

## What Do Orange Stakes, Old Photos and Cooking Lake Water Levels Have in Common?

Have you seen orange stakes on the old beach at South Cooking Lake? Have you wondered what they were for? A small group of volunteer researchers have been trying to understand what happened to all the water in Cooking Lake. Was it just evaporation and reduced rainfall, or is there more to the story? Some have suggested water withdrawals by industry and changes to stream channels may have also had an effect. There are many factors to consider.

Understanding the effect of these factors requires a clear picture of when the lake first started to decline and how it has changed over the years. Sadly, lake level measurements were only taken occasionally in the years before 1952(?). Local histories do contain stories of past water level changes and these have been collected. To add to this, a method is being tested to obtain measurements of water levels from the early 1900's. Old photos of the lake shoreline are like a time machine showing us where the water's edge was over 100 years ago.

By combining modern photographic techniques, it is possible to overlay old photos with pictures taken today, revealing where the old water's edge was. The orange stakes are placed to help locate, as closely as possible, where the water came to in the old photograph. Using modern survey techniques, we can obtain an approximate measure of the height of the water in the old photograph.

For example, the Manning cottage at South Cooking Lake was photographed first in 1915 or 1916. It was re-photographed in 2021 and the new image combined with the old. Orange stakes were then placed and the location of the old water's edge was determined and measured.



**Manning Cottage – 1915 or 1916**



**Manning Cottage - 2021**



**Combined photos from 1915/16 and 2021**

The water height in 1915/16 was estimated to be 737.6m, a level consistent with actual measurements taken in 1916. Today the water level is 734.0m. The difference is 3.6 m or 11.8 feet.

The technique is still being refined, and more measurements are planned for August and September. The major limitation to using this method is finding old photos of Cooking Lake for the period 1925 to 1949. All the old photos in the local history books for South and North Cooking Lake have been examined, but If you know of any other old photos of the lake which show the old waters edge please contact either Mike Boyd (780-467-4216) or Ken Quackenbush (780-686-5282).