

GIS Applications in Hydrology and Hydraulics Questionnaire

September 30, 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.

Name of Application, date, version number:

Contact (with e-mail, web site, and/or phone number):

Dr. Jeffrey G. Arnold

Email address: Jeff.Arnold@ars.usda.gov

Web site: <http://www.brc.tamus.edu/swat/>

Brief Description:

SWAT is a river basin scale model developed to quantify the impact of land management practices in large, complex watersheds.

SWAT is a public domain model actively supported by the USDA Agricultural Research Service at the Grassland, Soil and Water Research Laboratory in Temple, Texas, USA.

Platform/operating system:

Hardware:

*** Personal computer using a Pentium IV processor or higher, which runs at 2 gigahertz or faster**

*** 1 GB RAM minimum**

*** 500 megabytes free memory on the hard drive for minimal installation and up to 1.25 gigabyte for a full installation (including sample datasets and US STATSGO data)**

Web-based or desk-top application -
Currently desk-top application

Data Requirements:

Data format and compatibility:

Will the application import and export data files ?

Yes

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

Yes

Are system and user documentation available?

Yes

Are example applications available?

Yes

Does the application require prior installation of ESRI software?

Yes

If so, which products?

Software (ArcSWAT 1.0 for ArcGIS 9.1 version):

- **Microsoft Windows XP, or Windows 2000 operating system with most recent kernel patch***
- **ArcGIS-ArcView 9.1 with service pack 2 (Build 766)**
- **ArcGIS Spatial Analyst 9.1 extension**
- **ArcGIS Developer Kit (usually found in C:\Program Files\ArcGIS\DeveloperKit\)**
- **ArcGIS DotNet support (usually found in C:\Program Files\ArcGIS\DotNet\)**
- **Microsoft .Net Framework 1.1**
- **[Adobe Acrobat Reader](#) version 7 or higher**

Is there a user group or hotline-type support?

Yes

<http://www.brc.tamus.edu/swat/arcswat.html>

Click on 'ArcSWAT Group'

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