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Installation Instructions

If you have downloaded PEST

To install PEST, create a new directory (eg. *c:\pest*) and unzip the contents of *pest13.zip* into that directory. Next add the PEST directory to the `PATH` environment variable.

If you have received PEST on a memory stick

Create a new directory (eg. *c:\pest*) on your hard drive and copy all files from the *pest* directory and subdirectories of the memory stick to your hard drive. Next add the PEST directory to the `PATH` environment variable.

Documentation

The PEST manual is supplied in pdf format as file *pestman.pdf*. It is situated in the *doc* subdirectory after installation. Additions to PEST functionality since upgrading of the manual are documented in *addendum.pdf*. **It is very important that you print this out and keep it with the manual.** (I apologise that this is so large; PEST documentation will be completely rewritten shortly.)

modules.pdf describes FORTRAN 90 modules which are supplied with PEST (see the *modules* subdirectory). Programmers can employ these modules for management of communications between their applications and model input files where model runs are undertaken in both serial and parallel modes. Communication between an application and the model with which it communicates is implemented using the same template and instruction file concepts that PEST uses.

Other Software

A number of programs have been written to expedite PEST usage in common modelling situations. These include:

- the PEST Groundwater Data Utilities,
- the PEST Surface Water Utilities, and
- PLPROC

Programs of the Groundwater Data Utilities and Surface Water Utilities can provide great assistance in file preparation for a PEST run by automating most of the tasks involved in this process.

Included in the Groundwater Data Utilities are a number of programs which can be used to parameterise a MODFLOW model using pilot points and geostatistically-based random fields, and to introduce geostatistically-based (and other) regularisation constraints into the parameterisation process. When used in conjunction with the regularisation functionality of PEST, this software is more powerful by far than any other groundwater parameterisation software available today.

A growing number of these utility programs is supporting the use of MODFLOW-USG.

PLPROC stands for “parameter list processor”. It was written to expedite the use of PEST with models which use unstructured grids. These include MODFLOW-USG and TOUGH2.

The Surface Water Utilities include a comprehensive time series processor named TSPROC which is an extremely powerful aid to surface water model calibration. Using TSPROC, calibration can be undertaken based on one or more observed time series, as well as on important attributes of these time series such as volumes accumulated over various times, certain flow statistics and flow excedence fractions. Functionality is included for automatic construction of PEST input files even for complex parameterisation problems.

To download this software, see the following web pages:-

http://www.pesthomepage.org