CHAPTER 10, APPENDIX E

FHWA REFERENCES ON HYDROLOGY AND HYDRAULICS

- 1. A website for the Federal Highway Administration, Office of Bridge Technology provides current and archived information on highway hydraulics in its section titled "Hydraulics Engineering". This information includes publications and software, both current and archived. Most of the information may be downloaded or viewed in electronic format. Current and archived information includes Hydraulic Design Series (HDS), Hydraulic Engineering Circulars (HEC), and Hydraulic Reports.
- 2. AASHTO, 2005. Model Drainage Manual. AASHTO, Washington, DC.
- 3. AASHTO, 2006. Highway Drainage Guidelines. AASHTO, Washington, DC.
- **4.** Aron, Gert and D. F. Kibler, 1981. *Procedure PSU-IV for Estimating Design Flood Peaks on Ungaged Pennsylvania Watersheds*. Pennsylvania State University, University Park, PA.
- **5.** Aron, Gert, D. F. Kibler, E. L. White, et. al., 1981. *Field Manual of Procedure PSU-IV for Estimating Design Flood Peaks on Ungaged Pennsylvania Watersheds*. Pennsylvania State University, University Park, PA.
- **6.** Aron, Gert, and D. J. Wall, Elizabeth L. White, Christopher N. Dunn, David M. Kotz, May 1986. *Field Manual of Pennsylvania Department of Transportation Storm Intensity-Duration-Frequency Charts PDT-IDF*. Pennsylvania State University, University Park, PA.
- 7. Beard, Leo R., 1962. *Statistical Methods in Hydrology*. US Army Engineer District, Corps of Engineers, Sacramento, CA.
- **8.** Brown, S. A., S. M. Stein and J. C. Warner, 2001. *Urban Drainage Design Manual, Hydraulic Engineering Circular No. 22, Second Edition*. Report No. FHWA-NHI-01-021, Office of Bridge Technology, Federal Highway Administration, Washington, DC.
- **9.** Bureau of Watershed Management, 2000. *Erosion and Sediment Pollution Control Manual*. Department of Environmental Protection, Commonwealth of Pennsylvania, Harrisburg, PA.
- **10.** Bureau of Watershed Management, 2001. *Groundwater Monitoring Guidance Manual*. Department of Environmental Protection, Commonwealth of Pennsylvania, Harrisburg, PA.
- **11.** Engineering Computing Graphics Laboratory, 1998. *Watershed Modeling System, Reference Manual.* Brigham Young University, Provo, UT.
- **12.** Flippo, Herbert N., Jr., 1982. *Evaluation of the Streamflow-Data Program in Pennsylvania*. U.S. Geological Survey, Water-Resources Investigations 82-21, Reston, VA.
- **13.** Ginsberg, A., 1987. *HY-8 Culvert Analysis Microcomputer Program, Applications Guide*. Report No. FHWA-EPD-87-101, Federal Highway Administration, Washington, DC.
- **14.** McCuen, Richard H., Peggy A. Johnson and Robert M. Ragan, 2002. *Highway Hydrology, Hydraulic Design Series No. 2, Second Edition*. Report No. FHWA-NHI-02-001, Office of Bridge Technology, Federal Highway Administration, Washington, DC.
- **15.** HEC, 1990. *HEC-1, Flood Hydrograph Package, Computer Program Document 1A.* US Army Corps of Engineers, Hydrologic Engineering Center, Davis, CA.
- **16.** HEC, 1982. *HEC-2, Water Surface Profiles, Users Manual*. US Army Corps of Engineers, Hydrologic Engineering Center, Davis, CA.

- 17. HEC, 2002. HEC-RAS River Analysis System, Hydraulic Reference Manual. US Army Corps of Engineers, Hydrologic Engineering Center, Davis, CA.
- **18.** Jennings, M.E., W.O. Thomas, and H.C. Riggs, 1993. *Nationwide Summary of U.S. Geological Survey Regional Regression Equations for Estimating Magnitude and Frequency of Floods for Ungaged Sites, 1993.* Water Resources Investigations Report 94-4002, USGS Branch of Information Services, Denver, Colorado.
- **19.** Morgan, R.D., June 25, 1982. *Procedures for Coordinating Highway Encroachments on Floodplains with the Federal Emergency Management Agency (FEMA)*. Federal Highway Administration (memorandum), Washington, DC.
- **20.** National Resource Conservation Service, 1985. *National Engineering Handbook, Section 4, Hydrology.* US Department of Agriculture, Washington, DC.
- **21.** National Resource Conservation Service, 1990. *Engineering Field Handbook*. US Department of Agriculture, Washington, DC.
- **22.** National Resource Conservation Service, 2002. *WinTR-55 User Manual*. US Department of Agriculture, Washington, DC.
- **23.** Newton, D. W. and Janet C. Herin, 1982. *Assessment of Commonly Used Methods of Estimating Flood Frequency*. Transportation Research Board, National Academy of Sciences, Record Number 896.
- **24.** Norman, J. M., R. J. Houghtalen, and W. J. Johnston, 2001. *Hydraulic Design of Highway Culverts, Hydraulic Design Series No. 5.* Report No. FHWA-NHI-01-020, Federal Highway Administration, Washington, DC.
- **25.** Schall, James D., and Everitt V. Richardson, 2001. *Introduction to Highway Hydraulics, Hydraulic Design Series No. 4.* Report No. FHWA-NHI-01-019, Federal Highway Administration, Washington, DC.
- **26.** Shearman, J. O. and Arneson, L. A., 1998. *User's Manual for WSPRO A Computer Model for Water Surface Profile Computations*. Report No. FHWA-SA-98-080, US Federal Highway Administration, Washington, DC.
- **27.** Stuckey, Marla H., and Lloyd A. Reed, 2000. *Techniques For Estimating Magnitude and Frequency of Peak Flows For Pennsylvania Streams*, Water-Resources Investigations Report 00-4189, USGS Branch of Information Services, Denver, CO.
- **28.** Stuckey, Marla H. and Mark A. Roland, 2008. *Regression Equations for Estimating Flood Flows at Selected Recurrence Intervals for Ungaged Streams in Pennsylvania*, Scientific Investigations Report (SIR) 2008-5102, USGS, Reston, VA.
- **29.** U.S. Interagency Advisory Committee on Water Data, 1982. *Guidelines for Determining Flood Flow Frequency*, Bulletin #17B of the Hydrology Subcommittee: Reston, Virginia, U.S. Geological Survey, Office of Water Data Coordination, 183 p. [Available from National Technical Information Service, Springfield VA 22161, (tel 703-487-4600) as report no. PB 86 15 7278.]
- **30.** Wahl, Kenneth L, 1983. *Determining Stream Flow Characteristics Based on Channel Cross Section Properties*. Transportation Research Board, National Academy of Sciences, Record Number 922.
- **31.** Young, G. Kenneth, D. R. Pearson, S. M. Stein, J. S. Krolak, and A. T. Atayee, 1996. *User's Manual for, Integrated Drainage Design Computer System: Version 6.0.* Report No. FHWA-SA-96-064, Office of Technology Applications, Federal Highway Administration, Washington, DC.
- **32.** Ries III, Kernel G., John G. Guthrie, Alan H. Rea, Peter A. Steeves, and David W. Stewart, 2008. *StreamStats: A Water Resources Web Application*, USGS Fact Sheet FS 2008–3067, USGS, Reston, VA.
- **33.** Zevenbergen, L.W, L. A. Arneson, J. H. Hunt, and A. C. Miller, 2012. *Hydraulic Design of Safe Bridges, Hydraulic Design Series No.* 7. Report No. FHWA-HIF-12-018, Federal Highway Administration, Washington, DC.