

NFF 3.2

Model Uses	NFF is a set of regression equations published for each US State, allowing managers and decision makers to assess flood-peak discharges at gauged or un-gauged sites.	
Major Categories	Hydrology and Water Use	<u>Subject Knowledge Level</u> Intermediate
Minor Categories	Flood	<u>Technical Difficulty Level</u> Intermediate
Model Type	Physical Model	<u>Geographic in Nature?</u> No

Abstract

NFF estimates of the magnitude and frequency of flood-peak discharges and flood hydrographs which are used for a variety of purposes, such as the design of bridges, culverts, and flood-control structures, and for the management and regulation of flood plains. These estimates are often needed at un-gauged sites where no observed flood data are available.

To provide simple methods of estimating flood-peak discharges, the U.S. Geological Survey (USGS) developed and published regression equations for every State, the Commonwealth of Puerto Rico, and a number of metropolitan areas in the United States. These equations have been compiled into the National Flood Frequency (NFF) Program.

NFF works in concert with a Microsoft Access database, NFFv3.mdb, which contains the information needed to solve the regression equations for each State. As new equations become available, the NFF database will be updated and links to new documentation will be provided from the NFF web site. Users should check often to determine if the database has been updated with new equations for their areas of interest.

Future Developments

Continual updates to the regression equation database.

Model Limitations

Unknown

Model Features

- Regression equations calibrated for each state in the US, including Puerto Rico and some commonwealth areas in the US.
- Works in conjunction with Microsoft Access Database.

Required Data Types

NFF requires user input of physical and climatic characteristics used as independent variables in the equations. Manual or automated methods for measuring the input parameters are described in documentation provided for each state.

Model Outputs

Output is provided in the NFF user interface, and includes input parameters, peak-flow estimates, standard errors, and equivalent years of record. This output can be saved to a text file or printed. Hydrographs and frequency plots are presented in separate windows. The graphs and data used to create them can be saved to bitmap files or printed.

Hardware Requirements

400 megahertz or faster with at least 128 megabytes of memory is recommended.

DOS

Supported Platforms

UNIX

Software Requirements

Microsoft Access

Windows

Macintosh

Cost, Licensing and Availability

Free - available from link below.

Source

US Geological Survey

Source URL

<http://water.usgs.gov/software/nff.html>