

COVER CROPS & NITRATE LOSS

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

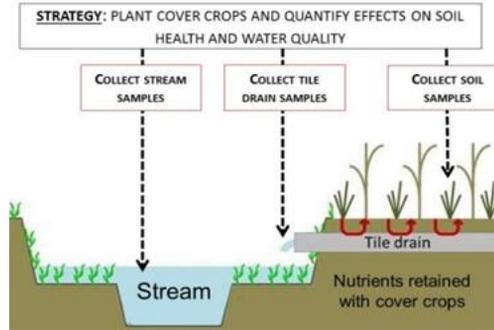
Agricultural streams and ditches export excess nitrogen (N), phosphorus (P), and sediments to sensitive downstream ecosystems. This contaminates drinking water, fuels algal blooms with “dead zones” and harms fish and mussels.

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

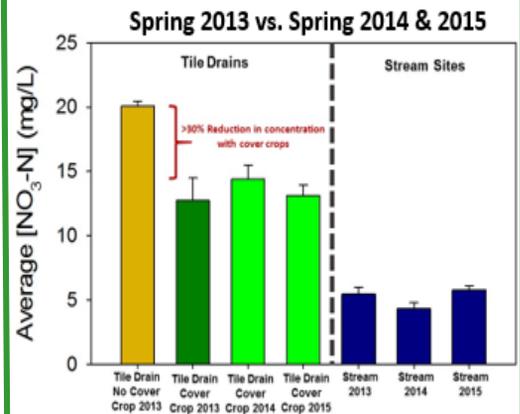
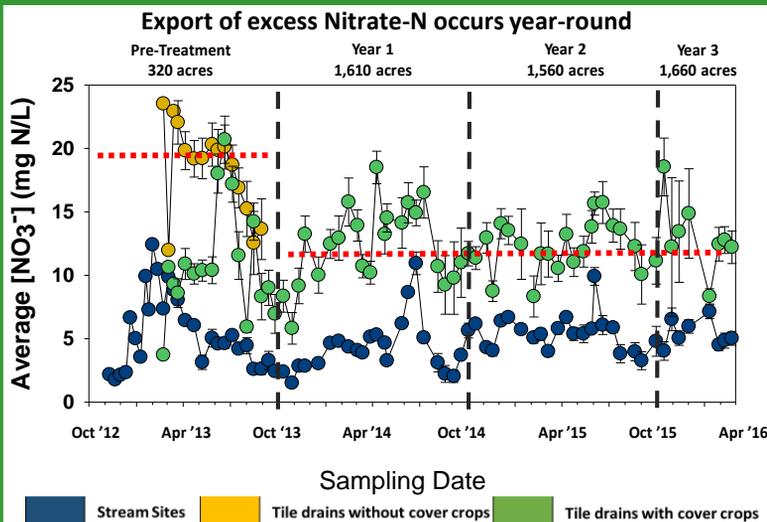
our STRATEGY

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

Cover crops, like ryegrass, 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.



RESULTS so far



In the first year of planting, tile drains with cover crops had **38% lower nitrate** than those without. Our data suggest that cover crops have the potential to significantly reduce N export from tile drain outlets.



CONCLUSIONS: Cover crops provide a field-scale management solution that reduces nutrient loss to tile drains, keeping fertilizer on the fields.



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