

WHITEFISH LAKE GOLF CLUB

MAINTENANCE STANDARDS AND PROCEDURES

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Mike Combs, CGCS, WLGC Superintendent

Neil Huether, WLGC General Manager/Secretary

INTRODUCTION

The purpose of this publication is to explain the operation of the maintenance department and delineate the practices and procedures necessary to achieve the standards that are expected. It is the intention of this material to help with increased understanding of operations and assist in the future decision-making process for current and future boards and managers. The staff looks forward to working with you when defining and accomplishing short and long-range goals for our facility.

Sincerely,

Mike Combs, CGCS, WLGC Superintendent

Neil Huether, WLGC General Manager/Secretary

GROUNDS MAINTENANCE STAFF

The grounds staff consists of four year-around employees; the Superintendent, Equipment Manager, and two Assistant Golf Superintendents. Our part-time and seasonal staff are employed from April to October completing a variety of jobs. During the peak season, June through September, we average nearly 30 staff members including the Ornamental Employees. Most of our staff works a full 40 hours per week during the peak operational and growing season. We are extremely fortunate to maintain an exceptionally high rate of staff retention each year at WLGC. We strive to create a working environment that fosters high employee morale and therefore low turnover.

During the peak season our staff focuses on the daily maintenance of the golf course property and needs associated with presenting two high quality golf courses. During the winter months our four full-time staff members are occupied with maintaining facilities, equipment (we have over 135 machines to maintain), refurbishing signs, benches, markers etc., attending educational opportunities and taking accrued vacation time. The winter staff also is responsible for snow plowing around the maintenance facility area.

EQUIPMENT

WLGC owns over 135 pieces of equipment, valued at \$ 2.5 million, which are used to maintain the entire golf course facility, cemetery, and Grouse Mountain soccer fields. This inventory is a responsibility that the staff takes seriously and therefore is very diligent in performing all specified routine and preventive maintenance. Each unit's hourly use is also monitored closely to ensure proper life expectancy and function. Our Equipment Manager and Assistant Technician's responsibilities include following the manufacturer's service intervals and ensuring that all mowers are cutting correctly and at the right heights of cut before leaving the shop. These two employees receive periodic training provided by the manufacturer's representatives.

The Club typically spends \$100,000 per year for regularly scheduled equipment replacement and new items under the capital equipment budget.



TURF CENTER

WLGC is proud of our state of the art 14,000 square foot Turf Center that was completed in March of 2012. The new facility functions wonderfully and adds to the quality of care of equipment now being housed indoors. The new Turf Center provides a safe and enjoyable work environment for our staff. Replacement of the old maintenance building was part of a long-range plan that took over 15 years to implement, but in the end, the project not only provides the best maintenance facility in the area but also added needed parking spaces for our members and guests.



GOLF COURSE MAINTENANCE PRACTICES

The philosophy behind the daily routine maintenance practices is to consistently offer well-maintained golf courses, as much as possible, before the first players begin their rounds. Maintenance of greens, tees, fairways, and bunkers are the top priorities and therefore receive the most attention. One of our goals is to achieve the maximum maintenance level with the least possible disturbances to players. That said, given our 36-hole operation, it is not always feasible to avoid being seen by players during their round. Our staff is instructed to keep working whenever doing so does not unnecessarily interfere with the player's enjoyment. When asked to do so, the staff will wait while the player completes their shot or has moved out of range.

The following explains the different areas maintained by our staff, with information on the maintenance practices for each area.

GREENS

The greens at WLGC require more attention than any other area of the facility. Attached is a list of the maintenance practices needed to ensure quality putting surfaces.



* Mowing 7 days per week at a height range of .120" to .150" (depending on the time of year)

- Rolling two or three times per week (as needed).
- Mowing direction is varied to avoid wear patterns and provide optimum cut.
- Adequate amounts of fertilizer along with micronutrients, are applied to maintain the best possible playing surfaces.
- Apply fungicides as needed to help curb turf diseases.
- Light sand topdressing every three weeks to maintain smooth and firm surfaces.
- Change cups seven days per week (pending play and maintenance needs) to distribute play and reduce wear patterns.
- Control weed and other invasive species.
- Patch areas that are damaged with sod when needed.

- Aerate twice per year to promote gas exchange, water penetration, decrease compaction, enhance root growth, control thatch build-up, and maintain drainage, all of which maintain the health of the green.
- Apply growth regulators every two weeks during growing season to help maintain consistency in growth while promoting better plant growth in the leaves and stems.
- Use of Graden dethatching machine and verti-cut as needed to promote growth.
- Check speed of green on a regular basis for consistency and to meet the goal of 9.5 to 10.5 feet of roll daily.

STANDARDS

- Green speeds of 9.5 to 10.5 on daily play basis and up to 12 for certain tournament events.
- Firm and smooth surfaces.
- Consistency between green surfaces maintained as much as possible. Weather, sun penetration, wind and other factors can create a climate that makes absolute consistency impossible.
- Hole locations are changed daily and are placed according to the Rules of Golf.

The greens at WLGC, while approaching 30+ years, are a blend of bent grass and poa annua turfgrasses and were constructed using the USGA sand-based methodology. While bent grass is the desired species, properly maintained poa (annual bluegrass) also makes a great putting surface in our climatic region.

TEES

The following maintenance practices are routinely used for tee surfaces:

- Mowing two times per week at a height of .450”.
- Aerification at least once per year.
- Rotation of tee markers daily to spread utilization and wear.
- Fill divots with sand/seed once per week.
- Fertilize every three weeks to insure recovery.
- Water daily or as needed.
- Mowing direction is changed for grain control and optimum cut.
- Topdressing with sand two times per year to keep smooth/level.
- Apply growth regulators every four weeks during growing season.

Since we have five to six sets of tees throughout the two courses, set up and markings take considerable time each day. Players are encouraged to play tees that make their game more enjoyable and give them the best chance to be successful.

STANDARDS

- Mow at .450” height.
- Change tee marker locations daily.

FAIRWAYS

The following maintenance practices are employed for fairways:

- Mowing two or three times per week at a height of .500”.
- Vary the direction of mowing to promote better cut for consistency.
- Weed control as needed, generally 2 times per year.
- Fertilize with slow-release nitrogen.
- Apply growth regulators, every four weeks during the growing season.
- Aerify or slice once per year, usually in the fall.
- Sand topdressing to improve firmness in low or wetter areas.

STANDARDS

- Mowing height of .500”
- Sand topdressing – add approximately ½” per year in identified areas. (Generally wetter locations.)

BUNKERS

We have a total of 91 bunkers across the two golf courses that require extensive maintenance to enhance the golfing experience. The following practices are part of the routine maintenance program for our bunkers:

- Completely rake by hand or machine at least twice per week.
- Check bunkers daily for needed maintenance.
- Keep bunkers free of weeds and debris.
- Edge bunkers as needed to keep a clean/sharp edge.
- Check sand depth periodically and add or move sand as needed.
- Remove overspray of sand from bunkers onto the collars and putting surface.
- Staff to encourage players to rake after entering any bunker.
- Animals are a constant problem with tracks in the bunkers. South Course issues are more common than on the North Course.

Bunker maintenance is a player responsibility as well as a staff responsibility, and steps to involve the members and guests are ongoing. The player assistant staff is also asked to monitor bunker conditions and when possible, repair bad areas by raking.

STANDARDS

- Rake bunkers 2 times per week, completed by early afternoon.
- Add or move sand as needed with at least 3” of sand in all bunkers.
- Edge and trim as needed.

ROUGH

Rough areas are an integral part of most golf courses and require constant maintenance as well. The following describes the agronomic practices used to maintain our rough areas.

- Mowing one to two times per week at a height of 2".
- Maintain an intermediate cut on each hole at 1".
- Trim mowing around the greens and tees once or twice per week.
- Exterior, non-irrigated areas, mowed as needed.
- Weed, disease and insect control as needed.
- Proper amount of water and fertilizer.
- Hand mowing in areas too small for regular equipment.

STANDARDS

- Cut at height of 1" to 2.5" inches in height. (Longer for some tournaments)

APRONS AND APPROACHES

The following are maintenance practices for the collars and approaches.

- Mow two to three times per week at height of .325" in peak season.
- Weed and disease control as needed.
- Proper watering and fertilizer applications as needed.
- Mowing direction altered to ensure optimum cut.
- Top-dress the approaches 4 to 6 times per year.

STANDARDS

- Cutting height to be roughly .325

PLANT PROTECTANT APPLICATIONS

The maintenance staff will notify the starter prior to intended chemical applications to the course. Products used are all licensed by the EPA and applied by a licensed employee trained in the specifics of the product being used. Our climate negates the use of pesticides on a frequent basis and our healthy turf also minimizes the need for regular herbicide applications. Most applications are either fertilizer or PGR's, such as PRIMO, to maintain a consistent growth pattern.

STANDARDS

- Apply products only as needed and minimal rates.
- Follow all EPA guidelines and the label.
- Avoid application spray drift by only using during calm or minimal wind situations.

TREES

Trees are an integral part of the golf course property and require continual monitoring. Trees often need to be removed when their canopy interferes with sunlight penetration to turf areas, especially greens. New trees are planted to replace those needed in critical areas, but not all trees will be replaced. While a tree fund is maintained for tree maintenance, specific trees are not planted as memorials. An arborist is occasionally utilized to treat trees in critical areas mainly when disease or insect infestation is evident or additional nutrients are needed. Roots are sometimes trimmed to minimize damage to golfer's equipment and cart paths.

IRRIGATION SYSTEM

Each year the WLGC uses approximately 80 million gallons of water to irrigate the golf courses, practice range, landscaping, trees, and soccer fields. The source of the water supply is Whitefish Lake with exclusive water rights reserved for both courses independently. Water for the South Course irrigation is stored in the pond on hole #15 and pumped at night onto the course as needed. Irrigation for the North Course comes directly from Whitefish Lake mainly during the evening when golfers are not present and evaporation is minimized. A major pump station is maintained on Whitefish Lake and a secondary pump station is maintained on the South Course by the pond on hole #15. The pumps in use are high efficiency variable speed centrifugal pumps that are computer controlled to only operate at the needed demand capacity. The entire irrigation system is computer controlled to increase efficiency and only deliver water as needed. Each control box can be operated remotely to insure proper distribution cycles and amounts.

The club maintains over 3,000 sprinkler heads on the two golf courses and an estimated 30 miles of pipes, electrical wiring, and numerous valves. An Irrigation Tech is hired and spends most of his/her time inspecting, repairing, and improving the irrigation system. Water is a valuable resource that will increasingly become more restricted as time advances, meaning efficiency and conservation are high priorities. Low pressure sprinkler heads have been installed throughout the course to add to the efficiency and uniformity of application.

In 2012-13 WLGC had our water rights reviewed and adjusted as needed with DNRC. The water right for the North Course is shared 50/50 with the City of Whitefish and the South Course right is exclusively owned by WLGC. Each water right is based on appropriation of 700 gallons per minute during the use season from April to the end of October.

STANDARDS

- Operate the irrigation system to distribute water only as needed.
- Maintain a double head system around the greens to water the green surface and the outside surrounding areas more efficiently.
- Provide a firm and fast putting surface.
- Maintain healthy turf for the fairways and rough, noting that brown does not necessarily mean more water is needed.



CHRISTMAS TREE LIGHTS

The lights on the large fir tree adjacent to the North Course practice area are maintained by the maintenance staff each year. Bulbs are replaced and damaged wiring is repaired by staff or electricians on an as-needed basis.

RESTROOMS

The restrooms are cleaned on regular basis by the staff and supplies are monitored and maintained. Independent contractors are used to paint, plumb, and refurbish the restrooms on the course in order to meet the high standards for WLGC.

ADDITIONAL AREAS OF RESPONSIBILITY

Duties include the care and upkeep of the clubhouse lawn, trees, shrubs, flowers and irrigation system. The parking lots are cleaned as needed and especially after winter to remove gravel, etc. Striping of the parking spaces is done on an as-needed basis but generally every two years. The crew is responsible for snow removal in the upper parking lot around the maintenance building and removal of snow that slides from the cart storage building.



GROUSE MOUNTAIN SOCCER FIELDS AND TENNIS COURTS

The crew is responsible for supplying irrigation to the soccer fields and mowing the fields and lawn areas as needed, generally once per week during the growth season. Providing water from the irrigation system in the spring and compressed air for blow out in the fall is WLGC's responsibility. (WLGC is not responsible for maintenance of the irrigation system on the soccer fields.)

CART PATHS

The staff maintains over 12 miles of cart paths on the two courses. Replacement of cart paths has been placed on a cycle by the board of directors to constantly improve and widen as needed. Funding is budgeted each year for asphalt applications. In recent years curbing is being installed to curtail cart traffic away from tees and greens. It is the goal of WLGC management to have all cart paths built to a minimum of 9 feet in width.

STANDARDS

- Paths are maintained as much as possible free of potholes and other bumps.
- Cart use is regulated by the Superintendent or his designee with respect to the playing conditions of the golf course and restrictions are enforced by the P.A. staff.



SURROUNDING AREAS

Duties include security fence repairs, miscellaneous burning of limbs, noxious weed control, pothole repair, and trimming around fences.

FLOWERS AND ORNAMENTALS

The expectation of golfers regarding the presentation of ornamental flowers and shrubs has changed over the years and now requires dedicated staff to maintain those landscapes. The club employs a horticulturist and specific staff to maintain the flowers etc., on the property and around the clubhouse.



CEMETERY

One dedicated staff member is responsible for mowing, irrigating and trimming the City of Whitefish Cemetery property (other course staff helps when needed.) This is a condition of the lease with the City of Whitefish and was offered by WLGC to improve the maintenance practices at the cemetery and offset some of the monetary expenses of the direct lease payments.

COURSE MARKING AND SIGNAGE

Duties include marking all hazards, ground under repair, cart directional signs, environmentally sensitive areas and out-of-bounds areas. Stakes are repainted in the off season.

PRACTICE AREAS

The practice areas consist of the driving range, two putting greens, and a short game area on the South Course with a chipping green and bunker.

- The practice range is mowed once per week.
- Target greens mowed twice per week.
- Teeing area is mowed twice per week or as needed.
- Divots filled by Golf Shop staff each day and 2 times per week by maintenance staff.
- Top-dressed once per month.
- Enhanced fertility program for the teeing area to promote growth of seeded divots.
- Bunker sand raked once per week. (Rake provided for patrons)
- Practice putting greens mowed daily and markers moved three times per week.
- Chipping area fairway mowed one time per week.
- Area around the perimeter of the range to be mowed as needed (east and south sides.)
- Golf Shop responsible for set up of practice tee area, ball picking, etc.
 1. Mats used Monday –Thursday (except for special occasions.)
 2. Hitting areas rotated from front of tee to rear to allow recovery of turf.

3. Hitting stations may be moved during the day when heavily used.
4. Spacing of hitting area set by Golf Shop staff.
5. Mats rotated once per week.
6. Staff will remove range balls from the fairway during the day.



WILDLIFE AND PESTS

Duties include management of pests, rodents, burrowing animals, waterfowl, hooved animals and occasionally bear, moose, turkeys, and other wildlife. While the wildlife adds to the visual experience of the golfer, it presents problems for maintenance of areas frequented by that same wildlife.

LONG-RANGE PLANNING

The staff, green committee, and board work in a systematic approach to long-range planning where all ideas and projects are subject to review and a prioritization process. The same golf course architect, John Stiedel, has been used since 1982 to ensure consistency in golf presentation over the entire facility. Unless unforeseen circumstances arise, most projects simmer with the planning board for several years before they are approved. At least every five years the project list is reviewed and if a specific project has not been completed, it remains on the list for re-prioritization.

GREENS COMMITTEE

The green committee consists of three sitting board members and three at-large non-board members, each serving at the will of the board. The at-large committee members are initially appointed to three-year terms and then reappointed by the board on an annual basis. Members may serve indefinitely if so renewed. The purpose of the expanded committee format is to ensure continuity and hopefully eliminate

specific agendas from new members. The history of most green committees is they are appointed, make mistakes, and leave about the time they begin to understand the operation. It is our goal to maintain a trained and competent green committee that understands the operation and best practices as well as the need for long-range planning. The committee, using standards, will hopefully not be driven by trying to adjust the golf course maintenance and layouts to suit their particular game and style of play, but rather develop practices and improvements that benefit all players.

USGA TAS (Turf Advisory Service)

WLGC has utilized at least one annual visit from the highly competent USGA Agronomist Staff to observe our operations, procedures, and turf quality over the past 20-plus years. This annual expenditure of roughly \$2,000.00 for the TAS (Turf Advisory Service) is seen as barometer to check turf quality, maintenance practices, areas of potential improvement, discover best practices and procedures from other course and in most cases verification of a job well done.