

***WHITEVALE GOLF CLUB***  
***COURSE MAINTENANCE STANDARDS***  
***In Support of the Strategic Plan***



In support of Whitevale Golf Club’s Strategic Plan, the Turf Department and Golf Committee have undertaken the task of producing “conditioning standards” for the course. These standards are a direct response to an action item derived from the Strategic Plan and delegated to the Golf Committee from the Board of Directors.

That action was to produce a course in “near championship condition for the majority of the playing season”. Due to the seasonal nature of our environment, certain times of the season do not permit “near tournament conditioning”. However, the intent of this document is to inform the membership of the standards the club is aiming to achieve in satisfying the Strategic Plan.

This document will continue to grow and develop as the committee continues to satisfy the goals outlined in the Strategic Plan.

Key drivers that affect the overall conditioning are:

1. **Budget** – ensuring sufficient funds for labour, fertilizer, pest control products, capital equipment acquisitions, etc. are available.
2. **Rounds of Play** – Historically Whitevale experiences approximately 30 - 32 thousand rounds a season.
3. **Existing soil profiles/construction** – The vast majority of greens, tees and fairways are highly compacted with no internal drainage below the upper 4 inches and are under sized for the number of rounds. Greens have a variety of different construction methods and growing mediums from “push up” soil to full sand and

a combination of both on some. These variabilities present challenges for consistency when determining fertility and moisture requirements.

4. **Property Limitations** – Delivering certain conditioning expectations need to be weighed against property characteristics such as topography, limited cart paths, differing sun exposure's, overplanted trees and their impact such as shade and their expansive root systems.
5. **Commitment to Environmental Responsibility/Sustainability and the Audubon.**
6. **Weather and time of season** – Standards subject to change due to immediate needs of the turf due to weather and both biotic and abiotic stresses.

## GREENS

- Height of Cut (HOC) will be a maximum of 0.150” for opening day. The HOC will be lowered by no more than 0.010” per week, until a height of 0.120” is acquired. During special events (such as Club Championship) HOC may be lowered for short periods of time to increase green speed. HOC may also be raised to reduce stress on the turf (such as wet conditions, extreme heat, high traffic, or disease pressures) as to protect the turf for optimum health.
- Frequency of mowing will depend on soil temperature and growth potential which determines speed of growth of the leaf blade. Generally, in the early and later parts of the golfing season greens will be mowed every other day. During normal parts of the season greens will be mowed every day. Double cutting may be utilized during special events when higher green speed is desired or when turf growth is above the ideal rate.
- Highly precision triflex mowers will be used for mowing greens but will rarely perform “clean-up” cuts. Walk behind mowers will be utilized for clean-up cuts during the majority of the season. During times of stress this clean-up pass will be set approximately 0.010” higher than the greens surface and will have a solid front roller to reduce traffic damage. This clean up cut will be performed every 2<sup>nd</sup> or 3<sup>rd</sup> day to reduce traffic again, depending on turf growth. Typically, clean up cuts will be performed every Monday, Wednesday, Friday during the majority of the golf season. All 4 practice greens will also follow these procedures.
- Green speed will also fluctuate with the time of the season, with the goal to maintain USGA Stimpmeter readings of 10 – 11 feet during the mid-May to early October golfing season. Green speeds faster than this will have a negative impact on pace of play for most of our members and will significantly limit hole locations.
- **NOTE – Turfgrass health will not be compromised for green speed.**
- Holes will be changed daily from late April/early May until end of Oct, and will rotate within a 6-quadrant system (left/right, front/middle/back).
- Hole changers will utilize a “BreakMaster” digital green reader to ensure holes are

- not placed on any slopes of more than three degrees within a 3-foot radius around the pin.
- Holes may be changed opposite days as to the mowing schedule during spring and fall to accommodate or reflect the number of greens staff employed at the time and the number of rounds being played.
  - Flags will be colour coded to identify if the pin is a front, middle, or back location (yellow, white, blue). Holes will be painted white daily, weather permitting.
  - Hole changers and mower operators will be trained to repair every ball mark, every day. On highly damaged ball marks, seed and a small sand top dressing will be applied to improve ball roll and speed the healing time, or the damage will be plugged out.
  - Clippings dropped by mowers will be blown off daily before play, along with any other debris
  - Water will be applied using the automated irrigation system for the health of the turf and never to help “Hold a Shot”. Hand watering will be utilized to deliver additional water to the areas that require it. This is critical to prevent underwatering or overwatering of other parts of the green. Increased hand watering frequency will occur during June, July, and August. The majority of the hand watering will be completed first thing in the morning to avoid disruptions with play but will be completed at any time of day if necessary.

#### Cultural Practices for Greens

- Rolling will be executed as often as possible, with a goal of rolling seven days a week from early May through to Thanksgiving. Rolling may be increased in frequency during special events such as Club Championship or after an aerification event.
- Topdressing greens will be carried out a minimum every 14 days at very light rates while the turf is actively growing. This will be followed behind with a vibratory roller and/or soft brushing to help knock the sand down into the turf canopy. The small amount of sand applied during these events will not negatively impact play and won't be noticeable to most members.
- Brushing will also be utilized ahead of mowers to help stand the grass up to help reduce grain and produce a smoother, faster green surface. This practice will only be executed when stressful turf conditions are not present during Spring and Fall.
- Aerification will take place twice a season with the goal of impacting a minimum of 20% of the green surface per year. This will require 3/4” solid tines at 2 inch spacing and take place during optimal growing conditions for promoting fast healing. A “Drill and Fill” event may take place in mid-September in conjunction with the solid tine event to all greens to improve internal drainage and increase oxygen levels. Bent seed will be inter-seeded into greens during these events using a Tri-Wave slit seeder in order to increase Bentgrass

- populations.
- COURSE CLOSURE will be necessary during major aerification/drill and fill events.
  - Additional mini hollow-tine aerification (1/4" holes) events may be utilized during the season in problematic areas where material will be removed from the greens profile.
  - Vertical mowing (dethatching) may be done in conjunction with aerification, but only if necessary, to remove excess thatch.
  - Deep tine aerification will take place twice a season with 1/2 inch solid tines, 12 inches long, normally in November prior to tarp installation and again with the traditional aerification event in late April/early May.
  - Venting of the greens will be done bi-weekly during the growing season with 1/4" solid tines in conjunction with a light topdressing. Greens will be cut and rolled immediately following this procedure. This process will not negatively impact ball roll.
  - Nutrients will be applied as required which will be determined according to soil and tissue tests. Clipping yield will also be measured and recorded to help determine nitrogen requirements.
  - Fungicide applications will be applied with respect to the weather, course conditioning expectations, and the threshold limits set in accordance with our Audubon program.
  - The use of wetting agents will be utilized on a regular schedule to improve the infiltration of water into the root zone. Wetting agents help to break the surface tension, removing standing water quicker after rain events and will reduce hydrophobic areas during drought conditions.
  - Biological products will be utilized as much as possible to reduce fertilizer and pest control product requirements. Our emphasis will be on healthy soil biology using organic forms of nutrition and carbon. These inputs help to feed a diverse group of microbiology within the soils.
  - Collars for the most part will receive the same programs as the greens. HOC will be kept at 0.285" for the season as research has shown keeping the HOC longer than this is detrimental to the health of the turf on the collars. The width of the collars will be approximately 21 inches (54 cm). A solid roller will also be utilized during the summer months and an additional 0.3 to 0.5 LBS of actual Nitrogen from an organic source may be made monthly during the summer. Light brushing will be done regularly.

**MEMBERS RESPONSIBILITIES:**

- i) Repair all ball marks, including on collars and approaches.
- ii) Wear a golf shoe with a minimalist tread/soft spike.
- iii) Take extra care making sure feet are never twisted or dragged while on the greens.
- iv) Keep power caddies and pull carts off collars.

## **TEE DECKS**

- HOC will fluctuate slightly with the seasons but will be kept at 0.300” during the bulk of the golfing season. The tees will be mowed two to three times per week according to the rate of growth and available labour.
- Triplex cutting units will be used to mow tees with walker mowers utilized on small tee decks and for clean-up cuts to prevent traffic damage.
- In order to reduce damage to some of the smaller or heavily used tees, blocks may be adjusted forward or back on different tee decks to provide a break and increased heal time. We will endeavor to keep overall yardage to the score card as close as possible.
- Blowers will keep the tops of the tee clear of any debris when labour permits.
- Hand watering will be utilized on problematic tees during summer months with high ET rates.
- Divot filling will correspond to the amount of play, and will normally be completed daily each morning during the season. Seed/sand mix will NOT be made available to golfers for filling divots on fairways and tees. Only Bentgrass cultivars will be used in the divot mix.
- Members are expected to replace all of their divots, even on tee decks when possible. Tee blocks will be adjusted daily during the May through October season, and will utilize the perimeter of the tee as much as possible, rather than just down the center. Outside these dates, tee block adjustment will be determined by the amount of play.
- Broken tees and other debris will be removed from all tees and surrounding areas along with tee block adjustment. Yardage markers to indicate distance will be in place on all tee decks and will be kept trimmed and visible.

### Cultural Practices for Tees

- Rolling of tee decks will take place a minimum of once a week when not mowing to help smooth the surface, reduce thatch, and decrease disease pressures by removing the dew.
- Topdressing will take place a minimum of twice a season.
- Vertical mowing will be done on an as needed basis if necessary.
- Aerification: Solid tine aerification and top dressing will be done a minimum of once a season, but twice a season will be the goal (Spring and Fall).
- These events will not require course closure.
  - spiking will be done as needed.
  - over seeding will be done behind aerification.
- Nutrients will be applied as required which will be determined according to soil and tissue tests.
- Fungicide applications will also be applied once threshold limits have been reached.

- Biological products will also be used with the goal of supporting a healthy soil food web, reducing Fertilizers and Pest Control Products.
- The use of wetting agents will also be utilized on tees at label rates.

**MEMBERS RESPONSIBILITIES:**

- i) Replace all divots when possible.
- ii) Put cigarette/cigar butts and broken tees in the garbage.

**FAIRWAYS**

- HOC will fluctuate with the season and start at no higher than 0.475” and be lowered by no more than 0.020” a week and be kept at 0.400” during the bulk of the golfing season. They will be mowed two or three times per week according to growth. Typical mowing days are Monday, Wednesday, Friday. A striping pattern will be mowed in for aesthetics, alternating the direction each mow.
- Rolling of the fairways was introduced in the 2019 season with the goal of rolling when not mowing. Fairways will be rolled as much as possible when not being mowed. Mow schedule will be adjusted for lack of growth in spring and fall and for the events calendar.
- Blowers will keep fairways clear of any major debris as much as possible. Clippings will be blown daily when staffing numbers permit.

Cultural Practices for Fairways

- Topdressing will only be done in special circumstances where special treatment is required.
- Vertical mowing will be scheduled a minimum of once a season if necessary.
- Aerification will be done a minimum of once per season with 3/4-inch solid tines, with the goal of completing this twice a season. This will not require course closure.
- Hollow tine aerification will only be completed if required to high thatch areas, cores will be broken up, the soil will be brushed back into the turf, and the thatch will be blown and vacuumed up.
- Use of a “soaker hose” or hand watering may be utilized on highly hydrophobic areas.
- Over seeding will be done to weak areas or areas which have low populations of bentgrass during aerification.
- Biological inputs will be used when possible to promote healthy soils.
- Nutrients will be applied as required which will be determined according to soil, tissue tests and clipping yields.
- Fungicide applications will be applied in accordance with threshold limits which

were set in accordance with our Audubon program.

- Only Bentgrass cultivars will be used in over seeding and divot mix applications.
- The use of wetting agents will be utilized at label rates.
- Staff will fill unrepaired divots regularly, with focus on our high traffic funnel spots.
- The Turf Department will endeavor to have all fairway sprinkler heads on each hole inside of 290 yards marked with yardage tags.
- Granite yardage markers will also be present on all Par 4 and Par 5 holes (100, 150, 200, (250))
- Fairway brushes will be used in spring and fall when mowing to help eliminate grain and improve overall conditioning.
- Deep tine aerification will take place in select trouble areas to help improve drainage, relieve compaction, help water infiltrate the soil and grow deeper roots.
- Irrigation will be applied for the health of the turf and “brown grass” may be seen during times of drought.

**MEMBERS RESPONSIBILITIES:**

- i) Replace all divots.
- ii) Follow cart boundaries set in GPS
- iii) Never drive through puddles, wet areas, or areas with visible traffic stress

**BUNKERS**

Bunkers can be inconsistent due to:

- i) Different levels of contamination of the same sand
  - ii) Different levels of moisture (irrigation, drainage, sun, wind)
  - iii) Amount of play
  - iv) Not raked properly after being played out of
- The sand in all of our bunkers is ProAngle. Only ProAngle will be used when adding sand to bunkers during the seasons.
  - Sand depth on green side bunkers will be 4-6 inches in the base of the bunkers, shallower in the transition zone, reducing to about 1 inch on the steep faces. Fairway bunkers will be 3-4 inches in the base, shallower in the transition zone, reducing to about 1 inch on the faces.
  - Bunkers will be maintained to the “Ozzy Style” where the faces, or steeper portions are rolled/flattened out to help allow balls to roll down to a leveler spot in the bottom of the bunker.
  - Bases of bunkers will be fully raked daily during the main season Monday to Friday, with “touch ups” completed on weekends.

- Drainage will be installed and working in all bunkers.
- Bunkers will be irrigated when necessary to maintain consistency and playability.

### Bunker Schedule

- A rotational “in-depth” check of sand depths and adjustments will be performed throughout the season to ensure that there is adequate sand above our Capillary Concrete liners.
- Below is the proposed schedule:

	<i>Week 1</i>	<i>Week 2</i>	<i>Week 3</i>
<i>Monday</i>	<i>Practice Bunkers, 1</i>	<i>8</i>	<i>13, 15</i>
<i>Tuesday</i>	<i>2</i>	<i>9</i>	<i>16 fairway</i>
<i>Wednesday</i>	<i>3</i>	<i>10</i>	<i>16 green</i>
<i>Thursday</i>	<i>5, 7 fairway</i>	<i>11</i>	<i>17, 18 fairway</i>
<i>Friday</i>	<i>7 approach/green</i>	<i>12,</i>	<i>18 green</i>

- Contamination from debris, stones, leaves, or weeds will be hand-picked daily, and troublesome bunkers will receive extra attention.
- Minor washouts from storm conditions will be repaired as quickly as possible prior to play.
- Rakes for members use will be made available at each bunker, numbers per bunker to be determined by the specific bunkers size. Handles will be placed parallel to the bunker edge on the low side of the bunker and will be adjusted daily.
- Raking equipment utilized by maintenance staff will include hand rake only in the smaller bunkers, with mechanical equipment used in the large bunkers. Bunkers will be raked as level as possible for play daily.
- Tall fescue rough around bunkers will be mowed/trimmed a minimum of once per week. Grass clippings will be removed from the bunkers before raking.
- Any edging required will be done with hand tool only, with the intention of maintaining the original shape and size of the bunkers.

### **MEMBERS RESPONSIBILITIES:**

- i) Take a moment to rake both pitch mark and footprints smooth.

- ii) Only enter/exit the bunker on the lower edge, (tee end) never on the steep face.
- iii) Leave rakes on the grass, parallel to the bunker edge on the same low edge.
- iv) If moving any type of debris, never throw it into the maintained turf.
- v) Never take pull carts or power caddies between bunker and the green, always go around the outside.

### **INTERMEDIATE ROUGH (Champ Cut)**

- HOC will be maintained at 1.25 inches and will be mowed three times per week. The cut will be 90 inches wide and will circle all bent grass fairways and approaches. This mower will not circle the greens but will meet up with the walk behind mower set at the same HOC around greens. Mow schedule will be adjusted during slow growth periods and holidays.
- A 40 inch-wide cut will be push mowed immediately up against the collar around all greens three times a week, at 1.25 inches. Clippings will be collected.

### **PRIMARY ROUGH**

- Will be mowed at 2.25 inches and will be mowed on a rotational basis. Mowing all rough on the course at least once per week, with the goal of twice per week to the areas that typically grow faster. Mowing will be adjusted for holidays and during times of slow growth.
- Rough around greens and tees will be maintained at 2 inches. Green sites will be mowed three times a week, Mondays, Wednesdays, and Fridays. Mowing will be adjusted for holidays and during times of slow growth.
- All rough has less than ideal irrigation coverage, and it is understood it will be watered for the health of the plant, and some “brown grass” will be seen during times of drought.
- Blowers will disperse any clippings as best as possible during times of excessive growth when labour permits.

### **TREES**

- Tree limbs will be pruned for the health of the tree, and to promote positive pace of play by allowing members to see under them when looking for a ball, but not necessarily to allow a full swing of the golf club.

- Complete removal of trees may be necessary if the canopy interferes with Sunlight getting to the surface of Greens, Tees, or Fairways,
- Priority areas will be identified and expedited if the shade stress is resulting in significant turf decline
- Pruning or complete removal may also take place to address trees negatively impacting specific sight lines for play
- Dead trees (or branches) will be removed if posing any safety concerns. Some dead trees may be left standing to enhance wildlife and supports our Audubon initiative, providing they pose no safety concerns.
- Removal of unwanted, dangerous, weak or weed trees such as Silver Maple, Poplar, Austrian Pine, Norway Maple, Manitoba Maple, Sumacs, and Buckthorn will continue on an ongoing basis, especially in areas where an increase in air flow is required.
- Not all removals will be replaced.
- Planting of any trees will involve input from the GM, Superintendent, Head Professional, Golf Committee Director and from members sitting on the Golf Committee. An architect is highly recommended to be involved in planning. Spacing will correspond to the size that the tree will be at maturity.

## **PONDS**

- Turf surrounding the ponds will be mowed once per week throughout the season.
- A minimum of 3 meters of Buffer will be followed for the turf surrounding the ponds and will not be fertilized or have any pesticides applied.
- Weeds will be removed by hand or cut down when they interfere with the view or the playability of the hole. Organic material growing in the ponds such as Bull Rushes will be manually removed as required. Some Bull Rushes will be left as part of our Audubon commitment to support wildlife habitat.
- Algae and Duck weed control will be executed within programs that promote all wildlife (fish/frogs/turtles ETC...)
- Biological treatments (beneficial bacteria) will be used to help reduce sludge and digest nutrients which cause algae.

## **PRACTICE FACILITY**

- All four Practice Greens will be treated the same as the greens on the course with respect to fertility, cultural practices, and irrigation.
- Holes on the Practice Greens will be changed twice a week during the majority of the season, and once per week during the shoulder seasons.

- Approaches will be treated the same as the tee decks on the course with respect to fertility, cultural practices, and irrigation.
- Target greens will be mowed twice a week at the same HOC as the tee decks on the course.
- Rough out in the driving range will be mowed a minimum of once per week throughout the growing season, possibly twice a week in areas of increased growth.
- The range tee will be mowed twice a week at minimum, at the same HOC as fairways. The ropes marking the hitting area will be adjusted daily.
- Staff will fill divots regularly consisting of Bentgrass in order to better resemble the fairways.
- Tee deck will be aerified, topdressed and overseeded a minimum of once per season, with the goal of twice per season (Spring and Fall).
- Fertility will be applied to ensure steady growth and recovery.

#### **MEMBERS RESPONSIBILITIES:**

- i) Take a moment to rake both pitch mark and footprints smooth.
- ii) Hit in a linear pattern on the tee deck.
- iii) Learn the linear pattern and understand how it promotes better healing.

### **IRRIGATION APPLICATIONS**

- Many tees with high use will need supplemental water to help sustain the seedlings and therefore will receive water at lighter rates and more frequently than established areas with fewer divots. Some fairways with “funnel areas” will be treated the same way. This irrigation may have to be applied during the day at sometimes of the year.
- Irrigation will be applied to any and all turf areas for the health of the turf. A “Deep and Infrequent” approach will be followed as often as possible based on ET rates, winds, temperatures, and course conditioning goals (Firm and fast). Irrigation will never be applied to soften the golf course to help golfers “hold a shot”.
- Hand watering will take place as needed and staff will be trained to do their best to avoid hand watering a green while members are putting.
- Some products applied to greens, tees and fairways will need to be washed off the leaf and into the soil. Therefore, on some morning’s irrigation may be running ahead of the first group.
- We have less than perfect coverage and varying soil conditions throughout the property, so during times of drought “brown grass” will be encountered, especially in the rough.

### **MEMBERS RESPONSIBILITIES:**

- i) If irrigation is running on greens or tees in the morning, pace your play to a 4-hour round so you do not catch up to running sprinklers.

### **GARDENS**

- Gardens will be maintained and established in different areas on the course to add colour and beauty to the property that will enhance the golfing experience for our members.
- Gardens will never be placed in locations that will impede the view of a hole or interfere with the normal playability of the hole.
- Whenever possible, gardens will include native species, and plants that enhance and attract wildlife, providing a food source and habitat for pollinators.
- Planters will be utilized around some hardscape areas.

### **MEMBERS RESPONSIBILITIES:**

- i) Do not put cigarettes or cigar butts in gardens or planters.
- ii) Keep all carts off gardens.
- iii) Enjoy

### **NATURALIZED AREAS**

- Areas on the course that the club does not mow on any regular schedule are “naturalized”. Members can expect some weeds to grow in these areas which some may think give the areas an unsightly look. These areas will be mowed as needed in a spot treatment to knock down noxious weeds.
- Some areas will be mowed to approximately 4” to aid pace of play.
- Naturalized areas are not sprayed, watered, or fertilized and not considered in play. Walking through these areas is not detrimental to the health of the area, but power carts must never be driven into them.
- Clusters of Milkweed will be left as it is a food source supporting the Monarch Butterfly.
- We will continue to establish & promote native & flowering plants for pollinators.

## **MEMBERS RESPONSIBILITIES:**

- i) Never drive through naturalized areas with carts

## **BATHROOMS**

- Fully Accessible on course bathrooms will be made available to our members and their guests whenever the course is open.
- Potable water will be transferred from the Clubhouse to the two 200 gallon holding tanks in each bathroom building for use via a water tank and tractor
- A safe chlorine residual will be maintained during the season for potable water stored in the holding tanks
- Bathrooms will be cleaned and stocked daily. Every effort will be made to check the bathrooms a second time on days when the club receives substantial rounds. Air fresheners will be placed in each bathroom.
- Waste will be pumped out and deposited into our Sewage Treatment Plant on site for treatment and then put back into the reservoir for use as irrigation on the course.

## **CART PATHS**

- Paths will be blown clear of clippings/debris when required.
- The hills at the 4<sup>th</sup> and 12<sup>th</sup> tees will be checked and blown multiple times a day when debris is falling from trees as debris may cause slipping issues.
- These hills will also be pressure washed a minimum of once per season to remove algae or moss and prevent a slipping hazard.
- A program of re-paving and widening to 9 ft. is underway to enhance the cart path appearance and to beautify the course.

## **MEMBERS RESPONSIBILITIES:**

- i) Keep all 4 tires 100% on the path.
- ii) Do not pull cart off the path at greens or tees.
- iii) Never drive on turf under stress
- iv) Never drive through puddles

## **OPENING AND CLOSING DATES**

- Weather will always be a big factor in actual dates, generally we strive for opening the golf course around the 3<sup>rd</sup> week of April, and close around the second week of November. Each spring and fall, if there is a concern about damaging the golf course due to things such as, but not limited to, excessive moisture, frost or significant rounds causing negative impact on conditioning, dates will be adjusted to protect the golf course from damage.
- Adequate time must be provided to complete winterization processes prior to snowfall, and minimum preparation before opening.

For opening day, we will strive to have;

- Greens mowed and rolled a minimum of 3 times.
- Minimum one cut on all other areas.
- All bunkers restored and sand depths checked/adjusted.
- Majority of the golf course raked and tidy.
- Bathrooms open, clean, and fully functioning.

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