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Cc: [Luke, Tim](#)
Subject: RE: TWG meeting follow up
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The MODFLOW 6 version of the WRV1.1 groundwater flow model is now available on IDWR's website at [Model Files for the Wood River Valley Groundwater-Flow Model - Idaho Department of Water Resources](#). I included a sample scenario well file and name file formatted for MODFLOW 6 that can be used as a template for scenarios you may want to run. A link to the USGS MODFLOW 6 documentation is also provided on the webpage.

As we discussed in the meeting, the MODFLOW 6 version has the following advantages:

1. Model run time is less than $\frac{1}{4}$ of the run time with MFUSG (less than 4 minutes vs. more than 17 minutes for the 20-year transient run on my system)
2. Convergence with the IMS solver is better than with the SMS solver (water budget error is 0.00% for all time steps with MF6, it ranged from -0.05% to 0.01% for some time steps with MFUSG)
3. Scenario model runs can be set up more easily because multiple well file can be written and read, rather than having to edit the very lengthy baseline well file. With the new format, the scenario well file only needs to list the stress periods we want to add stresses to, so it is very easy to create.

Zone and name files to extract fluxes by reach using the USGS zone budget program (zbud6.exe) are included in the 'ExtractFlux' folder. This replaces the bud2smp.exe extraction files provided with the MFUSG version.

Command line entries:

```
zbud6 < BigRch.nam
```

```
zbud6 < HRR_Stan.nam
```

```
zbud6 < Drain.nam
```

The 'Extract Head' folder includes an executable I wrote to convert the double precision head file to single precision (DbIHds2Sngl.exe). After running this program, mod2obs.exe can be run to extract heads from the wrv11mf6sngl.hds file using the same extraction files we used with the MFUSG version.

Command line entries:

```
DbIHds2Sngl < dbl2sngl.in
```

```
Mod2obs < m2oWells.in
```

Spreadsheets comparing the fluxes, heads, and water budget error from the MODFLOW 6 and MODFLOW USG versions are included to document that the MODFLOW 6 version is still calibrated.

Let me know if you have any questions or comments.

Thanks,
Jennifer