4.4 BUFFER ZONES AND HYDROMODIFICATION MANAGEMENT

Buffer zones protect waterways, tidal waters, and aquatic resources from the short- and long-term impacts of development activities. The buffer width needed to perform properly will depend on the size of the stream and the surrounding conditions, but a minimum 25-foot undisturbed vegetative buffer is recommended for all waterbodies, even the smallest perennial streams. Where feasible, riparian buffers should be sized to include the 100-year floodplain.

Buffer zones shall remain free of construction, development, or other alterations. By preventing hydromodification (channelization, stream straightening, filling of headwater, stream enclosure pipes/culverts, dams), natural drainage and aquatic systems are preserved, thus, enhancing water quality treatment and preserving natural floodplain characteristics that slow and store floodwaters when compared with channelized systems. This promotes natural management of storm events and helps to greatly reduce long-term maintenance costs. The number of roadways crossing through the buffer zones should be minimized and constructed only when necessary, such as when a significant portion of the site can only be reached by crossing a buffer zone. Other alterations within buffer zones beyond the 25-foot minimum could include utility crossings, when absolutely necessary, low impact parks, and open space. Roadways and utilities crossings should be approximately perpendicular to the buffer zone. Low impact park development within the buffer zone should be limited to trails, picnic facilities, and similar projects that do not significantly alter the existing vegetation and are more resistant to flood damage. Parking lots and roads significantly alter existing vegetation and are not considered low impact.

No stormwater treatment facilities, golf courses, septic tanks, drain fields, or wastewater irrigation shall be located in the buffer zone. Manicured lawns and the application of herbicides shall not be allowed in the buffer. Stormwater discharge from development and water quality measures should be dispersed into overland sheet flow before reaching the buffer zone.

CREEK BUFFER ZONES

Creeks or swales draining less than 320 acres but more than 40 acres shall have a minimum buffer width of 25 feet from the top of bank on each side of the creek or swale or the buffer setback shall be the 100-year floodplain, whichever is greater.

Creeks or rivers draining 320 or more acres shall have a minimum buffer width of 50 feet from the top of bank on each side of the creek or river or the buffer setback shall be the 100-year floodplain, whichever is greater.

WETLAND/BAY/TIDAL WATERS/DEPRESSION STORAGE BUFFER ZONES

A buffer of 25 feet shall be maintained along all tidal waters/coastal marshlands, measured horizontally from the estuarine area.

A buffer of 25 feet shall be maintained along all wetlands as measured from the inland edge of the wetland.

A buffer of 25 feet shall be maintained along all depression storage basins as measured from the edge of the high-water mark. Additionally, the volume within the natural depressions deeper than 2' and with a surface area larger than 1 acre shall be calculated and maintained so as to not adversely affect upstream/downstream properties. If there are no practical alternatives to maintain the depression storage volume at its existing location, the loss of volume shall be mitigated for on-site and within the same drainage basin. These depressions can be used toward the required detention storage.