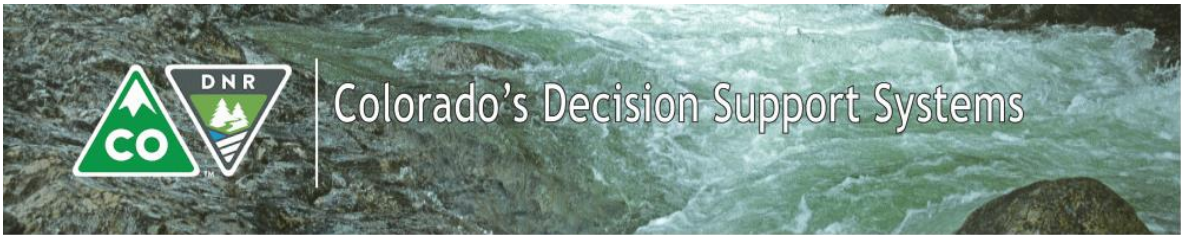

9.0 Discontinued but Supported File Formats

This section describes input files that are discontinued but continue to be supported. This support is provided to allow prior developments to continue to operate. They include:

9.1 Response File (*.rsp)

The response file contains the names of all other data files required to run the model. This file is read by subroutine StateM. Note that Version 10.30 and greater allows a user to enter response file data using one of two formats; random and sequential. StateMod reads the first file type and based on the occurrence of the character '=' in the first file name it determines if the file is random (contains a '=') or sequential (does not contain a '=').

The random file approach allows file names to be entered in any order as described below under Random Response Format. Any file type that is not required for a simulation is simply not included. Also any file name may be commented out by including a '#' character in column 1. Its format is described in the Chapter 4.0 Input Description.

The sequential file contains file names or a dummy name for every file type. It is described below. Also to allow StateMod to be backward compatible, well data (*.wes, *.wer, *.wem, and *.weh), the monthly instream demand (*.ifm), San Juan Recovery Plan sediment file (*.sjr), annual time series file (*.ipy), irrigation water requirement file (*.iwr) and soil moisture file (*.par) should not be provided unless specified in the control (*.ctl) file. See files with footnotes in the following table.

Sequential File Format		
Row-data	**Variable**	**Description**
		Format (a72)
Control and Network Files		
1-1	filena	Control file (*.ctl)
2-1	filena	River Network file (*.rin)
Station Files		
3-1	filena	Reservoir Station file (*.res)
4-1	filena	Direct Diversion Station file (*.dds)
5-1	filena	River Station file (*.ris)
6-1	filena	Instream Flow Station file (*.ifs)
7-1	filena (1)	Well Station file (*.wes)

Right Files

8-1	filena	Instream Flow Right file (*.ifr)
9-1	filena	Reservoir Right file (*.rer)
10-1	filena	Direct Diversion Right file (*.ddr)
11-1	filena	Operational Right file (.opr)
12-1	filena (1)	Well Right file (*.wer)

Climate and Stream Files

13-1	filena	Precipitation file - monthly (*.pre)
14-1	filena	Evaporation file - mon or ann (*eva)
15-1	filena	Streamflow file - mon (*.rim or *.xbm)

Demand Files

16-1	filena	Direct Flow demand file - mon (*.ddm)
17-1	filena	Direct Flow demand overwrite - mon (*.ddo)
18-1	filena	Direct Flow demand file - ann (*.dda)
19-1	filena (2)	Instream demand file - monthly (*.ifm)
20-1	filena	Instream demand file - annual (*.ifa)
21-1	filena (1)	Well structure demand file - mon(*.wem)

Delay and Reservoir Target Files

22-1	filena	Delay Table file - monthly (*.dly)
23-1	filena	Reservoir Target file - mon (*.tar)

Optional Files

24-1	filena (3)	SJRIP sediment file - annual (*.sjr)
25-1	filena (4)	Annual Time series file - annual (*.ipy)
26-1	filena (5)	Consumptive Water Req. - monthly (*.iwr)
27-1	filena (6)	Soil Moisture file - annual (*.par)

Historical and Base Streamflow Files

28-1	filena	Historic Res. EOM data - monthly (*.eom)
29-1	filena	Base Streamflow data (*.rib)
30-1	filena	Historic Streamflow data - monthly (*.rih)
31-1	filena	Historic Diversion data - monthly (*.ddh)
32-1	filena (1)	Historic Well Pumping - monthly (*.weh)

Output Control Files

33-1	filena	GIS data files (*.gis)
34-1	filena	Output Control file (*.out)

Daily Files

35-1	filena (7)	Streamflow file - daily (*.rid)
36-1	filena (7)	Direct Flow demand file - daily (*.ddd)
37-1	filena (7)	Instream demand file - daily (*.ifd)
38-1	filena (1,7)	Well demand file - daily (*.wed)
39-1	filena (7)	Reservoir Target file - daily (*.tad)
40-1	filena (7)	Delay Table file - daily (*.dld)
41-1	filena (5,7)	Consumptive Water Req. - daily (*.iwd)
42-1	filena (7)	Historic Streamflow data - daily (*.riy)
43-1	filena (7)	Historic Diversion data - daily (*.ddy)
44-1	filena (7)	Historic Well Pumping - daily (*.wey)
45-1	filena (7)	Historic Res. EOM data - daily (*.eoy)

(1)Well data (.wes, *.wer, *.wem, and *.weh) should only be provided when variable iwell = 1 in the control (*.ctl) file*
(2) A monthly instream flow file (.ifm) should only be provided when variable ireach = 2 or 3 in the control (*.ctl) file*
(3) A San Juan Recovery Sediment file (.sjr) should only be provided when the variable isjrip is not zero in the control (*.ctl) file*

(4) An Annual time series file (.ipy) should only be provided when the variable itsfile is not zero in the control (*.ctl) file*
(5) An Irrigation water requirement file should only be provided when the variable ieffmax is not zero in the control (.ctl) file*
(6) A Soil Moisture Parameter file (.par) should only be provided when the variable soild is not zero in the control (*.ctl) file*
(7) Daily data should only be provided when the variable iday is not zero in the control file.

9.2 Soil Parameter File (*.par)

The structure parameter file (*.par) contains soil moisture data required to perform soil moisture accounting. The soil moisture reservoir available to each structure is the parameter *awcr* multiplied by the structures area multiplied by average depth for every structure in the system specified in the control file (*.ctl) by variable *soild* (feet). It is formatted exactly the same as the soil parameter file used by the consumptive use model (StateCU), therefore it often contains data prior to and beyond the variable *awcr* that is not used by StateMod. Data can be entered in any order.

When this discontinued format is provided the following format string should be entered at the top of the file: # FileFormatVersion 1. If the above string is not provided StateMod will try to read the file and try to determine the appropriate type.

Row-data	**Variable**	**Description**
Control Data		
1		Format (i4, 1x, a12, 12f8.0)
1-1	cistat	Station ID
1-2	awcr(1-12,1)	Available soil moisture (inches per inch)
		Repeat for the number of stations numdiv

9.3 Irrigation Parameter Yearly Data File - Annual (*.ipy)

The annual CU time series file contains information required to perform calculations using a variable efficiency approach. The current standard is to provide 4 water supply and irrigation method combinations (Surface Supply Flood Irrigation, Surface Supply Sprinkler Irrigation, Ground Supply Flood Irrigation and Ground Supply Sprinkler Irrigation). A discontinued but still supported format includes total ground water and total sprinkler data.

When this discontinued format is provided the following format string should be entered at the top of the file: # FileFormatVersion 1. If the above string is not provided StateMod will try to read the file and try to determine the appropriate file type. Regardless if the file format string is or is not provided the discontinued total ground water and sprinkler data are distributed to four land use types as follows:

Water Supply Irrigation Method	**Approach**
Ground Supply Sprinkler Irrigation	= Minimum (Total Ground Water and Total Sprinkler Irrigation)
Surface Supply Sprinkler Irrigation	= Total Sprinkler – Ground Supply Sprinkler Irrigation
Ground Supply Flood Irrigation	= Total Ground Water – Ground Supply Sprinkler Irrigation
Surface Supply Flood Irrigation	= Maximum (0.0 or Total Area - Ground Supply Sprinkler Irrigation – Surface Supply Sprinkler Irrigation – Ground Supply Flood Irrigation).

```
Row-data      Variable            Description

Control Data
1                                 Format (i5,1x,i4,5x,i5,1x,i4,a5,a5)
1-1           ibm                 Beginning month of data (e.g. 1=Jan)
1-2           iby                 Beginning year of data (e.g. 1975)
1-3           iem                 Ending month of data
1-4           iey                 Ending year of data
1-5           cunit               Units of data ('   NA')
1-6           cyr                 Year type
                                     '  CYR'= calendar year (1-12)
                                     '  WYR'= water year (10-9)
                                     '  IYR'= irrigation year (11-10)

Time Series Data
2                                 Format (i4,1x,a12,3f6.0,2f8.0,f12.0,f3.0,f8.0)
2-1           idly                year
2-2           ID                  Structure ID
2-3           ceff                Conveyance efficiency (decimal)
2-4           feff                Maximum flood efficiency (decimal)
2-5           seff                Maximum sprinkler efficiency (decimal)
2-6           gacre               Acres with a ground water supply
2-7           sacre               Acres with a sprinkler supply
2-8           mprate              Maximum pumping rate (af/mo)
2-9           gwmode              Ground water use mode
                                    1 = maximum supply mode
                                    2 = mutual ditch supply mode
2-10          areax               Irrigated acreage for year idly (ac)
```

9.4 Operational Right File (*.opr)

Beginning with version 12.0 an operating rule file format was adopted that includes six (6) additional variables associated with water reuse, diversion type, etc.(see table below). When this discontinued format is provided the following format string should be entered at the top of the file: # FileFormatVersion 1. If the above string is not provided StateMod will try to read the file and try to determine the appropriate file type. Regardless if the file format string is or is not provided the discontinued operating rule file will assign the following default values:

Data Type	Variable	Default Value
Associated Plan Data	creuse	NA
Diversion Type	cdivtyp	NA
Conveyance Loss (%)	OprLoss	0
Miscellaneous Limits	OprLimit	0
Start Date	IoBeg	First year of operation
End Date	IoEnd	Last year of operation