

## LAKE RETAINING WALL GUIDELINES

The intent of this document is to offer guidelines for those interested in protecting their property from lake erosion. This is not an all inclusive document with regard to engineering, design, construction, or the like, and is not to be relied upon as a substitute for hiring a contractor or other competent professional.

The CWLHOA and community are very concerned about the expense being incurred dredging the lakes. Because of this process, our community funds are being tied up for maintenance instead of being used to enhance our community.

Owners of lake front property have additional expenses and responsibilities that are incurred. One of these responsibilities is protecting your property from erosion.

Your community Lake Committee members have compiled some information to guide homeowners when installing retaining walls. We hope that you will find the information useful.

### EDUCATION

1. Constant water movement causes erosion. The lapping of the water on your property slowly eats away at the waterline. Over time there is a gap between the lake bed and your yard. Generally, when we get one of our torrential downpours big chunks of unprotected yard break away and fall into the lake bed.
2. Lack of proper foundation and backfill for existing walls is a major culprit of erosion. If a wall was initially built incorrectly the same scenario occurs only it takes longer. The ground will sink behind the wall. Dirt can be added to the top but that is just providing more fill for the lake. Over time this gives the impression that the lake is not as full as it used to be. The erosion in the lake may be one reason it appears that our lakes are not maintaining the water level they used to.

### GUIDELINES

1. Have plat available or a survey of your property. Most lake front homeowners actually own property into the lake. Whether this was deeded at the time of purchase or because of property erosion it is yours to maintain.
2. Choosing a material. Concrete, rip rap, Versa-Lok blocks to mention a few. Because of environmental issues TDEC prefers that railroad ties not be used.

## SPECIFICATIONS

1. The base of the wall has to be below the water line. A trench will have to be dug to accommodate a minimum of 6" into solid lake bed by 24" wide for the base. The base should consist of COMPACTED gravel or crushed stone. The first layer of wall material should be below water level. If a system other than rip rap is used the 1<sup>st</sup> layer should be anchored with rebar.
2. Once the 1<sup>st</sup> layer of wall material is installed cover with fabric. This will keep the lapping water from reaching the base of the wall and damaging its' integrity. This is very important because our water level drops during drought season.
3. Backfill material for the next layer must consist of COMPACT native soil.
4. Once the wall has reached above water level the next 13" of backfill will consist of COMPACTED drainage aggregate. This should be a minimum of 1' wide.
  - a. Pour 3" of pea gravel
  - b. Compact
  - c. Lay a drainage pipe. 3-4" perforated pipe should work
  - d. Add 10" of pea gravel on top of that. Compacting as you go
  - e. If your wall is more than 4' tall it is recommended that you use fabric every 1' as a soil reinforcement
  - f. Remaining backfill will be COMPACT native soil topped off with sod.

Refer to illustration on last page.

## **PROFESSIONAL INSTALLERS**

Building a retaining wall correctly takes special knowledge. The following list of names, are of individuals or entities that may be able to assist you in completing a job of this magnitude.

All Seasons Precision Landscape Co	Contact:	901-619-6643
PCS LLC	Contact: Larry Lee	901-496-3975
Sweeney's Hardscapes Inc.	Contact: Todd Sweeny	901-218-2041

It is the responsibility of each homeowner to retain the services of a competent professional whom you are comfortable working with. These names are provided for your convenience only as potential options, and the CWLHOA and Lake Committee are not legally or financially responsible for the actions or inactions of these individuals or entities.

