

# Mary Lake Water Management

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## Critical Issues resulting from the Implementation of the MRWMP

(Based on the Analysis and Field Research of independent consultants)

- *The “soft shoreline” of Mary Lake is being seriously impacted by sustained water levels above 280.73 meters above sea level*
  - Over 56% of the shoreline of Mary Lake is composed of glacio-lacustrine deposits susceptible to erosion
  - 280.73m had been the June to September target operating level (TOL) for Mary Lake for 66 consecutive years prior to the 2006 implementation of the MRWMP
  - Erosion potential on Mary Lake was not considered in the background analysis in preparation of the MRWMP
  - On lakes where erosion was identified as an issue,(e.g. Buck, Fox, Kawagama) the MRWMP adopted specific management strategies to:
    - Minimize the change in spring peak levels
    - Quickly move to summer TOLs after the freshet
  
- *“soft shoreline” erosion on Mary Lake is being accelerated by the sustained low water conditions in the late summer and fall mandated under the MRWMP*
  - Wave action on exposed substrate during low water conditions is lowering or removing beaches
    - This substrate had historically provided some protection to “soft shoreline” against wave action at higher water levels
  - The MRWMP move to a lower October 15<sup>th</sup> TOL of 270.46 for Mary Lake appears designed to protect and enhance Lake Trout spawning;
    - Mary Lake is designated a Put Grow Take Lake Trout lake
    - MNR fish surveys of Mary Lake have identified “no naturals present” over a 5 year period

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- *Wetlands conditions have not been improved as a result of the new Mary Lake rule curves mandated under the MRWMP*
  - The Mary Lake rule curve was developed without specific knowledge of wetland conditions on this lake
  - Two 2007 MNR Studies of wetlands adjacent to Mary Lake concluded that these areas were not influenced by Mary Lake levels
  - MRWMP background research concluded that existing ecological conditions on Mary Lake were generally good
  - For six decades the “natural state” of Mary Lake water levels was determined by the rule curve established under the 1940 Hackner Holden Agreement
  
- *Mary Lake built structures are being negatively impacted by both high and low water levels:*
  - the higher sustained water levels during the spring and early summer
  - the lower water levels targeted for the late summer and fall
  - The vast majority of the existing stock of Mary Lake waterfront structures were designed and built based on the expectation that the 280.73 TOL which had prevailed since 1940 would continue
  - As a result of the higher Mary Lake TOLs mandated under the MRWMP from May to mid July;
    - Docks and boathouse decks are submerged creating safety issues for users
    - Structural stringers are inundated, shortening their useful life and the integrity of the associated docks and boathouses
  - Lower later summer and fall TOLs are severely limiting the utility of many docks and boathouses :
    - At the September 15<sup>th</sup> TOL of 280.66 44% of waterfront structures have less than 0.75 meters of bottom clearance and 18% have less than 0.50 meters clearance
    - Waterfront activities at both of Mary Lake’s commercial resorts are severely restricted by low water

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## Requested Action;

- *Immediate action is required.*
  - Revise the Mary Lake rule curve under the MRWMP to those levels which prevailed under the Hackner Holden Agreement
  - Mandate the coordination of logging operations at the Huntsville and Port Sydney dams to manage throughput rates that will ensure that Mary Lake has no greater deviation from its rule curve than the “Huntsville lakes”
  - Commit to no revision of the Hackner Holden based Mary Lake rule curve without a thorough public review of the finds of the “Mary Lake Water Levels Report - March 2008”
    - Review the utility of the late fall TOL designed to encourage and protect Lake Trout spawning
    - Establish an ongoing erosion monitoring program for Mary Lake and require that the findings of this program be incorporated in any proposal to alter the Mary Lake rule curve