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The Use of Internal Combustion Boat Motors on Lakes on the Menominee Reservation

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ABSTRACT
Introduction: The use of boat motors on lakes is allowed on some but not all lakes. Does the use of motorized boats have an effect on the quality of water?
Objective or Hypotheses: We will investigate the water quality in lakes to determine if there is a difference in water quality due to boat motors. We hypothesize that lakes where boat motors are allowed will have lower water quality than lakes where boat motors are not allowed.
Methods: Four different water quality parameters were measured (pH, Alkalinity, Hardness and Conductivity), from six different lakes. Water samples were taken from each lake using a Beta bottle at .5 meters down and at the deepest depth and analyzed back in the lab. The Hydrolab™ was used out in the field. The parameters measured by the Hydrolab™ (pH and Conductivity) were collected at .5 meters down and at the deepest depth. The parameters that were measured in the lab were the Hardness and Alkalinity. Historical data from 2004-2014 was used to complete the data set. Current data and historical data top and bottom sample values were averaged to compute an annual average (Database used: awqms.com). Data was analyzed using the student *t*-test to determine if a significant difference ($p<0.05$) exists between lakes. The data was then compiled into Excel.

Keywords: Motorized Boats, Water Quality, Alkalinity

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