

**CITY OF TEGA CAY  
SOUTH CAROLINA**

**ORDINANCE NO. 96 AMENDED**

AN ORDINANCE TO PROVIDE REQUIREMENTS FOR THE CONTROL OF EROSION AND SEDIMENTATION AND TO ESTABLISH PROCEDURES WHEREBY THESE REQUIREMENTS SHALL BE ADMINISTERED AND ENFORCED.

Now, therefore, be it ordained by the City Council of the City of Tega Cay, South Carolina, in meeting duly assembled:

**Section 1.     PURPOSE:**

The purpose of this Ordinance is to conserve the land, water and other natural resources of the City and to promote the public health and welfare of the people by establishing requirements for the control of erosion and sedimentation, ESTABLISHING GRADES and by ENACTING procedures whereby these requirements shall be administered and enforced. The Ordinance specifically deals with the clearing of land on property for any purpose including, but not limited to, home or business construction, landfills, parks, common area, recreational areas, or any use allowed in the City of Tega Cay Land Development Code or Zoning Ordinance. Tree removal activities shall be covered in Ordinance No. 97. Further, this Ordinance shall repeal Ordinance No. 41 in its entirety. This Ordinance by reference adopts the State of South Carolina Department of Health and Environmental Control Stormwater Management and Sediment Reduction Act of 1991, Chapter 72 Regulations and any amendments thereafter.

- (a)     City Council hereby authorizes the Administrator all powers, including issuance of summons, necessary to enforce this Ordinance.

**Section 2.     DEFINITIONS:**

For the purpose of this Ordinance, the following terms, phrases, words and their derivations shall have the meanings given herein. When not inconsistent with the context, words used in the present tense include the future, and words in the singular number include the plural number. The word "shall" is always mandatory and not merely discretionary.

- (a) **"Administrator"** is the Planner/Code Enforcement Officer and such duly appointed agents as may be authorized by the authority of the Mayor.
- (b) **"Clearing"** means any activity that removes the vegetative ground cover.
- (c) **"Cutting of Trees"** is the cutting or removal of any plant with a trunk diameter greater than or equal to four (4) inches measured one (1) foot above the ground.
- (d) **"Excavating"** means any digging, scooping or other methods of removing dirt or vegetation.
- (e) **"Filling"** means any depositing or stock piling of materials, including but not limited to, dirt, construction materials, concrete, rock, stone, tree parts.
- (f) **"Frontal Area"** is the open, unoccupied space between the street property line, or closest to the street, and the face building line of a principal building or structure, projected to the side lot lines of a lot.
- (g) **"Grading"** means any excavating or filling of the land.
- (h) **"Improved"** is an area where service infrastructure is available and could have one or more buildings.
- (i) **"Land Disturbing Activities"** means any activity which may result in soil erosion from water or wind and the movement of soil or sediments into Lake Wylie, or other waters, or onto the streets of Tega Cay or the property of others, or into the air, including, but not limited to, clearing, grading, excavating, transporting, filling of land, and mass cutting of trees.
- (j) **"Land Disturbance Permit"** means a permit issued by the City for clearing, filling, excavating, grading, transporting, or removal of plants or the combination thereof.
- (k) **"A Nuisance" (danger)** is the act of causing any soil, plants or debris to be deposited outside its original bounds, particularly on the streets, street right-of-ways and adjacent property, utility right-of-ways, any waters or waterways, and any other unpermitted activities including tree removal.

- (l) **"Person"** means any individual, partnership, corporation, contractor, state or instrumentality of a state or the legal representative thereof.
- (m) **"Removal"** is the actual removal or causing the effective removal through damaging, poisoning or other direct or indirect actions resulting in the death of a tree.
- (n) **"Shrub"** is any woody plant of low height with several stems.
- (o) **"Transportation"** means any moving of materials from one place to another when such movement results or may result in the destroying of the vegetative cover either by tracking or buildup of materials.
- (p) **"Tree"** is a perennial plant having a permanent, woody, self-supporting main stem or trunk, ordinarily growing to a considerable height, and usually developing branches at some distance from the ground.
- (q) **"Unimproved"** means any area with no service infrastructure and/or no buildings upon it.

**Section 3. ADMINISTRATION:**

The Planner/Code Enforcement Officer is hereby delegated authority to administer this Ordinance under the supervision and direction of the City Administrator and the Mayor.

**Section 4. EROSION AND SEDIMENT CONTROL PROGRAM:**

Erosion and Sediment control is of paramount concern to the City. Appendix 1 has been included to provide guidelines to the Planner/Code Enforcement Officer and developers/builders in the preparation of erosion control plans. They are not meant to prevent the Planner/Code Enforcement Officer from utilizing other means/methods/practices to control erosion. However, the final authority as to the approval of an Erosion and Sediment Control Plan is the Ordinance Administrator.

**Section 5. GRADING/FILLING LIMITATIONS OPTIONS:**

For the purposes of issuing a permit to either grade or fill a lot, either Option I or Option II below shall apply (applicant must designate Option chosen on the application) However, to select Option II the lot must require more than thirty percent (30%) of it to be graded due to either

topography, size and shape of lot, or size and shape of proposed structure and appurtenances. See Appendix II.

**Option I.** Land disturbance shall be limited to the area within twelve feet surrounding the footprint of the house and to the area designated for the driveway. Additional land disturbance in the frontal area is permitted if additional trees four (4) inches in diameter or greater are removed per Ordinance No. 97 Amended, Section 8. Regulations governing tree removal on construction sites are contained in Ordinance No. 97 Section 8 (a) through (f) excluding (b).

**Option II.** This option is expressly intended to accommodate steeply sloping lots. Land disturbance shall be limited to the area within the building setback lines, plus frontal area as defined. The reference point for establishing grade may be relocated from street edge to a point where existing topography changes from horizontal plane. New reference point location must be established by concurrence between Code Enforcement Officer and builder/contractor. Minimum slope must be maintained from new reference point following excavation. Downgradient lots must ensure fill does not raise slope line above required negative grade. Regulations governing tree removal on construction sites are contained in Ordinance No. 97 Section 8(a) through (f).

An illustration is included in this Ordinance for further clarification of any cut/fill to individual building lots. The Planner/Code Enforcement Officer, with the concurrence of the Planning and Zoning Commission, may make modifications if absolutely necessary.

**Section 6. REGULATED LAND DISTURBING ACTIVITIES:**

- (a) No person shall engage in any land disturbing activity covered under this Ordinance until he/she has submitted to the Ordinance Administrator an erosion and sediment control plan for such land disturbing activity and until that plan has been reviewed and approved and a Land Disturbance Permit has been issued as required by this Ordinance.
- (b) Any person who owns, occupies, or operates private agricultural or forest lands shall not be deemed to be in violation of this

Ordinance for land disturbing activities which result from the normal functioning of these lands.

- (c) As provided for in the South Carolina Code of Laws, any Federal or State agency that undertakes a project involving a land disturbing activity shall be exempt from these provisions, including land disturbing activities undertaken by the City relating to the repair and maintenance of existing facilities or structures.
- (d) Whenever a land disturbing activity is proposed, the preparation, submission and approval of the required erosion and sediment control plan shall be the responsibility of the landowner. The Land Disturbance Permit shall be issued jointly in the name of the owner and the contractor. The contractor shall verify that the erosion and sediment control plan shall have been approved and a Land Disturbance Permit issued prior to engaging in any land disturbing activity. The contractor shall insure that any of his/her subcontractors engaging in land disturbing activities possesses a copy of and understands the requirements/provisions of the Land Disturbance Permit prior to commencing any land disturbing activities. The owner and contractor shall both be responsible for compliance with the erosion and sediment control plan. The owner and contractor shall both be liable for the penalties for violation.
- (e) The permit holder(s) shall be responsible for compliance with the erosion and sediment control plan as approved by the Planner/Code Enforcement Officer. Compliance shall mean implementing the plan and abiding by the requirements of the plan throughout the land disturbing activity including maintenance of silt fences and any and all other structures required by the plan.

**Section 7. ACTION ON EROSION AND SEDIMENT CONTROL PLANS:**

- (a) Misunderstandings or misinterpretations:
  - (1) To avoid misunderstandings or misinterpretations and to ensure compliance with the requirements of this Ordinance, a consultation between the applicant and the Planner/Code Enforcement Officer is required. The conference is to ensure the applicant understands the Planner/Code Enforcement Officer's interpretation of the applicable requirements of this Ordinance and that the applicant has submitted all of the required information and that the applicant represents precisely and completely what he/she

proposes to do. If the requirements are met, the Planner/Code Enforcement Officer shall approve the plan and shall issue a Land Disturbance Permit within fourteen (14) days. If the requirements are not met, the Planner/Code Enforcement Officer shall not issue a Land Disturbance Permit until the applicant has submitted the required information and/or documents. If the applicant does not provide this information within thirty (30) days, the Planner/Code Enforcement Officer shall disapprove the plan and notify the owner by sending a certified letter to the owner's address, as set forth on the application.

- (2) The Erosion and Sediment Control plan must be in compliance with the requirements of the State of South Carolina Department of Health and Environmental Control Stormwater Management and Sediment Reduction Act of 1991, Chapter 72 Regulations, and any amendments thereafter.
- (b) The approved plan may be amended in the following circumstances:
- (1) When inspection by the Planner/Code Enforcement Officer reveals the inadequacy of the plan to accomplish the erosion and sediment control objectives of the plan, the Planner/Code Enforcement Officer shall determine the needed modifications to the plan and notify the permit holder(s) of said modifications. The owner shall immediately bring the property into compliance with the plan as modified.
  - (2) When the permit holder(s) finds that because of a change in circumstances the approved plan cannot be carried out effectively, he/she shall propose amendments to the plan to the Planner/Code Enforcement Officer. The said Officer shall consider the proposed modifications and approve or disapprove the modified plan within ten (10) working days in writing.
- (c) The Planner/Code Enforcement Officer shall not issue a Zoning/Certificate of Compliance pursuant to Ordinance No. 77, Section 19-46 until and unless a Land Disturbance Permit has been issued.

**Section 8. BOND REQUIREMENTS:**

The City may require from any applicant, prior to the issuance of a Land Disturbance Permit, a reasonable performance bond, cash escrow or other such legal arrangements as is acceptable to the City, to ensure that emergency measures could be taken by the City at the applicant's expense should he/she fail within the time specified to initiate appropriate conservation action which may be required of him/her. Within sixty (60) days of the completion of permanent land stabilization such bond, cash escrow or other legal arrangement, or the unexpended portion thereof, shall be refunded to the applicant or terminated, provided that the approved plan has been completed to the satisfaction of the City.

**Section 9. MONITORING, INSPECTIONS, UNLAWFUL ACTS, AND APPEALS:**

- (a) The Planner/Code Enforcement Officer shall periodically inspect the land disturbing activity to insure continued compliance with the approved erosion and sediment control plan, and to determine that the measures required by the plan are effective in controlling erosion. The right of entry to conduct such inspection shall be expressly reserved in the Land Disturbance Permit.
- (b) It shall be unlawful for any person to engage in any land disturbing activity without first obtaining a Land Disturbance Permit.
- (c) It shall be unlawful for any person to engage in any land disturbing activity that is not in compliance with that person's approved or modified erosion and sediment control plan.
- (d) All appeals to the Tega Cay Board of Appeals must be filed in writing (on a form provided by the City), specifying the reason for the appeal. Such notice of appeal shall be filed within thirty (30) days from the date of any written decision by the Planner/Code Enforcement Officer. The appeal must conform to the provisions of Ordinance No. 77. No land disturbing activity shall be undertaken while a decision is under appeal.

**Section 10. REMEDIES AND PENALTIES:**

- (A) To avoid any hazard or endangerment from pollution or deterioration of the natural land and water, upon finding that any provisions of this Ordinance have not been adhered to constituting a nuisance and/or an immediate danger to persons, property or

other vegetation, the Planner/Code Enforcement Officer shall direct by written order the property owners to remedy the situation.

- (1) The method of service shall be in one or more of the following ways:
    - (a) By personal delivery of the order to the person responsible.
    - (b) By mailing the order by registered mail to the last known address of the owner of the premises.
  - (2) The order shall set forth the time limit for compliance, but shall in no case be longer than thirty (30) days. The said Officer shall have the authority to require immediate compliance to abate nuisance activities.
- (B) If at the end of the time period set forth in the order, the property owner and/or contractor has failed to take action, the hazard or endangerment shall be declared a nuisance, and the Planner/Code Enforcement Officer shall have the work done. The costs of this service, including labor, equipment, materials, and any liability, shall be assessed to the property owner and shall be due and payable within sixty (60) days.
- (C) If at the end of the sixty (60) day period the account remains unpaid, the account is said to be delinquent and the City Tax Collector and Chief of Police are authorized to act within the legal limits to begin the process as prescribed by the South Carolina Code of Law to levy all penalties, execution cost, advertising costs and attorney fees necessary to collect all moneys due this City.
- (D) Any person found in violation of any provisions of this Ordinance shall be punished according to the penalties established by Ordinance No. 70.

**Section 11. SEPARABILITY:**

Should any part of this Ordinance be declared by a court of competent jurisdiction to be invalid, the same shall not affect the validity of the Ordinance as a whole, or any part thereof other than the part declared to be invalid.

**Section 12. EFFECTIVE DATE:**

That this Ordinance shall be and become finally binding immediately after same shall have received First and Second Reading, given in manner required by law.

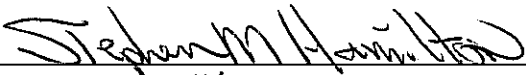
DONE AND RATIFIED in Council assembled on this 20th day of May, 1996.

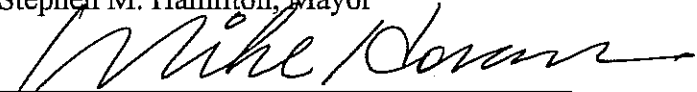
FIRST READING: April 15, 1996

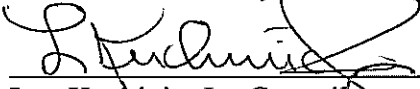
SECOND READING: May 20, 1996

AMENDED FIRST READING: May 19, 1997


AMENDED SECOND READING: August 18, 1997

  
\_\_\_\_\_  
Stephen M. Hamilton, Mayor


  
\_\_\_\_\_  
Michael Horan, Mayor Pro Tempore

  
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Lou Kuchinic, Jr., Councilman

  
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James "Buster" Millwood, Councilman

  
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Mary Lewis, Councilwoman

ATTEST:

  
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Jean C. Varner, City Administrator

# APPENDIX I

## GUIDELINES FOR EROSION AND SEDIMENTATION CONTROL IN TEGA CAY

### EROSION OF SLOPES:

- (1) **Vegetation Covers** - Employed on gentle to moderate slopes; can be with terraces or grassed swales (see below). Types of vegetation appropriate for local climate and soil conditions can be determined from publications of the Soil Conservation Service or from listings at City Hall.
- (2) **Grassed Swales** - Usually used at the terminus of a ditch or pipe-drain. Grassed swales can be constructed along property lines permitting two (2) lots to be serviced by the swale. In cross-section the swale should be parabolic - broader than deep - to prevent erosion of abrupt banks and to least disturb the continuity of the slope surface. On long or steeper slopes, the swale may have a few broad curves to reduce the velocity of the water; the outer portion of the curves require protection of riprap (large blocks of stone the irregularity of which also slows the run-off. Early establishment of the vegetation is aided by use of brush mats (see below), straw and netting, etc.
- (3) **Drainage Ditches** - Usually placed just upslope of the area to be protected. Purpose is to trap both surface run-off and shallow in-seep waters over a broad front and to lead the water laterally to natural gullies, grassed swales, or pipes along property lines. The ditch must slope over its entire length from a mid-high point. The ditch should be 12-18 inches deep (or deeper, if the subsurface waters pose a severe problem), laid with tiles or plastic pipe perforated over the top surface, and covered with pea-gravel except for the last several inches of tamped soil. The perforations are covered with aluminum screening to prevent clogging by soil particles. A cross-section of the ditch is shown in Figure 1.
- (4) **Terracing** - Used as a means to break up a long but moderate slope into controllable segments. (A slope whose pitch is halved will save at least one-third of the soil being lost. If the velocity of the run-off water can be halved, soil loss will be reduced to as little as one-thirtieth of the former amount!)

Most simply, terraces can be constructed of large stones or railroad ties/landscape timbers placed on contour across the slope at the lower point of each segment of slope. Stone blocks or timbers may be drilled and staked with metal rods to hold them firmly in place. Earth can be removed from the upper portion of each segment and filled into the lower part to reduce the overall slope. See Figure 2. Each "flat" has a protective cover of grass, shrubs, pine needles, bark chips, etc. A

gravel-filled, one foot deep trench is often placed on the upslope side of the highest terrace to direct runoff to a boundary gully, swale, or pipe-drain, etc.

- (5) **"Mesh" Covers** - Usually used to control erosion exposed or steep areas. Can be combined with terracing. Pine needles, bark chips, leaves, etc. are held in place by a widely spaced (2"-4") wire mesh staked down. Plantings of sturdy spreading evergreens can be interspersed over the slope through opening cut in mesh. Punctured plastic sheeting laid beneath the cover materials help shed the run-off, but this also impedes the planting process.
- (6) **Drainage Pipes** - Where natural gullies are not available and none of the above techniques seem desirable, buried pipes along property lines may go far in correcting excessive run-off. The pipe should lead to the lowest point on the property or, if possible, into the lake where the run-off must issue onto a pad of large riprap so as to prevent undue erosion at the spillpoint. The pipe should be large enough to carry maximum anticipated flow or use two smaller pipes side by side. Be careful that the pipe(s) does not cause new problems for adjacent homes. (Note: All downspouts should extend away from the building, or, if possible, piped into a natural gully, grassed swale, a ditch or large pipe.)
- (7) **Gully Erosion** - Control by **paving**, at least along the curves, with block stone 8 inches or larger. Paving should extend up gully walls to the maximum water mark expected, and smaller "filler" gravel should pack spaces between the larger blocks.

A simpler and cheaper means of control is **brush mats** - successive, densely packed, overlapping layers of moderate sized tree limbs laid butt end upstream and tied down with wire and stakes. Each layered mat should be a foot or eighteen inches thick and spaces can be entwined with any vines or clusters of leaves available.

## **EROSION OF WATER:**

The bedrock at Tega Cay is quite resistant to erosion; it is the dark gray crushed stone used locally as riprap and road base. However, upon exposure and weathering, it slowly decays to a tan-brown granular subsoil. Erosion of this rock along the lake front is not so much done by the undercutting of lapping waves as erosion notches seldom appear at the base of cliffs; most bases of cliffs extend out into the lake. The cliffs and trees are usually undercut by the gradual erosion of the upper parts of the cliffs by subsurface seepage of water at the soil-solid rock contact. (See Figure 3.) The continual wetting and drying (expansion and contraction) breaks down the rock and loosens the grains. Therefore, the interception of this run-off and seepage along the slope can greatly reduce this erosion and wasting away. This can be accomplished by properly placed and

constructed drainage ditches, terraces or merely a dense vegetation cover. Any water collected and discharged over a bank or cliff must be led to lake level by a paved channel or a pipe, either issuing onto a sufficient pad of riprap or the pipe must be laid out into the lake.

- (1) **Riprapped Waterfronts** - Block stone is placed up to normal lake high water level and extended as an apron perhaps 3 feet or more out over the lake bottom. (See Figure 4.) This apron helps break up the energy of the waves and also serves to trap some shore sediment. Blocks, especially in the apron, should be one foot or more in size. Filler stone is applied to the spaces at least in the upper part of the wall riprap to impede erosion of the cliff face.
- (2) **Sea-Walls** - Pilings embedded in the lake bottom are faced with horizontal heavy planking. The wall is supported further by deadmen, two types of which are shown in Figure 5B. Any space behind the seawall can be built up by lining several feet of the bottom and all of the seawall inner face to within a couple of feet of ground level with widely punctured plastic sheeting. Stone block is filled within and filler stone is applied to the spaces between blocks. Plastic sheet is extended over the top of the stone block and filled with tamped soil and planted.

#### **SEDIMENTATION:**

All of the anti-erosion techniques described briefly above will also aid in the reduction of sedimentation - be it on lower lawns, around docks or filling heads of coves into marshy insect habitations.

- (1) **General Broad Slopes** - Terracing is a simple means of inhibiting sedimentation from slopes by checking the velocity of run-off waters. Drainage ditches across upper slopes also serve this purpose but divert much water to controlled areas as well. Thick grass on any slope is essential in reducing sedimentation.
- (2) **Gullies** - Sediments carried by run-off waters can be controlled in gullies by several means. As described above, brush mats or pads of riprap are useful. Riprap is especially necessary on the outer sides of curves in the gully. Sedimentation dams will contain the sediment for a number of years and can be built so as to be cleaned out from time to time. The dams may be of wood planks, earth packed layer upon layer, concrete, or cement block. Each dam must have spillway around one end or an outlet pipe set about a foot below the top of the dam. All spill water must run over resistant material and must be conducted to ground level at least 8 or 10 feet down stream of the dam. It must issue onto a pad of large riprap to break up the force of the water. In severe problem areas, several dams in succession may be required to prevent excessive sedimentation below. As each dam-basin fills, the stream gradient is locally reduced and water velocity is thereby checked at points along the route. Vertical baffles or plates of

metal or timbers may be built out from one corner of the dam into the catch basin to cause a more complete deposition of sediment within the dam.

- (3) **Silt Fences** - Sediments issuing from a broad slope or areas of "fill" may be controlled and contained by use of one or more silt fences placed along the lower end of the slope. The fence consists of semi- impermeable fabric, closely woven to trap fine sand particles, mounted securely on wooden or, preferably, metal posts spaced not more that eight feet apart. If the fabric is stapled onto wooden posts, the blunt end of the staples and the fabric are positioned on the up slope side of the posts. The bottom of the fabric must be placed, weighted and buried within a trench at least 6 inches below ground level. If the fence will require further support against a high buildup of mud, straw bales should be aligned along the outside of the fence, with the bales cross-staked (from one bale down into the adjacent bale) for support. Care must be taken when crossing gullies or ravines to insure that the fabric is embedded into the ground to prevent underflow.
- (4) **Hay Bales** - Should be set in a trough and cross-staked 6" into the ground. This is acceptable only on minor lower slopes to control erosion.