



## **APPENDIX D**

- **METROPOLITAN CODE OF LAWS §15.64.010 *et. seq.*:  
STORMWATER MANAGEMENT**
- **STORMWATER MANAGEMENT ORDINANCE No.78-840**



**Metropolitan Nashville - Davidson County  
Stormwater Management Manual  
Volume 1 - Regulations**

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### **15.64.010 Definitions.**

As used in this chapter, the following words and terms shall have the meanings ascribed herein:

"Channel" means a natural or artificial watercourse of perceptible extent, with definite bed and banks to confine and conduct continuously or periodically flowing water. Channel flow thus is that water which is flowing within the limits of the defined channel.

"Drainage basin" means a part of the surface of the earth that is occupied by and provides surface water runoff into a drainage system which consists of a surface stream or a body of impounded surface water together with all tributary surface streams and bodies of impounded surface water.

"Erosion" means the disintegration or wearing away of soil by the action of water.

"Flood" means water from a river, stream, watercourse, lake or other body of standing water that temporarily overflows and inundates adjacent lands and which may affect other lands and activities through increased surface water levels, and/or increased ground water level.

"Floodplain" means the relatively flat or lowland area adjoining a river, stream, watercourse, lake, or other body of standing water which has been or may be covered temporarily by flood water. For administrative purposes, the "floodplain" is defined as the area that would be inundated by high water at the flood profile from which the flood protection elevation is established.

"Floodproofing" means a combination of structural provisions, changes, or adjustments to properties and structures subject to flooding primarily for the reduction or elimination of flood damages to properties, water and sanitary facilities, structures, and contents of buildings in a flood hazard area.

"Flood protection elevation" means the elevation which is one foot above the one-hundred-year flood high water profiles as developed by the corps of engineers for the Federal Flood Insurance Study for Davidson County. Until this study is completed and adopted, in areas where such one-hundred-year flood high water profiles are not developed the flood protection elevation is the March, 1975 flood for the Cumberland River and the Stones River, and two feet above the fifty-year developed flood for the tributary streams mapped by the U. S. Geological Survey prior to January 1, 1976.

"Floodway" means that portion of the stream channel and adjacent floodplain required for the passage or conveyance of a one-hundred-year flood discharge. The floodway boundaries are placed to limit encroachment in the floodplain so that a one-hundred-year flood discharge can be conveyed through the floodplain without materially increasing (less than one foot) the water surface elevation at any point and without producing hazardous velocities or conditions. This is the area of significant depths and velocities, and due consideration should be given to effects of fill, loss of cross-sectional flow area, and resulting increased water surface elevations.



"Floodway fringe" means that portion of the floodplain lying outside the floodway. This is the area of the floodplain that may be developed or encroached upon as long as the water surface elevation of the one-hundred-year flood is not increased by more than one foot at any point.

"Green infrastructure" means an approach to wet weather management that is cost-effective, sustainable, and environmentally friendly, which incorporates management approaches and technologies that infiltrate, evapotranspire, capture and reuse stormwater to maintain or restore natural hydrologies. Green infrastructure practices include, but are not limited to open space, rain gardens, porous pavements, green roofs, infiltration planters, trees and tree boxes, swales, and curb extensions.

"Green street" means a public right-of-way that utilizes green infrastructure to manage wet weather flows and enhance water quality.

"Human occupancy" means any portion of any enclosed structure wherein humans principally live or sleep, such as mobile homes, permanent residential activities, semitransient residential activities, health care community facilities, nursing home community facilities, orphanages, family care facilities, group care facilities, or transient habitation.

"Impervious area (IA)" means the portion of a parcel of property that is covered by any material, including without limitation roofs, streets, sidewalks and parking lots paved with asphalt, concrete, compacted sand, compacted gravel or clay, that substantially reduces or prevents the infiltration of storm water. Impervious area shall not include natural undisturbed surface rock.

"Impervious surface" means any ground or structural surface which water cannot penetrate or through which water penetrates with great difficulty.

"Infill (regulated residential)" means the creation of eight hundred to fifteen thousand square feet of additional net impervious area (IA) for a residential dwelling(s) through new development, redevelopment, or rehabilitation in existing neighborhoods.

"Lot" means a tract, plot or portion of a subdivision or parcel of land intended as a unit for the purpose, whether immediate or future, for transfer of ownership or for building development.

Material Increase the Degree of Flooding. The term "material increase the degree of flooding" shall be defined by the following criteria:

1. The proposed development raises the one-hundred-year flood elevation more than one foot; or, when considered in conjunction with other potential developments within the watershed, would contribute disproportionately to increased flooding which when combined with other potential development would cumulatively increase the one-hundred-year flood elevation more than one foot.
2. The proposed development does materially increase the property damage caused by the one-hundred-year flood.



3. The proposed development conflicts with the master plan adopted by the stormwater management committee for reducing flood damage.

One-Hundred-Year Flood. A "One-hundred-year flood" is one that has an average frequency of occurrence of once in one hundred years, determined from an analysis of floods on a particular watercourse and other watercourses in the same general region. Statistically, it has a one percent chance of occurring in any given year.

"Stormwater" shall mean stormwater run-off, snow melt run-off, surface run-off, street wash waters related to street cleaning and maintenance, infiltration other than infiltration contaminated by seepage from sanitary sewers or other discharges and drainage.

"Stormwater master planning district" means a defined geographical area that will benefit from the use of green infrastructure to augment or replace conventionally engineered stormwater management solutions.

"Structure" means anything constructed or erected, the use of which requires a more or less permanent location on or in the ground. Such construction includes but is not limited to objects such as buildings, towers, smokestacks, overhead transmission lines, carports and walls.

1. Structure shall not include fences.

"Structure, permanent" means a structure which is built of such materials and in such a way that it would commonly be expected to last and remain useful for a substantial period of time.

"Structure, temporary" means a structure which is built of such materials and in such a way that it would commonly be expected to have a relatively short useful life, or is built for a purpose that would commonly be expected to be relatively short-term.

"Watercourse" means a channel, natural depression, slough, gulch, stream, creek, pond, reservoir, or lake in which storm runoff and flood water flows either regularly or infrequently. This includes major drainageways for carrying urban storm runoff.

(Ord. BL2014-910 § 1, 2014; Ord. BL2011-940 § 2, 2011; Ord. BL2009-407 § 10, 2009; Ord. BL2008-345 § 1, 2009; Ord. BL2007-1440 § 1, 2007; prior code § 40-1-226)

#### **15.64.015 Stormwater division.**

There is hereby created a stormwater division within the metropolitan department of water and sewerage services ("MWS"), which in coordination with the department of public works, the metropolitan finance director, the metropolitan department of codes administration and the metropolitan planning commission, shall have the responsibility for compliance with the Clean Water Act of 1977, as amended and the National Pollution Discharge Elimination System permit (NPDES) and applicable regulations for stormwater discharges; developing stormwater management plans; identifying capital requirements and developing necessary financing for maintenance and rehabilitation of existing and new stormwater facilities; collecting fees and charges for the division; educating the public on the importance of stormwater management and



pollution control; developing written regulations and technical guidelines as may be necessary to enforce the terms of this chapter; and other related duties as required by the director ("director") of MWS. Nothing in this chapter shall constitute a transfer of the authority from the department of public works to MWS regarding the design, construction, maintenance, repair, and cleaning of storm sewers, which authority is delegated to the department of public works by section 8.402 of the Charter.

MWS shall be responsible for plan approval and construction inspection of both private stormwater facilities and public stormwater facilities not owned by the metropolitan government. Additionally, MWS may accept the responsibility for the operation and maintenance of private stormwater facilities only pursuant to criteria defined and adopted by the stormwater management committee and upon a written agreement approved by the metropolitan council. (Ord. BL2009-407 § 11, 2009; Ord. BL2007-1440 § 2, 2007)

**15.64.020 Director of public works--Authority.**

- A. The director of public works, with the approval of the mayor, shall establish written regulations and technical guidelines as may be necessary to enforce the terms of this chapter. These regulations shall be filed in the metropolitan clerk's office.
- B. Reserved.
- C. The director of public works shall have the authority to inspect private drainage systems within the county, and to order such corrective actions to said private drainage systems as are necessary to maintain properly the major and minor drainage systems within the county. (Ord. BL2009-407 § 12, 2009; prior code § 40-1-227)

**15.64.030 Director of codes administration--Authority.**

The director of codes administration, with the approval of the mayor, shall have the authority to establish such written regulations and technical guidelines as may be necessary to enforce the terms of this chapter. These regulations shall be filed in the metropolitan clerk's office. (Prior code § 40-1-228)

**15.64.031 - Reserved.**

Editor's note— Ord. BL2009-407, § 13, passed March 17, 2009, repealed § 15.64.031, which pertained to funding and derived from Ord. BL2007-1440 § 3, 2007.

**15.64.032 Stormwater fees.**

- A. Definitions. For purposes of this section,
  - 1. "Department" shall mean the department of water and sewerage services.
  - 2. "Director" shall mean the director of the department of water and sewerage services.
  - 3. "Impervious area" shall mean the portion of a parcel of property that is covered by any material, including without limitation roofs, streets, sidewalks and parking lots paved with asphalt, concrete, compacted sand, compacted gravel or clay, that substantially reduces or prevents the infiltration of storm water. Impervious area shall not include natural undisturbed surface rock.



4. "Residential property" shall mean any property whose primary use, as shown on the use and occupancy permit issued by the department of codes administration, is residential single-family or residential two-family.
  5. "Non-residential property" shall mean a parcel of property that is not a residential property as defined in this section.
  6. The "public system" shall mean and include storm water and flood control devices, structures, conveyances, facilities or systems, including natural watercourses, streams, creeks and rivers used wholly or partly to convey or control storm water or flood water within the jurisdictional boundaries of the metropolitan government. The public system shall include, without limitation, natural conveyances (a) for which the metropolitan government has assumed maintenance responsibility; (b) to which the metropolitan government has made improvements; (c) which have or may pose a threat to public property because of flooding; or (d) for which the metropolitan government is accountable under federal or state regulations governing protection of water quality.
  7. "Qualified control structure" shall mean a device or structure meeting design standards and approved by the department that substantially limits the discharge of storm water from a parcel of property into or through any public system or that substantially improves the purity of storm water so discharged.
  8. "User" shall mean the owner of record of a non-exempt residential or non-residential property or the person or entity in possession if other than the owner.
- B. Storm Water Utility and User Fee Established. There is established a storm water utility and a system of storm water user fees for each parcel of property in Davidson County. The fees shall be used by the metropolitan government, acting through the department, exclusively for operation and management of the storm water utility and such storm water and flood control purposes as authorized in Tenn. Code Ann. § 68-221-1101, et seq.. The fees shall be owed jointly and severally by the property owner of record and the person or entity in possession of such property in the amounts shown in Table 15.64.032. For each property having multiple dwelling or commercial units and more than one water meter, the director shall fairly allocate the storm water user fees owed among users based on their actual or estimated proportionate contribution to the storm water discharged by that property.
- C. Exemptions. The following properties shall be exempt from payment of the fees created by this section:
1. Residential properties zoned AG and AR2a of which half or more is used annually for the raising for sale of livestock or crops.
  2. Properties from which no storm water is discharged into or through the public system.
  3. Properties having no impervious area.
  4. Properties wholly within the corporate boundaries of Belle Meade, Berry Hill, Forest Hills, Goodlettsville, Lakewood and Oak Hill. Provided, however, that each such city may, upon approval of its legislative body, enter into the contract attached as Exhibit A to this ordinance, such that all property within its boundaries will participate in the metropolitan government's storm water utility and system of storm water user fees in the same manner as the remainder of the area within the General Services District. Such contract between any of the above cities and the metropolitan government shall be filed with the metropolitan clerk upon being executed.



D. Adjustments.

1. Properties on which a properly functioning qualified control structure has been installed shall be entitled to a downward adjustment in the fees established by this section in proportion to the improvement achieved by the qualified control structure in the purity of storm water discharged to the public system or the reduction achieved by the qualified control structure in rate or quantity of storm water discharged to the public system or both.
2. A downward adjustment of not more than fifty percent in the fees established by this section shall be available to any entity exempt from taxation under state or federal law that provides to its students or members a regular and continuing program of education approved by the director and concentrating on stewardship of water resources and minimization of demand on the public system.
3. The director shall develop regulations governing the fair and reasonable application of adjustments for properties entitled to one or more adjustment under the terms of this subsection. Prior to the adoption of such regulations governing adjustments in the fees, the regulations shall be published in a newspaper of general circulation and public comment thereon received and considered. Further, such regulations shall be approved by the stormwater management committee before becoming effective.

E. Application. Adjustments created under this subsection shall be granted by the director upon written application by the user of any qualifying property and submission of such supporting documentation as the director may reasonably require. The director may, upon not less than thirty written days' notice, revoke a previously granted adjustment or cease to recognize an exemption upon his determination that the affected parcel of property does not qualify for the adjustment or exemption.

F. Reports. Not later than the 15th day of October each year, the director shall deliver a report to the finance director and the metropolitan council providing the following information:

1. A list of properties that are exempt or have been granted adjustments under this section. The report shall identify each property by street address and owner name, and shall state the adjustment amount granted or the basis for considering the property exempt.
2. A list of all storm water projects completed within the previous year for each council district broken down by priority category (A, B and C).

G. Appeals.

1. Appeals relating to exemptions shall be taken to the stormwater management committee within sixty days after the department issues a bill for storm water fees indicating that an applicable exemption has not been recognized.
2. An appeal from any decision made by the director under this section, including a decision relating to an adjustment or allocation among users of a single property, shall be taken to the stormwater management committee within sixty days after issuance of the decision.
3. Users shall be entitled to appeal the department's calculation regarding the amount of the user's impervious area to the stormwater management committee. In the event the stormwater management committee approves a reduction in the amount of billable impervious area, such user's storm water fee shall be adjusted accordingly on a prospective basis. Users shall not be entitled to a refund or credit of storm water fees paid prior to said appeal.





- H. Collection. The director shall bill the fees established by this section to users who are retail customers of the department on their regular monthly water or sewer bills. The fees shall be shown as a separately identified line item. The director shall directly and at least semi-annually bill the fees created by this section to users not receiving water or sewer service from the department or shall contract for the inclusion of such fees on bills issued to the customers of other utilities operating in Davidson County, such contracts to be approved by resolution of the metropolitan council.
- I. Remedies. In addition to any other remedy available to the metropolitan government under law or contract, the department shall discontinue water service to the property of any user who fails to pay the fees established by this section in accordance with the procedures regularly used by the department when customers fail to pay bills for water or sewer service. Fees established under this section shall constitute a lien against the property served, which lien shall run with the land. The metropolitan government may enforce the lien as prescribed by law.
- J. Regulations. The director shall promulgate regulations to facilitate administration of this section. Prior to adoption, such regulations shall be published in a newspaper of general circulation and public comment thereon received and considered. The regulations further shall be approved by the stormwater management committee before becoming effective. Any material change in the regulations shall be made in accordance with the same process.
- K. Review of impervious area. The department shall review all user properties at least every five years to ensure such users are being billed for the correct amount of impervious area. Upon completion of the periodic review, if a user's amount of impervious area has changed, the department shall adjust such user's storm water fee accordingly to reflect the updated amount of impervious area.

**Table 15.64.032 GRADUATED STORM WATER USER FEE SCHEDULE**

<b>Property Type; Impervious Area (Square Feet)</b>	<b>Monthly Fee</b>
All; Less than 400	\$0.00
Residential; Between 400 and 2,000	\$1.50
Residential; Between 2,000 and 6,000	\$3.00
Residential; More than 6,000	\$4.50
Non-Residential; Between 400 and 6,000	\$10.00
Non-Residential; Between 6,000 and 12,800	\$20.00
Non-Residential; Between 12,800 and 51,200	\$40.00
Non-Residential; Between 51,200 and 300,000	\$100.00
Non-Residential; Between 300,000 and 1,000,000	\$200.00
Non-Residential; More than 1,000,000	\$400.00

(Ord. BL2009-407 §§ 8, 9, 2009; Amdt. 1 to Ord. BL2007-1440 § 4, 2007; Ord. BL2007-1440 § 4, 2007)

Editor's note - Exhibit A to Ord. BL2009-407 is not set out herein, but is on file and available for inspection in the metropolitan clerk's office.



State Law Reference - The Tennessee legislature, in Public Chapter 1143, provided a new standard related to agricultural exemptions for the stormwater fee. Refer to T.C.A. 68-221-107, based on Public Chapter 1143.

**15.64.033 Reserved.**

Editor's note—Ord. BL2009-407, § 13, adopted March 17, 2009, repealed § 15.64.033, which pertained to collection of fees and derived from Ord. BL2007-1440 § 5, 2007.

**15.64.034 Reports of stormwater division.**

The director of MWS shall submit an annual written report to the metro council, and shall personally appear annually before a joint meeting of the council public works and budget and finance committees on the stormwater management program. Such report shall contain, at a minimum:

The status of the stormwater management program in metro.

The fee structure imposed to fund the implementation of the stormwater program and the adequacy of funds to implement the program.

Any long-range plans which have been developed to implement the provisions of this chapter.

The status of any projects to control stormwater run off.

Any other information deemed relevant by the director.

(Ord. BL2007-1440 § 6, 2007)

**15.64.040 Stormwater management committee--Created.**

- A. There is created a metropolitan stormwater management committee which shall consist of seven members.
- B. The membership of the committee shall be as follows:
  1. Four members who shall be registered professional engineers in the State of Tennessee with expertise in civil engineering, hydraulics, hydrology, and/or environmental sciences; and
  2. Three lay members from the community at large.
- C. The members shall be appointed by the mayor and confirmed by a majority vote of the whole metropolitan council.
- D. The members appointed by the mayor shall have been residents of the metropolitan government area for not less than one year, and shall continue to be so eligible as long as they shall serve.
- E. Appointed members of the committee shall serve a term of four years. The terms of office of the first appointed members shall be staggered, two for a term of two years, two for a term of three years, and two for a term of four years.

(Ord. BL2012-127 § 1, 2012; Ord. 89-1017 § 1, 1990; prior code § 40-1-229(a))

Editor's note—Ord. No. BL2012-127, § 4, states that all current members shall remain in office and all current alternate members shall be converted to full members.



**15.64.050 Stormwater management committee--Organization.**

Within ten days after its appointment, the stormwater management committee shall organize itself by election of one of its members as chairman and another as vice-chairman, who shall serve for a period of one year or until his successor shall have been chosen. The director of the department of water and sewerage services shall appoint the secretary to the committee who shall be the custodian of the minutes and records of the proceeding of the committee. The director of law shall appoint a legal advisor to the committee.

(Ord. BL2012-127 § 2, 2012; Ord. BL2007-1440 § 7, 2007; prior code § 40-1-229(b))

**15.64.060 Stormwater management committee--Compensation.**

All appointed members of the committee shall serve without compensation, and may be removed from membership on the committee by the mayor for continued absence from meetings of the committee, physical disability, or other just cause.

(Prior code § 40-1-229(c))

**15.64.070 Stormwater management committee--Replacement of members.**

Replacement of any appointed member of the committee resigning or dismissed from the committee shall be appointed by the mayor and confirmed by the metropolitan council in the same manner as prescribed for regular appointees. Any member appointed as a replacement shall serve only for the remainder of the term of the member replaced, unless subsequently reappointed for an additional term.

(Prior code § 40-1-229(d))

**15.64.080 Stormwater management committee--Regulations--Meetings--Duties.**

The stormwater management committee shall adopt such rules and regulations as it may deem necessary to conduct its business. The committee, in open meeting, shall hear all appeals, under the provisions of this chapter. The committee shall meet at regular monthly intervals with the day and time to be determined by the chairman. In the event no appeals have been filed and there is no business pending, the chairman may cancel the meeting ten days before its scheduled date. The committee shall approve master plans for drainage basins and technical guidelines before they become binding under the terms of this chapter.

(Prior code § 40-1-229(e))

**15.64.090 Stormwater management committee--Voting regulations.**

Four members of the stormwater management committee shall constitute a quorum. A majority vote of members present shall be required for actions by the committee. In the event that a quorum is not present, an application shall be readvertised for the next regular meeting. No member of the committee shall act in any case in which he has a personal interest.

(Ord. BL2012-127 § 3, 2012; prior code § 40-1-229(f))

**15.64.100 Appeals procedure.**

A.

1. Whenever the director of the department of water and sewerage services or the director of codes administration shall reject or refuse to approve a plan for noncompliance with this



chapter, the owner or his authorized agent may appeal from the decision of the director to the stormwater management committee. An appeal must be filed within thirty days after said decision by the director of the department of water and sewerage services or the director of codes administration. The fee for filing an appeal shall be fifty dollars.

2. The stormwater management committee shall hear all appeals taken from any decision of the director of the department of water and sewerage services pursuant to Section 15.64.205. An appeal must be filed with the committee in writing within thirty days of any such decision by the director. The fee for filing an appeal shall be fifty dollars.
- B. A decision of the stormwater management committee varying the application of any provision of this chapter or modifying an order of the director of the department of water and sewerage services shall be by resolution of the committee, which shall specify in what manner such variations or modifications shall be made, the conditions upon which they are to be made, and the reasons therefor.
- C. Every decision of the committee shall be final; subject however, to such remedy as any aggrieved party or the metropolitan government may have at law or in equity. All decisions of the committee shall be in writing and shall indicate the vote of each member of the committee upon the decision. Every decision shall be promptly entered into the minutes of the meeting of the committee and filed in the office of the director of the department of water and sewerage services. The records of the committee shall be open to public inspection, and a certified copy of each decision shall be sent by mail or otherwise to the appellant.
- D. The committee shall, in every case, render a decision without unreasonable or unnecessary delay.

(Ord. BL2007-1440 § 8, 2007; Ord. BL2001-642 § 1, 2001; prior code § 40-1-229(g))

**15.64.110 Issuance of building and occupancy permits--Approval by director of the department of water and sewerage services.**

- A. Prior to the issuance of a use and occupancy permit for any structure within a development, unless exempted by Section 15.64.130, in which the drainage system is to be dedicated to the metropolitan government, the drainage system shall be inspected and accepted by director of the department of water and sewerage services personnel.
- B. Prior to the issuance of a use and occupancy permit for any structure in a development, unless exempted by Section 15.64.130, where the drainage system is to remain private, a registered engineer shall submit to the director of the department of water and sewerage services a certificate that the drainage system is complete and functional in accordance with the plans approved by the director of the department of water and sewerage services.
- C. No building permit, except for structures exempted in Section 15.64.130, shall be issued until grading, drainage and erosion control plans are approved by the director of the department of water and sewerage services.
- D. Any nonpermitted drainage system or construction or fill located within a floodplain, shall upon written notice from the director of the department of water and sewerage services, be removed at the property owner's expense.

(Ord. BL2007-1440 § 9, 2007; prior code § 40-1-232)



#### **15.64.120 Construction that may increase degree of flooding prohibited.**

All construction, whether by private or public action, shall be performed in such a manner as to:

- A. have no material increase in the degree of flooding in its vicinity or in other areas whether by flow restrictions, increased runoff or by diminishing retention capacity;
- B. have no adverse impact for site design including, but not limited to, no rise in the 100-year base flood elevations on any project or development located in a documented floodplain as a result of development;
- C. meet such other requirements as may be determined by the department of water and sewerage services.

The department of water and sewerage services shall promulgate regulations consistent with this section.

(Subst. Ord. BL2010-794 § 1, 2010; Prior code § 40-1-230(a))

#### **15.64.130 Review of building permits-- Drainage control referrals--Exemptions.**

The department of water and sewerage services shall have authority to review all building permit applications which shall be referred to it by the department of codes administration or by officials of the satellite cities within the general services district to determine whether there is a need for plans for drainage, grading and/or erosion control. In making permit referrals to the department of water and sewerage services, the department of codes administration shall exempt permits for the following:

- A. Single-family to two-family individual residential dwellings in any given area that do not alter a drainage channel, do not alter the natural ground elevation or vegetation by an amount greater than specified in the technical guidelines to be issued by the metropolitan department of water and sewerage services, or do not meet the definition of regulated residential infill;
- B. Commercial or industrial development that:
  1. Adds less than ten thousand square feet of impervious surface,
  2. Does not alter a drainage channel, and
  3. Does not alter the natural ground elevation by more than five feet.
- C. The exemptions listed in subsections A and B shall not be construed as exempting these activities from on-site drainage improvements that may be required in accordance with adopted building and construction codes, nor from compliance with Sections 15.64.150 through 15.64.180 and Sections 15.64.200 and 15.64.210.

(Ord. BL2014-910 § 2, 2014; Ord. BL2007-1440 § 10, 2007; prior code § 40-1-230(b))

#### **15.64.131 - Infill development—Applicability and requirements.**

- A. No project shall add impervious area without meeting the requirements of this section, unless otherwise specifically exempt from regulation pursuant to this section.
- B. There shall be three tiers of infill development for projects that are subject to infill regulation by this section:
  1. Tier I - Projects creating between eight hundred and two thousand five hundred square feet of net additional IA and with the total lot IA exceeding 30.0% must treat, by means of capture of the first inch of rainfall runoff, an IA equal to the net increase of IA.



2. Tier II - Projects creating between two thousand five hundred and eight thousand square feet of net additional IA, without regard to total lot IA percent must treat, by means of capture of the first inch of rainfall runoff, an IA equal to the net increase of IA.
  3. Tier III - Projects creating between eight thousand and fifteen thousand square feet of net added IA, without regard to total lot IA percent, must treat, by means of capture of the first inch of rainfall runoff an IA equal to the net increase of IA. Additionally, the project design must insure there is not an increase in the 10-year storm peak flow from the site, and be certified by a professional engineer.
- C. Construction projects that meet the definition of regulated residential infill shall include provisions for the management of the first inch of rainfall runoff from an impervious area equal to the net added impervious area; and shall not be exempt from the provisions of Section 15.64.120 concerning prohibition of increase in the degree of flooding.
- D. Prior to the net addition of at least eight hundred square feet of impervious area or issuance of a building permit, a sufficient development plan and supporting information required by the latest version of the regulated residential infill guidance document shall be submitted to and approved by the metropolitan department of water and sewerage services.
- E. The net added impervious area shall be calculated by subtracting the IA present in the aerial photography data obtained by metro in March 2014 from the proposed post-development IA and maintaining the original property boundary as the regulated project boundary, regardless of subdivision, re-plat, horizontal property regime, or any other modification of property boundaries by deed or plat.
- F. The owner/developer of a project meeting the definition of regulated residential infill shall endeavor to treat the first inch of rainfall runoff from net added impervious area using methods from the regulated residential infill guidance document. If this treatment proves impractical, analysis of the downstream management system to identify adequate drainage per the regulated residential infill guidance document or improving downstream drainage to mitigate a known flooding problem with assistance from a professional engineer may be considered for all or part of the one inch treatment requirement.
- G. The metropolitan department of water and sewerage services shall have the authority to offer additional runoff volume reduction measures and incentives. Refer to the latest version of the regulated residential infill guidance document for details.
- H. Notwithstanding other provisions of this section to the contrary, excluded from infill regulation are projects that:
1. Add less than eight hundred square feet of net new IA,
  2. Add more than fifteen thousand square feet of net new IA,
  3. Are on lots larger than forty thousand square feet, or
  4. Are on lots with a grading permit previously filed with the metropolitan department of water and sewerage services, as long as the post-construction IA conforms to the original grading plan.
- I. Projects on lots larger than forty thousand square feet may seek infill classification on a case-by-case basis.

(Ord. BL2014-910 § 3, 2014)



**15.64.140 Property developments--Drainage and erosion control plans required when.**

- A. Persons responsible for property developments that are determined to have a significant hydrologic impact or materially increase the degree of flooding (refer to definitions) shall be required to submit detailed grading and drainage plans, with supporting calculations prepared by a registered engineer, to the public works department for review and approval prior to initiation of work. Where applicable, an erosion control plan prepared by a design professional or soil scientist shall be included in order to prevent sedimentation from reducing the flow carrying capacity of the downstream drainage system.
- B. For purposes of this section, property developments that may have a significant hydrologic impact shall include the grading, excavation, clearance or other alteration of the landscape for other than agricultural purposes, whether or not a building application has been filed, and whether or not subdivision of the land or construction on the land is contemplated in the near future.

(Prior code § 40-1-230(c))

**15.64.150 Application of Federal Water Pollution Control Act.**

Approval by the metropolitan government does not relieve the developer of obtaining any permits required by Section 404 of the Federal Water Pollution Control Act.

(Prior code § 40-1-231(f))

**15.64.160 Applicability of floodplain regulations.**

- A. Uses permitted within the floodplain shall be in accordance with Article V of Chapter 17.136 of this code. The regulations and controls set forth in this chapter shall be applied within the areas designated on the zoning map or on special overlays thereto which are made a part of this chapter, and may be viewed upon request at the office of the metropolitan clerk. However, nothing contained herein shall prohibit the application of the regulations in Article V of Chapter 17.136 to lands which can be demonstrated by competent engineering survey, using the adopted profiles from which the flood protection elevation is derived, to lie within any floodplain, and conversely, any lands which can be demonstrated by competent engineering to lie beyond the floodplain shall not be subject to the regulations in Article V of Chapter 17.36. Any lands within the areas designated as floodplains on the zoning map or special overlays thereto shall be subject to the regulations and controls pertaining to floodplains as set forth in this chapter.
- B. Not later than August 1, 2011, the department shall develop a new volume of its Stormwater Management Manual to address best practices, incentives and implementation strategies for green/low impact stormwater infrastructure and infill development (the "LID Manual"). Such LID Manual shall be consistent with the requirements of this chapter and shall include, at a minimum, provisions addressing the following:
  - 1. Management of floodplain development including the use of wetlands, floodplain storage, and environmental features;
  - 2. The concept of "no adverse impact" for site design;
  - 3. Removing barriers to the utilization of LID in existing Metro Codes and Departmental Standard Operating Procedures;



4. "In-lieu of" programs that might increase overall LID utilization on development projects within Nashville and Davidson County; and
5. Minimum floor elevation requirements for residential and nonresidential development.

(Subst. Ord. BL2010-794 § 2, 2010; Prior code § 40-1-231(a))

Note—Section 3 of Subst. Ord. BL2010-794 states the department shall establish a stakeholder committee to assist in development of the LID Manual. The stakeholder committee shall include, but not be limited to, professional engineers, environmental structural design professionals, department employees, a representative of the mayor, and three members of the Metropolitan Council appointed by the Metropolitan Vice Mayor. All meetings of such committee shall be open to the public and advertised in accordance with the Tennessee Open Meetings laws. The department shall provide monthly progress reports to the Metropolitan Council until the LID Manual is complete.

#### **15.64.170 Development within floodways--Restrictions.**

- A. No new structure shall be constructed within the floodway. Notwithstanding the foregoing, a structure located in the floodway as of the effective date of this ordinance may be maintained and may be repaired in the event of a casualty loss not exceeding fifty percent of appraised value of improvements on the property, provided that no such existing structure located in the floodway shall be enlarged or expanded beyond its existing height or building footprint.
- B. Notwithstanding the provisions of subsection A. to the contrary, the stormwater division may allow the construction of the following types of structures within the floodway, provided the structure is designed and engineered, in such a manner so as to have no adverse impact:
  - a) Grade-level surface parking areas, paths and hiking trails.
  - b) Temporary structures, defined in Section 15.64.010 as "structure, temporary", that are one hundred square feet in size or less and are not used as a dwelling unit for humans.
  - c) Water-related features such as bridges, wharfs, docks, and boat ramps.
  - d) Public infrastructure installed by or for the benefit of the metropolitan government.
  - e) Rebuilding of an existing residential structure in the floodway that has sustained cumulative casualty loss in excess of fifty percent, provided the rebuilt structure is within the same building footprint as the damaged or destroyed structure and is elevated in accordance with the requirements of the Metro Stormwater Manual.
  - f) Athletic fields used for recreational purposes, including facilities associated with the recreational athletic fields such as dugouts, bleachers, concession stands, storage buildings, and other similar structures or facilities.
  - g) Modification or enlargement of an existing building or other structure located partially or entirely within the floodway of the Cumberland River, so long as such building or structure was in active commercial or industrial use as of July 1, 2012. No such modification or enlargement shall be permitted within the floodway of any Cumberland River tributary or undertaken without the approval of the stormwater management committee.

(Ord. BL2012-257 § 1, 2012; Amdt. 1 to Ord. BL2011-3 § 2, 2011; Ord. BL2011-3 §§ 1, 2, 2011; Ord. BL2011-940 § 1, 2011; Subst. Ord. BL2010-794 § 4, 2010; prior code § 40-1-231(d))





#### **15.64.180 Alterations of floodplains and drainage channels--Requirements.**

No alterations of floodplain land and drainage channels may be made without the written approval of the director of the department of water and sewerage services. All applicable requirements of this title and, in addition, the following conditions must be met before such approval may be granted:

- A. The construction of a levee, earth fill, building or other structure which alters the floodplain area shall only be permitted based on a plan prepared by a registered and licensed professional engineer of Tennessee, showing existing and proposed elevations, existing and proposed drainage channels, and existing and proposed structures, and the plan shall be approved by the director of the department of water and sewerage services of the metropolitan government certifying that the alteration and construction as proposed would not materially increase the degree of flooding in other areas, and that any structures proposed to be constructed in the floodplain shall meet the following special conditions:
  1. The minimum floor elevation of that portion of any structure intended for human occupancy shall be either equal to or higher than three feet above the flood protection elevation. Those portions of such structures not intended for human occupancy shall be either equal to or higher than the flood protection elevation. All other related facilities thereto such as electrical equipment, water service and sanitary sewer connections shall be either equal to or higher than the flood protection elevation, or shall be floodproofed to the flood protection elevation.
  2. The minimum floor elevation of any structure not intended for human occupancy, as defined, shall be either equal to or higher than the flood protection elevation. Floodproofing of these structures will only be authorized by the director of the department of water and sewerage services as specific individual exceptions to minimum floor elevation requirements where it can be shown that the proposed floodproofing is acceptable from an engineering standpoint.
- B. The proposed excavation, filling or change of alignment of any existing channel under the jurisdiction of the U.S. Corps of Engineers shall be approved by the corps of engineers.
- C. The plan is approved by the metropolitan planning commission taking into account the above conditions as well as any other pertinent factors. Any duly approved alteration of the floodplain will be so noted on the official zoning map as a matter of information. This notation will be made upon certification by the director of the department of water and sewerage services to the planning commission that such alteration has been completed in accordance with the approved plan.

(Ord. BL2007-1440 § 11, 2007; prior code § 40-1-231(b))

#### **15.64.190 Responsibility for off-site drainage improvements.**

The construction and financing of any required off-site drainage improvement necessitated by private development within the watershed shall be the responsibility of the developer. (Prior code § 40-1-234)

#### **15.64.195 Stormwater master planning district.**

- A. There is hereby created a stormwater master planning district within the geographical limits of the Metropolitan Government of Nashville and Davidson County and co-terminus with the



area currently served by the combined sanitary sewer system, as described by lines, words and figures on the maps on file with the department of water and sewerage services, which are incorporated herein by reference.

- B. In cooperation with the metropolitan planning department, the metropolitan development and housing agency, and the department of public works, the metropolitan department of water and sewerage services ("MWS") shall be responsible for developing a plan for the installation of green infrastructure within the stormwater master planning district. At the discretion of the director of metro water services, the stormwater master planning district may be subdivided into appropriate study areas.
- C. Such plan for a stormwater master planning district should include general location and type of installation and its estimated impact on the CSS.
- D. The initial plan shall be submitted to the metropolitan council not later than November 1, 2009, and shall be updated annually as part of the report by the director of MWS pursuant to section 15.64.034 of this chapter.
- E. Funding.
  - 1. The director of MWS shall submit to the mayor and the director of finance a list of green infrastructure projects within the stormwater master planning district(s) for suggested inclusion as part of the capital improvements budget not later than four months prior to the end of the fiscal year, as provided in Section 6.13 of the Metropolitan Charter.
  - 2. Not less than thirty days after the adoption of the capital improvements budget each year, the director of MWS shall further submit to the mayor and the director of finance a prioritized list of green infrastructure projects within the stormwater master planning district(s) for recommended inclusion as part of the next capital spending plan. Such recommendation shall include estimated construction and maintenance costs as well as anticipated benefit to water quality and water treatment.
- F. The department of water and sewerage services, working in conjunction with the department of public works, shall be responsible for the maintenance of any publicly funded green infrastructure projects within the stormwater master planning district(s). Such maintenance shall be done in accordance with specifications and standards established by MWS.
- G. Notwithstanding the geographical limitations imposed by the stormwater master planning district, the department of water and sewerage services shall have the authority to promulgate and enforce rules and regulations for the implementation of green infrastructure techniques to address stormwater issues associated with private development.
- H. Subsequent to the enactment of this section, additional areas within the Metropolitan Government of Nashville and Davidson County may be designated as stormwater master planning districts by a resolution of the metropolitan council receiving twenty-one affirmative votes.

(Ord. BL2009-461 § 1, 2009; Ord. BL2008-345 § 2, 2009)

#### **15.64.200 Floodproofing measures.**

Floodproofing measures such as the following shall be designed consistent with the flood protection elevation for the particular area, and flood velocities, forces and other factors associated with the flood protection elevation. The director of the department of water and sewerage services shall require that the applicant submit a plan or document certified by a



registered professional engineer or architect that the floodproofing measures are consistent with the flood protection elevation for the particular area:

- A. Anchorage to resist flotation and lateral movement;
- B. Installation of watertight doors, bulkheads and shutters;
- C. Reinforcement of walls to resist water pressures;
- D. Use of paints, membranes or mortars to reduce seepage of water through walls;
- E. Addition of mass or weight to structures to resist flotation;
- F. Installation of pumps to lower water levels in structures;
- G. Construction of water supply and waste treatment systems to prevent the entrance of floodwaters;
- H. Pumping facilities for subsurface drainage systems for buildings to relieve external foundation wall and basement floor pressures;
- I. Construction to resist rupture or collapse, caused by water pressure or flotation debris.

(Ord. BL2007-1440 § 12, 2007; prior code § 40-1-231(c))

#### **15.64.205 Non-stormwater discharges.**

##### **A. Definitions.**

“Community waters” means any and all rivers, streams, creeks, branches, lakes, reservoirs, ponds, drainage systems, springs, wetland, wells and other bodies of surface or subsurface water, natural or artificial, lying within or forming a part of the boundaries of the metropolitan government of Nashville and Davidson County.

“Contaminant” means any physical, chemical, biological or radiological substance or matter.

“Director” means the Director of the Metropolitan Government of Nashville and Davidson County's Department of Water and Sewerage Services, or his designee.

“Discharge” means any substance disposed, deposited, spilled, poured, injected, seeped, dumped, leaked, or placed by any means, intentionally or unintentionally, into community waters, the waters of the state, or any area draining directly or indirectly into the municipal stormwater system of the metropolitan government.

“Metropolitan government” means the metropolitan government of Nashville and Davidson County.

“Municipal separate storm sewer system of the metropolitan government” means a conveyance, or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, and storm drains) designed or used for collecting or conveying stormwater; provided, however, that sanitary and combined sewers are not included in the definition of the municipal separate storm sewer system.

“Non-stormwater discharge” means any discharge to the municipal separate storm sewer system except as permitted by subsection C of this section.



“Waters of the state” means any water, surface or underground, lying within or forming a part of the boundaries of the metropolitan government of Nashville and Davidson County, over which the Tennessee Department of Environment and Conservation exercises primary control with respect to stormwater permits.

- B. Except as hereinafter provided, all non-stormwater discharges into community waters, into the waters of the state, or into the municipal separate storm sewer system of the metropolitan government are prohibited and are declared to be unlawful.
- C. Unless the director has identified them as a source of contaminants to community waters, the waters of the state, or the municipal separate storm sewer system of the metropolitan government, the following discharges are permitted:
  - 1. Stormwater as defined in TCA Section 68-221-1102(5);
  - 2. Water line flushing;
  - 3. Landscape irrigation;
  - 4. Diverted stream flows;
  - 5. Rising groundwaters;
  - 6. Uncontaminated groundwater infiltration (as defined at 40 CFR 35.2005(20)) to separate storm sewers;
  - 7. Uncontaminated pumped groundwater;
  - 8. Discharges from potable water sources;
  - 9. Foundation drains;
  - 10. Air conditioning condensate;
  - 11. Irrigation water;
  - 12. Springs;
  - 13. Water from crawl space pumps;
  - 14. Footing drains;
  - 15. Lawn watering;
  - 16. Individual residential car washing;
  - 17. Flows from riparian habitats and wetlands;
  - 18. Dechlorinated swimming pool discharges;
  - 19. Street wash waters resulting from normal street cleaning operations;
  - 20. Discharges or flows from emergency fire fighting activities.
- D. The director, with the approval of the mayor, shall have authority to implement this section by appropriate regulations. Such regulations may include but are not limited to provisions for inspection of points of origin of known or suspected non-permitted discharges by appropriate personnel of the metropolitan government.
- E. Discharges pursuant to a valid and effective NPDES permit issued by the state of Tennessee are not prohibited by this section.
- F. The provisions of this section, including subsection C of this section, shall not apply to sanitary or combined sewers, which are governed by Chapter 15.40 of the Metropolitan Code of Laws.
- G. Violation of this section shall subject the violator to a civil penalty of not less than fifty dollars nor more than five thousand dollars per day for each day of violation. Each day of



violation may constitute a separate violation. (Ord. BL2007-1440 § 13, 2007; Ord. BL2001-642 § 2, 2001; Ord. 97-1016 §§ 1—7, 1998)

#### **15.64.210 Liability limitation.**

The degree of flood protection intended to be provided by this chapter is considered reasonable for regulatory purposes, and is based on engineering and scientific methods of study. Larger floods may occur on occasions, or the flood height may be increased by manmade or natural causes, such as bridge openings restricted by debris. This chapter does not imply that areas outside floodplain zoning district boundaries or land uses permitted within such district will always be totally free from flooding or flood damages. Nor shall this chapter create a liability on the part of, or a cause of action against the metropolitan government or any officer or employee thereof for any flood damages that may result from implementation of this chapter.

(Prior code § 40-1-231(e))

#### **15.64.215 Stormwater plan and permit review charge.**

Notwithstanding any other provision of the Metropolitan Code of Laws, the department shall develop a schedule of charges for services provided in reviewing permit applications, variance requests or reviewing plans submitted by private entities for proposed projects that must comply with the metropolitan government's stormwater management regulations. The schedule of charges shall reflect the department's actual costs incurred in providing such services. A copy of the schedule of charges shall be filed with the metropolitan clerk, furnished to each member of the metropolitan council and made available on request to any citizen of Davidson County. The department shall bill and collect in accordance with the schedule of charges, which may be amended from time to time to reflect changes in the department's actual costs of providing the services contemplated herein.

(Ord. BL2007-1457 § 15, 2007)

#### **15.64.220 Violations--Penalties.**

- A. Any violation of this chapter shall be punishable by a civil penalty in an amount not to exceed five hundred dollars; provided, however, that any violation of Section 15.64.205 shall be punishable by a civil penalty of not less than fifty dollars nor more than five thousand dollars. For purposes of assessing civil penalties under this chapter, each day of violation shall constitute a separate violation.
- B. In assessing a civil penalty, the following factors may be considered:
  1. The harm done to the public health or the environment;
  2. Whether the civil penalty imposed will be substantial economic deterrent to the illegal activity;
  3. The economic benefit gained by the violator;
  4. The amount of effort put forth by the violator to remedy this violation;
  5. Any unusual or extraordinary enforcement costs incurred by the municipality;
  6. The amount of penalty established by ordinance or resolution for specific categories of violations; and
  7. Any equities of the situation which outweigh the benefit of imposing any penalty or damage assessment.



- C. The department may also assess damages proximately caused by the violator to the municipality which may include any reasonable expenses incurred in investigating and/or enforcing violations of this part, or any other actual damages caused by the violation.
  - D. In addition to all other remedies provided by law, the metropolitan government shall have the right to injunctive relief for any violation of this chapter.
- (Ord. BL2010-639 § 1, 2010; Ord. BL2001-642 § 3, 2001; Ord. 95-1329 § 11, 1995)

**15.64.230 Notification to property owners upon amendments to flood maps.**

Within thirty days after the publication of new flood maps for Davidson County prepared by the federal government are received by metro, the metropolitan planning department will attempt to provide written notice to every property owner, to the address on record at the property assessor's office at the time of the mailing, whose property is included within the 100-year floodplain or floodway for the first time. These mailings are intended to be informational only, sent for the convenience of the owners, and the metropolitan government will not be liable for failing to notify a property owner or if the information in the notice is incorrect or incomplete.

(Amdt. 1 to Ord. BL2011-803 § 1, 2011; Ord. BL2011-803 § 1, 2011)



## **STORMWATER MANAGEMENT ORDINANCE NO. 78-840**

### **Amendment No. 1 to Substitute Ordinance No. 78-840**

Mr. President:

I move to amend Substitute Ordinance No. 78-840 by adding to the first sentence of Section 5, subsection b., after the word "administration" the following:

"or by officials of the satellite cities  
within the General Services Districts."

Introduced by:

Robert L. Reasoner \_\_\_\_\_  
Member of Council

(original signed by said  
Member of Council)

ADOPTED:

August 15, 1978



## **An Ordinance for Stormwater Management**

WHEREAS, an ordinance is needed to control storm drainage facilities, grading, excavation, clearance, and other alteration of the land in order to limit the dangers of personal injury or property damage that may be caused by stormwater runoff; and

WHEREAS, an ordinance is needed in order to secure eligibility for flood insurance under Public Law 1016, 84th Congress, and thereby to promote the public health, safety, and general welfare of the citizens of Nashville and Davidson County, Tennessee;

BE IT ENACTED BY THE COUNCIL OF THE METROPOLITAN GOVERNMENT OF NASHVILLE AND DAVIDSON COUNTY:

### **Section 1. Definitions.**

Channel - A natural or artificial watercourse of perceptible extent, with definite bed and banks to confine and conduct continuously or periodically flowing water. Channel flow thus is that water which is flowing within the limits of the defined channel.

Drainage Basin - A part of the surface of the earth that is occupied by and provides surface water runoff into a drainage system which consists of a surface stream or a body of impounded surface water together with all tributary surface streams and bodies of impounded surface water.

Erosion - The disintegration or wearing away of soil by the action of water.

Flood - Water from a river, stream, watercourse, lake or other body of standing water that temporarily overflows and inundates adjacent lands and which may affect other lands and activities through increased surface water levels, and/or increased groundwater level.

Flood Plain - The relatively flat or lowland area adjoining a river, stream, watercourse, lake, or other body of standing water which has been or may be covered temporarily by flood water. For administrative purposes, the flood plain is defined as the area that would be inundated by high water at the flood profile from which the flood protection elevation is established.

Floodproofing - A combination of structural provisions, changes, or adjustments to properties and structures subject to flooding primarily for the reduction or elimination of flood damages to properties, water and sanitary facilities, structures, and contents of buildings in a flood hazard area.

Flood Protection Elevation - The elevation which is one foot above the 100-year flood high water profiles as developed by the Corps of Engineers for the Federal Flood Insurance Study for Davidson County. Until this study is completed and adopted, in areas where such 100-year flood high water profiles are not developed the flood protection elevation is the March 1975 flood for





the Cumberland River and the Stones River, and two (2) feet above the 50-year developed flood for the tributary streams mapped by the U.S. Geological Survey prior to January 1, 1976.

**Floodway** - That portion of the stream channel and adjacent flood plain required for the passage or conveyance of a 100-year flood discharge. The floodway boundaries are placed to limit encroachment in the flood plain so that a 100-year flood discharge can be conveyed through the flood plain without materially increasing (less than one foot) the water surface elevation at any point and without producing hazardous velocities or conditions. This is the area of significant depths and velocities and due consideration should be given to effects of fill, loss of cross sectional flow area, and resulting increased water surface elevations.

**Floodway Fringe** - That portion of the flood plain lying outside the floodway. This is the area of the flood plain that may be developed or encroached upon as long as the water surface elevation of the 100-year flood is not increased by more than one foot at any point.

**Human Occupancy** - Any portion of any enclosed structure wherein humans principally live or sleep such as mobile homes, permanent residential activities, semitransient residential activities, health care community facilities, nursing home community facilities, orphanages, family care facilities, group care facilities or transient habitation.

**Impervious Surface** - A term applied to any ground or structural surface which water cannot penetrate or through which water penetrates with great difficulty.

**Major Drainage System** - That storm drainage system which carries the runoff from a 100-year frequency storm. Although damage may occur, runoff will be carried by the major system whether or not it has been planned and designed, and whether or not improvements are situated wisely in respect to it.

The major system usually includes many features such as streets, gulches, and major drainage channels. Storm sewer systems may reduce the flow in many parts of the major system by storing and transporting water underground. Good planning and designing of a major system should eliminate major damage and loss of life from storms having a one percent chance of occurring in any given year.

**Materially Increase the Degree of Flooding** - Shall be defined by the following criteria:

- a. The proposed development raises the 100-year flood elevation more than one (1) foot; or when considered in conjunction with other potential developments within the watershed, would contribute disproportionately to increased flooding which when combined with other potential development would cumulatively increase the 100-year flood elevation more than one (1) foot.
- b. The proposed development does materially increase the property damage caused by the 100-year flood.



- c. The proposed development conflicts with the master plan adopted by the stormwater management committee for reducing flood damage.

Minor Drainage System - That storm drainage system which is frequently used for collecting, transporting, and disposing of snowmelt, miscellaneous minor flows, and storm runoff up to the capacity of the system. The capacity should be equal to the maximum rate of runoff to be expected from the initial design storm which has statistical frequency of occurrence of once in ten years, or as specified by the stormwater management committee.

The minor system is sometimes termed the "convenience system," "initial system," or the "storm sewer system."

The minor system may include many features ranging from curbs and gutters to storm sewer pipes and open drainageways.

One Hundred-Year Flood - Is one that has an average frequency of occurrence of once in one hundred (100) years determined from an analysis of floods on a particular watercourse and other watercourses in the same general region. Statistically, it has a one percent chance of occurring in any given year.

Structure - Anything constructed or erected, the use of which requires a more or less permanent location on or in the ground. Such construction includes but is not limited to objects such as buildings, towers, smokestacks, overhead transmission lines, carports and walls.

Structure, Permanent - A structure which is built of such materials and in such a way that it would commonly be expected to last and remain useful for a substantial period of time.

Structure, Temporary - A structure which is built of such materials and in such a way that it would commonly be expected to have a relatively short useful life, or is built for a purpose that would commonly be expected to be relatively short-term.

Watercourse - A channel, natural depression, slough, gulch, stream, creek, pond, reservoir, or lake in which storm runoff and floodwater flows either regularly or infrequently. This includes major drainageways for carrying urban storm runoff.

## **Section 2. Authority of Director of Public Works.**

- a. The director of public works with the approval of the mayor shall establish written regulations and technical guidelines as may be necessary to enforce the terms of this ordinance. These regulations shall be filed in the metropolitan clerk's office.



- b. The director of public works shall have the authority to prepare, or have prepared, master plans for drainage basins and such details as may be needed to carry out said master plans.
- c. The director of public works shall have the authority to inspect private drainage systems within Davidson County, and to order such corrective actions to said private drainage systems as are necessary to maintain properly the major and minor drainage systems within Davidson County.

### **Section 3. Authority of the Director of Codes Administration.**

The director of codes administration, with the approval of the mayor, shall have the authority to establish such written regulations and technical guidelines as may be necessary to enforce the terms of this ordinance. These regulations shall be filed in the metropolitan clerk's office.

### **Section 4. Metropolitan Stormwater Management Committee.**

- a. Created: number, qualifications, appointment and terms of office of members.

There is hereby created a metropolitan stormwater management committee which shall consist of five (5) members and two alternate members.

The membership of the committee shall be as follows:

- (1) The chairman of the public works committee of the metropolitan council,
- (2) Three members and one alternate who shall be registered civil engineers, and
- (3) One lay member and one lay alternate from the community at large.

The latter four members and two alternates shall be appointed by the mayor and confirmed by a majority vote of the whole metropolitan council.

The members and alternate members appointed by the mayor shall have been residents of the Metropolitan Government area for not less than one year and who shall continue to be so eligible as long as they shall serve. Appointed members and alternate members of the committee shall serve a term of four (4) years. The terms of office of the first appointed members shall be staggered, two for a term of two years, two for a term of three years, and two for a term of four years.

- b. Organization.



Within ten days after its appointment, the stormwater management committee shall organize itself by election of one of its members as chairman and another as vice chairman. The director of public works shall appoint the secretary to the committee who shall be the custodian of the minutes and records of the proceedings of the committee. The director of law shall appoint a legal adviser to the committee.

c. Compensation.

All appointed members of the committee shall serve without compensation and may be removed from membership on the committee by the mayor for continued absence from meetings of the committee, physical disability or other just cause.

d. Replacement of Members.

Replacement of any appointed member of the committee resigning or dismissed from the committee shall be appointed by the mayor and confirmed by the metropolitan council in the same manner as prescribed for regular appointees. Any member appointed as a replacement shall serve only for the remainder of the term of the member replaced, unless subsequently re-appointed for an additional term.

e. Duties and Procedures.

The stormwater management committee shall adopt such rules and regulations as it may deem necessary to conduct its business. The committee, in open meeting, shall hear all appeals, under the provisions of this section. The committee shall meet at regular monthly intervals with the day and time to be determined by the chairman. In the event no appeals have been filed and there is no business pending, the chairman may cancel the meeting ten days before its scheduled date. The committee shall approve master plans for drainage basins and technical guidelines before they become binding under the terms of this ordinance.

f. Quorum, Voting and Conflict of Interest.

Three members of the stormwater management committee shall constitute a quorum. A majority vote of members present shall be required for actions by the committee. No member of the committee shall act in any case in which he has a personal interest. The alternate member shall replace any member who has a conflict of interest or is unable to attend due to illness or extended absence from the Metropolitan Nashville area.

g. Appeals to Committee.

- (1) Whenever the director of public works or the director of codes administration shall reject or refuse to approve a plan for noncompliance with this ordinance, the owner or his authorized agent may appeal from the decision of the director to the



stormwater management committee. An appeal must be filed within thirty (30) days after said decision by the director of public works or the director of codes administration. The fee for filing an appeal shall be \$50.00.

- (2) A decision of the stormwater management committee varying the application of any provision of this section or modifying an order of the director of public works shall be by resolution of the committee, which shall specify in what manner such variations or modifications shall be made, the conditions upon which they are to be made and the reasons therefor.
- (3) Every decision of the committee shall be final, subject however, to such remedy as any aggrieved party or the Metropolitan Government may have at law or in equity. All decisions of the committee shall be in writing and shall indicate the vote of each member of the committee upon the decision. Every decision shall be promptly entered into the minutes of the meeting of the committee and filed in the office of the director of public works. The records of the committee shall be open to public inspection and a certified copy of each decision shall be sent by mail or otherwise to the appellant.
- (4) The committee shall, in every case, render a decision without unreasonable or unnecessary delay.

### **Section 5. Review of Building Permit Applications and Development Plans.**

#### **a. Limitation of Flooding.**

No construction, whether by private or public action, shall be performed in such a manner as to materially increase the degree of flooding in its vicinity or in other areas whether by flow restrictions, increased runoff or by diminishing retention capacity.

#### **b. Building Permit Applications.**

The department of public works shall have authority to review all building permit applications which shall be referred to it by the department of codes administration to determine whether there is a need for plans for drainage, grading and/or erosion control. In making permit referrals to the public works department, the department of codes administration shall exempt permits for the following:

- (1) Single to two family individual residential dwellings in any given area that do not alter a drainage channel, and do not alter the natural ground elevation or vegetation by an amount greater than specified in the technical guidelines to be issued by the department of public works.
- (2) Commercial or industrial development that:



- (a) Adds less than 10,000 square feet of impervious surface,
- (b) Does not alter a drainage channel, and
- (c) Does not alter the natural ground elevation by more than five (5) feet.

(3) The exemptions listed in Sections 5b(1) and 5b(2) shall not be construed as exempting these activities from onsite drainage improvements that may be required in accordance with adopted building and construction codes, nor from compliance with Section 6 of this ordinance.

c. Property Developments.

Persons responsible for property developments that are determined to have a significant hydrologic impact or materially increase the degree of flooding (refer to definitions) shall be required to submit detailed grading and drainage plans, with supporting calculations prepared by a registered engineer, to the public works department for review and approval prior to initiation of work. Where applicable, an erosion control plan prepared by a design professional or soil scientist shall be included in order to prevent sedimentation from reducing the flow carrying capacity of the downstream drainage system. For purposes of this section, property developments that may have a significant hydrologic impact shall include the grading, excavation, clearance or other alteration of the landscape for other than agricultural purposes whether or not a building application has been filed, and whether or not subdivision of the land or construction on the land is contemplated in the near future.

### Section 6. Flood Plain Requirements

a. Flood Plain Regulations.

Uses permitted within the flood plain shall be in accordance with Article 7 of the Metropolitan Zoning Ordinance. The regulations and controls set forth in this Article shall be applied within the areas designated on the zoning map or on special overlays thereto which are made a part of this ordinance and may be viewed upon request at the office of the metropolitan clerk. However, nothing contained herein shall prohibit the application of the Article 7 regulations to lands which can be demonstrated by competent engineering survey, using the adopted profiles from which the flood protection elevation is derived, to lie within any flood plain, and conversely, any lands which can be demonstrated by competent engineering to lie beyond the flood plain shall not be subject to the Article 7 regulations. Any lands within the areas designated as flood plains on the zoning map or special overlays thereto shall be subject to the regulations and controls pertaining to flood plains as set forth in this ordinance.

b. Alterations of Flood Plain Land and Drainage Channels.



No alterations of flood plain land and drainage channels may be made without the written approval of the director of public works. All applicable requirements of this ordinance and, in addition, the following conditions must be met before such approval may be granted:

- (1) The construction of a levee, earth fill, building or other structure which alters a flood plain area shall only be permitted based on a plan prepared by a registered and licensed professional engineer of Tennessee, showing existing and proposed elevations, existing and proposed drainage channels, and existing and proposed structures, and the plan shall be approved by the director of public works of the Metropolitan Government certifying that the alteration and construction as proposed would not materially increase the degree of flooding in other areas, and that any structures proposed to be constructed in the flood plain shall meet the following special conditions:
    - (a) The minimum floor elevation of that portion of any structure intended for human occupancy shall be either equal to or higher than three (3) feet above the flood protection elevation. Those portions of such structures not intended for human occupancy shall be either equal to or higher than the flood protection elevation. All other related facilities thereto such as electrical equipment, water service and sanitary sewer connections shall be either equal to or higher than the flood protection elevation or shall be flood proofed to the flood protection elevation.
    - (b) The minimum floor elevation of any structure not intended for human occupancy, as defined, shall be either equal to or higher than the flood protection elevation. Flood proofing of these structures will only be authorized by the director of public works as specific individual exceptions to minimum floor elevation requirements where it can be shown that the proposed flood proofing is acceptable from an engineering standpoint.
  - (2) The proposed excavation, filling or change of alignment of any existing channel under the jurisdiction of the U.S. Corps of Engineers shall be approved by the Corps of Engineers.
  - (3) The plan is approved by the metropolitan planning commission taking into account the above conditions as well as any other pertinent factors. Any duly approved alteration of the flood plain will be so noted on the official zoning map as a matter of information. This notation will be made upon certification by the director of public works to the planning commission that such alteration has been completed in accordance with the approved plan.
- c. Floodproofing Measures.



Floodproofing measures such as the following shall be designed consistent with the flood protection elevation for the particular area, and flood velocities, forces and other factors associated with the flood protection elevation. The director of public works shall require that the applicant submit a plan or document certified by a registered professional engineer or architect that the floodproofing measures are consistent with the flood protection elevation for the particular area.

- 1) Anchorage to resist flotation and lateral movement.
  - 2) Installation of watertight doors, bulkheads and shutters.
  - 3) Reinforcement of walls to resist water pressures.
  - 4) Use of paints, membranes or mortars to reduce seepage of water through walls.
  - 5) Addition of mass or weight to structures to resist flotation.
  - 6) Installation of pumps to lower water levels in structures.
  - 7) Construction of water supply and waste treatment systems to prevent the entrance of floodwaters.
  - 8) Pumping facilities for subsurface drainage systems for buildings to relieve external foundation wall and basement floor pressures.
  - 9) Construction to resist rupture or collapse, caused by water pressure or flotation debris.
  - 10) Cutoff valves on sewer lines or the elimination of gravity flow basement drains.
- d. Development within floodways.

No development will be allowed within floodways that would impair their capability to carry and discharge a 100-year flood except where it can be shown by a registered professional engineer that the effect on flood heights is fully offset by stream improvements.

e. Degree of Flood Protection.

The degree of flood protection intended to be provided by this ordinance is considered reasonable for regulatory purposes, and is based on engineering and scientific methods of study. Larger floods may occur on occasions, or the flood height may be increased by man-made or natural causes, such as bridge openings restricted by debris. This ordinance does not imply that areas outside flood plain zoning district boundaries or land uses





permitted within such district will always be totally free from flooding or flood damages. Nor shall this ordinance create a liability on the part of, or a cause of action against the Metropolitan Government or any officer or employee thereof for any flood damages that may result from implementation of this ordinance.

- f. Application of Federal Water Pollution Control Act.

Approval by the Metropolitan Government does not relieve the developer of obtaining any permits required by Section 404 of the Federal Water Pollution Control Act.

### **Section 7. Permit Issuances and Controls within Drainage Systems.**

- a. Prior to the issuance of a use and occupancy permit for any structure within a development, unless exempted by Section 5b, in which the drainage system is to be dedicated to the Metropolitan Government of Nashville and Davidson County, the drainage system shall be inspected and accepted by department of public works personnel.
- b. Prior to the issuance of a use and occupancy permit for any structure in a development, unless exempted by Section 5b, where the drainage system is to remain private, a registered engineer shall submit to the director of public works a certificate that the drainage system is complete and functional in accordance with the plans approved by the department of public works.
- c. No building permit, except for structures exempted in Section 5b, shall be issued until grading, drainage and erosion control plans are approved by the department of public works.
- d. Any nonpermitted drainage system or construction or fill located within a flood plain shall, upon written notice from the director of public works, be removed at the property owner's expense.

### **Section 8. Penalties and Injunctions.**

- a. Any violations of this ordinance shall be punishable by a fine of not more than fifty (\$50.00) dollars for each and every violation. Every day that said violation continues shall be a separate offense.
- b. Injunctions. In addition to all other remedies provided by law, the Metropolitan Government of Nashville and Davidson County shall have the right to injunctive relief for any violation of this ordinance.



### **Section 9. Responsibility for Offsite Drainage Improvements.**

The construction and financing of any required offsite drainage improvement necessitated by private development within the watershed shall be the responsibility of the developer.

### **Section 10. Validity of Ordinance.**

- a. If any section, subsection, sentence, clause, phrase or portion of this ordinance is for any reason held invalid or unconstitutional by any court of competent jurisdiction, such portion shall be deemed a separate, distinct and independent provision, and such holding shall not affect the validity of the remaining portions of this ordinance. The purpose of the metropolitan council is that this ordinance shall stand, notwithstanding the invalidity of any section, subsection, clause, phrase or portion hereof.
- b. If any provisions of this ordinance and any other provisions of law impose overlapping or contradictory regulations, or contain any restrictions covering any of the same subject matter, that provision which is more restrictive or imposes higher standards or requirements shall govern.



**Section 11.**

This ordinance shall take effect on January 1, 1979, the welfare of the Metropolitan Government of Nashville and Davidson County requiring it.

The original document is signed by the following:

Introduced by:

Robert L. Reasoner  
Member of Council

RECOMMENDED BY:

W.D. Lamb  
Director of Public Works

Elmer Young  
Director of Codes Administration

APPROVED AS TO FORM AND LEGALITY:

J.R. Slobey  
Metropolitan Attorney

APPROVED FOR SUBMISSION TO COUNCIL:

Richard Fulton  
Metropolitan Mayor



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Volume 1 - Regulations**

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