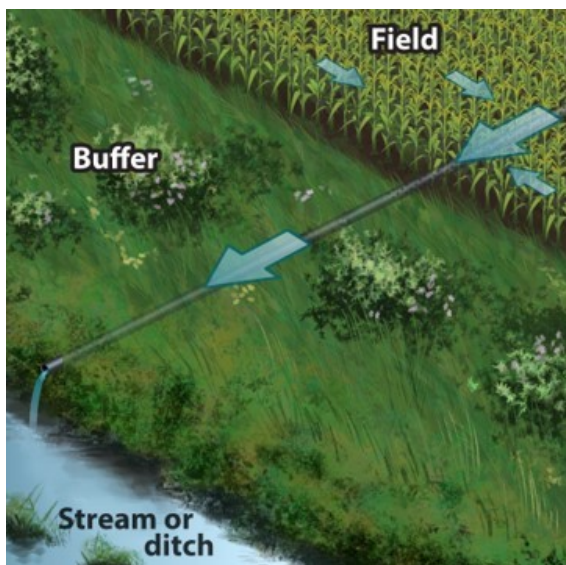


Saturated Buffers

Saturated buffers utilize the organic matter in the soil profile of a vegetated filter strip located between a field edge and a stream to remove nitrogen from tile transported water. To accomplish this a control structure is used to divert a portion of the tile flow into a distribution tile that runs parallel to a stream. To view results from ADMC saturated buffer research please visit <https://admcoalition.com/resources/>.



Conventional outlet through a filter strip.

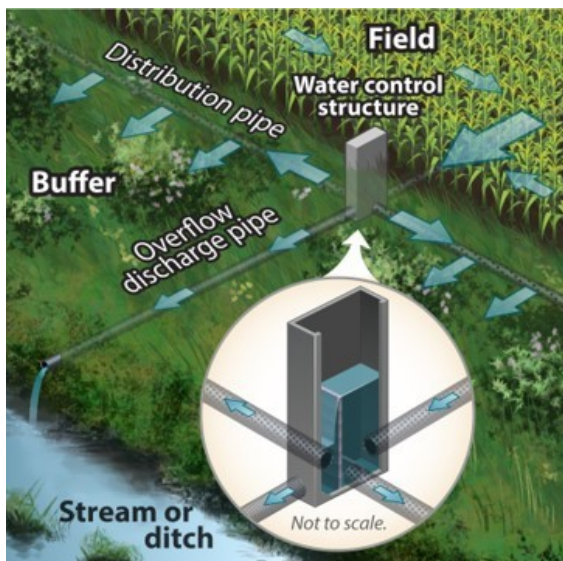
Location

Saturated buffers typically treat drainage systems operating from a single field and on 6 – 12 inch mains. To meet NRCS standards, the site must meet the following:

- At least 30 feet of perennial vegetation
- Stable stream banks
- At least 1.2% soil organic matter
- No sand lenses or gravel layers in along the length of the distribution line

Footprint

The control structure sits on the main near the field edge in the the filter strip. Typical distribution lines run 500 to 1,000 feet.



Modified outlet for a saturated buffer.

Performance

Recent ADMC monitoring showed that saturated buffers removed an average of 33% of the nitrate load. Research by Iowa State University with the USDA-ARS showed saturated buffers removed an average of 44% of the nitrate load.

Dollars & Sense

\$3,600
INSTALLATION COST

Average installation costs of 7 ADMC monitored saturated buffers was \$3,600

\$1.22

Practice cost per pound of N removed