



DAM SAFETY
POLICY MEMORANDUM #19

TO: Dam Owners, Operators, and Engineers

FROM: Stormwater, Dam Safety, and Flood Management Program
Water and Science Administration

DATE: April 24, 2023

SUBJECT: Use of NOAA Atlas14 Rainfall Data

Policy Statement

It is the policy of the Maryland Department of the Environment (the Department) that the design of dam embankments considers potential failure modes and incorporate defensive design measures as appropriate. The Department has observed instances where designs continue to incorporate rainfall depths and distributions found in Soil Conservation Service (SCS) Technical Paper No. 40 (TP-40), “Rainfall frequency atlas of the United States for durations from 30 minutes to 24 hours and return periods from 1 to 100 years”, occasionally referred to as SCS depths and distributions.

While the use of TP-40 may be accepted by jurisdictions for stormwater management design, small ponds and low hazard dam spillway design must use the rainfall depths and distributions found in “Precipitation-Frequency Atlas of the United States” NOAA Atlas 14, Volume 2, Version 3.0. This applies to both new small ponds and low-hazard dams, as well as existing structures under consideration for repair or retrofit.

Atlas 14 information can be accessed online using the NOAA Precipitation Frequency Data Server (PFDS) at <https://hdsc.nws.noaa.gov/hdsc/pfds/>

Additional Information

Questions about this policy or other items relating to ponds and dams can be directed to the Chief of the Dam Safety Permits Division at 410-537-3552.