

# Here's a Hole-by-Hole View of The Les Bolstad U of M Golf Course

By CHARLIE POOCH

Superintendent, Les Bolstad U of M Golf Course

Les Bolstad University of Minnesota Golf course covers 130 acres of wooded, hilly terrain located on the western edge of St. Paul within a metal driver distance of the St. Paul Campus.

Les Bolstad, whom the course is named after, one of the greatest amateur golfers Minnesota has known, went on to coach many of the areas greatest, including Tom Lehman and John Harris, while at the University course.

Built in the late '20s, most of the elevated, push-up greens still exist today.

Five years ago the connecting short course was converted into a successful driving range/learning center, accomodating men's and women's golf teams, kinesiology classes, golf camps and the general public.

This year has become a construction year as a tunnel has been added underneath Larpenteur Avenue and fill provided by the road construction is being used to upgrade many tees. Many of you will be able to see these changes on October 6.

**1** 393 Yards  
Par 4

A drive down the right and you are welcomed by the University mascot, Goldy Gopher. Any drive under 240 yards leaves you a blind shot to a fairly open green. Out of bounds lurks on the left from tee to green.

**2** 163 Yards  
Par 3

Water should not come into play, as this is an easy iron shot to a slightly elevated green with a large, green-side bunker on the left.

**3** 400 Yards  
Par 4

A drive to the top of the hill



Charlie Pooch with Goldy Gopher.

leaves you with a beautiful approach to this open green. Go too far and you hit off a 45° downhill slope.

**4** 355 Yards  
Par 4

All uphill to an elevated green. An accurate tee shot is required if you want to reach this green in regulation. Water lurks if you happen to hit it over the green.

**5** 150 Yards  
Par 3

An elevated, rather small green with two bunkers on the left leaves very little room for error. Safety can be had by staying short and right; don't be long.

**6** 306 Yards  
Par 4

Slight dogleg with an accurate tee shot extremely helpful. Fairway bunker very much in play on the left, but keeping to the right edge of the fairway takes bunker guarding green out of play.

**7** 464 Yards  
Par 5

Water along right for first 200

yards with accurate drive required. Hit it too far and trees protecting left give you no chance of going for the green in two. Second shot is best left about 100 yards short as a deep valley lies in front of the green allowing very little view of the cup.

**8** 185 Yards  
Par 3

Another elevated green that requires accurate tee shot. Any errant shot bounces off side hills around green leaving very difficult second shots. If in doubt, keep it short and straight.

**9** 472 Yards  
Par 5

Water on the right collects a few errant tee shots; however, this should be no problem. Accurate tee shot and you may have a chance to reach this green in two. Greenside bunkers surround green, but it is possible to roll up onto green. Be careful of going over as out of bounds is directly behind green.

**10** 339 Yards  
Par 4

Important to hit an accurate tee shot as mature oaks closely guard the edges of this fairway. A large green awaits a successful second shot.

**11** 347 Yards  
Par 4

Out of bounds entirely along left with another accurate tee shot required if you want a chance of reaching this green in regulation. A small green requires an extremely accurate second shot.

**12** 415 Yards  
Par 4

Playing 343 yards this year due to construction along Larpenteur Avenue makes this very reachable in

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## University of Minnesota GC—

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two. Accurate drive puts you well within reach of another elevated green.

### 13 525 Yards Par 5

A drive of 200 yards gets you over a large hill and part way along the dogleg left. Staying along the left shortens this hole immensely; however, two large oaks do an excellent job of batting down errant shots if you stray too far left as you approach this green. Cleveland Avenue and out of bounds loom on the right for errant shots that way.

### 14 305 Yards Par 4

Dogleg right provides a great hole for righthanded slices. Safest shot is five iron off the tee to the middle of the fairway allowing for a wedge or 9-iron to green. Adventurous golfers drive through or around radio tower with accurate shot reaching green in two. Errant drives often end up out of bounds right and behind green or in bunker protecting approach to green.

### 15 390 Yards Par 4

Straight drive required as out of bounds is very close on right and bail out to the left leaves you in trees with little chance of reaching green. Be careful of uneven lies in fairway as green has very little room for error on right and any shank is O.B.

### 16 388 Yards Par 4

This hole will be playing 165 yards of uphill par 3 due to the building of a new tee and addition of a pond between the old tee and existing fairway. Walkers get a workout as this hole is a constant climb.

### 17 145 Yards Par 3

Another accurate shot required to stay on this elevated green. Bunkers on left and right sometimes come into play with short shots leaving a difficult uphill chip and long shots leaving an extremely long, difficult, uphill chip.

### 18 406 Yards Par 4

Accurate drive of 200+ yards gets you on hill with beautiful approach to green. Be careful of going long or left as out of bounds looms. Mature trees line both sides of the fairway.

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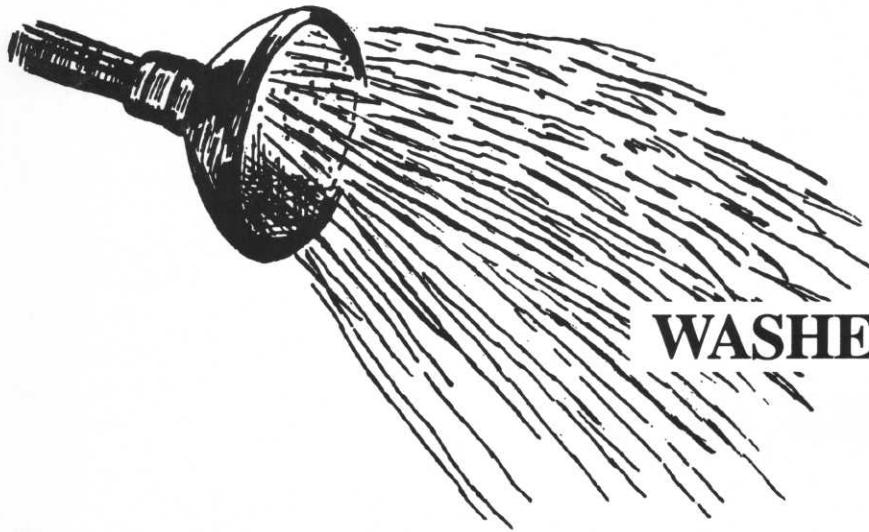
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# MGCSA Winter Damage Survey Creates Interesting Findings

By JIM NICOL, CGCS  
Hazeltine National Golf Club

After reviewing the Winter Survey Results, I noticed some interesting findings. One was regarding topdressing. Some things it helps, some it does not. Another was the use of covers. Are they helpful, and which ones work the best?

These same questions were reviewed by the MGCSA Research Committee last April, and we allocated money to look into these areas. We will be funding Dr. Dan Taylor's topdressing research in conjunction with the GCSAA. This study will look into different topdressing materials and results as how they relate to winter protection.

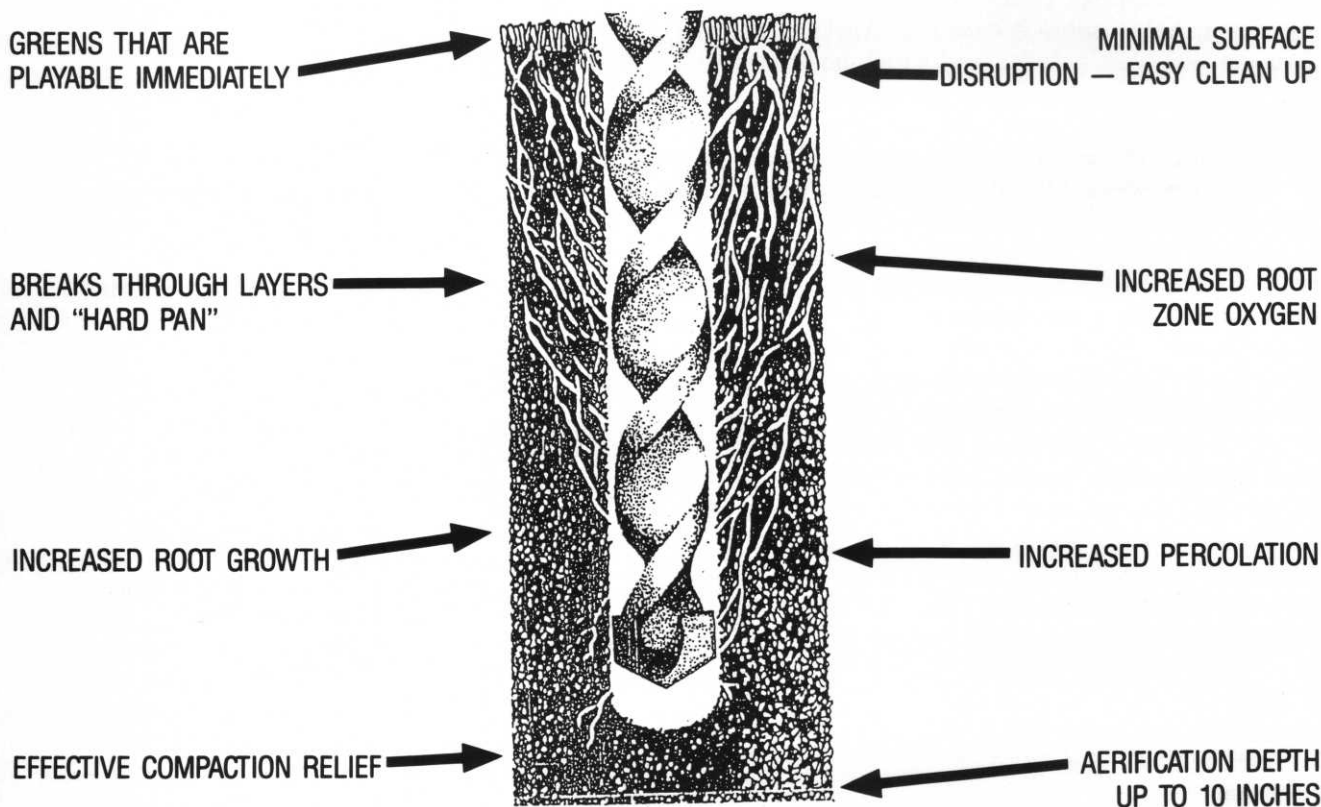
The committee also has allocated money to look into the use of covers on putting greens. The work will be done at Rolling Green Country Club under the direction of Pat Walton, CGCSA and Dr. Ward Stienstra. Different types of covers facing different directions relating to the sun will be placed this fall and several at different times during the winter. We will then use some of the same covers next year along with some new ones to see if age is a factor.

If anyone has suggestions or questions relating to these projects or the survey, please feel free to contact me.

Here are the results of the 110 surveys returned.

- 1) Did you cover greens?
  - No (84)
  - Yes (24)
    - HPI (16)
    - Excelsior (5)
    - Other (9)
- 2) Did you topdress?
  - No (66)
  - Yes (45)
    - Unimon (4)
    - Washed Sand (15)
    - 80-20 (23)
- 3) Did the November rain event affect the outcome of your greens?
  - Yes (55)
  - No (51)
- 4) When did your ice start forming?
  - November (51)
  - December (18)
  - January (11)
  - February (14)
- 5) Did you remove snow and ice?
  - No (57)
  - Yes (52)
    - November (6)
    - December (2)
    - January (1)
    - February (4)
    - March (37)
    - April (2)
- 6) When did you start seeing damage?
  - November (1)
  - December (2)
  - January (0)
  - February (7)
  - March (42)
  - April (32)
  - May (1)
- 7) If you removed snow and ice, was it helpful?
  - Yes (32)
  - No (24)
- 8) Was there a lot of damage to your greens?
  - No (55)
  - Yes (47)
    - Minimal (42)
    - Extensive (20)
- 9) What was it?
  - Ice (73)
  - Snow Mold (19)
- 10) What rates and products did you use for snow molds?
  - Daconil Weatherstick - 4, 6, 8 and 12 oz.
  - Chipco 26019F - 2, 4, 6 and 8 oz.
  - PCNB - 4, 6 and 8 oz.
  - Turfcide 400 - 4, 6 and 8 oz.
  - Scotts FFII
  - Calo-Clor - 3 oz.
  - Teremee SP
  - Daconil Ultrex
  - Penn Star 75 WP
- 11) How much water per 1000 square feet did you use?
  - 1 gallon (16)
  - 2 gallon (44)
  - 3 gallon (12)
  - 4 gallon (12)
  - 1.5 gallon (2)
- 12) Did you "water in" your PCNB?
  - No (54)
  - Yes (42)
  - Did not use PCNB (7)
- 13) What are you going to do differently next year?
  - Nothing (50)
  - Topdress
  - Improve drainage
  - Heavy Milorganite
  - Pray
  - Start Earlier
  - Cover all greens
  - Remove excess water before freezing
- 14) What did you do that you feel was successful?
  - Nothing (30)
  - Topdressing
  - Remove excess water
  - Remove snow and ice
  - Cover greens
  - Healthy turf in fall
  - Snow Fence
  - Let greens grow
  - Faith in God
  - Deep tine in December
- 15) Anything you feel that was not successful?
  - Nothing (32)
  - Not getting spraying done
  - Different Covers
  - Topdressing

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## Soil Compaction

Soil compaction can occur in any type of soil. Typically, a "hard pan" forms. Traffic causes soil particles of different sizes to become clustered together, filling up all available air spaces, compacting into a hard layer that can't easily be penetrated by moisture or roots. Some soil types are more susceptible to compaction than others, but once a compaction problem has become established, it can only get worse. As moisture penetrates the compacted layer, and traffic continues, the compaction layer becomes denser and thicker.

Compaction severely restricts the manner in which soil naturally manages water. Both by holding water near the surface of the green — and by limiting the ability of plants

to take up water and nutrients from below. Water trapped under the compacted layer reduces plant development, especially during dry periods.

A compacted green means that the fertilizers, pesticides and herbicides you apply cannot be utilized efficiently.

If they are not absorbed, they can be washed away easily. Even more serious, they can be trapped near the surface in a concentrated form resulting in turf damage. They can also be captured under the compaction zone, compounding the problem.

Compacted soil results in poor root and plant development. Compacted soil is dense; roots cannot grow in it. That can reduce turf growth by 20, 30, even 50% or more.

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# Environmental Stewardship Begins in Your Backyard

## CUES Summary: Sustainable Management Of Urban Ecosystems

A sustainable landscape requires low inputs of labor, fertilizers, herbicides, insecticides and fungicides to thrive. These chemicals have the potential to pollute surface and ground water and disturb natural ecosystem processes. The landscaper's objectives differ from the agricultural model driven by yield and profits which justifies the use of chemicals. Sustainable management embraces four principles.

**Conserving Biodiversity.** The naturally diverse landscape discourages outbreaks of disease or insects. Such a landscape also attracts birds and butterflies.

**Restoring native vegetation.** Consider using native vegetation in landscapes. Restore native vegetation to shorelines to reduce nutrient enrichment through stabilizing sediments and shorelines.

**Promoting nutrient recycling through composting.** Backyard and community composting is an ecologically sound way of disposing of yard wastes and increasing nutrients in urban soils.

**IPM, integrated pest management, for insect and diseases.** Inspect and monitor your plants' health on a regular basis, before problems are out of control. Instead of routinely spraying for insects, use spot treat problems of soft pesticides such as soaps, oils and biorational products such as Bt (commercial formulations of *Bacillus thuringiensis*). Adopt these biorational practices which target the pest and not the naturally occurring biological control agents such as parasitoids and predatory insects. Use naturally resistant plants. When necessary use hard pesticides, timed

to the vulnerable stage of the insect so the application has a major impact on the pest.

## What is CUES?

CUES strives to educate urban residents and landscape managers on ways to embrace environmental stewardship by practicing sustainable management. CUES reaches consumers and landscape industry through the resource center, educational materials and public programs. A Minnesota Extension Service, MES, collegiate grant in 1995 funded the creation of CUES. CUES is housed in the Andersen Library at the Minnesota Landscape Arboretum (MLA).

## What is the message Of CUES?

CUES' main goal is to convince people that environmental stewardship is not confined to the Serengeti in Africa. Environmental stewardship starts in your backyard. CUES tries to reach the managers of urban green spaces to convince them to practice the principles of plant health care (PHC) and Integrated Pest Management (IPM).

## What is Sustainable Landscape Design?

Landscape managers and gardeners generally want a landscape that is easy to maintain as well as one that looks good. Sustainable landscaping is a common sense approach to obtaining both goals. These landscapes use native and introduced plants adapted to the conditions of the sites so the plants can prosper without chemical inputs into the environment.

Properly designing or even redesigning a landscape is the first step towards lowering maintenance. A sustainable landscape is one that

preserves and protects nature's balance, while providing aesthetic pleasure.

Once a good design is in place, other practices come into play such as following principles of plant health care (PHC), encouraging biodiversity, composting yard waste and implementing Integrated Pest Management (IPM).

## What is Sustainable Landscape Management?

A sustainable landscape requires low inputs of labor, fertilizers, herbicides, insecticides and fungicides to thrive. These chemicals have the potential to pollute surface and ground water and disturb natural ecosystem processes. Fertilizers from urban landscapes run off into storm drains and enter waterways and cause algae blooms which affect light penetration, oxygen and fish populations. The urban ecosystem objectives differ from the agricultural model driven by yield and profits which justifies the high usage of fertilizers, herbicides, insecticides and fungicides.

Sustainable management promotes tactics that recycle nutrients to promote an ecological balance. Composting and using mulching lawn mowers all return nutrients back to the urban ecosystem. Other strategies lower the use of broad spectrum pesticides to permit the natural control of damaging insect populations by insect predators and parasitoids. Finally, sustainable management encourages diverse and alternative landscapes which require lower long-term maintenance.

## What is Plant Health Care, PHC?

An important component of Plant  
(Continued on Page 19)

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# CUES—

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Health Care (PHC) practices is selecting plants appropriate for the purpose and appropriate for the site. A plant correctly matched to its site will experience fewer pest problems because a healthy plant is less prone to insect and disease attack. Know and meet the cultural requirements of any plants. Once you have decided on a particular plant, investigate the characteristics of various cultivators.

Much research has been done on plant resistance to pests. Plants can be bred with inherent chemical or growth attributes that make them unattractive to insect feeding or resistant to diseases. For example, honey-suckle witches' broom aphid feeding, a common problem with older honey-suckle cultivars, results in branch tips with a mass of shoots which is at first, merely unattractive, but eventually weakening the entire shrub. Newer cultivars have been bred that are resistant to aphid feeding.

Many common plant diseases will cause defoliation which will stress the plant over time, reducing its vigor and winter hardiness. For example, select rose cultivars that are resistant to black spot (*Diplocarpon rosae*), an important rose disease, and select crab apple cultivars that are resistant to apple scab (*Venturia inaequalis*), a common problem in Minnesota.

## What is Integrated Pest Management, IPM?

CUES stresses the use of Integrated Pest Management, or IPM, which is the practice of using a variety of cultural, biological and chemical techniques to reduce pest problems. IPM is the part of PHC that is concerned with managing insects and diseases. One goal of IPM is to reduce any harmful impact chemicals may have on the environment including wildlife, soil and water quality. OPM methods include proper plant selection, biorational and biological pest controls, using traps for monitoring insect populations, regularly examining or scouting plant materials for signs of trouble, and the judicious use

of chemical pesticides applied at the most vulnerable time in an insect's life history.

When pesticides are necessary, use environmentally sound controls, such as horticultural oils and soaps, which break down quickly in the environment. The commonly available commercial formulations of *Bacillus thuringiensis* (Bt), fungi and nematodes are called biorational pesticides and these products can be used to reduce insect populations.

Controls such as insect parasitoids, beneficial wasps which lay their eggs on harmful insects, thereby parasitizing them and predators such as lady beetles and lacewings are generally referred to as a biological control. These biological controls are naturally found in the environment, but the widespread use of insecticides kills them as well as the pest insect. By limiting the use of insecticides and incorporating a variety of plants in the landscape to attract a wide range of insects, these beneficial insects can thrive and help to regulate harmful pests.

## How Does CUES Affect Me?

All these strategies are part of responsible urban landscape stewardship. Environmental stewardship of the urban landscape is within our grasp. A landscape managed by sustainable methods provides for a healthier environment that can be shared with butterflies, birds and fish. The kind of place we all long for on weekends. An urban environment where we can lay back, kick off our shoes and enjoy nature.

Sustainability promotes the concept that whether you are planting a garden, managing turf, developing a parkland or landscaping, your management practices affect everyone. The decisions you make affect water quality, waste disposal and the survival of all forms of wildlife.

When looking at alternative landscape practices, think in terms of management, rather than control. Work with nature to restore the ecosystem balance by improving soil and site conditions. Since problems

can't be eradicated, begin by accepting some imperfections, understanding the problems and using creative management strategies to restore environmental health.

The result is a more harmonious environment, with more leisure time to enjoy it.

## CUES Educational Materials

Educational materials on sustainable management of the urban landscape are available to extension educators, homeowners and the professional landscape manager in the CUES resource center at the Andersen Library at the Minnesota Landscape Arboretum. Extension bulletins are available for preview and can be ordered directly from a CUES order form for the MES distribution center. CUES is also multimedia. A slide caramate, monitor and VCR are available for viewing videos and slide sets.

The arboretum bookstore has books available for sale on plant health care, sustainability and IPM.

## Visit CUES And See For Yourself!

For more information of CUES visit the Andersen Library at the Minnesota Landscape Arboretum or contact Dr. Vera Krischik, Assistant Professor and Extension Specialist, Department of Entomology, University of Minnesota, 219 Hodson Hall, 1980 Folwell Ave., St. Paul, MN 55108. E-mail: [krisc001@maroon.tc.umn.edu](mailto:krisc001@maroon.tc.umn.edu) or (612) 625-7044.

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