

Regulation of Pre-Development Site Activities

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ACC and other jurisdictions have experienced significant resource destruction prior to development plans being approved at the hands of surveyors, soil testers, geotechnical specialists, and the like. These activities can cause soil erosion, the loss of valuable tree cover, and may include illegal grading - all in the name of site exploration. The focus of this memo is to determine how these pre-development land disturbance activities can be regulated.

Typical Development Patterns

As a licensed landscape architect (VA) with over ten years of experience, including more than six years in the land development industry, I've seen a variety of land development activities. In my experience, most normal pre-development activities have fairly limited site impacts. Typical pre-development activities often include things such as testing for septic systems, soils or geologic information, and site surveying.

Testing for septic systems may include smaller test-pits, or larger (4' x 4') pits dug using a back hoe. These test pits are generally left open for limited periods, then backfilled to limit potential liability. Site geology and soils information may require a vehicle-mounted drill rig, and is often limited to multiple shallow test holes of less than 12" diameter. Occasionally larger pits may be dug with a back hoe or similar. Again, test holes are usually back-filled relatively quickly to limit liability.

Disturbances associated with a normal site survey may include the installation of survey monumentation, or vegetation clearance. Survey monumentation generally has minor impacts, the most significant being installation of a 4" to 8" concrete monument with related excavation. Field topographic surveys require unhindered site access and open visibility, and as such impacts from vegetation clearance may be more significant. Wholesale removal of trees is not required, but undergrowth may be removed from wooded areas, or overgrown fields may be brush-hogged. As such, soil disturbance should typically be minimal.

In both of the previous examples there may be additional impacts due to site access, as temporary pathways are utilized for vehicular activities. In some situations during wet periods or with soft soils, the traffic areas can become rutted or eroded.

Property owners or developers may attempt to circumvent the spirit and intent of ordinances under the guise of legal uses such as 'testing' or 'agriculture' but this

is not required as a part of conventional development. I have seen instances where trees are removed to avoid complying with tree preservation measures, where sites are cleared and graded, or where site material is removed for use as fill material elsewhere. In my opinion, it is these types of activities that pose the greatest threat to water quality, and require regulatory control.

Regulatory Approaches

It is important to balance the need for regulation with the cost, hassle, and impact. While it would be possible to require permits for any surveying, site investigations, or other pre-development site work, it is probably not a good use of the resources of either the agency or consumer.

Some types of regulations that appear to work are grading permits and tree removal permits.

Grading Permits

Grading permits are often required when the area of impact is greater than a given size, or meet other requirements. There are typically exemptions for normal types of uses such as agriculture or landscaping. With the requirement for grading permits it can allow enforcement of sedimentation & erosion control measures, as well as site inspection.

Fairfax County, VA (1) requires a grading permit in the following instances:

- Disturbs more than 2500 square feet of land OR,
- Blocks existing drainage patterns OR,
- Adds or removes more than 18" of soil.

Portland, OR (4) requires grading permits for all activities, with exceptions for a number of specific minor activities.

Tree Removal Permits

Tree removal permits are often required for removal of trees over a given size.

Portland, Oregon's Tree Cutting Ordinance (3) regulates the cutting of trees 12" diameter or greater. Portland (4) also requires a permit for tree cutting (except Christmas trees) and root grubbing operations on slopes with gradients which, in whole or in part, exceed 25%. This regulation applies when more than five trees of six-inch diameter are to be cut or if the area to be cleared is greater than 2,500 square feet.

Atlanta (5) requires a tree removal permit for all trees of 6" DBH or greater, or pines of 12" DBH or greater.

As a part of the enforcement process, it may be possible to review the historic vegetation of a site via aerial photographs. Depending on the availability of imagery, a review of site conditions over a given period (i.e. 5 years, etc.) as a part of the development review may be an effective way to identify unpermitted site clearing and enforcement of tree protection ordinances.

Education and Certification

There are a number of alternatives for education and certification to ensure that area professionals are aware of the need for preserving water quality, and the requirements for work within the local jurisdictions.

Virginia (2) issues "Responsible Land Disturber Certification" through the Virginia Department of Conservation and Recreation (DCR). This program is a part of the Virginia Erosion and Sediment Control (ESC) Program, and is intended to improve ESC compliance throughout the state.

It may also be possible to develop guidelines for use and erosion & sedimentation control, and forward them to area professionals. Local surveyors, civil engineers, geotechnical engineers, and septic installers may be appropriate professionals.

Conclusion

It appears to be up to the specific jurisdiction to determine what they would like to regulate, and what problems they want to address. If Athens-Clarke County would like to address pre-development activities, tree protection, grading permits, and education may all be suitable subjects.

Sources

1. Fairfax County, VA - http://www.fairfaxcounty.gov/dpwes/publications/grading_plans.htm
2. Virginia - http://www.dcr.virginia.gov/sw/es_rld.htm
3. Portland, OR - <http://www.portlandonline.com/parks/index.cfm?c=39712>
4. Portland, OR - <http://www.portlandonline.com/auditor/index.cfm?c=28670>
5. Atlanta, GA - http://www.atlantaga.gov/client_resources/government/planning/arborist/tree%20ordinance.pdf