



**Number 2**  
**Par 5, 563 yards**  
**Lake Nona G&CC**  
**Photo by Daniel Zelazek**





## THE LAKE NONA GOLF & COUNTRY CLUB

# Exceeding Expectations

*By Joel Jackson, CGCS*

Metropolitan Orlando is home to three very high-profile, golf-centric communities: Bay Hill, Isleworth and Lake Nona. Since Orlando is a world vacation destination, the Orlando International Airport is one of the nation's busiest, but also one of the most accessible. Combine that fact with year-round golfing weather and Lake Nona's location near the airport and it's easy to see why so many international golf professionals have made Lake

Nona their U.S. home. Lake Nona is situated in southeast Orange County and the lake itself is part of an extensive watershed of lakes, creeks and wetlands which are all part of the upper Kissimmee River basin.

I'd love to regale you with insider stories about golf shoot-outs among the residents of this exclusive Golf League of Nations, but we respect the privacy of these golf stars when they are at home.

Besides that, I don't know any.

If you want to see the Lake Nona stars in action with a local flavor, you can tune in to the Golf Channel every spring to watch the Tavistock Cup, which pits golf professionals from Lake Nona and Isleworth G&CC in a friendly head-to-head competition for bragging rights. Both communities are owned by the Tavistock Group, hence the name.

Our story is about the people and practices that are employed to maintain and improve the "home





*The par-5, 578-yard 15th hole curves along the north shore of Buck Lake. Photo by Daniel Zelazek*

course" for these touring professionals and the local members of this prestigious country club.

One of the key people at any golf course is the superintendent. Brett Harris has been at Lake Nona for 14 years, first as an assistant to Ken Glover in 1991 and the last 11 years as the golf course superintendent. Harris took over in 1994 when Glover went overseas to manage a course in Saudi Arabia. Harris came to Lake Nona with Glover from Grand Cypress where Harris was an irrigation technician for superintendent Tom Alex.

Harris had an extensive background in golf course and landscape work in the Hilton Head, S.C. area, including Palmetto Dunes, Harbour Town and Haig Point. He also spent more than six years in the landscape business, working for landscape architect David Spencer of Spencer Green Goods on Hilton Head and he even had his own landscape company for two years before moving to Florida.

As a veteran who has watched Lake Nona grow, Harris said, "This is a player's club. We have a large contingent of low-handicap golfers. Our mission is to provide the most consistent, high-quality golf experience each and every day for all our members."

To accomplish that mission, Harris has 30 employees.

"We touch every playing surface every day," he explained. "That means mowing greens, tees, collars, greens surrounds, fairways and roughs every day. We may miss fairways one day, but it is rare. That also means the bunkers are checked and raked daily along with the usual course setup and detailing.

"If we have a challenge, it is to

keep all 18 holes playing consistently given some of the soil differences. We have a range of soil types from sandy to sandy loam to heavier muck. A few holes on the back nine have to be managed differently when we get into rainy periods. That's why we have a drainage program in place to help solve excess moisture situations."

That's not the only program going on at Lake Nona.

According to Harris recent master planning called for renovating greens, upgrading irrigation, lengthening the course, and improving drainage. In 2001 the greens were regrassed to TifEagle ultradwarf bermudagrass and the irrigation system gained a new pump station and operating control system (Rainbird Stratus 2).

"The new pump station has a phone paging system so that if the pump goes down during the night, it calls me and reports the failure," Harris said. "However, the kicker is that it also has an automatic restart feature. It will try to automatically restart three times. After the third time it says, 'I must have a real bad problem. I'd better wait till Brett gets here!' Whoever invented that automatic restart gizmo deserves a medal. It's great."

During the irrigation upgrade, a double-head system was installed around the greens so the putting surfaces and



*Early morning on the par-3, 157-yard 13th hole. Photo by Daniel Zelazek*

slope and surrounds could be managed separately, saving water and fertigation costs. Additionally, some new lateral lines were installed to cover areas up and down the fairways and roughs that were not adequately covered by the normal double-row system. Also, Harris said that they installed a mist head system for the bunkers to help irrigate the steep turf areas more effectively. We all know the overthrow by the big turf heads don't always provide good penetrating moisture for these high-and-dry knobs and mounds along the bunkers.

"We stretched the course out another couple of hundred yards by adding new Black Tees" Harris said. "The course now measures 7,215 yards from the tips, and we moved a couple of cart paths to enhance the landing areas on a few holes. On the new tees we are experimenting with Sealsle1 seashore paspalum to take advantage of its quick-recovery growth habit. We are learning that there will be competition between the paspalum and the surrounding bermudagrass so we will have to monitor that interface and perhaps do some 'chemical edging' with products that will control the paspalum. As I said, we are experimenting with it."

Amid all these improvement projects, Mother Nature threw in a monkey wrench – Hurricane Charley. Lake Nona was no different from hundreds of other courses during the 2004 hurricane season. They lost their share of trees and native areas around the course, but like everyone else they got organized and cleaned up the storm damage and replanted and remodeled



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## Course Facts



Lake Nona Golf & Country Club maintenance staff.

### Lake Nona Golf & Country Club

**Location:** Orlando

**Ownership:** The Tavistock Group

**Playing policy:** Private

**Number of holes:** 18; par 72; 7,215 yards;  
Course Rating/Slope: 74.8/139.

**Designed by** Tom Fazio; built by Wadsworth Construction.

**Opened:** 1987

**Management:** Charles Boesch, club manager; Eric Lane, vice president/director of club operations; Gregor Jameison, director of golf; Scott Blanchard, head golf professional; Brett Harris, golf course superintendent.

**Renovation projects:** Resurface greens with TifEagle; lengthen course with new Black tees; upgrade irrigation system. Install drainage.

**Total acreage:** 123 acres, 96 under maintenance/irrigation

**Greens:** TifEagle. Total 3 acres, avg. size 6,000 sq. ft. HOC: .090 - .105 inches, no overseeding; green speed goals: 9.25 for daily play, 10.0-11.0 for special events and tournaments

**Surrounds:** greenside chipping/collection areas are planted in TifSport for finer leaf blade characteristic. HOC: .375.

**Tees:** Tifway 419 bermudagrass; total 3.0 acres, HOC: .375. Overseeded with ryegrass blend @ 15 lbs./1000 sq. ft. New tees: Sealsle1 seashore paspalum.

Fairways: Tifway 419 bermudagrass; total 45

acres, HOC: .375. Overseeded with ryegrass for Tavistock Cup @ 400 lbs./acre.

**Roughs:** Tifway 419 bermudagrass; total 68 acres. Overseeded with ryegrass blends selected for quick transition for Tavistock Cup @ 300 lbs./acre.

**Bunkers:** 52 type 37M sand; machine-raked with Toro Sand Pro.

**Native areas:** Approximately 5 acres. This expanded during hurricane clean-up. Contain sand, pine straw and native plants.

**Waterways/Lakes:** 8 lakes; edges and banks maintained by outside contractor.

**Irrigation:** Source: Orange County Conserve 1 reclaimed water and deep well. Watertronex pump station with auto restart and phone-page features; Rain Bird Stratus 2 controls; Rain Bird heads with double-row coverage; fertigation system (four tanks).

**Staff:** Total 30 full time including superintendent, scheduled 40 hrs straight time, split week-end and staggered schedules: Monday - Friday, Tuesday - Saturday and Sunday - Thursday.

**Leadership:** Murray Russell and Jay Shipley, assistant superintendents; Brian Sargent, equipment manager; Bob Cody, spray tech and weekend foreman. Robert Scott, administrative assistant.

**Communications:** Biweekly crew/safety meetings.

**Cultural Programs:** Low nitrogen, high potash fertility; deep drill greens in May; actively brush and groom with True Surface Thatch-away equipment during summer season; power brush tees, fairways and roughs twice in the

summer. top dress greens every two weeks in season with bagged green sand.

**Pest Control:** Apply Chipco Choice to 36 acres once per year for mole cricket control; alternate fairways and roughs, targeting chronic areas that have been scouted and mapped. Grubs controlled with Merit applied every other year. All other insect, weed and disease control is done only as needed except for the pre-emergent herbicide applications in the early spring (Ronstar or Barricade on fertilizer) and prior to fall overseeding with Ronstar XL banding and Barricade on non-seeded areas.

**Management Challenges:** We touch every playing surface from tee to green every day. Everything is mowed and/or groomed daily. Trying to make all 18 holes consistent given sandy, sandy loam and mucky soil profiles on various holes requires prescription management to add or withhold cultural practices and nutrition depending on the weather and growth conditions.

**Environmental Management:** Member of the Audubon Cooperative Sanctuary System. We use mowing and pest-control setbacks around water features and we cultivate the use of native plants and extensive natural areas along many of the holes. Our use of nitrogen is minimal and we use lots of organic-based fertilizers and foliar feeding in our nutrition program.

**Special events:** Annual Member-Guest, Tavistock Cup and Club Championship Tournaments. We have hosted the Solheim Cup, the World Cup and numerous USGA events.

the native areas to blend in with the course. A silver lining behind the clouds was the fact that several contractors were already on site doing the improvement to the course. After a little regrouping, they helped with the clean-up and restoration of the course and the surrounds, and are now back on task to complete the planned work.

Large-scale projects like irrigation renovation and fairway drainage require a lot of attention and coordination, but the bread-and-butter and focal point of any course is the greens. Having good sound programs and practices in place is one of the keys to success and the TifEagle at Lake Nona is no exception.

"The TifEagle is a great grass," Harris says. "But like some others. I don't think it is for every course. You do have to have the manpower and resources to maintain it properly. It takes constant attention to bring out the best playing conditions and monitor for any stresses. We have a couple of greens that pop up with fairy ring once in a while, so we have to keep an eye out for them."

Typical of the factors that affect ultradwarf greens, nutrition and cultivation are two areas that need to be monitored closely to avoid excessive thatch formation. Harris does this with some tools and products I hadn't heard of before. Superintendents learn over time that many inputs and stresses are site-specific based on soil, water quality, air circulation, shade and the club's resources to meet expectations. So these practices are things that work for Lake Nona, given the resources the club can apply to its unique situation. So take the following with a grain of salt but also with some healthy curiosity.

## NUTRITION

"We are potash freaks. During the summer we are applying 0-0-30 or Sul-Po-Mag every two weeks. Our nitrogen levels run only 6-7 lbs. of nitrogen per year. On the greens we use lots of foliar applications in the summer months. Generally these are low in nitrogen and higher in calcium and magnesium. During the season we may



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Assistant superintendents Jay Shipley, left, and Murray Russell are veteran members of the Lake Nona Golf Course maintenance staff.

apply an organic granular blend called The Sanctuary (12-2-12 or 8-0-6). We

will add phosphorous when we overseed to stimulate root growth. On our wetter

holes we often skip an application knowing that the nutrients will last longer. We use Tom Burrows as an agronomic consultant. Lately we have been making applications of 4-2-27 and Sul-Po-Mag. Once again low on nitrogen and high in potassium."

Harris also has four fertigation tanks which he uses for:

- pHairway/urea acid injection to combat the high pH well water;
- applying regular fertigation blends like 16-0-5, 11-0-4 and sometimes 29-0-0;
- wetting agents;
- and "Dealer's Choice", which he uses for specialty liquid products like a phosphorous application.

Harris reserves the acid injection material only for the greens and must coordinate irrigation zone run times to charge the system just as the greens cycle is coming on. "It's too expensive right now to do the whole course, so we target the greens which are under the most stress."

# Water

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# Superintendent Facts

## Brett Harris



**Roots:** Born in El Paso, Tex., but raised in Pittsburgh. "Go Steelers!"

**Family:** Wife, Charlotte; son Wyatt, 10; daughter, Libby, 8.

**Education:** General Studies, University of South Carolina

**Employment history:** 1994 – present, Lake Nona, superintendent; 1991-1994 Lake Nona,

assistant superintendent; 1990 Grand Cypress, irrigation tech; 1988-89 Innisbrook, Landscape Dept.; 1986-1988 Hilton Head, SC, own landscape business; 1981-86 Hilton Head, landscape supervisor for Spencer Green Goods; Early 1980's Hilton Head (high school summers) worked on crews at Palmetto Dunes and Harbor Town.

**Professional affiliations and awards:**

Member of GCSAA, FTGA and Central Florida GCSA. Served on the board and as external vice president of the CFGCSA, secretary/treasurer since 2002.

**How did you get into the business?** As a teenager I worked on golf courses in Pittsburgh and Hilton Head after we moved in 1980

**Mentors:** Gary Snyder, CGCS, Haig Point GC, golf course construction and renovation; Tom Alex, Grand Cypress Resort, planning and managing a large operation; Ken Glover, Orchid Island GC, tournament preparations. Tom Burrows, stick to the basics of soil science.

**Goals and accomplishments:** John Kopack

and I have a pact to become certified superintendents. My goal is to see all the changes and improvements at Lake Nona completed. Some of that has been accomplished, and that is rewarding.

**Work philosophy:** Work smarter not harder. Treat your people well and your suppliers too. Train and cross-train the crew, delegate and have high expectations. Educate, explain the whys and wherefores and keep restrictions to a minimum.

**Advice:** Keep the job in perspective. Take care of your family. Protect your employer's investment. Use resources wisely. Learn from the good and bad traits of those you have worked for. Collect data and information because you can't improvise everything. Don't be afraid to ask questions of your mentors, peers, suppliers — especially those older than you. You can't know it all

**Hobbies/Interests:** The Uncle Freddy Band, guitar construction and repair, gunsmithing, competitive pistol and rifle shooting.

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## Fun Facts

1. **Vehicle:** Chevy 2500 HD
2. **Last good movie I saw:** The Big Lebowski
3. **I stay home to watch:** "24" and Monday Night Football
4. **The book I've been reading:** "The Principles of Correct Practice for Guitar"
5. **Favorite meal:** Chicken Paprikash
6. **Favorite performers:** Dream Theater, Foo Fighters and Al Dimeola
7. **Prized possession:** 1987 Martin D-60 Guitar
8. **Personal Heroes:** Our armed forces
9. **Nobody knows that I:** Service and repair guitars
10. **I'm better than anyone else when it comes to:** Defusing a crisis
11. **I'd give anything to meet:** Bill Cowher
13. **My fantasy:** To be the Pittsburgh Steelers' offensive coordinator. I just know I can do better.
14. **The one thing I can't stand:** Incompetent servers
15. **If I could change one thing about myself:** Have a little more patience.
16. **My most irrational act:** Attempting to

snowboard.

17. **My most humbling experience:** The birth of my children.

18. **The words that best describe me:** Analytical. Decisive. Impatient.



Harris with his traveling electric guitar. Photo by Joel Jackson.

## CULTIVATION

Cultivation of ultradwarf putting surfaces is just as important as getting the nutrition levels right. Harris employs a line of equipment from the True Surface Company called the "Thatch-away System." One particular favorite implement, nicknamed the "Poa Buster" by northern superintendents, is a verticutter-like tool. The main difference is that the blades are oriented at an angle instead of being vertical.

"You don't see lines after a pass," Harris says, "but you have a half basket of material at the end of the run. We mow behind it and it is really slick. With regular verticutting, the greens often turned yellow before they recovered.

"We also run brushes on the greens beginning in March and all through the growing season. On the fairways and tees we use a tractor-mounted, rotating power broom which really strips out the organic matter. In May as early

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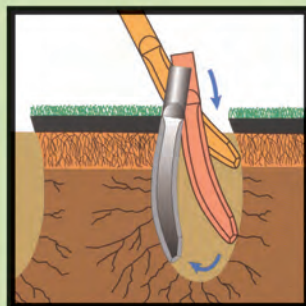


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*The par-4, 434-yard 7th hole sports a two-tiered fairway. The second green can be seen to the right. Photo by Daniel Zelazek.*

as possible, we deep-drill the greens and all summer we run a Thatch-away scarifier, with the blades 1 inch apart instead of the usual 1/2 inch. We do that once a month all summer. Weather permitting, the tees, fairways and roughs are aerified and power-brushed twice during the summer. We missed one cycle last year, thanks to the three hurricanes. We top dress the greens monthly in the summer and every two weeks in season using bagged green sand."

### PEST CONTROL

As far as pest control challenges on the greens and around the course, Harris hasn't been saddled with many problems.

"We use Pro Star for the fairy ring on a couple of holes. The only place we really had a tough time with nematodes was a few years back on a 180-yard stretch in front of the 10th green. It is a very sandy area and the turf could not take a fairway-height cut. We raised the area to rough height and began top dressing the area with a compost made of yard waste. After a while, the nematode counts went down and we lowered

the area back to fairway height.

As far as mole crickets go, we treat approximately 30 acres each year with Chipco Choice. We have had good-enough, long-term control that we alternate fairways and roughs every other year. If we have any hot spots I haven't found anything better than an over-the-top spray with an Orthene and Penetrol mix. I have found by watering it in right after application makes it very effective. We go after grubs with Merit every other year.

"Actually the sandhill cranes seem to do more damage than the grubs. If the cranes get too aggressive, we found that 10 lbs. of Milorganite or our organic-meal fertilizer applied in the area tends to discourage them."

What is encouraging for Harris is the progress the course has made under the management of the Tavistock Group since it took over almost ten years ago. Harris said, "We have renovated the greens, the irrigation system, the drainage infrastructure and the maintenance facility is on schedule for improvements. The course has evolved over time along with the residential development

of the property. Our mission is to see that they coexist as an enjoyable seamless experience so that we meet or exceed the high expectations of our members."



*View from the par-3, 196-yard fourth hole. The fifth green can be seen to left and the third hole is in the far background. Photo by Joel Jackson.*