Foreword

This training manual was developed to support the Introduction to GISHydro2000 training workshops given at the University of Maryland. It contains general information about ArcView, GIS-hydrologic modeling techniques, instructions on use of the software, detailed exercises, and supporting reference materials.

GISHydro2000 is an ArcView GIS-based application for conducting hydrologic analyses in the State of Maryland. Sponsored by the Maryland State Highway Administration, GISHydro2000 integrates a complete database of terrain, land use, and soils data with tools for assembling and evaluating hydrologic models such as the USGS regional regression equations and TR-20. The program is designed to support the procedures for hydrologic analysis recommended by the Maryland Hydrology Panel.

This manual will not directly follow the lectures presented in the training workshop. Rather, it serves as a document for future reference when using the software and further exploring its concepts. Several exercises are included to reinforce the lecture material including an Introduction to ArcView lab, USGS peak discharge estimation lab, a gaged homogeneous watershed lab, and two un-gaged heterogeneous labs. The exercises will be performed during the course of the workshop to emphasize the step-by-step techniques used.

The GISHydro software is evolving continually and being enhanced. Reporting and output features are in development to allow for watershed analysis report generation. Customized tools including a time of concentration estimator are also being created. Perhaps the most exciting development will be of a separate version of GISHydro for use over the World Wide Web. We encourage you to visit the GISHydro@Maryland website frequently so that you can always have the most up-to-date version of the software and data.

The Department of Civil and Environmental Engineering has a well established program of research and instruction in the field of GIS applied to hydrologic and hydraulic modeling. In addition to occasional training seminars and workshops, there are currently both undergraduate and graduate courses including: “ENCE465 – GIS for Planning and Design Models”, “ENCE688Z – GIS for Watershed Analysis”, and “ENCE688R – “River Engineering.”

We invite you to explore the training materials, courses, and research publications we have available. The GISHydro software initiative has been and continues to be a cooperation between academia, federal, state, and local government, as well as private consultants. This cooperation continues to produce powerful tools to support engineering, conservation, and planning efforts within the State.

Thank you for registering for the training workshop. For more information, please contact the authors of this document:

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