**Lake Owen 2020 Groundwater Study**

The water in Lake Owen comes from runoff from the watershed (the land outlined in yellow on the map), rainfall directly on the lake, and the groundwater(the area outlined in blue contributes groundwater). So far, our studies have focused mostly on the water in the lake and water entering the lake from the surface. Understanding the sources, quality, and amount of groundwater entering the lake, will help us understand water quality and lake levels and how to best carry out the mission of the Lake Owen Association: *To Preserve and Protect Lake Owen*.

Data collected in 2019 and supplemented in 2020 will help our scientists analyze and better understand the influence of groundwater in Lake Owen. A mathematical model will be developed using GIS information and water volume/budget data collected in 2019. This will help us understand how much water enters Lake Owen from the groundwater and from what areas this groundwater recharge occurs.

In 2020 we will test shallow wells and springs for total and dissolved phosphorus to ascertain how much nutrients groundwater contributes. A test of chlorides will tell us if septic system effluent is reaching these wells and therefore the tested groundwater.

The blue area in the figure below is a general outline of the source of groundwater to Lake Owen.



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