

## The Weiser area is Idaho's Group One Nitrate Priority Area

### Project Goals

To demonstrate a reduction in nitrogen fertilizer inputs as a result of the aggressive implementation and maintenance of agricultural water quality BMP's. These BMP's will be monitored for effectiveness through testing and evaluation.

### Project Success

- \* **37, 699** less pounds of nitrogen were applied, saving the farmers **\$17, 365**.
- \* A reduction of **140 lbs** of Phosphorus application per project acre.
- \* Filter strips reduced sediment run off by **60%** per field.
- \* Sediment basins reduced sediment run off by **65%** per field (~180 tons annually).
- \* **40 acre/feet** of water saved annually with surge system installation.
- \* Drip system installation saved **60.64 acre/feet** of water per year.
- \* **Educating the public on ground water issues.**

## For more information contact:



All WRSCD programs are offered on a nondiscriminatory basis without regard to race, color, national origin, religion, sex, age, marital status, or handicap.

## Phase I

## 319 Water Quality Demonstration Project



## Weiser River Soil Conservation District

# Best Management Practices (BMP's)

## Nutrient Management (590) Soil Sampling

TASK: Soil sample at 0"-12" and 12"-24" soil layers in the Spring and the Fall. Send samples to a certified lab. Make fertilizer recommendations based on University of Idaho Fertilizer Guidelines.

RESULT: Nitrogen application reduced by about 143 lbs per project acre. Phosphorus was reduced by 140 lbs.



## Irrigation Water Management (449) Moisture Sensors

TASK: Two systems were placed in each field. Data Loggers are connected to moisture sensors that are placed in the ground at specified depths. Readings are monitored to adjust for over and under applications of water.



Data Logger

Moisture Sensor

## Surface Irrigation System (443) Gat- ed Pipe/Surge System (430 HH)

TASK: Installation and demonstration of surge irrigation system. Surges of intermittent water flow to the furrow increases water application uniformity and efficiency.

RESULT: On 187.1 acres in the project, 40 acre/feet of water was saved annually.



## Surface Irrigation System (443) Drip System

TASK: Install and demonstrate a drip irrigation system that uses less water and reduces operating costs.

RESULT: On 75.8 acres in the project, 60.64 acre/feet of water was saved annually.



Weiser River  
Soil Conservation District

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## Filter Strip (393)

TASK: Plant grain filter strips 20 ft. X width of fields. Corrugates are pulled partially into the strip and then spreads out, slowing down the flow of water so that materials will settle out.

RESULT: Filter strip installation demonstrated 60% reduction of sediment run off per field.



## Sediment Basin (350)

TASK: Construct sediment basins to collect sediment from project fields. Location is important to allow for clean out annually.

RESULT: They were designed to collect 65% of the sediment run off from the fields. Potential annual collection of 180 tons of sediment.



A sediment basin during the irrigation season.

A full sediment basin at the end of the season