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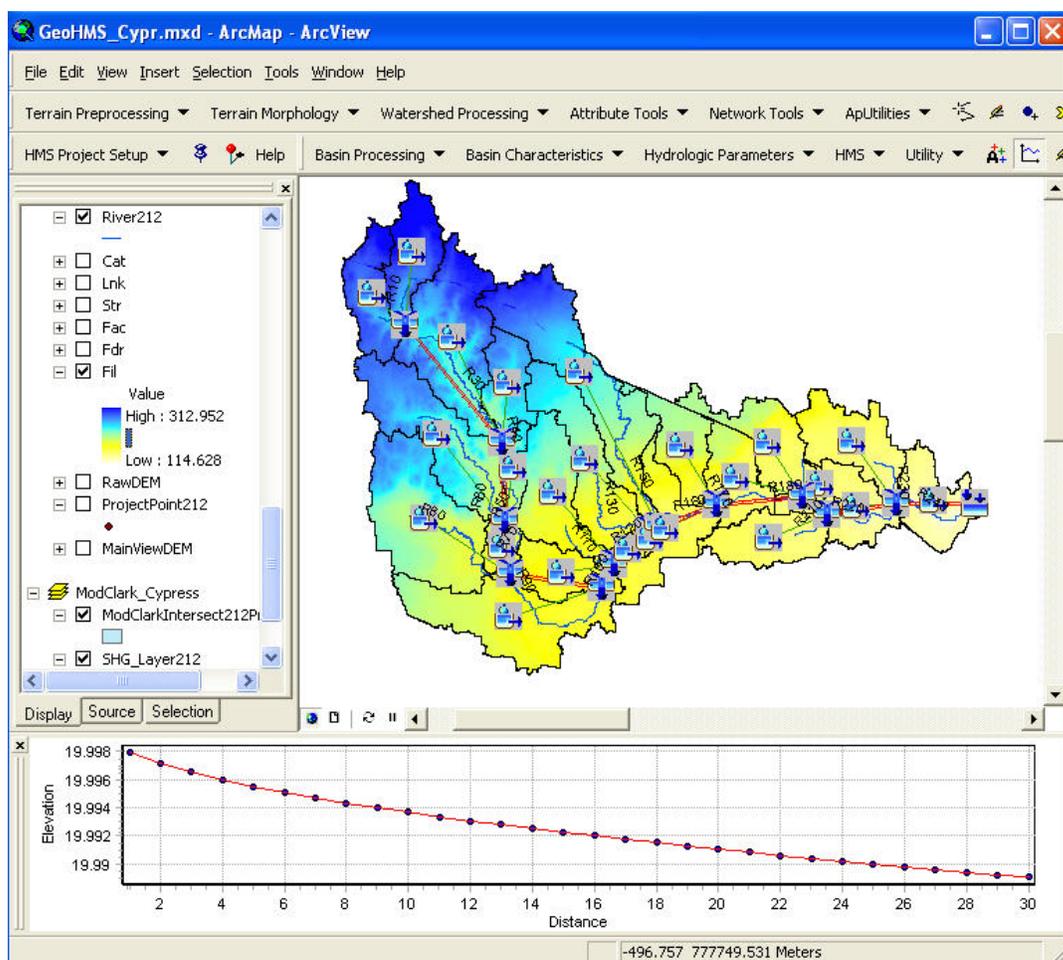
Flood & Coastal Storm Damage Reduction R&D Program

HEC-GeoHMS

Advanced Geospatial Support for Hydrologic Modeling

Description

The Hydrologic Engineering Center's Geospatial Hydrologic Modeling System (HEC-GeoHMS) is a geographic information system software based on ESRI's ArcGIS 9.2/9.3 and designed to analyze digital terrain data, delineate subbasins and streams, and generate hydrologic input files for HEC-HMS. HEC-GeoHMS comprises a graphical user interface (GUI), interactive tools, hydrologic parameter analysis components, data storage connection with the Data Storage System (HEC-DSS), and data management capabilities.



Over the years, the Hydrologic Engineering Center and Corps field offices have utilized HEC-GeoHMS on numerous projects ranging from watershed studies to project planning to emergency response project. Originally based on the ArcView 3 platform, GeoHMS has been updated to ArcGIS 9.2/9.3 and incorporates many useful GIS tools for estimating watershed characteristics and model parameters. HEC-GeoHMS can estimate basin average parameter values as well as grid-based parameter values for distributed modeling

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within HEC-HMS. New features and additional capabilities are constantly added from user feedback and technological updates.

Benefits HEC-GeoHMS will allow Corps engineers to analyze terrain data and efficiently develop data inputs for hydrologic modeling with HEC-HMS. HEC-GeoHMS provides the user with much control over the modeling process and develops hydrologic parameters that would be difficult with manual methods. Once the hydrologic data structure is developed within HEC-GeoHMS, it is easy to import this information into HEC-HMS for hydrologic flow computations. This product will save users time in data preparation and perform alternative scenario simulations.

Status The current release version of HEC-GeoHMS is version 4.2 for both ArcGIS 9.2 and 9.3. A new version is scheduled for release. Additional capabilities will include: enhanced terrain processing, extensive physical parameter extraction, hydrologic parameter estimation, data storage connection with HEC-DSS, and meteorological model support.

Distribution Source(s) HEC-GeoHMS can be obtained from the HEC Web site at the following location:
www.hec.usace.army.mil.

Available Documentation Documentation for HEC-GeoHMS currently consists of a User's Manual, which is also downloadable from the HEC Web site. In addition to the User's manual, the software comes with context-sensitive help and an example data set. User's can install the example data set and use it as a teaching aid for how to use HEC-GeoHMS.

Available Training There are training courses for HEC-GeoHMS in the Corps Prospect courses *Hydrologic Engineering Application of Geographic Information Systems*, *Advanced Application of HEC-HMS*, and *Hydrologic Modeling with HEC-HMS*. To find out more about these classes, and when they are offered, visit the HEC Web site and look these classes up under the training area of the Web site.

Available Support Support for HEC-GeoHMS is available to all Corps employees. Corps users can either e-mail or call HEC with questions and/or comments. Additionally, all users of HEC-GeoHMS can provide bug reports or comments with suggestions through the HEC Web site.

Application HEC-GeoHMS has been used by numerous USACE Districts for a wide range of studies to develop inputs for the HEC-HMS model. HEC-GeoHMS was used in the Sacramento / San Joaquin Comprehensive Study, Galveston District Buffalo Bayou Watershed, Russian River, CA dam break study, and Ketar Watershed Model in Ethiopia, Africa.

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Partners HEC-GeoHMS is developed by the Hydrologic Engineering Center through a Cooperative Research and Development Agreement (CRADA) with the Environmental Systems Research Institute, ESRI and using USACE Research and Development funding.