

Constructed Wetlands

Constructed wetlands are designed to remove nitrogen from agricultural drainage systems. A shallow wetland pool is created to generate conditions favorable for denitrification. Constructed wetlands are specifically designed for nutrient removal but do create wildlife habitat as well.

Location

Constructed wetlands are built in areas that were not previously considered to be wetlands and can intercept tile drainage prior to discharging to a stream. The wetland must also be located out of the 100-year flood plain. Constructed wetlands perform a similar function to the Iowa CREP wetland program in that they are designed to remove nutrients from drainage water prior to reaching the stream, but they are at a smaller scale. Constructed wetlands typically treat 30 – 200 acres whereas Iowa CREP wetlands have contributing areas of 500 – 2000 acres.



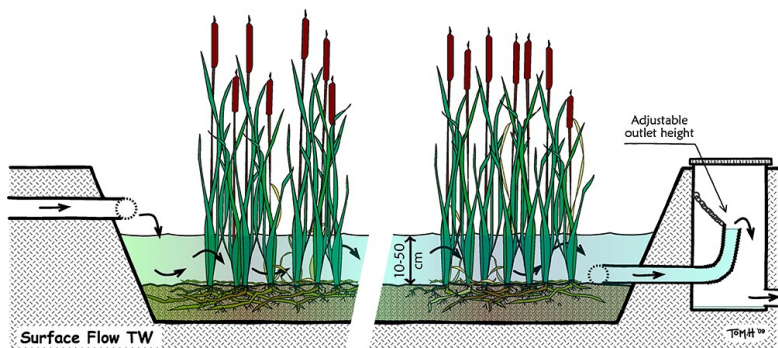
NRCS photo by Mark DeBrock

Footprint

Constructed wetlands must be 1% of the contributing drainage area to meet NRCS standards. It is recommended that the constructed wetland be as large as 5% of the drainage areas.

Performance

Performance varies and is generally related to the wetland to drainage area ratio. As the ratio nears 2%, nitrate reductions of >50% can be realized .



Dollars & Sense

\$60,000

Constructed wetland costs vary widely base on size, but generally range from \$42,000-\$80,000

\$1.32

Practice cost per pound of N removed