



March 18, 2019

Subject: PC-HYDRO Version 7.1 Release

To Whom It May Concern:

The Pima County Regional Flood Control District (District) is releasing PC-HYDRO Version 7.1, an internet-based implementation of the Pima County Hydrology Procedures. This release supersedes the 1979 Pima County Hydrology Manual and all previous versions of PC-HYDRO.

Note: The District will accept submittals using PC-HYDRO V 6.1 until May 1, 2019. Thereafter, the District will only accept PC-HYDRO V 7.1, with limited exceptions.

PC-HYDRO V 7.1 is the culmination of the District sponsored study: *PC-HYDRO: Pima County Hydrologic Procedures Comprehensive Evaluation* (Study), prepared by WEST Consultants, Inc. The Study analyzed 30 gauged Arizona watersheds and performed a full statistical analysis following the techniques outlined in Bulletin 17C using the non-proprietary software HEC-SSP. The results of the Study demonstrated:

“Considerable overlap between the PC-HYDRO and HEC-SSP prediction bands, particularly within the lower probability estimates (e.g., 100-year flow), with some deviation identified around the 2-year flow (50% return interval). This deviation of PC-HYDRO predictions near the 2-year frequency storm was found to be directly related to implementation of the adjusted curve number procedure... the overall fit between PC-HYDRO design flows and measured gage flows was improved and the number of under-predictions significantly reduced by limiting PC-HYDRO design predictions to unadjusted curve numbers.”

Therefore, based on the findings of the Study, the District is removing the adjusted curve number correction through the release of PC-HYDRO V 7.1. This revision has gone through an extensive review. Users across the engineering community have provided their assessment of the recommended revision. While PC-HYDRO is not mandatory, the District strongly recommends its use. The District will accept other prediction methods for estimating flood peaks, provided they meet with the prior approval from the District. You can access PC-HYDRO V 7.1 and an updated User Guide online at: <http://pchydro.rfcd.pima.gov/>.

Moving forward, District staff continues to seek other potential improvements to PC-HYDRO. We look forward to including your perspective as we generate technical guidance addressing input parameters including use of the newly obtained land use/land cover data to assign values for basin factors and impervious percentages.

Sincerely,

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Director and Chief Engineer

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