## Lake News

A newsletter for concerned residents of Pickerel Lake (Spring 2014)

# LAKE MEETING 14 June 2014 (1:00 pm) at 93 Lakeview Drive

A lake meeting is scheduled for **14 June** at 93 Lakeview drive (Bill & Dee's house) to discuss status of the road, payment of 2013-2014 drawdown, and future draw downs

Come at 12:00 noon for social (if you wish), but plan on a meeting that will begin at 1:00pm

### A bill from DEEP (for the 2013-2014 draw down) has not yet been sent to the Town of Colchester

I will collect money when it arrives (\$50/frontage; as previously agreed on)

### Pickerel Lake drawdown data 2013-2014

I have recorded lake levels and ice thickness twice a week, as well as, Dissolved Oxygen [DO] levels coupled with temperature throughout the draw down season (attached on back). Data would indicate a successful draw down.

With a dry fall and much evaporative cooling, Pickerel lake surpassed the target draw-down depth of a 3-foot (36 inches), by 5 inches. On 17 November, the lake level was down 41 inches. Some residents reported water in their wells were at critical levels. The gate was raised and lake level rose 10 inches (31 inches down) in 9 days.

A series of flash freezing and quick thaws apparently set the trend before "winter" took its grip on Pickerel lake (23 January). Maximum thickness was at least 10 inches of ice, observed on 17 February. Amongst open water there was at least 2 inches of floating ice on 21 March. By 24 March, all the ice had left Pickerel lake, the level was 1 inch above normal lake level.

Dissolved oxygen levels ranged from 7.3 to 15.4 mg/L (80-105% saturation), indicating a healthy system (Healthy water should generally have dissolved oxygen concentrations above 6.5-8 mg/L and saturation levels of oxygen between about 80-120 %).

Feel free to contact me, if you have any questions;

#### Pickerel Lake Draw down data 2013-2014

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04 Oct.
            lake level down 0 inches → [DO] = 7.3 mg/L; 20.9°C (3:00 pm EDT)
            lake level down 2 inches → no rain → evaporative cooling
22 Oct.
25 Oct.
            lake level down 6 inches
29 Oct.
            lake level down 15 inches
            lake level down 20 inches
01 Nov.
            lake level down 25 inches → [DO] = 12.3 mg/L; 8.5°C (11:00 am EST)
05 Nov.
08 Nov.
            lake level down 29 inches
12 Nov.
            lake level down 34 inches →first covering of snow
15 Nov.
            lake level down 38 inches
17 Nov.
            lake level down 41 inches
            lake level down 39 inches → wells are going dry
19 Nov.
            lake level down 38 inches
22 Nov.
            lake level down 38 inches →ice ~70% (0.5" clear - pancake ice)
26 Nov.
28 Nov.
            lake level down 31 inches >2.5" of rain (no ice)
01 Dec.
            lake level down 34 inches →thin clear ice
04 Dec.
            lake level down 36 inches →no ice
08 Dec.
            lake level down 33 inches
            lake level down 34 inches →ice cover 0.5" (clear)
11 Dec.
13 Dec.
            lake level down 34 inches -ice cover 1.5" (semi-transparent)
17 Dec.
            lake level down 34 inches →ice cover 2.5" (cloudy)
            lake level down 33 inches →ice cover 3.5" (opaque)
20 Dec.
            lake level down 28 inches → no ice → [DO] = 15.4 mg/L; 1.7°C (2:00 pm EST)
24 Dec.
27 Dec.
            lake level down 26 inches → no ice
            lake level down 22 inches → ice cover 0.75" (clear)
31 Dec.
            lake level down 24 inches → ice cover 2.0" (cloudy)
03 Jan.
07 Jan.
            lake level down 22 inches → ice cover 3.0" (cloudy)
10 Jan.
            lake level down 21 inches → ice cover 3.5" (opaque)
14 Jan.
            lake level down 18 inches → 1" (semi-transparent)
16 Jan.
            lake level down 14 inches → no ice
20 Jan.
            lake level down 15 inches → no ice
            lake level down 20 inches → ice cover 1" (clear)
23 Jan.
25 Jan.
            lake level down 24 inches → ice cover 3" (opaque)
            lake level down 26 inches → ice cover 5" (opaque)
28 Jan.
30 Jan.
            lake level down 28 inches → ice cover 7" (snow covered/cloudy)
04 Feb.
            lake level down 32 inches → ice cover 5" (snow covered)
            lake level down 33 inches → [DO] = 7.5 mg/L; 1.1°C (3:00 pm EST) - ice cover 3.5" (snow covered)
08 Feb.
            lake level down 33 inches → ice cover 5.5" (snow covered)
12 Feb.
17 Feb.
            lake level down 32 inches → ice cover 10" (snow packed)
            lake level down 26 inches → ice cover 6" (snow packed)
24 Feb.
            lake level down 28 inches → ice cover 6" (cloudy)
27 Feb.
            lake level down 30 inches → ice cover 8" (cloudy)
02 Mar.
            lake level down 28 inches → ice cover 6" (cloudy)
06 Mar.
09 Mar.
            lake level down 26 inches → ice cover 7" (cloudy)
13 Mar.
            lake level down 24 inches → ice cover 4" (snow covered)
            lake level down 22 inches → ice cover 2" (cloudy)
17 Mar.
21 Mar.
            lake level down 18 inches → [DO] = 13.3 mg/L; 5.2°C (3:00 pm EDT) - ice cover ~2" open water near East shore
24 Mar.
            lake level up 1 inch
15 April
            lake level down 0 inches → [DO] = 10.3 mg/L; 9.2°C (1:00 pm EDT)
  30
  20
                                                10
                                                                                                          lake level
                                                                                                           -[DO] mg/L
                                                                                                           Temp. °C
 -20
                                                                                                           ≈Ice cover (inches)
 -30
 -40
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<u>Ice Scale</u>: No ice → clear → semi-transparent → opaque → cloudy → snow covered → snow packed → Firn

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