# Winter is Not 'Down Time' on the Golf Course

## The golf season really begins in the winter, so use that time carefully and effectively.

BY BUD WHITE AND TY McCLELLAN

Golf course amenity repair, refurbishment, or replacement are important tasks that must be accomplished every year for a polished look on the golf course.

*So what do you do during the winter?* Better question: Who in the golf course management industry has not been asked this question more times than the number of hairs on our head? Okay, perhaps that's an exaggeration, but there are things that make all of us want to pull out our hair, and for turf managers this question qualifies as one of them.

Superintendents who are highly skilled in communication (and patience) look at this as a great opportunity to educate their golfing members, the green committee, neighbors, and even friends and family. Although some superintendents can easily convey a concise, calculated response, others become angered, or at the very least aggravated, in response to this frequent and somewhat irritating question. This begs other questions such as, "Why are there no articles or books available to turf managers concerning winter maintenance?" and "What took us so long to do so?" In searching through the Turfgrass Information File, textbooks, and the World Wide Web, it doesn't take long to realize that there is a lack of resources on the topic of winter maintenance.

Much like sports, the biggest gains in golf course improvements are achieved in the off-season. Necessary and/or desired course improvements oftentimes demand significant time, labor, and occasionally large equipment, all of which result in varying degrees of course disruption. This being the case, the real gains are achieved when additional man-hours are available and work can be performed most efficiently and without causing undue interference to play. During the golfing season, golf course maintenance is geared entirely to daily play and special events, leaving little time to do more than make only minor course adjustments and improvements.

In northern regions of the country where winters eliminate play for several months of the year, or at the very least cause restrictions for play, maintenance staff levels typically increase sometime in April and reach peak levels shortly thereafter. Staff levels then decrease around Thanksgiving, leaving anywhere from five to eight full-time employees on average, including the superintendent and mechanic. Simply put, for real gains to be achieved, golf courses should think twice about how many full-time staff they should keep through these important winter months. Furthermore, sufficient staffing throughout the winter is needed in preparation for best course conditioning when the course opens in the spring.

For northern courses, winter is the time of year in which maintenance budgets are closely inspected, adjusted, and approved. The number of full-time staff needed during the winter

months is a typical question that plays heavily on the budgeting process. Ultimately, the appropriate answer to winter staffing levels depends on many variables and is specific to each facility.

The following list of activities and projects won't encompass all that can be performed during the winter months, nor is it supposed to do so. Rather, this article is intended to assist green committees, boards of directors, and other course officials to appreciate and better understand what winter golf course maintenance entails, and to be better educated about determining winter staffing levels for their course. The list of winter duties and projects outlined below might surprise the average golfer.

## GENERAL DUTIES

**Snow Removal from Roads and Parking Lots:** Most, if not all, northern golf courses have at least some snow removal responsibilities during the winter. Depending on acreage and annual snowfall, snow removal requirements for some courses will be much more extensive than for others. Given the unpredictability of winter weather events, it is generally required that at least one person be kept on call for clearing snow during such events. Snow maintenance includes plowing roads and parking lots, blowing or shoveling walkways, and applying de-icing agents.

**Winter Play Setup Duties:** While generally not recommended in the northern United States, some winter play does occur and golfers still have expectations for course conditioning. It should also be noted that if winter play is allowed, not only should more staff be in place during the winter to accommodate play, but many more labor hours will be required to repair the course for the beginning of spring play (another article in itself).

**Landscape Cleanup:** Snow, ice, wind, and rain require debris cleanup across the property, whether it be to accommodate winter play or to prepare the course for spring opening. This includes downed tree branches and accumulations of leaves, soil, or anything that moving surface water leaves behind on the grounds. Remulching landscape and flower beds is another great winter project.

**Covering Greens:** For courses that annually suffer winter damage to their greens, covering them with straw, tarps, or synthetic covers, and heavy sand topdressings, just to name a few, can be essential to avoid turf loss. Many man-hours are required in covering and protecting greens, particularly if covers must be removed or applied several times throughout the winter.

**Monitoring Ice on Greens:** If by mid-February or early March continuous ice cover still exists, it may need to be removed or broken to allow gas exchange to avoid turf loss due to lack of oxygen. Although winter injury is poorly understood despite decades of research, the threshold for *Poa annua* is assumed to be close to about 50 days, whereas creeping bentgrass can tolerate continuous ice cover much longer. Regardless of these guidelines, monitoring of ice is necessary in northern states and, depending on the intensity and duration of the winter, breaking ice to save greens may be required.

**Snow Removal from Greens:** Snow is welcome during the winter, insulating the turf from desiccating winter winds and temperature extremes, but sometimes it must be removed from greens to hasten ice melt, speed surface thawing during the spring, or allow surface melt to be directed off the greens where it cannot accumulate and refreeze. Snow removal from greens is almost always performed manually so as to avoid mechanical damage to green contours.

**Monitoring Course Conditions:** In addition to monitoring the golf course regularly, many superintendents frequently perform plug checks to monitor turf health and check for winter damage. This is done by removing soil samples and placing them indoors on window sills where they warm with sunlight. Doing so in advance is a great way to determine if winter turf injury will be an issue, in which case communication and recovery plans can begin.

Painting greens is an increasingly popular project on dormant, non-overseeded ultradwarf bermudagrass greens.

**Winter Fungicide Applications:** In northern climates, various numbers of timely fungicide applications are used for control of pink snow mold, or Microdochium patch (*Microdochium nivale*), and gray snow mold (*Typhula* spp.) that frequent most cool-season turfgrasses.

**Winter Weed Control:** For facilities in the transition zone, where bermudagrass and zoysia-

grass go completely dormant, controlling actively growing winter weeds, such as *Poa annua*, with pre- and post-emergent herbicides is a must. As with all pesticide applications, staff are required to be trained and certified.

**Burning Native Roughs:** Burning in early spring is the best weed control method and the healthiest management for maintenance and cleanup of native vegetation. It has always been Mother Nature's way of maintaining the native plains. In addition to a burn permit, make sure to notify applicable parties in the area when burning, including the fire department.

**Advance Ordering of Fertilizers, Pesticides, and Other Chemicals:** Bulk ordering of fertilizers and pesticides during the winter months can produce significant cost savings as a result of early order discounts, but doing so requires excellent forecasting, budgeting, and planning, all of which takes time. Although this certainly applies to all facilities, those owned by management companies, government agencies, municipalities, and the like require a minimum of three bids for each specification of a product purchase. Depending on the situation, creating detailed specifications to obtain fair, competitive bids for every purchase order can be quite demanding of your time.

**Capital Purchases:** Maintenance equipment and other capital purchases typically require similar purchasing and bidding processes, as outlined above for chemicals and fertilizers.

**Continuing Education:** Whether it be the annual Golf Industry Show, local superintendent chapter meetings, USGA regional conferences, pesticide recertification workshops, etc., continuing education is needed to stay abreast of the newest chemistries, technologies, products, and techniques. Continuing education is required not just in certain instances (such as pesticide applicators); it is integral to the success of the facility.

## TYPICAL WINTER PROJECTS

**Annual Equipment Maintenance and Repairs:** Some equipment operates seven days a week all through the growing season, and others run two to three days per week on average. Parts become worn and need to be replaced, fittings loosen, bearings and seals wear out, engines and motors require tune-ups, and wiring needs to be inspected.

Extensive preventative maintenance in the winter is crucial for equipment reliability during the golfing season, and reducing costly breakdowns results in substantial cost savings. Additionally, there simply is not time to have multiple pieces of equipment waiting for parts or repair during the summer. While breakdowns in the summer cannot be eliminated, winter prevention and maintenance can go a long way in assisting with equipment durability and dependability.

Keeping equipment clean and operating efficiently does not just mean a better conditioned golf course; it also increases equipment longevity and trade-in value. "The value of the maintenance fleet more than justifies preventative maintenance and regular service. Maximizing the investment in equipment is good business sense and important to the viability of the overall golf course operation."[1] Do not forget equipment painting needs as well.

**Mower Blade Sharpening and Reel Grinding:** With dozens of reels and blades on multiple fairway, green, tee, and rough mowers, diligent sharpening and grinding of cutting units in-house takes weeks. Some courses contract out this work, but it can be very expensive. As such, investing in reel and blade grinding/sharpening

Snow cover completely shuts down any maintenance operations . . . or so many think.

equipment, and performing this job in-house, can produce significant cost savings. Bearings, seals, and roller rebuilding are necessary, too.

**Tree Maintenance:** Selective tree removal and pruning is needed annually to improve growing conditions by increasing sunlight exposure and air flow. Trees or branches that unduly interfere with play or intended architectural design should be eliminated. Annual winter tree maintenance also includes thinning of dense tree populations to reduce overcrowding, clearing understory brush, raising canopies for improved air flow, and addressing trees damaged during winter storms.

**Drainage:** Limited or no play during the winter is a great time to address deficiencies in drainage. This includes repairing existing drainage tile that has become compromised and no longer functions properly, or the addition of new drainage in areas that drain poorly. To improve poorly draining areas or small pockets that hold water, this can also be achieved through regrading drain basin contours.

**Irrigation System:** All facets of an irrigation system require annual attention. This includes routine servicing of pump stations as well as upgrading deteriorating irrigation components, leveling heads, and mapping of new irrigation lines and heads.

**Putting Green Collar Maintenance and Leveling:** Collars are areas of the course that are often overlooked, but they benefit from routine maintenance. This includes leveling, redefining widths, expansion, and relocation.

**Tee Leveling, Rebuilding, and Expansion:** Intense play and divoting from the centers of teeing grounds may produce surface unevenness that causes playing areas to remain wet, as surface water no longer exits off the tees as originally designed. The opposite also can be true. If aggressive divot-filling programs are in place, excess accumulation causes the center of tees to form a crown. Or, throughout the season it may be obvious that a tee is simply undersized for the amount of play it receives, which is most likely on holes 1 and 10, where additional practice swings are frequently used. In either case, the winter months provide a great opportunity to level, rebuild, or expand tees for the upcoming season.

**Bunkers:** The general industry standard for the lifespan of bunker sand is five to seven years before it must be replaced. This occurs because silt and clay impede bunker drainage and offer poor playability. Winter months are a great time

to replace bunker sand, if needed, or replenish sand if more is needed. To keep bunkers draining properly, it also is wise to inspect the drain system so that tile lines can be cleaned or replaced.

**Cart Path Repair:** At some point, highways and streets require repair, and cart paths are no different. Winter months, when temperature and conditions allow, are a great time to prepare cart paths for the upcoming season. Curbing can be built as well.

**Maintenance Facility Improvements:** An organized, clean, and operative maintenance facility does not happen by itself, and directing some attention here goes a long way to improving employee morale, better productivity and efficiency, and attracting and retaining quality employees.

**Pump House, Rest Stations, and Other Small Buildings:** There is no rule that states that these structures must be eyesores. Rather, when routinely painted and well maintained, even these facilities can be aesthetically pleasing.

**Golf Course Accessories:** These include tee markers, wastebaskets, ball washers, benches, bunker rakes, bag racks, etc., and because all are outdoor accessories that endure the elements, all require restoration every now and again. Golf course accessories should be cleaned, repaired, refurbished, painted, or built new, when necessary. New or updated accessories are noticed by golfers.

**Soil Testing:** Although it may not be practical to obtain soil samples during the winter, it is an opportune time to review soil test results from the previous season (and past years to evaluate trends, if any). Fertility needs should be addressed, and changes, if any, can be anticipated for the upcoming season. This allows for late winter soil amendment applications that may be in order.

**Water Testing:** Winter is a good time to establish baseline numbers on water purity, as water should be at its purest at that time. By running a water test in the winter and again in midsummer, the relative ranges of water quality used to irrigate your golf course can be obtained.

**Miscellaneous:** Other projects that can be performed during the winter may include installing a brick patio outside the clubhouse, installing a deep well, repairing a leaking water fountain line, cleaning/servicing/painting/installing large fans used to circulate air on greens, refurbishing the facility's main entrance gate, and everything in between. Winter also presents a great time to develop maintenance standards and review safety and training procedures.

There's lots that can be achieved during the winter months, and a winter crew can do so much for your course over time. Continuity of staff throughout the year is extremely important in regard to developing an experienced, responsible, and efficient crew. Similarly, staff continuity throughout the winter reduces time spent training new employees from one year to the next and minimizing rookie mistakes that can be very costly.

The exact number of employees to staff through the winter depends upon specific requirements of the facility. Keep in mind that course conditioning and preparation for the golfing season really begins in the winter, so think again and carefully weigh all the options before considering crew layoffs during the winter. Come time for the member-guest, club championship, or any other significant event at your course, you'll be glad you did.

Drainage construction is a perfect winter project when play and other seasonal maintenance jobs are minimized.

## REFERENCE

[1]Nelson, M. 2004. Mountain standard time (February, 2004). USGA World Wide Web Site.

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