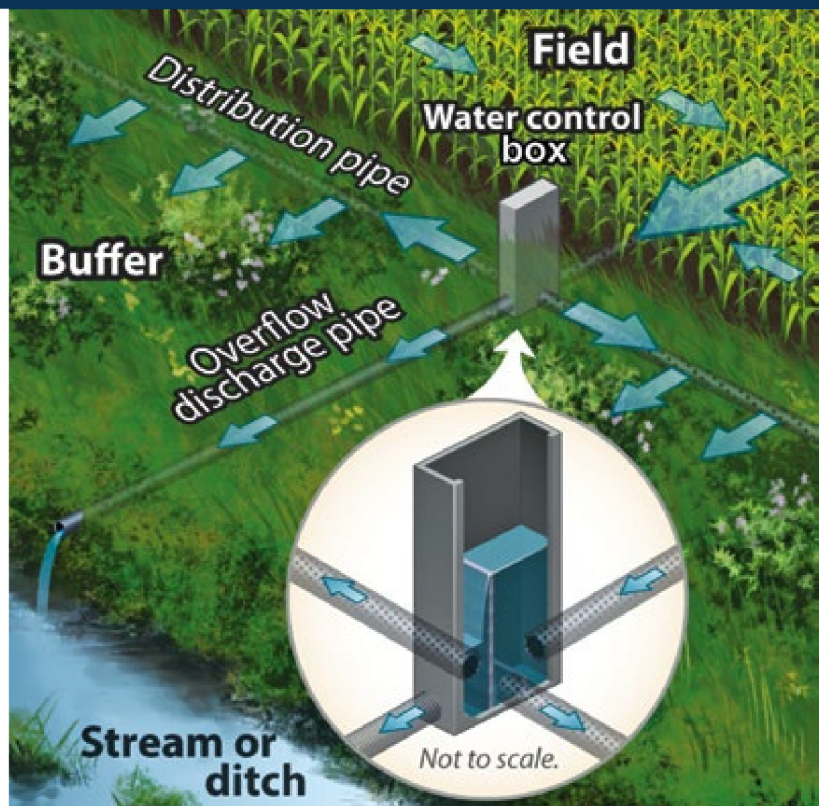


SATURATED BUFFERS

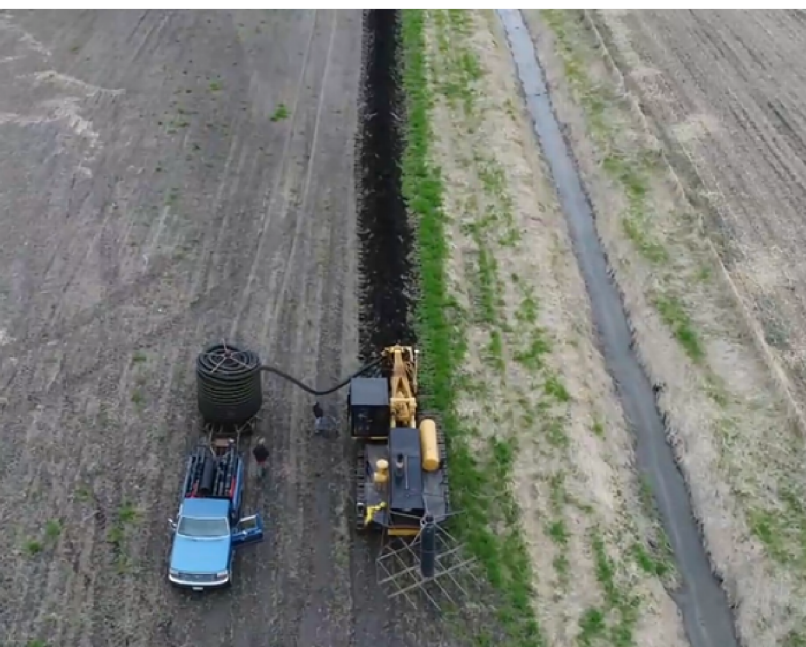
Working with private landowners across Iowa, saturated buffers are being installed as a water quality practice within priority watersheds.

THE BASICS

Underground tiles divert water from cropland, reducing stress on plants. A water control structure diverts that water laterally into a distribution line, increasing the shallow groundwater level and allowing for natural nutrient removal.



Source: Frankenburger et al., unpublished



THE BENEFITS

- Existing buffer helps to slow sediment, phosphorus and pesticides from entering the stream while also providing wildlife habitat.
- A saturated buffer improves efficiency by removing nitrates through denitrification and plant uptake.
- Allows for natural removal of nitrogen from subsurface drainage.

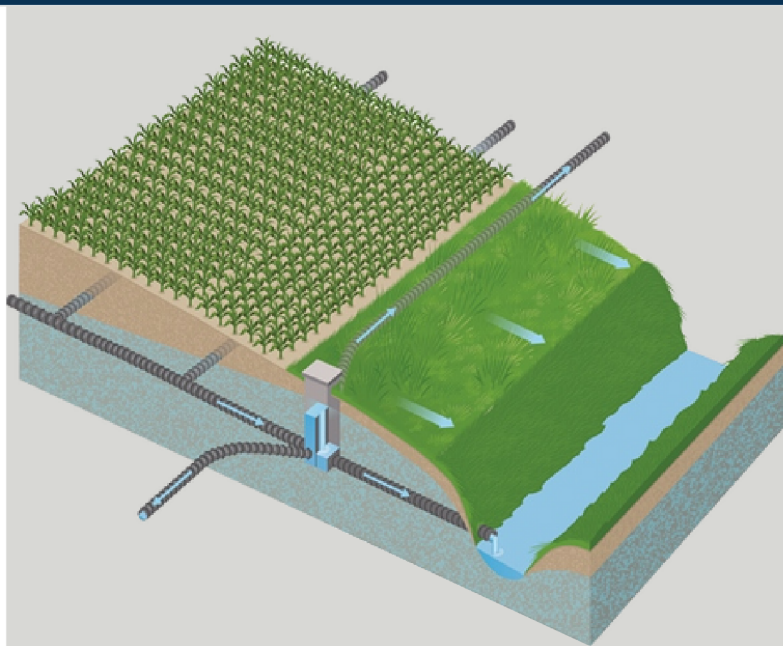


END RESULT:
CLEANER WATER



RESEARCH

Research has been conducted on several sites across the state. Sites have been shown to remove up to 92% of the nitrate load, with an average of 42% removal. Most nitrate entering the buffer is removed by denitrification and microbial immobilization.



Source: transformingdrainage.org



IOWA WATER QUALITY INITIATIVE SITES

The Iowa Department of Agriculture and Land Stewardship is currently seeking more sites statewide. For more information contact your local SWCD office or contact Tanner Puls, Edge of Field Coordinator for the Department.

