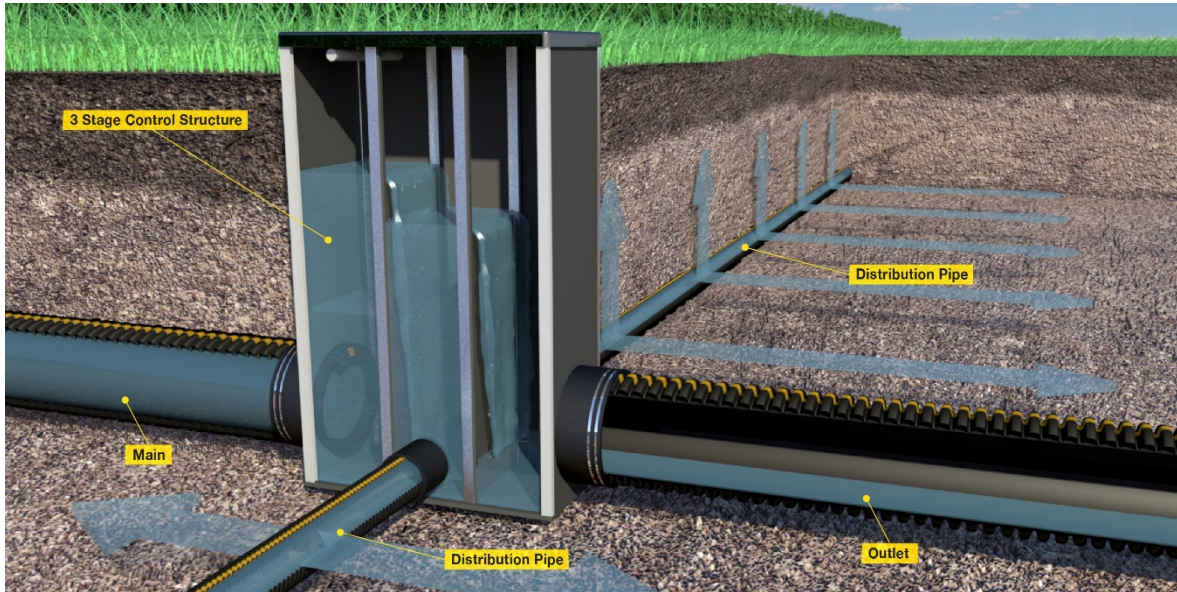


Practice Overview

Tile water is diverted into perforated lines running parallel to a ditch or stream that has a suitable vegetated buffer. As water moves through the buffer toward the stream, the organic matter in the soil naturally utilizes the nitrates in the water.

Benefits

- Denitrification (30% to 60%)
- Reduced peak flow to ditch
- Wildlife habitat
- Can be retrofitted on applicable buffers/outlets



How it Works

Edge-of-field water control structures on a buffer strip diverts flow into perforated tile lines that run along the buffer/stream bank. As water moves through the soil profile, plant roots and other organic matter in the buffer absorb the water and any usable nutrients before they get to the open ditch. The tile system can still function as normal in times of high flow where water bypasses the buffer by flowing over the stoplogs to a traditional tile outlet.

Installation Considerations

- Minimum organic matter content of 1.2%
- No gravel/sand veins through buffer
- Minimum buffer width of 30-foot
- Limit number of surface inlets
 - Trash in tile lines may plug system

Costs

- Installation: \$3,600
- \$1.00 to \$2.20 per lb of N removed

Standards, Resources, Tools

- [NRCS Codes \(604\)](#)
- [NRCS Saturated Buffer Design Calculator](#)
- [ADMC – Saturated Buffers](#)
- [Transforming Drainage – Saturated Buffer](#)
- [Purdue – Q & A on Saturated Buffers Download](#)
- [USDA – ACPF Saturated Buffer Suitability Tool](#)