d:\modular\_datasets\_rev58\revision\_notes\Rev58\_docs

**REVISION 58 – March 11, 2019**

1. NEW\_INPUT\_FILES

Contains a list of new input files that are being tested.

1. NEW\_OUTPUT\_FILES

Contains a list of new output files being review.

1. Existing output files

List of changes in output files

1. Existing input files

List of changes in input files

1. Other

Other files that were modified in this revision.

1. **NEW INPUT FILES**

* **INITIAL.AQU** – New file

Location in FILE.CIO

! aquifer

type input\_aqu

character(len=25) :: init = **"initial.aqu"**

character(len=25) :: aqu = "aquifer.aqu"

end type input\_aqu

type (input\_aqu) :: in\_aqu



* These files are required for those input datasets that read a constituents.cs file (2-Stage/saturated buffer)

**SALT\_WATER.INI**



**SALT\_HRU.INI**



1. **NEW OUTPUT FILES**
2. **EXISTING OUTPUT FILES**

Removed the units line from all output files;

1. **EXISTING INPUT FILES**

* **PESTICIDE.PST** – Database updated to combine land and aquatic parameters (all example datasets have this updated file as well as in the \database\_files sub-directory).
* Remove **PESTICIDE.CHA** and **PESTICIDE.RES** files from FILE.CIO (no longer needed since they are now combined in **PESTICIDE.PST** file
* Remove **PATHOGENS.CHA, METALS.CHA** and **SALT.CHA** files from **FILE.CIO** (in\_cha)
* Remove **PATHOGENS.RES, METALS.RES and SALT**.**RES** from **FILE.CIO** (in\_res)
* Changed the order of **SEDIMENT.RES** in **FILE.CIO** (in\_res) (moved this after **HYDROLOGY.RES**
* **CHANNEL.CHA** - DELETE THE FOLLOWING COLUMNS (last three columns):

CHA\_PSTreservoir.res

CHA\_LS\_LNK

CHA\_AQU\_LNK

* **CHANNEL-LTE.CHA** – DELETE THE FOLLOWING COLUMNS:

CHA\_PST

CHA\_PATH

CHA\_HMET

CHA\_SALT

CHA\_TEMP

Added **ID** to the front of this file;

* **RESERVOIR.RES** – DELETE THE LAST COLUMN:

RES\_PST

* **SEDIMENT.RES** – Carbon and bulk density were added to this file
* **HYD-SED-LTE.CHA** – 1) Carbon added to this file

2) RTE\_DB column taken out of this file

* **PLANTS.PLT** – updated files with DAY\_MAT substituted for PLT\_HU.

(Jeff incorporated the Potential Heat Unit Program with this revision)

* **AQUIFER.AQU –** 1) added column AQU\_INIT that is cross walked with INITIAL.AQU file;

2)DELAY column replaced with BF\_MAX(previous was named FLO\_MAX).

BF\_MAX is the baseflow rate

when entire area is contributing to baseflow.

* **SOILS\_LTE.SOL** – Fixed a problem with the SILTY\_CLAY entries that was duplicated.
* **PLANT.INI** – added initial rotation year to the input file (**ROT\_YR\_INI** in table below)



* **ROUT\_UNIT.ELE –** HYP column deleted



* **FILE.CIO –** ADDED SOILS\_LTE.SOL to file.cio (partial file below):



* CAL\_PARMS.CAL file – example input datasets updated with new file (LREW):

1) Removed PST and PLT variables in this database file;

2) The **GW** variables in OBJ\_TYP changed to **AQU**

3) “delay” variable (in AQU OBJ\_TYP column) renamed to “bf\_max”

Range = 0-2

Units = mm

* CAL\_PARMS\_CAL file (continued) – added following calibration variables to database file.

**NAME OBJ\_TYP ABSMIN ABSMAX UNITS**

snofall\_tmp hru -20 20 degrees

snomelt\_tmp hru -20 20 degrees

snomelt\_max hru 0 20 mm/deg/c/day

snomelt\_min hru 0 20 mm/deg/c/day

snomelt\_lag hru 0 1 none

tile\_dep hru 0 6000 mm

tile\_dtime hru 0 100 hrs

tile\_lag hru 0 100 hrs

1. **OTHER**

Removed the following subroutines in the source codes:

hmet\_hru\_init.f90

path\_hru.init.f90

path\_water\_init.f90

pest\_hru\_init.f90

pest\_water\_init.f90

constit\_hyd\_frac.f90

constit\_water\_frac.f90

constit\_water\_add.f90

ch\_read\_pst.f90

constit\_hyd\_add.f90

res\_read\_pst.f90

readlup.f90

Added new subroutines:

PEST\_HRU\_AQU\_READ.F90

HMET\_HRU\_AQU\_READ.F90

PATH\_CHA\_RES\_READ.F90

SALT\_CHA\_RES\_READ.F90

SALT\_HRU\_AQU\_READ.F90

OUTPUT\_LS\_SALT\_MODULE.F90

CONSTIT\_DB\_READ.F90

**Code edited for LINUX compile:**

* Change all i\_exist statements:

**Old** **New**

i\_exist /=0 .or. i\_exist .or.

if (i\_exist == 0 .or. if (.not. i\_exist .or.

* Ambiguous functions: om\_add and om\_mult\_const (in organic\_minteral\_mass\_module.f90)
* Deleted RES\_CONVERT\_MASS.F90 (TWO ROUTINES INCLUDED)
* AQU\_READ\_ELEMENTS.F90 – initialize MREG = 0 at top of routine;