

**Nelson County
Amended Drainage Ordinance**

As Adopted by the Nelson County Fiscal Court on November 19, 2002 and Recorded in the Nelson County Fiscal Court Orders, Book 29, Page 599. As Amended by the Nelson Fiscal Court on January 5, 2010 and recorded in the Nelson Fiscal Court Orders, Book 34, Page 392.

AN ORDINANCE ADOPTING REGULATIONS DESIGNED TO LESSEN OR AVOID HAZARDS TO PERSONS AND PROPERTY CAUSED BY INCREASED STORMWATER RUNOFF OR BY OBSTRUCTION OF DRAINAGE, AND TO OTHERWISE PROMOTE THE PUBLIC HEALTH, SAFETY, AND GENERAL WELFARE.

Be it ordained by the Nelson County Fiscal Court, Nelson County Kentucky, as follows:

ARTICLE I: GENERAL

Section 1.1 : Purpose

The purpose of this ordinance is to reduce or eliminate the hazards to public health and safety caused by excessive STORMWATER runoff, reduce economic losses to individuals and the community at large, and protect, conserve and promote the orderly development of land and water resources. The provisions of this ordinance further supplement ordinances and regulations as follows:

- a. Subdivision Regulations: For all Nelson County
- b. Zoning Regulations: For All of Nelson County

Section 1.2: Conflicting

The provisions of the ordinance shall be deemed as additional requirements to standards required by other Ordinances of the County. In case of conflicting requirements, the most restrictive shall apply.

Section 1.3: Separability

The provisions and sections of the ordinance shall be deemed separable and the invalidity of any portion of this ordinance shall not affect the validity of the remainder

Section 1.4: Other Permits

Before starting any activities regulated by this ordinance, an applicant shall comply with the requirements set forth in other, applicable ordinances with respect to the submission and approval of preliminary and final subdivision plats, construction plans, improvement plans, building and zoning permits, inspections, appeals and similar matters, along with those set forth in this ordinance and as may be required by State statutes and the regulations of any department of the Commonwealth of Kentucky.

Section 1.5: Definitions:

For the purposes of this ordinance, the following definitions are adopted

County Engineer: The Engineer employed by the Nelson County Fiscal Court who is responsible for the review and approval/disapproval of the STORMWATER management & drainage plans required of this ordinance.

Detention Facility: Any structure which is designed to collect and store surface water for subsequent gradual discharge.

Drainage Facility/Drainage Way: Any component of the drainage system

Encroachment Permit: Permit issued by the County to persons requesting to perform work, construct a private entrance, install utilities, or similar type work in the county roadway right of way.

Excess Stormwater Runoff: That portion of Stormwater which exceeds the safe storm drainage capacity of storm sewers or natural drainage channels serving a specific watershed.

NCRD: The Nelson County Road Department supervisor or authorized representative responsible for the inspection of drainage structures and stormwater and drainage plan compliance.

Protected Channel: A channel which receives Stormwater discharge and which is paved, rip-rapped or otherwise improved by addition of manmade materials so as to reduce the potential for erosion.

Safe Storm Drainage Capacity: The quantity of Stormwater runoff that can be transported by a channel or conduit without having the water surface rise above the top of the channel or conduit.

Sinkhole: A depressed area and/or a hole formed in soluble rock by action of water which serves to conduct surface water drainage to an underground passage.

Stormwater Channel: A natural or manmade open watercourse with definite bed and banks which periodically or continuously contains moving water, or which forms a connecting link between two bodies of water.

Stormwater Runoff: Water that results from precipitation which is not absorbed by the soil or vegetation or evaporated and which flows over the ground surface or is collected in channels or conduits.

Stormwater Runoff Release Rate: The rate at which Stormwater runoff is released from dominant to servient land.

25-Year, 24—Hour Frequency Rainfall: A precipitation event of 24-hours duration, having a 4 percent chance of occurring in any one year.

Stormwater Management & Drainage Plan (SDP): The drainage and stormwater management plan which provides all necessary plan sheets, profiles, hydraulic calculations, culvert pipe size & locations, detention basin, and all other necessary information which has been prepared, sealed and signed by a licensed Engineer for a particular residential, commercial, or industrial development within Nelson County.

ARTICLE II: DESIGN CRITERIA, PERFORMANCE STANDARDS, AND PERMITS

Section 2.1: Applicability

A Stormwater Management & Drainage Plan (SDP) shall be required for any new single-family residential developments **AND** for any new commercial, multi-family residential, industrial, institutional or utility developments.

A SDP shall also be required for any new development or redevelopment of previously developed areas of similar as above.

As a general note, The City of Bardstown maintains a “water shed drainage” map. This official watershed drainage map shall be kept in the office of the Flood Safety Officer at Bardstown City Hall. Any

development which could impact the drainage area associated with this map shall comply with restrictions identified by this map and City Ordinances which pertain to stormwater drainage.

No final subdivision plat shall be approved and no building permits shall be issued until and unless the SDP has been reviewed and approved by the County Engineer. Owners of residential property within subdivisions for which final subdivision plats have been approved prior to the date of the approval of this Ordinance shall not be required to comply with this Ordinance.

The County Engineer may also require a SDP for any drainage area if adverse impacts are anticipated. A SDP may also be required prior to any grading or excavation which would fill, obstruct, or otherwise alter any creek, stormwater channel or drainage facility.

Section 2.2: Stormwater Management & Drainage Plans:

The required Stormwater Management & Drainage Plan (SDP) shall identify means for controlling the stormwater runoff release rate from the development and providing storage potential for the excess stormwater runoff (where required) . All computations, plans and specification related to the implementation of this Ordinance *must be prepared and sealed by a professional engineer licensed in Kentucky.*

For all storm water management structures (culverts, detention basins, etc.) design hydro graphs of inflow and outflow for the 25-year, 24-hour storm event for the site under existing and developed conditions shall be used.

The SDP shall contain, but not be limited to, the following information unless specifically excluded by the Flood Safety officer.

- a. A topographic map of the project site and adjacent areas, of suitable scale and contour interval (five foot minimum), which shall define the location of streams, the extent of the flood plains, and calculated high water elevations, the shoreline of lakes, ponds, swamps, and detention basins including their inflow and outflow structures, if any and sink holes.
- b. The location and flowline elevation of all existing sanitary, storm, or combined sewers.
- c. Detailed determination of runoff anticipated for the entire project site following development indicating design volumes and rates of proposed runoff for each portion of the watershed tributary to the storm drainage system, the calculations used to determine said runoff volumes, and rates and restatement of the criteria which have been used by the project engineer throughout his/her calculations.
- d. A layout of the proposed Stormwater management system including the location and size of all drainage structures, storm sewers, channels, channel sections, detention basins, and analyses regarding the effect said improvements will have upon the receiving channel and its high water elevation.
- e. The slope, type, and size of all existing and proposed storm sewers and other waterways impacting or impacted by the proposed development on the site.
- f. For all detention basins, a plot or tabulation of storage volumes with corresponding water surface elevations and of the basin outflow rates for those water surface elevations.
- h. Depending on the complexity of the size and site A profile and one or more cross sections of all existing and proposed channels or other open drainage facilities, showing existing conditions and the proposed changes thereto, together with the high water elevations expected from stormwater runoff under the controlled conditions called for by these regulations and the relationship of

structures, streets, and other utilities to such channels may be required by the flood safety officer.

Section 2.3: Design Criteria

The following rules shall govern the design of improvements with respect to managing stormwater runoff:

a. *Methods of Determining Stormwater Runoff Rate and Volume*

The volume of required stormwater storage and runoff shall be calculated on the basis of the runoff from a 25 Year frequency storm. The calculations can be made in accordance with the instantaneous runoff factor method, the rational method, or other methods that may be deemed appropriate by the County Engineer.

b. *Release Rate*

All developments undertaken as outlined in this ordinance shall be designed in such a way as to insure that stormwater falling on a given site shall be absorbed or detained on site to the extent that the controlled release rate of stormwater runoff from all developments described in Section 2.1 shall not exceed the predevelopment stormwater runoff rate, unless it can be shown that no significant adverse downstream impacts will result from higher rates. The rate at which stormwater runoff is delivered to a designated stormwater storage area shall be unrestricted.

In the event that the County Engineer determines that the existing downstream channel or storm sewer system is inadequate to accommodate the release rate provided above, then the allowable release rate shall be reduced to that rate permitted by the capacity of the downstream channel or storm sewer system.

c. *Development Design*

Where it can be demonstrated by the developer that a higher stormwater release rate will not be contrary to the purpose and intent of this ordinance and where such proposed release rate will not adversely affect properties in the downstream portion of the watershed, the County Engineer may permit such release to be used as deemed appropriate.

Streets, blocks, lots, parks and other public grounds shall be located and laid out in such a manner as to minimize the velocity of overland flow and allow maximum opportunity for infiltration of stormwater into the ground, and to preserve and utilize existing and planned streams, channels, and detention basins, and include, whenever possible, streams and floodplain within parks and other public grounds.

d. *Excess Stormwater Passage*

(1) An excess stormwater passage shall be provided for all stormwater areas. Such passage shall have the capacity to convey through the proposed development the excess stormwater. The capacity for a passage shall be such that it will be able to transport the peak rate of run-off from a 100—year 24-hour return frequency storm.

(2) There shall be no buildings or structures constructed within excess stormwater passage, however, parking lots, playgrounds and park areas which shall not impair or endanger the water holding capability of a development -shall be considered compatible uses.

(3) Appropriate land planning shall be undertaken to preserve the existing natural drainage of a proposed development as part of the excess stormwater passage.

(4) Open channels shall be protected from erosion by appropriate vegetative cover, lining or other

treatment and earthen channel side slopes shall be no steeper than 2 to 1. Open channels with lining shall have a maximum gradient on side slopes of 1-1/2 to 1 (67 percent). Channel side slopes steeper than the 1-1/2 to 1 shall be designed as structural retaining walls.

e. *Stormwater Storage/Detention Areas*

The increased stormwater runoff resulting from the proposed development may be accommodated by the provision of appropriate detention facilities including wet or dry bottom reservoirs, flat roofs, parking lots, or streets. Storage areas shall be designed to the satisfaction of the County Engineer and if possible to provide secondary purposes for recreation, open spaces, parking lot or other types of use that will not be adversely affected by intermittent flooding. The following shall govern the design of detention facilities:

(1) *Storage Volume*

All stormwater storage areas must be designed to contain and safely pass stormwater runoff. The combined capacity of these storage areas shall be sufficient to contain the storm runoff from the development. The detention facility must be designed for periodic maintenance and energy dissipators shall be provided at points necessary.

The ponding of stormwater runoff shall not exceed a depth of one foot on a pedestrian mall area or one and one—half feet maximum in parking lots. Where these areas are used for ponding, the maximum depth should occur in the most remote and least used areas.

The drainage and grading design shall be prepared to insure that in a 100 year storm the depth of water run-off in any street, alley or pedestrian mall will not exceed the level of the first floor of any building.

For wet pond storage areas when calculating the storage capacity, only the volume available to store excess stormwater shall be considered. Permanent water storage does not constitute control of excess storm runoff.

(2) *Release Rate*

At no time during the design storm shall the stormwater runoff release rate exceed the allowable release rate as set forth in Section 2.3 b.

(3) *Release Velocity*

Detention facilities shall release stormwater at a non—erosive velocity. The protected channel receiving the detention discharge shall incorporate features to reduce velocity to non—erosive levels at the point where such discharge enters the unprotected channel. If release is into a subsurface conduit the energy gradient in the receiving facility shall not be increased beyond the slope of the conduit.

4) *Spillway,*

Overflow for each stormwater storage area shall be provided in the event a storm in excess of the design capacity occurs. Such overflow shall be constructed to function without specific attention and shall become part of the excess stormwater passage.

Emergency spillways shall be provided to permit the safe passage of runoff generated from a 100—year, 24-hour storm, or greater if required by State law.

Where rooftop storage for excess stormwater is provided, the building shall be provided with adequate structural design to insure that roof failure does not occur. overflow areas shall be provided so that the

weight of stored stormwater will not exceed the structural capacity of the roof.

(5) *Freeboard*

Detention facilities shall have adequate capacity to contain the storage volume of tributary stormwater runoff with at least one (1) foot of freeboard above the water surface of flow in the emergency spillway in a 100-year, 24-hour storm or as required by State law.

f. *Sinkholes and Subterranean Water Channels*

(1) The use of sinkholes or subterranean water channels for direct drainage of excess stormwater shall not be permitted although they may be used to drain a stormwater storage area. The introduction of any foreign matter or the filling, clogging or interfering with the natural drainage capabilities of the sinkholes shall not be permitted.

(2) Any person, firm or corporation proposing alterations, improvements or other disturbances of any sinkholes or known subterranean water channel must submit plans to the County Engineer showing that said alterations, improvements or disturbance would not interfere with the drainage capability. Also, erosion control methods must be shown for any activities which might create erosion or sedimentation and must be included in the plans.

(3) Sinkholes shall not be altered or covered in any way which would negatively affect the drainage capabilities of the sinkhole.

*Development within the 100 year floodplain (as determined from Flood Insurance Rate Maps or an appropriate survey) of a sinkhole shall not be permitted.

Section 2.4: Performance Standards

a. *Stormwater Channel Location*

Generally acceptable locations of stormwater channels in the design of a subdivision may include but are not limited to the following:

(1) Adjacent to roadways as ditches with culvert entrance pipes (reference section 2.5 below for encroachment permit requirements)

(2) In a depressed median of a divided roadway, Provided the median is wide enough to permit slopes of one foot (1') drop in six feet (6') horizontal or flatter.

(3) Centered on lot lines or entirely within the rear yards of a single row of lots or parcels.

(4) In each of the foregoing cases, a drainage easement with sufficient width to facilitate maintenance and design flow Shall be provided and shown on the plat.

b. *Storm Sewer Outfall*

The storm sewer outfall shall be designed to provide adequate protection against downstream erosion and scouring.

c. *Lot Lines*

Whenever the plans call for the passage and/or storage of stormwater runoff along lot lines, the grading of all such lots shall be prescribed and established for the passage and/or storage of waters, and no structure

or vegetation which would obstruct the flow of stormwater shall be allowed, nor shall any change be made to the prescribed grades and contours of the specified stormwater channels.

d. *Manholes*

All utility sewer manholes constructed in an area designed for storage or passage of stormwater, shall be provided with either watertight manhole cover or be constructed with a rim elevation a minimum of one (1') foot above the high water elevation of design storm.

e. *Easements*

Permanent easements for the detention and conveyance of stormwater, including easements of access to structures and facilities, shall be dedicated to the County.

f. *Obstruction of Drainage*

The keeping or disposal of grass clippings, trash, debris, obstructions or unwanted materials into the storm sewers or within or along stormwater channels or in adjacent flood plain areas which may wash into sewers and channels is prohibited.

g. *Maintenance*

Required maintenance for detention basins and associated structures shall be permanently provided by the developer with responsibility becoming that of the Private Land Owner or appropriate neighborhood association subject to inspection by the County Engineer. Every detention basin or structure shall be legally defined on both deed and plat and the maintenance entity shall be specified. Maintenance agreements shall be implemented as specified in Section 3.2

Section 2.5 Encroachment Permit (County Right of Way)

All construction projects (residential, commercial, or industrial) which require a permanent or temporary entrance onto an existing County Roadway or a newly developed roadway which is to be dedicated to the County at a later time or which require work within County Right of Way or work which can impact proper roadway drainage shall apply for an Encroachment Permit.

An Encroachment Permit shall be obtained from the Nelson County Road Department, Office of the County Engineer or his authorized representative prior to commencement of work in County Right of Way for the following situations.

1. Creation of any new entrance off a County road
2. Construction of a new home, commercial building, industrial building or similar construction activities (even if there is an existing entrance)
3. Creation of any temporary entrance or construction entrance off a County Road.
4. The harvests of timber logs whether a new entrance is used or an existing entrance is use.
5. Any work within right of way including but not limited to utility construction/repair, fence construction/removal, drainage ditch modifications, and any other construction or disturbance of the County right of way except as excluded below.

b. An Encroachment Permit shall not be required for:

1. Additions to homes, construction of garages, pole barn or other accessory structures to an existing building when an existing entrance is used for exclusive access.

Note: If a temporary entrance off the County right of way is constructed to access the building addition or other accessory structure site, then an Encroachment Permit shall be required”

2. Installation of prefabricated buildings when an existing entrance is used for exclusive access.

c. Application for an Encroachment Permit.

The Application for an Encroachment Permit shall be made at the Nelson County Road Department, office of the County Engineer or his designated representative. The Encroachment Permit form shall be supplied by the County. The encroachment permit shall be completed in sufficient detail to show the location of said work with respect to property lines. The encroachment permit shall detail the culvert pipe size, material, and slope/grade, driveway entrance material (ie concrete), assure compliance with approved the SDP if appropriate, and any detail or any other information which is appropriate for the site.

d. The Encroachment Permit (when required) shall be obtained prior to issuance of a building permit (by the Department of Code Enforcement) and/or the issuance of a Zoning Compliance Permit (by the Planning and Zoning Commission).

e. Encroachment Permit Denial

1. The Encroachment Permit request for a new entrance onto a County Road can be denied for the new entrance if that entrance does not have adequate stopping sight distance as defined in the Kentucky Transportation Cabinet’s Highway Design Manual, Section 700, “Geometric Design Guidelines”.
2. The County Engineer (in writing) may also deny an Encroachment Permit request for placement of utilities (public or private) in County right of way or the placement of any other objects in right of way (ie signs) if at the judgment of the County Engineer an alternative (private property) location for said utility (private or public) or other objects exist.
3. The Encroachment Permit may be denied (in writing) for a new entrance if at the judgment of the County Engineer a better location for the proposed entrance exist or the requested entrance poses a conflict with adjoining property owner rights or a potential safety hazard exist.
4. Should the Encroachment Permit request be denied, then the affected party may, within sixty (60) days, petition the Nelson County Fiscal Court (in writing) for reconsideration and issuance of the Encroachment Permit.

f. The fee required for the Encroachment Permit shall as listed in Section 3.3 below. This Encroachment Permit fee is fully refundable provided the work is constructed as detailed and approved on said

Encroachment Permit.

g. Roadway/Right of Way Damage:

The Encroachment Permit fee shall be forfeited should damage to the County Road occur (an not properly repaired) during construction activities associated with the Encroachment Permit.

Should damage to the county roadway and/or right of way occur which exceeds the \$500 encroachment permit fee or damage occur to the roadway when an encroachment permit was not required (ie off loading equipment, using equipment in right of way, etc.), then the person/persons will be issued a Notice of Violation (NOV) to this Section of this Ordinance for damaging the roadway.

That person/persons shall be responsible to repair or pay for the cost to repair the damaged roadway. Repair work or payment to the County for damages to the County Road shall be accomplished within thirty (30) days of issuance of a NOV.

Failure to comply with the NOV shall be addressed in accordance with Article V, Enforcement and Penalties of this Ordinance.

ARTICLE III: MAINTENANCE, ASSURANCES, AND FEES

Section 3.1: Assurance for Maintaining, Completion, and/or Operation of Drainage Ways, Stormwater Management Improvements, and County Right of Way

No persons shall restrict or cause to restrict existing drainage ways within the County. County road right of way ditches, curbs and gutter storm drain systems, cross drain culverts, roadway drainage easements, creeks, streams, etc. shall be maintained free of silt, soil, and other debris which restricts drainage flow which has resulted from residential, commercial, or similar construction activities.

Any persons requesting to change an existing County ditch line or other drainage way or work within the County Right of Way (ie Utility installation if approved) shall request approval prior to beginning work. If proposed change is acceptable, then the County shall issue an Encroachment Permit in accordance with paragraph 2.5 above.

The Encroachment Permittee shall make changes to the drainage way or County Right of Way in accordance with written County Standards or other approved standards as deemed appropriate. The County Engineer or the NCRD shall review and inspect all work associated with Encroachment Permit.

The SDP applicant shall construct all drainage features and/or structures required of the SDP. The County Engineer or the NCRD shall review and inspect all work associated with the SDP.

Section 3.2: Maintenance Agreement

A maintenance agreement, approved by the County Engineer, assuring perpetual maintenance of stormwater management improvements shall be executed by the applicant.

All roadway ditches and drainage easements for dedicated County roads shall be the responsibility of the County Government for maintenance

Ownership and maintenance of storm water retention structures within residential developments shall be the responsibility of the developer during residential development and the appropriate neighborhood association once the development is complete or substantially complete.

Ownership and maintenance of storm water retention structures within multifamily, industrial, commercial and/or institutional type developments shall be the responsibility of the owner of the respective property.

A maintenance agreement through recorded neighborhood protective covenants, or other approved recorded maintenance agreement assuring perpetual maintenance of the stormwater management improvements shall be executed by the applicant of the SDP.

Section 3.3: Fees

A fee of **\$500.00** shall accompany the submittal of each Encroachment Permit. This fee is fully refundable provided the entrance or other work requested in right of way is constructed as specified on the permit.

The encroachment permit holder requesting a new roadway entrance shall have twelve months (one year) time from date of permit issue to construct the entrance in accordance with the permit. Failure to complete the work properly within this one year time frame shall be reasons for forfeiture of the \$500.00 fee.

There is **no fee** required with the submittal of the SDP (Stormwater Management & Drainage Plan).

ARTICLE. IV: ADMINISTRATION

Section 4.1: Responsibility

The administration of this ordinance shall be the responsibility of the office of the designated County Engineer.

Section 4.2: Variances

a. Standards

Variations from these standards, provisions, and specifications may be granted when it is demonstrated to the satisfaction of the Fiscal Court that, owing to special conditions, a strict adherence to the provisions of this Ordinance will result in unnecessary hardship and that the spirit and intent of the Ordinance will be observed.

b. Procedure

A written request for variation shall be filed by the owner, seeking to develop or change the use of his property, or his agent with the County Engineer and shall state specifically what variation is sought and the public's interest in granting the variation. The applicant must specify hardships to result in following the prescribed regulations. The County Engineer must then examine and decide the validity of the proposed hardships. This request is then submitted to the Fiscal Court by the County Engineer along with a recommendations about granting the variance.

The variance will be granted only upon showing that there is good and sufficient cause and that the failure to grant a variance would result in exceptional hardship to the applicant. Financial hardship to the property owners shall not constitute proper or appropriate grounds for a variance under this chapter.

A record of all variance actions shall be maintained by the County Engineer including the justification for issuance.

Variances may be considered for, the reconstruction, rehabilitation or restoration of structures listed on

the National Register of Historic Places or the State Inventory of Historic Places.

Section 4.3: Official Maps and Profiles

Responsibility for all changes to official maps and profiles remains with the County Engineer.

Section 4.4: Interpretation

In the interpretation and application of this ordinance, the provisions expressed herein shall be held to be the minimum requirements and shall be liberally construed in favor of the Nelson County Fiscal Court and shall not be deemed a limitation or repeal of any other powers granted by State statutes or exercised by home rule units.

ARTICLE V: ENFORCEMENT

Section 5.1: General

The County Engineer or the NCRD shall be responsible for determining whether the SDP and or Encroachment Permit requirements is are in conformance with requirements specified in Article II, and whether development is proceeding in accordance with the approved SDP and/or Encroachment Permit requirements. Periodic inspection of the development site shall be made by the County Engineer or the NCRD to ensure that the SDP and/or encroachment Permit requirements are properly implemented.

The County Engineer, NCRD, the Zoning Enforcement Officer and other duly authorized employees bearing proper credentials and identification shall be permitted to enter upon all properties for the purpose of inspection, observation, and measurement, in accordance with the provisions of this ordinance.

Section 5.2: Enforcement

Failure to comply with the requirements of the encroachment Permit or failure complete all required improvements required by the approved SDP, or failure to comply with any other provisions in this Drainage Ordinance shall be justification for the issuance of Notice of Violation (NOV). The NOV shall list all deficiencies noted. The Violator to this ordinance shall have a seven (7) days (minimum) to correct all deficiencies listed on the Notice of Violation.

a. Failure to Comply

Failure to comply with the Notice of Violation shall be reasons for one or more of the following Enforcement Actions:

1. Issuance of a civil citation. The civil citation shall be subject to the monetary penalties established in section 5.4 below. The civil Citation shall be issued by the Planning and Zoning code enforcement officer or other appropriate County Agency.

2. Filing of a criminal complaint. The Planning and Zoning code enforcement officer or other appropriate County Agency enforcement officer may file a criminal complaint through the Nelson County Attorney's office to impose the criminal penalties provided below.

3. Revocation of the Encroachment Permit and forfeiture of Permit fee. The Ordinance violator shall have their Encroachment Permit revoked and permit bond fee forfeited. Prior to beginning any additional work at the site, the Violator shall correct all deficiencies and apply for a new Encroachment Permit and pay a new permit fee bond.

4. Stop Work Order. Failure to comply with such notice of violation shall result in the issuance

