KEVIN KAMENETZ
County Executive

VINCENT J. GARDINA, *Director*
Department of Environmental Protection and Sustainability

410-887-3768 FAX: 410-887-4804

PROJECT: _____
ENGINEER: _____
PROJECT I.D.# _____
REVIEW NO.: _____
DATE: _____

STORMWATER MANAGEMENT HYDROLOGY REVIEW CHECKLIST
(Please return this checklist with each re-submission)

LEGEND:				
	✓	ACCEPTABLE	X	NOT ACCEPTABLE
	R	REQUIRED, NOT SUBMITTED	NA	NOT APPLICABLE
	INC	INCOMPLETE	NC	NOT CHECKED

UNDERLINING INDICATES AREAS NEEDING ATTENTION
(2.10) MARYLAND STORMWATER MANAGEMENT DESIGN MANUAL

____I. HYDROLOGY SUBMISSION (Should be approved before plans are submitted.)

____A. DRAINAGE AREA MAPS:
- ____1. Sub-Areas shown.
- ____2. Time of Concentration Paths shown.
- ____3. Land Use, Existing and Proposed shown.
- ____4. Designate redevelopment areas, (Existing Impervious Area within Proposed Limit of Disturbance).
- ____5. Soil Types and Hydrologic Soil Groups shown.
- ____6. Watershed indicated.
- ____7. County & State Storm Drains shown with Size & Drawing Number if available.
- ____8. Note which coordinate system is in use; (In the lower right corner of each sheet).
  - ____a. Maryland Coordinate System; (MCS) must be used.

____B. HYDROLOGY COMPUTATIONS (Use Revised Baltimore County TR-55 Form):
- ____1. Runoff Curve Numbers (RCN) – Calculations.
  - ____a. Uses Maryland Soil Group Classification.
  - ____b. Soil Group Classification adjusted for compaction (2.5.2) (A to B, B to C).
  - ____c. Land use, Existing and Proposed.
  - ____d. Based on SCD "Good" Hydrologic Condition.
  - ____e. Off-site areas to Limits of Zoning for Freeboard (Unmanaged Storms if any) (2.3.1).
  - ____f. Drainage Areas (Acres & Square Miles).
  - ____g. Average RCN.
  - ____h. Use meadow in good hydrologic condition for predevelopment land use for non-forested vegetated area including agriculture

____2. Time of Concentration - Calculations:
- ____a Selected Path "Typical" of Area.
- ____b. Sheet Flow:
  - ____(1) Proper length. 150' maximum for pre-development conditions and 100' maximum for post development conditions.
  - ____(2) Proper "n" value.
  - ____(3) Proper slope.
- ____c. Shallow Concentrate Flow:
  - ____(1) Proper Length.
  - ____(2) Proper slope.
  - ____(3) Proper velocity.
- ____d. Channel Flow.
- ____e. Closest hundredth of an hour input for TR-20 (T_c = 0.1 hour minimum).

____3. Time of Travel - Calculations. Required when T_c Path leaves Drainage Area.

____4. Runoff Increase to be "Traded Off". Acceptable to County if Trade-Off and Controlled Areas recombine on-site.

____5. "Trade-Off" discharge deducted from Existing Conditions discharge.

____6. Allowable Release Rates.

____7 Appropriate Storms Managed:
- ____a. 1 & 100 year required in Jones Falls, Gwynns Falls, Herring Run & Roland Run Watersheds
- ____b. 1 year required in other watersheds unless otherwise indicated.
- ____c. 100 year may also be required if so indicated by Baltimore County Public Works or Soil Conservation District.
- ____d. CP_v is not required if total site runoff is less than 2 c.f.s.
- ____e. Overbank flood protection (Qp) volume is required because of downstream flooding problems.

____8. Developed Discharges. (Computed Hydrographs if Tabular Hydrograph Method is used with TR-55. TR-20 is used for Routing).

____9. Ultimate Discharges (Off-site areas to Limits of Zoning). Used where off-site areas contribute to controlled drainage area (2.3.1 [c]).

____II. <u>FIELD INVESTIGATION</u>:

- ____A. Drainage Area.
- ____B. Time of Concentration Paths.
- ____C. Ground Cover.
- ____D. Downstream Hazards.
- ____E. Suitable Outfall Available.
- ____F. Use of Natural Topography & Land Cover where possible (1.3.4).

Hydrology Approval Granted by: _____ Date: _____

COMMENTS: _____

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