

TILE DRAINAGE BENEFITS, RISKS, AND DITCH MAINTENANCE ISSUES

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Maintaining proper root zone soil moisture conditions optimizes yields and improves field trafficability. When soil voids are free of drainable water, air flow can occur that supports important chemical and biological processes needed for plant growth. Other benefits include deeper plant rooting depth and a dry soil will warm up more quickly in the spring than a wet soil. However, tilled soils have an increased risk of manure, pesticide and pathogen losses to surface waters. Macropores (earth worm burrows and shrinkage cracks) and tile surface inlets can act as direct conduits to tiles and in turn surface waters. Replacing tile surface inlets with blind inlets can help reduce this risk. Tile typically drain into surface drainage ditches. Maintenance of tile outlet ditches is critical to the proper performance of the tile system. When maintenance should occur is dictated by site specific conditions, particularly tile and ditch grade along with what a landowner is willing to tolerate. Ditches should be inspected annually and after major storm events to identify problems before they become severe. Clearing of trees and debris will likely be required more frequently than sediment removal. There are both private ditches and ditches that are part of the public drainage system created under WI Chapter 88 of Wisconsin Statutes. This law established the county drainage districts. Maintenance of and connecting to private ditches are the responsibility of individual property owner(s), which can lead to conflicts and disagreements. The public drainage system was developed to coordinate and better address drainage ditch issues involving multiple landowners. Any connections to or maintenance of public ditches must involve the County Drainage Board. It is also important to keep in mind that drainage ditch maintenance may require permits or review by government agencies such as the Wisconsin Department of Natural Resources, Natural Resources Conservation Service, the Army Corps. of Engineers and your local County Planning and Zoning Office. Additional information on tile drainage can be found on the UWEX tile drainage web site at the following URL: fyi.uwex.edu/drainage/.

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