The following Sections of the Rules of the Ingham County Drain Commissioner, 2005 Edition, are hereby revised and amended as follows:

PART 2: PROCEDURES FOR PLAN SUBMISSION, REVIEW AND CONSTRUCTION

Section 2: Preliminary Plan Submittal and Approval

C. Drainage Information Requirements

1. through 2. remain unchanged.

3. Submittal will require the following stormwater management information:

a. The overall stormwater management system for the proposed subdivision or development, indicating how stormwater management will be provided and the location of the positive public outlet.

b. The location of any on-site and/or off-site stormwater management facilities and appropriate easements that will be dedicated to the entity responsible for their future operation and maintenance. Easement information will be consistent with these Rules.

c. An easement dedication to the applicable intra or inter county drainage district will be contained in the proposed plat or plan. Applicant shall also provide Easement(s) in recordable form and consistent with these Rules for all on-site and/or off-site stormwater management facilities. The easement(s) shall be recorded upon final approval.

d. A description of the off-site outlet and evidence of its adequacy.

e. A map at the U.S.G.S., 7.5-minute quadrangle scale, showing the drainage area tributary to the outlet from the proposed development and its relationship with existing drainage patterns. This drainage boundary shall include any drainage originating outside of the development limits, that flows onto or across the development.

f. Any drainage originating outside of the development limits that flows onto or across the development shall not be passed through on-site stormwater storage facilities unless alternatives are proposed for the off-site flow that will achieve the objectives of these standards, including but not limited to water quality standards, such as separate basins for water quality treatment and storage of the 100-year storm volume.

g. Any natural watercourses and/or Inter and Intra County Drains passing through the proposed development.

h. Provide calculations to show that the hydrology for all existing wetlands will not be affected by the proposed change, this would include the water budget and hydro period for the wetland.
4. through 9. remain unchanged.

PART 2: PROCEDURES FOR PLAN SUBMISSION, REVIEW AND CONSTRUCTION

SECTION 3: Construction Plan Submittal and Approval

E. Final Subdivision Plat Submission and Approval

1. remains unchanged.

2. An executed agreement in recordable form that assures long-term maintenance of all legally described drainage improvements such as an agreement as provided under Sections 425 or 433 of the Michigan Drain Code, as amended (MCL 280.425; MCL 280.433), Maintenance Agreement, or other similar agreement that is acceptable to the Ingham County Drain Commissioner. The agreement shall legally describe the location of the drainage improvements, e.g. stormwater management facilities, and the entity responsible for their future operation and maintenance. The term stormwater facilities include, but are not limited to, catch basins, detention basins, oil/water separators, pump stations, secondary containment, vegetated swales, constructed wetlands, infiltration basins and trenches, porous pavement, rain gardens, underground storage vaults or tanks, or biofilters. The applicant shall record the agreement along with any easement(s) in the county register of deeds. The agreement and easement(s) may be combined in one document provided the form and substance are acceptable to the Ingham County Drain Commissioner.

3. through 8. remain unchanged.

PART 3: DESIGN CRITERIA FOR STORMWATER MANAGEMENT SYSTEMS

Revise and amend the fourth paragraph to read as follows:

First, eroded soil and other pollutants that accumulate on impervious surfaces, such as metals, fertilizers, pesticides, oils and grease, are flushed off by the early stages of runoff, which then carries a shock loading of these pollutants into receiving waterways. By capturing and treating the first 1.0 inch of runoff, pollutants that are washed off the land can be removed from stormwater before it flows offsite.

Revise and amend the sixth paragraph, third bullet point to read as follows:
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* The first flush volume; the runoff from the first 1.0 inch of rain from the entire contributing watershed.

PART 3: DESIGN CRITERIA FOR STORMWATER MANAGEMENT SYSTEMS

SECTION 3: Retention and Detention Systems

A. General Requirements

1. through 5. remain unchanged.

6. On-site management of storm drainage will be designed for control of flooding, downstream erosion and water quality. It is generally preferred that stormwater management plans address stormwater issues on the same site. Submission of flow calculations, cross sections and other pertinent data will be required.

   a. The volume of storage provided for flood control will be equal to or in excess of that required for a 100-year frequency storm.

   b. The allowable release rate from the flood control storage volume will be 0.15 cfs/acre of the property being drained, or as determined by the Ingham County Drain Commissioner.

   c. If the discharge does not outlet to a clearly defined public outlet, it is the developer’s responsibility to secure necessary easement(s) from downstream property owner(s).

   d. The volume and storage provided for controlling the bankfull flood will be equal to or in excess of the runoff from a 2.0-year/24-hour storm, which can be determined by: (8170 x acreage x the relative imperviousness factor C).

   e. The release rate from the bankfull storage volume will be such that this volume will be stored not less than 24 hours, nor more than 48 hours.

   f. The first flush volume of runoff will be captured and detained for at least 24 hours or within a permanent pool. This volume is equivalent to the runoff from 1.0 inches of rain per acre of the land tributary to the basin. This volume can be determined by multiplying the number of acres by 3630 (number of acres x 1.0 inch x 43,560 x 1/12 feet).

Standards for Stormwater Management
Systems, Procedures and Design Criteria

Supplemental Standards No. 3 – November 30, 2015

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Dated this 30 day of Nov, 2015