Date: 7/6/2019
Subject: **Clam River Open Channel Flow Test Using the Float Method**

On Friday July 5, 2019 at 9:00 am, I met with LMPOA members Gary & Cathy Meverden at the Clam River Dam in Cadillac, MI. to complete the subject test to determine the estimated amount of water flowing down the Clam River channel about 100 feet from the back of the dam. The lake levels at the time of the test were 6.70 (staff gage) or 1290.11 feet above MSL. Both dam gates were fully closed, the 8" square minimum flow orifice was open and water was flowing over the top of the winter gate.

The IEI method of measurement was used as shown in the attached supporting documents and worksheet.

Channel width = 16.8 feet
Average channel depth = 0.83 feet.
Total area = 16.8 x 0.83 = 13.94 square feet
Adjusted channel velocity = 0.94 feet per second

Results:

CFS = (Area x velocity) = 13.94 x 0.94 = **13.10 Cubic Feet / Second**

(CFS x 448.83 = GPM)
13.10 CFS x 448.83 = 5879.67 gallons per minute passing through and over the dam.

5879.67 x 60 minutes = 352,780 gallons per hour x 24 hours = **8,466,720 gallons per day.**

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