

Supplementary Materials (S1)

Years and Time Steps

Time Horizon
 Current Accounts Year: 1983
 Last Year of Scenarios: 2017

Time Steps per Year
 12
 Add Leap Days?

Time Step Boundary
 Based on calendar month
 All time steps are equal length
 Set time step length manually

Water Year Start
 October

#	Title	Abbrev.	Length	Begins	Ends
1	October	Oct	31	Oct 1	Oct 31
2	November	Nov	30	Nov 1	Nov 30
3	December	Dec	31	Dec 1	Dec 31
4	January	Jan	31	Jan 1	Jan 31
5	February	Feb	29	Feb 1	Feb 29
6	March	Mar	31	Mar 1	Mar 31
7	April	Apr	30	Apr 1	Apr 30
8	May	May	31	May 1	May 31
9	June	Jun	30	Jun 1	Jun 30
10	July	Jul	31	Jul 1	Jul 31

Time Step Name Format: October / Oct

The study period will run from October, 1982 to September, 2017.

Help Close

Figure S1. WEAP Model Years and Time Steps.

Table S1. Computation of Nash-Sutcliffe model efficiency coefficient (NSE)*.

Months	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Sum
Q_0 (m ³ /s)	1.15	2.29	6.03	15.6 3	24.06	20.16	8.88	5.03	3.59	3.10	2.32	1.45	93.69
Q_s (m ³ /s)	1.22	2.05	5.30	22.1 0	36.76	23.34	12.20	4.61	4.28	3.97	1.32	0.80	117.96
$(Q_s^t - Q_0^t)^2$	0.01	0.06	0.52	41.8 6	161.15	10.09	11.02	0.17	0.48	0.75	0.99	0.42	227.52
$(Q_0^t - \bar{Q}_0)^2$	44.32	30.44	3.17	61.2 0	264.22	152.66	1.16	7.74	17.8 1	22.12	30.09	40.48	631.09
NSE													0.64

* based on the formula;
$$NSE = 1 - \frac{\sum_{t=1}^T (Q_s^t - Q_0^t)^2}{\sum_{t=1}^T (Q_0^t - \bar{Q}_0)^2}$$

where, \bar{Q}_0 is the mean of the observed streamflow, Q_s^t and Q_0^t are simulated and observed streamflow at time t respectively.