

# COVER CROPS & PHOSPHORUS LOSS

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**the CHALLENGE:** reducing phosphorus loss from agricultural land and improving water quality

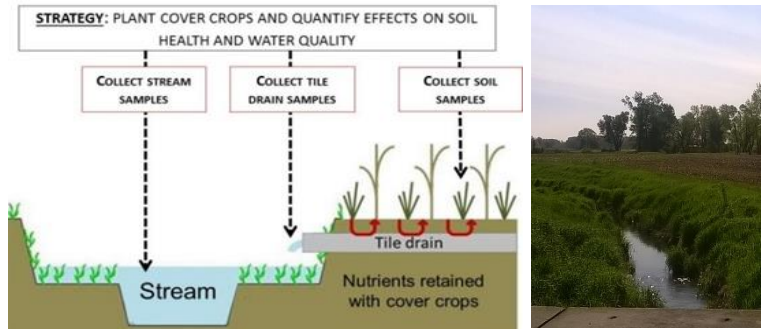
Agricultural streams and ditches export excess phosphorus (P), nitrogen (N), and sediments to sensitive downstream ecosystems. This contaminates drinking water, fuels algal blooms with “dead zones” and harms fish and mussels.

Excess fertilizer nutrients enter streams/ditches via tile drains, especially in Winter and Spring when fields are bare.

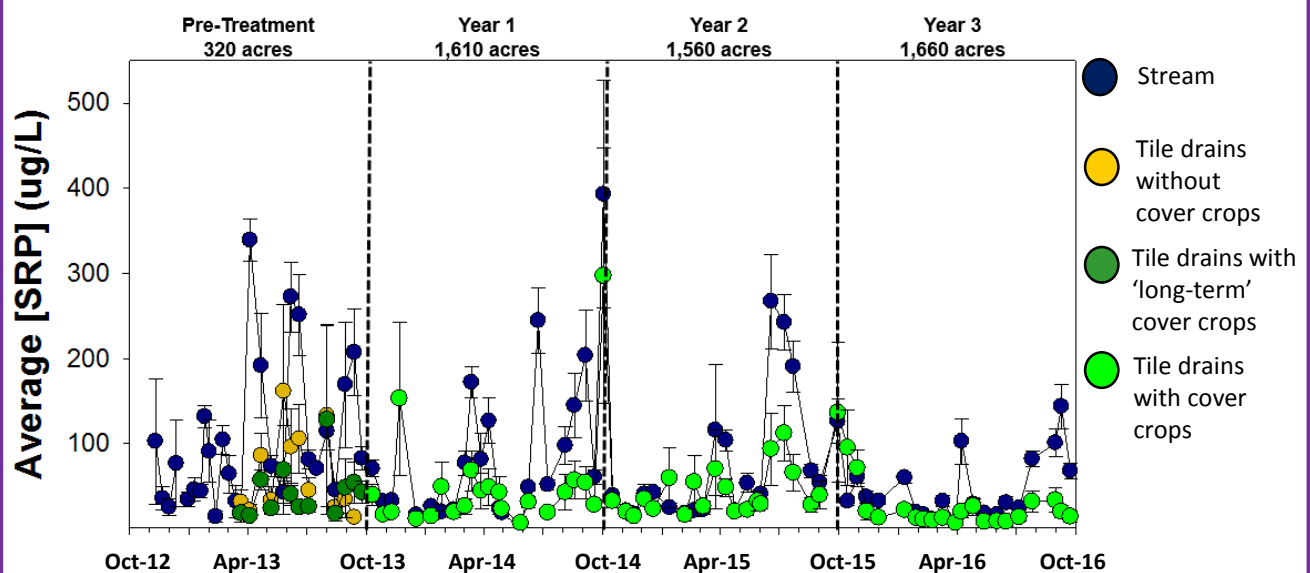
## our STRATEGY

**GOAL:** Retain nutrients/soils on fields and reduce stream export.

Cover crops are planted after cash crop harvest and their growth coincides with critical times for nutrient export from tiles to streams/ditches. We are measuring their impact on dissolved phosphorus loss in the Shatto Ditch.



## Shatto Ditch RESULTS so far



During the pre-treatment year, SRP from tile drains was highly variable but generally lower than the stream. Since cover crop planting, SRP from tile drains has become less variable and is consistently lower than in Shatto Ditch streamwater.

**CONCLUSIONS:** Cover crops provide a field-scale management solution that reduces nutrient loss to tile drains, keeping fertilizer on fields. Our data suggest that cover crops have the potential to reduce SRP export from tile drain outlets, thereby improving water quality.



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