Morgan County
Stormwater Management Plan
DRAFT – VERSION 3 FOR PUBLIC HEARING (2)

a) Title, Authority and Purpose

a) This article shall be known and may be cited as the Morgan County Stormwater Management Ordinance.

2. Authority and Purpose

a) This ordinance is adopted by the authority of the West Virginia Code 8A-1-1 to 8A-11-2 seq.

b) This ordinance is adopted for the following purposes:

i) To protect and provide for the public health, safety and general welfare of the citizens of Morgan County.

ii) To mitigate the impact of increased stormwater runoff due to change in land use; and thereby

iii) To safeguard lives and property from loss by flood and erosion

3. Applicability, Definitions, Exemptions, Waivers, and Variances

a) Any activity which is subject to the Morgan County Subdivision Ordinance, as amended, or the Morgan County Commercial and Industrial Improvement Location Permit Ordinance, as amended, shall provide adequate Stormwater Management measures that control and manage stormwater runoff from such development/improvements, except as provided herein.

b) Definitions: Commission: As used herein Commission shall mean the Morgan County Planning Commission and its staff or designated representatives or agents. Impervious: as used herein shall include all areas that produce 100 percent run-off. Impervious as used herein shall also include gravel roadways, driveways, parking lots, sidewalks, patios, etc.~~, located in the Warm Springs Run Watershed~~.

c) Exemptions: The following activities are exempt from the requirement to provide Stormwater Management measures:

i) Agricultural land management activities;

ii) ~~Additions or modifications to all existing~~ A single family detached residential structure~~s~~; and

iii) Activities that do not result in an increase in impervious land use area greater than 5,000 square feet and land disturbance greater than 1 acre.

~~iv) The development consists of single family residence, each on a lot of two acres or greater.~~

d) Waivers: The Commission may grant a waiver of the Stormwater Management requirements for individual developments provided that a written request is submitted by the applicant containing descriptions, drawings, and any other information that is necessary to evaluate the proposed development. If there are subsequent additions, extensions, or modifications to a development receiving a waiver, a separate written waiver request shall be required in accordance with the provisions of this section. A development shall be considered for a waiver if the applicant can conclusively demonstrate that the waiver is the minimum necessary to provide relief that, the applicant is not requesting a waiver based on cost considerations and that:

i) The proposed development will not generate more than a 10 percent increase in the 2-year 24-hour post-development peak discharge rate over the 2-year 24-hour pre-development peak discharge rate; and that the development will not cause an adverse impact on the receiving wetland, wetcourse, or waterbody; ~~or~~ and that the development will not worsen existing offsite stormwater problems, increase flooding or ponding on offsite properties or roadways, cause erosive conditions due to increased peak flows or volumes, or increase 100 year floodplain levels; or

ii) The site is completely surrounded by existing developed areas which are served by an existing network of public storm drainage systems of adequate capacity with stable outfalls to accommodate the runoff from the additional development; or

iii) The proposed development has implemented runoff and nutrient reduction practices for the first one inch (1") of rainfall consistent with better site design and Best Management Practices in accordance with the West Virginia Stormwater Management and Design Guidance Manual; that existing offsite stormwater problems will not worsen; increase flooding or ponding on off-site properties or roadways will not occur; any increase of peak flow or volume from the site will not occur; the amount of stormwater generated has been minimized to the greatest extent practical; increased 100-year floodplain levels will not occur; and infiltration of runoff throughout the proposed development has been provided where feasible.

e) Variances: the Commission may grant a written variance from Stormwater Management requirements if there are exceptional circumstance applicable to the site such that strict adherence to the provisions of these regulations will not fulfill the intent of these requirements. The applicant shall submit a written request to the Commission stating the specific variances sought, reasons for the request and supporting technical documentation in accordance with Section 6 of this ordinance, as applicable.

4. Stormwater Management Minimum Control Requirements

a) Stormwater management facilities shall control post-development runoff for the 24-hour, 2-year and 10-year frequency storms to a level equal to or less than the pre-development levels for the 24-hour, 2-year and 10-year frequency storms, respectively, and shall pass the 24-hour 100-year frequency storm without damage to the facilities. Both the volume and rate of runoff shall be controlled.

5. Specific Design Criteria

a) Infiltration measures, where feasible, shall be preferred to detention or retention systems. Where infiltration measures are not feasible the Commission may require that supporting documentation so demonstrating be submitted.

b) Infiltration measures shall be designed in accordance with accepted engineering practices and published design criteria; and shall meet the following requirements:

i) The requirements for demonstrating that infiltration measures are feasible, or are not feasible, shall be the same as those required by the West Virginia Department of Health for demonstrating that a site is suitable for the use of an individual on-site septic drainfield, except that:

a) Infiltration (perc) tests shall be made at the elevation or depth of the proposed bottom of the stormwater management facility;

b) The number of tests shall be sufficient to show the suitability of soil over the entire area of the proposed facility;

c) Where more than one facility is proposed for a site, tests demonstrating the feasibility of each facility shall be provided;

d) Tests shall be made by a certified septic installer or other qualified professional; and

e) The minimum acceptable rate of infiltration shall be one-half inch (1/2") per hour.

ii) Infiltration Measures shall be:

a) Constructed with the bottoms at least three (3) feet above seasonal high water table; and

b) Located at least 25 feet and downslope from all buildings on permanent foundation.

iii) Infiltration measures designed to accept runoff from commercial or industrial impervious parking areas shall:

a) Be a minimum of 100 feet from any water supply well;

b) Include an oil/water separator; and

c) Provide pretreatment for 25% of the design volume through the use of grass filter strips or other acceptable measure.

iv. The facility design shall include an overflow system designed to provide a non-erosive velocity of flow along its length and at the outfall.

v. Infiltration measures shall not receive runoff until the entire contributory drainage area to the infiltration system is stabilized or the system is protected by satisfactory sediment control measures.

vi. Sediment which has accumulated in the measure during construction shall be removed and the bottom scarified before final seeding and mulching; and

vii. Post-construction infiltration tests showing that the facilities will function as intended shall be made by a certified septic installer or other qualified professional and the results submitted to the Commission in writing.

c) Retention and detention ponds shall be designed and constructed in accordance with the criteria of the US Department of Agriculture, Natural Resource Conservation Service ~~or as published in the "Storm Water Management Pond Design Manual" as published by Maryland Association of Soil Conservation Districts~~ and shall include the following:

i) Velocity dissipation devices shall be placed at the outfall of all retention or detention structures and along the length of any outfall channel as necessary to provide a non-erosive velocity of flow from the structure to a watercourse.

ii) Stormwater management design shall include an analysis of the impacts of stormwater flow downstream in the watershed. The analysis shall include hydrologic and hydraulic calculations necessary to determine the impact of the proposed development upon a dam, highway, structure or natural point of streamflow restriction downstream to a tributary of the following size:

a) The first downstream tributary whose drainage area equals or exceeds the contributing area to the pond; or

b) The first downstream tributary whose peak discharge exceeds the largest designed release rate of the pond.

iii) The design release rate of the structure shall be modified if any increase in flooding or stream channel erosion would result at the downstream point.

d) For the determination of pre-development peak discharge, all land uses shall be considered to be meadow in good condition; and land use shall be based on the average use of the land in question for the five (5) years preceding the proposed change in the utilization of said land.

e) Where a stormwater management system involves redirection of some or all runoff from a site, it shall be the responsibility of the developer to obtain permission from property

owners impacted by such redirection. Approval of a Stormwater Management Plan does not create or affect any such rights; nor does it relieve the developer from any liability incurred due to flooding.

f) The basic design and analysis criteria, methodologies and construction specifications shall be those of the Natural Resource (Soil) Conservation Service ~~of Maryland Water Resources Administration~~ (or equal) found in the most current edition of the following publications:

i) "Urban Hydrology for Small Watersheds", Technical Release No. 55;

~~ii) "Storm Water Management Pond Design Manual", Maryland Association of Soil Conservation Districts;~~

iii) ii) "Natural Resource Conservation Service Engineering Field Handbook";

iv) iii) "Natural Resource Conservation Service Field Office Technical guide Standard 378"; and

~~v) "Maryland Standards and Specifications for Storm Water Management Infiltration Practices"~~

vi) iv) West Virginia Stormwater Management and Design Guidance Manual.

g) The methodology used to determine rainfall runoff shall be Technical Release 20 or Technical Release 55 (TR-20 or TR-55).

6. Stormwater Management Plan

a) Review and Approval of Stormwater Management Plan

The Stormwater Management Plan and Design Report shall contain supporting computations, drawings and sufficient information describing the manner, location and type of measures by which stormwater runoff from the entire development will be managed. The Commission shall review all plans and supporting information. The approved plan shall serve as the basis for all subsequent construction. Any deviations from the plan must be approved in writing.

b) Contents of the Storm Water Management Plan and Design Report

The developer is responsible for submitting a Stormwater Management Plan and Design Report which meets the requirements contained herein. The plan and report shall be prepared by a qualified professional engineer, registered in the state of West Virginia, and shall include sufficient information to evaluate the environmental characteristics of the affected areas, the potential impacts of the proposed development on water resources and the effectiveness and acceptability of measures proposed for managing runoff. The minimum information submitted for a Stormwater Management Plan or request for a waiver shall be as follows:

i. Design Report

a) USGS topographic map showing the project site;
b) Soils map showing the project site;
c) Test results showing the feasibility or lack thereof of infiltration measures; and
d) Narrative describing:

(1) The existing condition and character of the site;
(2) The nature and extent of the proposed development;
(3) The measures proposed for stormwater management;
(4) A summary of pre- and post-development runoff for the 2-, 10-, and 100-year frequency storms;
(5) The impact of the proposed development downstream from the site; and
(6) Organization of data and computations in the remainder of the report.

e) Computations, including:

(1) Pre-and post-development hydrology computations including curve number weighting, time of concentration and travel time, and subarea, combination and routing hydrographs for the 2-, 10-, and 100-year storms; and

(2) Hydraulic computations including structure sizing and performance for the 2-, 10-, and 100-year storms, resistance to overturning and flotation, and location and sizing of anti-seep collars, as applicable.

f) Pre- and post-development drainage maps showing existing and proposed contours, as applicable, at a scale no less than 1" = 100' at 2-foot contour intervals. Off-site drainage area mapping should be no less than 1" = 200', with the exception that the U.S.G.S. maps may be used if off-site topography is not reasonably available to the applicant, and including as applicable:

(1) Extent of soils of each classification;
(2) Extent of land use of each classification;
(3) Drainage subareas labeled to correspond with computations;
(4) Flowpaths showing each segment with length, type of flow and slope; and
(5) Location of drainage structures and stormwater management facilities.
(6) Topography shall be shown to at least 100 feet past the drainage divide to allow review of the drainage areas shown and used in the Stormwater Management Report.

ii) Stormwater Management Plans shall include in addition to information required by the Subdivision Ordinance and/or the Commercial and Industrial Improvement Location Permit Ordinance:

a) Dimensions sufficient to show location, size, depth and volume of each stormwater management facility and structure;

b) Details and specifications for each structure including (but not limited to) culverts, orifices, risers, inlet boxes, weirs, trash racks, spillways, riprap lining and anti-seep collars;

c) Location of existing and proposed easements and/or rights-of-way required for stormwater management facilities; and

d) Other information as may be required for specific site conditions and developments.

7. Construction, As-Built Plans and Final Approval

a) The developer shall install and/or construct all required stormwater management facilities.

b) As-built plans showing the completed location, size, volume and structure components shall be submitted to and approved by the Commission prior to the final approval of a subdivision or the issuance of an occupancy permit for a commercial or industrial development.

c) As-built plans shall be based on actual field measurements and shall be prepared by a registered professional surveyor or engineer licensed in West Virginia.

8. Inspections

a) Construction of all stormwater management facilities shall be subject to inspection by the Commission or Natural Resource Conservation Service.

b) The Commission shall be responsible for keeping a record of any inspections made on stormwater management facilities. Any deficiencies noted will be forwarded to the owner in writing for correction.

c) The Commission, either by virtue of the nature of the stormwater system or by the developer's lack of performance in accordance with the plans, may require the developer to hire a West Virginia licensed professional engineer to inspect the project and provide a report to the Commission. The report shall contain the developer's engineer's certification of compliance as well as any "as-built" plans, supplementary inspection reports and laboratory or field testing results.

9. Maintenance

a) Prior to granting final approval to a project, the Commission shall require the owner to enter into an "Inspection and Maintenance Agreement of Private Stormwater Management Facilities" attached hereto.

b) The Commission may from time to time make maintenance inspections on stormwater management facilities. Records of such inspections shall be kept in the Planning Commission Office and notice of any deficiencies shall be sent to the owner for correction.

c) If the owner assigns his rights of ownership of a stormwater management system to another person or entity, notice of such change of ownership must be made to the Commission in writing within 10 days of such assignment.

10. Pre-Design Staff Advisory Meeting

a) For projects requiring stormwater management, a pre-design advisory meeting is required with County Staff to discuss County requirements, alternative concepts for meeting the requirements for stormwater management, the opportunities for introducing water quality Best Management Practices and other issues the County or applicant wishes to discuss. The applicant is encouraged, but not required, to provide background information related to the site such as an existing conditions plan with contours, soils information, wetlands and floodplain boundaries, existing storm drain systems, existing ground cover characteristics, location of existing streams and other relevant information that may enhance and streamline the discussion.

INSPECTION AND MAINTENANCE AGREEMENT OF PRIVATE STORMWATER MANAGEMENT FACILITIES

THIS AGREEMENT, made this _____ day of _____, 20_____,

by and between _____

herinafter referred to as the "OWNER(S)" of the following property:

_____

_____

_____

and the Morgan County Planning commission, hereinafter referred to as the "Commission".

WITNESSETH:

We, the OWNER(S), with full authority to execute deeds, mortgages, other covenants, all rights, titles and interests in the property described above, do hereby covenant with the Commission and agree as follows:

1. The OWNER(S) shall provide for the maintenance of the stormwater management facility to ensure that the facility is and remains in proper working condition in accordance with approved design standards, rules and regulations and applicable laws. The OWNER(S) shall perform necessary landscaping (grass cutting, etc) and trash removal as part of regular maintenance.

2. If necessary, the OWNER(S) shall levy regular or special assessments against all present or subsequent owners of property served by the facility to ensure that the facility is properly maintained.

3. The OWNER(S) shall grant the Commission or its agent or contractor the right of entry at reasonable times and in a reasonable manner for the purpose of inspecting, operating, installing, constructing, reconstructing, maintaining or repairing the facility.

4. Should the OWNER(S) fail to maintain the facility or correct any defects within a reasonable period of time (30 days maximum) after proper written notice by the Commission, the Commission is authorized to perform the necessary maintenance or repairs and may assess the OWNER(S) served by the facility for the cost of the work, applicable penalties, legal fees and court costs, if any. Said assessment shall be a lien against all properties served by the facility and may be placed on the property tax bill of said property and collected as ordinary taxes by the Commission. The OWNER(S) shall maintain perpetual access from public rights-of-way to the facility for the Commission or its agent or contractor.

5. The OWNER(S) shall indemnify and save the Commission harmless from any and all claims for damages to persons or property arising from the construction, maintenance and use of the facility.

6. The agreement and covenants contained herein shall apply to and bind the OWNER(S) and the OWNER'(S) heirs, executors, successors, and assigns, and shall bind all present and subsequent owners of the property served by the facility.

7. The COMMISSION shall record this AGREEMENT in the land records of the COUNTY.

IN WITNESS WHEREOF, the OWNER(S) and the COMMISSION executed this AGREEMENT as of this _____ day of _____, 20_____

ATTEST: FOR THE OWNER(S)

_____ _____

_____ _____

ATTEST: FOR THE COMMISSION

_____ _____

_____ _____

_____ _____

STATE OF _____

COUNTY OF _____, TO WIT:

I hereby certify that on this _____ day of _____, 20_____, before the subscribed, a Notary Public of the State of _____, and for the County of _____, aforesaid personally appeared _____ for the Commission and did acknowledge the aforegoing instrument to be their Act.

In testimony whereof,
I have affixed by official seal,

_____ My Commission Expires: _____

NOTARY PUBLIC

SEAL: