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## Fixed point flags in MKMOD4 vs. READINP.

1 message

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**Mon, May 31, 2010 at 5:23 PM**

To: Willem Schreuder <willem.schreuder@prinmath.com>

Cc: Allan Wylie <allan.wylie@idwr.idaho.gov>, Rick Raymondi <Rick.Raymondi@idwr.idaho.gov>

Willem -

The attached is a screenshot from the MKMOD4.pl code.

I see you've hard-coded only the flags that ESPAM1.1 used. As a workaround for now I will change all the "UR" flags to "E." This works a loss of clarity in the data but no loss of functionality.

In ESPAM1.1, most of the points were as you described. However the "R" points had nothing to do with return flows; they were a correction for underestimation of recharge when deficit irrigation occurred on surface-water irrigated lands.

You have flagged it as if it had something to do with "SWV," which it did not. Like all other \*.fpt, in READINP the "R" points were simply a pass through and were added to the well term in the appropriate row, column and stress period. They did not precipitate nor participate in any other calculations.

Also, there were never any offsite pumping wells in the fixed-point data set. Offsite wells are wells whose pumpage volume must be subtracted from the aquifer at the location of the well and added to the diversion volumes for the entity. This is used whenever the pumpage volume is not included in the existing diversion data. These wells have to be in the Offsite data set for READINP to apply this calculation. I assume MKMOD4 behaves the same way?

(I do see some indication that this code is used for both the \*.fpt and \*.off files. I bet when I get to the \*.off it pukes 'cause the \*.off files don't have flags. Methinks you will have edited the \*.off to add an "O" flag, before running?)

Exchange wells do appear in the Fixed-Point data set. They are wells whose pumpage is already included in the recorded diversions for the entity and therefore neither READINP nor MKMOD should perform any other calculation than subtracting the volume from the appropriate row, column and stress period.

The points were flagged because the final multiplier in the line of multipliers near the end of the \*.mdl file could have been invoked (but never was) to multiply any point that had a flag of "W."

READINP looked for a "W" and ignored any other value.

In ESPAM2, we are not using the adjustment for recharge on surface-irrigated lands, nor are we using any adjustments for wetlands ET. Instead, we are applying wetlands and urban extraction directly in the Fixed-Point data set instead of as part of the non-irrigated recharge array. Because of this, the flags used in the ESPAM2 data are:

M = Mud Lake exchange wells

E = Non-Mud Lake exchange wells

UR = Net extraction for urban and industrial areas

W = Net extraction by ET on phreatic wetlands

UR could be U if MKMOD can only swallow one character. Lemme know.

Bryce

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**Fixed\_Point\_ScreenShot.jpg**  
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