Ground Penetrating Radar Study of Rib Lake: A Search for Industrial Waste and Buried Logs

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Abstract:

This project addresses industrial waste sediment deposits and sunken logs in Rib Lake in north-central Wisconsin. That detritus results from logging operations that ran until the late-1940s. The initial stage of the project involved the use of ground penetrating radar (GPR) on the lake during February 2015 to determine GPR’s reliability at sub-zero temperatures (-12° C). GPR successfully located and measured the thickness of industrial sediment lying on the lake bottom, and even located a number of confirmed, highly-valuable first cut pine logs. In summer and fall 2015 the second stage took place at Rib Lake to capture additional data. Towing the GPR behind a rubber dinghy, the winter profiles were reshot to confirm the accuracy of the two sets. Additional profiles were taken at a new location not far from the original one, and eventually the project will map the entire lake bottom. Findings indicate areas of large clusters of waste and logs, ones the Rib Lake Village Board will present to a third-party dredging company to use in cleaning the lake.