

Lake Lacawac, Bruce R. Hargreaves, Lehigh University (brh@lehigh.edu, http://www.lehigh.edu/~brh) 41°22.5'N 75°17.3'W elevation 428m
 18 Apr 2014, 10:40-11:40am EDT: platform moved to lake center 16Nov 2013: platform move to dock 11:45-13:00 EDT
 The water level sensor (referenced to dock) settles for several days after moving platform to lake center and thus underestimates water level during this period.

H310 sensor depth & Lake level are based on differential pressure sensor with ca 0.1mm resolution & vertical position referenced to bottom of lake.
 Sensor PSIC converted to depth using density of water at 40C (1.43321 psf/m)
 Lake level is referenced also to lower frame of dock at SE corner (2003-May2005)
 (Actual water level at dock varies seasonally with density of water column and hourly from precip, runoff, evaporation, seepage & outflow. Outflow also varies with status of beaver dam).

month summary		Std pressure at sea level = 1 atm = 760 mm Hg = 29.92" Hg = 1013.2 mbars Std pressure at 428m elevation = 724 mm Hg, 29.61 in. Hg. (965.2 mbars)										H310 sensor depth										Lake level		cumul. rain-mm		Batt min-V		RH% CR10 enc		RH% MUX enc	
avg Tw	Tair avg-C	Tair Hi-C	Tair Min-C	RHair-%	Rain-mm	WS Max-mph	WS Min-mph	WDIR-deg	Barom-mb	Sum Rad W/m2	Sum PAR μMol/m2	Tw 0.1m	Tw 0.5m	Tw 1m	Tw 2m	Tw 3m	Tw 4m	Tw 5m	Tw 6m	Tw 8m	Tw 10m	Tw 12m	H310_z (m)	Lakelevel-mm (40C)	rain-mm	Batt min-V	RH% CR10 enc	RH% MUX enc			
12.2	10.9	24.5	-1.7	77.2	86.1	2.2	11.5	224.7	961.7	284045483	575	14.6	14.6	14.7	14.5	14.4	14.3	13.9	13.2	13.2	13.2	13.2	13.2	11.0	-116.3	86.1	12.3	52.4	26.8		

PAR & PYR Integration period=15min instead of 60min after 11am on 9/11/2013

Location	% records	Date	Day of Yr	Tair avg-C	Tair Hi-C	Tair Min-C	RHair-%	Rain-mm	WS Max-mph	WDIR-deg	Barom-mb	Sum Rad J/m2	Sum PAR μMol/m2	Tw 0.1m	Tw 0.5m	Tw 1m	Tw 2m	Tw 3m	Tw 4m	Tw 5m	Tw 6m	Tw 8m	Tw H310-C	Tw 12m	H310 depth-m (40C)	Lakelevel-cumul. rain-mm (40C)	Batt min-V	RH% CR10 enc	RH% MUX enc		
LC	100%	10/2/2014	275	14.7	17.2	12.6	89.0	1.0	1.0	4.0	150	968.9	6311835	13.2	18.82	18.81	18.90	18.79	18.05	17.64	16.38	12.71	7.87	6.9	6.78	11.0	-135.2	1.000	12.4	48.9	35.3
LC	100%	10/3/2014	276	14.3	18.1	11.4	86.6	0.4	1.9	7.2	184	964.3	6419108	13.3	18.34	18.37	18.47	18.41	18.10	17.66	16.34	12.76	7.90	6.9	6.78	11.0	-132.6	1.400	12.4	49.2	36.1
LC	100%	10/4/2014	277	12.0	14.8	5.3	85.6	6.7	2.2	7.5	236	953.0	3758287	8.0	17.77	17.81	17.89	17.85	17.82	17.72	16.33	12.84	7.92	6.9	6.79	11.0	-134.2	8.100	12.4	50.4	34.1
LC	100%	10/5/2014	278	11.4	9.9	0.9	77.3	0.0	2.0	8.3	284	958.4	1699080	33.5	16.82	16.89	16.97	16.91	16.86	16.82	16.17	12.91	8.03	6.9	6.81	11.0	-134.2	8.100	12.5	50.4	35.4
LC	100%	10/6/2014	279	11.4	17.6	4.7	66.0	0.0	2.7	10.7	201	963.4	15348057	31.0	16.26	16.30	16.38	16.32	16.30	16.26	15.88	13.23	7.97	6.9	6.79	11.0	-137.9	8.100	12.5	48.8	34.9
LC	100%	10/7/2014	280	14.6	18.3	12.1	71.8	0.5	2.8	8.4	200	963.0	11402294	23.4	15.96	15.99	16.14	15.98	15.95	15.95	15.76	13.68	7.95	6.9	6.80	11.0	-141.0	8.600	12.5	49.8	35.9
LC	100%	10/8/2014	281	14.4	17.5	10.1	67.4	3.0	3.3	11.4	254	958.7	14342038	28.7	15.88	15.92	16.03	15.95	15.93	15.92	15.64	14.22	7.98	6.9	6.81	11.0	-140.5	11.600	12.5	50.8	38.0
LC	100%	10/9/2014	282	11.2	15.9	6.8	59.0	0.0	2.2	11.1	255	963.5	14838877	29.4	15.55	15.60	15.69	15.63	15.63	15.66	14.51	14.54	7.97	6.9	6.81	11.0	-144.2	11.600	12.5	50.2	33.1
LC	100%	10/10/2014	283	8.9	14.3	3.9	69.2	0.0	1.1	5.5	277	967.0	13675201	27.5	15.28	15.31	15.37	15.25	15.15	15.16	14.95	14.46	8.00	6.9	6.81	11.0	-147.6	11.600	12.5	50.2	31.4
LC	100%	10/11/2014	284	8.7	12.3	6.8	84.6	5.1	1.2	5.0	154	967.0	6384094	13.1	15.00	14.99	15.06	14.99	14.96	14.97	14.78	14.46	8.01	6.9	6.81	11.0	-145.6	16.700	12.5	49.5	34.6
LC	100%	10/12/2014	285	8.1	15.3	1.4	71.0	0.0	1.0	4.7	227	972.0	17659507	34.6	14.96	14.87	14.85	14.66	14.60	14.58	14.37	14.14	8.02	6.9	6.81	11.0	-145.8	16.700	12.4	51.9	33.5
LC	100%	10/13/2014	286	11.3	13.7	5.9	87.6	0.0	1.7	6.2	202	972.9	3142695	7.0	14.46	14.52	14.63	14.53	14.51	14.47	14.22	14.04	8.03	6.9	6.83	11.0	-147.4	16.700	12.4	49.1	34.8
LC	100%	10/14/2014	287	18.3	21.2	13.7	87.7	0.0	2.7	9.3	196	969.4	7989888	17.0	14.84	14.84	14.91	14.68	14.52	14.50	14.28	14.01	8.07	6.9	6.82	11.0	-147.5	16.700	12.4	50.8	37.8
LC	100%	10/15/2014	288	19.1	20.0	17.2	94.4	29.2	3.0	10.8	174	962.8	4241209	9.6	15.90	15.88	15.95	15.26	14.70	14.58	14.28	13.98	8.11	6.9	6.82	11.0	-135.9	45.900	12.4	52.5	44.2
LC	100%	10/16/2014	289	16.5	19.1	12.4	83.4	14.8	1.9	7.6	202	955.0	12000712	24.4	16.60	16.61	16.63	15.78	14.89	14.66	14.31	13.86	8.16	7.0	6.91	11.0	-98.8	60.700	12.4	55.5	54.0
LC	100%	10/17/2014	290	14.1	18.4	10.3	76.3	0.0	2.1	9.6	249	954.2	14121730	28.6	16.36	16.41	16.49	16.15	15.08	14.69	14.31	13.82	8.20	7.0	6.91	11.0	-95.5	60.700	12.4	53.9	44.1
LC	100%	10/18/2014	291	12.1	15.2	8.3	79.8	1.6	2.3	10.7	263	952.4	7362977	15.2	15.89	15.94	16.02	15.98	15.33	14.78	14.32	13.77	8.23	7.0	6.92	11.0	-97.9	62.300	12.5	53.7	26.0
LC	100%	10/19/2014	292	4.6	8.2	1.1	71.0	0.0	3.9	11.4	313	961.7	11935450	23.4	14.79	14.85	14.93	14.90	14.89	14.78	14.42	13.81	8.25	7.0	6.94	11.0	-100.7	62.300	12.4	54.7	12.7
LC	100%	10/20/2014	293	6.9	12.6	0.7	68.2	0.0	1.7	7.2	238	963.6	10196398	20.6	13.91	13.96	14.04	13.98	13.94	13.96	13.73	13.73	8.26	7.0	6.92	11.0	-104.4	62.300	12.5	51.4	12.4
LC	100%	10/21/2014	294	10.5	13.2	9.2	90.2	2.6	1.2	5.1	139	960.1	5938736	12.2	13.77	13.79	13.84	13.77	13.72	13.75	13.54	13.61	8.27	7.0	6.93	11.0	-104.7	64.900	12.5	52.6	11.7
LC	100%	10/22/2014	295	9.4	10.2	7.9	94.5	5.8	3.3	8.8	126	962.2	2083463	4.7	13.51	13.55	13.64	13.59	13.58	13.63	13.46	13.66	8.27	7.0	6.93	11.0	-100.9	70.700	12.4	53.9	11.9
LC	100%	10/23/2014	296	7.1	7.9	6.3	94.0	10.6	3.6	9.8	329	958.4	2211382	5.0	12.93	12.92	13.06	13.02	13.05	13.09	12.92	13.12	8.35	7.0	6.93	11.0	-90.0	81.300	12.3	54.9	12.3
LC	100%	10/24/2014	297	10.4	15.5	7.1	71.5	0.0	3.7	10.6	325	959.1	13122804	26.8	12.56	12.61	12.69	12.63	12.66	12.68	12.48	12.65	8.65	7.0	6.94	11.0	-87.7	81.300	12.3	55.8	11.7
LC	100%	10/25/2014	298	11.2	16.4	5.2	61.0	0.0	2.1	8.2	259	956.4	11035380	22.0	12.45	12.49	12.57	12.49	12.46	12.65	12.23	12.41	9.21	7.0	6.94	11.0	-89.8	81.300	12.4	54.1	11.8
LC	100%	10/26/2014	299	9.7	13.4	8.2	61.2	0.0	4.0	11.5	302	953.5	6605579	13.3	12.10	12.16	12.25	12.20	12.22	12.26	11.07	12.26	9.93	7.1	6.95	11.0	-92.0	81.300	12.5	54.2	11.9
LC	100%	10/27/2014	300	8.9	14.8	4.7	62.4	0.0	1.9	8.5	288	962.8	14593531	28.5	11.79	11.84	11.91	11.83	11.79	11.79	11.56	11.76	10.92	7.1	6.95	11.0	-95.3	81.300	12.4	55.3	12.1
LC	100%	10/28/2014	301	16.0	24.5	7.6	58.8	0.0	1.8	8.2	194	962.6	10401156	21.0	11.95	11.95	11.99	11.89	11.77	11.75	11.51	11.65	10.91	7.1	6.96	11.0	-96.7	81.300	12.5	52.5	11.0
LC	100%	10/29/2014	302	11.9	15.2	6.7	87.5	4.6	1.4	6.2	260	960.9	2767614	6.1	12.27	12.28	12.33	12.22	11.91	11.79	11.51	11.66	10.94	7.1	6.96	11.0	-94.9	85.900	12.4	54.8	11.7
LC	100%	10/30/2014	303	5.1	7.1	2.7	83.2	1.4	6.0	8.0	293	963.5	3675541	8.1	11.73	11.81	11.89	11.85	11.84	11.83	11.65	11.76	7.1	6.95	11.0	-93.1	81.300	12.4	54.1	12.7	
LC	100%	10/31/2014	304	4.1	9.3	-1.7	77.0	0.1	1.2	5.4	159	962.0	13358226	25.6	11.47	11.54	11.58	11.49	11.39	11.42	11.20	11.38	10.66	7.1	6.96	11.0	-94.6	86.100	12.3	56.5	12.9
#N/A	100%	11/1/2014	305	6.2	6.2	6.2	74.8	0.0	2.0	3.3	55	959.7	34	0.0	11.35	11.47	11.54	11.49	11.43	11.33	11.09	11.28	10.71	7.1	7.00	11.0	-95.6	86.100	12.6	54.1	12.6

Lake water & energy budget daily summary from hourly data (negative values: loss from lake; runoff & seepage term is residual after adjusting lake level change for all others)

Ratio of lake watershed to lake area	Runoff & seepage as % of watershed area precip
2.6176798	18%
Grand sum/avg	11.19 14.82 14.85 14.92 14.78 14.57 14.48 2.0 292759261 -51522 38.0 86.1 41.3 -70.8 0.0 0.0