

MODFE

Model Uses MODFE was developed to help solve two-dimensional ground-water-flow problems.

Major Categories Hydrology and Water Use

Subject Knowledge Level
Intermediate

Minor Categories Ground Water

Technical Difficulty Level
Intermediate

Model Type Physical Model

Geographic in Nature?
No

Abstract

This MODular, Finite-Element digital-computer program (MODFE) was developed to provide solutions to ground-water-flow problems based on the governing equations that describe two-dimensional and axisymmetric-radial flow in porous media. The documentation is divided into three parts and describes the hydrologic features and functions of MODFE, the finite-element equations used by the model and descriptions of the sub-routines and programs utilized.

Future Developments

Unknown

Model Limitations

Unknown

Model Features

- Characterizes general aquifer properties
- Assesses difference between true and approximate hydraulic head

Required Data Types

MODFE requires data pertaining to aquifer and confining-bed characteristics, two-dimensional space coordinates in Cartesian or radial (r-z) system, and time-step sizes. More detailed information on data input is available in the documentation.

Model Outputs

Outputs include hydraulic head and water-balance summary information of each time step, review of input data, and output of nodal flow rates from vertical leakage and boundary condition zones.

Hardware Requirements

None noted

Supported Platforms
DOS UNIX

Software Requirements

None noted

Windows Macintosh

Cost, Licensing and Availability

Free - available from link below.

Source

US Geological Survey

Source URL

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