

Recommendation for: Percent Ponding in Harris County (Revised 08/08/2002)

Goal: Since ponding areas identified for the 1984 *Flood Hazard Study* for Harris County have been slowly reduce in the years since that study, it is necessary to understand the original intent of the percent ponding variable (DPP) as presented in that study and to determine its applicability given the current state of development in the watersheds of Harris County.

Recommended Procedure: It is recommended that DPP be used only in calibration to historic events, as necessary and appropriate. For hypothetical storm events, it is recommended that ponding be eliminated from consideration.

Assumptions: Since ponding has historically been defined based on rice farming in the various watersheds, it should be considered a seasonal occurrence. Because of this and the fact that flooding rains can occur at anytime during the year, the worst-case condition would be a condition in which rice terracing and levees are impounding water and retarding the flow.

For use in historical calibration, maps created by HCFCD for the *Flood Hazard Study* to define ponding areas should be utilized, taking into account development which may have reduced the level of ponding in a particular watershed.

Testing Procedure: No testing was done for this recommendation.

Test Results: No testing was done for this recommendation.

Final Notes: No additional notes.

Committee Resolution: Use the recommended procedure.

Further Developments: The committee requested further clarification on the application sequence of the on-site detention procedure in subbasins where percent ponding (DPP) was also a factor. It would appear from testing the different sequences of application that it is more appropriate to apply the on-site detention procedure first and then to apply the ponding factor afterward. Applying the ponding factor first may result in a TC value which is significantly smaller than the without on-site detention scenario, which would be counter-intuitive. It is noted that in some cases, applying the ponding factor first may result in a negative TC value.