

## GIS Applications in Hydrology and Hydraulics Questionnaire

March 21, 2008

The Subcommittee on Hydrology set up a workgroup to organize and publicize information on GIS applications in the fields of hydrology and hydraulics. This scope has been expanded to include related water quality, watershed management, and ecological sciences GIS applications. This work is intended to make information on GIS applications in hydrology and hydraulics more generally available. This questionnaire is designed to gather limited but key information about a particular GIS application in order for a potential user to decide if the application fits his/her computer system, data requirements, and physical system to be modeled.

These applications should be public domain and supported by user documentation. Availability on the web is not necessary if the application can be distributed on CD ROM or through e-mail requests. If a short abstract, fact sheet, or technical paper is available on the application, please attach a copy. **Please return questionnaires by May 15, 2008.**

Name of Application, date, version number: The GIS Weasel, 4/2008, v 1.0

Contact (with e-mail, web site, and/or phone number): [mowshelp@usgs.gov](mailto:mowshelp@usgs.gov),  
<http://wwwbrr.cr.usgs.gov/weasel>

### Brief Description:

The GIS Weasel was designed to aid in the preparation of spatial information for input to lumped and distributed parameter hydrologic or other environmental models. The GIS Weasel provides geographic information system (GIS) tools to help create maps of geographic features relevant to a user's model and to generate parameters from those maps. The operation of the GIS Weasel does not require the user to be a GIS expert, only that the user has an understanding of the spatial information requirements of the environmental simulation model being used. The GIS Weasel software system uses a GIS-based graphical user interface (GUI), the C programming language, and external scripting languages. The software will run on any computing platform where ArcInfo Workstation (version 8.0.2 or later) and the GRID extension are accessible. The user controls the processing of the GIS Weasel by interacting with menus, maps, and tables. The purpose of this document is to describe the operation of the software. This document is not intended to describe the usage of this software in support of any particular environmental simulation model. Such guides are published separately.

Platform/operating system: Anywhere ArcInfo Workstation runs: Windows and a handful of Unix flavors.

Web-based or desk-top application ? Desktop

Data Requirements: raster elevation data

Data format and compatibility: ArcInfo Grid

Will the application import and export data files ? It will use ArcInfo Grids directly, but will not reformat input. It will export raster data via the ArcInfo GRIDASCII function. It also creates a wide variety of parameter output in ASCII files, as well as limited graphics.

Is the application flexible to couple with external programs and user created executables?

Are system and user documentation available?

Fact sheet: <http://pubs.usgs.gov/fs/2008/3004/>

Users manual: <http://pubs.usgs.gov/tm/2007/06B04/>

Are example applications available? Yes. Sample data provided with software package that goes with sample usage description in the users manual.

Does the application require prior installation of ESRI software? Yes

If so, which products? ArcInfo Workstation with GRID module.

Is there a user group or hotline-type support? Yes, email support ([mowshelp@usgs.gov](mailto:mowshelp@usgs.gov)).

Please return the questionnaire to William Merkel at [william.merkel@wdc.usda.gov](mailto:william.merkel@wdc.usda.gov). If there are questions or concerns please contact him at 301-504-3956. Thank you.