitrogen based on a pre-sidedress nitrogen test on cropland	Use of a Pre-Sidedress Nitrogen Test (PSNT) to determine the need and/or rate of additional nitrogen to be applied during a sidedress application.	PSNT is not available in North Dakota. Use plant tissue testing or properly calibrated chlorophyll meters to determine need for split application of nitrogen in the growing season. For corn only. Producer must currently apply all nitrogen fertilizer pre-plant in their cropping system. Contact NDSU Extension for further information regarding these two tests.	No

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	System Acres	WQL09	X				Apply phosphorus fertilizer below soil surface	Apply all Phosphorus fertilizer at least 3 inches deep and/or as a 2X2 row starter.		No
	System Acres	WQL10	X				Plant an annual cover crop that will scavenge residual nitrogen	Plant an annual, cover crop that will scavenge nitrogen left in the soil after the harvest of a previous crop.	Need to meet 340 practice standard and specifications. See the 340 species list for suitable species.	No
	System Acres	WQL11	X	X			Precision application technology to apply nutrients	Use of precision agriculture technologies to apply nutrients to fit the variation in site-specific conditions found within fields.		No
	System Acres	WQL12		X	X	X	Managing livestock access to water bodies/courses	Install structures or implement grazing management actions that assist in managing livestock access to water bodies and water courses.	Need to meet 528 practice standard and specifications and any needed facilitating practices.	Yes
	System Acres	WQL13	X	X	X	X	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 in an environmentally sound manner when monitoring indicates that an economic pest threshold has been exceeded. Pesticide applications must follow all label requirements.	Cropland only; must follow NDSU plan for specific crop.	No
	System Acres	WQL14	X	X			Land apply only treated manure	Field apply only manure that has been treated to stabilize nutrients and reduce odors and pathogens. Acceptable treatment alternatives are composting, anaerobic digesters or storage in a composting barn.	Composted manure only.	No
	System Acres	WQL15	X	X			Reduce the concentration of nutrients on farm by limiting the amount of feed and fertilizer brought on livestock farms	Grow at least 75% of feed for livestock on the farm and use manure from the livestock to supply at least 50% of N, 90% of P and 90% K for crops grown on the farm.		No
	System Acres	WQL16	X				Use of legume cover crops as a nitrogen source	Produce at least 70% of the operation's nitrogen needs through the use of cover crops or the utilization of manure.	See the 340 list for suitable legume species.	No
	System Acres	WQL17	X				Use of non-chemical methods to kill cover crops	Where cover crops are grown, eliminate herbicide use by using a roller crimper to kill the cover crop or use a cool season crop that will die back naturally as summer crops grow.	All termination methods listed on the enhancement sheet are acceptable. Grazing is not an acceptable method for terminating cover crop for this enhancement.	No

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	System Acres	WQL18		X	X	X	Non-Chemical Pest Control for Livestock	Management techniques, devices and biological agents used to control pests.	All methods listed on the enhancement sheet are acceptable.	No
	System Acres	WQL19		X	X	X	Transition to Organic Grazing Systems	Must meet NOP requirements.	For producers planning to or in the process of transitioning to organic grazing systems. Refer to www.ams.usda.gov/nop/ national website and the ND Department of Ag. Website: http://www.agdepartment.com/Programs/Plant/OrganicFarming.html for information. Grazing system must meet 528 standard and specifications.	No
	System Acres	WQL20	X				Transition to Organic Cropping Systems	Must meet NOP requirements	For producers planning to or in the process of transitioning to organic crop production. Refer to www.ams.usda.gov/nop/ national website and the ND Department of Ag. Website: http://www.agdepartment.com/Programs/Plant/OrganicFarming.html for information.	No
	System Acres	WQL21	X	X	X		Integrated Pest Management for Organic Farming.	Must meet NOP requirements	For certified organic producers or producers in the process of transitioning to organic crop production and implementing an IPM plan. Refer to www.ams.usda.gov/nop/ national website and the ND Department of Ag. Website: http://www.agdepartment.com/Programs/Plant/OrganicFarming.html for information.	No
	System Acres	WQL22	X	X			Composting of On Farm Organic Waste	On the farm composting of organic waste produced from agricultural operations.	Must meet practice standards and specifications for Composting Facility (317) and Animal Mortality Facility (316).	No
	System Acres	WQL23		X	X		Livestock Protection away from Sensitive Areas on Winter Grazing land	Protection of riparian and other identified sensitive areas.	Sensitive areas in North Dakota: riparian areas, sage grouse and Sprague's pipit habitat, forested areas, designated critical piping plover habitat and fringed prairie orchid sites. Temporary livestock protection structures must be installed on cropland, pastureland or hayland.	No
	System Acres	WQT01	X	X			Irrigation system automation	Using GPS guided variable rate irrigation or other innovative technologies that allow irrigation water application based on variable site conditions within a field.	Need to meet 449 practice standard and specifications.	No
	System Acres	WQT02	X				Mulching for moisture conservation	Using plastic or fiber mulch to reduce irrigation evaporation losses from bare soil surfaces.	Irrigated land only. Need to meet practice 484 standard and specifications.	No
	Actual Number	WQT03	X	X			Irrigation pumping plant evaluation	Evaluate existing pumping plant and identify and implement maintenance items needed to improve efficiency.	Requires TSP	Yes

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			Crop	Pasture	Range	Forest				
	System Acres	WQT04	X	X			Regional weather networks for irrigation scheduling	Use data from a regional weather network to improve irrigation scheduling.	Producers or TSPs must use NDAWN weather information in the Irrigation Water Management Plan. Use of the NDAWN Irrigation Scheduler program is optional but encouraged.	No
	Actual Number	WQT05	X	X			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.		No
	Actual Acres	WQT06	X	X			Conversion to Non-Irrigated Crop Production	The conversion of land that has been irrigated 2 out of the last 5 years to crops or pasture production that does not require irrigation.		No
	Actual Acres	FRD01	X	X	X	X	On Farm Research and Demonstrations	On farm research and demonstration consists of the implementation of applied research projects on working farms to gather information and demonstrate the efficacy of the activity. The projects must fit within identified state priority topic areas.	Projects must be conducted by USDA or university.	Yes
	Actual Acres	FPP02	X	X	X	X	On Farm Pilot Projects	On-farm pilots consist of the installation, monitoring and publicizing of projects that fit within the identified state priority areas. Pilots should be practices, components, or management techniques that have shown environmental benefits through research but are not used by farmers in the project area. Practices, components, or management techniques must be implemented, monitored and publicized according protocols developed specifically for the project.		No
	System Acres	CCR99	X				Resource-Conserving Crop Rotation	The rotation shall cover at least 3 years of the CSP contract. The rotation is considered adopted when the resource conserving crop is planted on at least 1/3 of the rotation acres. The resource conserving crop must be adopted by the third year of the contract and planted on all rotation acres by the fifth year of the contract.	See ND list of cover crops. Cover crops cannot be grazed or harvested.	No

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			Crop	Pasture	Range	Forest				
	System Acres	BCR01	X				<p>Cropland Enhancement Bundle #1</p> <p>This bundle of enhancement activities includes: AIR04-Use drift reducing nozzles, low pressures, lower boom height, and adjuvants to reduce pesticide drift AIR07-GPS, targeted spray application (SmartSprayer), or other chemical application electronic control technology WQL11-Precision application technology to apply nutrients WQL13-High level Integrated Pest Management to reduce pesticide environmental risk plus one of the buffer widening enhancements; ANM04-Extend existing filter strips, ANM05-Extending riparian forest buffers, ANM06-Extending existing riparian herbaceous cover OR ANM07-Extending existing field borders</p>	All enhancement sideboards noted above apply to the bundled enhancements.		
	System Acres	BCR02	X				<p>Cropland Enhancement Bundle #2</p> <p>This bundle of enhancement activities includes: ENR05-Locally Grown and Marketed Farm Products WQL16-Legumes as an N Source SQL02-Continuous Cover Crops WQL13-High level Integrated Pest Management to reduce pesticide environmental risk OR WQL21-IPM for Organic Farming PLT01-Pollinator Habitat or PLT08-Beneficial Insect Habitat</p>	All enhancement sideboards noted above apply to the bundled enhancements.		
	System Acres	BCR03	X				<p>Cropland Enhancement Bundle #3</p> <p>This bundle of enhancement activities includes: SOE01-Continuous No-till WQL07-Split N Application WQL10-Cover Crop to Scavenge N WQL13-High level Integrated Pest Management to reduce pesticide environmental risk plus one of the buffer widening enhancements; ANM04-Extend existing filter strips, ANM05-Extending riparian forest buffers, ANM06-Extending existing riparian herbaceous cover or ANM07-Extending existing field borders. If an applicant does not currently have buffers, they can install buffers to meet the requirements of the buffer widening enhancements in order to qualify for this bundle.</p>	All enhancement sideboards noted above apply to the bundled enhancements.		

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			Crop	Pasture	Range	Forest				
	System Acres	BCR05	X				<p>Cropland Enhancement Bundle #5</p> <p>This bundle of enhancement include activities to improve wildlife habitat on cropland and adjacent areas, includes: ANM08-Improve the plant diversity and structure of non-cropped areas for wildlife food and habitat ANM12-Shallow water habitat SQL04-Use of Cover Crop Mixes WQL13-High level Integrated Pest Management to reduce pesticide environmental risk OR WQL21-Integrated Pest Management for Organic Farming plus one of the buffer widening enhancements; ANM04-Extend existing filter strips, ANM05-Extending riparian forest buffers, ANM06-Extending existing riparian herbaceous cover OR ANM07-Extending existing field borders</p>	All enhancement sideboards noted above apply to the bundled enhancements.		
	System Acres	BFO02				X	<p>Forestland (Hard wood) Enhancement Bundle #2</p> <p>This bundle of enhancement activities includes: ANM15-Forest Stand Improvement for Wildlife PLT07-Hardwood Crop Tree Release ANM14-Riparian Forest Buffer Mgmt ANM24-Forest Wildlife Structures ANM22-Restoration of Rare and Declining Habitat</p>	All enhancement sideboards noted above apply to the bundled enhancements.		
	System Acres	BPA01		X			<p>Pastureland Enhancement Bundle #1</p> <p>This bundle of enhancement activities includes: ANM03-15% Native Grasses or Legumes in Forage Base WQL03-Rotation of Supplement and Feeding Areas WQL12-Manage Livestock Access to Water Bodies ANM09-Grazing management to improve wildlife habitat PLT02-Monitor key grazing areas to improve grazing management</p>	All enhancement sideboards noted above apply to the bundled enhancements.		

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			Crop	Pasture	Range	Forest				
	System Acres	BPA02		X			Pastureland Enhancement Bundle #2	This bundle of enhancements includes activities that will improve wildlife habitat by reducing the impact of pasture management activities using IPM and non-chemical controls to control pest and diseases while improving vegetation beneficial to both livestock and wildlife, includes: ANM03-Incorporate native grasses and/or legumes into 15% or more of the forage base ANM06-Extending existing riparian herbaceous cover ANM09-Grazing management to improve wildlife habitat WQL01-Biological suppression and other non-chemical techniques to manage brush WQL18-Non-Chemical Pest Control for Livestock	All enhancement sideboards noted above apply to the bundled enhancements.	
	System Acres	BPA03		X			Pastureland Enhancement Bundle #3	This bundle of enhancements includes activities that reduce energy use on pasture acres, includes: AIR07-Targeted Spraying ANM03-Incorporate native grasses and/or legumes into 15% or more of the forage base ENR03-Pumping plant powered by renewable energy ENR05-Locally Grown and Marketed Farm Products WQL13-High level Integrated Pest Management to reduce pesticide environmental risk	All enhancement sideboards noted above apply to the bundled enhancements.	
	System Acres	BPA05		X			Pastureland Enhancement Bundle #5	This bundle of enhancements includes activities that address all aspects of pasture management pest, nutrient and improve forage quality while improving wildlife access to water, includes: AIR04-Use drift reducing nozzles, low pressures, lower boom height, and adjuvants to reduce pesticide drift ANM03-Incorporate native grasses and/or legumes into 15% or more of the forage base ANM18-Retrofit watering facility for wildlife escape PLT02-Monitor key grazing areas to improve grazing management WQL07-Split nitrogen applications 50% after crop emergence	All enhancement sideboards noted above apply to the bundled enhancements.	

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			Crop	Pasture	Range	Forest				
	System Acres	BRA01			X		Rangeland Enhancement Bundle #1	This bundle of enhancement activities includes: PLT02-Monitor key grazing areas to improve grazing management WQL12-Manage Livestock Access to Water Bodies ANM09-Grazing management to improve wildlife habitat ANM18-Retrofit Watering Facilities for Wildlife Escape OR ANM11-Patch burning to enhance wildlife habitat WQL03-Rotation of Supplement and Feeding Areas.	All enhancement sideboards noted above apply to the bundled enhancements. ANM11 is not available in ND.	
	System Acres	BRA02			X		Rangeland Enhancement Bundle #2	This bundle of enhancements include activities that increase wildlife habitat and water quality, includes: ANM19-Wildlife corridors PLT02-Monitor key grazing areas to improve grazing management WQL12-Manage Livestock Access to Water Bodies ANM05-Extending riparian forest buffers OR ANM06-Extending existing riparian herbaceous cover ANM13-Retrofit watering facility for wildlife escape OR ANM14-Riparian Forest Buffer Mgmt	All enhancement sideboards noted above apply to the bundled enhancements.	
	System Acres	BRA04			X		Rangeland Enhancement Bundle #4	This bundle of enhancements includes activities that focus on improving habitat by reducing wildlife mortality range plant communities, while saving energy, includes: ANM18-Retrofit watering facility for wildlife escape ANM27-Wildlife Friendly Fencing ENR03-Pumping plant powered by renewable energy PLT02-Monitor key grazing areas to improve grazing management WQL01-Biological suppression and other non-chemical techniques to manage brush	All enhancement sideboards noted above apply to the bundled enhancements.	

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			Crop	Pasture	Range	Forest				
	System Acres	BRA05			X		Rangeland Enhancement Bundle #5	<p>This bundle of enhancements includes activities that address multiple resource concerns on rangeland, e.g. forage quality, control of undesirable plants and improved wildlife habitat, includes:</p> <ul style="list-style-type: none"> ANM09-Grazing management to improve wildlife habitat ANM26-Managing calving to coincide with forage availability WQL01-Biological suppression and other non-chemical techniques to manage brush WQL03-Rotation of Supplement and Feeding Areas WQL13-High level Integrated Pest Management to reduce pesticide environmental risk 	All enhancement sideboards noted above apply to the bundled enhancements.	