
MEMORANDUM

**Subject: Bear River Basin Plan
Use of Bear River Spreadsheet Model**

Date: September 28, 2000

Model Version Selection

The purpose of this memorandum is to document the two versions of the Bear River spreadsheet model and to provide the User with guidance in selection of the proper version to use. There are two versions of the model which can be selected for each of the three hydrologic conditions. The differences between the versions lie in the manner in which the ungaged reach gains and losses are determined.

The Bear River Model was developed based on historical data and the ungaged reach gains and losses were calculated to maintain a water balance in the river between major USGS gage points (the User is referred to the Task 3B Memorandum for a detailed discussion of the derivation of gains and losses). Therefore, the original model reflects historical or present development conditions using the ungaged gains and losses for each reach for calibration.

The **AArchived® model** is the original calibrated model in which the reach gains and losses are dynamically calculated to match historic gage values. That is, in this version of the model, the formulas or algorithms written to calculate the reach gains and losses remain as formulas. In other words, with any change to input data, the reach gains and losses will be re-computed so the discharge at any USGS gaging station node will match the historic value.

In the **AFuture Development® model**, ungaged reach gains and losses are Afixed® at historic levels. This model, therefore, represents historical conditions in the basin and should be used to analyze any new project formulations that change the historic flow levels in the basin.

The **only** difference between the two model versions is the fact that in the Archive version, the ungaged reach gains and losses are dynamically computed based upon input data. In the Future Development version, the reach gains and losses do not change.

Creation/Formulation of the Model Versions.

The AFuture Development@ model is created from an AArchived@ model simply by Acopying@ the values in the AGain/Loss@ spreadsheet page and Apasting@ them back over themselves as values using the Paste Special Excel option. The user will note that in the AArchived@ model the Gain/Loss calculations are formulas based on the Reach Gain/Loss calculations and are updated whenever data in the model is updated. The model referenced by the GUI is the AFuture Development@ model (with fixed reach gain/loss).

The User is cautioned that there are not automatic routines within the Bear River Model which facilitate construction of new AFuture Development@ versions (i.e, those in which gains and losses are not dynamically computed). Therefore, it is up to the User to maintain his own file naming conventions if the model is modified.