



Equipment left exposed to or only marginally protected from the elements will have a shorter lifespan and will experience more frequent breakdowns and higher repair costs than equipment protected indoors.

I Know We Don't Have the Money, but Can We Afford NOT to Invest in a New Maintenance Facility?

Is your maintenance facility a liability? Is it costing your golf course money? Is it interfering with care of the course? These are questions golf facilities should ask themselves.

BY DAVID A. OATIS

Much has been made of the economic downturn and the impact it has had on golf. In response, maintenance budgets have remained frozen or been reduced at most golf facilities. Capital investment in course maintenance equipment and replacement of larger, more expensive infrastructure items have been put off or ignored at many facilities. This is not surprising, because the need to reduce spending is understandable when income is down.

However, few golf facilities compute "the cost of not investing" in infrastructure items. In some cases, the cost of not investing can be considerable, though it is not immediately obvious and it is difficult to quantify. In short,

there are times when it is financially impossible or unwise to invest in infrastructure items, but before deciding to pull the plug on needed improvements, carefully consider the cost of not making them. You may find it surprising, but there are times when golf facilities simply cannot afford not to invest in infrastructure.

Even in the best economic times, it can be challenging to convince golfers to invest in infrastructure that they do not believe will directly benefit them. Irrigation systems, drainage projects, maintenance equipment (especially equipment needed for much-hated cultivation programs), and maintenance facilities quickly come to mind as examples. Historically, courses have

been very slow to invest in maintenance facilities, despite their enormous impact on nearly all golf course maintenance activities. While plenty of courses have newer or upgraded maintenance facilities, few are top notch. Regrettably, many courses are struggling with substandard facilities.

In case you are in denial and think that your facility "isn't that old," you may be surprised to learn that maintenance facilities that were state of the art 15 to 20 years ago may now be deficient in certain areas. Why? Golf course maintenance practices have changed dramatically in the last 20 years, and equipment has become increasingly specialized. Equipment inventories have expanded in response

to the increase in specialization, and maintenance facilities must adjust to accommodate larger equipment fleets. Similar changes in staffing levels also have occurred at many courses since their maintenance facilities were originally constructed or renovated. Change also may be necessary due to changes in regulations and ordinances or to account for environmental issues and concerns. Simply put, most older maintenance facilities (including those that are just 15 to 20 years old) are not equipped to handle modern equipment fleets, larger and more diverse staffs, or meet current regulations and ordinances.

Here are a few questions to help determine if your golf course maintenance facility is up to date:

- Does your maintenance facility provide a safe working environment for your employees?

- Does it provide a comfortable, efficient working environment, or is it a hardship and a challenge that must be overcome?
- Does it effectively protect your equipment assets?
- Does it increase efficiency, or does it drag your maintenance staff down and cost your course money?
- Does your maintenance facility help attract and retain quality employees, or is it a deterrent?
- Does your maintenance facility protect the environment, or is it a liability?

Reviewing the strengths and weaknesses of your maintenance facility is a very worthwhile exercise. You may find that your maintenance facility is costing you money in ways you never considered, and some fixes may be relatively inexpensive. To get started, let's first answer a few questions. For

the sake of organization, the questions are broken up into a few broad categories.

ORIGINAL PURPOSE

Many maintenance facilities began their life as something else. Since many golf courses first were farms, early maintenance facilities were typically barns. If your maintenance building was originally intended to be something else, chances are good that it is not ideally suited to its current purpose. If it was built in a different era, it may simply be too small. Such deficiencies can often be worked around but still have a detrimental impact on efficiency. The two questions to ask are:

- Was your maintenance facility originally built to be a golf course maintenance facility, or was it converted from some other use?
- Was it designed for your current staff size and equipment fleet, or was it for something a fraction of the current size?

The obvious question is, "What precisely is the purpose of a golf course maintenance facility?" A maintenance facility is not just an equipment repair or equipment storage facility, an office, or a locker room. It must allow for proper care and organization of all things related to staff, planning, and equipment necessary to conduct golf course turf management programs, projects, and activities. In the simplest possible terms, it serves as the center from which all golf course maintenance activities emanate. A weakness that adversely affects nearly all maintenance activities. For more information on the overall importance of a maintenance facility to the success of a golf operation, please see [Turf Care Centers: The Heartbeat of Golf Turf Conditioning](#).

APPEARANCE

When it comes to maintenance facilities, many course officials take an "out of sight, out of mind" approach. Maintenance facilities often are disdainfully referred to as the "barn" or "shed." Unfortunately, the name sometimes fits. It is important to recognize that



Do not confuse an inadequate facility with one that is sloppy and rundown. A facility like this will make it hard to attract and retain quality employees.



A field full of old equipment may be helpful for parts, but it takes up valuable real estate and gives the appearance of a messy operation.

the appearance of the maintenance facility has an impact on the staff. If your maintenance facility is old, dirty, disorganized, worn out, in disrepair, or unattractive, the effect it has on staff will not be positive. The questions to ask include:

- Does the appearance of your facility have a negative impact on staff morale? Clearly, this is a difficult to assess, but if the staff don't take pride in their work it may be because they are influenced by their surroundings.
- Does an unkempt appearance foster a lack of care and respect for maintenance equipment and the course? If it appears that you don't care about the cleanliness and care of the maintenance facility, why should the feelings of your employees be any different toward equipment or the golf course?
- Does your maintenance facility have an impact on your ability to attract new employees and retain quality ones? Think about it. If looking for a new job, what sort of operation would you be most attracted to? A clean, neat, professional maintenance

facility will be much more inviting to prospective employees than one that is cramped, dilapidated, dirty, and disorganized.

If the maintenance facility looks so bad that it adversely affects staff morale or is making it harder to attract and retain quality employees, then it is already costing you money. However, do not confuse a poor maintenance facility with one that is disorganized and run down. Many facilities can be improved with good organization and regular maintenance. Spring cleaning, reorganization, and some paint could have a very positive effect if the space and building(s) are adequate.

EQUIPMENT STORAGE

Golf course maintenance equipment is expensive. Many of the machines used for care and conditioning of the course are complex and have a high degree of sophistication and precision. Thus, every piece of equipment should be kept in a clean, dry environment and protected from the elements. For the sake of organization, each piece should have its own storage space,

and most equipment should be accessible without having to move other equipment. The exceptions would be less frequently used items such as aerators, topdressers, seeders, and the like.

Here is the million-dollar question regarding equipment storage: How much of your maintenance equipment is kept outside and left fully exposed to, or perhaps only marginally protected from, the elements? What constitutes "marginal" protection? Dusty, leaky buildings, lean-tos, or equipment stored in trailers or beneath tarps all constitute marginal protection. Equipment is often brought indoors wet from washing after use or from precipitation, so the storage environment should be dry and ventilated to hasten drying. In order to assess how insufficient your storage situation is, complete the following exercise:

- Carefully calculate the new replacement value of every single piece of equipment that is left outside or is only marginally protected.
- Be sure to count everything. This includes items big and small, such as

backhoes, dump trucks, mower and construction trailers, snow plows, cultivation equipment, etc. Even an old tractor that is only used to pull leaf collection equipment for a few weeks a year has value, so be sure to account for every piece of equipment, regardless of how old or how seldom it is used.

It is not uncommon for golf facilities to have several hundred thousand dollars' worth of equipment poorly protected. This results in several obvious costs. The equipment will deteriorate and break down more often. This results in higher repair costs and a shorter lifespan. Also consider the impact untimely breakdowns have on the golf schedule. Slower leaf removal in the fall slows play and aggravates golfers. Breakdown of cultivation equipment stretches out aeration, which is already a disruptive and disliked operation for everyone involved. Mowers and other equipment lose precision more quickly, and this can become noticeable as course conditions eventually decline. Operational efficiency is lost and daily jobs take longer to perform. When daily jobs take longer to perform because of unreliable equipment, other secondary jobs may not get done. This usually manifests itself in the form of less detail work on the course.

Another important question is, "How much of the equipment needs to be moved every day?" In facilities where space is limited, equipment often is packed tightly together in an effort to get as much of it indoors as possible. This creates several significant problems:

- Equipment that is parked too closely together is often subject to damage. The dreaded hydraulic oil leak on the 18th fairway may be the result of a hydraulic hose worn out from normal use, or the hose could have been damaged by another piece of equipment while moving in or out of storage. Do not let it be the latter.
- A significant amount of time and labor is wasted when equipment must be moved twice a day regardless of whether it is used. If this sounds familiar, calculate the number of labor hours required to get equipment in and out each day and multi-



It is critical to use and store fertilizers and pesticides properly. The environmental liability associated with not doing so is tremendous.



ply it by the number of days in a week/month/year. The amount of labor wasted on shuttling equipment in and out of the maintenance facility may be shocking.

- Last, but not least, keep in mind the number of cold starts that engines sustain when they have to be moved twice a day or more. Much of engine wear occurs when engines are first

started, so more cold starts translates to greater engine wear.

HAND-TOOL STORAGE

Storage of hand tools represents a unique challenge because they need to be accessed quickly and easily. Furthermore, many hand tools are awkward and heavy, and they come in myriad shapes and sizes. Improper

storage can result in expensive power hand tools, i.e., string trimmers, hedge trimmers, etc., being damaged. Staff also can be injured when improperly stored tools unexpectedly fall down on them. So, how are your hand tools stored?

- Are hand tools neatly organized so that they can be quickly located and accessed easily, or are they a jumbled, disorganized mess?
 - Is there frequently a line of staff at the start and conclusion of the workday getting hand tools out and putting them away?
 - Are hand tools organized so that you can quickly assess inventory?
- Inefficient storage of hand tools wastes time and can result in shorter equipment life and higher repair costs.

EQUIPMENT MAINTENANCE AND REPAIR

Given the huge investment in golf course equipment, careful attention must be paid to its maintenance and repair. An adequately sized, well-organized work area can save time and money. Following are a few points to consider when evaluating your equipment repair area:

- Lighting and climate control must be considered with respect to both adequacy and energy efficiency. The goal is to have a comfortable and safe working environment without wasting money.
- It is imperative that the repair area be separate from the primary traffic flow pattern. If traffic flows through the repair area, work flow will be disrupted and parts and tools can be lost or misplaced.
- Equipment maintenance and repair can be noisy, so the repair area should be located away from areas designated for staff.
- Certain maintenance tasks require specialized equipment and/or facilities. Mower grinding, painting, and woodworking are good examples.
- For efficient repair and maintenance of equipment, especially given larger equipment fleets and the complexity of modern equipment, equipment lifts are now considered a standard feature rather than a luxury. Equipment lifts require high ceilings and

plenty of space, which many older facilities do not have.

- Having repair parts accessible is critical to keeping the equipment fleet running efficiently. Thus, it is important to keep parts organized and secure so that inventory can be monitored and parts quickly accessed. This requires adequate space and storage shelving or the like.
- Saving old equipment for parts is both good and bad. A field full of old, broken-down, and partially disassembled equipment gives a messy, unprofessional image. By the same token, keeping old equipment for parts can save money. A balance must be struck.
- Equipment technicians are critically important to a smooth-running golf operation, and a substandard maintenance facility may limit the ability to attract qualified personnel.

STAFF FACILITIES

Maintenance facilities adequate for eight to 10 employees will become overcrowded with 15 staff members and very uncomfortable and inefficient with 18 to 20. Overcrowding causes a number of problems that may not be obvious to most golfers:

- Storage of personal gear is frequently a problem when space is limited. Maintenance staff members work outside in the elements, so they need a variety of jackets, sweaters, raingear, shoes, boots, etc.
- Inevitably, clothing gets wet with perspiration and/or precipitation. If it is stored without adequate ventilation, odors develop and clothing can be ruined. Without adequate facilities, staff usually resorts to spreading their wet clothing over equipment or somewhere else in the facility. This creates an unprofessional and unattractive mess.
- Some facilities issue employees uniforms and personal safety gear like ear and eye protection, gloves, respirators, boots, rain suits, etc. Overcrowding makes it very difficult to keep track of personal items and uniforms.
- Undersized lunch rooms may force staff to take breaks outdoors or in equipment storage or repair areas.

When kitchen facilities are too small, lunch and break time may cut into work time.

- Superintendents are responsible for training staff on a variety of issues, which means meeting facilities are necessary. Usually, the lunch/break room can double as a meeting room, but it must be large enough to do so. A television allows employees to keep abreast of news developments during their break time. Weather reports can be monitored as well.
- Separate, climate-controlled office and meeting space is necessary for the superintendent, assistant superintendents, and equipment technicians. A private meeting room also is needed for smaller groups.

SAFETY AND ENVIRONMENTAL ISSUES

Proper storage of fuel, pesticides, and fertilizers is critically important for practical, legal, and environmental reasons. These materials are expensive, so common sense and regulations dictate that they be kept secure. Accidental spills represent significant concerns. The long-term effects of equipment washing and pesticide mixing and loading operations also must be considered. Be sure to check local, state, and federal ordinances regarding containment and rinsate storage of these materials. Requirements vary throughout the U.S., but no golf facility can afford to be deficient when it comes to safety and environmental issues.

SOLUTIONS

Visiting maintenance facilities at other golf courses is very helpful in gauging how deficient your facility may be and for identifying possible solutions. Including course committee members, owners, or other decision makers on maintenance facility tours helps to educate and communicate the needs of your facility. Consulting with architects who specialize in designing golf course maintenance facilities can also be enlightening. Have a conversation with your insurance agent and get input regarding possible safety and liability concerns for your maintenance facility. Developing a master plan for

upgrading your facility is an excellent first step.

New construction and total replacement may be the best solution, but when this is not feasible, smaller improvements can help tremendously. Identify what can be accomplished and develop a manageable implementation plan. Here are a few things that can be done on a budget:

- Organize and clean the existing structure. A good spring cleaning and a coat of paint can do wonders.
- Clean and upgrade kitchen, bathroom, and locker-room facilities.
- Assign staff to maintain the facility so it is kept clean, neat, and organized.
- Evaluate the equipment inventory and determine if the fleet can be trimmed or whether it should be expanded.
- Consider reorganization options that add space and/or repurpose existing space. A few examples are as follows:
 - If storage is an issue, it may be feasible to add a cold-storage facility. This can usually be accomplished with reasonable expense, and it may free up other space and

improve operational efficiency significantly.

- If the repair area is inadequate, adding space by constructing an additional building or adding to the existing building is worth consideration.
- If office space is lacking, consider adding a separate facility for offices. An office trailer can provide an economical solution.
- If staff facilities are limited, a separate building for all staff activities may be the solution. Be sure to include a mud or drying room so that staff can hang wet clothing up to dry.
- Purchasing extra microwave ovens and/or toaster ovens and larger coffee makers are simple solutions to help staff enjoy their coffee and lunch breaks.

CONCLUSION

Your golf course may not currently have the funds available to build a new maintenance facility. However, understanding the deficiencies of your facility and how they impact maintenance activities, budget, and care of the

course is the first step toward improving the situation. Maintenance equipment, staff, and their activities and programs represent a huge expense and are vitally important to the success of a golf facility. Improving the protection of equipment and material assets combined with more efficient maintenance operations makes a big impact on the bottom line. They can also have a favorable impact on the golfer experience.

There are many other areas of turf maintenance facilities worthy of examination. This article cannot address them all. As such, if your facility is weak in the areas discussed, then it is a good bet that there are other areas that need upgrading and modernization as well. Given the impact maintenance facilities have on the efficiency of all course-care activities, improvements here can elevate course conditions, enhance golfer satisfaction, and even save money in ways you may never realize.

[DAVID OATIS](#) is director of the USGA Green Section's Northeast Region.



How does your equipment wash station stack up? Does it safeguard groundwater or is it a liability to the environment?