Energy Enhancement Activity – ENR01 – Fuel use reduction for field operations

State Criteria (same as NATIONAL CRITERIA)

Documentation Requirements (SEE NATIONAL ENHANCEMENT ACTIVITY JOBSHEET)

Implementation of this enhancement **requires** the use of RUSLE2 to compare the planned tillage operations with present baseline tillage operations.

1. Complete the attached "Field Operations Inventory Worksheet" documenting all tillage operations used in the production of each crop from harvest of the previous crop to harvest of the current crop. This will establish the baseline fuel use for that rotation.
2. Complete a second "Field Operations Tillage Inventory Worksheet" documenting the planned tillage operations for each crop in the rotation.
3. NRCS will use RUSLE2 to calculate fuel use for each system and complete the following table.

TABLE OF PLANNED AND APPLIED ACTIVITY – ENR01

1	2	3	4	5	6
Tract	Field(s)	Acres	Present Baseline Fuel Consumption calculated using RUSLE2 at the time of sign-up	Planned Fuel Consumption calculated using RUSLE2	Calculated Fuel Savings Percent (%)
Ex. T100	2b	7.3	21 gal	16 gal	24%

Ex. = example. NRCS completes column 1, 2 & 3 (Tract, Field and Acres Planned). NRCS completes remaining columns following the producer returning "Tillage Inventory Sheet for Existing System" and "Tillage Inventory Sheet for Planned System" to the NRCS Field Office.

In addition:

1. Provide a map showing the location of the fields where the practices were applied.
2. Provide copies of NE-CPA-30 "RUSLE2 Profile Erosion Calculation Record" for the existing system and the planned system showing the calculated fuel use for each system.

I certify that the enhancement criteria have been met and the required documentation provided to NRCS.

Certified by: _____ **Date:**_____

Conservation Stewardship Program (CSP) – 2014
Field Operations Inventory Worksheet for Existing System

For each crop in the rotation show the crop being grown, the previous crop, and the number of passes for each operation normally used from harvest of the previous crop through harvest of the crop being grown (annual harvesting operations are assumed for crops other than alfalfa). For alfalfa use one column to show the operations for seeding alfalfa, one column to show the number of years alfalfa is grown and the number of harvest operations, and one column to show the operations used to break out the alfalfa and plant an annual crop. Use additional sheets if needed.

Crop being grown (list actual crop rotation):						
Previous crop (residue type):						
Field Operation	**Number of Passes**	**Number of Passes**	**Number of Passes**	**Number of Passes**	**Number of Passes**	**Number of Passes**
Bale crop or crop residue						
Graze stubble or residue						
Shredder, flail or rotary						
Rolling Stalk Chopper						
Rolling Stalk Chopper on ridges						
Stalk slicer						
Plow, moldboard						
Subsoiler						
Sweep plow 20-40 inches wide						
Sweep plow >40 inches wide w/ mulch treader						
Chisel, straight point or twisted shovel						
Chisel, low crown sweep, 3 to 4 inches deep						
Disk, primary operation (1st pass only)						
Disk, secondary operation						
Field Cultivator						
Rotary Harrow (Seedbed Conditioner)						
Seedbed finisher (disk, field cultivator, coil tine harrow)						
Fertilizer application – Anhydrous, 12 inch spacing						
Fertilizer application – Anhydrous, 30 inch spacing						
Fertilizer application, strip till						
Manure injector, 30 inch spacing						
Drill or airseeder, single disk openers						
Drill or airseeder, double disk openers						
Drill or airseeder, double disk openers w/ coulters						
Drill or air seeder, hoe/chisel openers						
Planter, double disk openers						
Planter, ridge till, strip till, or double disk openers with residue managers						
Row Cultivation						
Row Cultivation, ridging, ditching, or hilling						
Spraying operations						
Other operations – please describe (use additional sheet if necessary)						

Complete two sheets for each crop rotation, one showing current tillage operations and one showing the planned tillage operations. Information will be used to calculate fuel savings for ENR01 Fuel Use Reduction.

Conservation Stewardship Program (CSP) – 2014
Field Operations Inventory Worksheet for Planned System

For each crop in the rotation show the crop being grown, the previous crop, and the number of passes for each operation normally used from harvest of the previous crop through harvest of the crop being grown (annual harvesting operations are assumed for crops other than alfalfa). For alfalfa use one column to show the operations for seeding alfalfa, one column to show the number of years alfalfa is grown and the number of harvest operations, and one column to show the operations used to break out the alfalfa and plant an annual crop. Use additional sheets if needed.

Crop being grown (list actual crop rotation):						
Previous crop (residue type):						
Field Operation	**Number of Passes**	**Number of Passes**	**Number of Passes**	**Number of Passes**	**Number of Passes**	**Number of Passes**
Bale crop or crop residue						
Graze stubble or residue						
Shredder, flail or rotary						
Rolling Stalk Chopper						
Rolling Stalk Chopper on ridges						
Stalk slicer						
Plow, moldboard						
Subsoiler						
Sweep plow 20-40 inches wide						
Sweep plow >40 inches wide w/ mulch treader						
Chisel, straight point or twisted shovel						
Chisel, low crown sweep, 3 to 4 inches deep						
Disk, primary operation (1st pass only)						
Disk, secondary operation						
Field Cultivator						
Rotary Harrow (Seedbed Conditioner)						
Seedbed finisher (disk, field cultivator, coil tine harrow)						
Fertilizer application – Anhydrous, 12 inch spacing						
Fertilizer application – Anhydrous, 30 inch spacing						
Fertilizer application, strip till						
Manure injector, 30 inch spacing						
Drill or airseeder, single disk openers						
Drill or airseeder, double disk openers						
Drill or airseeder, double disk openers w/ coulters						
Drill or air seeder, hoe/chisel openers						
Planter, double disk openers						
Planter, ridge till, strip till, or double disk openers with residue managers						
Row Cultivation						
Row Cultivation, ridging, ditching, or hilling						
Spraying operations						
Other operations – please describe (use additional sheet if necessary)						

Complete two sheets for each crop rotation, one showing current tillage operations and one showing the planned tillage operations. Information will be used to calculate fuel savings for ENR01 Fuel Use Reduction.