

# *Big Pine Creek Watershed Project*

## *Best Management Practices Fact Sheet*

### *Drainage Water Management*

**Drainage water management** is a low-cost, effective water conservation tool that allows for improved water quality, field trafficability, and increased yields. Managing drainage water enables farmers to manage water discharge from subsurface drainage systems to promote moisture and nutrient conservation.

The ability to farm the soils in the Big Pine Creek watershed is highly dependent on drainage. Drainage is an essential practice for crop production in Indiana, as we often get rains that saturate soils beyond the point of safely supporting traffic, especially during the spring and fall when it is critical for farmers to have access to their fields. Underground tile drainage can also be a conduit for nutrients and sediment from the field to the surface waterways. Nutrient losses from excessive drainage can impact nutrient use efficiency on the farm and also reduce income for the producer. In some cases, by using drainage water management instead of deep-free drainage, producers can conserve water and reduce fertilizer and nutrient losses by up to 30-50%.

Water is managed on the farm to provide opportunities to raise the water in a field during the summer months when crops are actively growing and trafficability is not a priority, and also during the winter months. During the spring, late summer and fall months, when trafficability is necessary, this practice gives you the opportunity to return to full drainage mode so that access to the field during critical times is not limited.

Drainage water management can be used for the following purposes:

- Reduce nutrients, pathogens and/or pesticide loading from drainage systems into downstream receiving waters.
- Improve productivity, health, and vigor of crops.
- Reduce oxidation of organic matter in soils.
- Reduce wind erosion or particulate matter emissions (dust) from the farm.
- Provide seasonal wildlife habitat.

Drainage water management systems are most effective when fields are pattern tiled with limited outlet tiles that move water from the lateral tiles in the field. Ideally, the main outlet tiles will be low-gradient to allow water to back into the tile lines using fewer structures. This practice is limited by tile systems with higher gradient outlet tiles and sloping land.



1. A drainage water management system structure being installed.

*Contact Info for the Soil & Water Conservation Districts in the Big Pine Creek Watershed*

*Benton County: Jon Charlesworth 765-884-1090 x3 jon.charlesworth@in.usda.gov*

*Warren County: Deb Lane 765-762-2443 x3 debra.lane@in.nacdnet.net*

*White County: Sharon Watson 574-583-5962 x3 sharon.watson@in.nacdnet.net*

Drainage water management will perform at its best when used as part of a comprehensive conservation system that addresses water management, nutrient management, and pest management, as well as production and soil conservation objectives on the farm.

Available financial assistance:

The Big Pine Creek Watershed group will be offering cost-share incentives to help producers adopt best management practices (BMPs) aimed at reducing the amount of nutrients, sediment, and bacteria entering our surface waters. **Drainage Water Management** is one of the BMPs we want to encourage. The financial incentive for drainage water management will come in the form of reimbursement of 75% of the total nutrient management planning costs based on USDA – NRCS cost estimates. The reimbursement will be capped at a total of 300 acres per application.

- Applications for cost share assistance are available from the Soil & Water Conservation District offices in Benton, Warren and White counties.
- Closing dates for ranking periods are still to be determined. Please check the watershed group's webpage which can be accessed via the Benton County SWCD website [bentoncountyswcd.org](http://bentoncountyswcd.org)
- Applications will be ranked based on merit. Pairing drainage water management with other conservation practices such as no-till/strip till, nutrient management, filter strips or cover crops will increase the ranking score of the application.
- Successful applicants will sign a contract outlining out the terms of the cost-share agreement.
- Cost share for drainage water management will go towards the drainage infrastructure necessary to manage discharge from underground drainage systems. This may include, but is not limited to portions of the drainage system infrastructure that will enable water table management and discharge management.
- All drainage water management plans will be reviewed to ensure that they meet USDA – NRCS standards and specifications as identified in the Indiana nutrient management practice standard (Practice Code 554). This standard can be found online at [http://efotg.sc.egov.usda.gov/references/public/IN/Drainage\\_Water\\_Management.pdf](http://efotg.sc.egov.usda.gov/references/public/IN/Drainage_Water_Management.pdf).