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HOLE NOTES

Official Publication of the Minnesota Golf Course Superintendents' Association

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Ralph Turtinen, Executive Director Minnesota Golf Course Superintendents' Association 240 Minnetonka Avenue South P.O. Box 617 Wayzata, Minnesota 55391-1617 612/473-0557 FAX: 612/473-0576

FROM THE PRESIDENT'S DESK

Thanks To All Who Have Worked So Hard To Make This A Very Successful Season



Once again the sound of air expelled from irrigation heads signals the end to another golf season. This summer we saw a moderate amount of rain to maintain the turf. Some trees and shrubs display evidence of drought stress with branches only partially leafed-out; however, this situation has truly made a comeback over the past three summers.

The passing of the golf season also marks the end of my term as President. I wish to thank all the members of the Board who have worked so hard during this year of transition of Executive Directors.

Recognition is owed to Kevin Clunis, Scott Turtinen and the Environmental Committee for their efforts in compiling the Environmental Handbook. I feel this is one of the greatest accomplishments our Association has achieved to keep us current in compliance with laws at the state and federal level. With the efforts of this Committee, our Association is in the lead, helping to create improved communication with lawmakers.

Individuals in our Association need to realize that our Board has collectively spent numerous hours during the past year attending classes and hearings on environmental issues, and that we are truly committed to keeping our members informed.

I am proud to have had the honor of being President of this outstanding Association that is nationally recognized for its various achievements in research, scholarships, educational conferences and now environmental compliance.

Our November conference is the 20th through the 22nd with an excellent program, including Bobby Gee, our keynote speaker.

— Tom Fischer President, MGCSA



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Another Great MGCSA Turf Conference Coming Up November 20-22 at Northland Inn

. . . .

Super Speakers Lined Up for 64th Annual Session

Once again, an excellent program has been lined up for the Minnesota Golf Course Superintendents' Association annual Turf Conference and Business Meeting November 20-22 at the comfortable Northland Inn in Brooklyn Park.

This year the session should be a more "thought-spaced" event, since the Pesticide Applicators Training Sessions, previously held at this time of year, are now conducted in March.

"That means there will be much more time to focus on the valuable information that our outstanding speakers will present," said Shane Andrews, head golf course superintendent at Hudson Country Club and general chairman of this 64th annual meeting.

"In addition, we're pleased to be returning to the Northland Inn," Andrews said. "As most of you will remember, the facilities, the service and the atmosphere we enjoyed last year were excellent."

Registration will begin at 8 a.m., Wednesday, November 20. That morning the principal speakers will be **Dr. James R. Watson,** the Toro Company, who will discuss "Integrated Pest Management," and **James Latham,** USGA Green Section Director, who will present various "Turf Tips."

After lunch, **Bobbie Gee**, a noted motivational speaker, will describe "The Making and Breaking of a Business Image."

At 2:30 p.m. the MGCSA's annual business meeting will get underway.

On Thursday, registration will begin at 7:30 a.m., at which time a guest speaker from the Minnesota Twins organization also will lead a fellowship gathering.

Tom Kientzle, head superintendent at Grand View Lodge's two golf courses—The Pines and the Garden Course—will lead the Thursday sessions.

The Complete Program for the 64th Annual MGCSA Conference and Business Meeting Is Presented On Pages 5-6 Don't Forget To Pre-Register for the 64TH ANNUAL MGCSA CONFERENCE AND BUSINESS MEETING By November 11

Speakers are **Dr. Paul Rieke**, Michigan State University, who will discuss " H_2O Injection," and **Dave Trachenko**, a well and pump consultant.

The afternoon speaker at 1 p.m. is **Tom Dolan**, Helena Chemical Company, whose topic is "Contingency Plan and Compliance."

The ever-popular Trade Show, to be held in the Northland Ballroom, will be conducted from 2-5 p.m.

Brad Klein, superintendent at Detroit Country Club, Detroit Lakes, is the chairman of the Friday session. In the morning attendees will hear **Randy Nicols** of the Golf Course Superintendents Association of America present views on "Current and Future Issues for the Golf Course Superintendents' Profession." He'll be followed by **Dr. Rieke**, reporting on his trip to New Zealand, and **Dr. Ward Stienstra**, University of Minnesota Department of Pathology, who will give a "Mercury Update and Alternatives."

Friday afternoon **Billy Given**, Prom Catering, has a fascinating presentation on "U.S. Open Concessions" followed by **Superintendent Chris Hague's** discussion of "The Open" at Hazeltine National Golf Club.

Wrapping up the conference program is the always interesting **"Thinking Superintendents"** session.

Back by popular request for the Friday evening banquet and awards program is **comedian Alex Cole.**

Two concurrent sessions, which proved exceptionally popular last year, are on the agenda again.

The first one is designed for mechanics Thursday morning. Session chairman is **John Granholt**, Eau Claire G&CC. The second, which focuses on irrigation, will be led by **Bill Whitworth**, CGCS, Northfield Golf Club.

MGCSA 64th ANNUAL TURF CONFERENCE & BUSINESS MEETING NOVEMBER 20, 21 & 22, 1991 NORTHLAND INN BROOKLYN PARK, MINNESOTA

Session Chairman James Gardner, Rochester Country Club

Wednesday, November 20, 1991

Main Ballroom

8:00-10:00 a.m.	Registration
10:00-11:00	Dr. James R. Watson
	The Toro Company
	"Integrated Pest Management"
11:00-12:00	James Latham
	USGA Green Section Director-Great Lakes
	"Turf Tips"
12:00-1:00	Lunch
1:00-2:30	Bobbie Gee, Motivational Speaker
	"The Making and Breaking of a Business Image"
2:30-3:30	MGCSA Business Meeting
6:00-8:00	Past Presidents' Dinner
6:00-8:00	

Thursday, November 21, 1991

7:30-9:00	Registration
7:30-8:30	FELLOWSHIP GATHERING,
	Guest Speaker From
	Minnesota Twins Organization
	Sinclair Lewis Room

GENERAL SESSION Session Chairman Tom Kientzle The Pines at Grand View Lodge Minnesota Room

9:00-10:00 Dr. Paul Rieke, Michigan State University "H2O Injection" Break - Trade Show Begins -10:00-11:00 Northland Ballroom 11:00-12:00 **Dave Trachenko** Well and Pump Consultant 12:00-1:00 Lunch 1:00-2:00 Tom Dolan, Helena Chemical Company Contingency Plan and Compliance 2:00-5:00 Trade Show - Northland Ballroom 6:30 Board-Speaker Dinner August Stuebner Room

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CONCURRENT SESSION Mechanics Service Session Session Chairman John Granholt Eau Claire G&CC Longfellow Room

To Be Announced

HOLE NOTES

Friday, Nove	ember 22, 1991			
7:30-9:00	Registration			
7:30-8:30	Industrial Relations Meeting			
GENERAL S	ESSION	CONCURREN	T SESSION II	
Session Cha	irman	Irrigation Ser	minar	
Brad Klein CGCS		Session Chairman		
Detroit Country Club		Bill Whitworth, CGCS		
Northland Bal	lroom	Northfield Go	olf Club	
		Longfellow Roc	om	
9:00-10:00	Randy Nicols, CGCS, GCSAA			
	"Current and Future Issues for the	To Be Announ	ced	
	Golf Course Superintendents Profession"			
10:00-10:15	Break			
10:15-11:00	Dr. Paul Rieke,			
	Michigan State University			
11 00 10 00	"New Zealand"			
11:00-12:00	Dr. Ward Stienstra			
	U of M Department of Pathology			
12:00-1:00	"Mercury Update and Alternatives"	EVENING BA	NOUET	
1:00-1:45	Lunch	Minnesota Ro		
1:00-1:45	Billy Given, Prom Catering	winnesota Ko	OIII	
1:45-2:30	"U.S. Open Concessions" Chris Hague, CGCS,			
1.45-2.50	Hazeltine National Golf Club	6:00-7:00	Cash Bar and Appetizers	
	"The Open"	7:00-9:00	Dinner and Awards	
2:30-3:30	Thinking Superintendents	9:00-10:00	Entertainment—Alex Cole, Comedian	

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HOLE NOTES

63rd Annual GCSAA Conference Set in New Orleans

Record-breaking attendance is expected at the 63rd International Golf Course Conference and Trade Show, scheduled February 10-17, 1992, in New Orleans, La.

The conference and show, considered to be the main event in the golf course industry, is hosted by the Golf Course Superintendents Association of America (GCSAA) and will include more than 60 educational sessions and seminars, a three-day trade show, a gala banquet featuring a performance by Kenny Rogers, the association's annual meeting and election of officers and the 1992 GCSAA Golf Championship.

Conference week opens with the annual GCSAA Golf Championship, scheduled February 10-11 at several courses in Ponte Vedra Beach, Fla. A field of about 350 will compete for individual and chapter team honors in the national tournament.

Topics ranging from golf course resto-



ed in the area that surrounds Augsburg Ice Arena. The reason why is selfexplanatory, it's time for the **MINNESOTA GOLF COURSE SUPERINTENDENTS' ASSOCIATION HOCKEY CLUB** to get it all together again. Ice time is as follows:

DATE	TIME	LOCATION
Thursday, November 14	11:30-1:00	Augsburg
Thursday, December 12	11:30-1:00	Augsburg
Thursday, January 16	11:30-1:00	Augsburg
Thursday, February 6	11:30-1:00	Augsburg
Thursday, March 12	11:30-1:00	Augsburg

Any association member is welcome to play. Ice time is courtesy of Associate members. After the contest join us for pizza at Davanni's.

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ration to protection of water resources will be covered in 53 one- and two-day seminars that will be offered during the first four days of the conference, February 10-13. Six concurrent educational sessions are scheduled for Friday, February 14, with several more educational programs scheduled for Saturday, Sunday and Monday.

Terry Bradshaw, the former National Football League quarterback who led the Pittsburgh Steelers to four Super Bowl victories, will be the keynote speaker at the Opening Session on Thursday, February 13, at the New Orleans Convention Center. Elected to the NFL Hall of Fame in 1989, Bradshaw currently serves as a studio analyst for CBS' "NFL Today." He has written several books and recently has produced the business video, "What Makes Us Great."

Nearly 600 manufacturers and distributors of golf and turf industry products, supplies and services are expected to exhibit at the trade show, which runs February 15-17 at the New Orleans Convention Center.

Country and pop music legend Kenny Rogers will provide entertainment at the formal closing banquet on Monday, February 17. Rogers has recorded dozens of hits in both the country and pop music fields, including "Lucille," "The Gambler" and "Through the Years."

The highlight of the gala evening will be the presentation of the Old Tom Morris Award, GCSAA's highest honor. The award is given to an individual who, through a continuing selfless commitment to golf, has helped to further the game with the same dedication and inspiration demonstrated by Old Tom Morris. Previous recipients of the award include Gerald Ford, Bob Hope and Arnold Palmer.

Last year's conference and show, held in Las Vegas, Nev., drew more than 16,400 people. Almost 1,400 of those attending were international visitors and guests, representing 46 countries outside the United States.

Nearly 600 manufacturers and suppliers will display the newest products and services in the golf course management industry during the 1992 GCSAA Trade Show, scheduled Feb. 15-17 at the New Orleans Convention Center.

(Continued on Page 19)

HOLE NOTES

Responsible Turf Pesticide Use May Actually Protect Surface Water Quality

By Robert J. Mugaas, Michael L. Agnew and Nick E. Christians

Properly maintained and healthy turfgrass will tolerate the presence of low levels of pest populations without suffering permanent damage. Healthy turfgrass usually recovers more quickly from any insect or disease infestations. However, there may be times, even in healthy lawns, where some pest control may be needed to prevent significant turf damage. Correct and judicious use of pesticides, chemical or biological, can be used to reduce pest populations and allow turfgrass recovery.

Pesticides are subject to a number of different fates once applied to a turfgrass area. Some of them may be degraded by sunlight, microbial action, chemical action or a combination of these processes. Others may volatilize back to the atmosphere, be absorbed by the plants or adsorbed by soil particles limiting further soil movement. Pesticides may be subject to several of these different processes although some may be more important than others. Degradation processes and plant absorption are particularly important as they account for removal of the pesticide from the environment. Two environmental pesticide fates of concern to surface water quality are those associated with leaching and runoff.

Leaching

Leaching is the downward movement of pesticides (and nutrients) with water flow through the soil. It is the process responsible for carrying pesticide and nutrient contaminants to ground and possibly surface water resources.

Unlike pesticide application to bare soil, the turfgrass system with its high plant density, dense fibrous rootzone and thatch development can have a significant effect on pesticide leaching potential. Recent university studies have demonstrated that the grass and thatch present a barrier to movement of several of the commonly available turfgrass insecticides and herbicides. Other research has suggested that the turf rootzone area is biologically active and can facilitate the microbial breakdown of some pesticides. Thus, long term buildup of these materials in the turf rootzone is unlikely. While the scientific data regarding the potential leaching of pesticides is limited, it is encouraging in that the turfgrass system does appear to restrict downward movement of pesticides applied to turf.

Runoff

Runoff occurs when the precipitation rate exceeds the rate of water infiltration into the soil. This can be a significant potential loss of pesticides and nutrients from row crop agriculture, where the pesticides are often applied to bare soil and may not be held in place by plants. When runoff occurs from these areas, pesticides can be dissolved and carried in runoff water. Pesticides also can be carried along as sediment in runoff water if they are bound tightly to soil particles.

Recent university studies have demonstrated that runoff from dense turf areas can be reduced to insignificant levels. Turfgrass areas have tremendous potential to absorb large amounts of precipitation. For example, it has been reported that a 150-acre golf course has the capacity to absorb 12 million gallons of water during a heavy (3-inch) rainstorm. Water movement over a dense turfgrass stand is usually slow enough that most of the water will infiltrate into the turf area before it can run off. Research also has indicated that, when runoff from turf areas was sampled for some herbicides, they were either non-existent or at very low levels.

While runoff research from turfed areas is limited, the initial findings are encouraging. It would appear that turfgrass can significantly limit runoff, therby reducing the chances for off-site movement of nutrients and pesticides.

Responsible Pesticide Application Practices

The first step in responsibly using any pesticide product is to follow the label directions exactly as stated on the

Editor's Note

Last winter Bob Mugaas, Hennepin County extension horticulturist, had the opportunity to spend a study leave at Iowa State University researching scientific literature to find out what is known about present lawn practices and their impact on water quality.

In the October 1991 issue of Hole Notes, Bob collaborated with Michael L. Agnew, extension horticulturist/turf, and Nick E. Christians, professor of horticulture, at Iowa State University, to write about "Turf Nitrogen and Phosphorus Management Practices." In this issue they conclude their two-part series with a presentation on "Responsible Turf Use."

Says Mugaas: "A larger, more comprehensive publication will be forthcoming this fall. It is hoped that this information about turf fertilizer and pesticide practices and their impact on water quality will help you communicate with greater knowledge about these issues.)

product container. The label provides necessary information regarding proper product application and container disposal procedures. Labels are legal documents and are enforcible by law should the product be used in a manner inconsistent with directions.

Before applying insecticides and fungicides to a turf area, be sure that the apparent damage symptoms are being caused by an insect or disease. If an insect or disease pest is found to be causing serious turf damage, then a proper control method can be selected. This may or may not involve the use of a pesticide.

Weeds should also be identified to determine whether there is a need for a

(Continued on Page 9)

Responsible Turf Pesticide Use

(Continued from Page 8)

pesticide. They may only be indicative of other cultural conditions that also need to be corrected.

As with fertlizers, it should be obvious that extreme care must be taken to prevent the direct application of pesticides into surface water areas.

Properly timing pesticide applications is crucial to their overall effectiveness against the pest and to minimize adverse environmental impacts. Often minimal amounts of pesticide can be used when the pest is in a young and/or highly vulnerable stage. For example, when weeds or insects are quite large and mature, greater amounts of pesticides are usually needed and may not be that effective. Likewise, treating disease problems at very early stages of infection is more prudent and may require less fungicide than attempting treatment of large, heavily infected areas.

Proper timing also can relate to the time of year when a pesticide may be most effective. For example, fall is the best time to control cool season perennial broadleaf weeds. At this time of year (mid-September to early October), these plants are actively growing and will more readily take up the herbicide. Often, lower rates and only one application of an appropriate herbicide are needed to be effective. Since much of the other landscape plant material is either going dormant for the winter or has been removed from garden and flower beds, there is usually less chance for off-target plant injury. However, that does not give license to be careless when applying a pesticide product.

Sometimes it is necessary to water-in a pesticide treatment for it to be most effective. Pre-emergent types of herbicides typically used for controlling crabgrass and other annual weedy plants must be moved into the soil surface to be effective. Their mode of action is such that it affects the seed as it begins to germinate but before it emerges from the ground. Depending on the soil type, .25 to .50 inches of moisture should be applied following application of these products. (This is about one to two hours of irrigation with most common lawn sprinklers. Automatic irrigation systems may need to be adjusted accordingly.) This not only puts the product where it will be the most effective but may move the material far enough into the soil that it will not be carried away in runoff.

A similar situation exists when using insecticides and fungicides. Those materials used for controlling thatch and soil-inhabiting insects and diseases usually require some type of irrigation following application to move the product into the thatch and thatch/soil area. This puts the product where it will be the most effective, reduces the chances of it being carried away in runoff and potentially reduces exposure to the material. While thatch can facilitate the breakdown of these materials and potentially reduce their effectiveness, it also can shorten their persistence in the environment. Pesticide label directions will indicate whether post-application irrigation is needed.

In the case of herbicides, it is often unnecessary to thoroughly drench an area to achieve satisfactory weed control. This may be wasteful of both water and herbicide as well as moving the herbicide beyond the plants and into the soil where it may be more prone to leaching. Where plant cover is sparse, the herbicide could potentially be carried in runoff either directly or bound to sediment. Spraying to wet the foliage and not spraying to runoff is usually sufficient to get enough herbicide into the plant to be effective. Again, follow label directions for proper mixing and water volume to use with the product.

Protecting our surface water resources as well as groundwater resources is not something to be taken lightly. However, neglecting our turf areas for fear of introducing nutrients and pesticides into our water supplies is not a way to protect these resources. Evidence is beginning to build that properly maintaining turfed areas with appropriate but modest ues of fertilizers and pesticides may do more to protect our water resources than to hurt them.

Authors

Robert J. Mugaas, Henn. County Extension Horticulturist, University of Minnesota Michael L. Agnew, Extension Horticulturist-Turf, Iowa State University Nick E. Christians, Professor of Horticulture, Iowa State University

GREEN CLIPPINGS

Here is the slate of candidates for the GCSAA's 1992 annual membership meeting in New Orleans, La.

President: William R. Roberts, CGCS Vice-

President:	Joseph G. Baidy, CGCS
	Randy S. Nichols, CGCS
Director:	Joseph M. Hahn, CGCS
	Paul S. McGinnis, CGCS
	C. Wayne Perkins, CGCS
	Bruce R. Williams, CGCS
	Randall P. Zidik, CGCS
	0001 11 0001

Nebraska GCSA and Iowa GCSA will be co-hosts of a seminar on Golf Course Construction Techniques and Management December 3-4 at the Holiday Inn Central in Omaha, Nebr. For more information call 1-800-472-7878.

The annual Michigan Turfgrass Conference will be held January 20-22 at the Holiday Inn in East Lansing, Mich. Contact Michael Saffel, Crop and Soil Science Department, Michigan State University, East Lansing, Mich. 48824-1325. His telephone number is 517/353-9022.

The MGCSA wishes to thank Par Aide for its donation to the Harold Stodola Research Fund in the name of Braemar Golf Course.

NK Medalist Turf Adds 3 Salesmen

NK Medalist Turf Division of NK Lawn & Garden Co., Minneapolis, has added three new turf sales specialists to its staff.

Michael W. Tentis will handle sales and service in NK Medalist's Western Region. His territory includes California, Nevada, Arizona, New Mexico and Utah. He formerly was a technical representative at O.M. Scott & Sons.

Luis B. Mendoza will cover the Midwest Region for NK Medalist. This includes southern Wisconsin, Illinois, Indiana, northern Kentucky and eastern Missouri. Mendoza joined NK from Cory Orchard & Turf, Indianapolis, an NK Medalist distributor.

Lee Record will handle turf sales and service in NK's Southeast Region. Record has several years of turf experience, most notably with the U.S. Golf Association Greens Section and Chemlawn Corporation.

The 1991 Season

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At Least it Wasn't Boring

By James M. Latham, Director Great Lakes Region USGA Green Section

The 1991 season has been a good news/bad news affair so far, with weather conditions determining the difference much of the time. Good news came to the West in the spring, with timely rains which have brought precipitation records up to par for the first time in 5 or 6 years, but they were preceded by winter desiccation damage to greens, tees, and fairways on many courses. Desiccation? How about 80-mile-an-hour winds with still air temperatures at 20 degrees below zero!

Crown hydration/winterkill of **Poa annua**, which has plagued northern latitudes of Wisconsin to Montana the last two years, moved south to the Wisconsin-Illinois state line area and southward. Rather than general, across-the-board damage to all courses, it was a patchwork of turf loss. One course could be almost undamaged, while a neighbor was hurt severely. This provided an early season supply of grist for the mills of locker room agronomists. At the same time, though, it gave superintendents an opportunity to reintroduce bentgrass into weak spots and justify the formulation of pro-bent maintenance programs.

For other areas, the worst was yet to come. Southern Michigan and Chicagoland went through a most disquieting season. It was an accelerated growing season, according to one Michigan superintendent. July weather came in May, August in June, and a breath of September in late July. Not a very deep breath, though, because another spell of hot, humid weather finished off a lot of **Poa annua** already weakened by disease and the hot, humid, but rainless weather earlier in the summer. Any time winterkil or Summer Patch become destructive is the time to present a plan for regeneration of bentgrass to The Powers so that a means of funding can be found. In this way, adversity might become a positive beginning to more reliable playing surfaces.

All of these woes were not shared democratically, however. Many courses have come through the hard times in fine condition. Those with a predominance of bentgrass and Kentucky bluegrass fared well. Naturally, **Poa annua** seedlings came on strong after winterkill, but the high temperatures in late spring applied some degree of stress.

Hopefully, the new poa plants got a lot of competition by inter- or over-seeding with more dependable species. In hot weather, the percentage of bentgrass or bluegrass seedling survival is low, but poa competition will not be as great as it is in either fall or spring. And what is wrong with aeration, slitseeding, etc., weak or dead areas during the prime playing season? At least, the golfers see something *positive* being done to their course rather than our usual moaning about that blankety-blank P.a.

Golf Courses in the Midwest

Have you noticed the number of golf championships being played in the Mid-Lands these days? Medinah, Hazeltine, Oakland Hills, Crooked Stick, Cog Hill, Edinburgh USA, SentryWorld, Crystal Downs, Kemper Lakes, Interlachen, Otter Creek, Golden Valley, Minikahda, Indianwood and others have become better known to competitive golfers of all ages in the last few years because of the USGA and PGA championships conducted in these environs in recent years. Architecture and style are, of course, the primary reasons for the associations to accept invitations to use these venues, but you can bet that course care comes next. The golf course superintendents at these courses, with backing by forward-looking Green Committees, have produced turf quality fit for champions as well as the non-handicapped.

The playing conditions at these courses did, at some time, favorably impress visiting golfers who communicate with The Powers who make decisions on competition sites. Potential hosts may not even be aware of this. That's why *playing quality* of the turf is usually as important as cosmetic greenness. Probably more. Thatchy, overwatered fairways are underwhelming, regardless of the shade of green. P. J. Boatright believed that play to firm, fast, fair grees demands firm, fast fairways.

The Courts

Litigation or legislation? When the U.S. Supreme Court ruled that committees could indeed promulgate rules exceeding those of USEPA, the door was opened for the political intimidation of governing bodies of all sizes. Timid politicians and highly vocal Anti groups can legislate away all pesticide use unless someone *locally* speaks up in their favor. This means that individual golf course superintendents, golfers, pros, club managers, as well as their organizations, will have to speak up.

We must talk to and inform our down-home folks in wards or precincts. Company lobbyists and pro-pesticide organizations cannot be of much help at community levels. If golf course managers *do* know more about pesticides than anyone in the neighborhood, they'd better begin speaking up. And *before* restrictions are proposed, not afterward, because the Anti's already have their ducks in a row. Remember that they know *how* to

(Continued on Page 15)