



Course Maintenance Standards

May 2016

Revision 2016-02

Introduction

The purpose of this document is to explain the general operation of the maintenance department and standardize the maintenance practices and procedures required to achieve course conditions that are expected by the membership. The standards and procedures outlined in this document are to be reviewed as required and updated on an as needed basis.

Mike MacLellan, Course Superintendent

Ron MacDonald / Ben Theuerkauf, Greens & Fairways Committee



Golf Course Maintenance Practices

The philosophy behind the daily routine maintenance practice is to consistently provide well maintained course conditions. Maintenance of “*the middle of the course*” - greens, tees, and fairways – is the top priority and will receive the most attention. Rough, bunkers, and native areas are considered secondary to areas of top priority. The majority of course maintenance occurs in the early morning hours. It is important that the maintenance staff be provided with a course that is generally free of golfers to allow efficient maintenance of the course. Maintenance staff shall have the ‘right of way’ at any time before 10 a.m.

Typical Weekly Course Maintenance Hours

| Practice | Day of Week | | | | | | | Total |
|--|-------------|-----|-----|-----|-----|-----|-----|-------|
| | M | T | W | T | F | S | S | |
| Mow Greens | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 28 |
| Change Pins, Fix ball marks, change tee blocks | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 24.5 |
| Green Rolling | 4 | | 4 | | 4 | | | 12 |
| Mow Tees, Approaches, Fringes | 8 | | | 8 | | 8 | | 24 |
| Mow Fairways | 12 | | 12 | | 12 | | | 24 |
| Mow Rough – AR5 Machine | 6 | 6 | 6 | 6 | 6 | | | 30 |
| Mow Rough Surrounds - Sidewinder | | 6 | 6 | 6 | 6 | | | 24 |
| Course Check – change garbage, clean benches, check bunkers, clean bathrooms | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 14 |
| Cooler Water | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 7 |
| Add divot mix to tees | 2 | 2 | | 2 | 2 | | | 8 |
| Rake Traps | | 12 | | | 12 | | | 12 |
| Various Jobs – trimming, course clean-up, maintenance, etc | As required | | | | | | | |

Note: This table is for general information purposes only. The course superintendent will adjust weekly maintenance hours as required to accommodate weather conditions, atypical course conditions, etc. Monthly verticutting, turfgrass product applications, aeration, etc are not included in this table.

Greens

- The greens will be cut six-seven (6-7) times per week in the high season, late May to late September. Application of growth regulator & modified rolling practices may allow reduced mowing which will be evaluated as the season progresses.
- Greens will be rolled three to four (3-4) times per week. Greens will be rolled after mowing. A whip pole will be used as required to clean the greens. Severely sloped greens will be rolled less frequently to allow playability.
- Green speed may vary throughout the season. A range of green speeds will be determined by the Superintendent / Greens Committee which provide for the greatest number of hole locations, while still providing a challenge for the average golfer.
- The height of cut may range from 0.14-0.18” and will be adjusted to maintain the desired green speed.
- Stimpmeter readings shall be obtained and documented on a regular basis. Measurements shall be made on each type of green complex. For instance hole #1, Hole #4, and hole #11 may be used as benchmark holes. These measurements shall be used as indicators for water application rate, rolling frequency, and height of cut.
- The pins will be changed and ball marks will be fixed daily from mid May to late September. Before and after as needed.
- An irrigation strategy will be adopted for the greens to provide the best distribution of moisture for each individual green.



Fertilization

Time: Mid April to early May

Product: Ammonium Sulfate – 2 to 3 applications

Discussion: Ammonium Sulfate is not temperature dependent thus should give a quick green up and growth. The downside could be high growth rate thus slower greens.

Time: Mid May

Product: Starter fertilizer high in Nitrogen / Phosphorous

Discussion: Starter fertilizer will kick start the Poa and get the roots deeper to prepare the grass for the summer months.

Time: Late May – September

Product: Fertilizer high in Nitrogen / Phosphorous

Discussion: Summer applications will start high in Nitrogen and Phosphorous which helps keep the plant healthy in the stresses of the summer. This will be mixed with the starter fertilizer throughout the season which with the higher Phosphorous will keep the Poa alive which has a tendency to die off in stressful times.

Time: Mid September

Product: Potash

Discussion: Potash will start the hardening off process of the grass to prepare for winter. It must be noted that two applications of this is recommended; however, only one application is currently budgeted. A secondary application costs approximately \$1,000.

Aeration / Verticutting

Type: Mini tine - ¼ inch

Time: 1st week of every month during high season (June – September)

Discussion: ¼ inch mini tines which will remove the thatch which is the dead grass that builds up beneath the grass layer not allowing water, fertilizer, air and chemicals to penetrate to the roots.

Type: Verticutting – heavy cut (¼ inch deep)

Time: Early May / Late September

Discussion: The plan is to do a heavy cut in the spring and over seed bad areas as required. Late September verticut to set up the grass to be healthy going into the fall and winter. It must be noted this will require a new set of blades to be ordered in the spring costing approximately \$1,000 (repairs budget).

Type: Verticutting – light (1/8 inch deep)

Time: Every two weeks in high season (June – September)

Discussion: Light verticutting is just deep enough to cut the stolons and take the grain out thus creating firm quick greens.

Type: Core Aeration – Punching

Time: October 17 – 18th

Discussion: In 2015 the greens were punched 2 inches apart with a heavy topdressing application to protect the grass from desiccation in the winter. The greens will be limed after aeration following the recommendations of soil samples taken in August.

Top Dressing

Type: Light Top Dressing (1-1.5 cu.ft per 1000 sq.ft)

Frequency: Bi-Weekly or monthly as required

Discussion: Frequent light top dressing is required to provide sufficient drainage ability within the top mat of the green and provides for healthier growing conditions for the grass. Light top dressing is not currently done due to budget constraints; however, it will be reviewed during 2016 and added if additional funds are available.

Type: Regular Top Dressing (application as required)

Frequency: After Fall Core Aeration

Discussion: Top dressing is required to fill all cored holes and allow incorporation of sand into the putting surface. This practice reduces organic matter, provides for better surface drainage, and allows the roots to grow deeper into the surface providing a stronger turf.

Additional Product Applications

Product: Revolution (Surfactant product)

Time: High Season – Once per month application

Discussion: Water repellency is an issue on all greens. The sand particles in the root zone become coated with a waxy like substance (hydrophobic) thus not allowing the water to penetrate deep into the root zone. Revolution dissolves the waxy substance and allows water to penetrate deep into the root zone making the roots chase the water (deeper root zone, stronger / healthier turf). Allowing the water to penetrate deeper into the soil provides a quick drying putting surface, less surface runoff, and a higher quantity of irrigation water reaching the root zone. These factors all improve putting surface quality. Revolution is also beneficial because it provides disease risk reduction by maintaining a drier putting surface, thus not allowing the damp / wet top of soil conditions that diseases require to grow.

Product: Primo (growth regulator)

Time: High Season – applications every 3 – 4 weeks

Discussion: Primo has been used since 2004. It stops the top growth and redirects the energy into thickening the grass up thus longer consistency in the speed of the greens. This product changed the industry whereas in a typical July day the greens mower may dump 2-3 times over the course where previously the dumps would be 9-10 times. This product is sprayed every 3-4 weeks included is a liquid fertilizer due to the tendency of the product to lighten the grass. Growth regulator and water management are the two pillars that control the speed of the greens.

Product: Fungicide

Time: July to October – monthly application

Discussion: Fungicide is a must as we would have no greens without it. It is usually not required until early to mid July when the days start to shorten up and dew remains on the grass longer in the morning. Fungicide is applied on a monthly basis from July to October and in November we apply our winter fungicide. A note that we normally do not have disease in the spring but it does happen once in a while.

Tees / Fringes / Approaches

- The tees will follow a simpler path than the greens.
- Fertilization will be applied in six (6) applications mostly nitrogen on a monthly basis starting early in the growing season (late April – early May).
- The surrounds will be done three (3) times in May, July, September.
- Aeration will be done in mid August or October.
- Growth regulator will be applied on a monthly basis from early June onward to the tees and approaches.
- Fungicide will be applied on a monthly basis from mid July to mid October and sprayed in early November with the greens in the winterizing spray.
- The tees are also divot mixed as much as possible.

Fairways

- Fairway Irrigation strategy will be adopted with the goal of providing roll out on a typical drive from the tee as well as reduce water application rates to save irrigation cost.
- The fairways have fertilizer applied three (3) times in early May, early June and mid August.
- Liquid fertilizer is applied usually twice (2) per summer to battle dollar spot.
- Weed control is applied to the whole course other than the greens in early September.
- Aeration of the fairways usually takes place in the first to second week of November.

Rough

- Do not fertilize as the mower is a mulcher thus providing enough nutrition to keep them thick enough to provide a challenge.

Sandtraps

- The traps will be topped up with sand as budget allows.
- The traps will be raked and cleaned of rocks two (2) times per week in the high season, late May to late September.

Trimming (whipper-snipping, hand mowing)

- The center of the course will be trimmed as required.
- The bare areas around the greens and tees created by the rough mowers are to be hand mowed.

Course Tee Set-up

- Course tee set-up should provide as close to the playing yardage as reasonably possible.
- Due to the small area / quantity of tee boxes, tee block location is recommended to be moved around on a daily basis. Alternate tee boxes should be used on a regular basis.
- The greens committee will develop a tee / pin placement standard placement procedure that the grounds crew will use to set the course up on a daily basis.

