

Shingle Creek and West Mississippi

**Third Generation Watershed Management Plan
Minor Plan Amendment**

On July 13, 2013 Shingle Creek and West Mississippi Watershed Management Commissions amended their joint *Third Generation Watershed Management Plan* to adopt a revision to Appendix C, Rules and Standards. This revision adopts the new National Oceanic and Atmospheric Administration (NOAA) Atlas 14 precipitation frequency standards, replacing the outdated Weather Bureau Technical Paper 40 (TP-40) standards. These precipitation frequency standards are used in hydrologic and hydraulic modeling to estimate stormwater runoff. The Atlas 14 standards were developed using a much longer period of record and larger data set than TP-40 and are more accurate. With TP-40 a single value represents, for example, a 100-year (1 percent chance), 24 hour rain event for an entire watershed. Under Atlas 14, an online tool (http://hdsc.nws.noaa.gov/hdsc/pfds/pfds_map_cont.html?bkmrk=mn) can be used to determine critical event rainfall depths for an individual location.

Mandatory use of the Atlas 14 precipitation depths is waived for projects that are at greater than 30 percent design as of the date of adoption of the amendment.

The minor plan revision is shown below as additions (underlined) or deletions (strike outs) to Appendix C, Rules and Standards, of the Management Plan.

Rule D.3.(b) is hereby revised as follows:

- (b) Runoff rates for the proposed activity shall not exceed existing runoff rates for the 2-year, 10-year, and 100-year critical storm events for the project location as set forth in NOAA Atlas 14 Volume 8, published June 2013, or its successor, using the online NOAA Precipitation Frequency Data Server or a similar data source. Applicant must document the location and event depths used. ~~The storm event table is shown below.~~ If an approved local water management plan requires more restrictive rate control, then the more restrictive rate shall govern. Runoff rates may be restricted to less than the existing rates when necessary for the public health and general welfare of the watershed. Member cities and project review applicants shall not exceed discharge rates at City boundaries as determined in the Commission’s hydrologic model.

~~Table 2.3. Storm event depths by return frequency.~~

Return Frequency	24-hour	12-hour	6-hour	3-hour	2-hour	1-hour	30-min	15-min
2-year	2.8	2.4	2.1	1.7	1.7	1.4	1.1	0.7
10-year	4.2	3.7	3.1	2.6	2.5	2.1	1.7	1.3
100-year	5.9	5.0	4.4	3.8	3.5	2.9	2.4	1.7

Source: US Department of Commerce, Weather Bureau, Technical Paper No. 40 (TP-40).