



1991 Turfgrass Summerfest

The Northwest Turfgrass Association, with the cooperation of the WSU Puyallup Research and Extension Center and the High Cedars Golf Club, is sponsoring the **3rd Annual Turfgrass Summerfest** June 24 & 25, 1991.

The event is planned to provide the opportunity for friends, colleagues, co-workers and everyone involved with the turfgrass industry to see the results of and hear about current turfgrass research activities; see and try out the "state-of-the-art" in industry equipment, and, practice your golf game.

Monday, June 24th, the **NTA R.L. Goss Golf Tournament for Turfgrass Research** will be held at a course yet to be determined in the Puget Sound area.

Tuesday, June 25th, the annual **WSU Turfgrass Field Day** at the WSU Puyallup Research and Extension Center, Field Laboratory - Farm 5 will be held. Following the field day will be the **NTA Turf Grounds Maintenance and Irrigation Equipment Display and Demonstration** and traditional luncheon cookout at High Cedars Golf Club. Wally Staatz, owner/manager of High Cedars Golf Club, has donated his club facilities for our use. Look for registration information for the Turfgrass Summerfest in the spring.

1991 Research And Scholarship Fund Raising Campaign

Tom Wolff, chairperson the NTA Research and Scholarship Fund committee, has announced the kick off of the 1990/91 Research and Scholarship fund raising campaign.

Intimately involved with turfgrass management, we realize more than most, that today's turfgrass quality is the result of knowledge and technological gains resulting from research and education accompanied by hard work and effort. We owe our thanks to those who gave their time and money to make the research and education possible, for without them we would have to rely on our own slow trial and error methods.

Few of us are independently capable of, nor prepared to conduct the research or develop the education programs necessary to keep the industry on the leading edge. Recognizing this, the Northwest Turfgrass Association created a research and scholarship fund to help make it possible for each of us to financially contribute to industry research and education advancements.

Donation forms will be mailed to members and industry supporters within the next month or so. Contributions are tax deductible and those contributing to the research and scholarship fund each year are recognized in the NTA Annual Directory

Buy a share today in better turfgrass for tomorrow.

1991 Annual Membership And Dues

The NTA is a non-profit corporation founded in 1948 to help all people interested in turfgrass culture. The association now has grown to over 400 people involved in turf facilities development and maintenance at schools, parks, golf courses, cemeteries, parks, sports fields, commercial sites, and home lawns. In addition, lawn spray services, landscape architects, landscape contractors, and equipment and chemical suppliers all participate as members in this organization. Through its many activities, the NTA has benefited all of these people by helping them learn more about their profession. Its annual conference and publications program provide timely and pertinent information specifically aimed at turf culture needs in the Pacific Northwest. In recent years, its focus has broadened to include landscape maintenance in addition to turf culture.

The NTA offers an opportunity to participate shoulder to shoulder with other leading turf professionals in the Pacific Northwest. Members get:

1. An opportunity to attend the annual conference to listen to outstanding researchers and practitioners and then discuss their findings face to face.

2. A copy of the annual conference **Proceedings**. This publication typically runs 100 to 150 pages and contains approximately 25 different topics as presented by top researchers throughout the Pacific Northwest and the United States. Many of the talks are practically oriented and provide information to take home and apply.

3. An opportunity to exchange ideas and experiences with other turf colleagues in the Pacific Northwest.

4. A first hand look at new equipment and products displayed by suppliers from throughout the region and the United States.

5. A quarterly publication, **Turfgrass Topics**, filled with timely information on turf care and other items of interest in our industry. **Turfgrass Topics** also includes advertising by the suppliers with whom you want to do business on a regular basis.

6. An annual **Directory** including a listing of association members along with valuable industry data.

7. A handsome annual **Certificate of Membership**.

8. An active group of elected and appointed colleagues looking out for your interests as those of the industry.

9. An opportunity to support and promote industry-related research.

Annual dues statements were mailed this last month. **If you haven't returned yours yet, get it in soon so you won't miss being listed in the NTA Annual Directory.**

President's Message

I sincerely hope that each of yChrist's birth to remind us of what Christmas is all about before the wrapping paper started flying off the packages. I was reminded that I already had my most cherished gifts; Christ as my Lord and Savior, a loving wife who is dedicated to our marriage and our children, a daughter and son who are a constant source of joy, the support of family and friends, and a job that both challenges and satisfies. I hope that 1991 brings a year of good health, happiness, and contentment to each of you.

During early December, I had the opportunity to attend both the Oregon Golf Course Superintendents Association's (OGCSA) Pesticide Seminar and the Western Washington Golf Course Superintendents Association's (WWGCSA) Pacific Coast Landscape Seminar and Equipment Show. The OGCSA seminar in Portland had just over 400 attendees and the WWGCSA seminar in Seattle had over 500. The trade show, held in conjunction with the Seattle seminar, also had excellent attendance and the suppliers that I talked with were most pleased. These groups are to be commended for the quality of the programs and especially for the service that they are providing to those persons involved in the green industry.

As a final note for this issues president's column, I want to remind each member once again of your Board of Directors desire for your input. The NTA Board is comprised of members from all areas and different jobs within the turf industry, and each officer and director is elected to serve the membership.

The very best to all of you in 1991!

U.S. Congress Agrees Turfgrass Sod Reduces Global Warming

Turfgrass sod's environmental benefits have received recognition by the U.S. Congress in the 1990 Farm Bill, following many months of direct activity by the American Sod Producers Association (ASPA).

Within the bill's findings, Congress notes, "tree plantings and ground covers such as low growing dense perennial turfgrass sod in urban areas and communities can aid in reducing carbon dioxide emissions, mitigating the heat island effect, and reducing energy consumption, thus contributing efforts to reduce global warming trends."

The Farm Bill contains funding of nearly \$74 million for fiscal year 1991, including over \$21 million for urban and community tree and turf planting and improvement efforts, \$32.5 million for rural forestry programs and \$20 million for the National Tree Trust Act of 1990.

ASPA's successful efforts in providing direct scientific evidence to demonstrate that turfgrass can be as effective as trees in environmental improvement programs will continue. The new legislation provides funding and other opportunities for expanded research, technical assistance and educational efforts which will be the focus of ASPA's future activities.



Bill Griffith

1991 45th NTA Northwest Turfgrass Conference & Exhibition Invitation

The NTA Board of Directors extend a cordial invitation to the members of the association, along with their colleagues, employees, spouses, friends and others interested in the turfgrass industry in the Pacific Northwest to attend and participate in the 1991 **45th NORTHWEST TURFGRASS CONFERENCE AND EXHIBITION** scheduled for September 16-19, 1991 in Coeur d'Alene, Idaho at the Coeur d'Alene Resort and Conference Center.

Research information, education, equipment displays and demonstrations, the annual turfgrass men's and women's golf tournaments and a turfgrass facilities tour will highlight the Conference and Exhibition. Also on the schedule of events are the annual business meeting of the NTA members; an excellent program for spouses and friends; and a number of social activities designed for everyone.

Coeur d'Alene will host the hundreds of golf course superintendents; parks, cemetery, school and other grounds maintenance personnel; professional consultants; landscape and lawn care personnel; equipment and product suppliers; research and extension staff; and others involved in the turfgrass industry from throughout the Pacific Northwest who will assemble for the outstanding professional development conference.

Coeur d'Alene, one of the largest meeting facilities of any resort in Idaho, will house the supplier show, a regular high point of the annual conference.

The Coeur d'Alene Selected America's Number One Resort

In 1990, The Coeur d'Alene Resort was named America's Number One Resort and selected as the Top Travel Product in the World by the prestigious *Conde Nast Traveler Magazine*.

The announcement was made at a black-tie dinner in Hamburg, Germany, during the opening ceremonies for the 1990 American Society of Travel Agents (ASTA) World Congress. Duane Hagadone, chairman and co-owner of Hagadone Hospitality Company, was in Hamburg to accept the award.

This award is the top achievement in the travel industry and for a resort in the Northwest to be named Number One on the magazine's TOP 100—where two went to the Ritz-Carlton in Naples, Florida and third place was awarded to the City of Paris, France—is unprecedented.

The *Conde Nast TRAVELER* Readers' Choice Survey was conducted among the magazine's 800,000 subscribers, with the assistance of Mark Clements Research, Inc. The results place Coeur d'Alene in the company of The Oriental of Bangkok, Thailand (winner of the world's best hotel), Singapore Airlines (top airline), Paris (top destination), Holland America (best cruise line) and Halekulani of Honolulu (top tropical resort).

Runners-up to The Coeur d'Alene in the Best Resort category included the Ritz-Carlton Resort of Naples, Florida; Phoenician, Scottsdale, Arizona; Boulders, Carefree, Arizona; and Ritz-Carlton, Laguna Niguel, California.

Don't miss it. Plan on attending the NTA's **45th Northwest Turfgrass Conference and Exhibition at The Coeur d'Alene Resort** September 16-19, 1991.

Coeur d'Alene Resort Golf Course

by Bob Spiwak

The resort course at Coeur d'Alene, Idaho won't be open for play until next spring and already the floating, man-made island 14th green has made a splash. So did about a dozen dignitaries at the course's dedication, when only one ball found the left rear of the green, a hundred yards from the shoreline tee. Granted the bigwigs were hitting into a 30-knot wind with wedges, and uncertain as to whose ball it was, the honor was claimed by Idaho governor Cecil Andrus, who was deemed to have the biggest wig.

There is a lot more to this Scott Miller-designed course than the 14th, but it is (so the claims go) the only green of its kind in the world, it certainly deserves its due.

It weighs 5 million pounds. It covers 15,000 square feet and has a 7,000-foot putting surface of Penncross bentgrass; the grass was delivered as sod from Illinois this summer. It has evergreen and deciduous trees, two large bunkers and will be graced by thousands of geraniums when it opens next April.

Moored with anchors, a winch system pulling 2-inch cables can transport the kidney-shaped behemoth from 75 to 175 yards from the tees into Lake Coeur d'Alene. As there is no attachment to the mainland, a special launch will carry golfers from tee to green. The skipper will even rake the bunkers.

A subject of environmental hassles when proposed, agreement was reached through an elaborate system wherein all water, fertilizer and pesticides (pesti, herbi, and fungi) applied to the green will drain down to a pumping station returning every bit through underground pipes to leach fields and holding tanks far inland. This protection is evident throughout the course, where curbed concrete cart paths direct all runoff to drains, and then back to the leach fields.

Scott Miller Design is from Scottsdale, Arizona. The owner, Miller, looks like Jack Nicklaus. A lot. Matter of fact, he worked for the Bear for nine years, and this is his first project under his own banner.

Miller has designed this course for the you-and-me golfer, and you won't find the punishment that awaits one at a Nicklaus course. Miller's a disciple of the "old boys"; Donald Ross, Albert Tillinghast and Alister MacKenzie. He has had the advantage of modern machinery, but has a light hand on the sculpting of the old mill site.

If you hit into one of the brilliant white sand bunkers which abound, odds are your lie will be level or uphill. No downhillers from the sand says Miller. Need to find the pottie? Look hard, for the on-course restrooms are located in bunkers beneath the 67th and 10th tees.

The course is a mixture of flatland and hills, the latter affording peek-a-boo views of the waiting 14th island. Such is number six, a par 3 with stairstep tees dropping down a flowered, woodsy hillside. The green is framed in pine, and has a background of lake and mountains.

Miller has not forgotten the women and high handicappers. There are four tees and from tee to green, Miller has seen to it that the same club selection can be used by any player, based entirely on the golfer's ability. The tees are large and random shaped, with no linearity to "guide" the player's set up.

Another interesting hole, a prelude to the island, is 13. Reminiscent of Pebble Beach's famed 18th, this is not a place for hookers. All along the left is the lake. As added incentive for accurate shotmaking, the first and second shots must each carry an inlet of Lake Coeur d'Alene for any chance of reaching the green in regulation.

The maintenance of the course, 6,518 yards from the pro tees and 4,532 from the fronts, is ramrodded by superintendent Steve Maas. He'll oversee a crew of 22 during the season, and you won't see anybody riding a mower on the greens. Walk-behind mowers will be used, with six people responsible for three greens apiece. A long putt from Maas' office window, a state-of-the-art computer-controlled weather station will monitor and deliver irrigation to the course's 120 acres, all bordered by Australian pines.

Miller beams, "Fence to fence, it's going to be like a park."

The golf course is an extension of the Coeur d'Alene Resort, developed by Idaho newspaper magnate Duane Hagadone.

Overcoming environmental hurdles, and pouring untold millions into the project (including a hefty sum to the state for "renting" a portion of the lake which holds the green), he has added tennis courts adjacent to the driving range. The latter will have targets floating on the water bombarded by floating balls.

Together, Miller and Hagadone have created a statement that a resort course can be created for golfers of all talents.

The floating green is the perfect exclamation point.

Source: Back Nine/December 1990

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Three Pacific Northwest Suppliers Receive Hunter Top 20 Distributor Awards

Three Pacific Northwest irrigation suppliers were recently named Top 20 Distributors by irrigation equipment manufacturer Hunter Industries.

They include Paul Woodman, Tom Glines and Jim Winterbourne of Evergreen Pacific Supply, Inc. in Bellevue, Washington; Taylor Ramsey and Cliff Thorne of United Pipe & Supply of Oregon in Eugene, Oregon; and Mike Rippe and Dick Hacker of United Pipe & Supply of Washington in Spokane, Washington.

The Top 20 honor recognized their outstanding sales and marketing achievements during 1990. The awards were presented by partner Richard Hunter at a national sales conference attended by more than 500 participants at The Broadmoor in Colorado Springs, Colorado.

Hunter Industries, headquartered in San Marcos, California, is one of the world's leading manufacturers of gear-driven rotary sprinklers. Hunter irrigation equipment is sold exclusively through a worldwide network of professional irrigation product suppliers.

Irrigation Part I: System Component Technology Seminar

February 26-27, 1991 the Western Washington Golf Course Superintendents and the Golf Course Superintendents Association of America are co-hosting a two-day seminar to be taught by David D. Davis, independent

irrigation consultant, and C. William "Bill" Speelman, production application manager with Toro's irrigation division. Current information on the components of today's golf course irrigation systems will be presented. Sprinklers, controls, piping and pumps will be discussed in detail. How to read and use the appropriate technical information will also be covered. **Irrigation I: System Component Technology** serves as a prerequisite to **Irrigation II: Systems Design, Operations and Management**, which is being considered for presentation in the spring of 1992.

Topping: A Poor Alternative To Proper Pruning

by Van Bobbitt, Washington State University

Trees are frequently pruned in the winter and early spring. Unfortunately, much of this "pruning" is actually "topping"—the drastic, indiscriminate cutting of large branches and trunks.

Why are trees topped? A primary reason is to reduce the perceived hazard of tall trees. Topping is also used to open up views. It appears that some of us have seen so many topped trees that we assume this is proper pruning.

However, topping can injure trees in several ways. By removing large portions of foliage and branches, a tree's ability to make and store food is reduced. The large pruning cuts caused by topping seldom callus over, leaving the branch stubs vulnerable to pests and diseases. Topping also can stimulate the dense growth of weakly attached shoots, known as watersprouts. Regrowth on a topped tree is usually faster and denser than on one that has been properly thinned.

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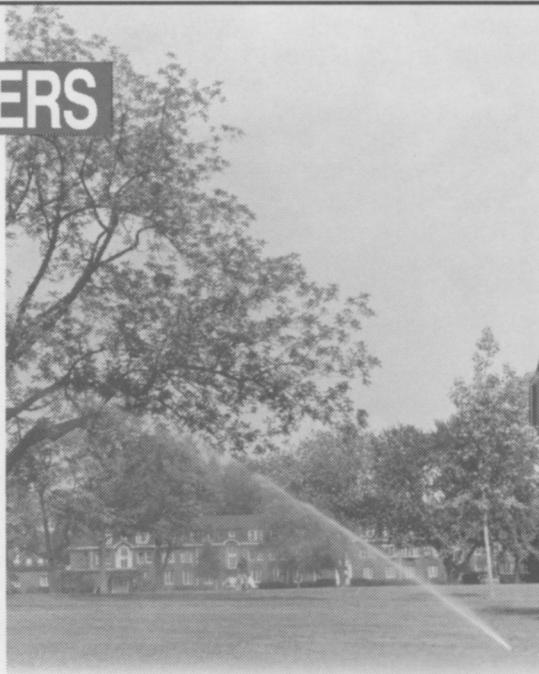
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Due to decaying branch stubs, dense regrowth, and weak watersprouts, a topped tree can be highly vulnerable to damage from wind, snow, or ice. In the long run, topping is likely to make a tree more hazardous, not less.

If topping is so bad, then what are the alternatives?

1. **Don't prune.** Only prune if there is a valid reason for doing so. Unnecessary pruning usually creates more problems.

2. **Thin.** Thinning is the selective removal of branches back to their point of origin or back to a strong lateral branch. Proper thinning can reduce a tree's size while retaining its natural shape. It also can open up a tree to allow more light through, enhance views, and reduce the danger of wind breakage.

3. **Remove the tree.** Having the wrong tree in the wrong place is a major reason trees are topped. Instead of trying to turn a large tree into a small one, it is often better to remove the problem and replant a tree the right size for the location.

Source: The Gardner/Winter 1990-91

Seed Research of Oregon Distributes Royalty Payments

Seed Research of Oregon is proud to announce that, as a result of their 1989-90 seed sales, over \$98,000 in royalty payments were made to Rutgers University. The royalty payments were based on sales of SR 4000, SR 4100, and SR 4200 perennial ryegrasses; Titan tall fescue and SR 3000 hard fescue. All of these varieties came out of Dr. Reed Funk's turfgrass breeding program. Dr. Funk's breeding program is recognized throughout the world as one of the best and most prolific programs ever developed.

Royalty payments in excess of \$4,000 and \$6,000 were also made to the University of Rhode Island and Arizona State University respectively, for sales of the improved creeping bentgrasses, Providence and SR 1020.

Leasing Equipment Offers Advantages

When Tony Fox decided to get back into the landscaping business after seven years absence, he knew he wanted the best equipment available. But he also wanted to "test the waters" before committing himself to a large capital investment.

"There's a lot of commercial and residential construction going on in the Pacific Northwest," says the Vancouver, Wash. contractor. "But I wanted to be sure of the stability of the economy before making a lot of capital outlays."

Fox diligently shopped around for a skid-steer loader—the workhorse for his new company—Special Dig and Construction. "I put between 50 and 60 hours on ever machine I demo'ed," he says. Finally he found the loader that best fit his needs and the flexible financing to help him get his business off on a fresh start, a model with tracks, one-yard bucket, forks and backhoe attachment.

"Case Power and Equipment of Portland, Ore., gave me a 90-day lease. They would have given me a six-month lease, but after 90 days I felt confident enough to roll the lease over into a straight purchase."

Innovation needed

Fox's experience illustrates the demand for innovative financing in the heavy equipment industry, says Phil Cote, Case Credit Corp. vice president for marketing and planning. One of the biggest challenges equipment financing companies face is responding faster to changing customer needs.

"Our customers' needs are changing faster in a more competitive marketplace," Cote says. "That's why we give dealers a great deal of flexibility in setting up financing arrangements."

One of the most important decisions facing a contractor who must upgrade or replace heavy machinery is the choice of a financing program. For example, lease financing can mean lower payments and shorter trade-in cycles; it's a way to fix costs and cash flow based on the operator's individual needs. "There's nothing wrong with paying only for what you use. And in this day and age, who can afford to needlessly tie up working capital?" Cote asks.

Money at work

Dick Krueger of Krueger's Associated Landscape, Hillsboro, Ore., agrees. "Leasing lets me keep my money working for me. My business is exclusively commercial contracts and keeping my assets liquid gives me more bonding capacity to get bids."

But leasing is not the answer for every contractor.

"The decision to lease or buy is a very personal one and should be made in terms of one's unique financial situation," Cote says. "The majority of businesses that fail go under because of cash flow problems. A contractor must ask how important it is to have a title or deed to a piece of equipment in meeting contractual needs."

Lower payments are possible under a lease arrangement because the customer is not required to have equity in the equipment. "You can only pay a portion of the selling price, which is determined according to depreciation," Cote says. "Say the current retail value of a machine is \$10,000 and you only need it for two years, you would still owe \$5,000 under a traditional four-year contract. With a lease however, you pay \$5,000 on the value of the machine during the period of use."

Investment recovery

Usually contractors expect to recover some of their investment by trading in an old machine when it's been paid for. "That can backfire if the used equipment market softens and you don't get as much money back as you were counting on," Cote notes. "With leasing, you in essence receive the credit you would get on a trade-in up front."

Full-service financing is an integral part of the heavy equipment business. It benefits landscape contractors and others by making the use of new equipment more affordable.

"That's why we're currently reviewing all current finance programs and contracts in an effort to stay competitive," Cote says. Much of the input for new financing options comes from dealers.

"What influenced my decision was first, who had the better machine," says Fox. "After that however, it was which dealer offered the better support system."

Pesticide Recertification Update

First Five Year Recertification Period Draws to a Close

It's hard to believe that the pesticide license recertification program initiated in January 1986 is coming to the end of its fifth year. Individuals who held a valid Washington State Department of Agriculture (WSDA) license on December 31, 1985 (except most aerial applicators and all private applicators) must meet recertification credits or by retesting, these 1986 recertification by the end of this year. By acquiring 40 recertification credits or by retesting, these 1986 recertification year licensees can renew their pesticide license for 1991, provided that a renewal application and fee are properly submitted. On renewing the license, an individual begins a new 5-year recertification period.

Please note: When recertification began in 1986, dealer manager, private-commercial, demonstration and research and public operator/consultant licenses became five year licenses to coincide with the recertification time period. Individuals in possession of any of these licenses at that time were issued revised licenses reflecting an expiration date of 12/31/90.

Recertification Credit Totals

During the first half of every year, WSDA mails a memo showing the official credit total to each licensee who has earned recertification credits. Unless there is an immediate concern about your credits, please wait for this memo rather than calling WSDA. This will help to ensure that licensing dollars are spent as efficiently as possible. Thank you for your cooperation!

Locating Recertification Courses

For various reasons, some licensees have difficulty locating recertification courses which meet their particular needs. Whether new to recertification, located in an outlying area, or involved in one of the more unique areas of pest control, individuals placed in this situation often become frustrated with the recertification program.

In this and each succeeding newsletter, a listing of those courses in Washington State which have been approved by WSDA for recertification credit will be provided.

We will be compiling a list of those programs that occur annually. Sponsors who wish to see their program on this list must contact the WSDA's Olympia office.

Course Sponsors

As a reminder, WSDA accredits recertification courses but does not, in general, sponsor them. Sponsors include the Washington State University (WSU) Cooperative Extension Service, professional associations, user groups, pesticide dealers, employers, colleges and others. Prospective recertification courses must be submitted for review at least four weeks prior to the course. In order for a course to be granted credit, it must contain at least two hours of applicable pest control related topics and the sponsor must be willing to have a WSDA representative monitor the course.

Prospective sponsors may submit course requests to Beth Williams at the WSDA's Olympia office.

Private Applicator Recertification Requirements

Just a reminder that to meet recertification requirements, private applicators, every five years, must:

- obtain 20 credits (with a maximum of 8 credits per year)
- or
- retake the private applicator exam.

Many private applicators are confused about the 8 credit/year maximum. The maximum number of credits allowed per year requires private applicators to spread training over the five-year recertification period. You are not required to earn 8 credits every year during the five year period.

One caution: with this maximum in place, private applicators need to earn at least four credits by the end of the third year of the recertification period.

Pesticides Storage Procedures

by Dr. Gwen Stahnke

Washington State University - Puyallup, WA

Before a pesticide storage facility is built, thought must be put into the type of material to be stored, sites available and the operational procedures to be performed in that area. The site itself should have a soil type and structure that will not flood and prevent any runoff from the area. The area should be contained whether it is a natural or artificial barrier. An emphasis should be placed on personal safety, accident prevention and detecting potential problems.

The actual physical recommendations for building a storage facility are not published by the Washington State Department of Agriculture (WSDA) or Oregon State Department of Agriculture (OSDA), but some of these items are generally common sense type of considerations. The WSDA updated their regulations relating to the general use of pesticides after holding public hearings throughout the State of Washington in January of 1990. The regulations specifically relating to pesticide handling and storage are contained in WAC-16-228-185. The storage procedures went into effect in June of 1990 and posting requirements in July of 1990. Any questions dealing with pesticide storage records are handled by the Department of Labor and Industries, and all questions relating to pesticide rules and applications are handled by the WSDA.

The actual storage facility should be a dry, well-ventilated, separate room, building or covered area where fire protection is provided. It is wise to have a switch on the outside of the facility to control ventilation and lights, and ideal to secure the storage facility by a climb-proof fence. Minimum protection would be to keep all doors and gates locked. Identification signs should be placed on rooms, buildings and fences to advise of contents and their hazardous nature. Any equipment used to handle pesticides at the storage site should be labeled with "pesticide use only", and a decontamination area should be provided for personnel and equipment. This area should be paved or lined with impervious material and all contaminated water should be disposed of as excess pesticide. Measure all application areas, mix up only the pesticide needed for the job and rinse all measuring equipment into spray equipment. Spray all equipment rinsate back on the site if at all possible to limit the amount of rinsate stored. The drainage system from this facility cannot discharge into a storm sewer or sanitary system or any water source or system.

continued on page 7

Pesticide Storage (continued)

Post the rules for personal safety in the personal areas as a safety precaution. No food or beverages or smoking is to be allowed in either storage, loading or pesticide areas. Rubber gloves, goggles, and protective clothing should be worn while handling the pesticide concentrates. Washing of hands immediately after using the pesticides is important, as well as having cholinesterase tests and physicals given to those employees regularly working with organophosphate and N-alkyl carbonate pesticides.

The local fire department, hospitals, public health officials and the police department should be informed of the hazards of pesticides in case of fire. Provide the fire department with a floor plan of different pesticide classifications in the storage facility and make sure to supply emergency telephone numbers of the person responsible for the storage facility. The outside of the storage area should be labeled with "DANGER", "PESTICIDE STORAGE" signs, with a list on the outside of the storage area of the types of chemicals stored. It is recommended to install smoke detectors and monitor the temperature of the storage facility. Any electrical equipment in the storage area should be shielded against sparks to reduce explosion risks.

Accident prevention is very important. Containers should be inspected, handled properly and no unauthorized persons should be allowed in the storage area. Ideally, an environmental monitoring system should be considered for the area around the storage facility. Samples from ground and nearby surface water should be analyzed for a baseline reading and then sampled on a regular basis.

Washington's Department of Labor and Industries now requires storage records to be posted or undated on the day a pesticide is put in storage or removed. The last date of entry must reflect the amount of pesticide remaining in storage. With a small inventory, all pesticide records can be kept on one sheet, while a large inventory with a frequent turn-over may require a single record sheet for each pesticide. Storage records are not required for storage periods of 24 hours or less. All storage and application forms must be kept in a location readily accessible to employees and in a location where they will not be destroyed. Records must be kept for at least seven years for evaluation and in case of an illness or unplanned exposure.

Good housekeeping practices should be maintained for all pesticides and their containers. Each pesticide formulation should be segregated and stored under a sign, with the containers stored upright and off the ground. It is better to store wettable powders above liquids and accumulate containers in rows with the labels visible and lanes to provide access to the pesticides. Containers should be checked regularly for leaks and absorptive clay, hydrated lime and/or sodium hypochlorite should be kept on hand for use in case of a leak or spill.

If pesticides are being applied, they are not considered unattended at the loading site if they operator maintains visual contact or returns at closely spaced intervals. When unattended, Category 1 pesticides with a signal word "DANGER" and their containers must be stored in an enclosure that can be locked to prevent unauthorized entry. Category 2 pesticides, with the signal word "WARNING" and Categories 3 and 4 with "CAUTION" should also be secured.

continued on page 8

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Pesticide Storage (continued)

Category 1 pesticides should be posted using the skull and crossbones symbol with "Danger/Poison Storage Area/Keep Out" in letters large enough to be seen at 30 feet. These signs should be posted at each entrance, on each exterior wall and on each exterior wall within 30 feet of the pesticide storage area and from the main entrance if the storage area is contained in a larger multipurpose building. Posting of the main entrance is not required if a sign is visible at the entrance which would clearly identify the possibility that pesticides could be on the premises.

Some suggestions for pesticide storage facilities from Fred Haskett of Greenworld in Ohio are to divide the facility into two areas; a primary containment area, and a secondary containment area. The primary containment area contains the chemical concentrates and has a 6-inch dike (1000 gallons holding capacity) surrounding it. It also contains an eye wash fountain, shower and sink, with all of them draining into a sump which isolates the chemicals. The secondary containment area has a 4-inch dike (3000 gallons holding capacity), with daily operations taking place there as well as trucks and fertilizer being stored in the area. The water line for filling in this area is attached to an anti-siphon device to prevent backflow out of the secondary area.

A well-planned chemical storage area can give your employer a savings on insurance premiums due to extra precautions that have been taken. It is well worth the time and effort to keep these facilities up to date and reduce the liabilities for your operation.

Waste Pesticide Update

The Washington State Department of Agriculture (WSDA) waste pesticide program has completed its third year of operation with collections held in Thurston, Franklin and Spokane Counties. Eight county collections have been completed since the first event in August 1988, and 344 growers have participated in the program. A total of 145,526 pounds or 72.8 tons of unusable pesticides have been collected to date. At least one collection will be held in the spring of 1991.

The WSDA waste pesticide program consists of two elements. The first is to acquire and dispose of unusable

pesticides and the second is to provide education and technical assistance to the agriculture community on waste pesticide issues. Most of our efforts over the last three years have centered on getting the collection element of the program operational and running smoothly. Now that this has been accomplished we will be expanding the educational aspects of the program.

The WSDA will be working closely with the WSU Cooperative Extension Service and the Department of Ecology in this education effort. We intend to use a variety of approaches including talks and slide programs, articles in this newsletter, and special publications on specific topics such as waste minimization and proper triple-rinsing and container disposal. We are interested in your ideas on what should be addressed in this program. Please feel free to call or write:

Lee Faulconer
Washington State Department of Agriculture
Pesticide Management Division
406 General Admin. Bldg., AX-41
Olympia, WA 98504-0641
Phone (206) 753-5064

Pesticide Hazardous Waste Generators Survey Planned

The state Department of Ecology's Solid and Hazardous Waste Program will be conducting a pilot project to survey commercial and public pesticide applicators and their facilities over the next year to help determine the level of compliance with the state's Dangerous Waste Regulations. These regulations apply to many pesticide applicators, in addition to about 4,600 other hazardous waste generators in Washington State.

Why the survey is needed

There are over 16,000 pesticide applicators in Washington who may generate pesticide hazardous wastes. Pesticide hazardous wastes are those wastes containing pesticide ingredients that would designate as hazardous under the Dangerous Waste Regulations. Of 552 hazardous waste cleanup sites statewide, about 97 (or 17%) are believed or known to be contaminated by pesticides. Some of these locations began as very small pesticide waste disposal areas and are now Federal Superfund hazardous waste sites.

Goals of the project

The surveys will allow the Dept. of Ecology to work individually with pesticide applicators in viewing firsthand their waste management practices. Ecology staff will also:

Determine level of compliance with regulations.

Provide information on how to safely manage wastes such as unusable formulations, containers, rinsates, and washwaters.

Assist applicators in understanding which wastes may be regulated.

Provide assistance to help applicators identify reuse and waste reduction techniques that can help them avoid being regulated.

Who is included in the project

Approximately 125 (10% of all commercial and public pesticide applicators) will be directly involved in this pilot

continued on page 9

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Pesticide Survey (continued)

project. A representative cross-section of pesticide application services will be contacted for on-site surveys. Services such as wood treatment, forestry, right-of-way, parks, residential yard care, agriculture, and others are related in the project.

How Ecology will respond if violations are found

The project will emphasize education and technical assistance to encourage voluntary compliance with the Dangerous Waste Regulations. However, if efforts to achieve voluntary compliance are unsuccessful, Ecology has a variety of enforcement options available. Formal options range from warning letters to criminal sanctions. These formal enforcement actions are usually reserved for repeat offenders, recalcitrant parties, and violators posing threats to human health or the environment.

Contacts

For additional information contact these Dept. of Ecology Solid and Hazardous Waste Program staff:

Dave Rounry, Olympia, (206) 459-6283
Bruce Howard, Spokane, (509) 456-6107
Dennis Bowhay, Yakima, (509) 575-2477
Lee Bagley, Tumwater, (206) 753-6375

Preview Buying Habits at Las Vegas Trade Show

Exhibitors and visitor will have the opportunity to preview the annual marketing research report, Buying Habits of Golf Course Superintendents, during the 62nd International Golf Course Conference and Show in Las Vegas, Nev. The report was published by the Center for Golf Course Management (CGCM), which is a subsidiary of the Golf Course Superintendents Association of America (GCSAA), the organization that sponsors the annual conference and trade show.

Buying Habits of Golf Course Superintendents contains exclusive information on maintenance and capital expenditures, equipment inventories, customer satisfaction and course and superintendent demographics. Significant statistics are also reported by state.

A special preview of Buying Habits will take place Tuesday, Feb. 12, during the trade show at the Las Vegas Convention Center. The special viewing will be held from 9:00 a.m. - 5:00 p.m. in East Meeting Room B-1 of the convention center.

CGCM collected, analyzed and reported the information compiled in Buying Habits both to aid industry representatives with product development, promotion, sales and servicing, and to provide an overall picture of the economic state of the golf course management industry.

CGCM staff will be on hand to discuss the report and other CGCM marketing research services with interested trade show exhibitors and attendees.

continued on page 10



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Buying Habits (continued)

"The trade show will provide an excellent opportunity for company representatives to see firsthand the value of the Buying Habits report and learn more about CGCM's marketing research service," said Karyn Z. Davis, GCSAA director of marketing.

Companies who do not plan to exhibit or attend the GCSAA Las Vegas Trade Show may contact the CGCM sales manager at 800/472-7878 or 913/841-2240 for information about the report.

New Snapshot Herbicide Approved for Ornamentals

Snapshot* herbicide from DowElanco has received federal EPA registration for use on established landscape ornamentals, container- and field-grown ornamentals, ground covers, non-bearing fruit and nut crops, non-bearing vineyards and nursery stock. The new preemergence herbicide is currently available in a dry flowable formulation as Snapshot 80 DF.

Snapshot 80 DF provides up to eight months control of 86 broadleaf and grassy weeds before they emerge, which greatly reduces the cost and labor of hand weeding. Snapshot 80 DF can be applied directly over the top of established labeled ornamentals without injury and can be applied to wet foliage. It shows excellent tolerance to 174 labeled species of ornamentals.

Snapshot 80 DF can be used alone or tank mixed with other herbicides to control additional weeds. Because it is a preemergence herbicide, applications should be made in the spring or fall before weeds emerge, preferably one to two weeks before germination of targeted weeds. For best results, the herbicide must be activated by at least 1/2 inch of moisture within 21 days of application.

Snapshot 80 DF carries a caution human hazard signal word. It can be used in commercial and residential landscaped areas and commercial nurseries.

A Methodical Approach to Park Maintenance

by David K. McDonald
Dir. Park & Rec. Dept.
Rochester, MN

Introduction

One of the most challenging aspects of park and recreation administration is maintenance management. It is multidimensional with knowledge needed to solve maintenance problems spread among many disciplines such as agronomy, architecture, engineering, forestry, horticulture, business and floriculture.

The challenge facing the practitioner is to develop a management tool which will aid him in planning, organizing, and performing numerous activities required to keep outdoor recreation facilities safe, attractive and clean for public use.

Maintenance management is both challenging and frustrating. It is subject to a number of uncontrollable factors such as vandalism, weather conditions, citizen complaints, emergencies, and politics. In spite of apparent

advantages, many organizations operate without a maintenance management system. As a result, they are primarily reactive to problems, and efficiency and effectiveness of their operations are greatly diminished.

Inventory

Sternloff and Warren (1977) identified four key elements to identifying ways and means of developing a maintenance management plan. They are: a) inventory; b) job description and identification and frequency of job task; c) systematic approach to scheduling non-routine maintenance; and d) planning and scheduling routine maintenance.

Fogg and Shiner (1981) suggest that man-made, natural resources and recreation activities must be inventoried in order to provide the widest range of information in order to validate managerial decisions. Not only should outdoor recreation facilities be identified, but such things as vegetation, soils, animal life, water, geologic features, and the number of softball games, picnics, etc. should be identified.

Conover (1977) describes a similar approach but identifies the key elements as: 1) intensive use; 2) scenic areas; and 3) natural areas. He also emphasizes a pragmatic approach, suggesting only information of value be gathered. This seems to imply that information about man-made facilities might be more helpful to managers responsible for daily maintenance.

Sternloff and Warren (1977) point out that a detailed inventory of areas, facilities and equipment should be made. They also suggest that activity use be noted by day, weekend, holiday, or season which seems to imply such information would be helpful.

Job identification, description, and frequency

A list of jobs can be identified following analysis of the inventory (Sternloff and Warren, 1977). For example, the identification of a softball diamond implies maintenance tasks such as irrigation, dragging the infield, trash pickup, pesticide use, field marking, etc.

The next step is to describe in sufficient detail the procedures required to complete the task. It is extremely important to keep it short and sweet according to Sternloff (1977). Maintenance workers may not bother to use plans that are too lengthy or detailed simply because they are too difficult to interpret.

It is important not to forget the level of service or frequency of performing the task. Although the determination is subjective, it determines the quality of service provided. For example, floors that are mopped daily presumes that the quality will be maintained if the level of frequency (daily) is followed under normal circumstances.

Much has been written about the length of time a particular job should take to complete. Sack (1971) identified several methods by which work standards can be developed. They include: 1) trial and error; 2) engineering standards; 3) historical records; and 4) statistical means. The most accurate method, engineering standards, is based upon actual work sampling or time and motion studies, but the cost usually outweighs the benefit. Other than to estimate budget projections, the length of time may not be of much significance in the public sector since productivity, profit motive and politics work in a negative way to minimize its importance.

continued on page 11

Methodical Maintenance (continued)

Non-routine maintenance

A method of handling all work requests that do not occur at regular intervals should be devised. Non-routine work develops as a result of vandalism, accidents, neglect and overuse. A conscientious manager will develop a tool to effectively deal with these situations.

Sternloff and Warren (1977) suggest that a work order system is a vital ingredient of an effective maintenance management system. They suggest that all non-routine work should be requested in writing. Following receipt of the work receipt, it is analyzed for accuracy, essential data and priority of scheduling. When the request is approved, a work order is written, assigned to a tradesman who records vital cost data. This information then becomes a historical record that is always available to the manager to estimate future maintenance costs.

Planning and scheduling maintenance tasks

Successful planning and scheduling of work is dependent upon knowing what is required along with an adequate number of people to do the job according to Sternloff and Warren (1977).

Scheduling of work can be on a daily, weekly, monthly, or seasonal basis. Park maintenance is seasonal in nature so the development of a seasonal calendar seems a logical outcome.

Sternloff and Warren (1977) point out that the key to a successful work schedule is to carefully consider such factors as season, visitor use, skills of the labor force, manpower availability, and availability of supplies and equipment.

Summary

A successful maintenance management plan should be simple and clear so as not to make interpretation too difficult for maintenance staff.

There are four key elements to an effective maintenance plan. First, an inventory of the resources should be made. Identification of natural, man-made or activity features should be done.

Second, identification of job tasks, a written description of each job and the frequency of service should be made.

Third, a system to managing unanticipated jobs needs to be developed. And finally, a maintenance schedule should be developed which considers the seasonal nature of maintenance activities.

Source: *Parks/Grounds Maintenance/December 90*

Golf Course Superintendents Turfgrass Doctors

by Mike Hulteen, CGCS,
Deer Creek GCI, Illinois

Golf course superintendents are professionals, not magicians. An analogy between superintendents and medical doctors can be drawn to illustrate the point.

After years of training and experience, both superintendents and doctors are prepared to examine ailments and prescribe treatment. Both are dealing with living objects. Both are concerned that the life continue. A great deal of mystery and misconception surrounds both occupations and their practices. Often, the cost of their services is considered too high, in some instances, exorbitant.

Appreciation is expressed only when the "patient" approaches some near tragedy and is "saved," to be useful and complete again.

One major difference between superintendents and doctors (other than income) is that superintendents must work to keep their "patients" at the verge of death, through extremely close cutting, followed by an armada of golfers and carts. The "intravenous bottles" of fertilizer and other soil conditioners can never be turned off, and should some virulent "infection" invade the course in the form of fungus, insects, drought, etc., the superintendent cannot let the "patient" recover through bed rest. He is lucky if he can keep carts on paths, let alone golfers off the course to let it recover naturally.

Each year, stories circulate of how a superintendent has been fired because the "course didn't measure up." Seldom do we hear of those who overcame tremendous odds and did keep the course in great condition, and almost never do we hear of course officials recognizing what may have caused the course not to measure up without pointing a finger at the superintendent. The common cold can remain uncured, but superintendents can have nothing short of perfection.

There are those who contend that all of this is what the superintendent gets paid for, and few superintendents would argue that particular point. What they might like to add, given the opportunity, is that should the "patient" suffer a setback or lose some vitality, conditions other than the superintendent's abilities and actions should also be given consideration. Superintendents are professionals, not magicians, and they can only perform minor miracles, regardless of budget, golfers' desires and demands, or other factors.

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Calendar of Events

- February 2** Women in Horticulture Conference
Contact: AWL (206) 938-5397
- February 5-12** GCSAA Conference and Trade Show
Contact: OGCSA Office (800) 472-7878
- February 24-25** NTA Executive & Finance Committee and Board of Directors Meetings
Contact: NTA Office (206) 754-0825
- February 26-27** WWGCS & GCSAA Irrigation Seminar
Contact: GCSAA 1-800-472-7878
- June 23** NTA Board of Directors Meeting
Contact: NTA Office (206) 754-0825
- June 24-25** NTA 3rd Annual Turfgrass Summerfest
Contact: NTA (206) 754-0825
- September 16-19** NTA 4th Annual Northwest Turfgrass Conference and Exhibition
Contact: NTA (206) 754-0825

- Pesticide Programs -

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