UG 210-21-5 ENG WinTR-20 Version 3.20.0000, Project Formulation - Hydrology Computer Program and User Documentation

User Guide: 210-21-5   **Date:**   April 21, 2021

Subject: ENG – WinTR-20 Version 3.20.0000, Project Formulation - Hydrology Computer Program and User Documentation

Purpose. To announce the availability of WinTR-20, Version 3.20.0000, Project Formulation - Hydrology computer program and provide information on obtaining user documentation.

Effective Date. Effective upon receipt.

Background. WinTR-20 is a single-event watershed-scale runoff and routing model. WinTR-20 computes direct runoff; develops hydrographs resulting from a synthetic or natural rainstorm; routes the hydrographs through stream reaches, valley reaches, and reservoirs; and combines hydrographs from tributaries with those on the main stream. WinTR-20 accommodates branching flow (diversions) and base flow. WinTR-20, Version 3.20.0000 also incorporates development of the principal spillway design, stability design (auxiliary spillway design), and freeboard hydrographs according to NRCS Technical Release No. 60, Earth Dams and Reservoirs, criteria. This version updates the routine that allows the user to import NOAA Atlas 14 data for site-specific applications to accept old and new formats. Engineers use WinTR-20 to estimate runoff volume and peak discharge, evaluate flooding problems, alternatives for flood control (reservoirs, channel modification, and diversion), and impacts of changing land use on the hydrologic response of watersheds.

Distribution. NRCS tested and CCE certified WinTR-20, Version 3.20.0000 for deployment to NRCS Information Technology Services (ITS)-supported workstations on September 5, 2017. The project reference number is CRQ2672782.

NRCS users may obtain the WinTR-20, Version 3.20.0000 computer program through their ITS managers.

WinTR-20 user documentation, additional support materials, training materials, and other references, including support of the new NOAA Atlas 14 rainfall data and associated NRCS-developed rainfall distributions derived from the NOAA data are available at the West National Technology Support Center WinTR-20 web site:
https://www.nrcs.usda.gov/wps/portal/nrcs/detailfull/national/water/manage/hydrology/?cid=stelprdb1042793

This user guide updates and replaces User Guide 210-18-1: ENG – WinTR-20, Version 3.20.0000, Computer Program, dated October 3, 2017. There were no software updates since the issuance of User Guide 210-18-1.

Filing Instructions. Users wishing to retain paper copies of WinTR-20 program documentation should place it in a three-ring binder adjacent to other NRCS technical directives.

Contact. Direct questions and comments regarding WinTR-20 to the appropriate State-level staff engineer, or to Quan D. Quan, Hydraulic Engineer, WNTSC, Beltsville, MD, at quan.quan@usda.gov or (301)504-3952.

Contact Claudia C. Hoeft, National Hydraulic Engineer, Conservation Engineering Division, at claudia.hoeft@usda.gov or (202)720-0772 with questions regarding this directive.

/s/

DIANE GELBURD

Deputy Chief for Science and Technology

[UG_210_210_5 - -]