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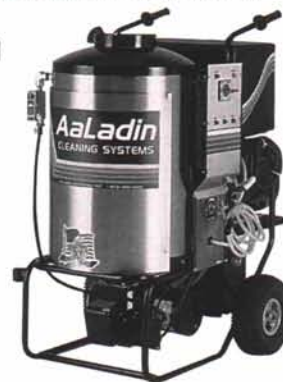
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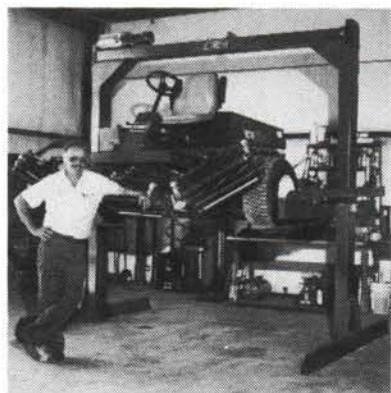


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## Heat Stress

(continued from page 16)

Keep in mind that, temperature, humidity, air movement, radiant temperature of surroundings, amount and type of clothing, and physical activity, are all factors that can lead to heat stress.

### PREVENTING HEAT STRESS

There are several ways in which heat-related illnesses can be prevented. Acclimatization, conditioning, hydration, air movement, and proper clothing can aid in the prevention of heat stress. Acclimatization is the adjustment to working in the heat and is essential if work is to be done in hot environments. In heat-related environments, acclimatized people will have lower heart rates, lower body temperatures, and higher sweat rates that consist of a more dilute sweat (with less salt) than persons who are not acclimatized.

New employees and employees who have been away from work for a few days should be given adequate time to acclimate to the heat. In *Fundamentals of Industrial Hygiene*, published by the National Safety Council, "both work and heat stress are required to initiate the body changes that result in acclimation. Working in the heat for about two hours per day for one to two weeks will result in complete acclimatization to a work/stress combination. Working more than two hours per day in the heat will not speed acclimatization, nor hinder it."

Employees in good physical condition have a lower heart rate and body temperature and a more efficient sweating mechanism. Obese and unfit employees are not able to tolerate the heat as well as lean people. Extremely obese individuals are six times

more likely to suffer heat stroke than thin people.

Evaporation of sweat from skin surfaces helps provide cooling. Fans may cool a person in many situations, but fans do not cool a person when the air temperature is above 90°F and the humidity is greater than 35 percent. In fact, fans have been associated with increased heat stress when the ambient temperature exceeds approximately 100°F. Air movement when the air temperature is greater than the body temperature may increase the likelihood of heat stress.

Hydration is an essential factor in working safely in elevated temperatures. To fight dehydration, adequate fluids should be consumed before, during and after the workday. Thirst is not

(continued on page 24)

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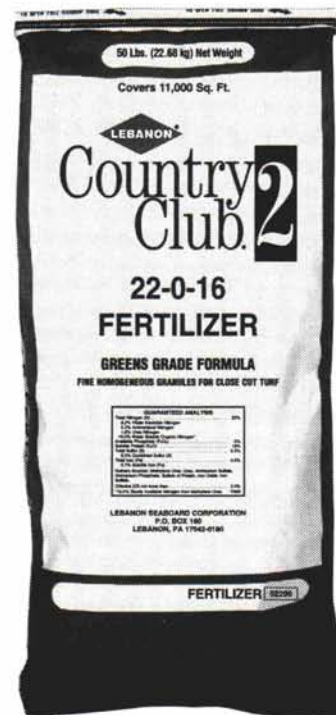
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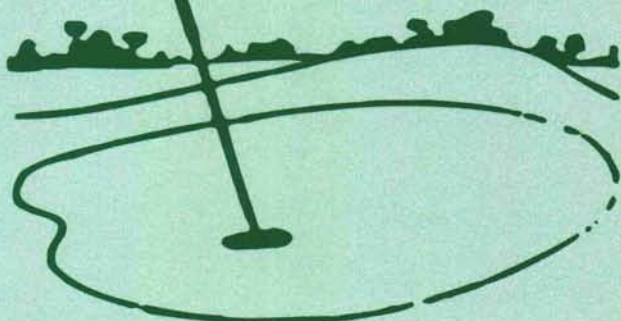
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## Heat Stress

(continued from page 22)

always an early enough warning of dehydration, and employees should not be afraid to drink too much water because any excess will be eliminated in the urine. Workers should be encouraged to drink at set intervals instead of at the sign of thirst. All drinks should be non-alcoholic and non-caffeinated because both alcohol and caffeine increase urine output, which leads to dehydration.

Proper clothing is the last element in fighting heat stress. The body's ability to cool itself through sweat evaporation can be diminished greatly by improper clothing. Light colored clothing should be worn because it reflects the sun's radiant heat, whereas dark colors absorb it. Keeping clothing as simple as possible without interfering with job safety, will help keep the body cool. Also, changing from wet to dry clothing as needed helps to reduce heat stress exposure.

When weather conditions warrant, increased attention must be paid to the prevention of heat illnesses, and steps should be taken to lower the effects of heat and humidity. Learning to identify and properly train your staff on heat stresses can possibly mean the difference between life and death. ■

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# Ozone Action Days in Golf Course Management

*Robert McCallum  
Orchard Hills C.C.*

**I** was delighted to receive a fax from the EPA in June of 1995 urging me to join Ozone Action Days (OAD). OAD is an alliance of participating Chicago-area businesses joined together in an effort to establish methods of eliminating, or at least minimizing, activities thought to damage the ozone (a.k.a. pure, fresh air). A typical OAD is a hazy day with 85°F. plus daytime high temperature, high humidity, and poor air circulation (0-8 mph). An OAD has a good potential for poor air quality aggravated by activities such as emissions from diesel, gas, and two-cycle engines; gaseous emissions while fueling equipment; emissions when using an oxygen and acetylene torch; industrial emissions; etc. The ozone on an OAD is especially influenced by these activities between the hours of 10 a.m. and 6 p.m.

All participants in OADs receive a fax bulletin alerting their businesses the day prior to an OAD. The EPA sends all participants a list of ideas and basic examples to follow so that a list of activities can be formed by each individual manager to fit his particular business and to be put into effect on OADs. The following is a list of activities we put into effect on OADs:

1. The hours were from 6:00 a.m. - 3:30 p.m. and changed to 3:00 a.m. - 12:30 p.m.
2. Promoted car pooling.
3. Fueled equipment before 8 a.m.
4. Performed almost all jobs requiring diesel, unleaded, or two-cycle fuel prior to 9 or 10 a.m.
5. Often performed jobs after 9 a.m. or 10 a.m. NOT requiring the use of diesel, unleaded, or two-cycle engines. Some examples are: pick up branches and litter; hand rake edges of traps; weed traps and flower beds by hand; fix high and low plugs on greens; fix ball marks on greens; eradicate chickweed on greens via physical removal; trim with a knife around sprinkler heads, yardage markers and CDGA markers; service ball washers; collect refuse; seed and soil divots; service equipment without running engines, etc.
6. Used electric carts for general transportation of the maintenance staff.
7. Postponed lunch break until 11 a.m.
8. Avoided rush hour traffic.

The seven of eight employees who voluntarily participated in OADs were rewarded with an extended (45-minute) lunch break. The participants were given a free lunch and paid during lunch break. The preceding benefits were served up as an incentive to participate in OADs. The employees commented that on OADs, they preferred to be working early because the temperatures were lower or cooler. The staff members enjoyed the freedom of working on the greens well in advance of play. The crew was able to finish repairing all ball marks, pushing down all plugs, cutting most of the cups, servicing all ball washers, collecting all refuse by the tees and parking lot, moving all tee markers, raking some traps, and mowing most of the greens, tees, and fairways without feeling pressure from the golfers.

We will continue to participate in OADs. We will continue to treat every work day in June, July, and August like an OAD so that it becomes a seasonal routine for us.

For additional information on Ozone Action Days, you may contact Brian Urbaszewski at the Partners for Clean Air Steering Committee. Phone 312-454-0400, Ext. 409, or fax 312-454-0411. ■





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*-Daniel Dinelli, CGCS - Superintendent  
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### A UST Undertaking

(continued from page 20)

ground water into so, if necessary, the water could be disposed of properly.

All of the contractors had been hired, the equipment was on site . . . let the digging begin. As we got into the project, we found that the excess ground water was gone, and disposal of water was going to be unnecessary. The amount of soil that needed to be removed also was less than expected, which made all of us very happy; just a one-day job, not any longer. When Miller felt that all of the contamination had been removed, soil samples were taken and sent to a lab for analysis. When the results came back, we found that another one or two truckloads had to be removed before the site would be clean. The holes were filled with large stone and road gravel. Could the end be in sight?

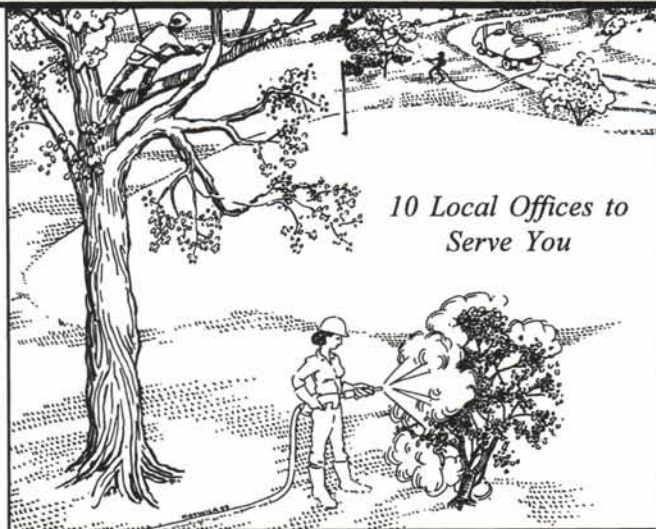
One final step remained, the filing for reimbursement from the state of Illinois. Everyone who finds it necessary to clean up a site such as ours is entitled to ask for reimbursement funds from the state of Illinois. These applications have been filed, and now we must wait and see if anything is received. It could be anywhere from six to eighteen months before Old Elm gets any money back, if they get any at all.

If you have USTs that need attention, I have a couple of suggestions. Hire a good contractor (one who cares about the job they do), expect the worst when the fire marshal comes to inspect, and look at hiring a consultant from the start. It could save you money in the long run. ■



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# the Bull Sheet

## DATES TO REMEMBER

July 7 — MAGCS monthly meeting at Orchard Valley G.C.

August 4 — John Deere Team Championship at LaGrange C.C.

August 14 — MAGCS monthly meeting at Bartlett Hills G.C.

August 20 — University of Illinois Field Day

August 24 — MAGCS family outing and Kane County Cougars baseball.

September 22 — MAGCS monthly meeting at Ruffled Feathers G.C.

September 29 — ITF Northern Golf Day at Glen View Club and Evanston G.C.

A couple of the clubs responded to the request of who is spikeless and what they did to get there. Here are some comments:

Bill Kennedy reports that Cress Creek C.C. is entering its second year as a non-metal course. Everyone is happy.

Henry Michna at Winnetka G.C. states that non-metal spikes are strongly encouraged. Season pass holders (members, as they call themselves) were given a set of the new soft spikes in the spring and asked to participate. Daily fee golfers receive a \$3 discount (another way we look at it, is the metal monsters pay a \$3

surcharge) if they wear non-metal spikes. Participation by daily fee players is better than 40%! Participation by the pass holders is undetermined but thought to be even better. If someone comes in and buys a set of soft spikes before playing (to be changed later on their shoes), they receive the \$3 discount anyway. The clubhouse manager and golf pro lead the "PR" movement; all Henry has to do is verbally be supportive. He predicts by 1999 the only people with "metal mashers" will be the touring pros.

John Gurke of Aurora C.C., reports that they had a "Spikeless Weekend" in August 1995. Soft spikes were provided and changed over for free. The overwhelming response led to an annual meeting vote to go spikeless in February 1996, which was passed. They have been spikeless ever since.

Don Behning, the head mechanic at Itasca C.C., is retiring at the end of the 1997 golf season. They are looking for an experienced mechanic to fill this position. Please send a resume to the attention of Scott Speiden, Itasca C.C., 400 E. Orchard St., Itasca, IL 60143, or fax to 630-773-8676.

Gary Schweber at Four Winds G.C. had an accident in early May that broke a bone in his thumb when he was making repairs to the irrigation system. Get well soon, Gary.

Dave Arden reported a correction to one of the previous notes

in that Jami Lynn Arden was the second girl born in the Arden family in many years. Shawna Marie Arden, daughter of Gerald Arden, was the first. Sorry, Shawna Marie!

For Sale: Two, 1994 Jac 422s greensmowers, \$2,000 each. Very good condition. A 1984 Cushman top dresser, like new, \$1,000 or best offer. Toro blower, fits 220D only, good shape, \$850. Call Bob or Merl at Balmoral Woods C.C., 708-672-4390.

The application deadline is December 31, 1997, for the fall 1998 semester for the Golf Course Turfgrass Management Program at Penn State. Write to: Golf Course Turfgrass Management Program, Pennsylvania State University, University Park, PA 16802-3504.

From the Educational Committee: You may want to have your equipment technician check into your new engine needs as soon as possible. Various distributors are claiming many industry standard engines will no longer be produced as of August 1, 1997. There are new regulations that no doubt originated in California regarding air pollution. This will affect several Kohler, Briggs and Stratton, and Tecumseh engines.

Peter Leuzinger has participated in the first "Birdwatching Ryder Cup" event which took place May 21, 1997. Competition details and rules:

The Birdwatching Ryder Cup will take place on 12 American and 12 European golf courses from midnight to midnight on Wednesday, May 21, 1997. A single observer will be assigned to each selected golf course,

(continued on page 32)