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Flash floods and high dew points.
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Dryspells, shallow roots and stressed *Poa*.
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To: Members/MGCSA
Anoka County Parks and Recreation Department has an opening for a part-time Service Technician (approximately 10 months/year) who will assist in golf course maintenance and equipment operation and repair of the Chomonix Golf Course, located in Lino Lakes, Minn.

Examples of Essential Duties (illustrative only):
- Establishes and coordinates a preventive maintenance program for all golf course equipment;
- Maintains equipment maintenance records and inventory control;
- Performs reel sharpening and repair;
- Assists in irrigation repair and maintenance;
- Assists with maintenance and upkeep of course facilities as assigned;
- Maintains all types of golf course equipment such as mowers and tractors;
- Keeps current of the latest equipment and techniques in golf course maintenance;
- Performs related duties as directed.

Requirements:
- High school education (GED), post secondary education in a related area; one to two years of job-related experiences; or equivalent combination of education and experience;
- Must possess a valid Class C drivers license;
- Must possess a strong mechanical ability;
- Ability to develop and implement a preventive maintenance program for all golf course equipment;
- Ability to use and instruct others in the use of maintenance equipment;
- Ability to operate and maintain all golf course equipment;
- Ability to engage in strenuous physical activities and work in temperature extremes;
- Skill in oral and written communication.

Salary (Grade 9): Hiring Range: $22,400 to $28,000 annualized depending upon background. Excellent benefits.

An Anoka County Application for Employment must be submitted to the Anoka County Human Resources Department (612/323-5525), by 4:30 p.m. on Wednesday, December 18, 1998 or postmarked by the closing date. Resumes, e-mail, or faxed applications will not be accepted.

Anoka County complies with the Americans With Disabilities Act. If you need an accommodation because of a disability, such as an interpreter and/or printed material in an alternate format (i.e., braille or large print), please contact the Human Resources Department 612/323-5525 (TDD - for hearing impaired 612/323-5544.)
Research Break on the Purdue Golf Course

Working in Purdue University’s newest science laboratory is a day enjoying the golf course.

Usually seen as sources of environmental problems, the chemicals and fertilizers used to keep golf greens glowing are thought to pollute nearby waterways and enrich them too much with nutrients that imperil fish and other creatures. Not so, Purdue researchers say.

The newly renovated Purdue Kampen Golf Course that opened June 27 is their unique opportunity to study environmental problems of golf courses in urban America.

“There are a lot of university golf courses, but what makes this course unique is the amount of interaction between the golf course and researchers and students,” says Clark Throssell, professor of agronomy.

There are research projects taking place on the Purdue Kampen course as golfers play through. One study of the way golf courses filter water aims to show that they could improve the quality of surface water by building the golf course so that it acts as a filter for pollution.

Research in the 1990s at several institutions has shown that golf courses are environmentally neutral. Many of them use herbicides and chemical fertilizers, but the studies have shown that these chemicals do not run off the course and into the local surface water.

“Research has shown over and over how well golf courses can clean up the chemicals that are used on them,” says Zac Richer, assistant professor of agronomy. “But nobody has looked at how well golf courses can clean up the water that is coming across them. That’s what we’re trying to do.”

The Purdue Kampen course borders a four-lane highway, and across the highway is a mix of businesses and residences, including a gas station and a motel. As rain falls, the runoff moves from the neighborhood through the ground under the golf course.

“All of that drains right across the golf course,” Reicher says. “Before the golf course was built, everything went directly into the bog. We assume that antifreeze, petroleum products, road salt and household chemicals were all going into the bog.”

The water from the neighborhood now is filtered by the golf course as it flows toward the bog; many of the pollutants break down into harmless components. The water that passes through the course is drained into 15 acres of man-made wetlands that border the Celery Bog. From there, the water is used to irrigate the course, giving it another chance to be filtered by the turf.

The researchers are setting up seven testing sites. In the next three to four years they will have a better idea of how well a golf course can neutralize urban runoff.

— USGA Green Section

On The Road With the USGA

By R.A. (Bob) Brame
Director, North Central Region

As the summer flies by, turf loss increases. While most turf loss observed in August-September has occurred on intermediate and secondary roughs, a few golf courses have lost some fairway grass. It’s likely a continuation of the weakening started with the wet and hot weather in late June. Weak and shallow roots don’t bode well for turf dependability in late summer.

I have seen more Pythium activity on fairways over the last two weeks of August than the entire balance of the season put together. Crabgrass and nutsedge encroachment also has been widespread. Nutsedge encroachment has set a new high for a number of courses. The stuff is everywhere. The fact that it is often called swampgrass tells you something about the weather and/or irrigation practices. Manage® continues to offer good control.

The wet June weather has allowed some interesting observations with regard to the use of wetting agents. Most wetting agents require early season pre-treatment to achieve optimum results during the summer. Generally speaking, wetting agents will reduce surface tension, and thus make it easier to get water into the profile. Does this mean May applications of wetting agents followed by very wet weather will result in a more wet root zone or moisture being held longer in the root zone? There are a number of superintendents that would answer yes. While wetting agents do have value, they can combine with weather conditions to make the root zone wetter than ideal. Should the irrigation system coverage and/or thatch accumulation be the cause of isolated dry spots, correct the cause of the problem rather than relying upon ongoing wetting agent usage.

‘Tis the season, the last few days have revealed some grub damage. Scout carefully for the possible need to spot treat. Late August did reveal some gray leaf spot damage on perennial ryegrass. In fact, Dr. Vincelli reports finding gray leaf spot damage back in late June. The fact that perennial ryegrass is susceptible to gray leaf spot, Pythium, and brown patch points to the potential value of going with a bluegrass and turf-type tall fescue blend in the roughs. Where perennial ryegrass is used on fairways and/or the step cut of rough, maintain fungicide protection into September. As a side note, regardless of the grass type, put the step cut of rough on the same maintenance program as fairways.

Fall is the time to build for next season. It is the time to initiate more aggressive fertilization, aerification and seeding to strengthen the turf for next year. Miss the mark in the fall and you’ll be behind all year. Build well.
The extensive *Poa annua* losses that occurred following the heat, high humidity and heavy rainfall in mid-August continue to plague golf courses across the region. Fairways have been especially hard hit, and the recovery process was hampered by extended periods of hot, dry weather well into early September. More often than not, the injury was a result of drought stress and the inability to keep weak, shallow-rooted turf alive during heavy play, rather than loss from disease activity.

Memorial Day was a week earlier than usual and Labor Day was a week later this year. Add these two weeks to the prime golfing season and three more weeks of play due to unusually warm spring weather, and the result is a considerable amount of additional wear and compaction to just about every golf course visited this fall.

The importance of aggressive core cultivation to greens, tees and fairways this fall cannot be overemphasized. It also would be a good idea to overseed weak, thin areas of turf. Every year a few more superintendents question the benefits of core cultivation to greens and fairways because of the pressure from golfers to maintain perfect playing surfaces until they (the golfers) decide when the season is over — usually with about 5 or 6 shopping days left before Christmas. The decision whether to core the greens and fairways should be a no-brainer this year.

Be sure to map the areas where significant crabgrass encroachment occurred this summer if you plan on making an application of pre-emergence herbicide during late fall or next spring. After the first few hard frosts it will be difficult to determine if the thin or bare areas are (1) simple wear and compaction, (2) sites where knotweed died, (3) sites where *Poa annua* died or (4) sites where crabgrass died. Controlling clover and other perennial weeds this fall would be a good idea considering the amount of weed encroachment observed on courses throughout the summer.

**Ten Guidelines For Good Mental Health**

1. **Face Reality.** In other words, learn to accept the facts of life and make the best of them. Do not be afraid to compromise when necessary.

2. **Take Responsibility.** Don’t blame others for your problems. Accept help when it is needed, but also make a major effort to solve your own problems.

3. **Be interested in other people.** Do things with and for other people. Make the effort to acquire new friends. Retain your same-age friends and work to keep in touch with younger and older people.

4. **Have strong and varied interests.** To be a well-adjusted person, try to do many kinds of activities and enjoy sharing these activities with other people.

5. **Be interested in new things as well as the old.** Most people agree that the world is changing faster than we can comprehend, but we still try to keep up. Do not be afraid of the future and accept changing times.

6. **Look forward to the future.** Live in the present and the future instead of the past. Make plans for the future; set some goals for yourself.

7. **Watch your health.** Good health is both important and worth working for. Do not dwell on your aches and pains; work to relieve them and safeguard your health.

8. **Maintain a neat appearance.** Take pride in your appearance. Have a strong interest in maintaining the place where you live.

9. **Know how to relax.** For good mental health learn how to relax and not take life too seriously.

10. **Adapt to changing circumstances.** One of your best assets is an ability to change your ideas and way of doing things when the situation requires it.
MEMBERSHIP REPORT
NEW MEMBERS: OCTOBER 5, 1998

<table>
<thead>
<tr>
<th>Name</th>
<th>Address</th>
<th>Phone</th>
<th>Class</th>
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<tbody>
<tr>
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<tr>
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<td>Tim Mihalko</td>
<td>MTT Distributing Co, Chanhassen, MN 55317</td>
<td>(612) 470-5861</td>
<td>Affiliate</td>
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Outsourcing May Improve Your Bottom Line

Just like the hired guns of the Old West, golf course superintendents can also take advantage of hired help to complete atypical tasks on the golf course.

**Details:** Employing an outside contractor can streamline your operation by:

- **Reducing labor and equipment costs.** Proficient contractors allow golf course personnel to spend their scheduled work hours accomplishing duties — not catching up by working overtime.
- **Providing substitutes for temporary laborers.** In some regions, contractors can help complete tasks in the early spring or late fall. This allows superintendents to forego hiring seasonal employees until early summer and/or rely on them less during the fall when they need to return to other activities.
- **Decreasing the potential for personal injuries.** Experienced contractors can complete certain non-routine tasks with a lower potential for injury because their workers are familiar with the machinery and procedures.
- **Lessening employee training time.** The number of training hours to acquaint golf course personnel with non-routine tasks can be lessened.

**Note:** While a contractor may be a big benefit to your facility, there are three reasons for not becoming overly dependent on contract services.

**Falling behind schedule:** An over-booked contractor can mean a missed agronomic window of opportunity on certain maintenance problems.

**Preventing key personnel from honing their skills.** Eliminating too many learning opportunities for assistant superintendents and college interns can make it more difficult to attract highly motivated employees who seek challenging positions. **Careful:** This may affect daily course conditioning as well.

**Ensuring the quality of work.** The superintendent is ultimately responsible for contractors' actions. Maybe your superintendent should complete the job in-house rather than taking the risk of an unskilled contractor dropping the “bomb” in his or her lap.

**Advice:** Always check your contractor's qualifications and references. Never allow contractors to work without close supervision. **Warning:** Don't assume that employing a knowledgeable, experienced superintendent would no longer be necessary. No matter what the circumstances, the superintendent should always have decision-making authority over contractors. — GCSAA Leader Board

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**Superintendents' Compensation On the Rise**

Compensation and benefits are increasing for golf course superintendents.

**Statistics:** In 1998, the average base salary for all golf course superintendents rose to $53,205 from $49,269 in 1995. Half of all superintendents earn more than $50,000 annually. The median base salary for a certified superintendent at a daily fee facility is $52,000, and at a private facility it is $69,743 (not inclusive of benefit compensation).

**Recent Findings:** The median income of a PGA head professional at a public golf course is $44,000, and at a private country club it is $75,000 (inclusive of benefit compensation).

**Typical Benefits:** Fifty-seven percent of superintendents receive a bonus, up from 51 percent in 1995. Ninety percent receive paid vacation, which averages 17 days plus an additional six paid personal leave days, 10 paid sick leave days and eight paid holidays.


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Top 10 Common Chemical Infractions to Avoid

The golf course superintendent manages and maintains the most valuable asset in the game of golf — the golf course

Remember: The superintendent’s role as an environmental steward requires proper knowledge of and training in the chemicals used on the golf course. He or she is crucial to the success of the facility and — more importantly — the health of the environment.

Listed below are 10 common infractions of pesticide laws found by inspectors in one EPA region.

Invalid Business Or Applicator License
Your superintendent is responsible for keeping it renewed and accessible.

Label Violation
The labels for many pesticides have been changed over the past four to five years as a result of the EPA's re-registration program. Consequently, many uses for products, such as diazinon and malathion, have been eliminated. Yet, some applicators may continue to buy and use products on plants (sites) that are no longer on the label.

Improper Mixing
Problems can come from prohibited tank mixes that cause interactions. There can be plant reactions from combinations of certain classes of pesticides that are applied days — or even weeks — apart.

Failure to Survey the Site Before Applying a Pesticide
For instance, overlooking or forgetting area wetlands.

Poor Preparation for Spills Or Other Emergencies
How many application rigs carry some soap, water, disposable towels and an eyewash kit? Worker protection standards now are very specific about providing decontamination materials. Applicators should be familiar with how to handle spills of pesticides.

Drift Complaints
Knowledge of product characteristics and attention to environmental conditions such as wind speeds or inversions will reduce the potential for problems. Be aware of sensitive nearby crops or plants.

Incomplete or Missing Records
Private and commercial applicators must keep appropriate record of pesticide applications.

Spray Tank Not Properly Cleaned; Applicator Not Familiar with Tank’s History
This can also lead to plant damage or illegal residues. When purchasing used spray equipment, determine the types of products that have been applied by the previous owner.

Sales Representative Makes Erroneous Product Safety Claims
Lack of familiarity with the label may be a major reason for unrealistic claims. Look critically for cautions or warnings, such as sensitivity or effects of specific weather conditions on applications or product efficacy.

Failure to Use Personal Protective Equipment
Specifications may even require specific types of gloves or spray units. Use quality equipment and keep it clean and functional. Replace it as needed.

* * *

Warning: The penalty for using a pesticide in a manner inconsistent with its labeling can include fines up to $1,000 per offense for private applicators — owners/operators of golf courses. Check your local and state laws and regulations.

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Photo courtesy of Burian Photography®
I Think We’re Done

Continued from last month, “Are we done yet?” Hopefully by now the rains have ceased and the winds have subsided and all our fall chemical applications have been applied. For me, and I know the boys around me, wonder if the PCNB we’ve applied is just where we put it and not washed away from all the heavy rains we’ve had in the last couple weeks. From a past experience a couple years ago, I had sprayed all my fall chemicals and we had a couple gully washer rain storms. Then I wondered if I might think of reapplying, but didn’t. Once spring came everything was fine. I’m hoping for the same results this upcoming year. As I write this, I felt a little at ease today, October 20. I finished my PCNB applications. By the time you are reading this I’ll have put my other chemicals down. Who knows, there might be snow on the ground by now. Ice on the lakes? Hmmm, could be.

I look forward to seeing all of you at the upcoming MTGF Conference & Trade Show December 9th, 10th and 11th at the Minneapolis Convention Center. It’s always fun to get together with friends and colleagues and talk about experiences we’ve had on each other’s courses. The educational aspects are great, but getting together with friends that you only see a couple times a year plays a big part for me. In just casual conversations there is so much we can learn from each other to better our profession and ourselves. As mentioned in last month’s edition of Hole Notes, I hope you have made your reservations at a hotel in Minneapolis. There are a limited number of rooms available, so if you haven’t yet, make a reservation today!

R & R

Thinking ahead, rest and relaxation!! In a couple weeks it’ll be Thanksgiving. A nice roast turkey, mashed potatoes and stuffing. Mmmmmmm!! Deer hunting....I’m looking forward to it. Or by now already have. The peace and tranquility of sitting in a stand, watching the squirrels, the birds and waiting for that nice buck to round the corner. The feeling that comes with seeing the animal and feeling your heart pounding in your throat as you get an adrenaline rush, that’s what it’s about. It isn’t just the kill I’m after, it’s watching the sun come up on a cold crisp morning. Just getting in touch with oneself, kickin’ back with the guys. Telling stories and solving all the world’s problems in a single night! I hope all who have hunted this year, be it waterfowl, deer or whatever other critters you were after, had a safe hunt. With that, I’ll close. Again I look forward to getting together with you in December. See ya soon!

— Steve Shumansky
Editor