From: Russncoco@cs.com
To: Filbert, Jennifer M
Cc: Ryan, Danny J
Subject: Lake level data at Deer Lake (Waterbody # 2460700)
Date: Wednesday, December 18, 2002 11:16:27 AM

Jennifer,

Frank Irving, a retired University of Minn. professor of Forestry and past president of our lake association, has been measuring lake level since 1993, the same year I started monitoring. Since we have no pier or bridge and thus no "official" gauge on our lake, the data I collected has not included lake level data, except for the recent few years where I recorded either "low, normal or high." I am writing to see if it would be possible to add past lake level data to the "official record," and include it proactively in the future. Although Frank's measurements were taken independently of mine, and almost never on the same day, lake level doesn't change that quickly. He took from one to four measurements each year but missed 1998. Frank showed me his method, gave me his data and I took some photos of him for an article I plan to put in the spring newsletter.

The reference point used for the measurements is a permanent marker, a large pipe just above the high water line marking the border between the Burnett County park and the adjacent lot (Ulferts). Frank lives next to Ulferts. He uses a sight level on a tripod and a measuring stick. We estimate the resolution is certainly less than an inch, and the data has been rounded to the half inch. The tripod is placed on the beach between the water and the pipe and fixed in a level position as indicated by the built in bubble level in the device. Then, the measuring stick is placed on the pipe, sighted with the level, and the inches above the top of the pipe is recorded. Then, the stick is placed at the water line, sighted with the level and the inches above the water is recorded. Subtracting the two gives the water level in "inches below the top of the pipe" so the lower the number, the higher the water, which is opposite of how this data is typically recorded. However, we could convert the data easily by choosing a reference point. Here are the raw numbers:

Date	Inches below top of pipe
7-30-93	73
4-30-94	76
6-11-94	79
7-12-94	78.5
9-17-94	71
4-28-95	62
9-9-95	65
7-7-96	56.5
6-6-97	52
7-11-99	72
5-28-00	85
9-30-00	95
5-12-01	82.5
5-24-02	73

Happy Holidays!

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