GOLF COURSE NEWS

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THE NEWSPAPER FOR THE GOLF COURSE INDUSTRY

A UNITED PUBLICATION VOLUME 3, NUMBER 8 AUGUST 1991

INSIDE

Nuisance water may be godsend

User-friendly

'Toxo-terrorists'

Pesticide law

2nd quarter 1991 course update

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COURSE MAINTENANCE

Addubbil, courses team up to save whome 13
Wildlife at refuge at John's Island West15
Greg Graham always tournament-ready16

COURSE DEVELOPMENT

COOKSE DEVELOT MENT
Japanese stay active in U.S. marketplace27
Las Vegas thrives in face of recession27
Monthly update: Planned, approved courses 36-37

COURSE MANAGEMENT

Management companies do it all	41
Owners association gains members	41
Kemper signs pact	41
SUPPLIER BUSINESS	
Bermudagrass test results released	45

Marketing conference speakers announced 46

Turfseed field days draw crowds47

High Court ruling said 'scary'

By Peter Blais

The recent Supreme Court ruling freeing local governments to impose pesticide regulations that conflict with federal law could severely restrict the use of golf course chemicals, according to a Golf Course Superintendents Association of America official.

"It scares the hell out of me. It's

another step toward more regulations," said Charles Passios, government liaison to the GCSAA board of directors.

"It means superintendents are going to have be more pro-active than ever, participating in the process and taking a lead role to make sure our concerns are heard when towns want to pass regulations."

In the case of the Town of Casey, Wis. v. Ralph Mortimer et al, the court ruled unanimously June 21 that the language of the Federal Insecticide Fungicide and Rodenticide Act does not allow it to pre-empt locally passed regulations.

The decision overturned a Wisconsin Supreme Court ruling that FIFRA

Continued on page 23



John's Island West golf course in Vero Beach, Fla., illustrates how golf courses can be havens for plant and wildlife. For the story, see page 15.

Photo by Kit Bradshaw

Major changes expected in revisions of wetlands laws

By Mark Leslie

Wetlands preservation regulations that have hand-cuffed golf course developers and created long, expensive waits for approvals are being rewritten — and loosened extensively — on two fronts.

A revision of the much-maligned federal wetlands delineation manual — used by the Army Corps of Engineers, Environmental Protection

Agency, U.S. Fish and Wildlife Service, and Soil Conservation Service since 1989 is under review and is said to more narrowly define what constitutes a wetland.

Further up Pennsylvania Avenue, congressmen have answered the call of voters and drafted legislation to correct deficiencies they see in the wetlands protection system.

Some conservationists are

angry. Linda Winter, director of wetlands programs for the Izaak Walton League, said a scientifically sound definition is "being thrown out and ignored for political reasons."

One EPA ecologist resigned and another asked that his name be dropped from the credits of the revision

But others are looking forward to changes.

Continued on page 28

First facilities open for handicapped

By Mark Leslie

Two golf facilities built especially for the physically challenged will open within the next month, marking milestones for the country's millions of handicapped people.

In Akron, Ohio, Edwin Shaw Hospital is completing the first course in the country designed especially for handicapped golfers. Dedi

Continued on page 38

End of drought won't solve Calif. woes

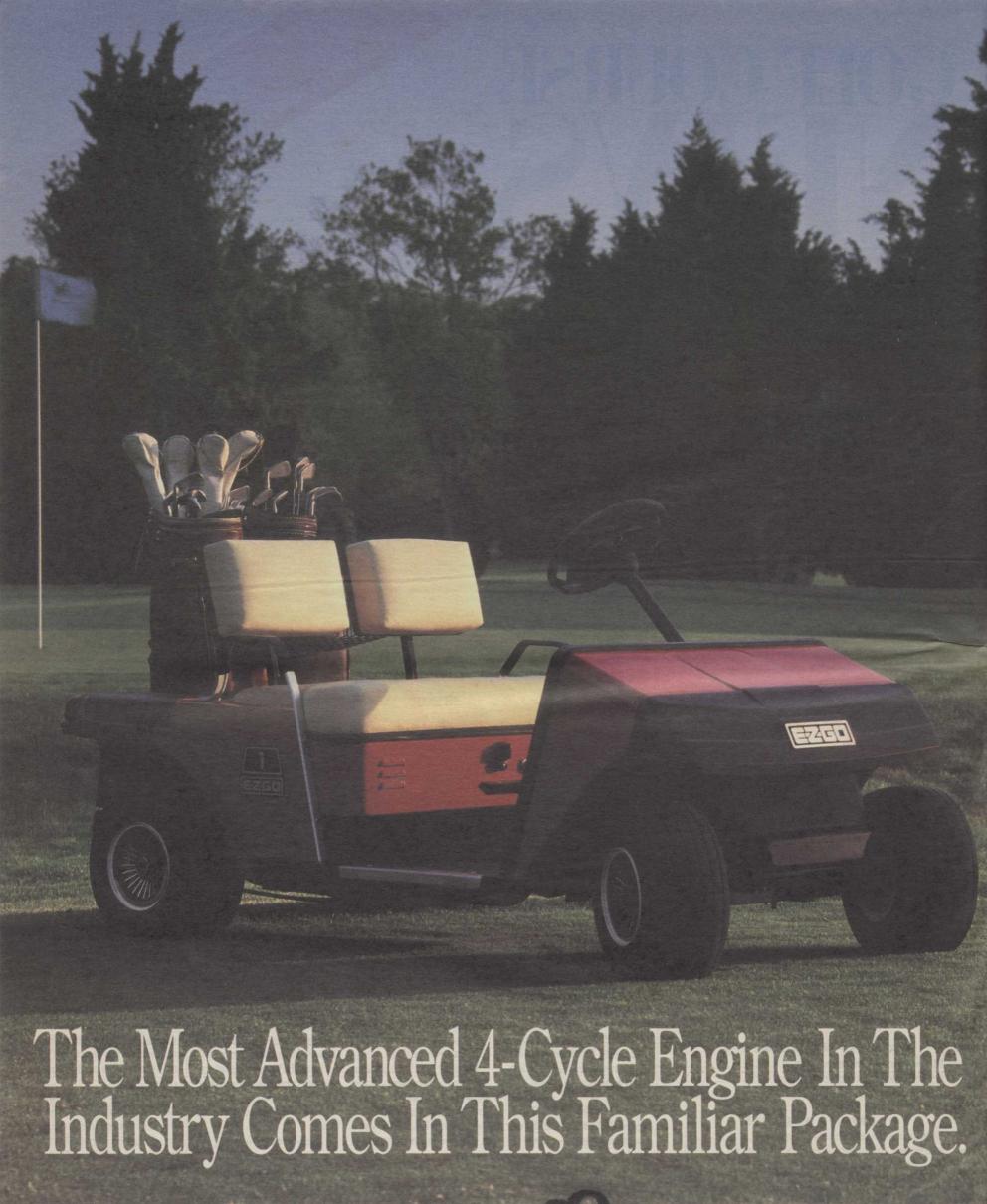
By Peter Blais

RIVERSIDE, Calif. — Water will continue to be in short supply for many years in California because of the six-year drought, increased demand from a growing population and environmen-

tal concerns, according to a Southern California water expert.

"We are going to see changes in our landscapes and maybe in our lifestyles if the shortages are severe enough and long enough," Coachella Valley Water District water management specialist Dave Harbison said during a recent water management seminar sponsored by the University of California, Riverside Cooperative

Continued on page 20



E-Z-GO has revolutionized the golf car industry. Again. We put the most advanced 4-cycle engine in the industry into our gas golf cars. It's a 295 cc, twin cylinder overhead cam engine that delivers 8.5 rated hp. And no other golf car on the market has it.

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Nuisance water studied as water source for Nevada

By Peter Blais

IAS VEGAS, Nev. — University of Nevada researchers are studying ways to use untreated nuisance water to irrigate turf in the water-strapped Las Vegas valley.

The reclaimed liquid could water as much as 3,000 additional acres of golfcourses and parks, according to researcher Robert Morris.

Nuisance water, Morris explained, is the salt-laden runoff from lawns of homes and businesses. Most of it collects in a perched water table 20 feet below the ground and travels west to east below the valley floor.

The water resurfaces in a wetland area of the eastern valley, before being dumped back into the Colorado River. Wetlands covered hundreds of acres before the recent development boom. The nuisance water has killed off all but about 12 acres, Morris said.

Still, grasses exist that could flourish in nuisance water, Morris noted. Some types of Bermudagrass can tolerate water with Electrical Conductivity levels (a measure of salinity) of 20 or more. The nuisance water's EC level ranges from nine to 15.

Some tall fescues also show promise of adapting to nuisance water, Morris added.

Theone-year study will determine whether grass irrigated with nuisance water can be maintained in golf-course condition.

"We want to see what it will look like and how it will have to be managed," Morris said.

Superintendents would likely have to use more nuisance than potable water since stressed turf irrigated with high-saline water is more susceptible to disease, Morris predicted. Drainage water would also have to be checked closely to make sure salts weren't left behind in the

La Crosse CC's members vote to pursue plan for \$6M course

LA CROSSE, Wis. — La Crosse Country Club members apparently will golf on a new course east of Onalaska in 1995.

Members recently voted to pursue the new course proposal at a cost of \$6 million.

Local businessman Charles D. Gellat gave 163 acres to the country club, along with \$1.5 million to help develop the course. He will retain the land surrounding the course and develop homesites on the property.

La Crosse residents last November revoked the country club's lease on city-owned land. The city must buy for \$1.5 million the existing course and facilities when it takes over in 1984.

Country club officials may request annexation to the city of Onalaska because of possible water and sewer problems.

coil

But if just half of the available supply proved useable, it would be a major payoff for Las Vegas developers, who have trouble obtaining construction permits when plans call for water taken from the Colorado River. Las Vegas is already using 280,000 of its 300,000 acre-feet-per-year allotment, leaving little for future golf course development, Morris said.

"For years, nuisance water wasn't considered to be worth



Robert Morris

the Nevada researcher said. "Our philosophy is, 'We've got this water, we can't get rid of it,

anything,"

so let's see what we can do with it.' Here's a possibility."

The Las Vegas Water District is funding half the \$140,000 project and the university the

emainder.

"The Water District has been great to work with," Morris said.

The state considers nuisance water a resource, despite its poor quality. Developers would need a permit from the state engineer before tapping it. But the cost would be minimal, Morris said.

Keeping the water in the eastern valley would be more cost efficient, Morris added. The 54hole Sunrise Golf Course sits directly over a pocket of nuisance water and would be an ideal user, Morris said.

Sunrise is converting from potable to effluent irrigation water, Morris said. Effluent costs about 70 cents per 1,000 gallons. The only cost of nuisance water would be pumping it out of the ground.

If courses turn their backs on nuisance water, no shortage of potential customers exists, Morris said.

"There's even talk of using it to fill canals that would be used to ferry visitors from casino to casino," he said.



CIRCLE #102

GOLF COURSE NEWS

Golf Course Europe lines up conference topics

Maintenance will be stressed more than past two events, say organizers

WIESBADEN, Germany — Golf Course Europe here Oct. 7-9 will feature 45 guest speakers who will outline the latest in design, construction, maintenance and management of golf courses.

While the official language for the management conference and greenkeeperworkshops is English, simultaneous translation into German is available.

Two special morning sessions will focus on confrontation with the

environmental aspects of building and maintaining golf courses in Europe.

Topics include golf course design, the role of the construction manager in golf course development, the master planning process-global examples, golf course marketing and public relations, environmental policy for golf in Europe.

Other sessions will discuss a range of topics from resort mas-

ter planning, trends in international golf resorts, model financial plan for a profitable public golf course operation, turning private golf courses public, golf for all, development of public golf courses in Germany, coping with heavy play, and "Golf cars: A debatable subject?"

Greenkeeper workshops will explore new products, new techniques in disease detection, breeding advances in bentgrasses for golf course microbiological lawn treat-

Also, soil productivity, turf development on today's new golf courses, non-turf type grasses for golf course use, greenkeeping management under future environmental legislation, common faults found on newly constructed golf courses, the Wentworth Estate environmental audit and practical aspects of golf course management.

Alaska project put out to bid

FORTWAINWRIGHT, Alaska—Bids will be open Aug. 9 for design and construction of the addition and renovation of Chena Bend Golf Course and clubhouse here.

Cost is estimated between \$1 million and \$5 million. The existing nine-hole course will be expanded and renovated to provide for an 18-hole regulation course.

The project also includes 800 square feet of unheated cart storage, a new irrigation system, parking and general site improvements.

Pebble Beach wins go-ahead to increase public play

PEBBLE BEACH, Calif. — The Monterey County Board of Supervisors has approved a plan to increase public play at Pebble Beach Golf Links.

In addition, new owners Cosmo World, a golf consortium based in Japan, may offer a limited number of advance tee times to future members of the Pebble Beach National Club.

Club members will be provided a two-hour block of time daily for starting time reservations. Members must also reserve a room at one of the resort hotels — The Lodge at Pebble Beach or The Inn at Spanish Bay — when reserving tee times. The reservations policy will not change existing policy for play at Pebble Beach.

Pebble Beach long has been a golf mecca and a California land-mark. The U. S. Opén will be held there in 1992.

Foreign designers at work in Japan

Golf in Japan continues to grow, and foreigners are wedging into the design field.

According to *Japan Golf Report*, of 85 courses opened last year, 11 were by non-Japanese designers.

Arnold Palmer was the designer for Kanegasaki in the district of Iwate and Aso Prince Hotel Golf Garden in Kumamoto, Jack Nicklaus for Oakmont Golf Club in Nara and Japan Memorial Golf Club in Hyogo.

J. Michael Poellot designed Caledonian Golf Club in Chiba and Imperial Wing GC Gold Course in Gifu. Other non-Japanese designers were Seve Ballesteros, who designed Seve Bellesteros GC Isumi Course, Fukushima; Robert von Hagge, Horai CC, Tochigi; Dye Design Office, Pete Dye GC VIP Course, Tochigi; Pete Dye, Olympic CC, Yamanashi; and Johnny Miller, Nara Wakakusa CC, Nara.

The 1,722 courses in Japan as of March 31, 1990, is an increase of 82 over 1989.

Introducing The Perfect



For overseeding low cut areas and establishing greens and tees, no other fertilizer provides the kind of coverage and nutrient distribution that Country Club 10-18-18 does.

It's All The Same.

When it comes to starter fertilizer, any turf manager worth his salt knows that homogeneous mixtures offer benefits that blends can't. Which is why every bag and every fine granule of 10-18-18 is exactly the same. Manufactured and tested under

the strictest quality control measures. Insuring uniform color and growth from start to finish.

Ratios That Result From Higher Learning.

In developing the ratios for 10-18-18, we went back to school. Extensive university research on soil and tissue analysis goes into every bag of 10-18-18. Along with lower nitrogen content for slower growth. More phosphorus for better seedling germination and density. And

4 August 1991

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String of 54-hole resorts foreseen in Ala.

Jones, Vaughan, ex-pro add expertise to state Retirement System plan for developments

Alabama is ranked 48th in the nation in public golf facilities. A key foursome hope to rocket the state from the bottom to near the top in 18 months via a string of 54-hole golf resorts running the length of

Courses are under construction in Birmingham, Huntsville, Auburn-Opelika and Mobile, and two more

are about set for launch.

Dr. David Bronner, chief executive officer of the Retirement Systems of Alabama, architect Robert Trent Jones, Bobby Vaughan, former director of golf at Tanglewood resort in Clemmons, N.C., and Bob Barrett, former pro at Shoal Creek, Birmingham, are the driving forces behind the courses to be marketed as the Robert Trent Jones Trail of Golf.

Barrett said, "A major course usually is on the board for 2-1/2 to three years, and in construction three more. We're doing it in 18

months, spending \$10 million to \$12 million at each site."

Retirement Systems is providing the financing.

Vaughan claimed Alabama has 10 percent of the country's natural resources, a perfect climate for golf and great interest in the sport.

Bronner added that most people don't understand that tourism is Alabama's No. 1 industry, and think it is a drive-through state for people on the way to Florida.

"Ifwe expand our attractions, they might stay in Alabama four or five nights," he theorized.

Courses unite in tee-time project around Ocean City

OCEAN CITY, Md. - The computer and four new golf courses in. the Ocean City area are making a neat match.

Acall to 1-800-4OC-Golf can book the golfer into a convenient tee time, probably at the course he most wants to play.

Letting the fingers do the walking beats early-morning dashes to a course usually jammed in the vicinity of the first tee.

The Beach Club Golf Links on Deer Park course started the ball rolling. River Run followed. Architect Gary Player conducted a clinic and played a round with sponsors and contest winners.

Eagle's Landing on Eagle Nest Road Drive opened with Tour pro Craig Stadler featured in a clinic and 18-hole exhibition.

The Landing layout perhaps should be known as "The Splash." Sixteen of the 18 holes have water.

The new Bay Club on Libertytown Road completes the new course foursome.

Bag For Greens And Tees.



more potash for hardier turf.

The end result—an agronomically sound product that delivers unprecedented performance.

Better Greens For Less Green.

While Country Club 10-18-18 is certainly not one of the more inexpensive fertilizers, it is exceptionally economical to use. Because of its homogeneous formulation, 10-18-18 covers a whole lot more ground than several bags of a cheaper blend. Which makes it ideal for maintaining as well as establishing turf. And with

10-18-18's WIN content, there's also less leaching and volatilization.

For more complete information about 10-18-18, contact your local Country Club distributor or call Lebanon Turf Products at 1-800-233-0628.

Then carry our bags around your course, and find just how much they'll improve your game.

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tees, video on 55-acre site FISHERS, Ind. — Tim Teague's

Inside-Out

features tiered

new Golf Inside-Out complex is in the middle of rapidly expanding golf

The proposed Hamilton Proper development, which will include a golf course, is a mile south; Joe Taylor's Stoney Creek Golf Course is less than five miles north; and the new Britton Golf Club a few miles

Two miles north, a Gary Player course is scheduled to open within the next two years.

Teague's 55 acres includes three acres of bentgrass tee box, 50 yards wide and three football fields long. The two-tiered teeing area can accommodate 120 players at the same

They can hit to greens with flags on them at varying distances, from a wedge shot to a full driver.

The teaching complex includes a 15,000-square-foot practice greens surrounded by sand bunkers.

Another 7,500-square-foot practice green is for putting.

Swings can be captured on videotape, played back and analyzed on the Golftek computer system.

A nine-hole, par 3 course adjacent to the teaching area is expected to open next spring.

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CCA subsidiary buys Gleneagles; cost undisclosed

DALLAS—GCC Asset Management Inc., a subsidiary of Club Corporation of America, has acquired Gleneagles Country Club in

Terms of the purchase were not disclosed.

Gleneagle, which opened in June 1986, has two 18-hole championship golf courses of Robert von Hagge-Bruce Devlin Design, 10 lighted tennis courts, a swimming complex and a 69,000-square foot clubhouse.

Irrigation Association lineup expert-studded

Bill Smith, vice president and senior quality assurance manager for Motorola's Land Mobile Products sector, will give the keynote address at the Irrigation Association's 1991 International Expo and Technical Conference in San Antonio, Texas.

In 1981, Motorola launched a drive for a tenfold improvement in quality of products and services by 1986. When Motorola achieved this goal, the company embarked on another campaign for a hundredfold improvement in the quality of products and services by 1991.

The ultimate goal is zero defects in everything it does and an overriding objective of total customer satisfaction. The company's efforts received national attention and Motorola was awarded one of the country's most coveted awards the 1988 Malcolm Balrige National Quality Award.

The International Expo will be held Nov. 10-13 at San Antonio Convention Center. Its theme is "Water — Enough for Tomorrow."

The Expoisthe only international

exposition and technical conference devoted exclusively to irrigation. Promotional co-sponsors for the conference include the Texas Turf Irrigation Association and Tulsa Irrigation Association.

Other featured speakers include Dr. Don Rice, director of the Thomas A. Read Center for Distribution Research and Education. He is also coordinator of the Industrial Distribution Program at Texas A&M University. Rice is well known as an educator in profit improvement techniques for distributors.

The conference also features two days of certification courses, a number of technical session, and the annual President's Reception and Banquet.

The Expo features 400 exhibits of the industry's products and services. The show kicks off on Sunday afternoon and runs through Wednesday. Participants will see live demonstrations and all the new product lines for the year.

For information people may contact Melanie House at IA headquarters at 703-524-1200.



Cliff Golf Course, an 18-hole public executive golf course has been sold to a San Francisco real-estate management and investment company.

The sale price for the course was not disclosed.

John Telischak, president of Telischak and Co., believes Deep Cliff is "one of the finest executive courses in Northern California and provides a very satisfactory golfing experience for nine out of 10 golfers. It is a beautifully designed and wellmaintained course that requires less time to play than those longer courses, and because the course must be walked, it is a serene and peaceful experience as well."

Mike Glasson and the Glasson family, owners of the course for the past 30 years, said Deep Cliff was their life for a long time, but the family decided to sell it and concentrate on other interests and investments.

Telischak & Co. has commissioned a San Francisco Golf Club consulting company to review all aspects of the course, clubhouse, operations and marketplace and recommend ways to improve the entire operation.

According to Telischak, "until we receive and study our consultant's recommendations, we are not contemplating any immediate changes in course personnel or operations.

County course to open in N.Y.

WARWICK, N.Y. — A 150-acre county golf course is set to open here next year.

Graham Skea, county parks and recreation commissioner, said golfer fees probably would pay off the \$2.02-million loan bonds on the course before the year 2010.

Skea added, "Golf enhances quality of life and usually provides permanent open space. I believe the new course will lure higher paying jobs to the Warwick, Goshen, Chester area south of Route 17."

Course designer was Hal Purdy of Saugerties.



Colorado high school golf team puts its muscle where its swings are

MONTROSE, Colo. — Golf course superintendents strapped with a budget crunch might consider the unique approach of officials at Montrose Country Club.

They tapped into the youth market — the Montrose High School golf team — to sod in one day a 2,700-square-foot practice green.

The cost? Tickets for Mark Knott, Angelo DeJulio, Dirk Jutton, Tate Brown and Heather Bateman to the International tournament, a PGA Tour stop Aug. 15-18 at Castle Pine Golf Club in Castle Rock, Colo.

The youngsters couldn't be happier, and Montrose Country Club pro Tom Carricato said, "If I had the same chance to do this again, I'd jump. The kids went well beyond the call of duty, took great pride in their novel hands-on experience, and see daily the results of their efforts."

Montrose had built a new clubhouse, and it became necessary to relocate the practice green. No budget provision had been made, and finding funds was unlikely.

Voters should decide issue, says official

GALVESTON, Texas — A stateforced election Aug. 10 should be used to measure the public's opinion on a proposed golf course at Jack Brooks Park.

That's the contention of local commissioner Wayne Johnson. He'd like the issue put on the ballot, at the moment a state constitutional amendment dealing with rural counties and county judges.

County Judge Ray Holbrook said if the golf course is put on the ballot, "we'd have to put on a whole bunch of other parks and ball fields we're spending money on, too."

Commissioner Billy Jack Pegues dismissed Johnson's request as "just another ploy." "He knows it takes months and months to pass any kind of bond issue."

Brevard County's 3rd course complete

VALKARIA, Fla. — The Habitat, Brevard County's third publicly owned golf golf course, won't be open for play until Nov. 1, but county and Chamber of Commerce officials recently toured the 6,800-yard layout in a sneak preview.

Expected to cost \$3 million, the par-72 course is being funded through a 1987 \$4-million bond issue that will be paid back through user fees.

All natural settings, including wetlands and scrub jay habitat, have been preserved. Deer and bobcat were observed during construction.

Charles Ankrom was the designer.

Dave Pemberton, director of Brevard County golf course operations, said it would take a few more months for the grass to grow in.

GOLF COURSE NEWS

Carricato huddled with Tom Briddle, a club official and Tectonic, Inc. executive based in nearby Longmont. Briddle suggested casting about for volunteer help, with emphasis on youngsters.

The high schoolers were eager to help, and were on the job at 7:30 a.m. The sod arrived two hours later, and the job was done just as darkness descended.

The land was very undulating, which made installation difficult, but problems were overcome in a nice mixture of zeal and ingenuity. Those testing the green the next day

Carricato huddled with Tom thought the ball rolled true and riddle, a club official and Tectonic, executive based in nearby Grass has come in well.

The fivesome won't be watching their prized project take further sharp shape in mid-August. They'll be 300 miles away, marveling as golf idols Jack Nicklaus, Lee Trevino, Hale Irwin and company draw birdie beads on putting surfaces the Castle Pine group would concede to be a bit better than their home-grown product. However, no new green ever received more enthusiastic or loving treatment.



Montrose High School students lay sod on Montrose Country Club green.

IF A TRUE-LINE PUTTING SURFACE IS WHAT YOU WANT— TRY Direct OF

Creeping bentgrass

With its superior true-line putting surface and dark bluish-green color, Putter creeping bentgrass is fast becoming the choice of some of the finest courses around.

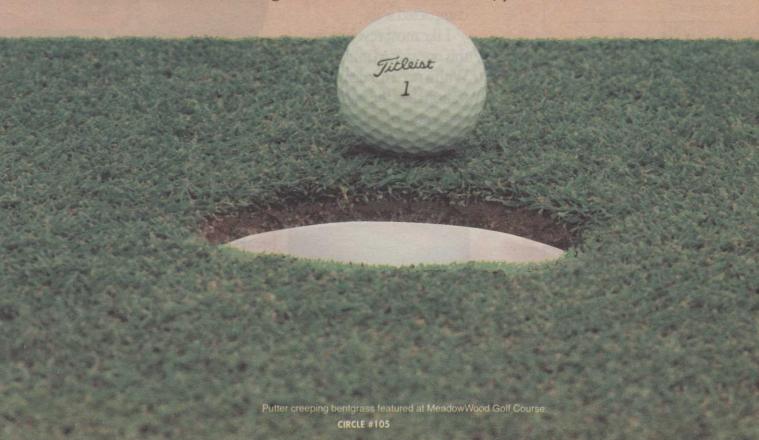
Tested side by side with the best-known bentgrasses, Putter exhibited superior color and excellent growth habit. With outstanding turf vigor, fine-leaf texture and improved resistance to take-all patch and other diseases. Add Putter's dwarf growth habit, high-shoot density and aggressiveness against Poa annua, and you have a green that's as tough as it is beautiful.

Not to mention one that satisfies your straightest shooters.

Put Putter up against the old favorites and compare. Putter quality #1. Putter density #1. Putter color #1. Putter disease resistance #1. Now, order Putter for the new world-class greens.

The Green See marks Putter for the new world-class greens.





EPA officials urge environmentally 'user-friendly' projects

U.S. Environmental Protection Agency official said America's golf industry must work with environmental authorities to seek "win-win solutions" that will ensure the game's growth is not inhibited by concerns about development, pesticides and water usage

Lewis Crampton, EPA associate administrator for communications and public affairs, told a group of golf industry officials here on June 24 that "golf is doing a number of positive things, (but) if the industry is going to continue to grow, golf courses have to be environmentally friendly places.'

He cited cooperative efforts by the EPA with the Golf Course Superintendents Association of America, including public education campaigns and efforts to reduce pesticide usage, as evidence that golf is "on the right course."

GCSAA President Stephen G. Cadenelli said, "It's only natural that golf course superintendents be leaders in environmental steward-

He noted that the association has worked for years to ensure that the public and government understand how golf courses are managed to prevent negative effects on the environment.

Larry Turner, project manager for the EPA's endangered species program, outlined the final draft of the long-delayed project. It will rely on county bulletins that feature maps showing areas where an endangered species is present and outline restrictions on chemical use in and around these areas. Chemical labels will instruct applicators to consult the county bulletins and abide by their restrictions.

Turner said a number of states have begun "state-initiated" plans to localize the endangered species regulatory process. He said although EPA can not turn over complete authority to the states, it has permitted them to enter into "landowners agreements" with sites like golf courses.

Son-in-law buys Westwood GC in auction sale

WOODBURY, N.J. - For more than 30 years, Westwood Golf Club was under popular assault by golfers in the suburban Philadelphia and southern New Jersey areas.

The 18-hole, 120-acre course recently went under the auctioneer's hammer, It was sold for \$3.75 million to Ken Vogt of this city. Vogt is married to the daughter of the original owner.

Going the auction route for such a transaction no longer is unique. A spokesman for Philadelphia-based Traiman, which claims to be America's foremost real-estate auction organization, said it was the eighth golf course they've awarded to the person with the highest dollar scorecard.

Kathy Kronopolus of the EPA's office of pesticide programs said prevention of ground water contamination is emphasized because remediation (treatment and cleanup of ground water) is much more expensive.

"The prevention policy includes promoting the use of 'safer' chemicals, non-chemical pest control alternatives and environmentally sound agricultural practices," Kronopolus said.

She added that the EPA will help states develop strategic management plans to accomplish these and other ground water protection and develop integrated pest mangoals, but cautioned that "the bottom line is that the user will continue to be responsible for pesticides in the field.'

Charles T. Passios, course superintendent at Hyannisport (Mass.) Country Club, pointed to a number of ways that golf and golf course superintendents have developed and implemented strategic plans to achieve ground water protection.

"I think golf's willingness to participate in research projects like the Cape Cod Study (on ground water)

agement programs shows that superintendents want to do the right thing. The results reflect a good job in managing pesticide use," he said.

Passios said, "Incorporating wetlands into the design of golf courses is one answer to the wetlands problem. However, clarifying the definition of what is or isn't a wetland would greatly assist in the protection of true wetland areas."

Congressman Jimmy Hayes (D-La), sponsor of House Resolution 1330, the new wetlands bill, blasted existing wetlands regulations and

the new delineation manual.

"Something as important as a national wetlands policy should not be written by a half-dozen people without public debate as a draft (amendment) to a 20-year-old water bill," said Hayes.

The present wetlands policy, according to Hayes, is confusing, unclear and might not let landowners know for years whether they are in violation of a wetlands law.

Under the Hayes bill, value and functional use would determine which of three classifications a wetland site would fall under.

Most Re Start Uno

You already know that aeration is a must for healthy greens.

But you may not know there's a new aerator that provides significant agronomic benefits without disturbing the surface. Or even disrupting play.

Meet Toro's revolutionary HydroJect™ 3000. The only aerator that injects water at high velocity to penetrate compacted soils.

Like most revolutions, this one started underground. With a need for deeper penetration than the normal 3" by conventional core aerators. We designed the HydroJect 3000 to penetrate 4" to 6", and beyond 20" if needed. A decided coup for



No disturbed turf. No disrupted play.

Andit breaks through compactive layers for better infiltration.



Hospitality buys share in company from Hong Kong

DALIAS—ClubCorpInternational has sold its 50-percent shareholding in a Hong Kong corporation to Hospitality Management International Ltd. in order to concentrate on activities in the Pacific Rim.

In addition to ownership and management of city dining clubs, Club Corp will expand through ownership, joint ventures, management and consulting of private country clubs, public golf courses, athletic clubs, golf resorts and their surrounding real estate developments.

Glade Springs resort goes on auction block

Guaranteed seller financing part of the bargain for July 29 sale

BECKLEY, W.Va. - The 3.850acre Glade Springs Golf Resort Development & Conference Center was to be sold at absolute auction on July 29.

The auction was conducted on site at the resort.

Miami-based Auction Co. of America planned to sell the property to the highest bidder regardless of the price. There was guaranteed seller financing on the property with the following terms: no qualifying, 20-percent down, 20-years amorti-

zation, two-years balloon, 11-percent interest, no points and no closing costs.

The Glade Springs Golf Resort amenities include an 18-hole championship golf course with a clubhouse and restaurant/ lounge, pro shop and locker rooms, 64 executive suites, 33,000square-foot conference center with seating for up to 400 persons, indoor and outdoor tennis-racquetball courts, a swim club with an Olympic swimming pool, and

an equestrian center.

In addition to the resort facilities, Glade Springs features an existing community of homes, townhomes, condominiums and home sites along the golf course.

The Glade Springs Development has already cleared an additional 18-hole golf course which would enable the buyer to use if for additional development.

The community also includes 120 acres of plotted lots and large tracts of land ready for development.

Science's role in EPA decisions studied by panel

EPA Administrator William K. Reilly has convened an expert panel to evaluate the role of science in the agency and report recommendations this fall.

Its purpose is to provide independent advice and counsel to the EPA administrator on how best to integrate current objective scientific information into the process of EPA policy development and decision-

Panel members are Raymond C. Loehr of the University of Texas;, Bernard Goldstein of UMDNJ-Robert Wood Johnson Medical School in Piscataway, N.J.; Paul G. Risser of the University of New Mexico; and Anil Nerode of Cornell University.

Mexico loans Koll Int'l \$55M for resort projects

LOS CABOS, Mexico - The Mexican government has loaned \$55 million to Koll International of Newport Beach, Calif., to develop posh Los Cabo resorts designed by Jack Nicklaus

Though the 900-acre Palmilla and 1,800-acre Cabo del Sol resorts are on Mexican soil, they will be owned by Koll International.

Both resorts will be among the few courses in the world with both ocean and desert views.

Koll's investment value, estimated in excess of \$1 billion, could create thousands of jobs.

Course OK'd; will help farm, add open space

MIDDLEFIELD, Conn. Lyman Farm, Inc. has received the go-ahead to build a second 18-hole golf course at Lyman's Meadows.

Howard Carlson, who with Marion Lazor and Charles Ziminski as Inland Wetlands Commission members voted in favor of the project while two members dissented, said, "It keeps open space, increases the economics of Middlefield and keeps the farm viable." He also noted that the golf course would protect land along the Coginchaug River.

Of the 145 acres to be used for the golf course, approximately 45 acres are classified as flood plain and wetlands.

Minn. Indians propose course

TOWER, Minn. — The Bois Forte Indian Reservation plans a \$20 million expansion of the Fortune Bay gambling casino near Lake Vermilion in northeastern Minnesota.

Expansion plans include an 18hole golf course. Construction will begin in the summer of 1992.



causes less injury to the grass. Result? Deeper roots, as confirmed by four years of independent research at Michigan State University. This should lead to healthier, stronger turf. No more cores either. Or

This means greens dry faster after

rain or irrigation. And it

paying a crew for Hydrofect 3000 cleanup and topdressing. Just one operator is required. These savings can cut your aeration costs dramatically. And, best of all, your golfers can play without delay. Think how much that can mean in minimal loss of greens fees.



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Butterfly may stop \$50M project on California coast

WEST MARIN, Calif. — A 36 hole, \$50 million golf course and resort along the rocky Marin coast may not take wing because of the Myrtle's silverspot butterfly.

Marin Coast Associates seeks county approval to transform the rocky coastline, now an overgrazed pasture accessible only to a herd of sheep, into a first-class golf club.

Besides a golf course, the project embraces a 200-room lodge, conference center and restaurants.

The Myrtle's silverspot butterfly,

which could land ever so gently on the federally protected rare and endangered species list, has been found on large portions of the 1,254acre site north of Dillon Beach eyed by the developers. If the butterfly makes the endangered list, large portions of its habitat could be restricted from development.

Developers say they could redesign the project around the butterfly — or even move its habitat.

Plans are to routinely close the course so sheep may graze there.

Voters approve bond for course

O'FALLON, Mo. — City residents recently approved a no-taxincrease bond issue for up to \$7.3 million to fund construction of a proposed 18-hole, par-72 course.

To be built on a 150-acre tract, the course would include a driving range, clubhouse and restaurant.

Amarket study had indicated that fees, in addition to income from the pro shop and concessions, would bring in \$1,454,550 in gross revenue by the third year of operation against expenses of \$799,910, for an annual net income of \$654,640.

Developer fined \$2,500 for draining bog, other work

MESICK, Mich. — Developer Paul Guthrie has paid a \$2,500 fine for allegedly violating several environmental laws last year on his Briar Valley Golf Course here, but he remains at loggerheads with the state Department of Natural Resources and the courts.

He was scheduled to respond July 26 to a court order charging failure to comply with terms of his course permit.

Chief among "numerous violations" on the golf course project, according to DNR water quality specialist Stu Kogge, is failure to restore a 10-acre bog Guthrie converted to a small lake.

Kogge said, "The bog drained underground to the headwaters of a top-quality trout stream, Burkett Creek, and the damage to the creek and the bog have been really horrendous."

Guthrie opened the first nine holes of his Briar Valley course last year and converted the bog to a lake over the past several months in the process of developing another nine holes in what Kogge claims was a "blatant disregard" of environmen-

Greenman Group picked for project

JOHNSON CITY, Tenn. — The Greenman Group, Inc., of Hollywood, Fla., has been selected to create a new public golf course and adjacent residential community here.

Greenman will assist the city in defining the parameters and overall scope of the project and coordinating the land development process. It also will help facilitate recruitment and supervision of the development team. Robin Miller will be development manager.

The city's lone golf course, Pine Oaks, generates 65,000 rounds annually. Demand for golf course time here is expected to accelerate dramatically in the next decade.

UST topic of firm's new newsletter

EXTON, Pa. — A subscription to a newsletter on the latest developments in secondary containment of underground storage tanks and piping is available free.

Published quarterly, *Total Solutions* contains news about secondary containment products as well as general news, including updates on EPA regulations and upcoming trade shows

Total Solutions is published by Total Containment, Inc., supplier of secondary containment systems for underground storage tanks and piping. For a free subscription, contact Total Containment, Inc., 306 Commerce Drive, Exton, Pa. 19341; 215-524-9274.

Course would replace home plan

SAN MARTIN, Calif. — A San Mateo firm that a year ago abandoned plans to build luxury homes in the Hayes Valley near San Martin now wants to put a golf course in the scenic valley.

The 170-acre golf course, proposed by H-R Development Partners, would run practically the length of the valley floor.



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Guide.



Interns man five positions for summertime at USGA

gional Internship programs. A pre-

med student, Smith enters his se-

nior year at Hampton University, in

USGA's Operations/Technical De-

partment. He is scheduled to

graduate in 1992 from the Amos

Tuck School of Business Adminis-

tration at Dartmouth College. After

graduating with honors from

Dartmouth in 1988, Watson worked

as a financial analyst with Merrill

Watson, 25, was assigned to the

Virginia, this fall.

FARHILLS, N.J.—The U.S. Golf Association has had five Howard Creel Fellowship Award recipients working at its office this summer. Bill Anderson, Ross Catlin, Nathan Robbins, Cedrick Smith and Richard Watson have all been working asinterns in various departments of the USGA.

Financial support for this USGA Internship Program, now in its second year, is assisted by the Howard Creel Foundation to foster sportsmanship in golf in an environment where aspiring future sports administrators can develop a strong appreciation for the game.

Anderson, 23, a recent graduate of Ohio University's Sports Administration Masters Program, is working in the Communications Department, assisting with media relations and with Golf Journal, the USGA's magazine.

Catlin, 26, is scheduled to graduate from the University of North Carolina at Chapel Hill with a master's degree in business administration next spring. He has been working with the Rules and Competitions Department.

Robbins, 22, is working in the USGA's Membership Department. Hehas recently graduated from the University of Maine with a degree in speech communication, and brings an interest in public relations.

Smith, 21, is assisting the USGA Foundation in a variety of areas, including its Junior Golf and Re-

Developer scrubs plans for resort, eyes golf course

CONCORD, N. H. — Developer Barry Stem has dropped plans for a resort hotel and conference center on Broken Ground, focusing instead on his original plan of an 18-hole golf course and more than 500 luxury homes.

Next spring, Stems wants to begin construction on the new golf course, which he hopes to finish by July 1993.

Hayward GC debate continues

HAYWARD, Calif. — The debate over the development of Hayward Golf Course continues.

A revised environmental report and a Planning Commission review must precede City Council deliberations. The last action would give the public a chance to voice pleasure or displeasure concerning the 108acre site.

At the moment, the future of the golfcourse site remains as uncertain as it was in 1986, when property owner Marian Mohr Fry closed the operation.

The property has been controversial since 1985, when Fry proposed putting 3,400 apartments or condos on the site.

condos on the site.

GOLF COURSE NEWS

Grand jury lauds city's funding of course

WASCO, Calif.—The city's role in money spent in construction of a golf course received high marks from a Kern County grand jury, but its report was critical of the media and the public.

Answering questions raised about taxpayers' funding of the golf

course, "the report stated," The financial risk to Wasco taxpayers is zero, and the \$8.8 million used for construction of the golf course put private investors 'completely at risk in event of a bond default.'"

The report said the local media

should attempt to inform the public and be a catalyst in improvement of information available to the public.

The public, it added, must get involved in government, should attend meetings, ask questions and be a part of the process.

Brae-Burn CC renovates on 60th birthday

HOUSTON, Texas—Brae-Burn Country Club recently had its 60th anniversary party, conspicuously absent of course swings.

The course has been closed

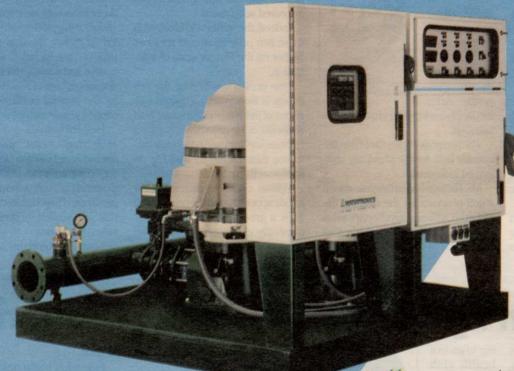
since January for a total re-design. Completion date has been pushed back to November because of 42 inches of rain since January.

Course re-design, not including

clubhouse refurbishing, will cost \$2.1 million.

A new lake has been built and three others enlarged. All tees and greens have been rebuilt.





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News coverage to be expanded in '92

It's hard to believe that summer is half over and we're working on fall issues and planning for 1992. Just the other day, registration forms for the GCSAA showed up! In case you haven't received yours, dates are Feb. 10-17, 1992, in New Orleans, La.

I recently met with our editors to plan our editorial features for 1992. I can assure you Golf Course News will expand our editorial coverage into some exciting new areas. The editorial features appear monthly and I will share the upcoming schedule as soon as it is finalized.

Since my last column appeared, I've had some interesting travel, meetingnew



Charles von Brecht

business leaders along the way. A good part of the time was spent in the Northwest at two field day events. (Our editorial staff cover a few of those events on page 47.)

This was my first full exposure to these educational and fun events. Both events I attended at Jacklin Seed and Turf-Seed were well attended and good learning experi-

A highlight of Jacklin's field day was Dr. Eliot Roberts' eloquent oration on turfgrass. The gist of the talk was comparing the environmental stability of grasses to trees. As Dr. Roberts suggests, "turf grasses indeed do stand tall among the trees." If you have not heard or read of Dr. Roberts' research, you should contact him at the Lawn Institute in Pleasant Hill, Tenn.

No doubt, the highlight at Turf-Seed was Dr. Bill Meier. Through a steady rain, Bill conducted a tour through acres of grass as though the sun were shining brightly. I look forward to attending these events again next year.

Recently, I've had a couple of letters in response to items in this column. Please call or write if you have any comments, questions or criticisms.

'Oneself' gives way to 'others' at two facilities

At a time when "oneself" is often one's favorite person...

At a time when "self-serve" has replaced "a helping hand"...

At a time when the popular magazine of the day has evolved from the '50s' Look to the '60s' Life, '70s' People, '80s' Us to today's Self...

At a time when newspapers are filled with stories of people pushing their own agendas at any cost—lying and terrorism notwithstanding...

At a time like this, it is refreshing to see the selflessness of some in the golf industry, the community in Akron, Ohio, and of one lady in Arkansas.

Edwin Shaw Hospital in Akron opens a golf facility for the physically challenged on Aug. 21 after three years of planning.

Retired Navy nurse Shirlee Hicks on Sept. 1 will then open Golf for Life, a practice facility in Berryville, Ark.,



for people undergoing physical rehabilitation.

The two projects are the first in the country built for the physically challenged individual.

Ms. Hicks, who just this year started a golf program for the deaf for the LPGAin California, saysher Arkansas creation targets a person's body, soul and spirit.

She and the therapists and officials at Edwin Shaw agree a handicapped person who can play the game has improved self-esteem.

Indeed, the spirits of all involved in these two projects should measure higher on the Richter scale of satis-

One person gratified by the two efforts is Bob Wilson, executive director of the National Amputee Golf Association. He called the two efforts "pioneering" and said he was anxious to see their playability and the response of the public.

Wilson conducts clinics for the handicapped around the country and finds a group of golfing hopefuls/ physically challenged wherever he

Accolades in this scenario should go to Ms. Hicks, who has gone the distance on her own - no outside financial backing and no partners. They should also go to the many who helped Edwin Shaw Hospital complete a project that includes a three-hole course and a masterful 15-acre practice range, both of which can be used by the general public when handicapped people are not booked.

Helpers from the golf industry include Wadsworth Construction Co., the builders; Hurdzan Design Group, the course architect; LESCO, Inc. and Commercial Pump, who donated their products. They donated everything that was needed - giving of themselves for others.

That's unique in this year 1991.

Truth doesn't get in the way of 'toxo-terrorists'

(Editor's note: A report substantiating information put forward in this commentary accompanies on pages 13-14)

By Tim Hiers

When the Trojan horse was wheeled inside the fortified walls of Troy, the inhabitants of Troy perceived it as a gift. It was a tragic misperception that cost them their freedom and their lives.

Today, perception plays a key role in society's decision-making. We are simply too busy (or think we are) to seek out the facts. Decisionmaking by perception makes our society vulnerable to those who want to promote their own agenda by manipulating perceptions.

Many Americans perceive that pesticides are a great cause of cancer and death in this country. Yet science (without politics) is telling us something vastly different. The average life span in the United States is approaching 76, while in the year 1900 it was 47.

Are we living longer because we eat more organic food? No, we ate more organic food 91 years ago. Today it's Pizza Hut and MacDonald's.

Is it because we exercise more? No. Could you imagine a farmer after 10 hours plowing fields needing to go to a health club for exercise some nine decades ago?

I believe technology, including medicine, and properly



used pesticides are the primary reasons Americans are living longer. Our society, especially a good majority of those under the age of 50, takes many things for granted.

American journalist Harry Golden once commented: "The arrogance of the young is a direct result of not having known enough consequences. The turkey that every day greedily approaches the farmer who tosses him grain is not wrong. It is just that no one ever told him about Thanksgiving."

If we were to severely reduce or eliminate pesticides, our future Thanksgivings might be greeted by malaria, yellow fever or starvation due to crop failures.

Unfortunately, we have developed a dangerous habit of criticizing and obstructing the very tools that have actually improved the environment and our quality of life.

An old Spanish proverb succinctly states the danger of obstruction: "Habits are first cobwebs and then cables."

Samuel Johnson took it a step further, saying, "The chains of habit are generally too small to be felt until they are too strong to be bro-

How did we get into this habit of worrying about pesticides while America is being ravaged by drug abuse, child abuse, poor education, crime, alcohol, etc.?

Strong evidence and documentation exist that reveal almost invisible, small, well-organized, effective and powerful ideological groups who have orchestrated and perpetuated this negative pesticide perception on the American people.

Originally, this group consisted ofremnants of the 1960s movement, Marxist/socialist college professors, the media and other anti-capitalistic and anti-Western radical factions. Today, this real cancer permeates some key government positions, a large number of our university students and is even being promoted in our lower grade systems. (Read Herbert London's "Why Are They Lying to Our Chil-

These subversive groups are willing to use any device — whether it be deception, coercion, manipulation or lying - to achieve their

agenda.

For lack of better definition, I will refer to them as pseudo-environmentalists, or p.e.'s.

Peter Meadows, of Australia, has dubbed them "toxo-terrorists."

They attempt (and have been successful at large) to appear to be environmentalists, but in reality they represent America's modern-day Trojan horse

Their goals and agenda are fairly simple: Use the environmental movement as a hidden tool to promote socialism or Marxism and to bring capitalism down through the

Let me clarify, this does not refer to all environmentalists - only those with ulterior motives.

It has been said: "The most dangerous untruths are truths moderately distorted." This is where the p.e.'s excel.

By using fear, distorted reports and lack of public knowledge, they can fool our government and its agencies into making counter-productive decisions. These same p.e.'s publicly renounce big government and its intervention in our lives while supporting legislation to increase the size of government and its control of private industry.

I believe there are six key steps

Continued on page 14

Publisher

Charles E. von Brecht

Editorial Director Brook Taliaferro

Managing Editor Mark A. Leslie

Associate Editor Peter Blais

Contributing Editors

Kit Bradshaw Vern Putney Bob Spiwak

Editorial Advisory Board

William Bengeyfield Dr. Michael Hurdzan Hurdzan Design Group James McLoughlin The McLoughlin Group Brent Wadsworth Wadsworth Construction

Production Manager Joline V. Gilman

Circulation Manager Nicole Carter

Editorial Office

Golf Course News PO Box 997 38 Lafayette Street Yarmouth, ME 04096 (207) 846-0600

Advertising Office National Sales: Charles E. von Brecht

Marketplace Sales: Simone M. Lewis

Golf Course News 7901 Fourth St. North Suite 311 St. Petersburg, FL 33702 (813) 576-7077

West Coast Sales

Wayne Roche James G. Elliott Co. 714 W. Olympic Blvd. Suite 1120 Los Angeles, CA 90015 (213) 746-8800

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Push for hurry-up golf on par-3 courses could lead to hazards, suits

To the editor:

As a preface to my criticism of your "Publisher's Note" in the July issue, let me state that you have a top-notch publication which has long been needed in the golf industry.

Your suggestion that all par-3s have signs to alert players on the tee to hit before the players on the green putt out attempts to cure one problem (slow play on the green) by creating another one (potential liability for course operators).

In the era of "cart-ball," it does seem logical that a group would drive up to the back of the green, signal the next group to hit, go to their balls and wedge and/or putt out while that group is driving up (hopefully in electric rather than gasoline carts) and proceed to the next tee. But logic does not always address complexity in the real world as we find it.

Par-3s come in a variety of lengths, greenside bunkering, solar orientation and wind conditions. Not everyone standing in back of a 200-yard par-3 waiting for the following group is going to see a high shot on a cloudy day or if that shot is coming from the

same direction as the sun.

When a player is hit by a ball and is injured, the golf course operator becomes potentially liable for having encouraged, by the sign, the shot to take place, grossly and negligently disregarding the contra-indicative conditions.

The sign you recommend is the evidence of the course operator's wanton disregard for the safety of the guests he or she has invited onto the course (at a fee, of course).

Obviously, attorneys will differ on this subject (and many of them are golfers, and no two golfers ever agree on anything...), but it seems that prudence would dictate that no course operator expose his or her players to the hazard of being shot at by a golf ball while standing in back of a par-3 hole. There are enough crazy things that happen on a golf course without encouraging an additional risk of this sort.

I don't have a solution, except to tag on to your general plea for education on etiquette of the game and the need to fight slow play. The "allow faster players to play through" concept is at least as widely disregarded as

the U.S.G.A. Rule to play the ball as it lies. I would even guess that playing through is much more likely to occur on a par-4 or par-5 (when someone is in the woods looking for a lost ball) than on a par-3.

With that in mind, one can only question what is to be gained by interrupting the front group's play of a par-3 hole (i.e. directing a slow group to wait for the group behind so they can get closer but not through).

It is difficult to attack slow play, and your implicit premise that most delay occurs on the greens is valid. It is also unlikely that golf in the United States (even with a pre-qualification that all golfers must be Type A personalities) would ever get to the "fast play" standard in countries like Ireland and Scotland, where three-hour rounds are the rule, and playing through is automatic if you hit one in the high grass.

Again, I enjoy your publication very much, but thought that it would be useful for you to have this minor but important criticism.

Sincerely, David L. Collins San Mateo, Calif.

Equal treatment in design coverage

To the editor:

Iwanted to thank you for your article, in the June issue of *Golf Course News*, about our project in Mexico.

We appreciate the fact that you gave us equal space with the articles about the Nicklaus and Dye projects. You have been equally fair with your coverage in past issues.

After working seven years for Tom Fazio, I feel we can design excellent courses. But many other (not all) magazines will give us little or no mention, whereas they give the big names, who don't need the publicity, large articles about projects that may be two years in the future.

Your magazine is different, and we definitely appreciate that fact. Keep up the good work

Sincerely, Stephen R. Burns Fernandina Beach, Fla.

Please address letters to: Letters to the editor, *Golf Course News*, P.O. Box 997, Yarmouth, ME 04096.

Facts, notes and quotes that shed light on the battle over the environment

The following are taken from the files of Tim Hiers, who wrote our guest commentary on the opposite page.

The fear factor

"How extraordinary: The richest, longest lived, best protected, most resourceful civilization, with the highest degree of insight into its own technology, is on the way to becoming the most frightened."

— Aaron Wildavsky,

University of California at Berkeley

Neil Orloff, director of Cornell University environmental research, has proposed three psychological reasons why Americans fear pesticides. First, there is the emotional need to find a scapegoat for dreaded diseases, like cancer. Secondly, there is the ingrained belief that nature and its products must be essentially pure and welcome. Thirdly, there is a pent-up need to lash out at big business to release our frustration and resentment.

Truth bears witness

"It now takes only 11 percent of the average citizen's disposable income for food compared to up to 50 percent of such income in much of the rest of the world."

- American Agri-Food producers

"Pesticides have been used in substantial amounts for nearly 50 years, and there is **no** evidence from analysis of cancer patterns that pesticide residues are responsible for **any** cancers in adults or children."

— Dr. Elizabeth Whelan

"Alar, a manmade plant growth regulator, causes cancer in mice; but only at levels 4 million times greater than any human exposure."

— Dr. Elizabeth Whelan

"If you do nothing with rats or mice, 10 percent will get cancer. Now consider the massive dosages they're given."

— Tim Hiers

"What is there that is not a poison? Only the dose makes a substance a poison."

— Paracelsus (Swiss-born alchemist and physician)

Torturing numbers

Ave. annual incidence of lethal poisonings in the United States

For	From	From
the Year	Agri Chemicals	Other Substances
1970	44	5299
1971	43	5313
1972	38	5380
1973	32	5302]
1974	35	5499
1975	30	6241
1976	31	5699
1977	34	4936
1978	31	4741
1979	29	4608
1980	24	4331
	— Agri-Cl	nemical Magazine

"Torture numbers, and they'll confess to anything."

- Gregg Fasterbrook

How much is that, anyhow? One part per million equals:

- one inch in 16 miles;
- one minute in two years;
- one cent in \$10,000.

One part per billion equals:

- one inch to a 16,000-mile trip;
 one bogey to 3.5 million golf tournaments;
- one second in 32 years;
- one cent in \$10,000,000.

One part per trillion equals:

- one flea to 360 million elephants;
- one second to 320 centuries;
- one penny in \$10,000,000,000

Will the real motive please step forward?

"The history of DDT and particularly the events leading to its banning make fascinating reading. One is left with a number of unanswered questions about why the environmentalists were so enthusiastically anti-DDT. Dr. J. Gordon Edwards makes an impressive case to the effect that some of those pushing for the DDT ban had some rather questionable motives, specifically, the banning of a lifesaving chemical as a means of

human population decimation.

"Edwards quotes environmentalist LaMont Cole: To feed a starving child is to exacerbate the world overpopulation problem."

"He writes that during a debate in San Francisco, Dr. Van den Bosch, from the University of California, chided him about his concern for 'all those little brown people in poor countries.' Dr. Charles Wurster, chief scientist for the Environmental Defense Fund, responded to a reporter's question by stating that there are too many people and 'this is as good a way to get rid of them as any,' referring to the banning of DDT. His comments caused attorney Victor Yannacone, an early opponent of DDT, to resign from the Environmental Defense Fund in disgust."

—Dr. Elizabeth Whelan in "Toxic Terror"

"Actually, the problem in the world is that there are too many rich people. The birth of a baby in the United States is something on the order of 20 to 100 times more disastrous for the life support systems of the planet as the birth of a baby in poor countries like Bangladesh or Venezuela."

- Paul Ehrlich, Stanford University

"It may be time to view the faults of the United States capitalist economic system from the vantage point of a socialist alternative."

Barry Commoner, biologist,
 University of St. Louis

Media & fabrication

"Speaking on the environment, Charles Alexander said, 'As science editor at Time, I would freely admit that on this issue we have crossed the boundary from news to advocacy.'"

"Boston Globe environmental reporter Dianne Dumanoski is often quoted as saying, 'There is no such thing as objective reporting... I've become even more crafty about finding voices to say the things I think are true. That's my subversive mission.'

"Barbara Pule, environmental editor for Cable News Network, said, 'I do have an ax to grind. I want to be the little subversive person in television.'"

- Insight magazine

"I was particularly interested in understanding the role of the press in disseminating a group of major myths in which environmental cancer is now embedded. The manipulation of the press by scientists, above all by some government scientists, has been so severe that the issue that should concern us is the manipulation, not the press."

— Edith Efron

Science or politics?

"George Wald, professor of biology at Harvard University, in addressing the environment, explained that the solution was not scientific but political and it would be necessary to reorganize society."

— The Apocalyptics

Internal memo from the EPA:

"Our priorities (in regulating carcinogens) appear (to be) more closely aligned with public opinion that with our estimated risks — and with scientific evidence."

- Imprimis (Hilsdale College magazine)

"Jimmy Carter had professed himself an admirer of Ralph Nader and had hired a group of Nader's lieutenants for top regulatory positions."

— The Apocalyptics

"What one learns above all, is that the government has systematically fed the public the views of one faction in the academic world, while the views of others have been largely withheld."

— Edith Efron

"A small but vociferous minority in North America is effectively stopping the use of vital agri-chemicals, not always on the basis of scientifically sound health and safety concerns, but often to forward the lifestyle, world view and political goals of anti-pesticide activists, thereby diverting precious time, money and the public interest from legitimate questions of safe and beneficial pesticide use."

Ron Arnold (in "Politics of Environment")

"Any movement or cause that requires a deception, coercion or other devices as fuel for propulsion is a movement that is inherently wrong and historically doomed to fail."

— Tim Hiers

Hiers comment

Continued from page 12

toward bringing a scientific and balanced view toward pesticides and golf courses in general.

1) Know the p.e.'s plan.

Can you imagine a major college football coach and his associates not taking the time to study game films of their next opponent, or a general planning a major attack without the benefits of surveillance or intelligence?

For years, we in the golf industry have addressed every issue except the p.e.'s who have unjustly attacked pesticides and golf courses. Until we address this problem rather then its symptoms, the battle will continue to be a losing one. The p.e.'s, once understood, are fairly easy to identify: anti-capitalistic, anti-technology, pro-socialist, pro-distortion,

The real versus the perceived

The following list of 30 hazards were ranked by Decision Research - and reported in the February 1982 issue of Scientific American) in terms of perceived risks according to several test groups, and by actual risks based on scientific data:

- smoking
- alcoholic beverages
- motor vehicles handguns
- electric power
- motorcycles
- swimming
- surgery
- X-rays 10. railroads
- 11. general aviation

- 12. large construction
- 13. bicycles
- 14. hunting home appliances
- 16 fire fighting 17. police work
- contraceptives
- 19. commercial aviation 20. nuclear power 21. mountain climbing

- 22. power mowers 23. scholastic football
- 24. skiing
- 25. vaccinations 26. food coloring
- 28. pesticides
- 29. prescription antibiotics

Their plan: Bring a new order to America,

go back to the "good old days," grow your

30. spray cans

The order in which the hazards are listed here is the actual order of their risk according to actuarial estimates, with smoking being the most hazardous.

Where did you rank pesticides in the list of 30 risks to our health and mortality?

Business and professional men ranked pesticides 15th.

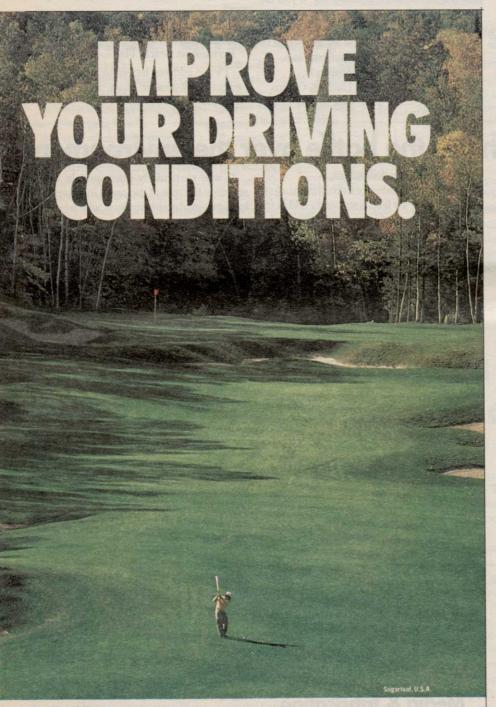
The League of Women voters ranked them

College students ranked them 4th, ahead

of alcoholic beverages and motor vehicles.

In actuality, pesticides rank 28th, behind bicycles (at 13) and skiing (at 24).

and pro adding to the size and cost of govern-



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ALSO

own food, limit technology, increase politically correct education; all this plus a new twist, at least for this country, redistribute the wealth. Isn't it amazing that the countries that employ these ideologies are generally the world's worst abusers of our environment and people? 2) Expose the p.e.'s with truth, integrity

and facts

Truth and facts are to a p.e. what flea spray is to a flea; they can't live with it. It has been said the strongest thing on earth is the truth. We cannot afford to exaggerate one fact or figure. We have to build a solid foundation because we are addressing people with no moral laws. Remember, they will use any method to advance their cause. We must be prepared to face stiff opposition early on, even among well-intentioned Americans who have been misled the past three decades.

3) Get our house in order.

We have the unenviable task of having to live up to the expectations not imposed on other segments of society. The p.e.'s have lured Americans into a zero risk mentality (with no grasp of risk/benefit) toward pesticides, when it is not demanded in any other arenas - automobiles, drugs, etc. As a result, thanks in part to the media which gravitates toward the negative, our chain (superintendents) can only be as strong as the weakest link.

Unfortunately, there are still superintendents or clubs who feel no responsibility to participate in the Golf Course Superintendents Association of America or its continuing education programs.

All the best efforts of 10,000 diligent, environmentally conscious superintendents can be severely impaired by one who is unin-

The GCSAA has done an outstanding job responding to its members through environmental education. But just being a member of GCSAA and your local chapter is not enough. It is imperative to participate in GCSAA and local chapter seminars, field days and other educational programs.

Finally, just do the basics and do them well. Keep your shop and equipment clean, train and motivate your employees, and adhere to the regulations. Don't deviate from the law. There's too much at stake, individually and collectively.

If you don't know or understand the regulations (and that's common) find a superintendent who does - but do it! Take the time to study and employ concepts of integrated plant management. For years top superintendents have successfully used this program and continue to fine tune it.

4) Inform/educate the public and earn its trust.

We must become pro-active, not reactive. In almost every town there is a superintendent adept at speaking to audiences. They

need to address our Rotary, Lions, garden and flower clubs, etc. to tell the truth about pesticides and golf courses. A good way to start each presentation would be with GCSAA's new video "Links with Nature," which highlights a course's interaction and actual enhancement of the environment and wildlife. An excellent way to demonstrate positive benefits of courses to the public would be to join New York Audubon Society's Cooperative Sanctuary Program. This would be a wise and beneficial investment for any club. Continued involvement and dissemination of factual information will be paramount in earning the public's trust.

5) Inform/educate the media and build a foundation of credibility.

Get to know the local media so they can place faces with names. Again, keeping your complex and equipment in immaculate condition will build a powerful and positive connotation toward you and your course. Don't expect too much too soon because good stewardship usually doesn't make exciting headlines and most members of the media have been saturated with one-sided anti-pesticide propaganda.

A caveat here: Some members of the media do not want facts or balance - so be careful!

6) Educate politicians and agencies. This will continue to be difficult, but some inroads have been made. We cannot wait for them to come to us. We have to visit them.

Finally, we must persist and set the example. Remember, peoples' minds are changed through observation and not through argument.

The challenge ahead seems awesome, but we are not alone. One of our greatest allies will be the true environmentalists (who include the majority of superintendents) with no secret agenda. They are very concerned that the p.e.'s will harm and even discredit the real cause.

What is the real cause? Protecting and enhancing the environment through conservation, recycling, planting trees, non-political education, and research. (In 1989 \$70 billion was spent on regulations and only \$9 billion on research.)

President Eisenhower once said, "Anation that values its privileges above its responsibility soon will lose both."

As golf course superintendents and citizens, we have the unique privilege of working with nature and living in America. Our responsibility is obvious: Take our jobs seriously, do the work honestly, strive to improve our environment, and leave this world with something our children will be proud to inherit.

And our scientists have a responsibility. Where have the real scientists been the last two decades? It's time to stand up and be counted.

As for all the p.e.'s, I'll leave you with this simple thought:

Being an American is the right to be wrong, not the right to do wrong.

Briefs



GRUB ATTACK RECALLED

Ringer Corp. has recalled its Grub Attack product which employs Bacillus popilliae (milky spore disease) and is used to control Japanese beetle grubs.

Grub Attack is marketed only in the Northeast and is the only product sold by Ringer which uses Bacillus popilliae.

Tests of the Grub Attack product manufactured under subcontract for the 1991 season indicate it may not perform to Ringer's standards for consistency and effectiveness.

According to company officer Rob Ringer, Ringer Corp. intends to correct the problem and will re-release Grub Attack as soon as testing demonstrates consistently effective

The product does not present a health or environmental risk.

GCSAA DONATES \$50,000

Research into environmentally beneficial turfgrasses has received \$50,000 in grants from the Golf Course Superintendents Association of America. The grants to the U.S. Golf Association will help fund the work of the USGA/GCSAA Turfgrass Research Committee in the coming year.

"We're extremely pleased to once again offer our financial support to the committee," said GCSAA President Stephen G. Cadenelli. "More important than the money, however, is our pledge to take the knowledge gained from this research and disseminate it to those responsible for the management of America's golf courses."

CADMIUM REVIEW TERMINATED

The Environmental Protection Agency has terminated a special review on the fungicide cadmium chloride (Caddy, Liquid Cadmium Turf Fungicide) due to the voluntary cancellation of the only remaining cadmium chloride pesticide registration by its producer, W.A. Cleary Corp.

According to EPA Fact Sheet #220, "... no cadmium chloride product may be sold, distributed or released for shipment by the registrant after July 31, and no cadmium chloride product may be sold or distributed by a retailer, dealer or any person after Dec.

Golfcourses or endusers may not obtain or take possession of cadmium chloride product after Dec. 31. Supplies in their possession as of Dec. 31 may be used until exhausted.

ATRAZINE-LADEN FERTILIZER DEADLY

LAKE CITY, Minn. — Lake City Country Club fairways suffered extensive damage when a fertilizer mistakenly containing atrazine was applied.

About 47,000 square yards of turfgrass were killed from an application April 27. Fertilizer supplier Farmers Elevator Co.'s insurance will pay to repair the damage, estimated at up to \$200,000, said company manager Greg Schwanbeck.

Course superintendent Cliff Reynolds said: "It's never a good feeling, seeing a road grader going up the middle of a fairway pulling sod

Audubon, courses team up to save wildlife

More than 100 courses already signed onto program

By Mark Leslie and Kit Bradshaw

Golf courses and an Audubon Society wildlife sanctuary program "are a perfect match," according to an environmental specialist with the U.S. Golf Association.

By July, more than 100 courses in 26 states had shown interest in the Audubon Cooperative Sanctuary Program for Golf Courses, administered by the New York Audubon Society and USGA.

Nancy Sadlon, the USGA ecologist hired for the project, said she is overjoyed by the response of superintendents across the

"I am continually finding that many golf courses are already way in advance," she said. "They have been doing conservation practices. Or they have one element of the environment they are interested in. For instance, they have put up their wood duck boxes, or worked very hard to keep their purple martin populations.

"It's amazing to find so many who have already participated in this fashion. It's re-



A whitetail deer and her fawn walk the fairway at Whitefish Lake Golf Course in Whitefish, Mont. Photo courtesy of Dave Wedum

freshing."

Superintendent William Black, who has signed his Congressional Country Club in Bethesda, Md., on to the program, said, "A lot of us have been doing a lot of these

programs for years anyhow."

Since 1981, Congressional has had a program that has greatly increased the Eastern bluebird population on the course. "People

Continued on page 18



Wildlife at refuge at John's Island West

VERO BEACH, Fla. — Otters play in its waterways. Armadillos, turtles and tortoises sun themselves there. Mockingbirds, cardinals and osprey nest in its trees. No, it's not Walt Disney World or some man-made zoo. It's John's Island West, which serves as a prime example of a golf course's sensitive use of land.

When we built John's Island West, we wanted to abide by all the rules and regulations. But, most importantly, we wanted to protect the environment and do it on a

positive basis," said architect Tom Fazio.

The result, according to golf course manager Tim Hiers, is that one scientist even planted an endangered species at John's Island West so that it would be assured of being preserved.

All agree the parcel of land was spectacular to begin with.

John Fitzpatrick, executive director of the Archbold Biological Station near Lake Placid, describes the land as "one of the rarest habitats in North America. Every square meter is precious to wildlife. It has a fairly large number of endangered species, and it is now a permanent habitat preserve that also provides recreation and beauty... It is the best example of bringing these two goals together."

One factor that makes this course unique in Florida is that no residences surround it. Fazio said that because of this, "we were able to leave much of the natural vegetation and fit the golf holes into the original contours."

As a result of the careful construction, Continued on page 21

Drought information network established in California

After being drought-parched for more than five years, California is fighting back with a new way to get the latest word on the state's water supply

A computer system called Advanced Technology Information Network (ATI-Net) lets users tap into comprehensive drought information gleaned by the California Department of Water Resources

According to ATI-Net General Manager Jeff Ennen, those with menu-driven information systems, modems and communications software can call in through a phone line to ATI's Fresno-based computer.

"It's fairly straightforward," Ennen said of the system, which walks users through a variety of information options like "press letter A for agricultural news."

Ennen said the drought information maintained by ATI-Net includes a listing of California water districts and the population bases supported by those districts; as well as updated general drought information; a county-by-county look at the drought; and government assistance programs available to help companies hurt by the economic impact of the drought.

While most of the aid programs were originally set up to help agricultural enterprises such as farms, Ennen suggested that golf course superintendents review the listings, to see if any aid programs would apply to the golf industry.

Such aid could include grants, loans, cost sharing, or technical assistance.

ATI-Net also includes an analysis of state water supplies by region, assessing both the current and potential impact of the drought on those water supplies. A list of publications that provide drought information is also available to ATI-Net users, Ennen said.

For more information on ATI-Net call 209-278-4872.

Greg Graham: Always tournament-ready

By Peter Blais

Only one golf course in the country hosted three major professional tournaments last year, the Desert Inn & Country Club in Las Vegas.

The job of maintaining the course in top condition for the PGA, LPGA and Senior players, as well as the 60,000 golfers who play the city's best-known course every year, falls on the broad shoulders of Gregory Graham.

The benefit of hosting three professional tournaments — Desert Inn LPGA International and Las Vegas Senior Classic in the spring and the Las Vegas Invitational in the fall — is the publicity it generates for the hotel, Graham said.

The down side is the stress it puts on Graham's crew, especially in the spring when the LPGA and Senior tours visit within six weeks of one another.

"The amount of hours we put in is just phenomenal," Graham said. "And it's going to get worse next year. They've pushed the women's tournament to the first or second week in April and the seniors to the last week in April. We've got something like two weeks in between."

The course has to remain in top-notch condition during and between the two spring tournaments.

"It would be nice to hold down play before a Tour event. But the Sunday before it starts, we'll have a 150- to 200-player shotgun tournament. The Tour officials get here seven or eight days before a tournament and are just flabbergasted by the amount of play we put through."

The Desert Inn has hybrid Bermudagrass on greens and tees and common Bermuda on the fairways. Everything is overseeded with perennial ryegrass in the fall.

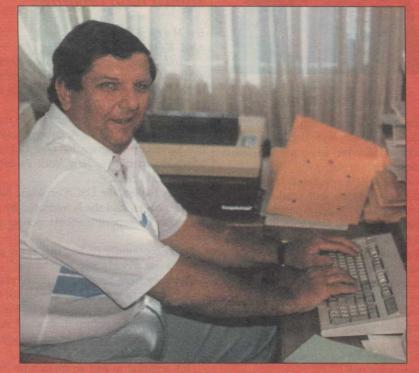
Graham usually begins overseeding in early October and normally doesn't close the course. But he had to wait until Oct. 15 to overseed last fall because of the late date slated for the Las Vegas Invitational, forcing the course to close immediately afterward in order to have it ready for a Nov. 5 local tournament.

"We had just 3-1/2 weeks to get the course overseeded and ready to open. You have to hit that time frame when the days are warm and the nights are just starting to cool off. If daytime temperatures get into the low 90s or even the high 80s and night-time temperatures in the low 50s you can have real problems because it takes that much longer for ryegrass to germinate.

"We had the whole course seeded before the first blade of grass came up. That was scary. I had my fingers crossed. But we were lucky... The timing was about 10 days too late for me. The fairways were real thin. But they look OK now."

Graham predicted the same thing will happen this year with the Las Vegas Invitational scheduled to end Oct. 13 and a local tourney following in early November.

Keeping the 18-hole facility in top condition is an expensive proposition. Desert Inntop dresses every two weeks after overseeding to stay in SUPER FOCUS



Greg Graham at command center — his computer.

shape for tourneys and the 250-plus rounds it pushes through every day. Greens are mowed "awfully short," although Graham raises cutting heights slightly following tournaments to make them friendlier for resort golfers.

"For a fairly flat golf course, there's an awful lot of contour on the greens," Graham said.

The course was planted in bentgrass many years ago, Graham said. But stagnant, humid air captured by the surrounding buildings, combined with high temperatures and an inadequate irrigation system caused the switch to Bermudagrass. Converting back to bentgrass has been discussed.

"The only problem I have with that (converting back to bentgrass) is some things with the irrigation system they need to address," Graham

"Tve grown bent everywhere I've been. This is the first time I've ever had Bermuda greens. I've been in the desert most of my life. It's not a problem when you can somewhat control your moisture. Temperatures of 115 to 120 degrees don't bother me. It's the micro-climates and the amount of humidity.

"The killer is pythium. The old rule-of-thumb is, if you combine the temperature and relative humidity and come up with a number of 150 or more, you better have some fungicide hitting the ground. If you have some humidity you're going to have some mushrooms starting to grow. That's a good indication you better get something down to protect you, because you're going to have a problem."

Growing bentgrass in the desert is easier than someplace like south Florida, where high humidity and afternoon thunderstorms combine to devastate bentgrass, Graham said. Improved strains of bentgrass, fungicides and technology make growing the cool-season grass in the desert easier than 10 years ago, he added.

Graham's philosophy is that water can always be added to a spot, but never taken away. That actually makes the desert superintendent's lot better than anyone's. In fact, deficit watering is better than drenching the turf to make it turn green and risking pythium, he said.

"To the eye, green is great," Graham said. "And in the resort industry, green is exactly whatyou're looking for. But being from Arizona, I lived there for 20 years, you learn to live with a

hell of a lot less."

Graham said he learned how little water was really necessary while rebuilding a green in Tucson. The turf went without water for 10 days in the middle of June.

"The grass turned brown," he remembered. "But the green still looked great. I took a probe and it wasn't all that hard. There was a lesson to be learned there.

"Ican see a day 15 or so years from now when you can look at different spots on the golf course with an infrared camera, or something, and say 'Idon'thave to water that spot, because I have the data that says I don't.' As water becomes more precious, the technology is going to improve so you can apply water where you need it and not where you don't need it."

Graham has been living with less water for some time. He estimates water use has dropped 25 to 30 percent since he came to Desert Inn two years ago. A recent late June evening saw 1.3 million gallons applied to the course. Graham has a weather station, but uses it as a guide rather than letting it automatically determine how much to irrigate.

"I use the weather station as a yardstick. A computer always rounds up, it never rounds down. If the transpoevaporation figures from the station say I should replace 0.38 I round down to 0.35. When you don't have a lot of water to waste, it's a pretty good system to use. And sometimes I'll even go less than that," Graham said.

"They say irrigation is a lote asier now because of computers. It's easier only because you don't have to plug in the quick couplers as you did years ago. But you still have to go out on the golf course and pay attention to it."

Graham helped build Angel Park, a 36-hole layout using city water, when he first moved to Las Vegas in the late 1980s.

"It was hard for people back East to swallow when you'd tell them your annual costs were \$450,000 for water and another \$130,000 to pumpit. Everything is big out West compared to the East." he said.

Las Vegas' growth has outstripped the water district's ability to supply water, Graham said. Pressure in the water line leading up to Angel Park, for instance, dropped 30 percent in the past fiveyears because of all the homes and businesses trying into it.

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Like most older Las Vegas courses, Desert Inn is on well water, which is out of the state and local water district's control. But most of the city's irrigation water comes out of the Colorado River, which is controlled by the Las Vegas Valley Water District.

The water district sets the price, but doesn't limit usage, Graham said. While the district has encouraged conservation, it also makes more moneywhen customers use morewater. Graham sees that as a conflict of interest that could ultimately lead to the area using up its allotment of Colorado River water.

"There needs to be a law to conserve water. River water, well water, it doesn't make any difference. You need another agency to control water, somebody who isn't charging you for it and so has a (financial) interest in how much you use," Graham said.

Graham's first golf course job was in 1959 while he was in high school in Holyoke, Mass. Afterafour-year stint in the Air Force, he enrolled in the two-year turf program at the University of Massachusetts in Stockbridge. There he became good friends with Professor Joe Troll, who has taught hundreds of superintendents throughout the world. Graham's parents had moved to New Mexico and he planned to return after graduation. Troll encouraged him to do so.

"He always used to say, 'You can't put three pounds of crap in a two-pound can.' What he was saying was that there were no jobs here (New England)," Graham recalled.

"In the first year UMass had a summer placement program. You had to go out and work on a golf course and write a paper about it. He tried to get guys to go to Florida or wherever. But no, they all wanted to go back to their local course. He'd say, 'I can't get these guys to leave here.' But that wasn't a problem with me."

Feeling school had left some gaps in his education, Graham went to work for a Texas irrigation system installer for three years, then the Toro Co. for 2-1/2 years.

"Out here irrigation is where it's at. In the desert, if you don't have a great irrigation system, you're going to suffer... It was nice to go that way.

I learned more by putting a system in and then understanding the design than if I'd been a designer and never put one in. It's like a mechanic who became a car designer. He'll give you a more practical car than the designer who has been on the boards all his life and never seen what he's designing," Graham said.

Afterworking in irrigation, Graham felt ready to become a superintendent. Tijeras Arroyo Golf Course in Albuquerque, N.M., was his first course. "It was the perfect place for me to start. It had the worst irrigation system I've ever seen" he said

The Country Club of Green Valley in Tucson, Ariz., was his next stop before he helped build nearby Arthur Pack Golf Course. Tucson National Golf Club was Graham's final tour of duty in Arizona. It was an 11-year association that included two rebuildings of the entire course and the in-house-designed addition of nine new holes

"Tucson has a lifestyle that's hard to beat. I'd go back there in a second if the opportunity arose," Graham said.

The opportunity to build Arnold Palmer-designed Angel Parkenticed Graham north to Las Vegas in 1988.

"That was like building a golf course on the moon. There was absolutely no soil on the job whatsoever. It was all crushed rock. Shadow Creek (Mirage casino owner Steve Wynn's course) would have been about 200 times easier," said Graham, who worked for the company that did the earth work at Shadow Creek.

"We crushed (at Angel Park) and screened everything. The soil we used was 3/8-inch pea gravel. I keep a jar of it at home just to show people. They say 'You're nuts, that's pea gravel.' That's right. But that's what we used," he said.

Angel Park's \$16-million budget would have built the Taj Mahal in much of Arizona, Graham said. But such a hefty price tag is not unusual in Las Vegas where lack of sand, rocky sites and a shortage of water push costs higher.

The Desert Inn came calling after Graham completed Angel Park. He soon learned high golfcourse costs weren't limited to construction

in Las Vegas. With a union work force, wages reach \$16 to \$17 per hour. They go far higher around tournament time when laborers get time-and-a-half for the sixth day of work and double time for the seventh. Approximately \$1.2 million of Graham's \$1.7 million annual operating budget goes to labor.

"This is a different management situation than I'm used to. It's been a learning experience. It's tougher to manage. You have to learn the rules and work within them," Graham said.

Laborcosts, tournaments and 60,000 to 65,000 rounds a year make such a large budget necessary, Graham said. But with greens fees ranging from \$75 to \$150, the course is a major money maker, he added.

"Golfers come to Las Vegas, they want to play the Desert Inn and they don't care what it costs," he said. "It's a great drawing card for the casino and the hotel. But if this course stood alone, I guarantee it would make a lot of money."

Maintenance costs have reduced membership from several hundred 20 years ago to about 50 today while increasing dependence on dailyfee play, Graham said. "If you had more than 50 members, I don't know when they could get on the course," he added.

Maintaining the course for hotel guests, outside players, members and touring professionals means meeting the needs of many different groups. How does Graham do it?

"I'm not being selfish when I say this, but I maintain the golf course for me," Graham said. "I did that in Tucson. I used to be a pretty good player, although I don't have the time now to play that much. But I know what the touring pros want and they get it.

"I'm not saying that everything they do on the Tour is correct. But if you pay attention to some of the things you do to prepare for a tour event, and try to work it into your budgets othat it drops down maybe just three notches after the tournament, then you'll have a better golf course for the everyday guy and he'll keep coming back."

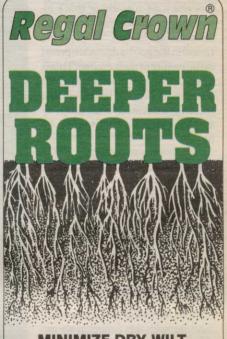
As for the 40-year-old Lawrence Hughesdesigned course itself, the greens have been rebuilt several times, so they now have considerable contour, Graham said.

"What they need to do is go back and do some fairway contouring to make it flow with what they've already done with the greens," Graham said.

The record cold that swept through Las Vegas last winter caused severe damage to plants and turf, but largely spared Desert Inn. The course lost a few eucalyptus and olive trees and suffered limited damage to a few palms.

"We're concerned we may have some Bermudagrass damage to the greens," Graham said in late June. "We haven't had any really hot

Continued on page 19



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17



Audubon Wildlife Sanctuary Program catches on

Continued from page 15

had always said the Eastern bluebird is fragile and can't compete in an environment with pesticides. In fact, we are increasing our population by providing nesting houses for them," Black said.

Black and his crew built 10 bluebird houses the first year. It was such a success that they have kept adding houses until they now have 75 along the edge of the fairways.

At Tam O'Shanter Public Golf Course in Canton, Ohio, President Chuck Bennell said the program is "a wonderful idea" he hopes will catch on nationwide.

"It's going to require that operators see it as something that's interesting to do and fun to do, and not a hassle," he said. "Most people Iknowin the golf business are proud of the beauty of their course. This is a way to share that beauty with people who may not be golfers, but who might come out to the property and help identify what wildlife we have.'

AUDUBON-USGA PARTNERSHIP

Ron Dodson, president of the New York Audubon Society, had instituted sanctuary programs with corporate and school landholders when he met with USGA Green Section National Director Jim Snow and decided to get involved with golf courses.

"We view all open space as important to wildlife," Dodson said, "and through this program we are able to work in a positive way with managers and golf course superintendents to have courses be part of the sanctuary system."

Spurred by its overall environmental program, the USGA has fully backed the effort. It added Sadlon to its staff and contributed \$30,000 to the New York Audubon to produce a brochure and support Dodson's time and travels working on the project.

Interested superintendents should contact the Audubon Society in Selkirk, N.Y., telephone 518-767-9051. They will be asked to register for \$100, for which they will receive aresource inventory handbook and one-year subscription to Field Notes, the Cooperative Sanctuary news-

After they complete the questionnaire and resource inventory handbook, the Audubon prepares a report based on this information. The report suggests various wildlife habitat enhancement projects and resource conservation programs, along with fact sheets that provide details of the projects.

If a course follows through, it becomes a "certified cooperative sanctuary.

Asked the incentives for a superintendent to get involved in the program, Sadlon said: "It helps them manage their course the way they'd like to. It helps them express some of their environmental concerns, to describe to the people in power the importance of certain management techniques, such as integrated pest management and water conserva-

"I do think it is helpful in becoming certified to being able to tell your local municipality that you have become a certified cooperative sanctuary. That shows, from an image standpoint, that you have taken action to be environmentally conscious."

Black said: "It's a great idea, a good way for golfing people to show we do mean well... The majority of superintendents and people in the golf course business are environmentally in tune and are doing things to help wildlife. We don't go spreading a lot of poisons around. We try to be very careful.'

Of Congressional CC's 500 acres, only five acres of greens and tees and 50 acres of fairways are intensively maintened, he said. "Yet people point their finger at golf courses and say, 'All they do is pollute the environment.' That's not the case."

Bennell agreed. Mentioning a North Carolina golf course where the scorecard is a bird watcher's

guide to the course, he said: "When I found out about the Audubon program ... it occurred that, first, it's fun to watch the birds and enjoy the wildlife and flowers when you're out on a course; and, second, the more we could attract birds and other wildlife to the course, the more the customers are likely to recognize it is a safe, as well as a beautiful, place to be. If you've got lots of birds and squirrels running around, it reinforces that you are being responsible as far as what you're spraying or fertilizing with."

Bennell said joining the sanctuary program will "enable us to plug into something very good for us technically and from a public relations standpoint. And it will enable us to make friends with environmentalists long before we would need them to know we are the good guys when there is a crisis somewhere...

"My own feeling is the political aspects of environmental responsibility are going to be as important as the technical aspects. You not only have to do the right thing, you

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at more than 100 courses across the country

have to be known to do the right thing.

"All of this comes together with the Audubon program, where we are able to get very good advice from a naturalist organization about how to use the areas of the course that are out of play for wildlife habitat."

THE SPECIFICS

Sadlon, who holds a landscape architecture degree from Rutgers University and has continued advanced studies in environmental sciences with a specialty in wetlands, said wildlife enhancement projects are broken into the four important elements: Cover, water, food and space.

· Cover could be a simple nest box providing a place for shelter and breeding. "We advise concerning whatever species is there," Sadlon said. "Some wildlife is more adaptable to an open environment; others, like the woodpecker, need a wooded area. We give superintendents specifics, like the dimensions, material and size of nesting boxes."

 A food enhancement project "might incorporate planting shrubs or other plant material that provides a food source. Sometimes trees are a seed source. Sometimes grasses. Berry-producing shrubs might also double as a cover enhancement project," she said.

"You could also start a bird seedfeeding program... which brings wildlife closer to the golfer, and that is one of the goals - for the golfer to understand who also uses their course."

• Water is usually tied in with the

irrigation pond or water feature of the golf course, Sadlon said. "We encourage that some edge of that pond be left in a natural state that is more beneficial to the two other elements important to wildlife food and cover," she said. "You can have your water feature and manicure it close to the edge on half the pond; but we encourage the other half be left natural."

· Golf courses are a natural to fulfill the space requirement for animals. "Courses have space available, quite a bit of it out of play.

We encourage that space be left as natural as possible instead of being manicured. We encourage natural vegetation be left," Sadlon said.

She added that flora and fauna are also part of the program. If a course contains a threatened species, Sadlon or Dodson tells the superintendent what its cultural habits are so they can provide for it.

Dodson said that in addition to internal recommendations, the Audubon Society keeps courses updated on ways to educate the public about courses.

"We recommend the courses become involved with the local citizens' groups, with the Girl and Boy Scouts—by having them build the bird boxes, for example - and with the media," he said. "One of our goals over time is to enhance the image of golf courses as important areas for wildlife."

The 26 states that had at least one golf course sign onto the program by July are Arizona, California, Colorado, Connecticut, Illinois, Indiana, Iowa, Kansas, Maine, Maryland, Massachusetts, Michigan, Minnesota, Montana, Nevada, New Hampshire, New Jersey, New York, Pennsylvania, North Carolina, South Carolina, South Dakota, Texas, Virginia, Washington.

Greg Graham

Continued from page 17

weather. At this point last year our greens were already transitioned. We had 12 days (last winter) in a row with a high temperature around 27 degrees and a low about 12. The greens were frozen solid."

Graham said the course suffered moderate damage, with three greens having to be re-done.

Environmentally, Desert Inn has experienced little problem. University of Nevada at Las Vegas researchers drilled three 50-foot wells at the course and found no chemical contamination.

"We don't use a lot of pesticides or insecticides anywhere but on the greens. I'm not on a preventative program at all. I pay attention to the conditions and when I need it I use it," he said.

The desert heat requires Graham's crew to work from 5 a.m. to 1 p.m. That means mowing occurs while the course is most heavily played. Delaying mowing until midafternoon would interfere less with play but expose workers to 110-plus degree temperatures and require more overtime pay.

"You don't have the flexibility of anging schedules you would on a normal golf course because the union requires overtime. It increases the cost of business because you need a little more equipment and a few more people. And there's a lot of hand work here on things like flower beds. But the hotel wants us to keep them up that way. That requires more people. We have 23 people on an 18-hole golf course. A normal course would take 15 to 18."



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New solutions, sources sought for California water users

Continued from page 1

Extension.

"We're looking at a crisis and it's not going to go away, even if it starts to rain."

THE SITUATION

The major source of water in California is ground water, Harbison said. The amount of ground water varies tremendously from area to area, so the drought situation differs markedly around the state.

Some areas have no ground water, some limited and some plentiful subsurface water. Certain coastal areas have pumped so much from the ground, salt water is infiltrating

Most of California's water is in the north, but most of the state's population in the south.

That has resulted in two types of water transportation in the state. Short systems are located east of San Francisco along the western slope of the Sierra Nevada Mountains, characterized by small water districts, small reservoirs and cross-valley pipelines.

The southern part of the state relies on special, long transport systems. The City of Los Angeles aqueduct from the Owen's River Valley, Metropolitan Water District aqueduct from the Colorado River and the state water project were all built at different times during this century with the goal of forever filling the water needs of Southern California. But none have solved the problem and all have even found it difficult to meet their designed

Environmental concerns have spawned heated debate in recent years. California voters will decide the winner, Harbison said.

One new source of water is being developed. A sample came on line when a small, seawater desalination plant opened in June on Catalina Island near Los Angeles. But the cost of removing salt from ocean water is \$2,000 per acre-foot, making it affordable for household use, but impractical for irrigation.

Population growth is driving the state's seemingly insatiable thirst for water. Immigration has helped push California past 30 million people, a figure planners 30 years ago didn't predict until the year 2010. Population is growing at 700,000 people a year, requiring 100,000 more acre-feet of water annually.

"What we have is increasing demand with a stagnant or shrinking water supply," Harbison said. "It's crucial for the green industry to be pro-active to survive."

Ground water will help the industry in the short run. California will overdraft 2 million acre-feet of ground water in 1991.

"But ground water is like a bank account. If you don't put water in, eventually you can't get water out," Harbison said.

Many parts of the state, particularly the central valley, are heavily overdrafting their

The Mojave Desert is showing surface cracking. A space shuttle landing had to be diverted away from an Edwards Air Force

Base landing strip because of cracking due to overdrafting.

"With or without drought, we're going to continue to have a shortage of water around the state. We're all going to have to learn to live with less water, personally and in landscaping," Harbison said.

Water is also going to get more expensive. Desalination and tougher Environmental Protection Agency drinking water standards regarding lead and radon will push prices higher. Filtering out radon and lead will cost the state's water district's \$600 million, Harbison estimated.

Reclaimed water could be the savior of the green industry, he said. Traditionally ignored and dumped back into the ocean, effluent has just recently been looked at for irrigation in California.

The problem is most sewer collection systems are gravity-fed, meaning the water must be treated, stored and then pumped back uphill to where it is needed.

"And that's not cheap either," Harbison said. "We'll probably end up paying the same cost as domestic water in many cases because of treating, storing and pumping costs."

Developing more in-state water is unlikely because environmentalists have virtually stopped dam construction over the past 20 years, Harbison said. Half serious/half joking discussions about importing water from the Columbia River and Alaska are longrange options, but would also be costly, he added.

CHANGES AHEAD

Some basic changes are coming.

Agriculture accounts for 85 percent of the state's water use. With water less available, farmers will shift crops, leaving less pasture, alfalfa, cotton, sugar beets and other waterhungry crops, Harbison said.

Farm acreage will be reduced, taking away jobs and income and raising food prices.

Proposed changes of water transfer codes will make it easier to move water to where it is needed. Current codes make it difficult or illegal to transfer water from one region to

Gov. Pete Wilson is working on changes to the law that would allow areas with excess water to sell it without permanently giving up their water rights, Harbison explained.

Wilson has set up a water bank allowing people with extra water to sell it to someone who needs it.

It is expensive, compared to conventional sources, averaging \$125 per acre-foot plus transportation charges. But paying even \$200 per acre-foot is better than going out of business, Harbison said.

"The water bank is doing its job this year. But there are going to have to be some permanent changes to the law," he

Rural farming areas are vulnerable. But so are urban areas, especially regarding landscaping, which is viewed as an optional use. Urban areas are looking at a 30-percent

Continued on page 21

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California

Continued from page 20

permanent reduction in water use over the next few years, Harbison predicted.

Attaining that goal will require incentives, although some water districts are already willing to shut off water to landscapers completely or on a percentage basis.

Percentage-based reductions are a very unfair way of rationing because the people who have conscientiously conserved over the years are penalized more severely than those who have always wasted water and will now be alloted a more reasonable amount, Harbison said.

Hopefully, most water districts will begin allocating water on a per-capita basis, Harbison said. Water allotments should be determined on an area's evapotranspiration rate and the area a landscaper is covering, he added

Harbison favors an allotment method giving a landscaper a certain amount of water that he can use as he sees fit.

Before such a system gains statewide acceptance, the landscape industry will likely see peak-season pricing, with higher prices in summer than winter; graduated block water rates, with a big user paying more per unit than a small user; maintenance contracts, with landscapers rewarded for saving water and punished for wasting it; incentives to replace thirstier cool-season turf with more-water-thrifty warm-season grasses; plantings of more desert-type landscapes; and, installation of efficient irrigation systems.

John's Island West provides safe harbor

Continued from page 14

Archbold Biological Station is using John's Island West as a permanent habitat preserve to help save the endangered Lakela's Mint.

Hiers is also cataloging the plants on the course, including an unusually large number of sand pines.

Hiers said the course is working in other ways to help the environment.

"I would say there is a better bird population, with more variety of birds, now than there was before construction," Hiers said. "We have several migratory birds who stop here, and we have sandhill cranes, wood storks, wood ibis, both the great white the great blue herons, scrubjays, mockingbirds, brown thrashers, cardinals and osprey.

"The wood stork and the sandhill crane are getting to be pretty rare in Florida, but we have them at John's Island West.

"Also," Hiers said, "we've stocked the lake with 4,000 bass and brim and they are doing just great. With no one fishing in the lakes, their only enemies are the birds and the otters.

"The otters are now here because we have created the lakes which are an attractive habitat — stocked with fish — for them," he said. "And we have opossums, bobcats, marsh and cottontail rabbits, gopher tortoises, armadillos, box turtles, and even, occasionally, a piney ridge boar. There are all kinds of snakes here, from the endangered indigo snake to the Eastern diamondback and pigmy rattlesnake to the water snakes, coral snakes and rat snakes."

We view all open space as important to wildlife.'
— Ron Dodson
New York Audubon Society

Hiers noted that creation of the course provided a secondary benefit to the environment that might not be apparent.

"A lot of people don't realize that, while a golf course might remove trees, there are always trees added to the course as well," he said. And, the majestic trees that are vulnerable to lightning in south Florida are now protected (with cabled lightning protection), where they weren't protected when they were growing in the wild.

The New York Audubon Society recognized the importance of golf courses to wild-life and has helped the U.S. Golf Association initiate a nationwide cooperative wildlife sanctuary program.

"We view all open space as important to wildlife," New York Audubon Society President Ron Dodson said, "and through this program we are able to work with managers and golf course superintendents to have golf courses be part of the sanctuary system."

John's Island West is one of the courses working with the Audubon Society in the fledgling program. Hiers said through the Audubon Society and Archbold Biological Station, his course's value as a wildlife area is being enhanced. And he thinks it's important for the public to become more educated

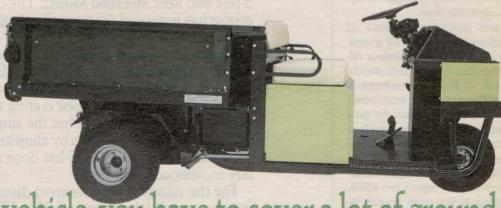
on the positive role of a golf course

"In several areas of the country, specifically Westchester County, N.Y., they have proven that, for every gallon of water a course uses, it recharges seven gallons to the aquifer. A typical acre of golf course turf in Florida returns 650,000 gallons of water to the aquifer a year. I don't think the public knows this," Hiers said

Despite evidence that suggests courses can be a partner in helping the environment, Hiers said the public's attitudes are difficult to change. He feels the change must begin with the superintendents themselves.

"The person who has the strongest vested interest in a golf course is the superintendent," he said. "The superintendent's career, his livelihood, his self-esteem ... everything is based on the condition and success of that course. Logically, it stands to reason that he is going to be the one interested in quality control, what it will take to maintain that course with a reasonable amount of money, and all the other factors considered, including the environment."

Saying golf courses should be designed to minimize the potential hazard to the environment, Hiers added that superintendents "should be involved with the courses before construction starts. They should be there when the specifications are written, so they can say, 'We don't want to irrigate this area,' and give the owner a chance to make an intelligent decision whether or not the area should have irrigation."



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RANSOMES

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Old pesticide law now being applied to California courses

Recommendations in writing required before applications

California golf course superintendents are being subjected to a 16-year-old pesticide law that until now has been applied only to agriculture.

Since 1975, California golf courses have been required to have written recommendations for all agricultural-use pesticide applications. However, the local agriculture commissioners have not enforced this section of the code. City, county and state government agencies have had exemptions from needing written recommendations.

In 1989, however, a new law removed that exemption. All agriculture use pesticide applications — including golf courses — were affected.

Now, golf courses must have a written recommendation from an agricultural "pest control adviser"

Genetically engineered pesticides win conditional OK

The U.S. Environmental Protection Agency has given a conditional pesticide registration to two pesticides derived from biological organisms that have been genetically engineered using recombinant DNA techniques.

Both products, the M-One Plus Bioinsecticide and the MVP Bioinsecticide, are manufactured by Mycogen Corp. of San Diego, Calif. They will be used to control beetle and caterpillar pests.

Each pesticide consists of pseudomona fluorescens genetically engineered to contain a different delta endotoxin (toxic protein crystal) of Bacillus thuringensis (B.t.) The genetically engineered micro-organisms produce the delta endotoxin crystal during growth in a fermenter under controlled conditions.

Subsequently, the pseudomonas fluorescens organisms are killed, resulting in B.t. toxin crystal encapsulated by the dead pseudomonas fluorescens. The dead pseudomonas fluorescens serves to protect the B.t. endotoxin against ultraviolet light and therefore to lengthen the effective life of the B.t. toxin.

To be effective, the targeted insects must eat foliage which has been sprayed with the pesticides. The insects stop eating shortly after ingesting the toxin, and death usually occurs one to five days later. The pesticides work by paralyzing the gut of the insect.

EPA believes M-One Plus and MVP will not pose an unreasonable risk to humans, birds, mammals or other non-target vertebrates.

(PCA) before applying an agricultural pesticide. Only a PCA can write a recommendations

"Recommendation" means the giving of any instruction or advice on any agricultural use as to any particular application on any particular piece of property.

Each recommendation must contain, when applicable:

1. Owner or operator of the property of site to be treated.

2. Location of the site to be treated. The location doesn't need to include the township, section and range. It can be any description understand-

able by the adviser, grower and applicator.

3. Commodity, crop, animal or site to be treated.

4. Total acreage or units to be treated.

5. Identification of the pest or pests to be controlled by their recognized common name.

6. Name of each pesticide or device recommended, or description of the method recommended.

7 Dosage rate per acre, or other unit, dilution rate, and volume per acre.

8. Suggested schedule, time or

conditions, and label restrictions on use or disposition of crop or crop by-products.

9. Safety interval and posting requirements, if established, for the pesticide or combination of pesticides recommended.

10. Warning of the possibility of damages by the applications from hazards known to exist.

11. The criteria used to determine the need for the recommendation.

12. Certification that alternatives and mitigation measures that would substantially lessen any significant adverse impact on the environment have been considered and, if feasible, adopted.

13. Signature and address of the person making the recommendation, date, and name of employers, if any, he represents.

PCAs must have licenses. A PCA is defined as one who provides recommendations concerning any agriculture use; one who offers himself as an "authority" on any agricultural use, one who acts as a general adviser on any agricultural use who solicits services or sales outside a fixed place of business.

JOHN DEERE !!!!

Some big names have already started arriving for the 1992 PGA

Hosting one of golf's four major championships is a huge job. Just ask Superintendent Tom Van De Walle of St. Louis' Bellerive Country Club—site of the 1992 PGA Championship.

"I came here in 1986 with the major responsibility of getting Bellerive ready for the PGA," says Van De Walle. "Six years sounds like a lot of time, but we've rebuilt greens, tees, bunkers, fairways—even redesigned some holes entirely—and we still have a lot left to do.

"John Deere has played a big role in our success. We mow greens with the John Deere 22s, fairways with a 5-reel 3325 Turf Mower and tees and intermediate rough with a 3-reel 856 Reel Mounted Mower. The condition of the course has improved dramatically since we started using these mowers.

"We've converted almost all our fairways and tees to zoysia—a grass that's great to play on but tough to mow. The John Deere 3325 and 856 are the only mowers we've found that can handle it. Their cutting units stay true and don't let the turf get puffy. Plus, the single lever lift on the 3325 improves our fairways by allowing us to cross-cut more easily. In fact, the 3325 has done so well, we plan to buy another one next year."

For the name of your nearest distributor, or free literature on all John Deere's Golf and Turf Equipment, call 1-800-544-2122 toll free or write John Deere, Dept. 956, Moline, IL 61265. We know, like Tom Van De Walle, you're going to like what you see.



Tom Van De Walle of St. Louis'
Bellerive Country Club is using
a fleet of John Deere reel
mowers to help him prepare
for the 1992 PGA
Championship.





High Court ruling gives community pesticide laws precedence

took precedence over local laws, according to Tom Delaney, Professional Lawn Care Association of America director of government

The Wisconsin court had agreed with Christmas tree farmer Ralph Mortimer that the town of Casey could not pass laws stopping him from spraying pesticides on his farm, Delaney explained.

"We're very disappointed with the decision," said PLCAA President Neal DeAngelo, whose association had successfully fought preIt scares the hell out of me. It's another step toward more regulations.' - Charles Passios GCSAA directors' government liaison



vious municipal attempts to preempt FIFRA. "We realize this will affect everyone who uses pesti-

Passios and DeAngelo said they are encouraging members of both associations to inform their leadership whenever localities are considering passing pesticide ordi-

"The earlier we hear, the earlier we can help members deal with it." DeAngelo said. "The tools we can provide are primarily information members can use to nip bad laws in the bud.'

Meanwhile, the PLCAA will be fighting for local and state control on two fronts, according to

First, FIFRA is up for Congressional re-authorization within the next two years. The PLCAA will attempt to get federal pre-emption language included, Delaney said.

"It will be a fight by both sides. I'm afraid Congress will have to see some of the problems local control will cause before it does anything,"

Second, state laws can be rewritten so they take precedence over local ordinances, Delaney said. The PLCAA is encouraging members to lobby their state legislators and regulators.

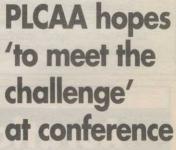
Delaney encouraged superintendents to monitor proposed local pesticide ordinances dealing with golf courses and other pesticide

"Municipalities may deal with homeowners one week, golf courses the next and somebody else the next.

"The philosophy is to divide and conquer. But it pays to get involved in the others' fight as well as your own," Delaney said.

"The GCSAA has been noticeably absent from federal meetings dealing with pesti-

"It really hasn't been very active in cooperating with the other industry user groups."



The Professional Lawn Care Association of America's 12th annual conference will be held in conjunction with Green Industry Expo/91 in the Tampa (Fla.) Convention Center, Nov. 18-21.

The theme, "Meet the Challenge," describes the conference goals: to help lawn care companies meet the challenge of self-improvement, progressing to suit changing times, becoming better business leaders, learning more about turf research and new products, and finding ways to work together with each other to assure a strong future for lawn care professionals.

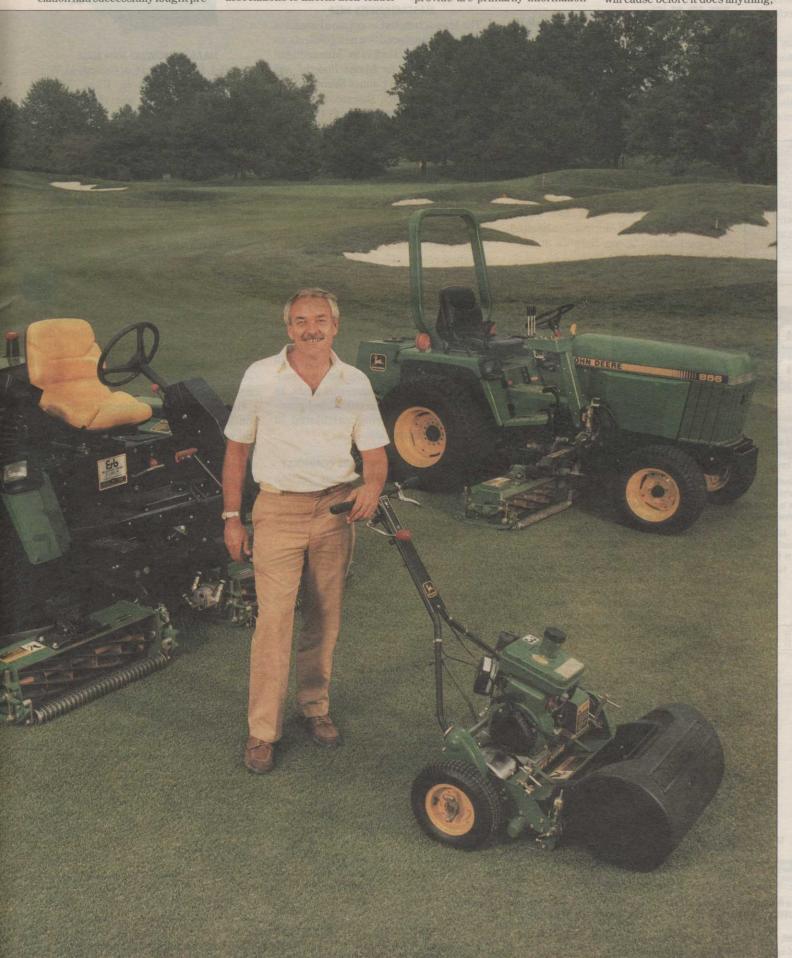
EDUCATION GIVES AN EDGE

The lawn care business is constantly changing with new products and new techniques resulting from research every year.

"PLCAA members have every opportunity to get the competitive edge over their non-member competitors through education sessions covering topics of vital importance," according to Dale Lybarger, conference education chairman.

Some of the sessions scheduled by the Conference Committee, chaired by Daryle Johnson, are business basics, marketing, mixing pesticides and fertilizers.

Also, recycling systems, biostimulants, sprayer use and nozzle control, broadleaf weed control composting, nitrogen and pesticide movement, state pesticide issues and liability insurance.



Mountains



PAR SUPPORTS EXTENSION

The Arizona Golf Association's PAR committee has donated \$28,707 for technical support of the state's turfgrass extension program.

PAR committee members are Kay Davis, Bill Ealy, Phil Edlund, Bill Emerson, Eric Filsinger, Lynn Geisler, Tim Kloenne, Gary Panks, Bill Rodie, Mike Rothenberg, Tom Russell, Russell Skelton, Craig Sloan, Bob Swanson, Art Williams, Jim Woods and Jerry

Please send news to GCN

Superintendents associations and others are invited to send news stories and photographs to: Golf Course News, P.O. Box 997, Yarmouth, ME 04096.

Northeast

TURF RESEARCH TOURNAMENT

Massachusetts' third annual Turf Grass Research Golf Tournament will be held at The Country Club in Brookline on Oct. 3.

The support generated from golf clubs, Massachusets Turf and Lawn Grass Council, Massachusetts Golf Association, PGA of New England and golf-related service companies are an im-



portant component in reaching the goals for turf research.

Through this funding support, grants this year have been awarded for the following turf research: "Fungicide Control of Summer Patch with Minimal Environmental Impact," "The Use of High Pressure Injection System to Control Sub-Surface Pests,"and "Studies on the Pathogenicity and Management of Plant Parasitic Nematodes Occurring on Putting Greens."

PGA ALMANAC

New England PGA Section clubs will be featured on "PGA Golf Almanac," to be aired on New England Sports Network at 11:30 a.m. Sundays through Sept. 7.

In order of appearance, the program will feature Worcester (Mass.) Country Club; Quidnesset Country Club in No. Kingston, R.I.; Green Hill Golf Club in Worcester; The Quechee (Vt.) Club; Pine Brook Country Club in Weston, Mass.; Pawtucket (R.I.) Country Club; Weston (Mass.) Golf Club; Metacomet Country Club in East Providence, R.I.; Rutland (Vt.) Country Club; and Fall River (Mass.) Country Club.

New England PGA Master Professional Jack Gale of Tatnuck Country Club in Worcester coordinated the NEPGA's broadcast. The program will feature segments on the history of golf, rules and etiquette, golf instruction, the people of golf, people of the PGA and highlights of the New England Section's activities and events.

MASSACHUSETTS HELP

The Massachusetts Cooperative Extension Service has introduced two new publications "Professional Turfgrass Management Recommendations for Massachusetts" and "1991 Massachusetts Control Recommendation Guide for Insect, Disease, and Wood Pests of Shade Trees and Woody Ornamentals."

The first guide covers turfgrass culture, insect, disease, nematode and weed management. It discusses monitoring techniques and suggested threshold levels for turfgrass insects, cultural management of diseases, as well as environmental considerations in the use of herbicides.

The second book is for grounds managers and others responsible for the care of woody plant materials. It lists chemical recommendations, IPM considerations, growing degree day information, and timings for control.

PEST MANAGEMENT

The landscape pest message system is on line in Massachusetts. People may call 617-894-3115 for an update on the management of turf and ornamental pests, as well as the number of accumulated growing degree days being calculated in Waltham and Wareham.

NEW ENGLAND GCSA HONORS CONNOLLY

Jim Connolly, USGA Green Section agronomist for the Northeast Region, has been elected an honorary member of the Golf Course Superintendents Association of New England.

John Clark, new superintendent at Rochester (N.H.) Country Club, was assistant to Pat Kriksceonatis therefor many years. Kriksceonatis is now superintendent at Essex Country Club in Manchester-by-the-Sea,

Clark's assistant is Woody Valley.

WILKINSON DIES

Jason Wilkinson, former owner of the Duston Golf Club, died in a motorcycle collision with a moose in Plymouth, N.H.

DESIGN AND CONSTRUCTION SEMINAR SET

A seminar on golf course design and construction is due Aug. 13 at the State University of New York in Delhi.

Its focus is on retaining the original design intent of a mature golf course while making modifications necessary for modern-day play.

Speakers are David Whelchel of Hurdzan Design Group; Craig Schreiner, a golf course architect from the Heartlands; golf course superintendents John Carlone and Matt Ceplo; and William B. Stark III of Turf Renovations, Inc.

Seminar sponsors are the New York State Turfgrass Association, Central New York GCSA, Finger Lakes AGCS, Hudson Valley GCSA, Metropolitan GCSA and Northeastern GCSA.

RETIRED OWNERS ACCEPTED

Retired Pennsylvania golf course owners will receive honorary memberships from the Pennsylvania Golf Owners. Qualifying recently were Joe and Olga Vuknic, from Broken Tee Golf Course, now Carmichaels Golf Course; and Don and Marge Nagode, from Fallen Timber Golf Course, now Quicksilver

North Central



HAAS, BEMOWSKI JOIN HALL

Mark J. Bemowski, 44, of Greenfield, Wis. and Eugene (Gene) R. Haas, 56, of Wauwatosa, Wis., have been elected to the Wisconsin Golf Hall of Fame.

Bemowski won the prestigious Milwaukee District match championship five times and was runnerup four times. He won and was runnerup in the Wisconsin State Open, won three WSGA state amateur championships, twice was WPLA Ray Fischer 72-hole champion and with partner Jim Covelli captured the WSGA bestball championship. He is a travel co-ordinator..

Haas became involved in golf in 1958, and was elected president of Whitnall Park Golf Club in Hales Corner in 1960.

He has been president and vice president of the Milwaukee County Public Links Association, vice president and member of the board of directors of the Wisconsin Public Links Association, and chairman of the U.S. Golf Association Amateur public links championship in 1966.

He's been executive director of the Wisconsin State Golf Association since 1977, and was instrumental in restructuring the WSGA to include all types of golf clubs as members. This enabled public links members to have equal status with private and semi-private members, a major breakthrough in streamlining the golf program in Wisconsin.

Haas has been a USGA Regional Affairs Committee member since 1978 and a member of the USGA Handicap Procedure Committee since 1981.

Haas five times has been rated one of the state's Top Ten public links players, twice was club champion at Whitnall Park, was club champion at Westmoor Country Club in 1982 and is the current Senior champion

MCBRIDE HONORED

Muirfield Village Golf Course superintendent Mike McBride is one of three recipients of the Meritorious Service to Students Award, presented by Ohio State University's College of Agriculture.

McBride was cited for providing turfgrass students experience in golf course work through guest lectures, internships, hiring, and financial support to the Ohio State Turfgrass Club.

He helped put the now-successful weeklong golf course maintenance course in place at the university by showing the need for the course and helping financially. During the course's early stages, he filled vacancies in the class with his employees.

McBride was nominated for the award by the Department of Agronomuy to recognize his commitment to education and the future of the profession.



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CIRCLE #124

010

West

WATER-SAVING GROUP FORMED

PEBBLE BEACH, Calif. — Thirteen area golfcourses last October formed the Greater

Monterey Bay Area Golf Course Association in a move to conserve water. It was a prudent union.

An ordinance enacted at that time required mandatorywater rationing of 23 percent by golf courses on the Monterey Peninsula.



The association instituted a goal of 27percent rationing and monitored members' water use regularly.

The 13 member courses averaged more than 40-percent reduction in water used from October through April.

Heavy rains last March brought relief from the statewide drought, and as of May 1, area courses were no longer subject to mandatory rationing.

Bob Zoller, superintendent at Monterey Peninsula Country Club's two courses and association president, said the group he heads will stay together and pursue methods of further water conservation.

"There is always something good that comes out of adversity," he said. "The water rationing forces us all to take a look at our water usage and figure out ways to cut back.

Four of our member courses — Spyglass Hill, Quail Lodge and Rancho Canada East and West — each spent nearly \$1 million retrofitting and updating irrigation systems which ultimately will save thousands of gallons of water yearly."

Other member courses are Pebble Beach Golf Links, The Links at Spanish Bay, Old Del Monte, Poppy Hills.

Also, Cypress Point Club, Carmel Valley Ranch and Pacific Grove Municipal Golf Course.

Southeast

SPECIAL HELP IN COMMUNICATIONS

The recent rash of superintendent job changes in Florida may give credibility to the claim that communication is the No.1 sin by those in golf course maintenance.

In order to provide its members with techniques and strategies for improving commu-

nications skills, the Florida GCSA Education Committee has scheduled Dr. Bree Hayes, clinical psychologist and motivational speaker from the University of Georgia, to present a seminar on communications at the Crowfoot Open. The seminar will be held at



7:30 a.m. Sunday, Aug. 4, in the Grand Cypress Conference Center in Orlando.

Hayes has given public relations and public speaking seminars at the GCSAA Conference and Show for several years. While many people initially avoid public speaking, and think public relations is something for the publicity department, Hayes' seminars receive high marks from superintendents who have taken her classes. She provides insights into the art of communicating with others.

This year's seminar entitled "Public Relations" will cover topics such as communicating with your staff, club management and members with regard to demands and criticism; handling the media with regard to negative publicity over pesticide usage and water consumption issues; and your personal and business image.

Preregistration fee is \$30 before Aug. 1 and \$40 at the door. The four-hour seminar will be submitted to the GCSAA for .5 CEU's toward certification. The seminar is open to all FGCSA members and guests. An entry to the Crowfoot Open is not required to attend the seminar.

BASS, MEADORS CERTIFIED

Congratulations to Peter Bass and Gary Meadors who are the newest Florida superintendents to become certified golf course superintendents

Bass received an associate's degree from the Stockbridge School of Agriculture at the University of Massachusetts. Shortly after graduation, he served four years in the U.S. Air Force. Upon returning to the States, he began his professional career in the New York state area — Sunningdale, Westchester and Auppauge country clubs. In 1982 he moved to Florida and became superintendent at Cypress Run Country Club in Tarpon Springs.

Meadors received his degree from Lake City Community College in 1984. Since graduation, he has spent six years at the city of Jacksonville Beach. Meadors and an eightmember crew maintain an 18-hole course that plays 70,000 rounds a year. He is a member of the North Florida GCSA.

ON THE MOVE

Mike Hamilton, formerly at Lanier Golf Club in Gainesville, Fla., is the new superintendent at Harbor Club in Greensboro, Ga.

Norm Wilson, formerly at Pine Hills Golf Club in Winder, Ga., has replaced Hamilton. Bill Newman, who had been Wilson's assistant, succeeds Wilson.

Gary Wilder, formerly director of golf maintenance at Harbourtown Golf Links in Sea Pines Plantation, Hilton Head Island, S.C, is the new superintendent at Callaway Gardens' 63-hole complex in Pine Mountain, Ga.

Bill Langer will add to his responsibilities for resort management, lending his expertise to the Buick Southern Open on the Mountain View Course in September. Langer has been head superintendent at Callaway Gardens for 26 years.

GEORGIA ASSOCIATION MOVES

The Georgia Turfgrass Association office has moved to 5198 Ross Road, Acworth 30101; telephone 404-975-4123.

GEORGIA CONFERENCE

The summer conference of the Georgia Golf Course Superintendents Association will be held Aug. 5-6 at Lake Lanier Islands Hotel and Golf Club in Gainesville.

A turfgrass conference was held at Griffin Experimental Station July 31.

TORNADO CLEAN-UP

Chip Burchfield and staff at Dogwood Golf and Country Club in Austell are cleaning up after a tornado ripped through the course, taking out nearly 1,000 trees.

WELLS SNUBBED IN FLORIDA

It is becoming nearly impossible to drill a well in Florida, according to Larry Hawkins of Geoscience Inc. in Gainesville.

"When you try to get an irrigation permit for a well to irrigate a golf course, they have a right in a lot of states to stop that process through administrative objections. We're seeing that almost become a matter of fact in some areas of Florida now. Every one is being challenged," Hawkins said.

Hawkins noted the state's ground water system is being depleted and many homeownersface strict water-use regulations.

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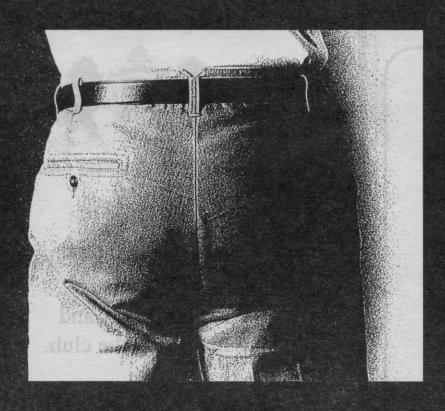
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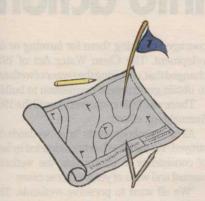
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CIRCLE #127

Briefs



DAVIS COURSE OPENING IN OCTOBER

CALHOUN, Ga. - Take several rolling hills, lots of trees, two lakes and a river. Mix well, and you have Fields Ferry Golf Club, scheduled to open in October.

The testing layout designed by Arthur Davis embraces several water holes, with strategic positioning of the greens to take full advantage of the waterways, ponds and lakes. Fairways without sharp contours gently roll in design that blend with the existing terrain. Elevated tees and greens enhance the vistas surrounding the historic civil war site.

Fields Ferry's three finishing holes are cited as outstanding. No. 16, a 523-yard par 5, challenges the better player to carry the lake and approach the island putting surface in two. The 17th, a 155-yarder, plays from an island tee over a lake to a well-bunkered elevated green and old chimney.

The 18th is a 525-yard par 5 that can be reached in two with a strong drive.

HALL & LINDSAY LAYOUT POPULAR

VICTORIA BAY, B.C. - Word-of-mouth advertising can be too powerful.

As news of an 18-hole course being built at Cordova Bay on Vancouver Island leaked out, 2,500 persons vied for membership.

Rather than discriminate, it was to decided that the course, which opened in July with a new clubhouse, would be for greens fee players only.

The Canadian firm of Hall & Lindsay Developments Ltd. is the builder. That company's Wilfred S. Hall has been building golf courses

Hall & Lindsay has built the back nine at Arbutus Ridge, a retirement complex on Vancouver Island, scheduled to open May 15 with a new 15,000-square foot clubhouse.

Hall & Lindsay's U.S. company, directed by Wilfred's son, Scott L., just completed the new nine at Fiddlers Elbow, Far Hills, N.J., and is doing a major renovation job at Copper Hill Country Club in Flemington, N.J.

RICHARDS' HEAD OF BAY ON SCHEDULE

PLYMOUTH, Mass. - The new Head of the Bay Golf Club here is rapidly taking shape in the sand hills of upper Cape Cod.

The 6,000-yard course is designed by Richard and Associates of Sagamore Beach, Mass., and is owned by Carl Nuissl of Wrentham, Mass

All 18 fairways have been cleared and graded, the greens are being shaped, and the irrigation system is being installed. Head of the Bay Country Club plays over a rolling 180-

"I believe the golf course will be a fine addition to the New England golf community," designer Ray Richard said. "I feel we have quite a story with the progress made by the contractor, the difficulty in putting together a deal like this in tough times, and the beautiful site with which we had to work.

The course will be seeded in the fall. Opening is planned for September 1992.

Japanese continue active in market

By Peter Blais

Despite a slowing economy in their own country, Japanese are still investing in golf throughout the world, according to an expert on international finance.

Japanese investment was down somewhat last year and will likely be still lower in 1991, according to Paul DeMyer, national director of hospitality consulting services with the international financial firm Clark Kenneth Leventhal & Co.

But the Japanese are still interested in U.S. record highs the previous two years, it's still investments and should become even more active in the second half of the 1990s, said DeMyer during the recent Institute for International Research Golf Course Development and Financing Conference in Las Vegas.

JAPANESE INVESTMENT IN U.S.

Total Japanese U.S. real estate investment in 1990 was \$13.06 billion, the third highest level in six years. While that's down from above a substantial 1987 investment, DeMyer

The figure is all the more impressive considering a number of negative factors — the U.S. recession, the doubling of Japanese interest rates, a 40-percent decline in the Japanese stock market, a continued decrease in the Japanese trade surplus, deregulation of Japanese financial institutions, overbuilt U.S.

Continued on page 30

Vegas turns hot territory despite recession

By Peter Blais

Unlike other parts of the country, the recession has made Las Vegas a more attractive place for golf course communities, according to a major developer.

Mark Fine, president of the Summerlin Division of Summa Corp. that is developing Legacy at Green Valley and TPC at Summerlin, has witnessed the growth of the southern Nevada city from a modest 250,000 citizens when he first moved to the valley 18 years ago to more than 800,000 today.

"What's taken place here is rather amazing," he said during the recent Golf Course Development and Financing Conference sponsored by the Institute for International Research. "Many people think Vegas is the place to be.

"One of the main reasons it has done so well is because it was never considered a great place to be. Phoenix, Atlanta, Houston were all great places, but not Las Vegas.

"Then, just 24 months ago, when every place else was overbuilt, Las Vegas become a great place. It remains a fairly strong market when you consider what's happening elsewhere in the country."

Las Vegas has long suffered an image problem. Barren desert, gambling and organized crime were the images that came to mind when one thought of the city, Fine said. Although it's changing, Las Vegas remains primarily a one-industry town - gaming. The growing industries — resorts, second homes and retirement communities - are all linked to golf courses.

Still, it was 1982 before the area attracted any major outside capital. Local banks and the Teamsters union pension fund, especially for resorts and other amenities, were the major lenders of development capital until the mid-1980s, Fine said.

In 1988, when most other U.S. cities were overbuilt, developers started to look toward Las Vegas. Criticizing the development industry, Fine said: "Unfortunately, developers are development-driven, not marketdriven. If there is a place they can build and



Tee areas shaped like the four suits in a deck of cards make Grand Legacy at Green Valley, on the outskirts of Las Vegas, a unique property. The course was designed by Arthur Hills and Associates, while the community was planned by David Jensen Associates.

borrow money, they are going to build. It doesn't matter whether the market justifies it or not. I hate to say that, but it has caused the crisis in the building industry today."

Developers rushed to Las Vegas and laid down earnest money on land. Unfortunately for them, but fortunately for the long-term economic health of the city, 1988 coincided with the drying up of capital nationwide. Many developers lost their earnest money and left town before their projects got off the

"We were right at the cusp of having major overbuilding problems," Fine said. But the recession saved Las Vegas from that curse, he added.

Las Vegas has felt the pinch of the national recession and depressed housing market. But it has left the city with "a healthy demand cycle," he said.

For instance, single-family housing starts dropped from 12,000 to about 8,000 over the past three years, "which I think is very healthy for a town of Las Vegas' size."

Multi-family housing starts have been in the 3,000 to 5,000 range the past two years. In 1988, it was 18,000. Projects on the books called for another 18,000 to 25,000 in both 1989 and 1990, a forecast that proved overly optimistic.

"All those would have been built if the financing market hadn't changed. And there would have been no justification for it and no market for it," Fine said.

LAS VEGAS' PAST

Until 1980, there were virtually no residential golf course projects, Fine said.

The Dunes Hotel Country Club and Desert Inn & Country Club were affiliated with re-

The Sahara Country Club (formerly Stardust Country Club) was the first residen

Continued on page 33

McCormack heads lineup of speakers at conference

ORLANDO, Fla. — The future of golf will undergo in-depth scrutiny at Golf Development Expo here Sept. 12-14.

More than 30 experts will probe golf development at general sessions that will embrace 20 fact-finding workshops. More than 116 exhibitors will present technology. There will be a market feasibility review.

Mark McCormack, International Management Group president, will be the keynote speaker at 8:30 a.m. Sept. 12 at Expo headquarters, The Peabody, 9801 International Drive.

Financing/investment sessions will

emphasize golf financing; find out how to tap it; how to joint venture with a name designer; tax-exempt and taxable bond financing; the outlook for Japanese investment; raising seed money; how to attract equity investors; and European joint venture opportunities.

The management and operations field will be reviewed in a checklist for maximum profits; a legal checklist for development; the next real-estate boom: more than just golf: clubhouse management for maximum profits; and marketing strategies for faster cash

Development issues to be examined are "The value of golf: Making your deal pencilout"; "Public courses: An entrepreneur's golden opportunity"; private golf facilities; how to avoid legal blunders; actual cost considerations for your golf course; and hotel and resort golf opportunities.

Design trends and master planning topics are "Master planned communities: Critical design features for maximum profits"; "Initial planning stage: Putting it all together"; solutions for environmental hurdles; and "Lessons learned: An in-depth look at a work-out situation."

Grassroots anger pushes Congress into action

Continued from page 1

"I think it's terrific," Landscapes Unlimited's William Kubly said of proposed changes to the system. Kubly, whose company is headquartered in Lincoln, Neb., but builds golf courses around the country, added: "It's been ridiculous. We've had a 10-by 30-foot piece of land in the middle of a fairway on top of a hill declared a wetland.

"I'm all for wetlands preservation but not in those small pieces. I'd say that's (revision) good news for the golf course industry."

Kubly said the regulatory system "has really been handcuffing us out in the field. And the costs to the owners are getting so high that it is not cost-effective to build golf courses any more in certain parts of the country due to wetlands and erosion control."

Tom Clark of Wheaton, Md., president of the American Society of Golf Course Architects, said: "I'm encouraged to hear a lot of congressmen are starting to hear from their voters... People are starting to take steps in the right direction."

Rhod Shaw, an aide to Rep. Jimmy Hayes of Louisiana, who drafted the leading wetlands bill, said the move is gaining support in Congress. By early July, 149 co-sponsors from 38 states and Guam had lined up behind the Hayes bill, Shaw said, "because it's a grassroots issue.

Everybody's (congressmen) getting an incredible amount of reaction from home.

"The system's wrong. The system's broken. People should get involved and let their legislators know. Reality is the greatest check for where we need to head on this."

WETLANDS DISAPPEARING

At the center of the problem is the need to preserve the nation's wetlands and to balance that with responsible management and development. Experts say the United States is losing 500,000 acres of wetlands a year, a portion simply becoming open water.

Swamps, marshes and bogs were once considered wasteland. The government en-

couraged draining them for farming or development. The Clean Water Act of 1972 changed that, requiring the owner of wetlands to obtain government permission to build.

There was little controversy until the 1989 manual took effect.

All agree nobody wants "true" wetlands destroyed. Yet the issue has been clouded by lack of consistency in interpreting the wetlands manual and waits of years in some cases.

"We all want to preserve wetlands. The problem is the time it takes to get a permit," Clark said.

"I'm sensitive to wetlands issues myself," Kubly said, adding that the EPA and Corps

149 congressmen co-sponsor 'sweeping' new legislation...

Ry Mark Leslie

Louisiana Rep. Jimmy Hayes has introduced legislation that he says will enhance protection of wetlands while "providing a legal system for balancing the competing interests of wetlands protection, essential community growth and infrastructure, and private property rights."

Hayes' HR 1330 would "revamp the whole (Clean Water Act Section) 404 program," according to environmental consultant Mike Kelly. Co-authors of the bill are Reps. Don Young of Alaska, Beryl Anthony of Arkansas, Billy Tauzin of Louisiana and Thomas Ridge of Pennsylvania.

Kelly, vice president of Williamsburg Environmental Group, Inc. in Williamsburg, Va., said other bills, besides Hayes', have been introduced—including HR 404 by Rep. John Paul Hammerschmidt, the ranking Republican on the Public Works and Transportation Committee, which Kelly said has a good chance of passage. "But the Hayes bill is the most sweeping."

Rhod Shaw, Hayes' chief of staff and legislative director, who has worked on the legislation for three years, set out to correct deficiencies in Section 404 such as its "bureaucratic morass for private landowners and local governments"; its ignoring of "basic, fundamental rights of private property owners"; its covering of privately owned lands that pro-



Rep. Jimmy Hayes

vide "minimal wetland functions and values at best"; and its failure to provide incentives and flexibility "to encourage landowners and wetlands users to act responsibly and invest in wetlands restoration, enhancement and preservation."

Shaw said: "Current 404 law is not a management program. It does not get at how you can actively manage, conserve and handle the property. And it does not recognize that you have to have some kind of balancing mechanism to allow central community growth to co-exist with environmental protection."

Noting that 60 to 70 percent of the American population lives within 50 miles of the coast, he added: "We have people living there,

moving there. How do we co-exist with those areas?

"We have to start making some pretty tough decisions. That's where HR 1330 really comes about."

HAYES' "FIXES"

A key element of Hayes' HR 1330 is classification of wetlands according to their values "because not all wetlands are created equal," Kelly said. Shaw calls it "narrowing the jurisdictional scope of the program to functional wetlands."

It also aims to immeasurably speed up the approval process; unify the program in the Corps; provide that preventing development of a highest-classified wetland is considered a "taking" for which the landowner must be compensated; and encourage states to establish programs meeting Corps approval.

Under HR 1330, wetlands would be classified under three types. The first would be regulated more strictly than current law. The second would be regulated at the same level. The third would be regulated on a limited basis

Stressing that HR 1330 is "a discussion vehicle," Shaw said he does not expect the EPA to give up its share of jurisdiction of wetlands and the veto power it enjoys. He simply wants to instigate discussion on the speed of the process.

"Right now we have two federal agencies review an application at two different times, rendering two different decisions. We need a way to make a decision at one time," Shaw said.

SPEED

HR 1330 states that after a prescribed short timeframe, if no action has been rendered by the agency, the permit will be assumed to be granted.

"The environmental community is saying, They'll let everything be developed.' The development community is saying, 'They'll deny everything to cover themselves.' Both sides have a valid concern. I see them denying a lot... But, that's fine because the developers who are waiting seven years never get an answer. At least here, a 'no' is better than waiting, because they can reapply and resubmit, and this time they know why the application was denied," Shaw said.

STATE LAWS

The bill would allow and encourage state laws, but those laws would have to be approved by the federal agency in charge. This would put an end to the situation that Geoscience Inc. President Larry Hawkins referred to when he said: "We in Florida have

the feds to deal with. We have the state to deal with. We've got a water management district to deal with — and even the county government, which may be more stringent than all three.

"The key to this whole issue is to try to get some consistency in wetlands definition that serves all four interests, right down to the local government."

The "taking" issue is another that will bring debate. Kelly said: "It will give lawyers work. The Hayes bill sets up more lawsuits if you do have wetlands classified as high value on your property. It sets up compensation if you can't develop."

STRICT SEQUENCING

Another point of debate will likely be what legislation terms "strict sequencing."

"Here we clearly diverged with the environmental community," Shaw said. "In 1989 the EPA and Corps signed a memorandum of agreement on strict sequencing. When you get an application for a permit today, the very first thing we look at is, can this person avoid doing the project in a wetland? So you're told you can't do something on your property even if you don't have the financial wherewithal to buy another property or use another alternative."

MAPPING

Consequently, the EPA or Corps have become planners, not regulators, he said.

The Hayes bill also proposes national mapping to determine wetland areas. This would help prospective landbuyers by letting them know before they buy if a property contains wetlands.

But it would be a project of massive expense and, Shaw said: "I don't expect it to be passed. We just wanted to give people the idea to discuss.

"A lot of tailoring needs to be done to it... Current law isn't working. We're losing 500,000 acres of wetlands a year, anyway. The environment clearly isn't benefiting under current law. And God knows, local communities don't think they're winning under it.

"When you're 0-for-2 on both sides of the fence, maybe it's time to rewrite the law. So we have given 1330 to people to look at and question, 'What do I think about the idea that all wetlands aren't created equal for regulatory purposes. Maybe classification is the way to go. Maybe we ought to look at private landowners' rights. Are we going to compensate them when we take their land for the 'greater good'?

"We've got people going into bankruptcy because of this."

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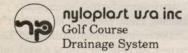
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and wetlands guidelines toward revision

have deviated from the original intent of lawmakers, which was "to preserve habitat that can survive in the wetlands, and areas that have poor drainage."

The Clean Water Act did not address wetlands. It dealt with navigable waters. This led to the 1989 delineation manual, which was not meant to be a regulatory document but rather a guide in deciding whether an area is a wetland, Shaw said.

Former Corps official Bernard Goode, who helped write the manual, told Civil Engineering News: "It's just a program that's out of control. Had I known then what I know now, I would have insisted there be

more surface water for there to be a wetland. Areas that no one in their right mind would call a swamp, bog or marsh are being called federal wetlands."

"What has started to happen," Shaw said, "is that the EPA or Corps - which the American public doesn't want making these decisions - are the decision-makers on national planning. They are setting people down and saying, 'We don't see the need for your project.' But since when did the government tell me whether I have a need for my project? They are to regulate, not decide need.'

In a letter to his colleagues, Hayes said: "With the Clean Water Act in need of reauthorization during the 102nd Congress, we not only have an opportunity to act, but we have a chance to regain the responsibility we have abdicated regarding wetlands law since the original act ... was passed...

"We in Congress have effectively transferred the power to decide what our national wetlands policy should be to federal agencies that are accountable to no one. Decision after decision has since been controlled by the opinions of a few bureaucrats, who have utilized their own science to forward their own ideas. Clearly, a minority has determined the rules of how the majority shall live."

Larry Hawkins, president of Geoscience

Inc. in Gainesville, Fla., said the 1989 manual has caused confusion and "quite a bit of consternation about how those jurisdictional calls have been made. It is not applied equally throughout the Corps' districts.'

He said in Florida the Corps has been taking extensive farmland out of production by declaring areas as wetlands because they have hydric soils. "Hopefully, these two things (manual revision and Hayes bill) will clarify that issue because it really has been a problem," Hawkins said.

Therevised EPA-Corps manual and the Hayes bill would substantially resolve problems with current law, say people in the golf industry.

... hearings will be conducted nationwide over revised manual

The revision of the federal wetlands delineation manual, used by the Army Corps of Engineers and Environmental Protection Agency since 1989, spells out several concems with the guidelines and responses to those concerns.

Greatest among those matters are:

· That wetlands determinations are being based on less than all three of the basic parameters that decide if an area is a wetland -hydrology, soils and vegetation. In fact, in some cases, officials have declared an area a wetland if it meets only one parameter.

The proposed solution is that all three criteria must exist, and - with exceptions a determination that one parameter exists can not be based on evidence of other pa-

· That one week of wetness during the growing season was enough to create wet-

The response is to require that an area be "wet" for more than 14 days during the growing season before it can be declared a

· That areas that were dry at the surface (potentially all year round) were considered



If it goes into effect as proposed, you'll see a lot of forested wetlands — "wet woods" — drop out of jurisdiction. And it will open a lot of land for development.'

— Mike Kelly, environmental consultant

wetlands based on the presence of water as much as 18 inches below the surface. ("Our entire district is a wetland," Shaw said.)

The revision would require saturation to be at the surface for more than 14 days.

The Office of Management and Budget proposed mandating a 21-day period of water being at the surface, the same as the Hayes' bill proposes, said Rhod Shaw of Louisiana Rep. Jimmy Hayes' office.

• That hydrology could be considered demonstrated even without strong evidence of the presence of water.

The proposed solution is to require "strong evidence of the presence of water; where the indicators of hydrology being relied upon are not strong, supporting evidence is required," Shaw said.

· That actual conditions in the field were not accurately reflected by the method with which the growing season was defined.

The revision would regionalize the determination of the growing season.

• The 1989 manual was developed without public input.

EPA press officer Sean McElheny said a 60-day public comment period would follow release of the proposed revision. He said extensive field testing would be done by the EPA, Corps and Soil Conservation Service. And a blue ribbon panel of experts would study the guidelines.

The new manual, he said, should be in the field very late this year or in 1992.

The narrower definition of wetlands is "language I'd support," said Larry Hawkins, president of Geoscience Inc. in Gainesville, Fla. "What's been flying in the face of even the 1989 manual is that they have not been applying all three criteria.

"In fact, a legitimate jurisdictional wetland does have water at the surface for a significant period of the wet season. Twenty-one days is reasonable. But water at the surface and all three indicators are very prudent."

Mike Kelly, vice president of Williamsburg Environmental Group, Inc. in Williamsburg, Va., said: "If it goes into effect as proposed, you'll see a lot of forested wetlands - 'wet woods' - drop out of jurisdiction. And it will open a lot of land for development."

The revision also tackles the obstacle of timeliness developers have faced.

An overview of key elements states: "EPA and Corps staff work together to resolve differences regarding individual permit applications early in the review process. Permit applicants are encouraged to initiate pre-application meetings with regional staff from the Corps, EPA and other commenting agencies to discuss concerns... In doing so, the actual permit review period may be significantly reduced."





Japanese firms continuing investments in the

Continued from page 27

real-estate markets, the Persian Gulf crisis, the Japanese Ministry of Finance's concern about adverse publicity and restrictions on foreign investments, negative media coverage, and the difficulties facing U.S. investment institutions.

While the Japanese are not pulling out of the U.S. market, the types of investments that attract them have changed, DeMyer said.

Early Japanese interest was in trophy properties. But the finances proved unsustainable and there was a limited supply.

Japanese investors in the past three years have shown a preference for properties with more sustainable growth patterns. More investors are involved and the average price per acquisition has fallen.

Office properties have become less popular while resort and hotel properties with golf facilities have become more attractive. Mixed-use projects, residential developments and land have become primary targets. Land has shown the biggest percentage increase the past two

years and that is likely to continue as the land is developed, DeMyer said.

Hotels and resorts remain prime targets, particularly those with golf courses. They were the top choice for the second straight year, comprising 29 percent, or \$3.8 billion of Japanese real estate investment. Most of that money, 59 percent, was spent in Hawaii and California.

"Most of the money to develop resorts is coming from foreign investors who consider a golf course an attractive and essential element in terms of financing desirability," DeMyer said. "If there were no golf courses, there would be no resorts. These days a resort has to offer oceanfront or golf."

Japanese golf course investment is increasing because of prestige, the high cost of golf in Japan and barriers to development in their home country. In 1990, the Japanese invested \$547 million on pure golf course deals, not including courses that are parts of resorts or mixed-use deals like Pebble Beach. That's double the amount spent in 1989. Sixty-nine percent of pure golf course investment was in Hawaii and California.

The trend is away from joint ventures and toward 100 percent Japanese ownership, with American professionals brought in only as consultants, in golf course and resort deals.

"It may be they were less satisfied with their joint-venture partners than expected," DeMyer said.

Predictions for 1991 are that Japanese investment will be on the low end of the \$6 billion to \$10 billion range. Longer term, the outlook is better, DeMyer said. The large investment in land bodes well for future investment. By 1993 all major Japanese banks are expected to meet international standards for capital requirements and the United States should be well out of the recession, he said.

Golf interest is expected to remain high. The Japanese have agreed to buy Grandote Golf & Country Club and Meridian Golf Club in Colorado and Holly Ridge Golf Club in Sandwich, Mass., the first Japanese foray into New England.

"There is a burgeoning of golf worldwide and the Japanese will continue to acquire golf courses," DeMyer said. "Japanese memberships will continue to impact the worldwide golf market into the next century.

"But we don't believe in the Reaganomics of Japanese golf. It will probably not trickle down much further than the top tier of the market. The rest of the market will depend on the old tried-and-true valuation method of cash flow."

EFFECT OF JAPANESE MARKET ON U.S.

Japan is a nation of 125 million people using 1.800 domestic golf courses. America has roughly twice

Japanese buy Idaho, Colo., Wash., Mass., La. courses

Japanese investors are expanding their golf course purchases from the traditional targets of Hawaii and California.

Recent buys have been in such locations as Idaho, Washington, Massachusetts, Colorado, Florida and Louisiana.

Hidden Lakes Country Club, an 18-hole course in Sandpoint, Idaho, about 60 miles from the Canadian border, was purchased for undisclosed investors. Some were said to be Japanese.

The new owners intend to renovate and upgrade the facility.

The \$29.6-million Indian Summer Golf and Country Club in Lacey, Wash., is scheduled for completion in 1992 and a golf school in Lacey also is planned.

In Massachusetts, Cape Cod Golf Properties, a subsidiary of the Nakamoto Group of Kobe, Japan, bought Holly Ridge Inc., which owns the Ridge Club, a 300-acre golf and residential community.

The Japanese have been very active in Florida and Louisiana.

Turtle Creek Golf Club, near Rockledge, Fla., was sold in February to Tokyo businessman Shigeo Sekiya.

Sabal Point Country Club in

central Florida went for \$5.5 million in March, and Sweetwater Country Club near Longwood, in Seminole County, was sold in April. The buyer was not revealed, but it may have been Japanese.

The Country Club of Louisiana is about to be sold for \$20.5 million to Japanese businessman Hiroshi Furui. Other Japanese-owned courses in Louisiana include Le Triomph Country Clubin Broussard and Meadowlake Country Club.

Colorado has also captured Japanese attention. Tokyo developer Koji Fujiki hoped to buy South Ridge Golf Course from the city of Fort Collins May 16, but the \$3.2-million deal fell through because of a wetlands problem.

In La Veta, in the southern part of Colorado, Nihon Unix Co. Ltd. of Tokyo bought the 18-hole Grandote Golf and Country Club. The reported purchase of \$2.5 million is said to be a conservative figure.

In the Denver suburb of Englewood, Meridien Golf Course is believed a target of Central Sports of Japan.

Japanese investors seem to have switched from purchasing premium courses at premium prices in premium states to buying bargain courses at bargain prices in bargain states.

as many people, but six times as many golf courses.

"Compared to the United States, Japan has, and always will have a shortage of golf courses relative to the population," DeMyer said.

The number of rounds increased 7 percent annually from 1979-89, reflecting the Japanese growing love of golf. More courses are expected to open in 1991 than in any other single year in Japan. But environmental concerns, astronomical land prices and high interest rates will limit Japan's potential capacity to about 2,300 courses, DeMyer said.

"We foresee a long-term inability of the Japanese to meet their own golfing needs," he added.

Private country club membership prices have increased dramatically during the last decade. A survey of 665 courses near Tokyo revealed membership prices many times higher than in the United States. The difference is due, in part, to the types of memberships in the two countries.

Japanese memberships are an investment as much as a right to play. They are traded like securities, which buoys their price. Membership costs could drop in the near future, as they did for a short time in 1988, DeMyer said, reflecting the

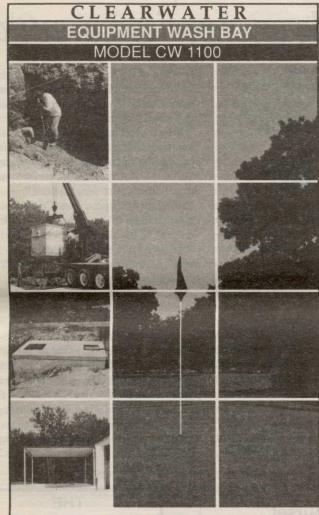
increase in course supply.

Japanese clubs that grab headlines are those with memberships of \$1 million or more. But they are the minority. The greatest demand is for courses with membership costs below \$200,000. A survey of courses scheduled to open in 1991 showed most in the \$100,000 to \$250,000 range with those between \$250,000 and \$500,000 still popular.

Importantly for would-be sellers or developers of U.S. golf properties, "We anticipate a retrenchment outside the borders of Japan over the next few years as the supply of golf courses tries to catch up with the demand," DeMyer said.

"During that time, overseas membership clubs targeted to the Japanese aren't likely to perform at their hoped-for levels. During the latter half of the 1990s, we foresee a resurgence in Japanese tourism and golf activity outside of Japan."

Still, higher prices for existing courses, joint ventures or selling memberships to the Japanese are not out of the question. Most U.S. clubs that have sold memberships in Japan are located in Hawaii and already owned by the Japanese. More membership sales are possible in Hawaii, which the Japanese can visit for a short vacation or long



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U.S. but changing interest in types of property

weekend. Guam is even closer and is experiencing a major golf development boom.

Hawaii's limited developable land also works to its advantage in attracting Japanese buyers, DeMyer said. Japanese investors seek memberships in courses that are scarce. If a course can be easily duplicated down the road, its membership values will probably never rise very high. Limited space, environmental concerns, zoning problems, anti-development settlements, and possible multimillion-dollar impact fees will make further golf course development difficult.

On the mainland, membership sales to Japanese offer some potential. Japanese expatriates working in the United States have been the most lucrative market to date. Major cities like New York, Los Angeles, San Diego, Atlanta, San Francisco and Chicago have had some success.

Misconceptions about Japanese memberships abound, DeMyer said. A membership purchaser is entitled to 85 to 90 percent of the initiation fee back at some future date. It acts as a guarantee that reduces the risk of buying at the initial offering price.

"If you bought a stock today, and were always guaranteed 90 percent of that price, more people would be willing to acquire stock," he said.

The 90-percent guarantee is transferable to all future buyers of the membership. Any profits at the time of sale belong to the seller. Generally, private clubs don't participate in the re-sale of memberships.

"How is this different?" DeMyer, asked. "A new club can obtain substantial cash inflow without the responsibility of payback or interest on those funds in the future. The club is not obligated to refund the 90 percent until it has reached a stable level or after a period of, say, 10 years. If after 10 years all the members want their money back, the owner has effectively financed the entire project for free and is repaying those investors with cheaper dollars of tomorrow.

"The Japanese golf industry is fueled by the assumption that the initial offering price will never be lower than the market price at any giventime. This assumption is very important in understanding the difference between Japanese and American memberships."

Other trends will include selling memberships to a group of golf courses, either in the same metropolitan area or in geographically diverse resort areas; tying playing rights in U.S. courses to membershipsales in local Japanese courses; or tying memberships to hotel, condominium or home ownership adjacent to the course.

"By attaching memberships to real estate, the developer is appealing to the twin hearts of Japanese investors — real estate and golf," DeMyer said.

DeMyer said the typical U.S. course is not a candidate for Japanese investment. Courses with the best chance of appealing to the Japanese should have one or more of the following attributes: located in Hawaii, Guam or the West Coast; proximity to a major metropolitan area with many Japanese executives and expatriates; high-quality reputation; famous designer; tie-in to a Japanese course; or a link to real estate

Few courses have attracted more than \$50 million in Japanese memberships, but chances for some to attract millions or tens of millions can't be dismissed.

— Paul DeMyer

Few courses have attracted more than \$50 million in Japanese memberships, but chances for some to

attract millions or tens of millions can't be dismissed, DeMyer said.

RESORT GOLF TRENDS

A Leventhal study of 400 international resorts revealed some of the better locations for investing in golf resorts.

Guam had the highest room occupancy rates at 95 percent, followed by Hawaii, Florida, U.S. Southwest and Northern California. Australia and U.S. ski resorts were the lowest at less than 60 percent Daily room rates varied from an average of \$200 in the Caribbean down to \$60 in Mexico.

Of importance to golf marketers is that groups (conference go-ers, seminar attendees, etc.) make up a larger percentage of visitors (50 to 60 percent) than do tourists (40 to 50 percent). And group business is on the rise.

Compared to standard hotels, resorthotels had a 9-percent higher occupancy rate and charged 80 percent more per room.

Continued on page 32



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GOLF COURSE NEWS

Greatest potential is in Guam, S'east, Mexico, Caribbean

Continued from page 31

Chain affiliation is growing, with 58 percent of the resorts surveyed affiliated with major chains. Hilton, Sheraton and Marriott were the top three. Luxury hotel operators like Four Seasons and Ritz Carlton are also expanding into resort destinations.

Foreign ownership of major hotel companies is increasing, although American companies still control the majority of resort hotel rooms.

The report compared the acquisition, repositioning and development potential at international resort locations based on politics, potential for increased demand, existing lodging supply and demand, costs compared to revenue potential, available land and resort sites, overall infrastructure and local economy.

Australia, Northern California, Arizona and Florida were prime targets for acquisition.

Hawaii, Mexico and the Mediterranean were excellent areas for repositioning.

The greatest new development potential existed in Guam, U.S. Southwest, Mexico and Caribbean. Guam, a 3-1/2-hour plane trip from Tokyo, is experiencing tremendous growth as a destination resort for Japanese and South Korean tourists.

"The best opportunities for resorts are those offering cultural and historical amenities. People want to relax but also experience the places they visit," DeMyer said. INTEGRATING GOLF INTO RESORTS AND COMMUNITIES

Resort hotels developed in conjunction with master planned residential communities will be a significant trend into the 21st century.

"In many instances the resort and golf course have increased the value of the residential components," DeMyer said.

Integrating golf into resort and residential communities takes careful planning, professional experience or assistance, an understanding of the variables that determine type and purpose of the golf course and a knowledge of the different options, DeMyer said.

Golf can increase a resort's profitability,

hotel utilization, marketability and ability to attract financing.

The Undivided Interest Concept is a new trend. It is similar to time-sharing, but differs in one major aspect. UDI units usually have a golf course, making it potentially more attractive to certain buyers. One of the most successful is the Melrose Club on Daufuskie Island off Hilton Head, S.C., DeMyer said.

Formal and informal use agreements between golf courses and resorts without courses are becoming more common, especially in areas with excess golf capacity, DeMyer said. The Ritz Carlton in Laguna Niguel is an example.





Vegas developing at fast pace despite outlook elsewhere

Continued from page 27

tial golf course. Paradise Valley, which became Showboat Country Club and is now Indian Wells Country Club, along with Las Vegas Country Club rounded out the field.

Up until 1980, all golf course development was linked to demand for golf, not housing. And demand was limited. Las Vegas Country Club was financed by the Teamsters and went through three owners before becoming established, Fine said.

There were no successful real estate golf developments until 1982, he said. Prior projects were core courses that weren't developed to maximize residential housing. The economics of golf in the 1980s forced golf to become real estate oriented, the Summa Corp. official said.

LAS VEGAS' PRESENT

Prior to 1980, single-family housing permits averaged 4,500 per year. They have jumped to 7,600 since 1983, the unofficial start of the Las Vegas golf boom.

Fine traces the boom's origins to the 1983-84 opening of Spanish Trail, the main beneficiary of the pent-up demand for golf course communities and "the most successful" community in Las Vegas.

Spanish Trail developed along the lines of a Palm Springs, Calif. community, complete with entry gate. Robert Trent Jones Jr. designed the 27-hole course. The community demonstrated the pent-up demand for golf course lots.

Started by a local family that made its money in the concrete business, the community was well designed and successful from the start through every residential construction phase, Fine said. It appealed to many market segments — primary, custom, pre-retirement and retirement residences.

"It showed me a golf course can extend the life of a project," said Fine, a non-golfer.

Based on Spanish Trail's success, other developers tried golf course communities. U.S. Homes opened a retirement community called Los Prados in 1985-86. It was never very successful because it wasn't well conceived, Fine said. When retirement homes didn't succeed, it shifted to conventional housing.

"It never really identified what it truly wanted to be," Fine said.

Painted Desert came on line in 1986-87. It had a very successful land-sale program, but never projected a clear image of the course as a semi-private, private, or public course, Fine said. Consequently, it didn't get maximum value for the lots.

"It's very important to know who your market is and what you're doing to reflect the values along the course," Fine said. "Golf course communities are so capital intensive that you usually can't afford to make mistakes."

Spanish Trail made mistakes, Fine explained. But there was such a pent-up demand for golf course housing that the developers were able to work through them and not repeat them in the second and third

"Painted Desert didn't turn out to be as strong as Spanish Trail," Fine said.

Painted Desert was also a target golf course, the first in the area, Fine added. It opened before Las Vegas had water problems and people didn't understand the need for it

"We will do no projects that have been done before," Fine said. "I've always said the pioneer is the guy who dies with the arrows in his back. Don't be a pioneer if you want to



Identifying a niche and making sure there is enough demand to justify the capital expenditure are keys.'

- Mark Fine

be with your project at the end. Stay with the fundamentals, keep it simple, do it right and don't get too fancy."

Canyon Gate was a joint venture that opened in 1987-88. The two parties fought and separated, Fine said. The family that remained and developed the project didn't have enough lots remaining along the Ted Robinson-designed course to keep it exclusive.

"I've seen courses that were well conceived but didn't have enough product along the golf course. Consequently they couldn't sell enough golf course memberships to maintain the exclusive image they were trying to market. That doesn't mean you can't sell memberships to people outside the community. But it's easier to sell to those in the community because people typically want to play near where they live," Fine said.

The Legacy in Green Valley opened in 1989-90. Arthur Hills was the designer. Fine called it "an economic course" for the Las Vegas area, even though it uses a million gallons of irrigation water a day.

"This is the desert and people want to live along something green," he explained.

Developers must be willing to absorb some red ink for two or three years while a course incubates and develops a reputation, Fine said.

Legacy charged \$75 greens fees and hosted 35,000 rounds its first year — somewhat below the 50,000 to 55,000 rounds developers projected the semi-private course needed to be economically strong. The golf course had to provide more revenue because it wasn't strictly private, which would have allowed some of the costs to be transferred to the surrounding development.

"But if they stick with the program for five years, Legacy will become a very successful course," Fine predicted.

LAS VEGAS' FUTURE

Although it will never be a golfing mecca like Palm Springs, Las Vegas has good potential for golf course communities in most segments of the housing market, Fine said.

The 22,000-acre TPC at Summerlin community plans on 55,000 housing units built over the next 25 years for 150,000 to 175,000 residents. Lot sales have been primarily to builders so far, with 14 deals closed by late 1990. Fine projects 60 home models will be available by the end of 1991 and 80 a year later. Fifty homes were occupied in late June.

The 230-acre TPC course, designed by the PGA Tour staff with consulting pro Fuzzy Zoeller, will be the eventual home of the Las Vegas Invitational. It is scheduled to open this fall with memberships selling for \$30,000. Approximately 160 were sold from April 15 through late June, making it the most successful membership sales start-up for a TPC course, Fine said. The goal is 400 members the first year, with an eventual total of about 500.

"Memberships are expensive, but we wanted to make a statement on the front end of the project," Fine said. "We needed to with 22,000 acres of property."

A Sun City community with a basic course, and homes in the \$80,000 to \$140,000 range, has been developed at the rate of 700 units a year for the last four years on 1,000 acres to the north of TPC at Summerlin, Fine said.

"They told me they're having the best year they've ever had, which I find incredible considering the economy," he added.

Among the problems facing developers wanting to attract people to golf course communities is the growing air pollution problem in Las Vegas, the water shortage and dealings with county and state officials, Fine said.

"But identifying a niche and making sure there is enough demand to justify the capital expenditure are keys," Fine said. "The future of golf is in communities where you know your niches and pre-retirement communities for people who are looking to retire in the next five to 10 years. Those markets are available and those markets are good.

"The challenges facing golf courses are water, how you use it, how much the county will let us continue to build golf courses and the tremendous costs of building courses since almost every single part of them must be irrigated.

"They can be successful. There are examples of successful courses. But you have to be market driven, not development driven when you're involved in golf course development in Las Vegas."



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Tree-cutting can cost millions, developer discovers

By Peter Blais

Superintendents should make sure a tree rests on their course's property before sending out an employee to cut it down, unless the maintenance budget includes an extra \$1 million or more to give away to an abutting landowner.

That's the advice of a California arborist who served as an expert witness in a recent Los Angeles Superior Court jury trial that could cost a Santa Monica man accused of damaging 17 of his neighbor's trees \$1.4 million.

"To my knowledge, it's the largest award ever for destroying someone's trees," said Alden Kelley, a consulting arborist from Fullerton.

According to Kelley, to improve his view a Beverly Hills developer building a hilltop house had a crew remove all or part of what turned out to be his neighbor's pine trees.

"The view was essentially smogladen Santa Monica. But the idea of a view lot is a peculiar kind of insanity you encounter in coastal regions. And he took the approach, I think, that it's easier to get forgiveness than permission. It works with developers a lot, but it didn't work in this case," he said.

Working with local nursery stock, Kelley arrived at a total replacement value of \$310,000 — \$200,000 for the trees, which ranged from five to 32 inches in diameter, and \$110,000 for restoration to the steep slope he said was denuded by lugging the trees off site. The figure was based on replacement-in-kind, meaning same species, same size, same condition in the same location.

"It's based on the same theory that holds 'If you destroy my car, I wantitreplaced with the exact same car,' " Kelley explained.

Gerald Sauer, the attorney for the plaintiff, called in a realty specialist who placed the value of trees as a privacy screen at 15 to 24 percent of total property value. His lowend figure on a \$2.5-million property was \$400,000 for the 17 trees.

"One jurist went for my figure. The other 11 went for the realtor's figure. The jury found for the plaintiff for \$400,000. Then, instead of going to California statutes and giving treble damages for unauthorized damage of wood and underwood, they simply awarded

Palmer, Benz in China first

While the story was correct, a headline in the July issue misstated that China's first modern course had opened in Shanghai. In fact, Shanghai International Golf and Country Club, a Robert Trent Jones Jr. design, is the first modern course in Shanghai itself.

Arnold Palmer designed China's first modern course, Chung Shan Hot Springs Golf Course, in Sanxiang Commune Zhengshan City in Quang Dong Province. It opened in late 1985.

Brad Benzthen designed Beijing Golf Club, which opened in 1987.

him another \$1 million punitive damages, which was even higher. So the total figure was \$1.4 million."

The defendant is appealing the judgment.

Kelley has been involved in many tree damage cases. Most are settled before going to trial, he said. When cases have reached the court, judgments have varied from exactly what the plaintiff wanted to exactly what the defendant wanted, he added.

"Usually it's a compromise that leaves both parties unsatisfied," Kelley said. "Having an extremely competent attorney, who does his homework, was a key factor in this case. Persuading a dozen people that a wrong has been committed that deserves significant redress takes more than just saying, 'This is a bad thing.' Sauer did his homework."

Kelley's advice to superintendents is to be extremely cautious before cutting down trees bordering private property since, according to California law at least, unknowingly felling someone else's trees can result in double damages.

Kelley is a firm believer in re-

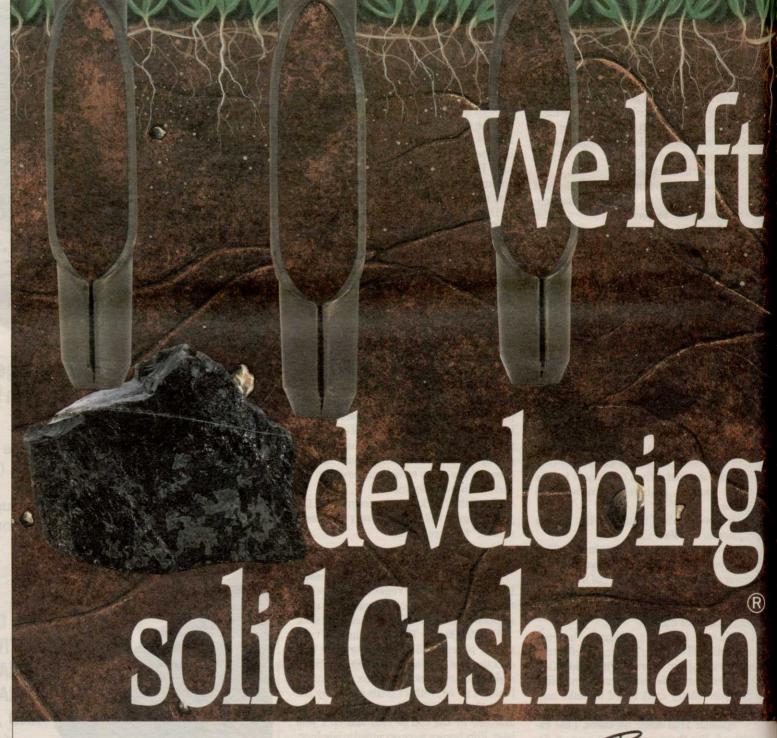
placement-in-kind when it comes to restoring trees. On occasion, estimated replacement value has exceeded total property value.

"There is precedent that it depends on the intent of the plaintiff. If it is the plaintiff's intent to restore, then the defendant can be stuck with the higher cost. But if the intent to restore isn't there, it is usually adjusted downward (to property value)," he said.

Asked if the amount of this judgment was an isolated case that isn't likely to be repeated, Kelley

responded: "It's volatile, variable and to a large degree, unpredictable, in each case. Judges and juries are supposed to be objective, but they are not. Their biases will carry the day more often than not.

"If you are in an area where the peopleselected for juries cherish trees, the chances of a large settlement for the plaintiff are much greater than in an area where people feel Those trees are such a mess, I wish we could get rid of all of them." People are not rational about landscape trees. They are often emotional about them."





Irwin, Phelps join forces on design

Hale Irwin Golf Services, Inc. of St. Louis has been commissioned to design two courses in Vail Valley, Colorado, and a course in Citrus County, Florida.

Plans have been unveiled for two 18-hole courses at Cordillera, a 3,200-acre luxury resort and residential community development in Edwards overlooking Vail Valley.

Irwin will provide conceptual and routing plans, as well as the final design and construction documents for the first 18 holes. This par 72 resortlayout is slated for completion

in the fall of 1992 or spring of 1993. Said Irwin: "I never have seen a

more dramatic site for a world-class

Richard Phelps, a past president of the American Society of Golf Course Architects, will aid Irwin.

More than 80 percent of the first course's 1,115 acres will be untouched.

Construction of Cordillera's second course, planned to be private, is scheduled to begin the season after the opening of the first course.

In Florida, Southern Woods Country Club five miles south of Homosassa

Springs will be a 293-acre master planned community next to the 8,000acre Sugarmill Woods development.

Construction is scheduled to begin this summer on Southern Woods, which will be an 18-hole par 72 private country club. A 1993 opening is expected.

Developed by Flovicc and Co., a Florida corporation, it will be designed to preserve the rolling sand hills, towring pines and oaks.

Sugarmill Woods Manageemnt, Inc. has been retained as construction manager.

Appraisal firm establishes arm for golf properties

HARRISBURG, Pa. — Hirsh Valuation Group, a full-service realestate appraisal and consulting firm, has established Golf Property Ana-

Golf Property Analysts will specialize in the appraisal, consulting and feasibility analysis for golf courses and related real estate.

Laurence A. Hirsh, president of the firm, said: "The real-estate appraisal industry has not given enough attention to golf courses as a special-use property and it is a property type requiring a complete understanding of not only the business of golf but the game of golf

"Through a specialized program of education, data gathering and management and the combination of both real-estate and golf industry professionals, we feel we can elevate the level of valuation services now available to the golf industry.'

Hirsh recently authored the article "Golf Courses - Valuation and Evaluation," published in the January issue of The Appraisal Journal and has lectured at numerous golf development conferences and to college real-estate students on the subject of golf course valuation and

Nicklaus' Nevillewood in final stages

CARNEGIE, Pa. - The Club at Nevillewood, a Jack Nicklaus-designed layout marked by "a lot of downhill shots into greens," will be sodded and seeded in August in preparation for a 1992 opening.

Director of golf Les Botkin said the course, the centerpiece of the private residential Nevillewood development, will play from 5,074 to 7,132 yards, with four to five tees

It will feature all-bentgrass fairways and greens, Botkin said, adding that crews sodded 550,000 square feet of banked areas.

The rolling hills eight miles from downtown Pittsburgh offered Nicklaus the challenge for this par 72 course. Atlas Construction did the bulk earth-moving, while Wadsworth Construction Co. crews performed the shaping. Construction began last September.

Willow Springs open

Willow Springs Golf Course's two nine-hole layouts and practice area in the Howard County area near Baltimore, Md., opened in June.

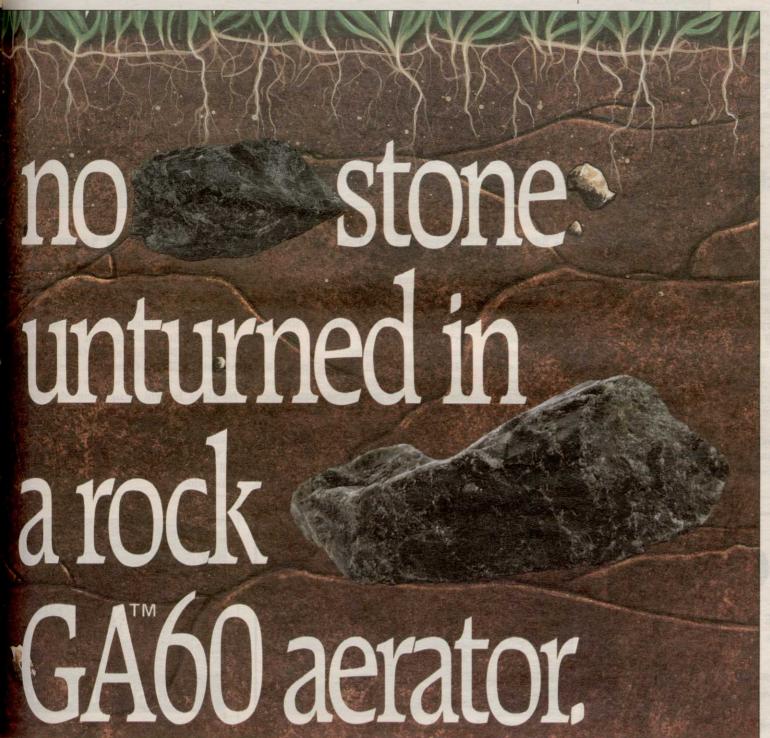
A par 62 executive course, Willow Springs has incorporated the surrounding wooded areas, streams, ponds and rolling hillsides into play. Its elevation varies as much as 80 feet.

The greens have been built according to USGA specifications and average 6,000 square feet. Both ninehole courses have four par 4's; the rest are par 3's. An 18-hole round is total par 62.

Willow Springs has a large practice putting area and range. The practice area has 25 to 30 tee spaces with amphitheater mounding and target areas.

In keeping with the character of Howard County, the clubhouse is a renovated farmhouse.

Willow Springs was designed by Al Janis, and built by Golf By Janis, a company based near Ocean City,



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CELISHWAN

Doral's Red course re-opens Sept. 23 after renovation

MIAMI — The Red golf course at Doral Resort and Country Club is undergoing a major renovation, which was designed by the original course architect Robert Von Hagge.

When the course re-opens Sept. 23, its yardage (6,167) will remain the same but the grass, contour and elevation of each hole will be completely changed.

Instead of the flat fairways will be rolling fairways that are slightly narrower and decidedly more challenging. To further enhance play, all sand bunkers will be reshaped and six new ones added.

The grass on the fairways is being replaced by a new hybrid strain of Bermudagrass that is both disease- and pest-resistant. Greens are being replanted with Tifdwarf, a Bermuda known for creating a faster putting surface.

The most significant individual hole change is on the 15th, a 141-yard par 3. Its "island" green will be narrow and 150 feet long, have three tiers that will drop seven feet from back to front, and be surrounded by a rock wall.

Graham/Panks picked in \$3.8B project

SCOTTSDALE, Ariz. — Graham/Panks International has been selected to design the first of five golf courses at Lake Las Vegas, a \$3.8-billion master-planned community and destination resort project in Henderson, Nev.

Pioneering a new concept, Lake Las Vegas has been described by architect Gary Panks as "one of the most ambitious golf course development projects in the nation today."

Permits were first sought more than 25 years ago, and the approved master plan has been formalized within the past five years.

The development by Transcontinental Properties will feature a 320-acre artificial lake and will include up to eight luxury hotels, four resort golf courses, one private golf course and more than 3,000 single-family homes and villas.

Courses newly approved in the U.S.

Golf Course News is publishing this list monthly. It includes courses that have been approved around the country in the past month. In addition, the accompanying chart contains the sites and contacts for new courses and renovations in the planning stages. When those courses are ready to begin construction they will be

listed again in this "Courses newly approved in the U.S." chart. We would appreciate your help in updating this section. To contact us call 207-846-0600 or write *Golf Course News*, P.O. Box 997, Yarmouth, Maine 04096.

Under "Type" — D= Daily Fee; P= Private; and M= Municipal.

Location	Course Name	Туре	Holes	Address	Architect/Contact
California —			i de la company		e and the State state of the State of S
Fairfield	Paradise Valley GC	N/A	N/A	1000 Webster St.	Robert Muir Graves
Colorado ————————————————————————————————————	N/A	N/A	18	Hwy 550	Finger Dye Spann
Ft. Collins	·Link-N-Greens	D	9	Lincoln & Lemay Aves.	Mike Musgrave
Florida ———					
Cocoa Beach	N/A	M	9	Minuteman Causeway	Gene Burress
Idaho					
Idaho Falls	N/A	M	18	East River Rd.	Golf Course Mgr. Chuck Deming
Kendrick	River Crossing GC	D	9	P.O. Box 134	Gordon E. Nelson
Massachusetts					
Sutton	Sutton Hills GC	P	36	Putnam Hill Rd.	Cornish & Silva
Minnesota					
Rochester	N/A	P	18	Country Club Rd.	Paul Pehler
Oregon					
Prineville	N/A	M	18	N/A	Brian Whitcomb
Texas					
East San Angelo	N/A	D	27	Pulliam St.	Richard Fausset
Virginia —					
Fredericksburg	Curtis Memorial Park	D	18	Strafford County	Ault, Clark & Assoc.

Champions Development Group appoints Perna v-p

BOCA RATON, Fla. — Craig A. Perna, former divisional vice president for Rainberry Developers Four, Inc., and project director of The Polo Club Boca Raton, has been appointed chief operating officer of Columbus, Ohio-based Champions Development Group. Champions said it "specializes in creating upscale country club communities with ... outstanding golf courses."

While with Rainberry, Perna was responsible for creating two south Florida communities, including The Polo Club Boca Raton, a 900-acre, 1,700-home country club community.

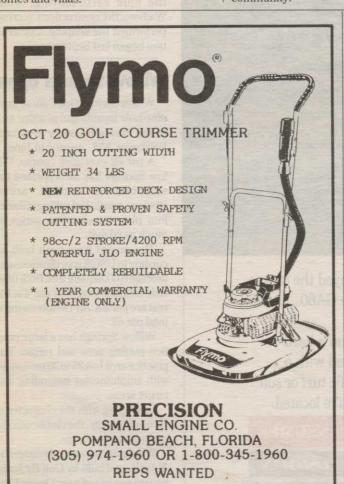
"The success of this project has been a direct result of Craig's efforts," said Roy Flack, president of Rainberry Developers Four, Inc. "His dedication, professionalism and hard work produced south Florida's premiere country club community."

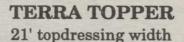
The second project was Polo Trace, a 400acre golf club community now under construction. Its first golf course, already open, is being acclaimed as one of the best new courses in the country.

"Craig's dedication, professionalism and talent have been very instrumental in developing some of the finest golf course communities in South Florida," said Tak Tanigawa, chief operating officer of Champions Development Group. "We will utilize his considerable expertise in designing similar communities across the country,"

Perna's first projects will be Country Club of the North in Dayton, Ohio, and the Medallion Club in Columbus. The Dayton club will have a Jack Nicklaus course. Jack Nicklaus Jr. will design the Medallion

In addition to heading the team of professionals who will create the first two projects, he will formulate a development group that will purchase and create such communities nationwide.





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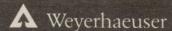


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Courses newly planned in the United States

Following is a chart containing the sites and contacts for new courses and renovations in the preliminary planning stages. When these courses are ready to begin construction they will be listed again in the "Courses newly approved in the U.S." chart.

Please help us continue to update this section. To contact us call 207-846-0600 or write Golf Course News, P.O. Box 997, Yarmouth, Maine 04096.

Arizona
Peoria
Phoenix
Sun City West
Tucson
All

Donald Diamond Arkansas

California

Fresno Ojai Orinda Palm Springs Placerville Pleasanton Santa Barbara

Colorado Florence Lafayette

Connecticut Bristol Manchester Middletown Milford Seymour

Florida Fort Myers Georgia

Contact Ron Ault, Fountain Hills Phoenix Golf School Inc Del Webb

Alderman Jim Hannah

John E. Woods Farmont Corp. Pacific New Wave Corp. City Mgr. Rob Parkins Bill Center Jack Nicklaus Rob Robinson

Councilor Duke Goggin City Adm. Brian Rick Martin Lind

Douglas Reiff Kevin Della Bianca Town Dir. Wally Irish John S. Ott Mayor Frederick Lisman Desmond Muirhead

Pete Dye Don Cottle

Location Fulton County Gainesville Gwinnett Cnty

Illinois Carol Stream Cuba Elburn Elgin Fairview Hghts. Lisle

Lockport West Dundee

Dubuque Maryland Betterton

Laurel Rockville

Massachusetts Bridgewate Michigan

Brighton Van Buren Twp. Minnesota

Owatonna Rochester Missouri

Contact

Murai Assoc Fieldale Farms Corp. Wayne Ewing, Snellville

Tim Miles Rod Richardson Ken Blood, St. Charles James Follensbee Ron Prichard Park Dist. Director Steve Hartman Robin Hill Dev., Wheaton

Dundee Trsp. Park Dist.

City Council

Ron Prichard Montgomery County Revenue Auth Frall Dev., Mt. Airy

Town Counsel Mel Cohen Huron-Clinton Metro Auth. Waste Mgt. of Mich

Dean Hartle Paul Pehler

Jayne Foss

Location

Washington Nebraska

Lincoln Papillon **New Jersey**

Fredon Millville **New Mexico**

anta Fe Ohio

Millersburg Oklahoma

Oregon Albany Albany Arlington

Astoria

Independence Jefferson Polk County Salem Salem Willamina

Pennsylvania

Contact Ron Prichard

City Hall City Administrator Jon Morrison

> Ron Prichard Robert Ench

State Land Office

Kim Kellogg

Dan Dillingham

Leighton Weddle River Oaks GC Gilliam County Community Dev Northwest Conference Resorts

Sunriver Properties Inc. Ed Pfau, Salem Lynn Baxter Dong Keun Chaey Cottonwood Lakes GC Larry Tokarski Maxine Stork, St. Helens

Harold Benjamin

Location Contact

Doylestown Kresgeville Scranton Telford

Tennessee Johnson City

York

Mt. Pleasant Texas Galveston

Port Arthur San Angelo Utah

Centerville North Salt Lake West Bountiful Virginia

Virginia Beach Washington

Blaine Blaine Gorst Indianola

Olympia Port Orchard Mario Diliberto Farda Assoc. Tannersville Rees Jones Ron Prichard

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City Mgr. David Hales City Mgr. Collin Wood Grant Iverson

Ron Prichard R.G. Moore

Gig Harbor

Semiahmoo Co. Trillium Corp. Rec. Director Vicki Vannemann Robert Screen, Bainbridge Island Weyerhauser Real Estate James Richardson,

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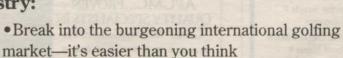
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First two golf facilities for physically challenged

Continued from page 1

cation ceremonies for the long-awaited project will be held at 1 p.m. on Aug. 21. The driving range will open at that time, with the three-hole golf course expected to be ready for play next spring.

And in Berryville, Ark., teaching professional Shirlee Hicks will realize a longtime dream on Sept. 1 when she opens Golf for Life, a practice facility built to facilitate rehabilitation-type patients.

Bob Wilson, executive director of the National Amputee Golf Association, hailed the two openings as a good omen for the physi-

The hopeful success of these ventures may turn the industry around, make people take another look at what they have.' - Bob Wilson

Nat'l Ambutee Golf Assn.

cally challenged public.

"From the standpoint that they (Edwin Shaw Hospital) are pioneers, I'm anxious to see the outcome. That is, the playability of the course -whether there is any damage to it

from wheelchairs, whether the aesthetics are good... The acid test will be if people will play

"The hopeful success of these ventures may turn the industry around, make people take another look at what they have."

He said if the public responds well to the hospital course, "it will provide the impetus for others to be built. Those who are designing municipal courses, especially, will have to take a hard look at it for accessibility."

Wilson, who travels extensively from his Amherst, N.H., headquarters to teach the physically challenged how to play, said handicapped people in other regions will not travel to Ohio to play golf. He cited the need for similar courses elsewhere.

That has already been considered by Edwin Shaw officials.

Ron Tristano, director of Edwin Shaw Challenge Golf Course, envisions hospital staff training therapists from other regions.

"There is a terrific need throughout the country," said Tristano, a Class A PGA pro, who was a volunteer instructor at Edwin Shaw for three years before being appointed this spring to his present job. "One of our main goals is to be a leader in training other people. We will probably be doing that locally this fall and with people from other areas in 1992."

Tristano said the dedication is set to coincide with the World Series of Golf competition in Akron. Tournament sponsor Akron Golf Charities has been the main source of funding for the golf facility.

The driving range is on 12 acres across the street from the hospital. Its 3,500-squarefoot handicapped tee area is being sodded to open on time. It also has a non-handicapped tee area so the public can play and help provide adequate funding, because "there are not enough handicapped golfers to support it themselves," Tristano said.

The course, on 10 acres adjacent to the hospital, has par-3 holes that play 130 to 160 vards from the back tees and half that distance from forward tees. A middle set of tees has also been constructed. It will have bluegrassfairways and bentgrasstees and greens.

After a debate over using artificial turf or ModSod on the greens, officials decided on real grass, figuring wheelchair-bound golfers won't harm it. They comprise 10 to 20 percent of all the golfers in Edwin Shaw's golf rehabilitation program, Tristano said.

He said the 2,500-square-foot practice green will also feature bentgrass.

Tristano said hospital therapists and volunteers work with "people with any number of physical disabilities," including amputees, stroke and accident victims, and people with

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opening at Ohio hospital and Arkansas range

spinal cord injuries and muscular disorders.

Three six-week training sessions are held

annually, and this year a private ski club attended a separate session.

Tristano said the hospital will promote the facility to the public, reserving times for the physically challenged.

"The goal is to allow people to get into a mainstream activity, to continue to get the therapeutic benefit physically and emotionally," he said. "And they can go at their own pace."

GOLF FOR LIFE

Meanwhile, Hicks, a retired Navy nurse and one of a handful of people licensed as a teaching pro by both the PGA and LPGA, will fulfill a goal she has looked forward to for a number of years.

"I love golf. I love to teach. And I wanted to incorporate my medical background with golf," Hicks said. One way was to become involved with rehabilitation.

"It's been wonderful," she said.

Hicks, who in June oversaw the opening of the only golf clinic for the deaf in the United States in San Jose, Calif., is moving from her Dublin, Calif., home to Arkansas on Aug. 10.

That project has "absolutely gone wild. It's growing by leaps and bounds," she said, hoping the same success awaits her in Berryville.

Set on a 53-acre site, the Arkansas facility

now includes a 15-acre driving range with a huge sand bunker, along with a 15- by 45-foot artificial-turf putting green fringed with Bermudagrass.

She said the trap was sloped to be easily accessible to all types of trauma patients.

Hicks will be on site to teach and will also use video teaching aides.

She has already made a two-story building handicap-accessible and plans to build a 25-station driving range next year.

Arkansas, she said, is the third-largest retirement area in the country and "golf is booming" there. That leads her to high hopes for the life of Golf for Life.

Many firms contributed to hospital course construction

AKRON, Ohio — Construction of Edwin Shaw Challenge Golf Course here started as a seed in the minds of hospital officials and grew to embrace the entire state and, indeed, national corporations.

Ron Tristano, director of the course for the physically challenged, lauded everyone from local contractors to national golf equipment manufacturers for helping the effort without charge.

Initial tree clearing was done by the local firm of Keller/Hall Inc., he said.

That was followed by clearing and rough grading work donated by the Ohio Contractors Association, who "did a marvelous job and were here for quite some time," Tristano said.

Hurdzan Design Group of Columbus, Ohio, designed the course, making it wheelchair-accessible from tee to green.

Wadsworth Construction Co., a national golf course builder based in Plainville, Ill., performed the final grading and shaping and provided Tom Kluck as project manager for the three-hole course and 12-acre driving range.

Kurtz Brothers of Cleveland Heights, Ohio, provided all the greens and tees mix, while Commercial Pump of Swanton, Ohio, donated the pump station.

LESCO, Inc. of Rocky River, Ohio, provided all the grass seed, fertilizer, cups and ball

washers.

Since the rehabilitation program was started, Wilson and MacGregor sporting goods companies have given equipment for the golfers.

Meanwhile, a group of area PGA professionals has given continued support through lessons, and therapists from the hospital as well as Akron residents have volunteered time in the program.

"Without all their help, and the funding of Akron Golf Charities, this would never have happened," said Tristano, himself a former volunteer pro.

"We owe a lot to a lot of people in the community and beyond."



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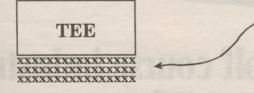
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GOLF COURSE NEWS

CIRCLE #123

GOLF COURSE

The firms that run the courses, pages 41-43

THE NEWSPAPER FOR THE GOLF COURSE INDUSTRY

VOLUME 3, NUMBER AUGUST 1991

INSIDE

Nuisance water may be godsend

User-friendly

'Toxo-terrorists'

Pesticide law

2nd qu		neg		Under 1991	Constr	uction 1990
Туре	1991 YTD	1990	1990 Yrend	YTD:	YTD	Yrend
			166	340	-	301
Daily Fee	48		37	88		184
Municipal	27	-	86	189		4
Private						560

Audubo	course Maintenance n, courses team up to save wildlife
Wildlife	at refuge at John's Island West

COURSE DEVELOPMENT

Japanese stay active in U.S. marketplace

Las Vegas thrives in face of recession

Monthly update: Planned, approved courses

COURSE MANAGEMENT Management companies do it all Owners association gains members Kemper signs pact ...

SUPPLIER BUSINESS Bermudagrass test results released Marketing conference speakers announc Turfseed field days draw crowds

High Court ruling said 'scary'

freeing local governments to impose pesticide regulations that conflict with federal law could severely restrict the federal law could severely restrict the use of golf course chemicals, according to a Golf Course Superintendents Association of America official.

"It scares the hell out of me. It's

another step toward more regulations," said Charles Passios, government liaison to the GCSAA board of directors.
"It means superintendents are going to have be more pro-active than ever, participating in the process and taking a lead role to make sure our concerns are heard when towns want to pass regulations."

In the case of the Town of Casey, Wis.
v. Ralph Mortimer et al, the court ruled
unanimously June 21 that the language
of the Federal Insecticide Fungicide
and Rodenticide Act does not allow it to
pre-empt locally passed regulations.
The decision overturned a Wisconsin Supreme Court ruling that FIFRA
Confinued on page 23



Major changes expected in revisions of wetlands laws

By Mark Leslie
Wetlands preservation
regulations that have handcuffed golf course developcutted goil course develop-ers and created long, expen-sive waits for approvals are being rewritten — and loos-ened extensively — on two

Arevision of the much-ma-ligned federal wetlands de-lineation manual — used by

life Service, and Soil Conservation Service since 1989— is under review and is said to

is under review and is said to more narrowly define what constitutes a wetland. Further up Pennsylvania Avenue, congressmen have answered the call of voters and drafted legislation to correct deficiencies they see in the wetlands protection system.

By Peter Blais RIVERSIDE, Calif.

the Izaak Walton League, said a scientifically sound defini-tion is "being thrown out and ignored for political reasons." One EPA ecologist re-signed and another asked that his name be dropped from the credits of the revi-sion. But others are looking for-

ward to changes.

Continued on page 28

By Mark Lestie
Two golf facilities built
especially for the physically
challenged will open within
the next month, marking
milestones for the country's
millions of handicapped

handicapped

open for

In Akron, Ohio, Edwin Shaw Hospital is completing the first course in the country designed especially for handicapped golfers. Dedi

End of drought won't solve Calif. woes Coachella Valley Water Dis-

er will continue to be in a supply for many years difornia because of the

changes in our landscapes and maybe in our lifestyles if the shortages are severe

Coachella valley water Dis-trict water management spe-cialist Dave Harbison said during a recent water man-agement seminar sponsored by the University of Califor-nia, Riverside Cooperative

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" most informative golf course development publication?" "It covers subjects that are current, important and impact the industry," he contends.

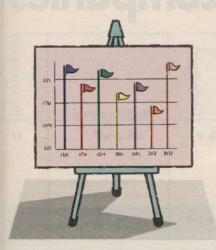
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Briefs



KEMPER, MIAMISBURG INK DEAL

MIAMISBURG, Ohio — Kemper Sports Management of Northbrook, Ill., has signed a long-term agreement with the city of Miamisburg to manage and operate its two municipal golf courses, one of which will be an upscale daily-fee course when it opens next May.

Kemper Sports began managing and operating Mound Golf Course on June 1. Mound is a nine-hole course built in the 1930s.

Miamisburg also has retained Kemper Sports to "grow-in" PipeStone, an 18-hole course designed by Arthur Hills that capitalizes on the Miami Valley's rolling terrain and the property's thousands of mature trees.

"These are two excellent municipal facilities that are exactly what we had in mind when we broadened our territory last year to include Ohio," said Kemper Sports Vice President Tom Lenz.

Mound was built as part of the WPA, the Depression-era public works program. Measuring 2,826 yards, it was designed by pioneering golf course architect Hipper Campbell.

PipeStone is on schedule to open with upscale playing conditions next May.

"We're thrilled to have been selected to manage these courses, and approach this opportunity with the same philosophy we use at Kemper Lakes, which hosted the 1989 PGA Championship: to offer the best daily fee courses in the area," Lenz said.

REICH PROMOTED

PHOENIX, Ariz. — Resort Management of America has promoted Jeff Reich to director of golf for the Karsten Golf Course at Arizona State University.

Reich, head professional for the course, was chosen after Director of Golf Duff Lawrence was selected as the new head professional for Paradise Valley Country Club. Prior to joining the Karsten Golf Course two years ago, Lawrence was the head professional for Desert Highlands.

The transition took effect July 1. Reich will draw on more than a year of service at the Karsten Golf Course as well as his experience as head professional at TPC Starpass in Tucson to oversee every aspect of the course.

FISHER ISLAND NAMES GOLF DIRECTOR

FISHER ISLAND, Fla. — Fisher Island has named Ted Antonopoulos director of golf/golf professional.

A class A member of PGA of America, Antonopoulos is responsible for developing the golf program at the nine-hole P.B. Dyedesigned golf course.

Antonopoulos brings to Fisher Island 10 years experience.

Management companies gaining popularity with owners, developers

By Peter Blais

"They (American Golf Corp.) operate and maintain the course better than we would have." — Dan Gray, managing general partner of River Oaks Golf Plantation, Myrtle Beach, S.C.

There, in a nut shell, is the primary reason golf course management companies are taking over an ever-increasing number of facilities across the country.

Gray is a member of the limited partner-

See management chart, pages 42-43.

ship formed in the mid-1980s that built River Oaks. The group intended to operate the daily-fee course itself. But Gray's group received an offer it couldn't refuse from AGC, which had just acquired Carolina Shores Golf Club across the North Carolina border in Calabash and wanted to enter the Myrtle Beach market.

"We felt our interests were better served if we weren't involved with the management and were just landlords," Gray said. "It's worked very well."

Management companies come in all sizes and shapes. The 28 responding to this month's survey operate anywhere from one to 140 courses. They own, lease or operate municipal, daily-fee, private and resort facilities in all parts of the country. And they provide services ranging from simply keeping the books to building and managing an entire operation.

An individual, group or municipality considering hiring a management company has to ask, 'Why can they do a better job than I can?', said Earl Collings, publications editor for the National Golf Foundation

"Any golf course that goes to a manage-

changes from time to time, place to place'
— Thomas Bennison,
Club Development Interests.

Management is really a philosophy and philosophy

ment company has to be feeling economic pressure from its current practices."

Sometimes that means the golf course is losing money or not making as much as the owner thinks it should, Collings said.

Or developers, 50 percent of whom have never operated a golfcourse, may not want to be involved in the day-to-day operation, he added.

THE SELECTION

How does someone select a management company?

Cost is naturally a big consideration. Fee structures are as numerous as management companies. Flat fees as well as a percentage of net profits, gross profits, total revenues, golf car rentals, greens fees, food and beverage profits, golf shop sales, and others are all used.

"The average fee is probably somewhere between 15 and 20 percent of gross revenues," Collings said.

Tom Lenz, Southeast regional manager for Kemper Sports Management, listed a number of questions golf course owners frequently ask when interviewing management companies, including:

- What facilities do you operate that are similar to mine?
- What is the fee structure?
- What services do you provide?
- What is the financial stability of the company?

What is your management philosophy?

· Why does this facility interest you?

- Who would oversee the operation at the corporate level?
 - Why are you interested in this area?
- Will employees work for the management company or golf course owner?

• What is the payroll procedure?

 What types of insurance coverage does the company have?

But the final decision, Lenz said, is largely a personal one.

"You're dealing in intangibles when hiring management companies," he said. "Owners basically hire management people because they like them. They feel a certain comfort level with them."

"Management is really a philosophy and philosophy changes from time to time, place to place," agreed Thomas Bennison of Club Development Interests.

THE DIFFERENCE

Some companies are much larger and more national in scope than others. Large companies like AGC (140 courses) and Club Corporation International (130 courses) may have advantages in overall experience, staff size and volume purchase savings. But is bigger necessarily better when it comes to management companies.?

"Running golf courses is all we do," said Jerry Owens, Southeast regional superinten-Continued on page 44

Golf course owner associations join forces

The Grand Strand Golf Executives Association has affiliated with the National Golf Course Owners Association.

The Strand group is made up of owners of 60 public-access golf courses located within 40 miles of Myrtle Beach, S.C. The organization was formed in 1977 to promote golf in the area. The golf package plans developed by members have been successful.

The GSEGA also serves as a means for the owners to network and share solutions to common problems. It is operated by a six-

person board of directors and is managed by an executive director.

George Hilliard, executive director of the GSEGA, said: "We joined the National Golf Course Owners Association because we want to work on the national level to help protect the interests of golf course owners. We also think we have something to contribute to the organization because our association has a great deal of experience in dealing with the public and the traveling golfer."

Mike Hughes, executive director of the

Charleston, S.C.-based NGCOA, said: "We are pleased to have all 60 courses of the Grand Strand Executive Golf Association as members. They represent a large group of innovative, progressive and forward-thinking owners. They realize the increasing need to act in concert on matters of mutual concern, especially in times of increasing regulatory pressure on golf course operations.

"Their success in working together speaks for itself and should serve as a model for other owners around the country."

Marriott Golf takes over 3 courses

WASHINGTON, D. C. — Chardonnay Club, a 36-hole championship golf facility in the Napa Valleywine country of California, is among three golf facilities to be managed by Marriott Golf under a recently-signed contract with Cooke & Andrews Investments Inc., the U. S. development unit of Japan's Systems and Engineering Corporation based in Tokyo.

Facilities in the agreement in Virginia and Georgia are expected to open within two years.

Chardonnay Club is a meticulously-manicured facility noted for its free-form greens, beautiful vistas, elevated tees and the famous Chardonnay grape vineyards that weave their way through the layout. Opened in 1987, it has been named among the best 20 courses in northern California by Golf Today. Roger Billings, most recently director of golf at Marriott's Tan-Tar-A Resort and Golf Club in Missouri, has been named director of operations at Chardonnay Club. A 10-year veteran of Marriott Golf, Billings earlier served on the golf management team at Marriott's Rancho Las Palmas Resort in southern California. He twice was named "Golf Merchandiser of the Year" by the Gateway Section of the PGA.

Marriott Golf, founded in 1990, now manages 17 facilities in the U. S. and Bermuda, with three under construction at Florida, Georgia and Virginia. Marriott Golf earlier signed an an agreement with Golden Bear International to manage 15 public access facilities to be developed by Golden Bear in the U. S. over the next several years.

Financing seminar scheduled for August

IRVING, Tex.as — Crittenden Research Institute will host an executive briefing here Aug. 19-20 for presidents, chief executive officers and senior real-estate executives.

The briefing will be held at the Marriott Dallas/Fort Worth Airport, 8440 Freeport Parkway.

Key issues to be discussed include how to acquire, negotiate and hold under-performing real estate; who's lending and how much money you can actually get; negotiation tactics that keepyouincontrolofyourinvestment; financincg structures that close the equity gap; and how to attract equity investors.

Market opportunities will also be discussed. Reservations may be made by contacting Crittenden.

GOLF COURSE NEWS

Survey of golf course management companies

			AFERANCE E	00					(0)
Company name Address Phone no. Contact person Circle no.	No. of courses	Course types*	Regions served	Yrs. in business	Company name Address Phone no. Contact person Circle no.	No. of courses	Course types*	Regions served	Yrs. in business
American ClubServ 4748 Forest Bend Dallas, Texas 75244 214-392-7378 Lynn Fry Circle #201	3	M, D, P	U.S.	5	Club Development Interests 5956 Sherry Ln., Ste. 1705 Dallas, Texas 75225 214-987-9740 Thomas Bennison Circle #208	6	D, P	U.S. & Int'l	17
American Golf Corp. 1633 26 St. Santa Monica, Calif. 90404 213-315-4200 Craig Price Circle #202	140	M, D, P, R	U.S. The state of	20	Club Mark Corp. 100 Glenborough Dr. Houston, Texas 77067 713-872-0145 Rick Coyne Circle #209	4	D, P, R	South, S'East	21
Arnold Palmer Golf Management 7575 Dr. Phillips Blvd., Ste. 270 Orlando, Fla. 32819 407-351-2800 John Hudson Circle #203	18	M, D, P, R	U.S. & Int'l	10+	Club Operations & Property Mgmt. 207 W. Park Ave. Tallahassee, Fla. 32301 904-681-9331 Bill Horne Circle #210	54	P, R	U.S.	8
Bass Golf 4000 Park Rd. Charlotte, N.C. 28209 704-523-9407 Arthur Jeffords Circle #204	2	D, P, R	S'East	more some some some some some some some som	Franklin Golf Properties 3011 Rock Island Rd. Margate, Fla. 33063 305-752-5847 Dean Horn Circle #211	2	D	S'East	10
Billy Casper Design & Management 1919 Gallows Rd. Vienna, Va. 22182 703-761-1444 F. Thomas Martty Circle #205	6	D, P, R	Mid-Atlantic, East	2	Glen Ivy Management 268 N. Lincoln Corona, Calif. 91720 714-371-5131 Hurley Reed Circle #212	N/A	N/A	Western U.S.	25
Club Consultants Inc. 19210 Huebner Rd., Ste. 100 San Antonio, Texas 78258 512-496-9991 Jack Parker Circle #206	3	P, R	Texas	40	Golf Management & Planning 7681 S.W. Cirrus Dr. Beaverton, Ore. 97005 503-643-7198 Lee Brune Circle #213	N/A	M, D, P, R	West	30+
Club Corp, International 3030 LBJ Freeway, Ste 700 Dallas, Texas 75234 214-243-6191 Randy Williams Circle #207	130+	M, D. P, R	U.S. and Int'l	34	Golf Properties Management 3369 Dehesa Rd. El Cajon, Calif. 92019 619-442-8100 David Fleming Circle #214	for the land	p qui i	S'West	25

^{*} M — Municipal; D — Daily fee; P — Private; R — Resort

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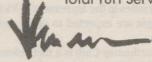
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Company name Address Phone no. Contact person Circle no.	No. of courses	Course types*	Regions served	Yrs. in business	Company name Address Phone no. Contact person Circle no.	No. of courses	Course types*	Regions served	Yrs. in business
Golf Resources 1503 LB5 #256 Dallas, Texas 75234 214-620-3402 Sam Swanson Circle #215	3	D, P	U.S.	4	Marriott Golf One Marriott Dr. Washington, D.C. 20058 800-542-5811 Roger Maxwell Circle #223	20+	D, P, R	U.S.	21
Golf Services Group 12777 Jones Rd. Houston, Texas 77070 713-955-6263 Bill Wallace Circle #216	6	M, D, P	U.S.	4	Player Management Services Inc. 3300 PGA Blvd., Ste. 100 Palm Beach Gardens, Fla. 407-624-0300 Jim Applegate Circle #224	Several	D, P, R	U.S.	6
Hale Irwin Golf Properties 12444 Powerscourt Dr. 5t. Louis, Mo. 63131 314-965-8787 Richard Stalhuth Circle #217	4	D, R	U.S.	14	Recreation Services Ltd. 3012 Fairmont Ave. Dallas, Texas 75201 214-740-0114 Marty Streiff Circle #225	9	M, D	S'West, Midwest	6
HFH Inc. 9420 Bunsen Pkwy, Ste. 200 Louisville, Ky. 40220 502-499-3900 Joe Lesousky Circle #218	2	D, P	Midwest	2	Resort Management of America 11801 North Tatum Blvd., Ste. 228 Phoenix, Ariz. 85028 602-953-6553 Henry DeLozier Circle #226	4	D, R	U.S.	4
International Golf Management 4252 Dundas St. West Burlington, Ont. LTR 3X4 416-332-5111 Ken Quiggan Circle #219	N/A	N/A	North	5	Riverside Golf Group 645 Riverside Ave. Jacksonville, Fla. 32204 904-356-1000 Steve Melnyk Circle #227	3	D	S'East	3
Jim Colbert Golf 1448 15th St., Ste 200 Santa Monica, Calif. 90404 213-576-6020 Donelle Ferguson Circle #220	20	M, D, P	U.S.	11	The Club Group Ltd. P.O. Box 6989 Hilton Head, S.C. 29938 803-686-2002 Whitney Crouse Circle #228	3	D, P	S'East	5
Kemper Sports Management 500 Skokie Blvd. Northbrook, Ill. 60004 708-291-9666 Tom Lenz Circle #221	9	M, D, P	East, Midwest, West	12	The Golfing Co. 2285 Murfreesboro Rd., Ste. 200 Nashville, Tenn. 615-360-9629 Kevin Tucker Circle #229	3	D, R	S'East	8
Landmark Club Management Co. 78-140 Calle Tamoico LaQuinta, Calif. 92253 619-564-8100 Buzz Gill Circle #222	27	D, P, R	Calif., Midwest, N'East	20	Western Golf Properties 7711 East Greenway Rd. Scottsdale, Ariz. 85260 602-483-8914 Joe Black Circle #230	15	P, R	U.S.	6



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Management companies come in all shapes and sizes

Continued from page 41

dent with AGC. "We have people with expertise in golf course agronomics, marketing, finances, food and beverage and pro shop operations. We produce a high-quality product at a lower cost because we can make purchases in big blocks. Our expertise and low cost are major selling points."

But size alone shouldn't be the deciding factor, Collings said.

"This is just a hypothesis, but I feel a company that manages too many courses can become detached and too tied to a certain formula," the NGF employee said.

"Courses and how they should be managed

We get the golf course in good condition, get the people to the course, then follow through with strong customer service'

— Steve Lambert,
Jim Colbert Golf, Inc.

are very site specific. If I started my own management company I would do custom management and operate just five or six courses."

Owens said AGC has made management more site specific by hiring local managers



erations. For instance, the general manager at Carolina Shores and River Oaks has lived in the area more than five years.

"We bring in people from

California (corporate headquarters) to make suggestions. But the general manager makes the final decisions," Owens said.

AGC also recently reorganized its operational

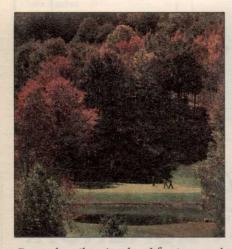
structure so that on-site managers are directly responsible for their operations, while regional and national staff, like Owens, "really work for them. We've inverted the pyramid so the on-site people have the responsibility," Owens said.

What does a management company do once it takes over a course?

"There are three ingredients to being successful," said Steve Lambert, senior vice president of Jim Colbert Golf, Inc. "We get the golf course in good condition, get the people to the course, then follow through with strong customer service. If all three ingredients are in place, you have a successful operation."

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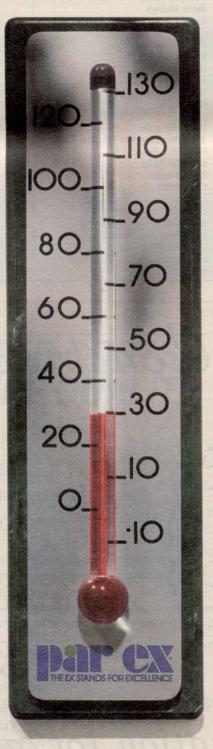
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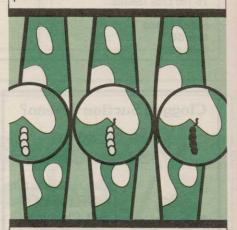




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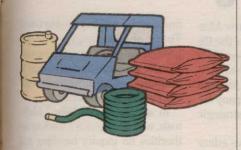
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Briefs



CATALANO RETURNS TO RAIN BIRD

GLENDORA, Calif.—Rain Bird Sales, Inc. has announced four appointments to its Golf

Mike Catalano has returned to the position

of product manager afteratenure as independent irrigation consultant. He will be instrumental in new product development aswellasimprovement and maintenance of the existing product line.



Mike Catalano

Tony Matlock, new product manager, will serve as coach, coordinator, trainer and motivator in improving service to the golf trade. He was instrumental inestablishing the certified supplier program.

As product applications engineer, Clayton Harvey will be responsible for training personneland service of Rain Bird golf equipment on the East Coast. Harvey will be based in

Marnie Tadlock, new marketing assistant, has worked in the accounts payable department for Rain Bird. She is completing her bachelor's degree in marketing at Cal Poly,

FMC ADDS ASIAN DISTRIBUTOR

Farmers Marketing Corp. of Phoenix, Ariz., has added a distributor in Southeast Asia. Leisure Management Ltd., located in Bangkok, Thailand, will market and sell the new turf-type variety of Bermudagrass, NuMex Sahara, exclusively in Thailand.

Leisure Management is active in promoting golf course construction and development

Leisure Management has seed available in Thailand, as well as hydroseeding equipment and mechanical seeders for turf establish-

Farmers Marketing Corp. President and Chief Executive Officer Royce R. Richardson, said: "It is exciting to work with a company that has demonstrated such enthusiasm for our variety, Sahara. They have advertised the product in their country, purchased seed for inventory, and are using Sahara on their own courses, as well as courses developed by

HERRON ELECTED TO LESCO BOARD

CLEVELAND, Ohio - F. Leon (Le) Herron Jr., retired chairman and president of 0.M. Scott & Sons, Inc., has been elected to the board of directors of LESCO, Inc.

The election fills an existing vacancy and increases the board to its authorized number of nine members.

Herron joined O.M. Scott & Sons, now The Scott Companies, in 1965. He was elected president in 1966 and chairman in 1971. He served as chairman and president until his retirement in 1983.

During his tenure, Scotts' sales grew dramatically and it expanded into international distribution.

Quality of vegetative Bermudagrass far exceeds seeded varieties, tests show

The most significant results in the national field tests on Bermudagrasses reportedly concern the seven seeded varieties, which as a block ranked at the bottom of entrants.

"The quality of seeded types is not near that of vegetative types," said Kevin Morris, national director of the U.S. Department of Agriculture's National Turfgrass Evaluation Program.

Morris said a lot of researchers are working on seeded Bermudas and more cultivars will enter the marketplace. "But they probably won't reach the quality of the seeded varieties for at least several years."

Vegetative Bermudas must be sprigged,

which is costly, while Bermuda seed does grow in quickly, Morris said. But the major problem with all of the varieties of the warmseason turf is susceptibility to winter kill in cooler areas.

U.S. Golf Association Green Section National Director Jim Snow said that in choosing a Bermudagrass a superintendent "especially has to consider where he is because of (Bermuda's lack of) winter hardiness. Color and texture aren't as important. It's if the grasses survive. And survive is a relative term. It can do with so much damage unless it takes a very long time to come back (from dormancy).'

Mike Kenna, director of Green Section

research, said the nationwide tests are helpful but "should only be one part of the decisionmaking process.'

He said there is a wide range in the way the test plots are maintained. "One university may keep it wonderfully, while at the next one the plots are riddled with weeds," he said.

Kenna suggested superintendents check the test results, then talk to the researchers in their region, then visit the site to see the grass in conditions close to their own.

"That's where the test is a valuable tool," he said. "If a superintendent bases his decision on the overall mean (of the test alone), he can really mess it up."

Top 29 Bermudagrasses in national tests

Name	AR1	AZ1	CA2	CA3	FL1	KS2	LA1	MD1	MO4	MS1	UB1	VA1	VA4	Mean
*Tifway	7.9	7.9	6.7	6.4	7.9	1.0	7.6	7.1	1.9	7.5	7.3	6.2	7.1	6.3
*Tifway II	7.8	7.8	6.4	6.4	8.1	1.5	7.7	6.8	1.0	7.7	7.3	6.3	7.1	6.3
MSB-10	7.6	7.8	6.9	6.3	8.1	1.7	7.7	6.8	1.0	7.7	6.7	6.3	6.8	6.3
A-29	7.1	6.9	5.5	5.5	6.4	8.2	7.1	5.8	1.4	5.1	7.0	7.0	5.5	6.0
E-29	7.0	6.4	5.6	5.7	6.6	8.0	6.2	5.8	2.8	4.4	6.8	6.5	5.9	6.0
*MIDIRON	6.8	6.4	5.9	5.8	6.9	7.5	6.8	5.3	2.7	4.2	6.3	6.2	5.8	5.9
A-22	7.1	6.6	5.5	5.9	5.9	7.7	6.6	5.7	1.4	5.1	6.7	6.2	5.8	5.8
MSB-20	7.4	7.1	5.7	5.5	7.7	1.0	7.1	6.3	1.0	6.9	7.6	5.5	6.6	5.8
NM 43	6.9	7.1	5.6	5.8	7.7	1.2	7.2	6.2	1.0	6.7	7.7	6.2	6.1	5.8
MSB-30	6.0	6.9	6.5	5.8	6.5	2.7	7.1	6.7	1.5	5.9	6.2	5.7	7.1	5.7
*TUFCOTE	7.6	6.2	5.7	5.7	7.2	2.0	7.4	5.4	1.0	5.6	7.4	6.5	6.7	5.7
*TIFGREEN	6.7	6.9	5.7	5.6	8.1	1.3	6.8	5.9	1.0	6.2	7.8	6.0	6.4	5.7
CT-23	5.0	7.2	5.6	5.9	6.5	3.0	7.2	6.4	1.0	5.6	5.7	4.8	6.2	5.4
NM 507	6.3	7.7	6.2	5.6	8.1	1.0	7.4	6.2	1.0	4.5	4.3	4.8	6.9	5.4
*TEXTURF 10	6.3	6.6	5.5	5.5	7.0	2.8	6.3	5.5	1.0	4.7	5.8	6.3	6.3	5.4
NM 471	5.8	6.9	6.1	6.0	7.6	1.0	7.3	5.8	1.0	4.4	4.8	5.2	6.9	5.3
RS-1	6.0	5.6	5.5	5.7	5.7	5.8	5.9	5.3	1.5	3.7	5.8	5.7	5.6	5.2
FB-119	5.4	6.1	5.4	5.2	6.7	1.0	7.3	5.8	1.2	4.6	6.3	6.3	6.0	5.2
NM 375	5.7	6.2	5.4	5.6	7.1	1.0	6.6	5.2	1.0	4.0	6.1	5.8	6.0	5.1
*VAMONT	5.5	5.4	5.2	5.3	6.7	3.2	5.7	4.8	2.1	4.0	5.9	5.7	5.8	5.0
NMS 3	4.7	6.4	5.3	5.5	6.7	1.0	6.8	5.7	1.0	3.8	5.9	5.5	6.2	5.0
NM 72	4.8	6.4	5.2	5.1	7.8	1.0	6.6	5.4	1.0	4.5	5.4	4.8	6.2	4.9
NMS 4	5.6	6.5	5.5	5.3	7.2	1.0	6.2	5.1	1.2	2.7	5.8	5.0	5.9	4.8
*GUYMON	5.1	6.2	4.6	5.2	6.2	6.2	5.6	4.8	2.6	2.2	5.1	3.2	3.0	4.6
*NMS 1 (NUMEX-SAHARA)	4.7	4.7	5.2	5.1	4.9	1.0	6.3	5.2	1.0	2.6	5.2	4.0	5.6	4.3
NMS 2	4.9	4.5	5.1	5.1	3.8	1.0	5.4	5.3	1.0	2.4	5.4	3.8	5.4	4.1
NMS 14	4.5	4.6	4.9	4.8	4.6	1.0	5.2	4.6	1.0	2.3	4	4.2	5.1	4.0
*AZ- COMMON	4.6	4.2	4.8	4.9	4.4	1.0	5.4	3.4	1.0	2.2	5.0	4.0	4.7	3.8
LSD VALUE	1.1	0.6	0.4	0.4	1.1	1.4	0.6	1.1	1.1	0.7	0.8	1.6	0.7	0.3

* — Brands available on the marketplace.

Locations submitting data for the National Perennial Ryegrass Test follow, with their code names, type of soil, nitrogen in pounds per 1,000 square feet, mowing height in inches, and irrigation practices:

Scott improves fertilizer coating

MARYSVILLE, Ohio — O.M. Scott & Sons Co. has developed Poly-S, a breakthrough in controlled-release fertilizer coating technology, the company claims.

Harvey Goertz, a Scott research scientist, said the process applies a double coat to fertilizer. The primary coat is sulfur over urea and the secondary coat a proprietary polymer.

"By varying the composition and amount of the polymer, we are able to vary the release rate. We've been able to get products that will last two to six months," Goertz said.

"Sulfur-coated products by and large last six weeks to three months. They control that by increasing the weight of the sulfur. When you add more sulfur to try to last beyond three months, the efficiency drops off. You have such a tight coating that some of the nutrient never releases at all.

"We no longer depend on sulfur thickness. Our product releases almost all its nutrients." Goertz feels the process, on which patent is pending, is a technological breakthrough.

This is the first time we've been able to achieve these results at a low cost, which sets it apart from other processes," he said. "Some resin-coated fertilizers last up to a year, but they are very expensive to produce.'

Scott says Poly-S technology offers:

- · the physical advantages of abrasion resistance, no dust, and decreased build-up on equipment:
- · chemical pluses of increased water insoluble nitrogen values, and resistance to environmental stress;
- · agronomic advantages of uniform release from week to week, adjustable release rates, reduced surge growth, extended residual, decreased temperature sensitivity, increased nutrient efficiency and low phototoxicity; and
- the financial benefit that it is an economic source of nutrients that provide extended

ITODA to conduct annual meeting

The Independent Turf & Ornamental Distributors Association will hold its annual conference in Hilton Head, S.C. Oct. 23-27.

The association, formed in June 1990, includes distributors who market products and service to the professional turf and ornamental

ITODA members are dedicated to "the principles of developing and maintaining the highest levels of marketing stewardship, training and developing quality sales personnel and providing the highest level of service to product end-users through education, technical support and communication.'

Members gather at least twice a year to discuss industry issues related to distribution of products and services.

More information is available by contacting President Herb Lea at 301-899-3535 or Membership Chairman Don Hepler at 217-352-0591.

Speakers announced for GCN marketing conference

YARMOUTH, Maine — Seminar speakers have been announced for "Marketing to Golf Facilities" a two-day program for suppliers of products and services to the golf course industry.

According to Charlesvon Brecht, Publisher of Golf Course News, the program's sponsor, the speakers and panelists include successful industry leaders, experts, and marketing innovators who will share their knowledge and experience during the seminar, scheduled for September 16-17 in Oak Brook, Ill.

Trends in growth of facilities will be the topic of the kick-off presentation by Richard Norton of the National Golf Foundation. He will provide a forecast on industry trends affecting marketing.

"Successful suppliers to the golf course industry in the 1990s will stay close to their customers and their needs" says von Brecht.

During the first seminar, attendees will hear from experienced superintendents, golf course developers and management company executives who will discuss their needs, buying habits and ways to influence their decisions.

A buying-habits panel of superintendents will include Kevin Downing, Willoughby Golf Club; Tim Hiers, Johns Island Club; and John Potts, Peoria Park District. It will focus on how they evaluate, recommend, specify and purchase supplies and services. John "Jack"

LESCO tallies 2nd quarter sales record

CLEVELAND, Ohio - LESCO, Inc. had record sales of \$41,645,000 in the second quarter ended May 31, up nearly 20 percent from the year-ago sales of \$34,853,000, it was reported by James Il Fitz Gibbon, chairman and chief executive officer.

FitzGibbon also reported that directors declared an increased annual dividend of 8 cents per common share, payable July 9, to shareholders of record June 28. The previous annual dividend was 7 cents a share.

Earnings for the quarter were \$1,715,000, or 42 cents a share. "While earnings were strong in a very competitive marketplace, they were below last year's record quarterly earnings of \$1,889,000, or 46 cents a share," FitzGibbon said.

Earnings reflected lower profit margins from competitive pressures to reduce some prices. "We believe competitors lowered prices to move excess inventories and generate cash flow without regard for reasonable profits," he said. "While this impacted our profit margins on particular products, our broad product line and geographic diversification enable us to maintain overall profitability."

Salesofeach of the company's major productlines, fertilizers, turfprotection products, seed and turfcare equipment, increased in the quarter.

Frost, Marketing Resources Group, will moderate.

How to reach developers and renovators will be examined by panelists Paul Eldredge, James McLoughlin, and Dick Nugent. Paul Eldredge is with Wadsworth Golf Construction Company; James McLoughlin is the principal of The McLoughlin Group; and Dick Nugent is a golf course architect and the principal in Dick Nugent Associates.

As management companies take on a wider role in specifying and supplying their clients courses, reaching these key decision makers becomes critical. Management company executives Joe Black of Western Golf Properties; Jerry Diamond, of Club Corporation of America; and Bob Wallace, of Kemper Sports Management will help attendees discover ways to identify and reach key individuals within management companies.

With the international golf boom, many industry suppliers are taking advantage of international markets. During the session, "Global Opportunities in the Golf Course Market", Monica De Bartolo of the Illinois Trade Center will provide a nuts and bolts introduction to international trade. And Scott Johnson of Rhone-Poulenc Ag Company will discuss his company's strategic marketing approach.

Dennis Chase, executive editor of Advertising Age, worked with the Gallup Organization to develop a special report on Green Marketing. During his session, "Marketing to Environmental Concerns," Chase will examine the report's

findings. He will be joined by Owen Town, of Ciba-Geigy, who will provide an overview of a comprehensive program and campaign to promote a more environmentally responsible use of product.

In addition, M.H."Mac" McIntosh, one of America's leading authorities on inquiry handling and sales lead management, will share new ideas on how to expand sales.

For more information about the seminar, contact Rebecca Quinlan. Conference Group Manager, at 207-846-0600.

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Jacklin, Turf-Seed host field days

Jacklin Seed Company in Post Falls, Idaho, and Turf-Seed in Hubbard, Ore., recently hosted their annual grass seed research field days at their respective company bases.

Jacklin reported more than 120 visitors and Turf-Seed 400 from the United States, Canada, New Zealand, Australia, Japan, Korea, England, China, Argentina, Germany and other European countries.

They were impressed by the U.S. national test trials for Kentucky

bluegrass, perennial ryegrass, turftype tall fescue, creeping bentgrass and Bermudagrass.

Another highlight was the viewing of the shade and low-maintenance trials, as well as the zoysiagrass seed development and tests.

Featured were details on extensive biotechnology research and experimentation, and information on criteria necessary for a grass seed variety to qualify for the Green Seal label.

Turfgrass seed growers, manag-

ers and distributors reviewed the latest developments in turfgrass technology.

In addition to unveiling new varieties Tomahawk and Safari tall fescues and Quickstart perennial ryegrass, Vanessa Jensen and Miroslav Jiranek, new members of Turf-Seed's marketing team, were introduced.

The 10th anniversary event at the research facility near Hubbard, which has grown from 27 acres to 110, will be held June 18, 1992.



University of Illinois professor Hank Wilkinson speaks at 9th Turf-Seed Field Day

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RANSOMES

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BASF receives fed'l testing permit for 1991

RALEIGH, N.C. — BAS 514, an experimental product that controls annual grasses and broadleaf weeds with one application, has received a federal experimental use permit for more than 4,000 acres in 1991, according to Terry Hanson of BASF Corp.

A limited amount of the product will be sold to cooperating researchers and commercial turf specialists for trials in selected states, reports Hanson, BASF specialty products manager.

The experimental herbicide is based on a new active ingredient, whose proposed common name is quinclorac. An application for full registration has been submitted to the Environmental Protection Agency.

After seven years of study, BAS 514 has shown good to excellent postemergence control of crabgrass dandelions, clover and other broadleaf weed species, Hanson said.

Cool-season grasses as well as Bermudagrass and zoysiagrass have been determined to be tolerant to BAS 514 application, he said.

Promark moves to Brillon, Wis.

BRILLION, Wis. — In a move designed to streamline operations and increase emphasis on the product line, Ariens Co. has moved all operations of its Promark subsidiary to Ariens headquarters here.

According to Steve Dunlap, vice president of marketing, Ariens will focus its attention and resources primarily on the Promark chippers/shredders and turf/pavement vacuum products.

Although stump grinders and aeriallifts no longer will be marketed by Ariens, Dunlap expects few disruptions or inconveniences because Ariens has an established dealer and customer service system for its existing line of commercial and consumer products.

Michael Thuecks will be responsible for Promark's sales effort and will have field sales outlets in Illinois, Georgia and Calfornia.

Flexible underground piping system saves 75 percent on installation costs

EXTON, Pa. — Total Containment, Inc., has introduced Enviroflex, a new flexible doublewall piping system for underground fuel storage and delivery systems.

Enviroflex is said to save as much as 75 percent in installation costs when compared to conventional double-wall piping.

Enviroflex consists of flexible primary piping and a flexible outer jacket, plus a series of unique surface access chambers within the dispenser and tank sumps.

This arrangements provides both primary and secondary containment from tank outlet to dispenser. It also serves to reduce the number of piping joints, where most reported leaks occur, by 50 percent

In addition, Enviroflex provides needed secondary containment for dispensers, pumps and manways. Enviroflex is suited to all fuels and virtually any environment. Should a leak occur, the surface access chambers under the dispensers make it easy to pinpoint and repair the problem.

For more information on Enviroflex or any other Total Containment products, contact Total Containment, Inc., 306 Commerce Drive, Exton, Pa. 19341 or call (215) 524-9274.

CIRCLE #301

New biostimulant released

ANN ARBOR, Mich. — Emerald Isle, Ltd. announces PanaSea Plus, a new, organic biostimulant that reduces thatch while increasing root mass number and length.

It is a combination of liquefied sea plant extracts processed in a proprietary way to preserve naturally occurring cytokinins.

In tests at Michigan State University and the University of Georgia, PanaSea Plus produced superior results on creeping bentgrass.

In test comparisons at MSU, PanaSea Plus finished first overall, and at the University of Georgia produced "significantly greater root production" on Penncross creeping bentgrass during the summer stress months ... "the period of time when normal plant hormone production and translocation within the plant might be inhibited or reduced."

PanaSea Plus raises the threshold at which high temperature decline occurs by delaying premature leaf senescence triggered by prolonged high summer temperatures.

Contact Emerald Isle, Ltd. at (800) 628-GROW.

CIRCLE #302

Turf-Seed's CITATION CITATION CITATION Contains naturally pest resistant endophyte plant tissue between plant tissue between the cells.

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PLOT BEAUTY PLOT B

Left, insect damage in perennial ryegrass. Right, endophytic ryegrass resists insect pests.

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CIRCLE #149

System improves truck versatility

GARNER, Iowa — The Shuttle System introduced by Stellar Industries enables multiple-bed applications with a single truck chassis.

One truck operator can, without leaving the cab of the truck, load and unload or change truck beds in less than a minute.

One truck can support numerous bodies. Controls are mounted in the truck cab for operator safety and ease of operation.

The Stellar Shuttle is available in 3,000-, 4,500-, 8,000-, 12,000-, 20,000- and 40,000-pound capacities and can accommodate truck beds from eight to 24 feet in length. All models feature a 50-degree dump angle.

For more information on the Shuttle System, contact Stellar Industries Inc., 280 W. 3rd St., Box 169, Garner, Iowa 50438 or call (515) 923-3741.

CIRCLE #303

J&S offers high tech tee system

HONEOYE, N. Y. — Automatic electronic technology has hit the driving range.

J&S Conveyors, Inc., is offering what it claims is the world's first automatic tee box. A ball can be teed every 5 seconds from a 1,200 ball hopper, eliminating the need to bend down after each shot.

Ball after ball may be teed at a height adjustable by the player. The golfer can concentrate on stance and swing without bending over and losing rhythm.

The player turns on the Tee-Matic by inserting tokens, bills or even a credit card. An electronic sensor tees balls on demand, and the LED display can track either the number of balls hit or the amount of time remaining.

Tee-Matic can be used either indoors with a net or outdoors, where rugged and durable construction requires no protection from the elements.

For more information contact Sam Campanella, J&S Conveyors, Inc., 39 E. Main St., Honeoye, N. Y. (800) 628-8718.

CIRCLE #304

GOLF COURSE NEWS

Maine Golf Guide best of Northern N.E. trilog

The Maine Golf Guide, the third volume in a Northern New England golfing trilogy by Bob Labbance and David Cornwell, is the largest and most comprehensive of the three

All 104 public courses in Maine are covered in detail, with additional sections on private clubs, courses that no longer exist, and layouts under construction. Course maps for 52 of the clubs, together with 144 photographs, illustrate the book's 208 pages.

Summary boxes for each course list date established, number of holes, yardages, pars, slope figures, 150-yard markers, approximate season, amenities, whether starting times are needed, directions and phone numbers.

A chart of 1990 fees includes weekday, weekend and twilight fees, carts, lessons and special package rates, and appendices include the history of Maine golf, golf course architects, driving ranges, club pros and superintendents, and even miniature golf.

Travel maps begin sections for the northern, central and southern regions of

Maine is a big state to cover in terms of territory, and the Vermont-based authors needed some help to pin down routes leading to some rather remote links. Coming to their aid as correspondents with strong area knowledge and game experience were Rick Denison, Gene McNabb, Mark Putnam and Pete Webber.

Even so, Labbance and Cornwell nabbed little sleep the past two summers as they hit the road early and frequently arrived home in the wee hours a couple of mornings later. Finding courses off the beaten path led to adventure and misadventure, and the golf game sometimes suffered because of fatigue.

Often, though, they were rejuvenated by unique sites at their destinations. Labbance was particularly impressed with many of the seaside and coastal layouts, terrain and structure he termed visual treats.

New book details best plants of inland Northwest

PULLMAN, Wash. - From Arabis to Zelkova, "Landscape Plants for the Inland Northwest" provides descriptions of nearly 500 trees, shrubs, vines and ground covers that grow well in the region.

Descriptions include the height and width plants reach when full grown, growth habit, whether they prefer sun or shade and soil conditions to which the plant is adapted.

Information in "Landscape Plants for the Inland Northwest" sometimes differs from that in other references. This is because it is based on observations of the plants under Inland Northwest climate and soil conditions

The 70-page, spiral-bound publication groups vines, trees, shrubs and ground covers separately and includes common and scientific names.

It is available fro \$3 from Bulletin Office, Cooperative Extension, Cooper Publications Building, WSU, Pullman, WA 99164-5912. To obtain a copy, send a check or money order payable to Cooperative Extension Publications. Ask for EB1579.

Though private courses are dealt with in narrative form, like the earlier books on Vermont and New Hampshire courses they don't get the complete public course treatment.

Explains Labbance, "The books are aimed at the public golfer and the golfing public. Coming into a new state, the stranger is at a loss to locate a course he's heard about or one where he's in the vicinity but can't pinpoint. Maps, road routes and details we've provided make the course findable, and save a lot of mileage woes we encountered the past five years."

Labbance and Cornwell took a lot of wrong turns and dead ends in their explorations that began as a hobby and became a project, almost an obsession.

The \$15 guide is available in bookstores, golf pro shops, sporting goods stores and from the publishers, New England Golf Specialists, Box 17, Stockbridge, Vt. 05772.

Asked when they plan to tackle remaining New England states - Massachusetts, Connecticut and Rhode Island - the pair fall silent. Both have full-time jobs.

Labbance maintains a particularly punishing pace. He works 15 hours weekly for another author, golf course architect and historian Geoffrey S. Cornish of Amherst, Mass. As research editor, Labbance is updat-

architects' "bible" Cornish wrote in collaboration with Ron Whitten.

Whitten has gone on to other projects, but will add a chapter to Part One, which deals with the history of golf course architecture. Labbance is entering the 1,000 new courses built since 1986 publication. Part III of the master course list will be listed in new form, easier to read, with redundant information eliminated.

Labbance is pleased that Cornish noted in his foreword of The Maine Golf Guide, "a job well done in every respect ... a service of immeasurable value."

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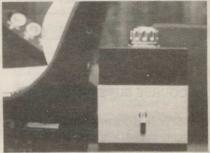
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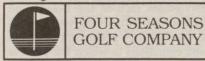
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CIRCLE #162

August

6-8 - Field diagnostic course for turfgrass managers in Ithaca, N.Y. Contact Joann Gruttadaurio at 607-255-1792.

6-9—Successful establishment of urban trees in Ithaca, N.Y. Contact Becky Parker at 607-

7 — Grassland's Annual Field Day and Equipment Show in Latham, N.Y. Contact 518-785-5841

7 — Illinois Landscape Contractors Association Summer Field Day in St. Charles, Ill. Contact ILCA at 708-932-8443.

8 - MNLA Summer Meeting and Trade Show in St. Paul, Minn. Contact Minnesota Nursery and Landscape Association at 612-

8-Rutgers Research Field Day in Freehold, N.J. Contact Edmund Milewski at 201-285-

8 - NYSN/LA Summer Field Day in Syracuse, N.Y. Contact Dan Barnhart at 315-638-8689.

11-12 — Ohio Seed Dealers Assn. summer meeting in Perrysville. Contact 614-459-1018.

13 - Golf course construction/design and golf day in Delhi, N.Y. Contact NYSTA at 800-

14 — GCSAA Seminar on Maximizing Turfgrass Disease Control in San Diego.*

15 — Pennsylvania Golf Course Owners general membership meeting at Mohawk Trails GC in New Castle.

16-18 — TAN-MISSLARK Regional Nursery and Garden Supply Show in Dallas. Contact Texas Association of Nurserymen at 512-

17-19-West Coast Golf Show in Long Beach. Contact Southern California PGA.

19-20 — Acquisition Financing Seminar in Dallas Texas. Contact 800-443-8318.

20-21 — South Dakota Seed Trade Assn. summer meeting in Brookings. Contact Barry Keal at 605-692-6171.

21 — University of Rhode Island Turfgrass Field Day at Kingston. Contact Noel Jackson at 401-792-2932.

22 - Michigan State University Turfgrass Field Day, Trade Show and Equipment Auction in East Lansing. Contact 517-353-2033.

25-27 - National Lawn, Garden and Power Equipment Showcase in Toronto, Ontario, Canada. Contact show producers at 705-741-

September

1-3 — International Garden Trade Fair in Cologne, Germany. Contact show producers at 212-974-8836.

3-5 - IoG Sports & Leisure World Trade Exhibition in Peterborough, England. Telephone 0908 311856.

6-7 - GCSAA 65th anniversary and dedication of new headquarters building in Lawrence, Kan. Contact GCSAA at 913-841-2240.

11 - Poa Annual Golf Tournament sponsored by NEGCSA in Lake George, N.Y. Contact 518-783-1322.

11-14 - National Club Assn. Club Leadership Conference at Grand Traverse Village, Mich. Contact 202-625-2080.

12 - Ohio Turfgrass and Landscape Horticultural Field Day in Columbus. Contact Dr.

Karl Danneberger at 614-292-2001. 12-14 — Crittenden Golf Development Expo

in Orlando, Fla. Contact 800-443-8318.

13-15 - Florida Nursery and Allied Trades Show in Orlando, Fla. Contact FNGA at 407-

15-17 — GMA Show-International Professional Lawn, Garden and Outdoor Power Equipment Exhibition in Kempton Park, United Kingdom, Contact Andry Montgomery Group at 502-473-1992.

Continued on page 52

Continued from page 51

16-17 — Marketing to Golf Facilities Seminar in Chicago sponsored by Golf Course News. Contact Becky Quinlan at 207-846-0600.

16-19 — Northwest Turfgrass Conference and Exhibition in Couer d'Alene, Idaho. Contact NTA at 206-754-0825.

17 - Metropolitan GCSA Professional Turfgrass Field Day at Rye N.Y. Contact Bob Lipmann at 914-248-7476.

17-19 - Va. Tech. Turf & Landscape Field Days in Blacksburg. Contact J.R. Hall III at 703-231-5797.

19 — Pennsylvania Golf Course Owners general membership meeting at Butler's Golf Course in Elizabeth.

23 — Poa Annual Golf Tournament sponsored by Central NYGCSA in Rome, N.Y. Contact Rick Canale at 607-753-3021.

25-28 — National Club Assn. Club Leadership Conference in Tucson, Ariz. Contact 202-625-2080.

25 — 25th Annual CGSA Fall Field Day at Carling Lake Golf & CC in Lachute, Quebec, Canada. Contact Canadian Golf Superintendents Association at 800-387-1056.

26-29 — Professional Plant Growers Assn. annual international conference and trade show in Nashville, Tenn. Contact 517-694-7700.

October

2-3 - 31st Annual Southern Calif. Turfgrass Expo in Costa Mesa. Contact Chuck Wilson at 714-951-8547.

7 — Allied Association Meeting at St. Ives CC and Bend CC. Contact Georgia GCSA at 404-769-4076.

7-9 — Golf Course Europe in Wiesbaden, Germany. Contact Ellen McGillavry at (03465) 73777.

12 — Pennsylvania Golf Course Owners statewide dinner meeting at State College.

13-15-Fla. Turfgrass Annual Conference & Show in Jacksonville. Contact 407-898-6721.

14-16 — Cornell Greenhouse Conference, "Systems that minimize environmental impact" at Ithaca, N.Y. Contact 607-255-2166.

14-17 — American Seed Trade Assn. Management Academy in West Lafayette, Ind. Contact 317-494-4247.

21-24 — Constructed Wetlands for Water Quality Improvement symposium in Pensacola., Fla. Contact 904-474-3722.

24-26 — Summit 91 Women in Golf in Daytona Beach, Fla. Contact LPGA at 9040254-8800.

November

2-5 — American Seed Trade Assn. Lawn & Farm Seed Conference in Kansas City.

3-5 — Georgia GCSA Annual Meeting at Jekyl Island Club Resort. Contact Georgia GCSA at 404-769-4076.

5-6—Indiana State Lawn Care Association Conference and Show in Indianapolis. Contact ISLCA at 317-575-9010.

5-8—New York State Turfgrass Association Turf and Grounds Exposition in Rochester, N.Y. Contact NYSTA at 800-873-TURF.

7-10 - Golfworld 91 in Dusseldorf, Germany. Contact Monika Waraczynski at (0211) 45600-543.

10-12 — Canadian Seed Trade Assn. semiannual convention in Ottawa, Ontario.

10-13 — International Irrigation Exposition in San Antonio, Texas. Contact The Irrigation Association at 703-524-1200.

14-16 — Landscape Maintenance Association Meeting and Demo at a site to be announced. Contact LMA at 813-584-2312.

17-19 — Ohio Seed Dealers Assn. winter meeting in Columbus. Contact Richard Moore at 614-459-1018.

Continued on page 53

Golf Course Marketplace

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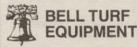
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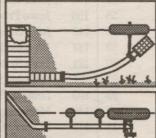
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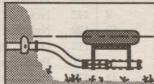
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Continued from page 52

17-21 — Green Industry Expo in Tampa, Fla. Contact PLCAA at 404-977-5222.

19-20 - 4th Annual Southern Grounds & Turf Maintenance Exhibition and Conference in Myrtle Beach, S.C.. Contact S.C. State Board for Technical & Comprehensive Education at 803-737-9355.

19-21 - Inland Northwest Turf and Landscape Conference and Trade Show in Spokane, Wash. Contact show producers at 800-729-

21 - Pennsylvania Golf Course Owners general membership meeting in Monroeville.

December

2 - 6th Your Home Turf at Michigan State University in East Lansing. Contact Dr. Frank Rossi at 517-353-0860.

2-5 - Ohio Turfgrass Foundation Annual Show in Cincinnati. Contact 614-292-2601.

3 - New Hampshire GCSA Annual Meeting in Concord, N.H.

3-4 - Southern Grounds and Turf Maintenance Expoin Myrtle Beach, S.C. Contact show producers at 800-553-7702.

3-5 — Rocky Mountain Turf Conference in Denver. Contact 303-688-3440.

8-11 — CGSA's 43rd Annual Canadian Turfgrass Conference and Trade Show and 25th Annual Meeting in Toronto. Contact Canadian Golf Superintendents Association at 800-387-1056.

9-11 — 22nd Annual Georgia Turfgrass Conference & Trade Show in Atlanta. Contact Extension Conference Office at 912-

9-12—Ohio Turfgrass Conference and Trade Show in Cincinnati. Contact Ohio Turfgrass Foundation at 614-292-2601.

10-12 - 22nd Annual Georgia Turfgrass Conference & Trade Show in Atlanta. Contact 912-681-5189.

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January

9-10 - New Hampshire Turf Conference in

13-16-32nd Va. Turf & Landscape Conference & Trade Show in Richmond. Contact Randeen Tharp at 804-340-3473.

16-18 - Mid-Am Trade Show in Chicago. Contact 708-526-3993.

19-21 - New York State Arborists Assn. Empire State Tree Conference in Albany. Contact 518-783-1322.

20-22 - 62nd Annual Michigan Turfgrass Conference in Lansing. Contact Mike Saffel at 517-353-9022

February

10-17 - GCSAA Annual Conference & Show in New Orleans.*

24-27 - American Seed Trade Assn. Management Academy in West Lafayette, Ind. Contact 317-494-4247.

* — For more information or to register, contact Betsy Evans, education coordinator, Golf Course Superintendents Association of America, at 800-472-7878 or 913-841-2240. The seminars are dependent upon the availability of the instructors, and are therefore subject to change. One-day seminars cost \$100 for GCSAA members and \$120 for nonmembers; two-day seminars cost \$180 for members and \$210 for non-members.

Guettler finds hosing around pays off

Fla. construction firm uses hose to evenly spread sand and gravel during greens construction

By Mark Leslie

Guettler & Sons originated the idea, inventor Bob Ritten made it "sing," and now golf course builders and superintendents are singing the praises of the invention.

The new creation pumps gravel, sand, or root-zone mix through a 2-3/8-inch hose and onto the green or sand bunker as far away as 1,000 feet.

"I believe it is going to be the way to build greens in the future," said Dee Greninger, superintendent of an Arnold Palmer Management Co. project, Northport National Golf and Country Club, in Northport at the Lake, Mo.

"It is state-of-the-art... The application is going to be the best thing on the market for doing the pea gravel and intermediate layer on the greens."

Greninger was on site to see the equipment used in construction of The Osage River Course, the first 18 holes of the 54-hole Northport complex.

Architect and builder Jim Fazio was equally enthused after seeing Guettler use the equipment to build St. Lucie County Municipal Golf Course in Vero Beach, Fla.

Ritten, a cousin to Pete Guettler, who owns the 37-year-old Ft. Pierce, Fla., business with son Tom, said the Guettlers had struggled with the technology for three or four years when they came to him.

An inventor with eight patents in the boat loading industry, Ritten spent a year developing the first "sandscaping" rig. Then, early this year Guettler added a subsidiary, Sandscape, Inc., using the technology.

The Guettlers have used the technology on five courses and found it has many advantages to traditional greens construction, which uses heavy equipment and laborers with rakes.

Greninger summed it up for Guettler: "It's advantages are twofold. It speeds up the process. And it allows you to work when weather conditions won't allow it."

It allowed Northport's greens to be built when it was too wet to work with heavy equipment, Greninger said, explaining that the machinery can be parked off the course and hoses hauled across the construction site.

Greninger also estimated the greens were built in two-thirds the ordinary time.

And Ritten said modifications to the hose have speeded that up.

U.S. Rubber has built a hose with a 2-3/8-inch inside diameter to replace the two-inch hoses used at Northport.

"That 3/8 inch makes a big difference," Ritten said. "The hose is lighter and easier to handle because the 3/8 inch is taken from the rubber. The outside diameter remains the same.

"I was concerned with the wear factor. But it has been nil. Everything's fine-tuned now. The combination is blended out right. We were getting (rubber) burn, but not now."

Ritten said the Sandscape system uses an air compressor. Air and soil material are mixed in a "gun" and forced through the hose.

"We can build a green in six hours with three men. Normally it takes eight to 10 hours using six to eight laborers, plus heavy equipment,' he said.

Greninger said men at the end of the hoses



I believe it is going to be the way to build greens in the future.'

— Dee Greninger, Arnold Palmer Management Co

follow grade stakes as they pour the material in—first the four-inch gravel layer on top of trenched drain tiles, then two- to four-inch choker (course sand) layer and finally the 12-to 14-inch root-zone mixture.

"You can blow it in exactly where you want it and not have to worry about grade or high spots and low spots and screwing up the original contour," Greninger said.

Traditional greens construction equipment endangers drain tiles and disturbs the choker layer, mixing it with the lower gravel blanket, he added.

"Quality-wise, when you don't have to get the equipment in and disturb that intermediate level and worry about crushing the drain tile, it's a better job. That's going to be a key," Greninger said.

"It's the most unique piece of equipment I've seen for building greens. In theory, you could do away with the bottom layer of gravel because there's no threat of breaking the drain tile."

In fact, Guettler hopes USGA officials will concur that "sandscaped" greens can be built without the bottom layer, thereby reducing the construction costs further.

Ritten said that would cut down construction costs several thousand dollars. "You also will get better drainage because water now has to flow down into ditches, whereas if tiles are on top of the base it should drain from both sides and the top. You'd probably just put down a one-inch base of rock."

A practice green at St. Lucie is being built this way to test the idea, Ritten said.

Greninger said he can see other applications for sandscaping, especially on sand bunkers.

He said Northport will take full advantage of this idea.



Green sandscaping allows workers, left, to apply a four-inch gravel layer to a new green. The truck, above, transports gravel and pumps it to the site.

"It is allowing us to complete the grassing of the course without putting the sand in first," he said. "Previously, you had to bring in the sand first and stockpile it in the sand traps. But this system allows the bunkers' silt and sediment to settle out. Next spring or summer we will blow the sand in and not disturb the grass.

"There's less chance of sand being contaminated during the winter. It lets you stabilize the edge of the bunkers, too, before putting the sand in, so you don't have the topsoil washing into white sand."

Greninger said he could see a big advantage on existing courses. "Anytime you don't have to back a big truck over your fairway into your bunkers, that's good. Guys now have to stockpile and use lighter equipment and make a dozen trips back and forth to fill a trap... Alot of times you could even work amidst play," he said.

Ritten added: "I can see every course putting new white sand out there after construction. It's like trimming a house."

The men on the hose?

Ritten foresees them becoming as proficient as shapers—some of whom maneuver bulldozers like artists do paintbrushes.

"They will be able to put gravel down so well they won't have to stake the green," he said.

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RS#	Advertiser	Page	RS#	Advertiser	Page	RS#	Advertiser	Page
164	Absolute Irrigation Sys.	52	135	Hancor	33	137	Precision Small Engine	36
165	Anderson Instruments	52	166	Hometech Indus.	52	170	Precision Tool Products Co.	52
107	The Andersons	10	116	Huber Ranch Sod Nursery	38	112	Regal Chemical	17
120	A. Palmer Golf Management	38	105	Jacklin Seed Co.	7	134	Regal Chemical	32
150	B.H.Sales	49	153	Jacobsen	56	123	Regal Chemical	39
152	Barebo, Inc.	55	156	Jesco Products	51	147	Regal Chemical	44
167	Bell Turf Equip.	52	115	John Deere	22-23	155	Resort Management of Amer.	
169	Bloch & Co.	52	177	JPF Distributors	53	119	Root Zone Mix Q.C.	39
154	Clearwater Env. Systems	30	121	Labb Systems/Software	38	125	Sandscape, Inc.	25
168	Continental Bridge	52	124	Lake Aid Systems	24	157	Schipper & Co.	51
126	CRI Golf, Inc.	25	103	Lebanon Turf Products	4-5	110	Southern Concrete	16
102	Cushman	3	140	Marketing to Golf Facilities	37	173	Sporting Valley Sod	53
114	Cushman	20-21	118	Master of the Links	39	104	Standard Golf	6
136	Cushman	34-35	163	Master of the Links	52	174	Syntennico	53
148	Cushman	46-47	160	Mike Young Designs	51	132	Tee-2-Green	31
117	Dispro Display Products	38	158	Miltona Turf Products	51	138	Terracare Products Co.	36
101	E-Z-GO	2	142	New Golf Concepts	42	106	Toro Comm'l. Prod. Div.	8-9
175	Excel Bridge Mfg.	53	129	Nyloplast USA, Inc.	28	143	Total Turf Care	42
130	Excel Brush Works	29	113	O.M. Scott	18-19	149	Turf-Seed	48
127	Flowtronex	26	151	Page Com	49	159	Unit Structures	51
145	Formost Construction Co.	43	176	Page Com	53	109	Valent USA	14
111	Glenmac	17	146	Par Ex	44	161	Warehouse Radio	51
122	Golf 2000 Pavers	39	178	Pavelec Bros. Construction	53	108	Watertronics	11
162	Golf Course News Mktplace	51	131	Peco, Inc.	29	139	Weyerhaeuser	36
179	Greenscape Pump Services	53	133	Pennington Enterprises	32	171	Willadsen Scale Models	53
128	Guettler & Sons	38	144	Perfection Sprinkler	43	172	Yard Edge	53
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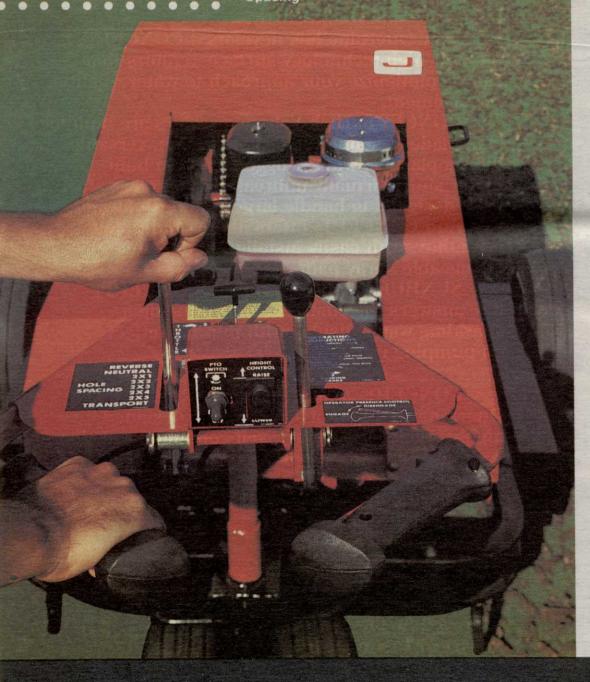
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