

# Where the water flows

## 10 things to know about drainage

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Moving water from where it is or was to where people think it should be has always been a big deal in Ohio. It has been said that northwest Ohio alone has enough drainage tile to reach the moon. Add to that the fact that Ohio has 22,500 miles of county ditches. To be sure, if you own property in Ohio, whether you realize it or not, part of your responsibility as a landowner is helping to maintain – or at least not damage – these drainage systems.

The good news is the ability of storm sewers and other mechanisms in the city to efficiently carry away excess rainwater means that many Ohioans rarely have to worry about flooding. However, those who move to rural areas find that drainage requires a lot more attention. Here are some things you should know about drainage and your land.

**1 The basics:** Everyone lives in a watershed, which is an area of land that drains into a single point such as a lake or stream. Excess surface and subsurface water must be removed through manmade drainage methods to prevent flooding. Why is this important to know? Because drainage practices on one property can significantly impact drainage on neighboring properties.

**2 Drainage in Ohio:** Most of Ohio is naturally poorly drained. Rural residents and farmers use ditches, grass waterways, streams and drainage tile the way city residents rely on storm sewers. Likewise, landowners should expect to pay to maintain those drainage systems the way city residents pay for sewer and water services.

**3 Importance of drainage:** For homeowners, inadequate drainage can lead to basement flooding, wood rot and ponding on their lawns. For farmers, poor drainage often means higher input costs and lower yields due to loss of crops, delayed planting, replanting, soil compaction and delayed harvesting.

**4 Drainage maintenance:** Without proper attention to drainage systems, brush and vegetation inhibit water flow in ditches, log jams clog culverts, tree roots plug drainage tile and new development alters drainage patterns. Updating and maintaining drainage systems prevents flooding, soil erosion and drainage tile failures for landowners and their neighbors. Landowners are responsible for drainage maintenance, unless the property is under a maintenance program with the county engineer and/or Soil and Water Conservation District (SWCD).

**5 Petition ditch projects:** If a drainage problem affects more than one landowner, affected landowners often file a petition with the county engineer or SWCD (depending on the county) to establish a drainage improvement program. After a public input process, county commissioners vote on the program. If adopted, the project is funded by all landowners in the improvement area through an annual assessment. It is important for new rural residents to realize that the benefits of maintained drainage far outweigh the cost of the assessment. If the project is voted down,

landowners have to resort to civil legal action to resolve drainage problems. Of course the best option is that neighbors reach a friendly agreement to maintain drainage systems and avoid these legal processes.

**6 Drainage easements:** Properties often contain drainage easements, which are areas of land reserved by the county for drainage maintenance activities. Objects such as sheds, fencing and trees should not be placed in the easement area and can be removed at the landowner's cost. Easements are listed on the deed or plat, which can be found at the county recorder's office. Also, check with the local SWCD to find out if the land is under a drainage maintenance program.

**7 Drainage law:** Ohio's drainage laws are complex. The reasonable-use rule allows landowners to alter surface drainage on their land only if it causes "reasonable" damage to upstream or downstream neighbors. However, landowners can be required to pay for damages if a court deems their actions to be unreasonable. Cutting a drainage tile, filling a ditch and doing new construction can all impact the flow of surface water and be found to be unreasonable.

**8 Nonpoint source pollution:** Nonpoint source (NPS) pollution refers to pollution that comes from many diffuse sources. NPS pollution occurs when rainfall or melting snow produce runoff that picks up and carries away pollutants to ditches, streams or lakes. Farm and lawn runoff, failing septic tanks or improper disposal of household chemicals can cause NPS pollution. Farmers often voluntarily take land out of production to create natural filter strips that reduce NPS pollution. In addition, they follow strict regulations for manure and pesticide application. Homeowners should also be aware of what chemicals they use on their lawns, because they apply pesticides at a rate up to 10 times greater per acre than farmers do, according to the U.S. Fish and Wildlife Service.

**9 Septic tanks:** Because wastewater produced by rural residents is not sent to a municipal treatment plant, it must be treated on-site. More than a million homes and other structures in Ohio use on-site wastewater treatment, such as septic tank leach fields. Soil helps to clean and filter wastewater as it makes its way into the surface and groundwater. However, only 6.4 percent of Ohio has the deep, permeable soil that offers the best capabilities for treating wastewater. As a result, many septic tanks fail, according to Ohio State University Extension, causing polluted runoff.

**10 Resources:** Contact your county Soil and Water Conservation District for information on drainage practices, requirements and maintenance projects. An Ohio State University Extension fact sheet "Soil Evaluation for Home Septic Systems" and an overview of drainage laws (Bulletin 822) are available at [ohioline.osu.edu](http://ohioline.osu.edu) or at county Extension offices. To find a drainage contractor, visit the Ohio Land Improvement Contractors Association Web site, [www.olica.org](http://www.olica.org), and click on member directory.

*Sources: Ohio Farm Bureau, Delaware County SWCD, OSU Extension, U.S. Environmental Protection Agency, Ohio Division of Natural Resources*