May 31, 2016

Welcome to the 2016 season and thank you for allowing Mountainview to work for the OCUA for another year! We are really looking forward to a successful season!

<u>April 20</u>—Field walked through. Fields have good color and are dry considering the long winter that had just passed. Determined rolling needed to be done to all of the fields. Vandalism noticed and noted that the gate would be repaired.

<u>May 6-</u> The mowers had been properly inspected, greased and then brought the fields. Soil samples were taken of all the fields for analysis.

<u>May 9 -</u> All fields were rolled to ensure proper turf to soil contact after Spring freeze thaw. The hope is that it would help in leveling out some of the playing surfaces.

<u>May 10 -</u> First mowing! The fields have begun to grow enough that the first mowing could take place. The fields were all dry and there were no issues with rutting. Mowing will continue at 2-3 days a week depending on weather and growing conditions. Mowing also coordinated as to make sure that it was done right before first lining of the fields.

Also on this day, irrigation system was fired up. Same issue with pressure at the pump was noted and a visit would be required from Pumptronics. Although the system was fired up and ready, there is no need for water at this time and no the system was not turned on. The fields would be closely monitored to ensure no drought.

<u>May 13-</u> First application of fertilizer for the Spring. It was a fast release fertilizer (22-4-8) with high amount of nitrogen to ensure maximum growth. This is to guarantee the healthiest Spring turf conditions after winter months in dormancy.

<u>May 18-</u> Pumptronics met with Mountainview's external manager to try and fix system problem. A solution was finally discovered and we are happy to report that the pump is in full working condition!

It was noted that the forecast has been getting warmer and drier. We opted to turn the system on this day. The irrigation will begin on all irrigated fields as needed. When sufficient rainfall is recorded in system, it will not turn on.

<u>May 30 -</u> The Spring clean up began at the fields. The ditches, paths, fence lines and satellite boxes were all mowed and trimmer. This is largely done but another crew will be needed this week to finish.

June 15, 2016

June 2- Small crew went to the fields with the sole purpose of analyzing the irrigation heads. This a big job that takes the whole day. Someone has to manually turn on each zone while another goes head-to-head inspecting how it pops up, turns and then descends back into the ground. Details of each head are then recorded. The full report is made to Mountainview's external manager and formal recommendations will be made. While the crew was there, they went and replaced 8 valve box heads.

<u>June 7-</u> We got notice that there was a hole in field 11. Within the hour, we had a team member at the fields, turning off the irrigation to that zone and assessing the damage. It appeared to be

an irrigation head that from years of wear and silt, it not properly drop back into the ground after the cycle was finished. The mowers then cut off the head and when the cycle turned on again, water came out of the line directly versus the spray pattern. The flow of water caused erosion of the soil. Field 11 was put offline.

<u>June 9-</u> After assessment of the fields, it was determined that there was not as extensive damage as originally thought. A new irrigation head was put in place and the irrigation zone was started. A small amount of topsoil was then used to remedy the erosion hole and sod was placed over the soil. While new sod can be played on, it was our recommendation to keep the field offline for a few days in order to get the ground and new dirt to settle.

<u>June 14-</u> Topdressing material was delivered to the fields in anticipation of this week's aeration/topdressing of all of the fields. This material was placed on a non-gravel area as to prevent gravel from getting into the machine and ultimately the fields.

June 15- Day one of core aeration at the fields to help relieve any compaction.

June 29, 2016

<u>June 16</u>: Day 2 of aeration to help relieve field compaction and improve nutrient and water infiltration to the roots.

<u>June 17:</u> Since the aeration was completed yesterday, topdressing began to help fill in the holes to aid in the soil quality and reduce weed infestation.

June 21: The extreme heat, aeration and topdressing had caused the turf to show signs of stress. Our thoughts were that the current amount of irrigation being put on the fields was not enough to combat the extreme conditions. The irrigation was then increased for a short period of time until the heat breaks (or rain falls consistently). It was also noticed that an irrigation head was damaged during the irrigation so a new one that we had in stock was installed. Topdressing was also completed on this day.

June 21: An inspection of the irrigation pond was done to determine how it was holding up in this drought. It was low and so for the first time in 3 years, the deep well was turned on. June 23: All of the fields were fertilized using the slow release summer formula. We needed to use a slower release fertilizer (slower than normal) to ensure that the pills of fertilizer do not burn the turf in the extreme heat. The nutrients will release slowly into the soil to feed the roots.

*Mowing has slowed down to 1-2 times a week because the heat and lack of rain has caused the turf to grow more slowly.

July 14, 2016

The average Ottawa summer see's about 6-8 days of above 30 degree temperature. As of today, that number is over double. There have been difficult conditions and we would now

consider this year to be a draught. With that, regular maintenance, mowing and water has to adjust accordingly.

Work at UPI is between applications at this time and future applications for second week of July has been delayed by 1 week because of the extreme temperatures. Mowing only took place 1-2 times per week as growth of the Turfgrass has slowed and we want to reduce as much tractor traffic during times of extreme heat and draught.

During these conditions, more damage to dry fields is expected during play as the turf is not as strong. We are beginning to plan out special seeding and fertilizing blends to combat this come time for remediation. We are pleased with the conditions of the fields and will continue to monitor the fields and adjust maintenance according to weather requirements.

July 29, 2016

Conditions have continued to be hot and dry. Fertilizing has again been pushed back a week in fear of the extreme heat. It will be scheduled for a time that is more weather favorable.

<u>July 15-</u> We were notified about a leak on the rise at UPI. It was discovered that it was from the supply well that was turned on. The only short term solution was to turn the deep well off until it can be properly fixed. There is still plenty of water in the irrigation pond. In the Fall when there is less activity at the fields, the deep well leak will be fixed.

<u>July 19</u>— With concern with the delayed fertilizer application, Mountainview sent over Todd Russell (MVT Turfgrass sales rep and consultant) to take a look at the fields. He made note of weed percentages, confirmed that some area's that appeared weak were not because of Chinch Bug and informed us that the grass did look "hungry". Unfortunately, the weather was not in our favor for an application of fertilizer and until that time comes, we just need to closely monitor the watering schedule to ensure the best results.

July 22 – With the upcoming No Borders tournament to take place, Mountainview sent over a crew to clean up some of the facility. Trim parking lot, ditches, fence and some bush lines. A large crew was also sent to replace broken valve boxes. When the valve box lids break or sink into the ground over many years, it becomes a hazard for players. Unfortunately, the lids are no longer available for the older units. The team worked at removing the old boxes, leveling out the space with fresh topsoil, added a new box and re-sodding the border when needed.

August 12, 2016

Welcome to August!

The hot and dry conditions continue. While some rain was welcomed, what happens is that when the ground gets too dry, some precipitation rolls off of the surface rather then penetrating into the ground. Thankfully, most fields are irrigated and the ones that aren't, are withstanding the weather stresses.

On **August 11**, a customer work operator from Mountainview went to the fields to do an application of fertilizer. This fertilizer is a little later in the season than normal but it needed to

be timed for when we were expecting a little rain. Applying any fertilizer in 30+ degree weather needs to happen when a little rain is in the forecast to prevent burning when the temperature is that hot.

Wayne Ramsey also arrived at the fields on **August 11.** In this time of drought, we needed to closely monitor the fields and the irrigation system. Specificially the pond. It has been 3 years since we have had a need to turn the deep well on to supply water. Wayne was concerned about the water level in the pond and therefore turned on the deep well. The deep well will be kept on until water levels in the pond rise. We are still keeping below the fields daily water allowance as granted by the Ministry of Environment and OCUA's water permit.

There is some concerns with non-irrigatied fields as the amount of plus 30 degree weather and lack of precipitation has taken the fields passed dormancy.

Mowing has been consistent with 1 (sometimes 2 on irrigated fields) mowing a week. Mowings are discouraged on stressed turf like fields 18/19. Mowing encourages Turfgrass growth. And while that is good for healthy turf, it can actually further stress a domant turf as it needs to use up energy to produce growth. We expect to be able to get onto a more frequent mowing schedule as the evenings turn colder and more precipitation in the long term forecase.

August 26, 2016

A little relief came when the skies opened up and wonderful rain help to relieve some turf stress. Unfortunately, it did not cool down the daytime temperatures but the evenings are becoming cooler.

On **August 17** the temperatures were still remaining high and the deep well was still getting monitored. A crew leader went out to the fields to check the irrigation, mark irrigation heads for future work, take inventory for valve box replacement and checked the pond. He did a full walk through of the fields to make sure there were no immediate problems.

August 22 brought Mountainview external manager to the fields to again look at the deep well, pond and irrigation. It is very important that this component of the fields is watched closely with the lack of rain and extreme heat. The manager also looked at fields 18 and 19. These non-irrigated fields are now past dormancy and some of the turf is dead. We will be doing the normal Fall overseeding but recommend an additional seeding to help fill in the field.

August 23 an additional irrigation inspection was done. There was a suspicion that maybe one section was not coming on and doing full rotations. After running the whole system manually, it was determined that all was functioning properly.

The weather was still warm but Mountainview decided to proceed with the slice aeration. This type of aeration helps to relieve some compaction without interrupting any play. This was done on **August 25.**

On **August 31** and **September 4**, the irrigation pond was inspected. We are keeping a very close eye on the pond and watching the level of water. Unfortunately, the water has not raised enough to turn off the deep well that is supplying the irrigation system.

We are in the discussion of turning off the irrigation earlier in the Fall than normal. Usually, we turn it off right before the first heavy frost. We are contemplating turning it off earlier to encourage the pond water levels to rise. This will happen if the temperatures drop during the day. Usually below 20 degrees is optimum. We will also time this for at least 14 days after the fall overseeding program in order to give the new seedlings the best chance at germination with adequate moisture levels.

On **September 7** OCUA and Mountainview had the Fall walkthrough. We took a look at all the fields and Mountainview made notes as to Fall recovery program for all fields but particularly fields 18 and 19. We also noted that the fields closest to the parking lot are showing extra damage from foot traffic and will need a more aggressive aeration, topdressing and overseeding this fall. At this time, there is no sign of Fall grubs.

Mowing will be increased this period to 2-3 times as the warm September weather and little bit of rain has increased turf leaf growth.

September 23, 2016

September 7 - I was not able to add these notes into my last update as I was away and never got word until after my holidays. A team from Mountainview arrived to mark all the irrigation heads. The system has to be manually turned on and crew members need to find those heads and mark them with turf paint. This is done before any aeration so that no holes are made by the machine.

September 19 we decided to assess the irrigation system. With favorable weather coming and less play, we decided to turn off the system. The deep well was turned off and the satellite box was turned off as well. It is earlier than normal but we felt there will be enough rain fall over the course of the early fall (and cooler nights) to aid in the repair. We felt it was the best for the dry pond to be re-filled naturally over the course of the Fall, Winter and Spring in case of similar conditions next year. We continued to closely monitor rain fall and temperatures and will turn on the system again for watering if needed.

The Fall remedial work is beginning to take place and it has been a busy week at the UPI fields. September 19 the aeration equipment was also brought to the fields. A solid tine aeration was made to all the fields. This kind of aeration does not remove any thatch but will begin to help precipitation and nutrients into the roots by relieving some compaction. The team came again on September 20 to do a primary application of seed to all the fields. There was a slight increase to the seed on the front fields to help repair some of the foot damage from the season. This seeding will begin to germinate after 7 days.

Finally, on **September 21** the first application of Fall fertilizer was applied to aid with the new seeding that was done the previous day.