Index-velocity Quick Sheet

Entering Multi-parameter Ratings into ADAPS

If we assume a 2-parameter index velocity rating with the following form:

$$V = X*Vi + Y*Vi*S + C$$

Where
- V = mean velocity,
- Vi = index velocity,
- S = stage,
- X = coefficient for the index velocity term,
- Y = coefficient for the index velocity – stage term, and
- C = a constant

This form of an equation is not supported in ADAPS ratings (PR menu). A data descriptor (DD) processor must be used, as shown in the following steps. The items shown in blue are the screen displays from ADAPS.

In ADAPS, go to the SU menu:

```
1 -- Manage Record Data Aging Status
2 -- Update Location information
3 -- Update Data Descriptor information
4 -- Update ADR Instrument information
5 -- Manage preferred input
```

Select option **3**, then select the Station (**ST**), hit return:

```
EDIT/UPDATE PROGRAM FOR DATA DESCRIPTOR (DD) FILE

              AD - Add a NEW Data Descriptor
              ED - Edit a Data Descriptor
              DI - Display a Data Descriptor
              LI - list the Data Descriptor for a station
              DE - Delete a Data Descriptor
              PF - Create DCP performance Data Descriptors
              CH - Change to different Data Descriptor
              US - Re-start program, display user information
              QU - Quit this program
              EX - Exit adaps programs
```
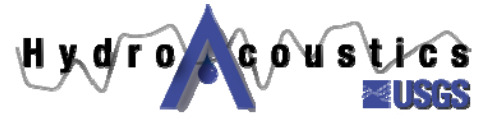
Select **ED**, then choose **Discharge** from the Data Descriptor List

```
DD DISPLAY AND UPDATE OPTIONS

    1. DISPLAY/UPDATE DD INFORMATION
    2. DISPLAY/UPDATE DD PROCESSING INFORMATION
```

ENTER OPTION NUMBER INDICATING WHICH DATA TO DISPLAY/UPDATE OR KEY
[CR] TO CONTINUE:

Select **2**, then the following DD processor menu appears:

```
8805524500 TRN8 IROQUOIS RIVER NEAR FORESMAN, IN
                        DD#1 Discharge (AVM), in cfs

     Processor Status:                  working
     Created by:                        smorlock  on: 02-26-2004 @ 13:45:29 EST
     Modified by:                       smorlock  on: 02-26-2004 @ 13:45:29 EST
SD - Starts on:                         10-01-2003
ED - Ends on:                           12-31-2382
RP - Default primary report type:       Standard
GP - Unit values missing gap time:      120 (MINUTES)
DV - Compute DVs:                       MEAN
IS - Stage gage:                        Not Specified
IV - Velocity gage:                     Not Specified
UL - Upper gage height limit:           Not specified
LL - Lower gage height limit:           Not specified
EQ - Use mean-velocity equation:        Yes
XC - Equation X coefficient:            Not specified
YC - Equation Y coefficient:            Not specified
EC - Equation constant:                 Not specified
HB - Base for extreme events:           Not used
HP - Interval for extreme events:       Not used
 Enter code to edit field, IR to set to In-review, DE to delete processor, NW to
create new version, or key [CR] to continue:
```

Enter **NW** to create a new DD processor

You will be prompted for the start date – put in the date when you want the multi-parameter rating to start:

ENTER STARTING DATE AS (MM DD YYYY): 10/01/2003
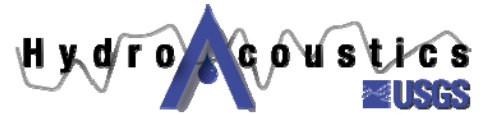
The following menu will appear, select option **4**:

```
PROCESSING INSTRUCTIONS FOR
              8805524500 TRN8 IROQUOIS RIVER NEAR FORESMAN, IN
                        DD#1 Discharge (AVM), in cfs


                           Computation Type


        1. Direct daily values computation
        2. Standard stage-discharge computation
        3. Slope-discharge computation
        4. Velocity/Deflection meter discharge computation
```

 Select primary computation type: **4**

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The following menu for the new processor will appear:

```
                8805524500 TRN8 IROQUOIS RIVER NEAR FORESMAN, IN
                        DD#1 Discharge (AVM), in cfs

Processor Status:                       working
     Created by:                            smorlock  on: 02-26-2004 @ 13:45:29 EST
     Modified by:                           smorlock  on: 02-26-2004 @ 13:45:29 EST
SD - Starts on:                         10-01-2003
ED - Ends on:                           12-31-2382
RP - Default primary report type:       Historical
GP - Unit values missing gap time:      120 (MINUTES)
DV - Compute DVs:                       MEAN
IS - Stage gage:                        DD #02 Gage height (AVM), in feet
IV - Velocity gage:                     DD #03 Stream velocity (AVM X), in ft/s
UL - Upper gage height limit:           Not specified
LL - Lower gage height limit:           Not specified
EQ - Use mean-velocity equation:        Yes
XC - Equation X coefficient:            0.462
YC - Equation Y coefficient:            0.033
EC - Equation constant:                 0.099
HB - Base for extreme events:           Not used
HP - Interval for extreme events:       Not used
 Enter code to edit field, WK to set to Working, NW to create new version,
 or key [CR] to continue:
```

The above menu shows entry for the equation $V = 0.462Vi + 0.033ViS + 0.099$

Notes:
- o Status must be set to WK, Working , to enter values
- o You must have ADAPS Administrator rights to access this feature
- o EQ must be set to Yes
- o IS must be set to the primary gage height sensor
- o IV must be set to the instrument velocity you are using as an index velocity
- o Make sure old velocity ratings are shut off prior to start date (SD) for this processor