

Information for running the program WREVAP

Dr Sri Srikanthan
31/7/2013

The computer program WREVAP calculates the evaporation for four separate cases using a flag as given in the table below.

Case	Flag
Actual evapotranspiration from landscape	1
Evaporation from shallow lake	2
Evaporation from deep lake (constant depth)	3
Evaporation from deep lake (variable depth)	4

Input data required to run the program are:

1. Latitude (degrees)
2. Station height (m)
3. Mean annual precipitation (mm year^{-1})
4. Number of months
5. Monthly temperature ($^{\circ}\text{C}$)
6. Monthly relative humidity (%)
7. Monthly sunshine hours (h)
8. Monthly lake depth (m)
9. Monthly salinity (ppm)

The last two items are only for a deep lake.

The input data is supplied to the program via two files: a parameter file and a data file.

Parameter file: ETpaper.par

Example:

Melbourne.dat ! File containing the climate and other data
Melbourne.out ! Output file
1 ! Flag for evapotranspiration from landscape

Data file:

For actual evapotranspiration from landscape or evaporation from a shallow lake

Record

- 1 Station header
 - 2 Latitude, station height, mean annual rainfall and number of months
 - 3 Data header
 - 4 year, month, number of days, temperature, relative humidity and sunshine hours
- . “ “ “
. “ “ “

Example: Melbourne.dat

86282 MELBOURNE AIRPORT

-37.666 113.4 660 194

Year	Month	Day	Temperature	RH	SH
1994	1	31	18.48	62.08	9.65
1994	2	28	19.81	72.05	7.29
1994	3	31	17.08	68.90	10.15
1994	4	30	15.31	68.57	9.40
1994	5	31	12.14	69.55	10.53
1994	6	30	10.06	76.05	10.11
1994	7	31	10.30	69.94	10.52
1994	8	31	9.62	67.81	10.83
1994	9	30	10.65	65.72	10.25
1994	10	31	14.34	60.37	10.61
1994	11	30	15.82	60.00	11.39
1994	12	31	20.75	57.92	9.58

.
.

For evaporation from a deep lake (constant depth)

Record

1	Station header
2	Latitude, station height, mean annual rainfall, number of months, lake depth and salinity
3	Data header
4	year, month, number of days, temperature, relative humidity and sunshine hours

. “ “ “
. “ “ “ “

Example: ThomsonReservoir.dat

Thomson Reservoir

-37.752	415	1090	36	22.95	23	
Year	Month	Day	Temperature	RH	SH	
2007	3	31	16.59	69.96	8.02	
2007	4	30	13.45	74.71	7.31	
2007	5	31	12.56	73.88	5.20	
2007	6	30	6.94	85.04	3.91	
2007	7	31	6.98	79.93	4.45	
2007	8	31	9.33	72.12	6.58	
2007	9	30	9.77	69.64	7.03	
2007	10	31	12.77	64.85	7.86	
2007	11	30	15.43	75.45	8.42	

2007 12 31 17.28 69.95 8.43

.
.

For evaporation from a deep lake (variable depth)

Record

- 1 Station header
- 2 Latitude, station height, mean annual rainfall, number of months and salinity
- 3 Data header
- 4 year, month, number of days, temperature, relative humidity and sunshine hours

. “ “ “
. “ “ “ “

Example: ThomsonReservoirVD.dat

Thomson Reservoir

-37.752	415	1090	36	23		
Year	Month	Day	Temperature		RH	SH Depth
2007	3	31	16.59	69.96	8.02	22.52
2007	4	30	13.45	74.71	7.31	21.99
2007	5	31	12.56	73.88	5.20	21.69
2007	6	30	6.94	85.04	3.91	21.79
2007	7	31	6.98	79.93	4.45	23.39
2007	8	31	9.33	72.12	6.58	24.26
2007	9	30	9.77	69.64	7.03	24.86
2007	10	31	12.77	64.85	7.86	25.26
2007	11	30	15.43	75.45	8.42	25.52
2007	12	31	17.28	69.95	8.43	25.62

.
.