

Why isn't the lake filling up...with ALL the snow that melted!?!?

Joe Rush - Lake Manager

We've been receiving calls with concerns on the lake level and whether it will come to pool this year, or if there are problems causing the lake not to come to pool. As of writing this, we are currently in the normal range for lake level in March. We still anticipate the lake continuing to rise throughout spring and to be at pool before mid-April. Many calls we received have been concerns as to why we are not at pool already this year due to the extreme winter and snow precipitation we've received. To understand this, you have to understand the snow to liquid equivalent. This is the amount of LIQUID (water) that is produced after snow melts. There are many factors that go into determining the value, much of which would bore the average person, so I'll hold off of those details. However, the 'average' snow to liquid ratio is 10:1. This means that if 10 inches of snow covered our watershed, the melting of that snow would produce the equivalent of a 1-inch rain event. With frozen ground, the majority of this precipitation would run off the landscape and into the streams, coming into the lake. Again, this would be considered an average 10:1 snow to water equivalent.

The extremes would be when you have a wet snow, or a dry snow. During a 'wet snow' winter, the ratio could be as low as 5:1, and therefore 5 inches of snow would melt into 1 inch of water. (Less snow accumulation, but the same amount, 1 inch, of water produced. These snows are the ones where making snowballs is easy because of the high liquid content!

The other extreme, a dry snow, is when the snow has little to no liquid water content. This snow is less dense and has more air pockets between the snow crystals. These are the drifting snows that blow around. Dry snows show a greater accumulation of snow, but the conversion ratio for dry snow is greater than 10:1, and in extreme cases can reach a ratio of 30:1! This would mean that it would take 30 inches of snow to melt and provide 1 inch of water. These dry snows occur when air and ground temperatures are well below freezing. If you paid any attention to this winter (which I'm sure everyone did), you'd notice that we had A LOT of super cold weather, and DRY snow this year!

With the snowmelt and runoff we've received and the lake level monitoring we're doing, we're seeing about 1/10 of a foot rise per day. If we continue with this water inflow, we would be at pool by mid April, which would be within our normal conditions. With normal spring rains bringing more moisture, we may see the lake at pool earlier.