United States Department of Agriculture
Natural Resources Conservation Service

2012 Ranking Period 1

Soil Quality Enhancement Activity – SQL03 – Drainage water management for nutrient, pathogen, or pesticide reduction

Enhancement Description
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.

Land Use Applicability
Cropland

Benefits
This enhancement holds nutrients in the soil, reduces pathogens leaving the field, and/or reduces pesticides leaving the field when crops are not actively growing. Additional benefits may include reduction of the oxidation of organic matter and/or reduced wind erosion or particulate matter (dust) emissions.

Conditions Where Enhancement Applies
This enhancement applies to cropland that has been artificially drained (surface or subsurface) and which is flat enough that significant portions can be flooded or saturated by controlling outflow from the drainage system.

Criteria
1. Implementation of this enhancement requires compliance with the requirements of the Conservation Practice Standard, Drainage Water Management (554) and the associated plan;
2. Operate water control structures/devices to hold water surface elevations no more than 6 inches **below** the ground surface on the affected area for a minimum of 90 days per year;
3. This enhancement only applies to the areas of cropland where water levels can be effectively maintained at the desired elevations.

Adoption Requirements
This enhancement is considered adopted when a drainage water management plan that meets NRCS practice standard 554 has been implemented and fields are flooded such that ponding or saturated conditions meet the target hydrologic conditions in the above criteria.

Documentation Requirements

1. List of fields where this enhancement was utilized, the field size, and the equipment installed/used,
2. Dates when fields were flooded and water removed from fields, and
3. Photo documentation of saturated soil areas. Photos must be dated and labeled with field number.

North Dakota Requirements

The drainage water management plan must meet the NRCS Field Office Technical Guide standards and specifications for practice 554.