

Ensure Success *with a* Drainage Water Management Plan!

USDA's Natural Resources Conservation Service (NRCS) offers technical and financial assistance for Drainage Water Management (DWM). Installation and implementation of DWM begins with a DWM Conservation Plan. Your plan can be prepared by local NRCS Field Office staff, private Technical Service Providers or a professional drainage contractor. NRCS program incentives can make managing farm tile drainage systems more productive and more profitable.

What is DWM?

DWM is the process of managing the timing and the amount of water discharged from agricultural drainage systems. DWM is based on the premise that the same drainage intensity is not required at all times during the year. With DWM, both water quality improvement and production benefits are possible. Water quality benefits are derived by minimizing unnecessary tile drainage, reducing the amount of nitrate that leaves farm fields. DWM systems can also retain water in fields that could be used for crop production later in the season.

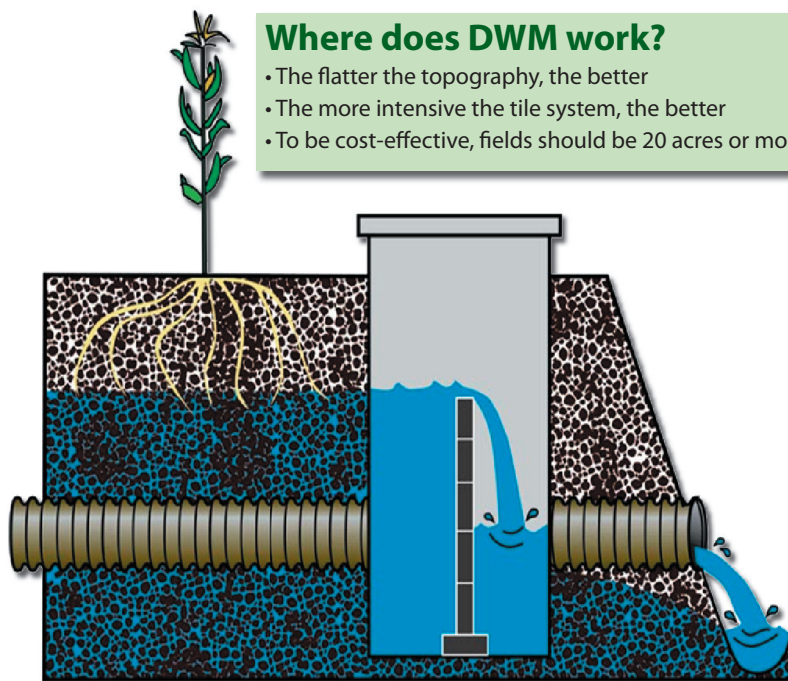
Get a Plan!

To successfully retrofit a DWM system on existing agricultural tile drainage systems, it is essential to have a plan of action—a DWM Plan. Also when applying for NRCS programs or financial assistance, producers are more likely to be funded if they have a DWM plan. When successful, a DWM system can help private landowners:

- Protect & improve water quality
- Potentially enhance crop production from more available soil-water & nutrients
- Reduce organic matter oxidation to retain soil productivity & minimize atmospheric carbon release
- Reduce wind erosion & loss of valuable soil
- Enable seasonal shallow flooding for wildlife habitat

Where does DWM work?

- The flatter the topography, the better
- The more intensive the tile system, the better
- To be cost-effective, fields should be 20 acres or more in size



DWM is the process of managing the timing and the amount of water discharging from agricultural drainage systems. A water level control structure is installed in the tile line and allows for management of the tile outlet elevation.

What's In a DWM Plan?

A properly prepared DWM Plan ensures factors of landscape, soils, slope, and current drainage systems are taken into consideration and incorporated into the function of your DWM System. The following information is needed to develop a DWM plan:

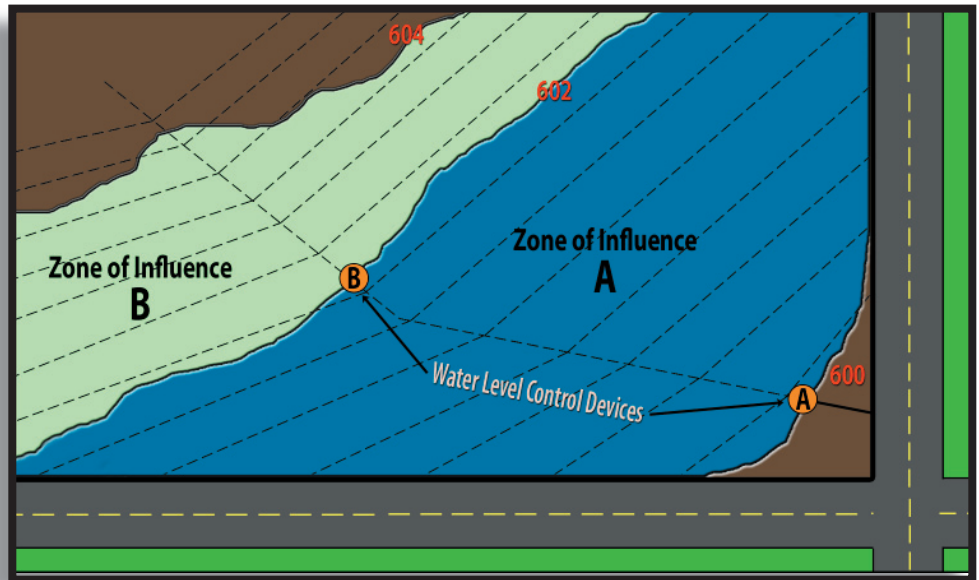
- farm & field identification
- field maps with field boundaries marked
- landowner goals & objectives
- tile map
- soil map
- detailed topographic map

What's In a DWM Plan?

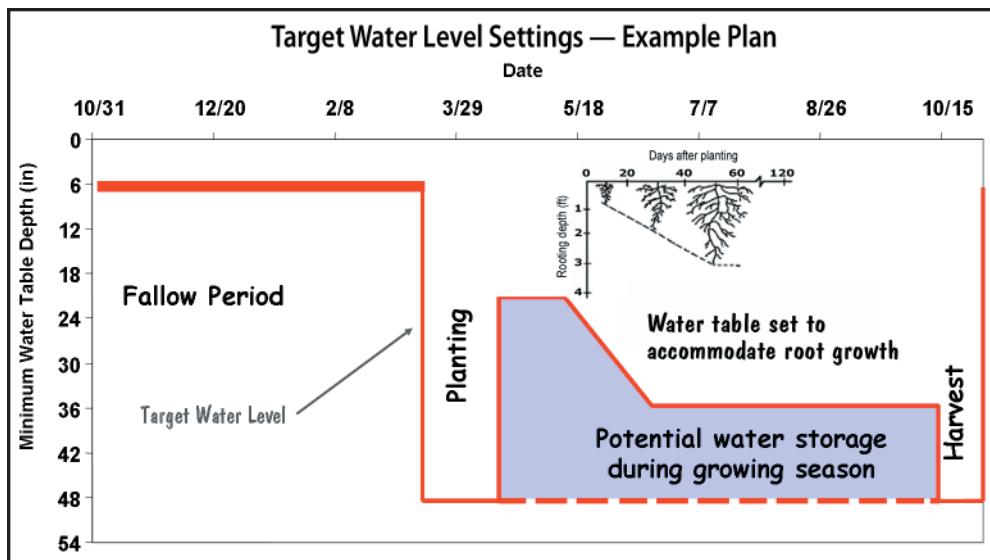
DWM plans provide the location and size for each planned water level control structure. Also, to effectively use and benefit from a DWM system, it is crucial that the plan includes a detailed set of instructions for operation and maintenance. A tile drainage system with water level control structures is most beneficial if operated properly. Remember, the most important word in Drainage Water Management is MANAGEMENT. This means MANAGED by YOU.

An essential component of the DWM plan is a determination of the area of the field impacted by each water level control structure (zone of influence). The DWM Plan will clearly identify critical dates and target water level elevation levels needed to accomplish management goals and objectives. Details of Operation and Maintenance include:

- Target water elevations PRIOR to tillage, planting or harvest operations. Manage water levels that permit trafficable conditions to perform needed field work.
- Target water elevations AFTER seasonal field work. Manage water levels that permit infiltration of rainfall and bring water to crop root zones. Water level targets vary with crop, growth stage, and soil type.
- Target water level prior to and during HARVEST.
- Target water level is near the soil surface or to a prescribed level during the FALLOW period.



Lines labeled 600, 602, and 604 represent ground surface elevation levels.



DWM is the process of managing timing and amount of water discharges from agricultural drainage systems. The DWM plan provides the target water table level settings.

The Golden Rule of Drainage:

Only release the amount of water necessary to ensure trafficable conditions for field operations and to provide an aerated crop root zone—any drainage in excess of this rule likely carries away nitrate and water that is no longer available for crop uptake.

**Is YOUR land suitable for a DWM System?
Visit your county NRCS office for a field evaluation!**