

331710094115900 Evaporation Gage at Wright Patman Lake near Texarkana, TX

Big Cypress-Sulphur Basin
Lower Sulphur Subbasin

LOCATION.--Lat 33°17'10", long 94°11'59" referenced to North American Datum of 1983, Bowie County, TX, Hydrologic Unit 11140302, with instrumentation attached to a 20 ft tower on Bells Island, located about 2.7 mi southwest of Wright Patman dam and 2.7 mi west of U.S. Highway 59.

CLIMATOLOGICAL RECORDS

PERIOD OF RECORD.--Feb. 2008 to current year.

INSTRUMENTATION.--Wind speed, wind direction, air temperature, relative humidity, vapor pressure, and net radiation. Wind speed and direction are measured with a sonic anemometer. Datalogger measures and records one hour averages for all parameters. Satellite telemeter at station.

REMARKS.--Estimates of daily evaporation are made using the Penman equation. Daily amount of advected energy and the daily change in stored energy are not measured and assumed negligible. Measured parameters for the Penman equation include net solar radiation, wind speed, air temperature, and atmospheric vapor pressure. Latent heat of vaporization is assumed a constant value of 2,440 joules per gram and atmospheric pressure is computed from the elevation of the site.

Estimated daily sums result if hourly evaporation estimates were set to zero when raining and anemometer had difficulty obtaining good measurements. Daily sums on Jan. 9, 2011, Jan. 10, 2011 and Jan. 11, 2011 are estimated because of rain and setting hourly values to zero when anemometer was not obtaining good measurements.

If calculated daily evaporation sums were negative, then daily sums were set to zero. Negative daily evaporation sums result when average daily net radiation is negative. Daily sums on Nov. 2, 2010 and May 2, 2011 were set to zero for this reason.

EXTREMES FOR PERIOD OF RECORD.--

EVAPORATION: Maximum, 9.59 millimeters per day, June 19, 2011; minimum, 0.00 millimeters per day, Dec. 30, 2009, Jan. 29, 2010, Feb. 4, 2010, Feb. 8, 2010, Nov. 2, 2010, Jan. 10, 2011, and May 2, 2011. Maximum reported here may have been exceeded during the period from May 12, 2009 to June 2, 2009 when data were missing.

EXTREMES FOR CURRENT YEAR.--

EVAPORATION: Maximum, 9.59 millimeters per day, June 19, 2011; minimum, 0.00 millimeters per day, Nov. 2, 2010, Jan. 10, 2011, and May 2, 2011.

331710094115900 Evaporation Gage at Wright Patman Lake near Texarkana, TX—Continued

EVAPORATION PER RECORDING INTERVAL, MILLIMETERS
WATER YEAR OCTOBER 2010 TO SEPTEMBER 2011
DAILY SUM VALUES

[e, estimated]

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	4.81	1.03	1.75	2.13	0.43	2.69	4.55	2.30	5.82	6.80	6.75	5.11
2	4.20	0.00	1.90	1.26	1.44	2.96	5.17	0.00	6.26	7.03	6.79	6.10
3	4.37	0.35	1.60	2.12	0.70	3.70	6.32	5.00	7.23	6.61	7.55	4.73
4	3.53	4.07	2.20	1.54	0.12	2.21	3.98	5.24	6.84	6.85	7.73	7.19
5	3.53	3.08	1.80	1.60	1.56	1.51	4.85	4.84	4.88	6.07	7.55	7.84
6	3.20	2.04	1.40	2.14	1.78	2.00	7.07	5.95	6.10	6.52	7.19	5.53
7	3.49	2.34	1.59	2.85	0.95	2.00	2.43	6.90	6.47	7.25	7.20	5.33
8	3.65	2.79	0.47	1.75	2.16	1.25	5.26	3.12	6.33	7.60	7.22	5.25
9	3.31	2.19	1.43	e0.31	0.13	3.25	5.88	6.56	6.43	7.06	6.86	4.92
10	3.16	1.97	0.53	e0.00	0.70	3.73	5.67	4.72	6.36	7.44	6.05	5.05
11	0.41	0.95	1.46	e0.34	1.76	4.84	5.04	5.30	7.05	7.75	4.69	5.17
12	2.99	2.85	2.54	0.88	2.71	4.49	4.98	2.90	6.14	7.51	5.92	4.95
13	3.70	0.73	1.09	1.18	3.86	1.70	5.07	6.01	7.01	7.54	3.47	5.63
14	3.59	1.59	1.86	1.05	1.98	1.81	4.57	4.24	6.73	4.90	6.44	3.65
15	3.29	1.39	2.48	0.31	1.69	3.39	5.24	5.30	6.92	5.36	6.01	4.32
16	2.87	1.30	1.85	0.02	1.77	3.82	5.99	5.76	7.28	6.50	6.10	3.48
17	2.18	2.43	1.49	0.21	1.50	5.10	5.79	5.55	8.61	6.74	7.05	3.74
18	3.01	0.81	1.39	0.67	1.06	4.34	3.92	5.14	9.38	6.07	5.42	3.47
19	1.50	1.31	1.41	0.88	2.38	3.94	7.43	4.41	9.59	5.85	6.28	4.15
20	1.80	0.00	1.30	0.19	3.18	5.01	0.94	2.79	9.18	5.90	6.30	4.34
21	2.63	1.56	1.99	1.20	2.40	4.52	1.74	4.13	4.47	7.08	2.61	4.48
22	3.14	0.90	1.18	1.52	3.00	4.30	6.70	6.67	3.63	6.85	5.33	2.86
23	1.83	1.41	1.35	0.63	1.61	5.55	4.83	2.77	6.38	7.34	4.75	4.17
24	2.01	2.45	0.33	1.38	1.42	5.09	6.18	6.55	7.11	6.67	2.86	4.51
25	3.56	0.71	0.84	1.97	2.03	3.60	2.88	7.17	6.22	5.68	5.07	5.78
26	3.32	1.83	1.41	1.78	1.04	5.11	0.64	5.38	7.72	4.81	5.96	4.26
27	3.25	1.79	1.25	2.35	1.76	1.19	4.97	6.29	7.79	6.21	5.65	4.05
28	4.58	2.68	0.43	2.76	3.67	1.01	5.21	8.15	6.47	4.87	5.58	4.38
29	2.56	0.51	0.35	3.04	---	1.22	7.34	7.35	6.46	5.54	0.97	4.58
30	2.97	2.57	1.67	1.09	---	1.51	1.04	6.84	6.22	6.47	5.85	6.41
31	3.41	---	1.99	0.30	---	2.85	---	6.09	---	7.22	5.16	---
Total	95.85	49.63	44.33	39.45	48.79	99.69	141.68	159.42	203.08	202.09	178.36	145.43
Mean	3.09	1.65	1.43	1.27	1.74	3.22	4.72	5.14	6.77	6.52	5.75	4.85
Max	4.81	4.07	2.54	3.04	3.86	5.55	7.43	8.15	9.59	7.75	7.73	7.84
Min	0.41	0.00	0.33	0.00	0.12	1.01	0.64	0.00	3.63	4.81	0.97	2.86

331710094115900 Evaporation Gage at Wright Patman Lake near Texarkana, TX—Continued

