

Environmental Bulletin

Water Drainage Issues

This bulletin discusses drainage issues as they exist in Cabarrus County, North Carolina and the way these issues affect private property owners and developers. The examples set forth below illustrate many of the questions posed to local government representatives on a regular basis. Almost all cases involve an alteration in the flow of surface water.

In general, a downhill property owner receives water coming from property uphill and the general civil law rule pertaining to water flow provides that water has a right to go where it wants to go.

Three propositions emerge from the civil law rule:

1. The easement of the uphill owner includes the right to accelerate and increase the natural flow, but does not include the right to divert waters.
2. "Natural flow" of water means that the upper owner cannot divert the water by causing it to flow upon the lower land in a different manner, nor in a different place from which it would naturally flow.
3. The downhill owner may not obstruct the natural flow from above in any way.

North Carolina has followed a modified version of the civil law rule in governing the rights of property owners with respect to drainage of surface waters. In 1977, in the case of *Pendergrast vs. Aiken*, the NC Supreme Court formally adopted the "Reasonable Use Rule" as a guideline for settlement of drainage cases (293 N.C. 201, 236 S.E.2d 787). The Reasonable Use Rule views all conflicting interests on the facts of individual cases. The Reasonable Use Rule recognizes the right of each landowner and the general public to deal with surface water in any manner so long as the acts are "reasonable under the circumstances". Therefore, each Reasonable Use Rule case must be decided on a multitude of differing factual situations. Liability is incurred only when interference with the flow of water is found to be unreasonable. Government authorities may not have the authority to require changes in development plans that met the requirements of law at the time of their approval.

Typical Drainage Scenarios Reported to Local Government Representatives

1. **Lots in a subdivision have recorded drainage easements, which control all surface drainage. A lot owner fills in the drainage easement to facilitate mowing. The adjacent owners carport or basement floods.** A drainage easement grants the right for water to pass across property by open channels or enclosed pipes. Any change to prohibit or restrict flow would be a violation of the local government's ordinances. Plans to alter any drainageway must be reviewed by local government planners prior to any construction. If the work has already taken place, the altering landowner can be forced to restore the drainage back to its original condition or to submit plans for the proposed reconfiguration construction. However, any damage to adjacent landowners is a private civil matter between the affected parties.
2. **A developer, when grading a series of lots, fills in a low area in order to develop more lots. This causes water to back up onto an upstream owner. As a result, the upstream owner's land is made less useable.** Grading over an acre requires plat review and permitting by the Cabarrus County Erosion and Sedimentation Control Program staff in the Planning and Zoning Services Department. All property within the City of Concord is also subject to this program. Typically, these problems are discovered in the plan review process. However, if the disturbed area is less than one acre, a plan is not required, and consequently, no review takes place. The downstream owner cannot prohibit or restrict flow without violating the Unified Development Ordinance. The degree of damage resulting from grading, and any remedy, remains a private civil matter between the affected parties.
3. **A developer installs a street as part of a development. A culvert with inadequate capacity is installed where the street crosses a stream. Thus, land upstream is flooded during moderate rainfall.** Home basements are flooded.

OR

A culvert has been installed where a street crosses a stream. The culvert had adequate capacity initially, since the watershed is rural and has low runoff-producing capabilities. However, as the watershed is developed, particularly with commercial and industrial property, peak flows increase. With time, the culvert becomes inadequate and flooding occurs on the property upstream.

The NC Department of Transportation (NCDOT) is the contact party for questions involving drainage pipes under state maintained roadways. The NCDOT reviews the size of pipes within their right-of-way under their normal plan review procedure. If a street has been accepted under the state maintenance program, the property owners should contact the NCDOT Division of Highways office in Albemarle (704-982-0101) to discuss possible upsizing of the pipe. If the street is not under NCDOT maintenance, the property owners are responsible for any maintenance of such streets. The property owners may contact the NCDOT to request that their street be accepted for state maintenance.

- 4. A culvert is placed in a new road at the lower edge of a subdivision. The culvert is placed in a broad shallow swale (the natural watercourse), where runoff has always occurred. The downstream owner is upset because of the additional flow and particularly because of the concentrated flow from the culvert. While a downstream owner must accept the additional flow, the developer has the responsibility to control velocity in order to prevent soil erosion. If damage occurs due to increased runoff, any issue of damage is a private civil matter between the affected parties.**
- 5. A number of property owners are concerned that fallen and leaning trees and logjams are blocking a stream. They ask local government representatives to clear these out to prevent flooding and to clean up the area. In some cases, the petitioners do not own the property alongside the stream. There are currently no government programs that fund debris removal from streams. In fact, the presence of logs and limbs in streams is normal for healthy streams. The owner of the property where the stream is located is responsible for removal of excessive woody debris to prevent problems with drainageways (open-channel or piped). If a landowner adjacent to the stream causes flood damage to another landowner's property, the problem is a private civil matter between the affected parties.**
- 6. A stream has severe bank erosion at a bend, the result being a home or other structure is in danger of being undermined and destroyed. If the stream is located on the owner's property, then the property owner is responsible for correcting the problem. An engineer should be contacted to assess the condition of the endangered building. If the erosion is caused by increased flows from an adjacent owner, then it is a private civil matter between the affected parties.**
- 7. A corporation develops a large shopping center. In the grading plan, they make a deep cut alongside an adjacent owner. Later, this rather steep slope is subject to a landslide, the result being, part of the adjoining owner's land is damaged. The developer must control the erosion on his or her property and has the duty of subjacent support. The damage issue is a private civil matter between the affected parties.**
- 8. A homeowner has a swampy area in the rear of his or her property (which could be classified as a wetland). The owner wants to fill the area to eliminate wetness, mosquitoes, etc. If the disturbed area is greater than an acre, a permit must be secured from Cabarrus County. The owner should also contact the US Army Corps of Engineers and the state Division of Water Quality regarding possible "404" and "401" program permitting requirements for construction work in the wetlands. If permitting is not required, the property owner can proceed at his or her own risk. The Cabarrus County Health Alliance Environmental Services staff is an excellent source of information on mosquito control.**
- 9. A homeowner has a problem with a wet basement or crawl space due to a high water table (particularly in the spring or winter). In most cases, wet basements and crawl spaces are caused by roof drains not being directed away from the house or by intrusion of ground water. The property owner should call a contractor or waterproofing consultant.**
- 10. A landowner is experiencing mud or muddy water in his or her pond or stream. The sediment can be traced to a nearby development being graded or from a farm upstream from their property. If the sediment is from construction activity, the developer is responsible for controlling the erosion on his or her particular site. If silt has been deposited in the stream or pond from the upstream development, local governments can only require the upstream owner to maintain and/or fortify his or her erosion control measures to prevent**

sedimentation downstream. The Cabarrus Soil and Water Conservation District has jurisdiction on agricultural land where sediment may be originating from a farm. Any issue regarding damage is a private civil matter between the two property owners. Sometimes, discoloration of water is caused by turbidity. Turbidity is caused by extremely fine particles being held in suspension in water. Erosion control devices will not remove these particles from the runoff. This is a common problem, especially considering the amount of clay in our soils. Normally, the discoloration disappears in time as the particles settle out.

11. **A property owner wishes to pipe a ditch on his or her property.** Plans to alter any drainageway must be prepared by a registered engineer or land surveyor and must be reviewed by local government representatives prior to any construction. The designer or property owner should verify that the site is not located in a Water Supply Watershed Critical Area, where piped drainage is not allowed.

What Local Government Can Not Do

1. Local government representatives cannot use taxpayer funds to solve individual problems or private disputes between property owners.
2. Local government representatives do not maintain drainageways on private property. Maintenance of pipes and open channels on a lot are the responsibility of the individual property owner(s).
3. Local government representatives have regulatory authority for water quality protection and zoning. If a developer is applying for a grading permit or is securing approval of a subdivision plan, local government planners can refuse to approve the plan if drainage measures are inadequate. For example, a submitted plan may indicate culverts which local government engineers believe are too small or are located in the wrong place. Or a plan may indicate the developer wants to fill in a floodplain, build on a floodplain or any other action which would cause flood damage either on the proposed development or on property adjacent to it. Local government representatives can refuse to approve these plans. However, the state NC Division of Water Quality in the Department of Environmental Quality has regulatory authority for sediment and erosion control.
4. If the developer is seeking approval of a subdivision plan, local government can require drainage easements along natural swales. However, the local government representatives can only recommend diversions and property line swales to prevent surface runoff from one lot to another. If the developer proposes a deep cut adjacent to another property and local government representatives believe it won't be stable, approval of the plan can be withheld. However, if the development plan has been approved, the site graded, seeded and stabilized, and some time later erosion occurs, local government representatives have no authority to take action. Approval of a plan does not release a developer/owner from duties and responsibilities under the common law, nor does it mean the affected property owner does not have any remedies. However, almost all the examples above are "private nuisance" actions, and can only be resolved through the courts as a civil matter between the affected property owners.

What Local Government Can Do Under Exceptional Circumstances

1. If the situation is causing erosion and, in particular, sedimentation on neighboring land and streets, this is a violation of the Cabarrus County Erosion and Sedimentation Control Ordinance and enforcement action can be taken by the Division of Water Quality. Contact the Mooresville office at 704-633-1699.
2. If the recorded drainage easements are part of a water quality protection system, any actions taken to reduce the effectiveness of any part of the system is a violation of applicable regulations and/or ordinances. As an example, a series of diversions and swales are planned, approved and built to divert water to a water quality pond. If the diversions or swales are filled in so as to render them ineffective, this would be a violation of the applicable local government regulations and ordinances, and enforcement action can be taken.

SUMMARY

Most "drainage complaints" typically brought to the attention of local government representatives involve disputes between property owners, and as such, are outside the authority of local

governments. However, staff working with Cabarrus Soil and Water Conservation District, Cabarrus County Watershed Improvement Commission and the federal Natural Resources Conservation Service can provide technical assistance on private and public property.

Helpful Numbers	
Division of Water Quality- Mooresville, NC	704-663-1699
Cabarrus County Planning and Zoning Services Department	704-920-2141
Cabarrus County Soil and Water Conservation District and Watershed Improvement Commission	704-920-3300
City of Concord Customer Care Center	704-920-5555
City of Concord Environmental Services / Stormwater Division	704-920-5360
City of Kannapolis Development Department	704-933-5999
City of Kannapolis Public Works Department / Engineering Division	704-920-4200
NC DENR / Division of Water Quality / Wetlands Unit	919-733-1786
U.S. Army Corps of Engineers Asheville Regulatory Field Office	828-271-7980 x 5

Click www.bae.ncsu.edu/bae/programs/extension/publicat/arep/waterlaw.html for more information on water law in North Carolina.