United States Department of Agriculture
Natural Resources Conservation Service

2010 Ranking Period 2

# 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.

**Criteria**
1. Implementation of this enhancement requires that the client must comply with the requirements of the Conservation Practice Standard, Drainage Water Management (554);
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.

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

SQL03 – Drainage Water Management for Nutrient, Pathogen, or Pesticide Reduction:

- The owner is responsible for obtaining all required permits and for compliance with such laws, rules and regulations.
- Any requested design assistance provided by NRCS will follow NRCS FOTG standards and NRCS engineering design, installation and checkout criteria. NRCS design assistance will be provided according to workload.
- This practice is potentially suitable on flat (usually less than 1%) areas with existing tile drainage.

Refer to the publication, *Questions and Answers about Drainage Water Management for the Midwest* (WQ-44) at:
http://www.ces.purdue.edu/extmedia/WQ/WQ-44.pdf