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<th>Name</th>
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<tr>
<td>David VonSchmittou</td>
<td>Class A</td>
<td>GCSAA Three Rivers Park District - Baker National GC, Medina</td>
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<tr>
<td>David Carroll</td>
<td>Class C</td>
<td>The Links at Northfork, Ramsey</td>
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<td>Ryan Inglis</td>
<td>Class C</td>
<td>GCSAA Mississippi National Golf Links</td>
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<td>Troy D. Lang</td>
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<td>GCSAA Minnesota Valley Country Club, Bloomington</td>
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<td>Jeffrey J. Meyer</td>
<td>Class C</td>
<td>GCSAA (pending) Koronis Hills GC, Paynesville</td>
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<td>Cris Risberg</td>
<td>Class C</td>
<td>Southbrook GC, Annandale</td>
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<td>Daniel Mickelson</td>
<td>Class D</td>
<td>Oak Ridge Country Club, Hopkins</td>
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<tr>
<td>Jeramie Gossman</td>
<td>Student</td>
<td>Town &amp; Country Club, St. Paul</td>
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<tr>
<td>Jeffrey K. Hable</td>
<td>Student</td>
<td>Bunker Hills Golf Course, Coon Rapids</td>
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<tr>
<td>Randy DeVries</td>
<td>Affiliate</td>
<td>Creekside Soils, Hutchinson</td>
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<tr>
<td>Greg Giza</td>
<td>Affiliate</td>
<td>EAC Solutions, Northfield</td>
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<td>Teresa Krebs</td>
<td>Affiliate</td>
<td>Custom Manufacturing Inc.</td>
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<tr>
<td>Ted Phillips</td>
<td>Affiliate</td>
<td>RAK Industries, Wyoming, Minn.</td>
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<tr>
<td>Dan Swenson</td>
<td>Affiliate</td>
<td>S&amp;S Tree and Horticulture Specialists, Inc.</td>
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<tr>
<td>Rick Deziel, Jr.</td>
<td>Facility</td>
<td>Shamrock GC, Hamel</td>
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**RECLASSIFICATIONS**

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<tr>
<td>Cris Risberg</td>
<td>Class C</td>
<td>GCSAA Southbrook GC, Annandale</td>
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<tr>
<td>Richard Grundstrom</td>
<td>Class A to AA - GCSAA</td>
<td>Indian Hills GC, Stillwater</td>
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<tr>
<td>Steven Hall</td>
<td>Class B</td>
<td>GCSAA Hillcrest Golf &amp; CC, Altoona, Wis.</td>
</tr>
<tr>
<td>Matt McKinnon</td>
<td>Class B</td>
<td>GCSAA The Legacy Courses at Cragun's, Brainerd</td>
</tr>
<tr>
<td>Donald A. Dare</td>
<td>Class C</td>
<td>GCSAA Baker National GC, Medina</td>
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- Submitted by Mike Nelson
  MGCSA Membership Chairman

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Hello to all! What a wonderful summer it has been so far. I hope everyone is having a great year so far, and the economy isn't affecting your course or departments.

Your Board of Directors met on Tuesday, June 17 at the Boulder Point Golf Course. I wasn't able to be in attendance, however our very capable and talented executive director filled in with excellent minutes allowing me to write this informative and insightful article.

In Communications the MGCSA is looking at reserving a block of rooms for the GCSAA annual turf conference in San Diego next year. In conjunction with that event the Industrial Relations committee is looking at either a beach party or cruise for our annual get together.

For those of you that have yet to take the Power Limited Technician test. Good Luck! I took the test last week and have to be honest that I wasn't as diligent about studying as I should have been. I did pass with a 92, but that is only because I have always been good at taking tests. When I went through the memory part of the test the honest truth is I was positive about eight answers. So I had to draw on the help of some common sense and the processes of elimination to be successful. None the less I have now passed and with my $30 license fee will join the legions of Power Limited Technicians that have invaded the turf scene.

Scott Turtinen reporting on business office activities stated that over 100 superintendents and 22 affiliates have not paid their 2003 dues. The roster is going to press and they will not be included in the first run. As a reminder the roster this year will be a 3-ring binder that can have updated pages added more easily and reduce the cost in subsequent years. Scott also reported that the 2002-03 tax information has been sent to the accountants.

Human Resources reported there is some concern that several superintendents out east have been losing their jobs over trivial matters. The concern is that this could creep to Minnesota. There was some discussion about communication between the Superintendent and his or her Board of Directors. While I wasn't privy to the conversation, my personal opinion is that you make sure you keep the lines of communication open and make your people feel like they can talk with you.

The MTGF reported that Field days at the U of M are scheduled for July 24th. Dr. Horgan has a number of projects going on. Phosphorus certification will take place at the field days.

The MTGF has decided to donate up to $15,000 for the Turf Pathology position for 2 years. They are also donating $5,000 to Brad Pederson and his landscape program as well as $2500 to the Society of Arboriculture.

Finally the Research committee reported that University of Minnesota endowment of $25,000 is now due. The Board approved the payment. Also under the research committee was the Troe Center Hole-in One promotion. This has been postponed and the committee will readdress the program this winter to have time to promote the concept.
Every once in a while something comes along to drive performance to the next level.

STAY TUNED.
A NEW STANDARD IN DOLLAR SPOT CONTROL.

We don't make the turf. We make it better.
But it's not just anthracnose that's thriving, threatening to take over the world like some mutated life form in a bad sci-fi movie. "Dollar spot," one of the first turf diseases ever identified in the U.S., also back in the 1920s, has made a dramatic comeback. The disease, which appears as sunken brown spots, thrives on close-cut turf, Clarke says, like the putting surfaces at many Met Area clubs. Thankfully, supers can use fungicides to control it.

Raisch's story has a happy ending, thanks both to his own communication skills and to an understanding Ridgewood membership. Together, they weighed several strategies to combat the problem, some radical (regrassing and reconstruction of the greens), others less dramatic. In the end, Ridgewood razed some of its oaks to get more light and air onto the greens, and to get off what Raisch calls "the stimpmeter roller-coaster," i.e., 11 on the weekends, 10 during the week, 13 during member-guests. The club's Board of Directors mandated that for the upcoming 2002 season, greens would not roll faster than 9.5 throughout the week "regardless of what was being contested or who was playing."

The changes made all the difference. "We did see anthracnose develop on a few greens in late June, but it never took hold," Raisch writes. "...Without question the overall membership enjoyed the change, especially since the ball still rolled true."

Anthracnose is an opportunistic bully. It attacks turf already weakened by stress, one obvious source of which is the hot, dry weather our area has endured the past few years. The drought, which began in 1998, reached catastrophic levels last year. The six months ending with February 2002 saw the lowest rainfall on record in northern New Jersey for that period and the summer that followed was the hottest since records first were kept. For superintendents, it was a massive double-punch.

"The metropolitan area typically experiences about 15 to 20 days when the temperature reaches 90," says Dr. Frank Rossi, a turfgrass scientist at Cornell University. "This past year there were about 50. That's like trying to grow grass in Raleigh, North Carolina. And of course in Raleigh they... (Continued on Page 25)
Defining Problems and Solutions of Wash Water Recovery for Golf Courses

By Roger K. Tychsen

Fresh water is not as plentiful as you'd think today in the United States, continuous depletion of our water resources could cause us to be facing a critical water shortage in the near future, according to National Geographic Magazine. In one of their recent articles, we learned some interesting statistics which we thought were worth passing along to you to help you better understand the size and scope of the problem.

It is a fact that the earth has virtually the same amount of fresh water today that it did when dinosaurs roamed the planet five hundred million years ago. Ninety-seven percent of the Earth's water supply is in the form of salt water. Only 3% is fresh, and two-thirds of that is ice. That means there is only 1% remaining as fresh water for our use and half of that is locked up in Lake Baikal in Russia. The big problem is simply that there are too many people, and the fact is that we flagrantly abuse one of our most precious and limited resources.

In California, for example, 78% of the available water supply goes to agriculture and 22% goes to urban uses. The United States withdraws 339 billion gallons of ground and surface water a day. An average of four trillion gallons of water falls on the US daily in the form of precipitation, but much of that disappears in evaporation and runoff. At the same time our rivers and aquifers are being dangerously fouled and depleted.

"Because it is such a limited resource, it becomes all of our responsibilities to end or limit its' abuse. People's attitudes, habits and perceptions of water must change. Blatant misuse, waste and ignorance of water problems need to be vocalized, and awareness of the challenges which lie ahead need to be brought to public attention"...and we agree wholeheartedly.

Storm Water Regulation Impact

The Federal Clean Water Act has been slow to be implemented on a proportionate basis state by state, but it has had an impact in many areas already especially in the business of Power Washing. Businesses which work outside and have waste water which drains onto the ground or into the storm sewer have been the first to be affected including: painters, pool repair, construction workers, paving contractors, saw cut operators, carpet cleaners, golf courses, pesticide applicators and auto repair operations.

For years bare dirt and storm drains on the street have been used as the personal sinks of many owners and operators of power wash equipment who have presumed their waste water would be cleaned up by someone else. In truth the storm drain system is completely different from the sanitary sewer system. Most storm drains empty directly into the ocean, bay, river, creek or other body of water with no treatment at all, eventually affecting our drinking or irrigation water supply.

Local owners and operators involved in equipment washing sales or usage have been participating with government wastewater agencies to help with the development of emerging regulations. The result has been the development of a Best Management Practices (BMPs) guide for the power washing industry. Some of the guidelines are:

- Pollutants caused by Power washing jobs are:
  - Soaps, detergents and degreasers
  - Petroleum products including oil and grease
  - Any toxic compounds removed during washing
  - Heavy metals—especially copper, nickel, zinc and silver

(Continued on Page 18)
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Wash Water Recovery—

(Continued from Page 15)

* Corrosive solutions
* Bacteria from food or animal waste
* Sediment, sand, dirt and debris

None of these pollutants can be washed onto the street or into the gutter, storm drain system or any body of water or be allowed to soak into the ground. Waste water containing these pollutants must be captured, collected and ultimately treated. If you eventually discharge the water to the sanitary sewer system you may be required to do some testing or use some pretreatment equipment such as an oil/water separator or a water recycling machine.

Effects of Pollutants Generated by Equipment Washing

* Oils and Oil Emulsions. Very Low concentrations can interfere with respiration and reproduction in fish and other aquatic life as well as destroy algae and plankton. Oily films on water surfaces can interfere with aeration of the water and block needed sunlight required for photosynthesis.

* Nutrients. Cleaners containing nutrients such as phosphorous and nitrogen cause plant life to increase, which can cause oxygen depletion, causing plants to die and decay and thereby depriving fish of oxygen needed for survival.

* Chlorine. Even very low levels can be lethal to aquatic life.

* Ammonia. High levels can be lethal to fish and other aquatic life. Ammonia contains nitrogen, which causes the results previously listed under nutrients.

* Metals. Cadmium, lead, copper and others can interfere with reproductive cycles of fish, invertebrates and other aquatic life.

* Sodium Hydroxide. This caustic agent found in some cleaners is toxic to fish and other aquatic life.

* Phosphoric Acid. Is toxic to aquatic organisms. The nutrient phosphorous also causes the problems listed under nutrients.

* Potassium Hydroxide and Nitrilacetic Acid. These two agents found in cleaning detergents are harmful to aquatic life.

* Metal, Para, Ortho-Xylenes. Ingredients found in concentrate cleaners that are harmful to aquatic life in very low concentrations.

* Hydroflouric Acid. Also toxic to aquatic in very low concentrations.

Liquids from cleaning operations can also cause water to become cloudy and turbid (foul). Turbidity can effect aquatic plant growth by reducing available sunlight. Solids can smother bottom dwelling aquatic organisms.

EPA and Wash Water Issues - Summary

The EPA deals with a variety of environmental issues with their main purpose being to protect the environment. Those issues that are pertinent to the washing industry as a whole are quite simple.

Wash Water is considered a source of Industrial Waste.

If for any reason "wash water" is allowed to soak into the ground, go into a storm drain or drain into any surface water such as a river or a lake, it must meet the "CLEAN WATER ACT'S" contamination requirements, which simply states that it must be as clean as drinking water.

To avoid any conflicts, all the water used needs to be picked up and disposed of properly. Since this is not always practical, then "ZERO DISCHARGE" reclamation is required. This means all the water is picked up, cleaned and reused so as not to pollute any ground or surface waters. Left-over water must be hauled away or cleaned for discharge to local sanitary sewer standards.

Any cleaning, maintenance or other service that does not follow a practice that prevents ground or surface water contamination during its operation is typically in violation of the "CLEAN WATER ACT" and both the owner of the property and the operator could be liable and face legal penalties and be responsible for damages and clean-up costs.

Today, technologies and equipment are available to enable the cleaning industry to be compliant. It is, therefore, in the best interest of the industry at large and in the interest of public health and safety to work towards the goal of 100% compliance.

(Continued on Page 19)
Wash Water Recovery—
(Continued from Page 18)

To this goal, operators utilizing equipment in the washing process which clean and reuse wash water and/or pick up wash water and remove it from the site or process it to meet sanitary sewer discharge requirements are typically compliant in that they are utilizing "best management practices" to control contamination to ground and surface water. Those, who utilize these "best management practices", limit their own and their clients' exposure and risk of running afoul of EPA regulations relating to this matter.

EPA and Industrial Waste - Detail

Why does the US EPA regulate the discharge of industrial wastewaters?

The Threat to Public Health & Environment: Many businesses generate waste and wastewater during daily operations. If these wastewaters are disposed of into shallow injection wells, such as septic drain fields, dry wells, cesspools or pits, constituents from these wastewaters pass through septic systems and discharge to ground water unchanged.

If these wastewaters are disposed into storm drains or sewers, they may endanger surface water such as streams, lakes and estuaries.

The Safe Drinking Water Act

EPA and State Underground Injection Control (UIC) programs are established to protect underground sources of drinking water from contamination by injection wells.

EPA has found that contaminant concentrations in groundwater resulting from industrial discharges may exceed the maximum contaminant levels (MCL's) identified in the EPA primary drinking water standards. EPA prohibits the injection or run-off of fluids that will endanger ground water that is or could be and underground source of drinking water.

The Clean Water Act

EPA prohibits the discharge of wastewater into storm drains or sewers under the authority of the Clean Water Act.

The Resource Conservation Recovery Act (RCRA): EPA has recently added 20 new chemicals to the list defining toxic waste (March 29, 1990). Industrial wastewaters contain many of these toxic chemicals.

If you discharge RCRA-regulated wastes into a septic system, drain field, drywell, cesspool, pit or other injection well, you may be operating an unauthorized, hazardous, waste disposal site.

Solutions:

You must stop discharging industrial wastes to your septic system, drain fields, dry wells, cesspools, pits or separate storm drains or sewers.

Stop using the well for these wastes!

Facilities that use these types of disposal systems may be in violation of federal, state or local requirements and subject to monetary penalties.

First: Temporarily seal the floor drains or other means of wastewater entry to the injection wells and surface waters. If the floor drains are necessary to comply with state or local laws, the discharge point to the injection well should be blocked or disconnected.

You should then use one of the following plans for alternate disposal:

Eliminate the wastewater, if possible, through recycling, improved housekeeping, waste minimization or other means.

Route all wastewater to a municipal wastewater treatment facility, if available, and if it will accept your waste.

If a municipal treatment plant is not available, or it will not accept your waste, route the waste to a tank or container for proper accumulation and disposal.

Second: Initiate a waste minimization and pollution prevention program. Even if you cannot eliminate the waste entirely, you may be able to reduce the volume and toxicity. This may reduce your costs, liabilities and the regulatory burden of hazardous waste management, while preserving the environment and precious ground-water resources.

Minimize wastes by recycling wherever and whenever possible.

Third: Implement clean-up. In many states you will need to contact the appropriate EPA, state and local agencies regarding their closure and permit requirements.

In most instances, you will need to:

Pressure wash any discharge lines or piping leading to the septic system, cesspool or drywell.

Clean out liquids and solids from all lines and tanks, dry wells or pits. Dispose of the contents by acceptable methods for waste disposal.

Fill the dry well, cesspool or pit with an inert material, seal with asphalt or cement, or as otherwise required by state and local authorities.

In the future use implement a water conservation program by using wash water recovery equipment designed to save precious water and clean up the water you are using for reuse in your application.

(Related article on Page 21)
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