



SATURATED BUFFERS

Practice Description:

A saturated buffer is an area of perennial vegetation between agricultural fields and waterways where tile outlets drain. Tile lines connect to a control structure, which distributes water laterally along the buffer. As water drains into the buffer, the living roots of perennial vegetation absorb water and nutrients, like nitrate-nitrogen.

According to the Iowa Nutrient Reduction Strategy, a saturated buffer has the potential to remove 50% of nitrate-nitrogen from water that is diverted through the buffer.

Practice Benefits:

- Decreases nitrate-nitrogen being deposited in waterways
- Decreases turbidity and volume of water in waterways
- Stabilizes stream banks
- Provides wildlife habitat

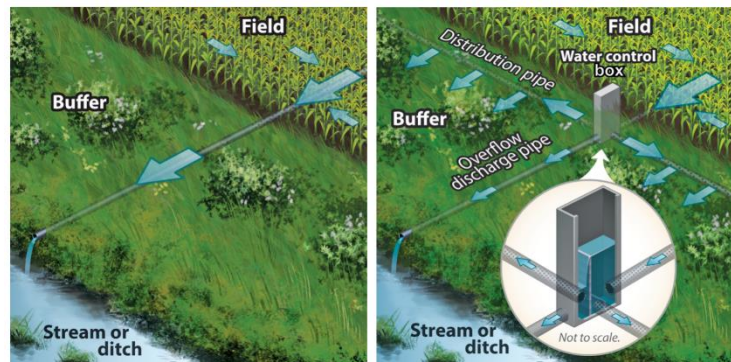


Image courtesy of Frankenburger et al., Unpublished.

Practice Economics:

- Cost of installation and equipment to drain a 25 acre area is about \$2,000, but varies greatly depending on the landscape
- Compatible with existing federal and state cost-share programs so farmers who implement saturated buffers can recoup some of their costs



Saturated buffer with a one-year-old prairie planting in Story County, Iowa. NRCS/SWCS photo by Lynn Betts.

The Conservation Media Library was supported by an Iowa NRCS funded Conservation Innovation Grant to the Soil and Water Conservation Society. To learn more about the Library and access other resources, go to www.swcs.org

Other Resources:

- <https://www.flickr.com/photos/151012306@N08/albums/72157696778831671>: A step by step visual guide to saturated buffer implementation. These photos were taken on real farms across Iowa and are part of the Conservation Media Library.
- <https://vimeo.com/291573566>: A video about saturated buffer implementation in Iowa that is part of the Conservation Media Library.
- <https://transformingdrainage.org/practices/saturated-buffers/>: A storing house for saturated buffers research from a collaborative research group across eight states.
- <https://store.extension.iastate.edu/product/14441>: Two-page factsheet on saturated buffers from Iowa State University Extension.
- <http://www.saturatedbufferstrips.com/>: A research collaboration between the Agricultural Drainage Management Coalition (a coalition of drainage-affiliated businesses) and the National Laboratory for Agriculture and the Environment (USDA-Agricultural Research Service).
- <https://www.iowalearningfarms.org/page/webinars>: On April 18, 2018 Dan Jaynes with USDA-ARS gave a webinar on saturated buffers for Iowa Learning Farms.

This project is part of the:



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