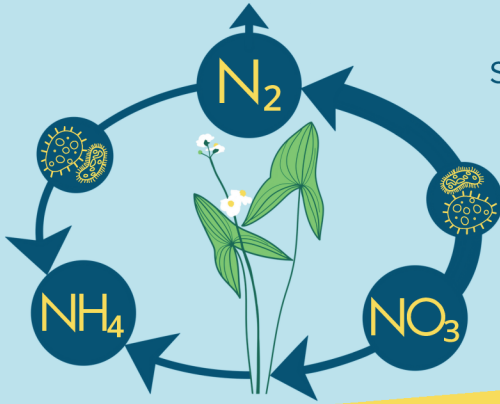


# SMART WETLANDS

A NUTRIENT LOSS REDUCTION SOLUTION FOR YOUR TILE DRAINAGE SYSTEM



Smart Wetlands are small but mighty constructed wetlands designed to catch and remove nutrients from tile drainage runoff.

It is undisputed these constructed wetlands are one of the most effective and efficient ways to **NATURALLY REMOVE EXCESS NITROGEN** leaving row-cropped fields.

Each wetland acre removes an average **3 TONS/YEAR**

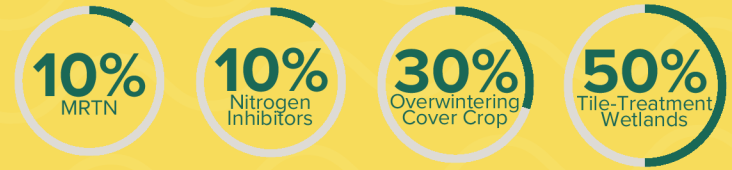
of all nitrates lost through farm tile drainage before they can enter our water sources.



By reducing nitrogen runoff, Smart Wetlands can:

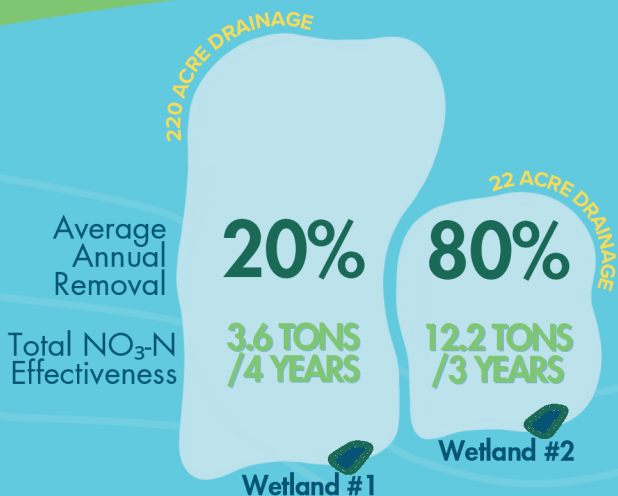
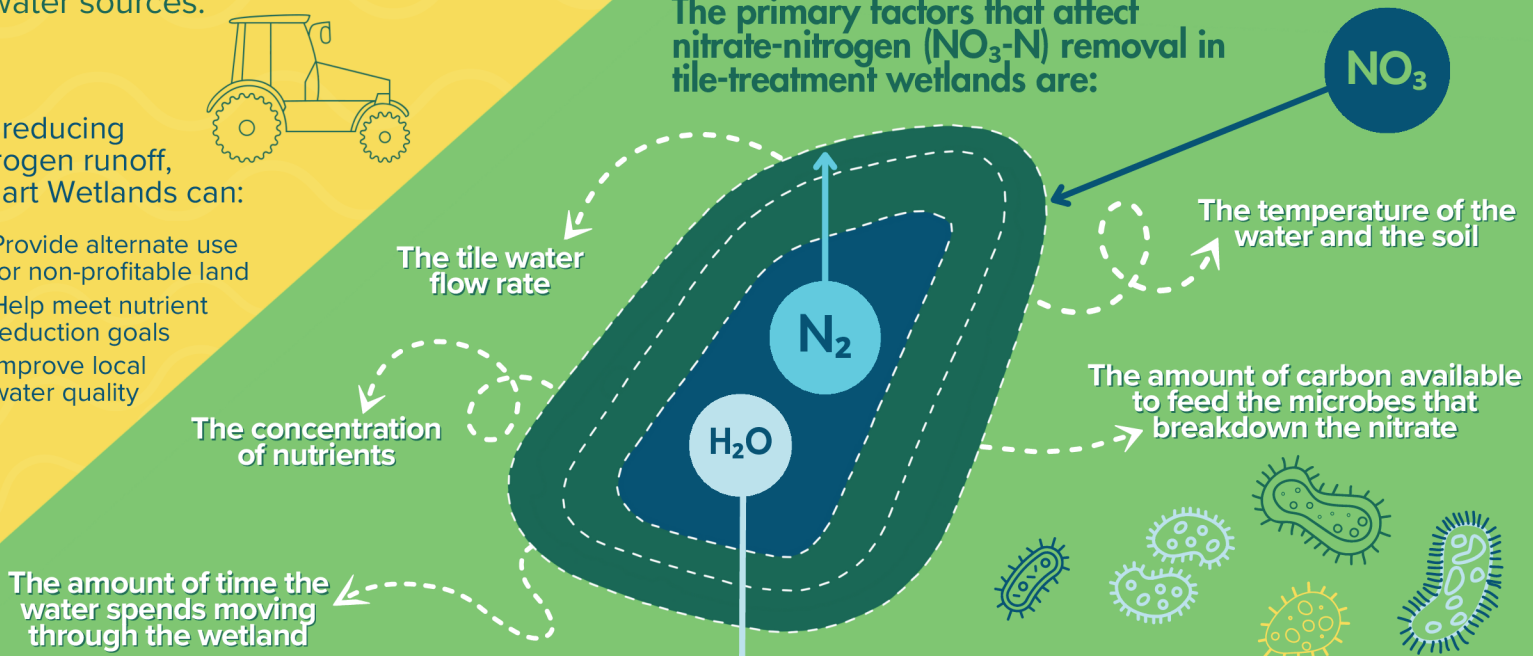
- Provide alternate use for non-profitable land
- Help meet nutrient reduction goals
- Improve local water quality

## NITRATE REDUCTION METHODS BY COMPARISON:



\*2023 IL Nutrient Loss Reduction Strategy Biennial Report

The primary factors that affect nitrate-nitrogen ( $\text{NO}_3\text{-N}$ ) removal in tile-treatment wetlands are:



These natural filters help keep our local rivers, lakes, and even far-off places like the Gulf of Mexico healthier by reducing the amount of farm nutrients that reach them.

Farmers are improving water quality in Illinois by using Smart Wetlands on row-crop land.

To learn more about the effectiveness and efficiency of this practice in Illinois TWI worked with University of Illinois-Chicago scientists who collected and analyzed several years of data on two Smart Wetlands in Bureau County.



We found the wetland treatment area should be 1% of the drainage area, and the wetland project area including buffer should be ~5% of the drainage area.

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