Lake Lacawac, Bruce R. Hargreaves, Lehigh University (brh0@lehigh.edu, http://www.lehigh.edu/~brh0)

31October2010: platform moved to dock

19Sep2010: Station moved to dock 9am-4pm for replacement of deck; mast down middle of day; remoored with only 3 lines (missing SE)

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.

Adjusted Tw sensors 13Nov07 based on comparison of depths and vs PUV & YSI sonde profiles (note that Tw at 11.3m matches PUV Tw at 12.5, probably within sediment boundary layer)

Tw12 adjusted to match others on bottom after moved to dock

Beaver dam bypass pipe installed 6Oct

H310 sensor depth & Lake level are based on differential pressure sensor with ca 0.1mm resolution & vertical position referenced to bottom of lake. Sensor PSIG converted to depth using density of water at 4oC (1.43321 psi/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).

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | 5280 | ft/mile | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | 1609.3 | m/mile | | | | | | | | | | | | | | | | | | | | |
| | | Tair avg F | Tair max F | Tair min F | | Rain-in | WS-mph | WS max mph | | | | | Tw 0.1m F | Tw 0.5m F | Tw 1m F | Tw 2m F | Tw 3m F | Tw 4m F | Tw 5m F | Tw 6m F | Tw 8m F | Tw 10m F | Tw 12m F | | | | | |
| | | 24.3 | 30.4 | 18.2 | | 3.63 | 5.9 | 32 | | | | | 33.9 | 37.1 | 37.2 | 37.6 | 39.0 | 37.9 | 38.8 | 38.1 | 37.8 | 38.1 | 37.6 | | | | | |
| Month summa | avg Tw | Tair avg-C | Tair Hi-C | Tair Min-C | RHair-% | Rain-mm | WS-m/s | WS Max-m/s | WDIR-deg | Barom-mb | Sum Rad W/m2 | Sum PAR uM/m2/s | Tw 0.1m | Tw 0.5m | Tw 1m | Tw 2m | Tw 3m | Tw 4m | Tw 5m | Tw 6m | Tw 8m | Tw02.2m | Tw02.7m | H310_z (m) | Lakelevel-mm (4oC) | cumul. rain-mm | Batt min-V | RH% CR10 enc | RH% MUX enc |
| | 3.3 | -4.3 | -0.9 | -7.7 | 83.5 | 92.2 | 2.6 | 14.4 | 279.0 | 957.7 | 148386001 | 289 | 1.0 | 2.8 | 2.9 | 3.1 | 3.9 | 3.3 | 3.8 | 3.4 | 3.2 | 3.4 | 3.1 | 2.3 | 24.5 | 91.7 | 12.3 | 16.9 | 15.9 |

month (All)

Data

| Location | % records | Date | Day of Yr | Tair avg-C | Tair Hi-C | Tair Min-C | RHair-% | Rain-mm | WS-m/s | WS Max m/s | WDIR-deg | Barom-mb | Sum Rad J/m2 | Sum PAR Mol/m2 | Tw 0.1m | Tw 0.5m | Tw 1m | Tw 2m | TW3m | TW4m | TW5m | TW6m | TW8m | TW H310-C | TW12m | H310 depth-m (4oC) | Lakelevel-mm (4oC) | cumul. rain-mm | Batt min-V | RH% CR10 enc | RH% MUX enc |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ND | 100% | 12/1/2010 | 335 | 8.0 | 14.4 | -0.5 | 96.3 | 63.9 | 2.6 | 10.0 | 189 | 955.9 | 1281394 | 3 | 5.55 | 5.57 | 5.57 | 5.59 | 6.03 | 5.45 | 5.80 | 5.43 | 5.36 | 5.2 | 5.31 | 2.3 | 63.6 | 63.400 | 12.4 | 22.5 | 21.3 |
| ND | 100% | 12/2/2010 | 336 | -1.3 | 0.6 | -3.8 | 78.3 | 0.0 | 2.2 | 6.1 | 299 | 964.0 | 6271431 | 12 | 4.97 | 5.11 | 5.11 | 5.17 | 5.83 | 5.14 | 5.53 | 5.09 | 4.98 | 5.0 | 4.90 | 2.3 | 85.9 | 63.400 | 12.4 | 17.0 | 24.2 |
| ND | 100% | 12/3/2010 | 337 | -1.8 | -0.2 | -3.7 | 78.1 | 0.0 | 2.0 | 5.3 | 315 | 963.0 | 4284340 | 8 | 4.63 | 4.73 | 4.72 | 4.75 | 5.46 | 4.73 | 5.14 | 4.70 | 4.58 | 4.6 | 4.54 | 2.3 | 64.2 | 63.400 | 12.6 | 15.6 | 17.8 |
| ND | 100% | 12/4/2010 | 338 | -2.4 | -0.7 | -4.3 | 84.1 | 0.0 | 3.1 | 9.6 | 317 | 957.4 | 4656418 | 9 | 4.18 | 4.25 | 4.23 | 4.25 | 5.07 | 4.30 | 4.72 | 4.30 | 4.14 | 4.2 | 4.08 | 2.3 | 51.0 | 63.400 | 12.5 | 15.8 | 14.4 |
| ND | 100% | 12/5/2010 | 339 | -4.3 | -2.5 | -6.0 | 79.1 | 0.0 | 3.7 | 12.7 | 307 | 951.8 | 5510855 | 11 | 3.63 | 3.70 | 3.69 | 3.71 | 4.63 | 3.78 | 4.22 | 3.80 | 3.61 | 3.6 | 3.53 | 2.3 | 41.2 | 63.400 | 12.5 | 15.9 | 14.8 |
| ND | 100% | 12/6/2010 | 340 | -4.1 | -3.2 | -5.0 | 81.2 | 0.0 | 3.9 | 10.5 | 303 | 946.5 | 3621136 | 7 | 2.92 | 3.01 | 3.02 | 3.07 | 4.07 | 3.15 | 3.58 | 3.16 | 2.94 | 3.1 | 2.84 | 2.2 | 32.9 | 63.400 | 12.5 | 16.2 | 14.7 |
| ND | 100% | 12/7/2010 | 341 | -3.9 | -2.7 | -5.1 | 74.1 | 0.0 | 4.1 | 11.8 | 304 | 947.6 | 3175273 | 6 | 2.26 | 2.44 | 2.46 | 2.53 | 3.56 | 2.63 | 3.04 | 2.63 | 2.37 | 2.5 | 2.30 | 2.2 | 27.2 | 63.400 | 12.4 | 16.4 | 14.7 |
| ND | 100% | 12/8/2010 | 342 | -5.5 | -3.9 | -7.4 | 65.2 | 0.0 | 3.5 | 11.4 | 306 | 957.4 | 7558573 | 14 | 1.62 | 1.80 | 1.85 | 1.98 | 2.91 | 2.05 | 2.52 | 2.15 | 1.90 | 2.2 | 1.83 | 2.3 | 21.7 | 63.400 | 12.3 | 16.5 | 15.3 |
| ND | 100% | 12/9/2010 | 343 | -7.9 | -5.7 | -11.1 | 70.1 | 0.0 | 2.5 | 8.5 | 291 | 968.0 | 8142290 | 15 | 0.98 | 1.31 | 1.42 | 1.62 | 2.39 | 1.70 | 2.40 | 2.08 | 1.85 | 2.4 | 1.87 | 2.3 | 18.3 | 63.400 | 12.6 | 16.1 | 16.0 |
| ND | 100% | 12/10/2010 | 344 | -7.7 | -2.4 | -13.2 | 85.4 | 0.0 | 0.8 | 5.9 | 212 | 971.5 | 3015958 | 6 | 0.66 | 1.74 | 1.84 | 2.03 | 3.15 | 2.55 | 3.12 | 2.70 | 2.44 | 2.9 | 2.31 | 2.3 | 16.3 | 63.400 | 12.5 | 15.3 | 15.9 |
| ND | 100% | 12/11/2010 | 345 | -0.5 | 6.0 | -4.9 | 79.7 | 0.0 | 0.6 | 3.9 | 199 | 968.9 | 6626365 | 13 | 0.86 | 1.88 | 1.94 | 2.15 | 3.33 | 2.76 | 3.36 | 2.93 | 2.66 | 3.1 | 2.59 | 2.3 | 14.1 | 63.400 | 12.5 | 16.1 | 14.5 |
| ND | 100% | 12/12/2010 | 346 | 4.0 | 10.7 | -1.5 | 98.2 | 27.6 | 2.0 | 11.4 | 145 | 950.1 | 1494350 | 3 | 0.63 | 2.00 | 2.08 | 2.25 | 3.35 | 2.68 | 3.30 | 2.95 | 2.75 | 3.1 | 2.71 | 2.3 | 29.0 | 91.000 | 12.5 | 17.4 | 13.4 |
| ND | 100% | 12/13/2010 | 347 | -3.0 | 2.9 | -11.4 | 90.6 | 0.5 | 3.1 | 11.2 | 302 | 938.5 | 1815350 | 4 | 0.54 | 2.04 | 2.11 | 2.27 | 3.37 | 2.70 | 3.30 | 2.92 | 2.72 | 3.2 | 2.66 | 2.3 | 42.3 | 91.500 | 12.3 | 17.1 | 14.7 |
| ND | 100% | 12/14/2010 | 348 | -11.2 | -9.9 | -12.3 | 80.1 | 0.0 | 3.9 | 10.8 | 311 | 945.5 | 4797265 | 9 | 0.66 | 2.10 | 2.16 | 2.33 | 3.17 | 2.48 | 3.04 | 2.72 | 2.51 | 2.9 | 2.51 | 2.3 | 37.1 | 91.500 | 12.3 | 16.2 | 16.7 |
| ND | 100% | 12/15/2010 | 349 | -8.8 | -7.1 | -10.5 | 76.4 | 0.0 | 3.8 | 10.9 | 307 | 951.4 | 5002180 | 10 | 0.61 | 2.18 | 2.24 | 2.43 | 3.21 | 2.56 | 3.10 | 2.78 | 2.58 | 2.9 | 2.58 | 2.3 | 32.1 | 91.500 | 12.4 | 16.0 | 16.2 |
| ND | 100% | 12/16/2010 | 350 | -7.4 | -3.1 | -10.6 | 79.9 | 0.0 | 1.4 | 8.2 | 249 | 953.0 | 6467329 | 12 | 0.26 | 2.26 | 2.33 | 2.51 | 3.46 | 2.87 | 3.40 | 3.08 | 2.87 | 3.1 | 2.83 | 2.3 | 27.8 | 91.500 | 12.4 | 16.7 | 16.1 |
| ND | 100% | 12/17/2010 | 351 | -6.9 | -2.6 | -11.0 | 89.0 | 0.0 | 1.1 | 6.8 | 264 | 958.6 | 4406441 | 8 | 0.05 | 2.35 | 2.41 | 2.63 | 3.64 | 3.08 | 3.62 | 3.24 | 2.99 | 3.3 | 2.95 | 2.3 | 24.3 | 91.500 | 12.6 | 15.6 | 16.1 |
| ND | 100% | 12/18/2010 | 352 | -5.7 | -0.9 | -9.1 | 86.0 | 0.0 | 0.7 | 4.6 | 259 | 963.7 | 6810323 | 13 | -0.09 | 2.43 | 2.50 | 2.70 | 3.73 | 3.22 | 3.73 | 3.33 | 3.11 | 3.4 | 3.05 | 2.3 | 21.1 | 91.500 | 12.5 | 16.4 | 16.0 |
| ND | 100% | 12/19/2010 | 353 | -6.9 | -0.6 | -12.0 | 86.0 | 0.0 | 0.7 | 3.4 | 272 | 961.4 | 6275074 | 13 | -0.26 | 2.53 | 2.58 | 2.80 | 3.82 | 3.33 | 3.81 | 3.42 | 3.17 | 3.4 | 3.13 | 2.3 | 18.3 | 91.500 | 12.6 | 16.5 | 16.2 |
| ND | 100% | 12/20/2010 | 354 | -5.4 | -3.4 | -9.1 | 88.4 | 0.0 | 2.7 | 12.0 | 306 | 959.4 | 2603237 | 5 | -0.40 | 2.59 | 2.65 | 2.88 | 3.81 | 3.26 | 3.78 | 3.38 | 3.17 | 3.4 | 3.11 | 2.3 | 15.7 | 91.500 | 12.5 | 15.4 | 15.5 |
| ND | 100% | 12/21/2010 | 355 | -4.8 | -3.5 | -6.0 | 83.6 | 0.0 | 3.9 | 10.2 | 327 | 959.8 | 5213189 | 10 | -0.46 | 2.63 | 2.70 | 2.91 | 3.70 | 3.10 | 3.62 | 3.27 | 3.10 | 3.2 | 3.03 | 2.3 | 12.9 | 91.500 | 12.4 | 16.3 | 15.1 |
| ND | 100% | 12/22/2010 | 356 | -4.3 | -2.0 | -5.4 | 89.1 | 0.0 | 3.3 | 9.1 | 324 | 957.6 | 4740852 | 9 | -0.57 | 2.70 | 2.77 | 2.99 | 3.82 | 3.26 | 3.77 | 3.39 | 3.20 | 3.4 | 3.12 | 2.3 | 10.8 | 91.500 | 12.6 | 16.5 | 14.9 |
| ND | 100% | 12/23/2010 | 357 | -4.8 | -3.7 | -5.7 | 84.0 | 0.0 | 4.9 | 12.0 | 323 | 959.9 | 4225720 | 9 | -0.43 | 2.77 | 2.84 | 3.08 | 3.68 | 3.10 | 3.61 | 3.27 | 3.08 | 3.2 | 2.98 | 2.3 | 8.4 | 91.500 | 12.5 | 17.4 | 15.1 |
| ND | 100% | 12/24/2010 | 358 | -5.1 | -2.9 | -6.1 | 85.1 | 0.0 | 3.6 | 8.9 | 323 | 964.9 | 7229600 | 13 | -0.38 | 2.84 | 2.91 | 3.15 | 3.86 | 3.33 | 3.79 | 3.45 | 3.29 | 3.3 | 3.21 | 2.3 | 6.5 | 91.500 | 12.4 | 18.8 | 15.2 |
| ND | 100% | 12/25/2010 | 359 | -4.8 | -2.9 | -6.0 | 87.6 | 0.0 | 1.8 | 5.3 | 324 | 961.6 | 3249822 | 7 | -0.35 | 2.93 | 3.00 | 3.25 | 4.10 | 3.63 | 4.07 | 3.70 | 3.47 | 3.6 | 3.35 | 2.3 | 4.9 | 91.500 | 12.6 | 16.3 | 15.0 |
| ND | 100% | 12/26/2010 | 360 | -7.1 | -5.0 | -10.7 | 93.5 | 0.0 | 2.7 | 9.0 | 214 | 954.2 | 1946006 | 4 | -0.51 | 2.96 | 3.02 | 3.31 | 4.11 | 3.61 | 4.10 | 3.71 | 3.48 | 3.6 | 3.35 | 2.3 | 4.6 | 91.500 | 12.4 | 15.7 | 15.6 |
| ND | 100% | 12/27/2010 | 361 | -9.1 | -6.9 | -11.3 | 84.4 | 0.0 | 6.4 | 14.4 | 323 | 945.6 | 6996686 | 13 | 0.06 | 2.96 | 3.05 | 3.30 | 3.70 | 3.21 | 3.70 | 3.34 | 3.11 | 3.3 | 3.02 | 2.3 | 9.1 | 91.500 | 12.3 | 17.4 | 16.2 |
| ND | 100% | 12/28/2010 | 362 | -3.2 | 0.5 | -7.1 | 73.7 | 0.1 | 3.7 | 11.0 | 309 | 956.2 | 5739636 | 11 | 0.11 | 2.98 | 3.07 | 3.42 | 3.87 | 3.36 | 3.83 | 3.46 | 3.29 | 3.3 | 3.23 | 2.3 | 7.1 | 91.600 | 12.5 | 19.0 | 15.1 |
| ND | 100% | 12/29/2010 | 363 | -3.4 | -0.3 | -9.1 | 86.2 | 0.0 | 2.5 | 9.7 | 293 | 962.5 | 4309622 | 8 | 0.07 | 3.00 | 3.08 | 3.52 | 4.03 | 3.53 | 4.00 | 3.61 | 3.44 | 3.5 | 3.38 | 2.3 | 5.0 | 91.600 | 12.5 | 18.4 | 15.0 |
| ND | 100% | 12/30/2010 | 364 | -5.1 | 5.2 | -13.0 | 87.9 | 0.1 | 0.3 | 4.6 | 230 | 966.9 | 7011370 | 14 | 0.02 | 3.02 | 3.09 | 3.62 | 4.15 | 3.69 | 4.17 | 3.76 | 3.49 | 3.6 | 3.47 | 2.3 | 3.4 | 91.700 | 12.5 | 18.3 | 15.9 |
| ND | 100% | 12/31/2010 | 365 | 1.2 | 7.8 | -4.9 | 88.1 | 0.0 | 0.3 | 2.6 | 203 | 966.4 | 3907914 | 8 | 0.03 | 3.04 | 3.12 | 3.68 | 4.18 | 3.73 | 4.20 | 3.78 | 3.55 | 3.7 | 3.51 | 2.3 | 1.6 | 91.700 | 12.5 | 17.8 | 14.4 |

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: **2.61767578** Runoff & seepage as % of watershed area precip: **65.5%**

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1.000 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | 4.184 |
| **Grand sum/avg** | | **-4.30** | **1.03** | **2.83** | **2.89** | **3.09** | **3.91** | **3.29** | **2.4** | **148386001** | **-28561** | **-15.6** | **92.2** | **157.7** | **-41.3** | **0.0** | **0.0** | SumTerrevap2=AirVPD,mbar*WS,m/s*s | Nominal diffuse %R from water=7% | **-25705.0** | **85584.5** | **23%** | **3** | **#N/A** | **#N/A** | **-1.0** | **#N/A** |

<=SCALE ADJ (1.0=no adjustment)

joule/calorie (=joule/degree for 1cm3)

Data

| DATE | DayOfYr | AvgTair C | AvgTw 0.1m | AvgTw0.5 m | Avg Tw1m | Avg Tw2m | Avg Tw3m | Avg Tw4m | AvgWS CSI m/s | SumRad J/m2 | SumH Evap (*0.9=KJ/m2) | Sum Lk_lvl chg (mm) | SumRain mm | Sum Runoff & seepage, mm | SumLake evap (mm) | Sum Terrevap2 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 12/1/2010 | 335 | 8.04 | 5.55 | 5.57 | 5.57 | 5.59 | 6.03 | 5.45 | 2.0 | 1281394 | 453 | 83.315 | 63.9 | 43.6 | 0.7 | 0.0 |
| 12/2/2010 | 336 | -1.26 | 4.97 | 5.11 | 5.11 | 5.17 | 5.83 | 5.14 | 1.9 | 6271431 | -1128 | -26.436 | 0.0 | 3.9 | -1.6 | 0.0 |
| 12/3/2010 | 337 | -1.83 | 4.63 | 4.73 | 4.72 | 4.75 | 5.46 | 4.73 | 1.8 | 4284340 | -1057 | -16.347 | 0.0 | -0.1 | -1.5 | 0.0 |
| 12/4/2010 | 338 | -2.41 | 4.18 | 4.25 | 4.23 | 4.25 | 5.07 | 4.30 | 2.9 | 4656418 | -1389 | -11.320 | 0.0 | 0.7 | -2.0 | 0.0 |
| 12/5/2010 | 339 | -4.31 | 3.63 | 3.70 | 3.69 | 3.71 | 4.63 | 3.78 | 3.4 | 5510855 | -1839 | -9.175 | 0.0 | 1.4 | -2.7 | 0.0 |
| 12/6/2010 | 340 | -4.07 | 2.92 | 3.01 | 3.02 | 3.07 | 4.07 | 3.15 | 3.5 | 3621136 | -1662 | -6.047 | 0.0 | 3.0 | -2.4 | 0.0 |
| 12/7/2010 | 341 | -3.94 | 2.26 | 2.44 | 2.46 | 2.53 | 3.56 | 2.63 | 3.8 | 3175273 | -1711 | -6.222 | 0.0 | 2.3 | -2.5 | 0.0 |
| 12/8/2010 | 342 | -5.51 | 1.62 | 1.80 | 1.85 | 1.98 | 2.91 | 2.05 | 3.2 | 7558573 | -1705 | -3.318 | 0.0 | 4.7 | -2.5 | 0.0 |
| 12/9/2010 | 343 | -7.92 | 0.98 | 1.31 | 1.42 | 1.62 | 2.39 | 1.70 | 2.3 | 8142290 | -1312 | -3.972 | 0.0 | 3.2 | -1.9 | 0.0 |
| 12/10/2010 | 344 | -7.65 | 0.66 | 1.74 | 1.84 | 2.03 | 3.15 | 2.55 | 0.4 | 3015958 | -544 | -1.687 | 0.0 | 4.3 | -0.8 | 0.0 |
| 12/11/2010 | 345 | -0.53 | 0.86 | 1.88 | 1.94 | 2.15 | 3.33 | 2.76 | 0.5 | 6626365 | -197 | -1.723 | 0.0 | 3.6 | -0.3 | 0.0 |
| 12/12/2010 | 346 | 4.04 | 0.63 | 2.00 | 2.08 | 2.25 | 3.35 | 2.68 | 1.7 | 1494350 | 314 | 29.705 | 27.6 | 8.1 | 0.5 | 0.0 |
| 12/13/2010 | 347 | -3.00 | 0.54 | 2.04 | 2.11 | 2.27 | 3.37 | 2.70 | 2.9 | 1815350 | -823 | -3.445 | 0.5 | 5.3 | -1.2 | 0.0 |
| 12/14/2010 | 348 | -11.17 | 0.66 | 2.10 | 2.16 | 2.33 | 3.17 | 2.48 | 3.6 | 4797265 | -1890 | -4.851 | 0.0 | 5.1 | -2.7 | 0.0 |
| 12/15/2010 | 349 | -8.76 | 0.61 | 2.18 | 2.24 | 2.43 | 3.21 | 2.56 | 3.5 | 5002180 | -1695 | -4.922 | 0.0 | 4.1 | -2.5 | 0.0 |
| 12/16/2010 | 350 | -7.45 | 0.26 | 2.26 | 2.33 | 2.51 | 3.46 | 2.87 | 1.1 | 6467329 | -708 | -3.726 | 0.0 | 3.4 | -1.0 | 0.0 |
| 12/17/2010 | 351 | -6.88 | 0.05 | 2.35 | 2.41 | 2.63 | 3.64 | 3.08 | 1.0 | 4406441 | -519 | -3.480 | 0.0 | 3.1 | -0.7 | 0.0 |
| 12/18/2010 | 352 | -5.75 | -0.09 | 2.43 | 2.50 | 2.70 | 3.73 | 3.22 | 0.6 | 6810323 | -385 | -2.953 | 0.0 | 3.1 | -0.6 | 0.0 |
| 12/19/2010 | 353 | -6.95 | -0.26 | 2.53 | 2.58 | 2.80 | 3.82 | 3.33 | 0.6 | 6275074 | -426 | -2.461 | 0.0 | 3.5 | -0.6 | 0.0 |
| 12/20/2010 | 354 | -5.43 | -0.40 | 2.59 | 2.65 | 2.88 | 3.81 | 3.26 | 2.5 | 2603237 | -694 | -2.918 | 0.0 | 3.2 | -1.0 | 0.0 |
| 12/21/2010 | 355 | -4.81 | -0.46 | 2.63 | 2.70 | 2.91 | 3.70 | 3.10 | 3.7 | 5213189 | -1010 | -2.355 | 0.0 | 4.0 | -1.5 | 0.0 |
| 12/22/2010 | 356 | -4.33 | -0.57 | 2.70 | 2.77 | 2.99 | 3.82 | 3.26 | 3.1 | 4740852 | -709 | -1.863 | 0.0 | 3.9 | -1.0 | 0.0 |
| 12/23/2010 | 357 | -4.78 | -0.43 | 2.77 | 2.84 | 3.08 | 3.68 | 3.10 | 4.6 | 4225720 | -1239 | -2.777 | 0.0 | 3.5 | -1.8 | 0.0 |
| 12/24/2010 | 358 | -5.11 | -0.38 | 2.84 | 2.91 | 3.15 | 3.86 | 3.33 | 3.4 | 7229600 | -951 | -1.758 | 0.0 | 4.0 | -1.4 | 0.0 |
| 12/25/2010 | 359 | -4.77 | -0.35 | 2.93 | 3.00 | 3.25 | 4.10 | 3.63 | 1.6 | 3249822 | -476 | -1.336 | 0.0 | 3.6 | -0.7 | 0.0 |
| 12/26/2010 | 360 | -7.09 | -0.51 | 2.96 | 3.02 | 3.31 | 4.11 | 3.61 | 2.5 | 1946006 | -809 | 5.660 | 0.0 | 11.0 | -1.2 | 0.0 |
| 12/27/2010 | 361 | -9.13 | 0.06 | 2.96 | 3.05 | 3.30 | 3.70 | 3.21 | 6.0 | 6996686 | -2452 | -2.285 | 0.0 | 5.8 | -3.5 | 0.0 |
| 12/28/2010 | 362 | -3.24 | 0.11 | 2.98 | 3.07 | 3.42 | 3.87 | 3.36 | 3.4 | 5739636 | -1063 | -1.371 | 0.1 | 4.5 | -1.5 | 0.0 |
| 12/29/2010 | 363 | -3.38 | 0.07 | 3.00 | 3.08 | 3.52 | 4.03 | 3.53 | 2.3 | 4309622 | -577 | -1.828 | 0.0 | 3.2 | -0.8 | 0.0 |
| 12/30/2010 | 364 | -5.10 | 0.02 | 3.02 | 3.09 | 3.62 | 4.15 | 3.69 | 0.3 | 7011370 | -312 | -2.074 | 0.1 | 2.4 | -0.5 | 0.0 |
| 12/31/2010 | 365 | 1.19 | 0.03 | 3.04 | 3.12 | 3.68 | 4.18 | 3.73 | 0.2 | 3907914 | -50 | -1.582 | 0.0 | 2.2 | -0.1 | 0.0 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 4.184 | <=CONVERT HEAT TO DEGREES | | | | | 4.184 | slope |
| 25% | 0.9 | | | 6000000 | cm3/m2 (for 0-4m integrated depth) | | | | | 6000000 | intercept |
| Solar Heat input (absorbed from solar rad), KJ/m2) | Sum H evap (KJ/m$^2$) | solar heat absorbed - evap loss (kJ/m$^2$) | % of absorbed solar heat lost via evap | Solar Heat input (absorbed from solar rad), Tw 0-6m) | starting Tw (0-6m) | ending Tw (0-6m) | actual dTw, 0-6m | RESID1: NON-SOLAR FLUX (Heat flux to offset absorbed solar to match dTw) | evap loss (degC 0-6m) | RESID2: NON-SOLAR FLUX to offset absorbed solar to match dTw LESS EVAP (degC 0-6m) | r2 |
| 961 | 407 | 1368 | -42.4% | 0.04 | 5.20 | 5.50 | 0.30 | 0.26 | 0.02 | 0.25 | |
| 4704 | -1015 | 3689 | 21.6% | 0.19 | 5.50 | 4.96 | (0.54) | (0.73) | -0.04 | (0.69) | |
| 3213 | -951 | 2262 | 29.6% | 0.13 | 4.96 | 4.57 | (0.38) | (0.51) | -0.04 | (0.47) | |
| 3492 | -1250 | 2242 | 35.8% | 0.14 | 4.57 | 4.10 | (0.47) | (0.61) | -0.05 | (0.56) | |
| 4133 | -1655 | 2478 | 40.0% | 0.16 | 4.10 | 3.58 | (0.53) | (0.69) | -0.07 | (0.62) | |
| 2716 | -1495 | 1220 | 55.1% | 0.11 | 3.58 | 2.93 | (0.65) | (0.76) | -0.06 | (0.70) | |
| 2381 | -1540 | 842 | 64.6% | 0.09 | 2.93 | 2.38 | (0.55) | (0.64) | -0.06 | (0.58) | |
| 5669 | -1535 | 4134 | 27.1% | 0.23 | 2.38 | 1.89 | (0.49) | (0.72) | -0.06 | (0.66) | |
| 6107 | -1181 | 4926 | 19.3% | 0.24 | 1.89 | 2.22 | 0.33 | 0.09 | -0.05 | 0.14 | |
| 2262 | -490 | 1772 | 21.6% | 0.09 | 2.22 | 2.44 | 0.22 | 0.13 | -0.02 | 0.15 | |
| 4970 | -177 | 4793 | 3.6% | 0.20 | 2.44 | 2.65 | 0.21 | 0.01 | -0.01 | 0.02 | |
| 1121 | 283 | 1404 | -25.2% | 0.04 | 2.65 | 2.67 | 0.02 | (0.03) | 0.01 | (0.04) | |
| 1362 | -741 | 620 | 54.4% | 0.05 | 2.67 | 2.51 | (0.16) | (0.21) | -0.03 | (0.18) | |
| 3598 | -1701 | 1897 | 47.3% | 0.14 | 2.51 | 2.60 | 0.09 | (0.05) | -0.07 | 0.01 | |
| 3752 | -1526 | 2226 | 40.7% | 0.15 | 2.60 | 2.64 | 0.04 | (0.11) | -0.06 | (0.05) | |
| 4850 | -637 | 4214 | 13.1% | 0.19 | 2.64 | 2.90 | 0.26 | 0.07 | -0.03 | 0.09 | |
| 3305 | -467 | 2838 | 14.1% | 0.13 | 2.90 | 2.98 | 0.08 | (0.05) | -0.02 | (0.04) | |
| 5108 | -346 | 4762 | 6.8% | 0.20 | 2.98 | 3.08 | 0.09 | (0.11) | -0.01 | (0.10) | |
| 4706 | -384 | 4323 | 8.2% | 0.19 | 3.08 | 3.18 | 0.10 | (0.09) | -0.02 | (0.07) | |
| 1952 | -624 | 1328 | 32.0% | 0.08 | 3.18 | 3.03 | (0.14) | (0.22) | -0.02 | (0.20) | |
| 3910 | -909 | 3001 | 23.2% | 0.16 | 3.03 | 3.17 | 0.14 | (0.02) | -0.04 | 0.02 | |
| 3556 | -638 | 2917 | 17.9% | 0.14 | 3.17 | 3.15 | (0.02) | (0.16) | -0.03 | (0.14) | |
| 3169 | -1115 | 2054 | 35.2% | 0.13 | 3.15 | 3.18 | 0.03 | (0.09) | -0.04 | (0.05) | |
| 5422 | -856 | 4566 | 15.8% | 0.22 | 3.18 | 3.40 | 0.21 | (0.00) | -0.03 | 0.03 | |
| 2437 | -428 | 2009 | 17.6% | 0.10 | 3.40 | 3.53 | 0.13 | 0.03 | -0.02 | 0.05 | |
| 1460 | -728 | 732 | 49.9% | 0.06 | 3.53 | 3.37 | (0.16) | (0.22) | -0.03 | (0.19) | |
| 5248 | -2206 | 3041 | 42.0% | 0.21 | 3.37 | 3.27 | (0.10) | (0.31) | -0.09 | (0.22) | |
| 4305 | -957 | 3348 | 22.2% | 0.17 | 3.27 | 3.48 | 0.21 | 0.04 | -0.04 | 0.08 | |
| 3232 | -519 | 2713 | 16.1% | 0.13 | 3.48 | 3.60 | 0.13 | (0.00) | -0.02 | 0.02 | |
| 5259 | -281 | 4978 | 5.3% | 0.21 | 3.60 | 3.65 | 0.05 | (0.16) | -0.01 | (0.15) | |
| 2931 | -45 | 2886 | 1.5% | 0.12 | 3.65 | #N/A | #N/A | #N/A | 0.00 | #N/A | |