

STORMWATER DRAINAGE

WHAT IS IT?

The State of North Carolina has a State StormWater Management Program, established in the late 1980's; affecting developments in 20 coastal counties (including Beaufort County). This of course includes Cypress Landing. The program manages impervious surfaces, runoff protection of sensitive waters, maintenance of vegetative buffers, transportation of runoff through vegetative conveyances, etc. More information about these state regulations can be found on the internet at <http://www.enr.state.nc.us/> under the "Rules of Regulations" section.

The state requirement is designed to comply with federal EPA regulations covering the same issues. Information on the EPA regulations governing this area may be found on the internet at <http://cfpub.epa.gov/npdes/stormwater/swphases.cfm>. These EPA regulations result from the Clean Water Act of 1987.

The Cypress Landing stormwater drainage system is a professionally engineered system. Its design, developed by Weyerhaeuser Real Estate Development Co (WREDCO), has been submitted to, approved by and permitted by the State of North Carolina, Department of Environment and Natural Resources (NCDENR) and the Division of Water Quality (NCDWQ). It is intended to provide a means to remove storm water runoff throughout the community in a manner that meets the requirements of both Federal and State laws.

The stormwater drainage system consists of roadside swales (ditches), some curb and gutter collection swales, catch basins, installed culverts and underground piping feeding into both ponds and wetland areas where runoff is collected, directed and eventually returned to Chocowinity Bay.

HOW DOES IT WORK?

Our stormwater drainage system is a gravity system depending on the collection of runoff which does not naturally percolate into the ground following a rain or melting snow event. This gravity system depends on a certain amount of absorption and is linked to the impervious surface limitations that each property owner is permitted on their lot(s). The Impervious limit is the amount of non percolating area allowed by the NCDWQ (house, patios, sidewalks and driveways). It does not include any mechanical devices such as pumps, valves, motors, water treatment facilities, etc., with the exception of the lake(s) floodgates and golf course irrigation system.

The water that does not percolate finds its way into a network of swales, underground piping and retention ponds and lakes which eventually drain into Silas Creek, Rice Patch Creek, wetland areas and/or Chocowinity Bay.

There are no treatment facilities for the stormwater that returns to the bay. Therefore it's very important that the system work as designed to ensure that water that has been "naturally cleansed" finds its way into the bay. This natural cleansing is accomplished by movement through vegetation/grass and wetlands thus allowing time for the settlement of solids.

WHAT ARE THE PERMITS ISSUED BY THE STATE?

Cypress Landing has both high and low density permits.

The low density permits require (among other things) that:

- The only runoff conveyance systems allowed will be **vegetated/grass conveyances** such as swales.
- No piping shall be allowed except: (a) that minimum amount necessary to direct runoff beneath an impervious surface such as a road and (b) that minimum amount needed under driveways to provide access to lots.
- No homeowner/lot owner/developer shall be allowed to fill in, alter, or pipe any swales without receiving the proper approvals from the State of North Carolina.

The low density permits also define the allowable impervious area for each building lot included in that permit.

The high density permits are issued for sections where the retention ponds are located and contain the same language regarding alterations to the drainage system by property owner and others.

The intent is that runoff moves slowly along the swales, impeded by vegetation/grass and naturally cleansed by that vegetation and by travel through wetland areas before it finds its way back to the bay. Rapid movement (such as through a pipe) or movement along non-vegetated paths defeats the purpose of the system and could create erosion.

WHO'S IN CHARGE OF IT?

The permits were issued to WREDCO to construct, manage, and maintain the system. WREDCO was responsible to ensure that the system was properly built and that all requirements of the permits were adhered to during individual home construction. These permits will soon be re-issued to the Cypress Landing Master Homeowners Association (CLMHOA) who will have the task of managing the system.

Generally, the property where the roadside swales are located is owned by North Carolina Department of Transportation (NCDOT). These swales are usually on their right of way. While NCDOT is technically responsible for the functional maintenance of these swales, the CLMHOA, in order to preserve the appearance of the community, has a vested interest and it is expected that each property owner will routinely maintain the portion (s) of the system that are adjacent to their property. This would include cutting the grass and removal of debris accumulations. Common areas and major infrastructure maintenance may be accomplished by the CLMHOA supported by NCDOT.

The functionality of the system will be monitored by the Buildings and Grounds Committee (B&G) although the responsibility for the management of the system, changes to the system and other technical issues relating to the administration of the system will be that of the CLMHOA.

WHAT LIMITATIONS APPLY TO MY OWN PROPERTY?

You cannot exceed the impervious surface allotment for your lot. This was a part of the permitting process that either WREDCO or the Architectural Control Committee (ACC) evaluated and approved when you submitted your house plans for approval prior to building.

Anything that you wish to do on your property that would change that original impervious surface coverage **MUST** be submitted for approval to the ACC prior to implementation. This would include projects such as expanding a patio, driveway, parking area, etc. as well as large projects such as putting an addition on your home or adding a detached building.

If you live adjacent to a water feature or wetland area, you cannot place any permanent structures within 50 feet of the water's edge: plus there are significant other restrictions on the activities that are permitted within this zone.¹ You also must maintain any vegetative buffer that exists along the edge of the water in a manner consistent with the Cypress Landing Lot Maintenance Policy, i.e. cutting, mowing, trimming etc.

If you have an easement on your property that has on it or in it a portion of the storm water drainage system (collection swale, catch basin, underground piping involved with the system etc.), **YOU MAY NOT MAKE CHANGES TO ANY PART** of these systems without first contacting the CAM and being directed to the proper agencies for obtaining the necessary approvals.

WHAT LIMITATIONS APPLY AT THE STREET SIDE IN FRONT OF MY PROPERTY?

Many roadside swales in the community have a slope of only 3 inches or less per 100 feet, so it takes very little change in elevation to defeat this slope. Modifying the swale could cause your or your neighbors swale to backup, drain poorly or completely stop flowing.

Therefore care and proper engineering is needed when you sod your swale (refer to the Cypress Landing Building Guideline). Additionally, before you modify/fill your swale, and place a pipe into your swale (other than under your driveway), or remove the vegetation in the swale and replace it with rocks, gravel, etc, you must first notify the CAM and consult with the NCDOT.

You need to perform routine maintenance (grass cutting, etc.) and debris clean-up in the swale in front of your property. Additionally, you should not permit the dumping of materials into any of the drainage swales: and if during the process of work on your property a contractor impacts either a roadside or a collection swale, you should ensure that it is returned to design specifications following that work. Assistance in effort, if required, is available from the ACC and or B&G.

¹ See NCDENR Tar/Pamlico River Basin Rules 15A NCAC 2B.0259

WHATS THE PROCEDURE IF I WANT TO MAKE A CHANGE?

Any change or alteration to a portion of the Cypress Landing Stormwater Drainage System requires prior approval from the NCDENR, the NCDOT or both. Application for any change should be made to the proper state authority. The CAM should be informed and will be able to provide the phone number and addresses of the NCDENR and NCDOT.

Requirements associated with the drainage system can also be found in the Cypress Landing Building Guidelines.

WHERE DO I GO IF I HAVE A PROBLEM WITH STORMWATER DRAINAGE ON MY PROPERTY?

Initial contact to report your problem should be to the Community Association Manager. The CAM will record your complaint and direct you to the proper department.

Buildings and Grounds Committee
7/20/05