UG 210-22-3 ENG FHWA HY-8, Culvert Hydraulic Analysis, Version 7.70, Computer Program and User Documentation

User Guide: 210-22-3   **Date:**   December 8, 2021

Subject: ENG – FHWA HY-8, Culvert Hydraulic Analysis, Version 7.70, Computer Program and User Documentation

Purpose. This user guide announces the availability of the Federal Highway Administration (FHWA) HY 8, Version 7.70, "Culvert Hydraulic Analysis" computer program and provides information on obtaining the software and documentation.

Expiration Date.   Effective upon receipt.

Background. HY-8 is a computer program used to size culvert pipes. The technical methods applied in HY-8 are based on culvert hydraulic approaches and protocols documented in the FHWA publications "Hydraulic Design Series 5: Hydraulic Design of Highway Culverts" (HDS-5), April 2012, and "Hydraulic Engineering Circular 14: Hydraulic Design of Energy Dissipaters for Culverts and Channels" (HEC-14), Third Edition, July 2006.

Version 7.70 contains several improvement and bug fixes including an updated Quick Start Guide, upgraded interface display, increased irregular roadway plot points, and improved tailwater computations. Full documentation of improvements and fixes are available at: https://www.fhwa.dot.gov/engineering/hydraulics/software/hy8/.

HY-8 is public domain software available for download to anyone who wishes to use the software. FHWA does not provide user assistance or support for HY-8. NRCS does not have an established internal support framework for HY-8.

The application of HY-8 is the responsibility of the user. The user is responsible for understanding potential accuracy limitations of the program results, independently cross checking those results with other methods, and examining the reasonableness of the results based on his or her engineering knowledge and experience.

Distribution. NRCS tested and CCE certified HY-8 Culvert Hydraulic Analysis, Version 7.70 for deployment to NRCS Information Technology Services (ITS) supported workstations. The project reference number is RFC#CRQ4089937, dated November 29, 2021. NRCS users may request the HY-8, Version 7.70 computer program through their appropriate ITS managers.

This user guide cancels, deletes, and replaces User Guide 210-17-1: FHWA HY-8, Version 7.50, Culvert Hydraulic Analysis Computer Program and Documentation, dated November 14, 2016.

Filing Instructions. Users wishing to retain paper copies of HY-8 Culvert Hydraulic Analysis Program documentation should place it in a three-ring bunder adjacent to other NRCS technical directives.

Contact. Contact. NRCS users are to direct questions and comments regarding software operation to the appropriate State-level staff engineer or to Jacob Dieguez, Hydraulic Engineer, Water Quality and Quantity Team, Beltsville, MD, at jacob.dieguez@usda.gov or (443) 699-5226.

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/

 J. XAVIER MONTOYA
Acting Deputy Chief for Science and Technology

[UG_210_22_3 - -]