



Phase II Storm Water Program

Winter 2020

Conservation Tillage

Conservation tillage is a method of agricultural preparation of soil that reduces soil erosion by leaving crop residue on the soil surface. Farmers are using this method to increase yields and improve soil quality. When soil is tilled it is more easily washed away by storm water. Even with flat and well-drained cropland, agricultural fields are generally susceptible to the effects of runoff and erosion. This runoff removes important nutrients needed for plant development, and while doing so can produce harmful storm water runoff that could contain chemicals such as herbicides and pesticides. When using a conservation tillage farming method top soil is retained, which promotes soil quality and increases crop yields. Leaving vegetative cover also protects the soil from sunlight, which improves water retention and increases beneficial fungal ecosystems and microorganisms.

Pros

- Improves soil quality
- Reduces the need for fertilizers
- Reduces soil erosion
- Improves water retention
- Reduced fuel and labor costs

Cons

- Could increase the need for herbicides and pesticides
- Could delay planting times



Ridge-Till

Crops are planted on ridges built in rows.



Rotational-Till

The soil is not tilled every growing season.



Strip-Till

Rows are tilled where seeds are to be planted. The soil in between the rows is untilled.



No-Till

No tilling of soil by use of plow, disk, etc. Aims for 100% ground cover.



Mulch-Till

Leaves at least one third of the surface soil covered by crop residue.