



## Policy 11

### SEDIMENT DISPOSAL FOR DETENTION BASIN MAINTENANCE

When properly designed, stormwater detention basins will accumulate significant quantities of sediment over time. Sediment gradually reduces the available stormwater storage capacity of the basin. A rule of thumb is that approximately 1% of the storage volume capacity associated with the 2-year design storm can be lost annually. Therefore, approximately 20% of a pond's total storage capacity can be lost within 20 years.

However, the actual sediment accumulation rate is dependent upon a number of factors including watershed size, facility sizing, upstream construction, nearby industrial activities and land uses, numbers of leaking vehicles, use of sand and salt during winter, etc. Thick grass and vegetation will retain sediment and silt at a faster rate.

In addition to long-term maintenance, sediment disposal is usually necessary during the construction process. Erosion control practices and devices are not totally effective at reducing and eliminating all sediment. The developer must ensure that the designed detention volume has been restored and that all graded surfaces have been completely stabilized at the end of construction.

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The sediment basin shall be inspected on a regular basis to determine the impact of existing sedimentation on the capacity of the basin. Inspections should occur during dry weather and wet weather conditions. In general, remove sediment prior to significant accumulations using a combination of equipment methods and hand shoveling. Typical intervals for sediment removal will be every 5 to 7 years. Typical intervals for sediment removal for a sediment forebay or other pretreatment settling basin will be once a year.

#### Assessment and Disposal:

1. If the detention basin meets any of the following criteria, then contact the Tennessee Department of Environment and Conservation (TDEC) for further regulations and recommended disposal guidelines.
  - a. Known contaminants are contained in the stormwater runoff or the sediment.
  - b. The detention basin receives stormwater runoff from an industrial site.
  - c. The detention basin receives stormwater runoff from a fueling center.
  - d. The detention basin receives stormwater runoff from one or more commercial businesses with a total parking area of at least 120,000 square feet or 400 parking spaces.
  - e. The Engineering Director has reason to believe that contaminants are present based upon scientific or engineering information.

In all cases, treat sediment from detention basins as potentially hazardous soil until proven otherwise. Sediments should be sampled and identified before removal and disposal operations proceed. Contact the local office of TDEC - Division of Water Pollution Control (865-594-6035) to discuss special disposal procedures.

2. If the detention basin does not meet any of the above criteria, or if the sediment has been tested and is determined to be free of contamination, then the following disposal practices are allowed.
  - a. Disposal at a Class III or Class IV landfill.
  - b. Use for fill material, cover material or land spreading on the project site.
  - c. Other disposal materials as approved by the Engineering Director.

All sediment which is disposed onsite must be prevented from entering the sediment basin, any drainage channel or culvert, natural creeks or streams, or any other component of the stormwater drainage system.

The following table is a list of local landfills that may accept sediment. Contact each landfill for costs and regulations associated with sediment disposal. This list is not intended to be complete or inclusive.

<b>Landfill</b>	<b>Location</b>	<b>Phone</b>	<b>Type</b>
Burnett-Armstrong Demolition Landfill	3330 Delrose Avenue Knoxville, Tennessee	865-525-6645	Demolition
Poplar View Class III/IV Landfill	7826 Rutledge Pike Knoxville, Tennessee	865-525-7720	Demolition
Ridgeview Demolition Landfill	8723 Oak Ridge Highway Knoxville, Tennessee	865-690-9436	Demolition
Yarnell Demolition Landfill, LLC	1550 Lamon Quarry Road Knoxville, Tennessee	865-470-0023	Demolition
Chestnut Ridge Landfill & Recycling Center	240 Fleenor Mill Road Heiskell, Tennessee (in Anderson County)	865-457-7810	Sanitary