

Meridian Hills Country Club

Golf Course Standards, Maintenance & Set Up

Committee On Green

| | |
|--|----|
| I – Mission Statement | 3 |
| II – Vision | 3 |
| III – Objectives | 3 |
| IV– Superintendent’s Duties and Responsibilities | 3 |
| V –Standards & Maintenance | 4 |
| Standards & Maintenance Goals..... | 4 |
| Turfgrasses | 4 |
| Standards & Maintenance – Greens..... | 5 |
| Standards & Maintenance – Collars | 6 |
| Standards & Maintenance – Fairway Approaches | 6 |
| Standards & Maintenance – Fairways | 7 |
| Standards & Maintenance – Green, Tee, and Bunker Surrounds | 8 |
| Standards & Maintenance – Tees..... | 9 |
| Standards & Maintenance – Intermediate Roughs | 10 |
| Standards & Maintenance – Primary Roughs | 10 |
| Standards & Maintenance – Bunkers | 11 |
| Standards & Maintenance – Practice Range | 12 |
| Standards & Maintenance – Trees | 13 |
| Standards & Maintenance – Ponds | 14 |
| Standards & Maintenance – Clubhouse Lawns | 14 |
| Standards & Maintenance – Landscaped Areas | 15 |
| Standards & Maintenance – Cart Paths | 15 |
| Standards & Maintenance – Natural Areas | 16 |
| Standards & Maintenance – Irrigation | 16 |
| On-Course Restrooms | 16 |
| Chemical Applications | 16 |
| Nursery | 17 |
| VI - Course Set Up | 17 |
| General | 17 |
| Cup Placement..... | 17 |
| Tee Marker Placement | 17 |
| VII – Shop Set Up and Maintenance | 18 |

| | |
|--|----|
| <i>General</i> | 18 |
| <i>Facility Organization</i> | 18 |
| <i>Material Stockpiles</i> | 18 |
| <i>Fuel and Chemical Storage</i> | 19 |
| <i>Tools, Equipment, and Machinery</i> | 19 |
| <i>Licenses and Permits</i> | 19 |
| VIII – Equipment Maintenance | 19 |
| <i>General</i> | 19 |
| <i>Operators’ Manuals</i> | 19 |
| <i>Spare Parts Lists</i> | 19 |
| <i>Operation and Care of Equipment</i> | 20 |
| <i>Equipment Repair and Maintenance</i> | 20 |
| <i>Tools and Diagnostic Equipment</i> | 21 |
| <i>Equipment Maintenance Schedule</i> | 21 |
| <i>Equipment Maintenance Records</i> | 21 |
| IX– Hazardous Material Management & Safety | 21 |
| <i>General</i> | 21 |
| <i>Hazardous Material Plan</i> | 22 |
| <i>Material Safety Data Sheets (MSDS)</i> | 22 |
| <i>Storage</i> | 22 |
| <i>Application</i> | 23 |
| <i>Cleanup</i> | 23 |
| <i>Chemicals</i> | 23 |
| <i>Fuels, Lubricants, and Solvents</i> | 23 |
| <i>Equipment and Tool Safety</i> | 23 |
| X – Records | 24 |
| <i>General</i> | 24 |
| <i>Chemical Records</i> | 24 |
| <i>Permits and Licenses</i> | 24 |
| XI – Extreme Droughtand/or Temperature Plan | 24 |
| XII -2012-2013 Golf Course Improvement Projects | 26 |

I - Mission Statement

To prepare, preserve and maintain the golf course as the major club asset and to afford the opportunity to provide enjoyment to the club's members and guests.

To protect, understand and fulfill the golf course architect's and club membership's vision with a goal of a fair golf challenge for all levels of player abilities.

To plan and execute programs and procedures that maintains a superior golf experience as well as enhances and protects the environment, property, and aesthetics of the club.

II - Vision

We will maintain and manage our financial resources, club assets and equipment to provide an exceptional golf experience to all members. We will offer state-of-the-art golf facilities and continually strive to effectively communicate with the membership. We will protect the architects' design and make changes in carefully measured increments.

III - Objectives

The course will be maintained so that excellent playing conditions exist for both high and low handicap golfers. The golf course should play and be prepared daily and identically to the prescribed standards, within weather limitations, on a continued basis and at above standards for certain events. Special preparations will be prescribed as needed to conform to the events being conducted. The golf course superintendent will prepare a report when needed; outlining all needed exceptions to the normal and will include a cost estimate for achieving these exceptional standards.

The goal of the maintenance department is to have the least amount of player interference and golf course inconsistencies as possible.

These objectives will be met within an overall annual capital and maintenance budget prepared by the Committee on Green, General Manger, and Golf Course Superintendent, approved by the Board of Directors. Any significant variance to the annual maintenance budget will be approved prior to the expenditures. The approval process will include Committee on Green Chairman and General Manager.

IV – Superintendent's Duties and Responsibilities

The Superintendent shall devote his full time, attention and skills to the performance of his duties at MHCC.

The Superintendent shall render professional advice, opinions, assistance, and services to the Committee on Green, the General Manager and the BOD of MHCC as reasonably required.

The Superintendent shall engage, train, and supervise a staff as necessary to handle efficiently all grounds maintenance activities and otherwise assist him in the performance of his duties in supervising the condition and all grounds maintenance of MHCC.

The Superintendent shall cooperate and work closely with the other management staff and professionals engaged by MHCC to the extent reasonably requested by the Committee on Green, the General Manager and the BOD of MHCC.

The Superintendent will use best efforts to be available to attend regular and special meetings of the Committee on Green and the BOD of MHCC to provide input and information as to areas both within the scope of his duties as well as other matters relevant to the maintenance operations of MHCC.

The Superintendent will not engage in any activities in conflict with his duties hereunder or which detract from his responsibilities.

The superintendent shall at all times be directly responsible to the General Manager and the BOD of MHCC, but shall at all times cooperate and work closely with all members of the golf staff and all members of the management staff of MHCC.

V - Standards & Maintenance Goals

The overall goal of the golf course standards and maintenance effort is to maintain all aspects of the golf course. The following standards and maintenance practices define that vision.

Turfgrasses

The following turfgrasses are used on the golf course at MHCC:

Greens – Bentgrass, Poa annua.

Collars – Bentgrass, Poa annua.

Fairways – Bentgrass, Poa annua.

Tees – Bentgrass, Poa annua.

Intermediate Rough – Kentucky bluegrass, Ryegrass.

Primary Roughs – Kentucky bluegrass, Ryegrass, Poa annua.

Standards – Greens

All greens are to be smooth, uniformly turfed with healthy grass free of infirmities, firm but pliant enough to hold a well-struck shot.

Putting green speed is to be generally maintained at the maximum speed consistent with the long-term health of the grass, and should be uniform from hole to hole. The speed will range from 9' to 10.5' on the stimp meter. The green speed may be faster for certain tournaments and events and will be coordinated in conjunction with the golf shop.

Damage from ball marks must be kept to a minimum through communications with members and the daily efforts of the maintenance staff.

The size, shape, and contour of each green shall be maintained in accordance with the architect's design.

Periodic verticutting and top dressing will be performed to reduce thatch on a bi-monthly basis or as needed to keep up with growth. During times with above normal temperatures these practices may be suspended to reduce turf stress.

Cups, flags, and poles are to be uniform, clean, and maintained in good repair.

Maintenance – Greens

Mowing frequency – Daily.

Mowing equipment - Walk mowers (sharpened and properly adjusted), Triplex mowers will be used after top dressing and during aerification times.

Mowing patterns – Mowing directions will change daily so as to create a visible checkerboard pattern. The perimeter edges where green and collar meet will be mowed so as to provide smooth contours and may be periodically marked with dots of paint to maintain original green shapes.

Mowing height - .115" (may be adjusted as needed based on the health of the plant and during aerification in April and September).

Ball marks - Repaired daily, up to five minutes will be spent per green.

Fertilization - Per Superintendent's annual plan.

Pesticide application - Per Superintendent's annual plan.

Standards – Collars

All collars are to be smooth, uniformly turfed with healthy grass free of infirmities, firm but pliant enough to hold a well-struck shot. Turf loss is unacceptable.

Grass height shall be shorter than fairway height but taller than green height.

All cultural practices, fertilization and pesticide applications performed on the greens will also be performed on collars.

In addition eight passes should be mowed in front of the green using the collar mower to aid in the transition to fairway approach height of cut.

Maintenance – Collars

Mowing frequency - 3 to 4 times a week.

Mowing equipment - Walk mowers (sharpened and properly adjusted).

Mowing patterns – Mowing directions will alternate each time to prevent grain accumulation.

Mowing height - .375”.

Ball marks – Repaired daily.

Standards - Fairway Approaches

The fairway approach is the area between the eight collar passes made in front of the green and the first sprinkler head in the fairway. In some situations these areas may be expanded to reduce wear caused by larger fairway five-plex mowers.

All fairway approaches are to have a uniform coverage of healthy, well-groomed turf. The surfaces are to be firm, but not too hard. Shots should have a reasonable amount of roll. Wet spots should be drained, especially around greens so that shots have the opportunity to roll onto the greens.

Fairway approach perimeter edges are to be well defined and contoured in accordance with the design of the course. The turf is to be free of weeds, foreign grasses, and other infestations and impurities.

Leaves, grass clippings and divot debris should be removed on a daily basis.

The grass will be cut to tournament conditions so that shots may be hit with reasonable ball control. The same conditions shall apply during all seasons of the year.

Maintenance-Fairway Approaches

Mowing frequency - Two to four times per week depending on growth rate.

Mowing equipment – triplex mowers.

Mowing pattern – mowing directions will change each time to prevent grain accumulation.

Mowing height - .475”.

Divot repair - Weekly when maintenance department is fully staffed during the summer.

Aerification - Per Superintendent’s annual plan.

Fertilization - Per Superintendent’s annual plan.

Pesticide application - Per Superintendent’s annual plan.

Water control - Daily, taking care to monitor moisture level to avoid “boggy” spots.

Standards – Fairways

All fairways are to have a uniform coverage of healthy, well-groomed turf. The surfaces are to be firm, but not too hard. Shots should have a reasonable amount of roll. Wet spots should be drained, especially around greens so that shots have the opportunity to roll onto the greens.

Fairway perimeter edges are to be well defined and contoured in accordance with the design of the course. The turf is to be free of weeds, foreign grasses, and other infestations and impurities.

Leaves, grass clippings and divot debris should be removed on a daily basis.

The grass will be cut to tournament conditions so that shots may be hit with reasonable ball control. The same conditions shall apply during all seasons of the year.

Yardage markers shall be placed on all sprinkler heads indicating distances approximately 250 yards to 50 yards to center of green.

Maintenance - Fairways

Mowing frequency - Two to four times per week depending on growth rate.

Mowing equipment – Five-plex mowers.

Mowing pattern – mowing directions will change each time to prevent grain accumulation.

Mowing height - .500’.

Divot repair - Weekly when maintenance department is fully staffed during the summer.

Aerification - Per Superintendent’s annual plan.

Fertilization - Per Superintendent’s annual plan.

Pesticide application - Per Superintendent’s annual plan.

Water control - Daily, taking care to monitor moisture level to avoid “boggy” spots.

Standards – Green, Tee, and Bunker Surrounds

All aprons, tee banks, and bunker surrounds are to be smooth, uniformly turfed with healthy grass free of infirmities and firm.

Aprons, tee banks, and bunker surrounds will be maintained at rough height depending on climatic conditions and the grass variety.

Aprons, tee banks and bunker surrounds will be blended properly into the other manicured areas (tees, collars, approaches, fairways, intermediate rough, and rough) to maintain the playability and aesthetics of the course.

Maintenance – Green, Tee, and Bunker Surrounds

Mowing frequency – Two to three times per week depending on growth rate.

Mowing equipment – Triplex or lightweight rotary mower.

Mowing pattern - Directional cuts will be posed daily and will follow a contour, checkerboard, or straight pattern.

Mowing height – 2.5”, adjustable for tournament conditions.

Bunker banks - Hover mowed once per week.

Aerification - Per Superintendent’s annual plan.

Fertilization - Per Superintendent’s annual plan.

Pesticide application – Herbicides and Insecticides will be used. Fungicides are neither budgeted for nor applied to golf course rough.

Water control - Per Superintendent's annual plan.

Standards – Tees

All tees are to be smooth, level (except as needed for proper drainage), uniformly turfed with healthy grass free of infirmities. Surface shall be firm but not hard. Turf loss is unacceptable.

Grass height shall be shorter than fairway height. Edges shall be neat and trim. The same conditions shall apply during all seasons. This will require over-seeding on an annual basis.

Leaves, grass clippings and divot debris should be removed on a daily basis.

Periodic top dressing will be performed to reduce thatch accumulation.

All amenities at the tee (ball washers, water stations, waste containers, tee markers, yardage monuments, and divot repair containers) shall be maintained in first class condition at all times.

Maintenance - Tees

Mowing frequency -2 to 3 times a week depending on growth.

Mowing equipment - Walk mowers (sharpened and properly adjusted).

Mowing patterns – Mowing directions will change each time to prevent grain accumulation.

Mowing height - .375”.

Tee markers - Changed daily per objectives.

Divots - Repaired daily.

Edges - Neat, trimmed, and maintained as needed.

Aerification - Annually or as needed.

Fertilization - Per Superintendent's annual plan.

Pesticide application - Per Superintendent's annual plan.

Waste containers - Emptied daily.

Hindering vegetation - Cut or removed from in front of tees as needed. Overhanging limbs pruned.

Divot repair buckets - Located on all par three tees and filled daily.

Water control - Per Superintendent's annual plan.

Standards – Intermediate Roughs

Turf conditions in intermediate roughs will generally be maintained at a higher level than most other clubs. They should be uniformly turfed with healthy grass, and be free of impurities and infestations.

Intermediate rough will consist of a continuous triplex-width band that surrounds the fairway and green. There shall also be a triplex-width band mowed from tee complex to start of fairway to provide a 'dew path' for walking golfers.

The grass should be mowed at a higher height than fairways but at a lower height than primary roughs. This provides a transition that will help avoid awkward lies that occur when a ball comes to rest against two drastically different heights of grass.

Maintenance – Intermediate Roughs

Mowing frequency – two to three times per week.

Mowing equipment – triplex mower.

Mowing pattern – mowing directions will alternate each time to prevent grass from lying over.

Mowing height – 1.125”.

Aerification - Per Superintendent's annual plan.

Fertilization - Per Superintendent's annual plan.

Pesticide application – Herbicides and Insecticides will be used. Fungicides are neither budgeted for nor applied to and golf course rough.

Water control - Per Superintendent's annual plan.

Standards – Primary Roughs

Turf conditions in planted roughs will generally be maintained at a higher level than most other clubs. They should be uniformly turfed with healthy grass, and be free of impurities and infestations. The grass height should be higher than fairway height to maintain a good contrast.

The height should be high enough to add some difficulty to shots, but should not penalize players.

The mower operator will take care in operation around trees so as not to damage crowned areas in any manner and will also provide a crisp, clean edge around native grass areas.

The operator will also vary mowing patterns on a weekly basis as directed by the Superintendent. All cutting patterns must blend in properly with intermediate rough areas, greens aprons, tee banks, and natural areas to maintain playability and aesthetics of golf course.

The amount of trees and the shade they produce will deeply impact the consistency of the rough in certain areas.

Maintenance – Primary Roughs

Mowing frequency - Two times per week.

Mowing equipment - Rotary mowers.

Mowing patterns – varying weekly as directed by Superintendent.

Mowing height - 2.5”, adjustable for tournament conditions.

Bunker banks - Hover mowed once per week.

Aerification - Per Superintendent’s annual plan.

Fertilization - Per Superintendent’s annual plan.

Pesticide application – Herbicides and Insecticides will be used. Fungicides are neither budgeted for nor applied to golf course rough.

Water control - Per Superintendent’s annual plan.

Standards – Bunkers

Maximum consistency should be maintained from bunker to bunker. All bunkers are to be kept smooth and even. Sand will be maintained at a minimum depth of 4” in the floors and 2” on the faces. Sand is not to be pulled up on the banks of bunkers. A lip of 1” to 2” is to be maintained on all bunkers.

All bunkers are to be raked. All bunkers shall be free of rocks and vegetation. Leaf and grass debris will be removed on a daily basis before raking. The edges and slopes adjacent to bunkers shall be kept in an attractive manner and trimmed to the height of the roughs.

Sand rakes shall be provided. All rakes will be maintained in good condition and painted, repaired, or replaced when necessary. All rakes shall be conveniently placed for use by members.

Maintenance - Bunkers

Mechanical Raking – Four to Six times per week.

Spot Hand Raking – Daily on an as needed basis.

Sand Depth – Consistently monitored to provide minimum 4” in floors and 2” on faces

Edging - As needed.

Sand replacement - As needed.

Bunker Rake Placement- All rakes shall be placed outside of the sand bunkers.

Standards – Practice Range

The same standards prescribed for tees above shall apply to the tee area of the practice range. The same standards prescribed for fairways above shall apply to the fairway portion of the practice range. The fairway portion of the range is to be groomed more aesthetically versus concerns for playability.

Practice stations will be patterned to provide the most economical use of the tee areas.

The practice putting, chipping, and bunker areas shall be maintained in accordance with the same standards applicable on the golf course to closely replicate actual playing conditions.

The synthetic tee will be used for all golf outings and for junior golf clinics. It will also be used when the Superintendent deems the grass tee to be too wet and during times of turf dormancy.

Maintenance – Practice Range

The practice putting green will be mowed daily with a walk mower. Mowing pattern will vary each time to prevent grain accumulation.

The chipping green will be mowed five to seven times per week with a walk mower. Mowing pattern will vary each time to prevent grain accumulation. Ball marks will be repaired daily.

The practice area that includes the chipping green and practice bunker will be mowed two to three times per week depending on conditions. Divots will be repaired daily by the golf operations staff.

The practice tee will be mowed two to three times per week depending upon conditions. Mowing patterns will be determined based upon aesthetic considerations for the view from the clubhouse and to provide the best practice surface.

Target greens will be mowed two to three times per week with a walk mower.

The range will be mowed two to three times per week depending upon conditions.

The practice bunker will be raked daily and edged weekly.

Divot repair is the joint responsibility of the golf operations and golf course maintenance staff, with spot filling done daily and major repairs done periodically or as needed.

Standards – Trees

Trees provide the course with texture, beauty, shade, and tactical choices. The Superintendent must be continually aware of the condition and health of trees on the golf course, particularly large specimen trees and those that affect play. At the first sign of damage or insect infestation, he must be prepared to act to preserve the health and well-being of the surrounding area including tree removal.

Trees that come into play on the course should be trimmed only to preserve their health and the safety of golfers. Heavy equipment should not be used around these trees to avoid root damage.

Maintenance – Trees

Trees will be trimmed up so that carts and mowing equipment can maneuver under trees.

Tree pruning, dead limb removals, and tree removals will be done by the Green Superintendent's maintenance personnel on a monthly basis.

Outside contractors may be used for larger trees per the superintendent's risk assessment; this work will be done in the winter unless deemed a safety hazard for golfers or maintenance personnel.

Stumps will be ground and holes filled with soil and seeded or sodded in the fall or spring.

Standards – Ponds

All water bodies shall be clean, well defined, and free of weeds and noxious growth.

Maintenance – Ponds

Ponds will be chemically treated as needed to keep ponds clear of algae with the understanding that during peak water usage times this will be done with limited success.

Grass carp will be introduced to ponds to help keep algae down.

The buildup of organic matter over the years in the ponds will make it very difficult to have any successful control of the algae and moss chemically. During periods of high temperatures the algae and moss will continue to flourish until we dredge the ponds.

Standards – Clubhouse Lawns

Flowerbeds will be maintained, edged and mulched as needed.

Turf areas will be mowed as needed.

Entire clubhouse area will be checked daily for trash and other unsightly debris.

Annuals and perennials will be planted in appropriate areas. In addition, an assortment of other planters will be located throughout the area.

An ornamental horticulturalist with a landscaping background will be on staff to professionally maintain the intricate landscapes around the club grounds.

Maintenance – Clubhouse Lawns

All clubhouse lawns will be rotary mowed and clippings bagged at least once per week during the growing season.

All string trimming will be done in conjunction with mowing.

All sidewalks will be blown free of mowing debris.

All clubhouse lawns will be fertilized and treated for weeds.

Standards – Landscaped Areas

All landscaped areas will be maintained in a neat and attractive manner. Lawn areas are to be mowed, edged, irrigated, and fertilized on a regular basis. Native flowering plants and shrubs will be used as much as possible. Annual plantings will be made to provide seasonal color.

Landscaped beds will be located at areas around the course according to the Superintendent's Landscape Plan. These plantings should highlight and accentuate interesting areas. Seasonal flowers are to be bedded, well cared for and properly rotated. All trees, shrubs, and plants shall be pruned as needed.

Maintenance – Landscape Areas

All lawn, landscape, and paved areas are to be weed and pest free, and free of litter, leaves, and debris. The entire area will be policed for litter daily and the parking lot and sidewalks will be blown off as needed.

Standards – Cart Paths

All paths shall be clean, well defined, in good repair, well drained, and properly located with adequate width and surface. Permanent traffic control devices, i.e., curbing and signage, shall be used where necessary. Such devices shall be designed for safety and aesthetics.

Rope and stakes are to be avoided as much as possible. However, they may be used to re-direct cart traffic to prevent turf damage and deterioration.

Maintenance – Cart Paths

Cart Paths will be blown off when needed.

Cart Paths should be overlaid and widened when budget dollars allow.

Standards – Natural Areas

These areas (natural roughs, lakes, creeks, and other environmentally sensitive areas) will be maintained in a manner that enhances their natural characteristics while maintaining the playability and integrity of the course.

Maintenance – Natural Areas

All detail work will be done under the supervision of the Superintendent, to include: mowing, weed eating, trimming, pruning, watering, or weed control. These areas will be cut down once a year in late fall or early spring.

Standards – Irrigation

The golf course shall be watered to meet the needs of the turfgrass and to enhance its playability by maintaining its surfaces as firm as possible. All water needs will be based off the needs of the primary playing surfaces. (Greens, tees, and fairways)

All irrigation will be scheduled by the management team under the direction of the Superintendent. Hand watering that is needed during the day in certain areas of the course will be under the direction of the Superintendent, Assistant, or Irrigation Technician.

Water is the most essential component of any golf course operation. Since the game of golf is played on a living plant, either rain or irrigation is necessary for proper course conditioning.

Water at MHCC is a limited resource and scheduled irrigation and daily routines are often adjusted to manage this limited resource. The primary source of water for irrigation is a well and the holding pond is on the fourth hole.

Maintenance – Irrigation

Periodic maintenance will be done to the irrigation system in coordination with the Superintendent. The irrigation is typically turned on in April and blown out in November.

On-Course Rest Rooms

The on course restrooms are cleaned daily by the housekeeping staff.

The on-course restrooms are primarily for use by members and staff. Whenever possible, maintenance staff should use the rest rooms in the golf course maintenance facility. However, maintenance employees may use the on-course facilities when it will not interfere with members' use or it is impractical to return to the shop to use the facilities.

Chemical Applications

Basic fertilizer schedules are to be established based on soil tests to maintain healthy turf and adjusted to meet environmental conditions and water quality standards.

Chemicals will only be used as a last resort and only in a controlled, supervised manner under the direction of the Superintendent and supervised by a licensed applicator of the state.

All personnel responsible for fertilizer or pesticide applications on the golf course will at all times be aware of our environmentally sensitive areas, such as lakes and creeks, and will be aware of any application guidelines per environmental regulations.

Nursery

There are two turf nurseries on the golf course. These nurseries will be used for harvesting sod to be used on MHCC property as needed. Periodically these areas will be renovated and reseeded based on the current needs of the Superintendent.

VI -Course Set Up

The Superintendent will assign properly trained staff to prepare the course for play each day. While the greens and tees are the most important areas of the course and will receive the greatest attention, the set up crew must also survey other areas to ensure that the course is ready to meet the highest expectations of members and guests.

Cup Placement

In season, cup positions shall be changed each day. All cup positions shall be used on a rotating six quadrant basis. Since all positions are to be utilized, six positions generally considered to be more difficult, six positions considered average difficulty, and six positions considered to be easy shall be used each day, independent of whether the placement is forward, middle, or back. Cup position rotation shall be entirely independent of tee marker placements.

Tee Marker Placement

Four sets of tee markers shall be maintained. The markers shall be moved daily and all portions of each respective teeing area shall be used on a rotating basis. There shall be six front positions, six middle positions, and six back positions for each set of tees each day, the objective being that the overall length of the golf course shall be about the same each day.

The course is designed to play:

5,169 yards from the Rust tees.

5,992 yards from the Tan tees.

6,200 yards from the Blue/Tan tees.

6,499yards from the Blue tees.

6,621 yards from the Blue/Green tees.

6,734 yards from the Green tees.

The Superintendent, in consultation with the Head Golf Professional and Greens Chairman may lengthen or shorten the course for club tournaments outlined in the MHCC golf package and in the event of unusual weather and/or course conditions.

The rotation of the tee placements from front, middle, and back shall be independent of the cup placements on the greens. Tee markers shall be placed facing the desired direction. The width of the placement of the tee markers shall be approximately 18 feet or at the Superintendent's discretion.

VII - SHOP SET UP AND MAINTENANCE

The golf course maintenance facility, or shop, is an essential part of the golf course maintenance effort. This is the location where equipment and tools are stored and maintained; where materials such as mulch, seed, sand, and soil are stored; where chemicals used for the maintenance and health of turf are kept; where supplies and spare parts are stockpiled; where the Superintendent has his office; where the central computer control for the irrigation system is located; and where the staff gathers for direction and training.

Facility Organization

The organization and efficiency of the golf course maintenance staff is, to a great degree, dependent upon the set up and organization of the golf course maintenance shop.

Material Stockpiles

Bulk materials, such as mulch, sand, seed, soil mixes, etc., will be stored in specified locations, typically in the shop yard. It is best, as time and money permits, to construct large treated lumber bins on concrete pads for each different material. This allows supply vehicles to back up and dump their loads in each bin without materials cross-contaminating each other. If bins are not available, more widely dispersed areas may be designated for the various materials.

Fuel and Chemical Storage

Fuel and chemical storage must meet all the requirement of local codes. Typically, fuel will be stored in above ground tanks away from the maintenance shop. A fueling station will be set up for all moving equipment. All equipment will be shut off when fueling. Portable fuel containers will be used to fill power tools outside the building.

Chemicals, including herbicides, pesticides, fungicides, and fertilizers must be stored in accordance with manufacturer's specifications and storage arrangements must meet all federal, state, county, local, and club requirements.

Tools, Equipment, and Machinery

The Superintendent will maintain a tool, equipment, and machinery list, showing the purchase date and value of all significant tools and equipment. An inventory of these items will be conducted at least annually.

Licenses and Permits

All required licenses and permits must be secured from necessary authorities. The Superintendent is responsible for ensuring that all employees who are required to have such licenses and permits keep them up-to-date.

VIII -EQUIPMENT MAINTENANCE

Proper maintenance extends the life of equipment and machinery, reduces breakdowns, and protects the health and vitality of turf.

Operators' Manual

Operators' manuals will be retained for all pieces of equipment, machinery, and power tools. Operating instructions, safety guidelines, and maintenance requirements will be copied for use in instructing employees as required.

Spare Parts Lists

Spare parts lists will also be filed for future use. The Mechanic will make a copy of each spare parts list for reference and use.

Operation and Care of Equipment

The useful life of tools, equipment, and machinery is directly related to their use and maintenance. All employees must be trained on the proper use of all equipment, machinery, and power tools.

Employees assigned to use any equipment, machinery, or tools must perform all maintenance and safety checks prior to use. Gas, oil, hydraulic, and lubricant levels must be checked before each use, as required. Employees must know and be aware of the proper gas/oil mixture or fuel, oil, hydraulic fluid, or lubricant to be used in each piece of equipment, machinery, or power tool.

All items will be returned to the shop in clean and working order. Employees must immediately report any maintenance problem or safety defect to the Superintendent or other supervisor and may be disciplined for unsafe or inappropriate use of equipment, machinery, or power tools.

Employees must drive equipment and machinery on service roads, cart paths, or roughs as much as possible when driving about the course. Driving on fairways should only be done as a necessity. Vehicles or machinery will not be driven onto greens, collars, or tees.

Mowers, in particular, require proper sharpening and adjustment of blades. If not performing up to expectations in the field, employees should not continue. The equipment should be returned to the shop for repairs, sharpening, or adjustment, as necessary.

All employees must pay close attention to hydraulic lines. Hydraulic fluid leaks, in addition to hindering the proper operation of the equipment, will cause damage to turf. If a leak is noticed, the piece should be driven off playing surfaces, parked, and shut off. The Superintendent or mechanic should be notified. Attempting to transport the machinery to the shop may cause turf or equipment damage.

Equipment Repair and Maintenance

All equipment and machinery will be maintained by a qualified full time Mechanic to meet all manufacturers' specification and the expectations of the Superintendent and his Assistant.

Detailed repair and maintenance records will be kept by the Mechanic for each piece of equipment or machinery.

Only sharp and properly adjusted cutting units will be allowed to mow the course.

The Mechanic will supervise the daily servicing of equipment and machinery, using the opportunity to further educate staff members on the correct way of servicing and operating the equipment.

The Mechanic will not knowingly permit any equipment or machinery to be taken on the golf course that may have a potential safety problem. Such problems will be repaired promptly.

Tools and Diagnostic Equipment

The Superintendent and Mechanic will determine what tools and diagnostic equipment are necessary to properly maintain all equipment and machinery. These items will be purchased and assigned to the mechanic who will use them in the course of his duties.

The Mechanic is expected to use all tools and diagnostic equipment properly, service and clean them as necessary, and provide for their ongoing security.

Equipment Maintenance

The Mechanic is responsible for establishing a preventive maintenance schedule in accordance with all manufacturers' specification and the expectations of the Superintendent.

The Mechanic must keep the Superintendent fully informed of the preventive maintenance effort and of any unexpected major repairs.

Equipment Maintenance Records

The Mechanic will keep detailed and up-to-date maintenance and repair records for each piece of equipment and machinery. These records will be periodically reviewed by the Superintendent.

IX - HAZARDOUS MATERIAL MANAGEMENT

The handling, storage, and application of a number of hazardous materials are inherent in golf course maintenance. These items have the potential of causing major damage to the golf course or serious injury or illness to staff if not handled correctly. The Superintendent will take all necessary steps to ensure that staff is trained in the correctly handling, storage, and application of these materials.

Hazardous Material Plan

The Superintendent is required to prepare a Hazardous Material Plan that identifies all such materials used in the golf course maintenance operation. The plan must address storage, handling, application, and safety procedures for each material.

The plan must also address emergency and notification procedures relating to major hazardous material spills and/or employee contaminations.

Material Safety Data Sheets (MSDS)

It is the policy of the Club that Material Safety Data Sheets (MSDS) is obtained for all hazardous chemicals used in or around managed facilities. Material Safety Data Sheets (MSDS) are provided by manufacturers for any chemical product deemed hazardous.

Any manager or supervisor who purchases chemicals for use in the facility must notify the Facility Safety Officer of any new chemicals purchased. The Facility Safety Officer is charged with the responsibility of obtaining the appropriate MSDSs for any hazardous chemicals used. The MSDSs must be maintained in a master file by the Facility Safety Officer and copies must be made available to all departments using hazardous materials.

All new employees who will work in areas where hazardous materials are used will be trained how to read and interpret MSDSs.

The Superintendent will ensure that the appropriate MSDSs for all hazardous materials used in the golf course maintenance shop are available for employee review in the work area. Further, the Superintendent will take active steps to ensure periodic review of MSDSs.

Storage

All hazardous materials will be stored according to the manufacturer's specifications for each item.

Mixing

Mixing of chemical concentrates with water will be done according to manufacturer's specifications in an area designated by the Superintendent for mixing. The area should be well ventilated for the safety of staff and all required safety precautions followed. If possible this area should be contained to prevent run off of any spilled chemicals.

Application

Pesticides and fertilizers will only be applied by a properly trained employee who possesses the necessary knowledge and is properly licensed as required. Specific guidance and direction will be provided by the Superintendent for each application.

Clean-Up

The Hazardous Material Plan will contain specific directions to handle the clean-up and notification of any spills. All such spills will be reported to the Superintendent who will supervise clean up and make any necessary notification.

Chemicals

A list of all herbicides, pesticides, and fertilizers in storage and use will be maintained at the maintenance shop. Material Safety Data Sheets (MSDS) will be maintained for all items on the premises.

Fuels, Lubricants, and Solvents

A list of all fuels, lubricants, and solvents in storage and use will be maintained at the maintenance shop. Material Safety Data Sheets (MSDS) will be maintained for all items on the premises.

Equipment & Tool Safety

All purchased equipment and machinery come with safety guidelines. The Superintendent must ensure that all employees are properly trained in the safety aspects of all equipment.

Original copies of all safety guidelines will be filed in the golf course maintenance shop. The Superintendent will make copies of all safety instructions to be used in training staff. Such training should be noted in each employee's file. Periodic refresher training is also essential and should be held on days when inclement weather limits work on the golf course.

Likewise, certain power tools also come with safety instructions. These should also be filed for future use and copies made to instruct employees on the safe use of all power tools.

Adequate lighting during hours of limited visibility goes a long way to dissuade criminal activity. While MHCC typically has adequate exterior and entry lighting, bulbs burn out with some frequency and these need to be replaced.

X -RECORDS AND BENCHMARKS

The Superintendent is required to maintain certain records and benchmarks for his department. Most are for his use, but others may be checked by the General Manager and some material is useful in working with the greens committee.

Chemical Records

All records of the purchase, storage, handling, application, and disposal of the various chemicals used in the golf course maintenance operations must be on file in the maintenance shop.

Permits and Licenses

All permits and licenses relating to the golf course maintenance operation, including pesticide handling and application permits, must be on file in the golf course maintenance shop. It is the Superintendent's responsibility to ensure all licenses are renewed on time.

XI - Extreme Drought and/or Temperature Plan

The Superintendent with consent of the Committee on Green Chairman with approval from the MHCC President will prioritize course management practices during times of extreme drought and/or temperature. The main objective is to reduce stress on the turf, both above and below ground.

This may include the following operational changes;

Closing the entire course at 7:00pm or earlier if necessary, to have the ability to increase watering times and levels of the priority areas in the following order; Greens, Collars, Fairway Approaches, Fairways, Tee's, Club House Lawns, Rough, Practice Range.

Not all sprinklers run the same length of time or discharge the same amount of water, refer to the averages listed below.

Watering times/levels

| | | |
|---------------------|------------------------------------|-----------------|
| <i>Greens</i> | <i>10 min = .05" Precipitation</i> | <i>2 Hours</i> |
| | <i>20 min = .10" Precipitation</i> | <i>4 Hours</i> |
| <i>Fairways/App</i> | <i>10 min = .05" Precipitation</i> | <i>5 Hours</i> |
| | <i>20 min = .10" Precipitation</i> | <i>10 Hours</i> |

| | | |
|-----------------------|------------------------------------|-------------------|
| <i>Tee's</i> | <i>10 min = .05" Precipitation</i> | <i>2.5 Hours</i> |
| | <i>20 min = .10" Precipitation</i> | <i>5 Hours</i> |
| <i>Rough</i> | <i>15 min = .05" Precipitation</i> | <i>3.75 Hours</i> |
| | <i>30 min = .10" Precipitation</i> | <i>7.5 Hours</i> |
| <i>Practice Range</i> | <i>15 min = .05" Precipitation</i> | <i>4.75 Hours</i> |
| | <i>30 min = .10" Precipitation</i> | <i>9.5 Hours</i> |
| <i>All Area's</i> | <i>= .05" Precipitation</i> | <i>9.25 Hours</i> |
| | <i>= .10" Precipitation</i> | <i>18.5 Hours</i> |

The pump capacity of our irrigation system is based on being able to balance the water across the entire property. On average we can run 28 sprinkler heads at one time based on current pump output.

Cutting Heights/Mowing Frequency

Greens, cutting heights may be raised to .130" (normally .115"); mowing frequency may be reduced to five days per week (normally seven days per week) and rolled the other two days. Fairways mowing frequencies may be reduced to twice per week (normally three times per week).

Golf/Maintenance Cart Traffic

During extreme drought situations, carts will be asked to run in the fairways as much as possible. We have a greater ability to water fairways during drought situations. During extreme temperatures (90 plus) situations, carts will be asked to run in the rough as much as possible. This should lesson stress to the fairways during times of ninety plus degree temperatures.

Syringing Turf

During extreme temperatures situations daily syringing will occur in the mid to late afternoons (hottest part of the day). Syringing is applying small amounts of water to cool the playing surfaces. The sprinklers will be on for only three minutes and should delay your round only momentarily and cause minimum disruption to playing surfaces.

Hand Watering Fairways

During extreme drought and temperature situations, the need to hand water fairways to get adequate amounts of water down without over watering other areas is necessary.

Unfortunately this requires hoses to be stretched across fairways and maintenance staff in the fairways.

XII – 2012-2013 Golf Course Improvement Projects

Hole #1

- Align, reshape and level all tees.

Hole #2

- Align, reshape and level remaining tees.

Hole #4

- Raise and/or level area around sprinkler heads in fairway.

Hole #5

- Install Sand Mat in greenside bunker to improve drainage.
- Raise and/or level area around sprinkler heads in fairway.

Hole #6

- Install Sand Mat in greenside bunkers to improve drainage.
- Raise and/or level area around sprinkler heads in fairway.

Hole #7

- Install Sand Mat in bunker to improve drainage.

Hole #9

- Install Sand Mat in greenside bunkers to improve drainage.
- Raise and/or level area around sprinkler heads in fairway.

Hole #10

- Install Sand Mat in greenside bunkers to improve drainage.
- Raise and/or level area around sprinkler heads in fairway.

Hole #11

- Align, reshape and level all tees.
- Remove electric pole behind green.

Hole #13

- Align, reshape and level remaining tees.

Hole #15

- Align, reshape and level tees.

Hole #16

- Align, reshape and level tees.

Hole #18

- Align, reshape and level rust tee.