



CONSERVATION ENHANCEMENT ACTIVITY
E590118X

CONSERVATION
STEWARDSHIP
PROGRAM

Reduce risks of nutrient losses to surface water by utilizing precision agriculture technologies to plan and apply nutrients

Conservation Practice 590: Nutrient Management

APPLICABLE LAND USE: Crop (annual & mixed); Crop (perennial)

RESOURCE CONCERN ADDRESSED: Water Quality Degradation

PRACTICE LIFE SPAN: 1 year

Enhancement Description

Utilize precision application technology and techniques to reduce risk of nutrients in surface water by reducing total amount of applied and reducing the potential for delivery of nutrients into water bodies. Precision agriculture technology is utilized to plan and apply nutrients to improve nutrient use efficiency and reduce risk of nutrient losses.

Criteria

- Documentation of producer's record of nutrient management meeting all Conservation Practice Standard Nutrient Management (CPS 590) general criteria and additional criteria to minimize agricultural nonpoint source pollution of surface and groundwater.
- Minimize soil surface disturbance during fertilizer placement.
- Development of site-specific yield maps using soils data, current soil test results, and a yield monitoring system with GPS receiver to correlate field location with yield. Data is used to diagnose low, medium, and high productivity areas (management zones).
- Nutrient rates of application (minimum N-P-K) are planned and applied according to management zone.



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- **Utilize variable rate technology (VRT) for nutrient application** to reduce nutrient loss risk and improve nutrient use efficiency; VRT may be map-based, sensor-based (crop canopy sensors), or manual.

Documentation Requirements

- Documentation of nutrient management records meeting all Nutrient Management, CPS 590, general criteria and additional criteria to minimize agricultural nonpoint source pollution of surface and groundwater.
- Planned nutrient budget, yield goal, and planned applications by management zone (must include minimum N-P-K).
- Planned variable and flat rate application layers (maps and/or tabular statistics).
- As applied records of actual variable rate applications (maps and/or tabular statistics).