

Onsite Visit Report

H. Smith Richardson Golf Course Fairfield, Connecticut

Visit Date: November 2, 2021

Present:

Peter Grace, Golf Course Superintendent

Bob Bigonette, Golf Professional

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The USGA Green Section develops and disseminates sustainable management practices that produce better playing conditions for better golf.

Background

It was a pleasure to visit H. Smith Richardson Golf Course and conduct an agronomic assessment on behalf of the United States Golf Association. The primary purpose of my visit was to review the golf course and provide options for improving day-to-day playing conditions. Major points of focus during our tour included the need to remove trees that are restricting playability, adding forward tees to make the course more enjoyable for players with slower swing speeds, and upgrading an antiquated equipment fleet. I was pleased to see that overall turf health was good very good on the putting greens and fairways. The fact that they are in such good condition with how many rounds you have done this year is a testament to a strong agronomic program. Mr. Grace and his team deserve a good deal of praise.

The following report summarizes my observations and agronomic recommendations for your course. Please note the numerous underlined blue hyperlinks that are embedded throughout the report which provide additional information on a given topic. Should you have any questions regarding the contents of this report, or any new issues arise, you can contact me on my cell at 314-604-8682.

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Putting Greens

Observations

1. **The putting greens on the golf course were mostly in a healthy state. The only noticeably blemishes were the result of some dollar spot damage.**
 - [Dollar spot](#) is caused by a fungal pathogen that cause small imperfections on the turf surface. Left unchecked, it can negatively impact both the appearance of the greens and more importantly ball roll.
 - This year was a particularly difficult year for dollar spot. The frequent rains and cloudy days were ideal for dollar spot development. Mr. Grace indicated that the putting greens are routinely treated every two weeks with a fungicide to protect against dollar spot and other pathogens but this summer the duration of control was not as long as it has been in the past.
 - Greens that are shaded, such as Hole No. 1, had significantly more dollar spot damage.

There were varying amounts of dollar spot damage present on the putting greens. Those greens which are shaded, such as Hole No. 1, were especially hard-hit.



2. **Turfgrass rooting was favorable for the three greens that I sampled.**
 - Many roots extended to a depth of 3 inches. I was pleased to see numerous white, fibrous roots within each sample.
 - I did not observe any problematic soil layering. It appears that your sand topdressing and cultivation efforts are keeping pace with organic matter accumulation.

Recommendations

1. **I do not see any need to make dramatic changes to your cultivation program on the greens. I would continue to aerate them twice per year, once during the spring and once during the fall.**
 - I suggest going with 0.375-inch hollow tines on the tightest spacing possible. If labor constraints make pulling a core challenging, then you could substitute the 0.375-inch hollow tines with 0.5-to-0.625-inch solid tines.
 - Make sure to time the aeration when soil temperatures are between 55- and 60-degrees Fahrenheit at a 2-inch depth as this will result in rapid recovery.

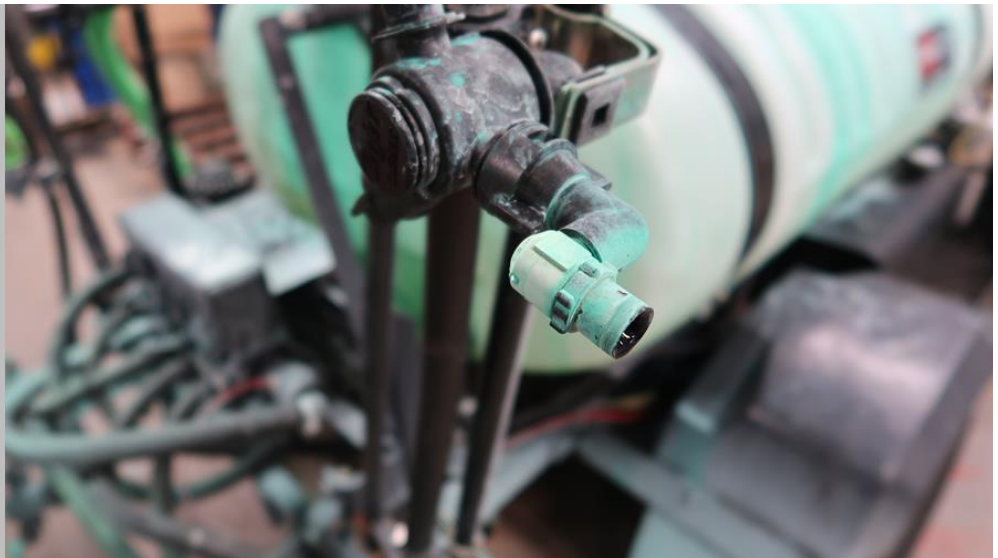
2. Lightly topdress the putting surfaces every 14 days during the growing season.

- What is most important for maintaining a good balance of sand to organic matter is the total amount of sand that is applied per year. Light and frequent is much better than heavy and infrequent sand treatments. I suggest 100 pounds per 1,000 square feet.
- For a topdressing program to be successful the maintenance team must be provided with gaps of 2 to 3 hours each week so that they can easily complete the task. Most golf courses I work with are closed to play for a period of time on Mondays or Tuesdays which allows this process to take place. I understand your golf course is open every day of the week but if you were able to block off a 1 to 1.5 hour of tee times once every 14 days it would provide enough of a gap for the maintenance team to accomplish sand topdressing.

3. Make sure your sprayer is setup with appropriate nozzles and properly calibrated. I would replace your current nozzles this winter with a new set.

- Uniform spray coverage is important for maximizing fungicide performance; even small gaps in coverage may allow dollar spot to develop. Nozzle type, nozzle pressure, and dilution rate have the greatest impact on the uniformity of fungicide applications. Nozzles that produce coarse to extremely coarse droplets, such as TurfJet or Raindrop nozzles, dramatically reduce the performance of fungicides for dollar spot control. Air-induction or flat fan nozzles that produce fine to medium droplets are recommended. In order to provide thorough coverage of the turfgrass foliage, fungicides should be applied in 2 gallons of water per 1,000 square feet; lower carrier volumes reduce the performance of fungicides for foliar disease control.
- I would go with either the [Air Induction Flat Spray Tips](#) from TeeJet or the [TurboDrop XL](#) from GreenLeaf. They are excellent nozzles for reducing drift while also providing great coverage when using contact fungicides.

I recommend changing the nozzles on your spray rig this winter. Poor distribution could be contributing to the less than desirable dollar spot disease control.



4. Rotate and/or tank mix different fungicide chemistries with unique modes of action.

- The fungus that causes dollar spot develops resistance to fungicides very quickly. To prevent or delay the onset of fungicide resistance, use integrated management to minimize fungicide use, rotate among fungicide classes after each application, and tank-mix systemic fungicides with a contact fungicide. Secure® and chlorothalonil are excellent contract fungicides for dollar spot control.

5. I am happy to review your fungicide program and provide feedback on ways that it could be improved upon.
 - Please email me the proposed program for next year if you would like specific suggestions.
6. Make sure to remove the dew from the turf surfaces daily when not mowing.
 - Extended periods of leaf wetness favor disease development.

Tees

Observations

1. H. Smith Richardson currently has 4 different tees.
 - Black at 6,704 yards (Par 72).
 - White at 6,378 yards (Par 72).
 - Green at 5,723 yards (Par 72).
 - Red at 5,311 yards (Par 73).
2. Although there are several different tee options available, the most forward set of tees is still too long for a large percentage of golfers. It is my opinion that installing additional forward tees could be beneficial.
 - Having different sets of tees for players with varying swing speeds is important and one of the greatest trends among the industry. This is a great way to attract new female and junior golfers while also helping to retain aging golfers who do not hit the ball as far as these used to.
3. The maximum distances for male and female golfers and approximate club distance are outlined below.

Note: The maximum recommended hole length for female golfers is based on information from the PGA of America publication [Setting Up Golf Courses for Success](#) and USGA data.

<i>Figure 1: Maximum recommended hole distances for average female and average male golfers</i>			
	Par 3	Par 4	Par 5
Female (25 hdcp)	140	260	380
Male (13 hdcp)	210	400	590

<i>Figure 2: Approximate club distances for average female and average male golfers</i>		
Club	Female Golfers (25 hdcp)	Male Golfers (13 hdcp)
Driver	140	210
Fairway Wood	120	190
Long Iron/Hybrid	105	170
Mid-Iron	100	140
Short Iron	80	120
Wedge	60	100

4. The following table lists the distances from the tee that is played by the majority of female golfers (Red) and the tee that is played by the majority of male golfers (White). All recommendations will be based on data from average swing speed (see reference charts on the right side of the table) for female and male golfers.

Course Name: H. Smith Richardson Golf Course

Female Tee: RED
Swing Speed: Average

Male Tee: WHITE
Swing Speed: Average

Female - Scorecard Distances from RED		
Hole	Par	Yardage
1	4	282
2	4	285
3	3	120
4	4	314
5	4	300
6	5	463
7	4	355
8	3	137
9	5	405
10	5	365
11	4	325
12	3	140
13	5	408
14	4	335
15	4	280
16	3	112
17	4	280
18	5	405
OUT	36	2661
IN	37	2650
TOT	73	5311

Male - Scorecard Distances from WHITE		
Hole	Par	Yardage
1	4	375
2	4	310
3	3	171
4	4	340
5	4	400
6	5	505
7	4	383
8	3	180
9	5	490
10	4	389
11	4	355
12	3	175
13	5	505
14	4	405
15	4	355
16	3	150
17	4	370
18	5	520
OUT	36	3154
IN	36	3224
TOT	72	6378

Female Handicap to Swing Speed Reference

Pro = >85
0-5 = 81-85
6-10 = 76-80
11-15 = 71-75
16-20 = 66-70
21-25 = 61-65
26+ = <60
Aver. = 60

399
Pro = >110
0-5 = 101-110
6-10 = 91-100
11-15 = 81-90
16-20 = 71-80
21-25 = 61-70
26+ = <60
Aver. = 81-90

- The tables below compare the estimated approach shot distance and estimated approach clubs for the average male (14 handicap) and average female (25 handicap) golfers. They also show whether the female and male golfers are expected to reach the putting green in regulation or where there may be distance issues.

- However, while this table breaks down these two specific swing speeds by gender, there are many aging male players with swing speeds at or approaching the 60 miles-per-hour swing speed noted for the average female player. Also, many young beginning players fall into this same swing speed category.

Female Golfers - RED Tee						
Handicap - 25			Swing Speed - 60 MPH			
Hole	Par	Yards	Yards Over Rec. Max.	Est. Approach Shot Distance	Est. Approach Shot	Club
1	4	282	✗ 22	142	Fwy Wood+	
2	4	285	✗ 25	145	Fwy Wood+	
3	3	120	✓ --	120	Fwy Wood+	
4	4	314	✗ 54	174	Fwy Wood+	
5	4	300	✗ 40	160	Fwy Wood+	
6	5	463	✗ 83	203	Fwy Wood+	
7	4	355	✗ 95	215	Fwy Wood+	
8	3	137	✓ --	137	Fwy Wood+	
9	5	405	✗ 25	145	Fwy Wood+	
10	5	365	✓ --	105	Fwy Wood	
11	4	325	✗ 65	185	Fwy Wood+	
12	3	140	✓ --	140	Fwy Wood+	
13	5	408	✗ 28	148	Fwy Wood+	
14	4	335	✗ 75	195	Fwy Wood+	
15	4	280	✗ 20	140	Fwy Wood+	
16	3	112	✓ --	112	Fwy Wood	
17	4	280	✗ 20	140	Fwy Wood+	
18	5	405	✗ 25	145	Fwy Wood+	
OUT	36	2,661	✗ 321			
IN	37	2,650	✗ 190			
TOT	73	5,311	✗ 511			

Male Golfers - WHITE Tee						
Handicap - 14			Swing Speed - 81-90 MPH			
Hole	Par	Yards	Yards Over Rec. Max.	Est. Approach Shot Distance	Est. Approach Shot	Club
1	4	375	✓ --	165	Hybrid/Long Iron	
2	4	310	✓ --	100	Short Iron	
3	3	171	✓ --	171	Fwy Wood	
4	4	340	✓ --	130	Mid Iron	
5	4	400	✓ --	190	Fwy Wood+	
6	5	505	✓ --	105	Short Iron	
7	4	383	✓ --	173	Fwy Wood	
8	3	180	✓ --	180	Fwy Wood	
9	5	490	✓ --	90	Wedge	
10	4	389	✓ --	179	Fwy Wood	
11	4	355	✓ --	145	Hybrid/Long Iron	
12	3	175	✓ --	175	Fwy Wood	
13	5	505	✓ --	105	Short Iron	
14	4	405	✗ 5	195	Fwy Wood+	
15	4	355	✓ --	145	Hybrid/Long Iron	
16	3	150	✓ --	150	Hybrid/Long Iron	
17	4	370	✓ --	160	Hybrid/Long Iron	
18	5	520	✓ --	120	Mid Iron	
OUT	36	3,154	✓ --			
IN	36	3,224	✓ --			
TOT	72	6,378	✓ --			

6. The vast majority of Red tees are too long for an average female golfer.

- The chart shows that the overall length needs to be reduced by 511 yards just to reach the maximum length, with new tees needed on 13 holes. Also, note the variety of clubs used by an average male golfer playing from the White tees range from wedge to fairway wood to reach putting greens in regulation. On the left chart, every hole requires the use of a fairway wood.

7. The challenge for average female golfers and average male golfers is not proportional.

- The golf course is much more difficult for the average female player playing from the Red tees. With the exception of Nos. 3, 8, 10, 12 and 16, every other hole is unreachable for the average female player.
- This results in longer round times (more shots) and less enjoyment for these players. There are many examples of facilities that have addressed this through the creation of more forward tees. Round times have decreased, and golfer satisfaction has gone up. This is good for business and good for the reputation of the facility.
- An average male golfer playing from the White tees should be long enough to reach 17 out of the 18 greens in regulation. They will also use a variety of clubs on their approach shots.

8. What does the + sign behind the “Estimated Approach Shot Club” mean?

- This sign simply shows that shots with fairway woods on these holes will end up short of the putting green for each hole by the distance shown titled “Yards Over Recommended Maximum.” For example, under the female golfer column a combination of a driver struck 140 yards on No. 1 followed by a fairway wood of 120 yards will leave the player approximately 22 yards short of the green for the third shot on this par-4 hole. On the same hole, the average male player playing the White tee markers can reach the green in two with a long iron for the second shot. Obviously, those players with less swing speed will consistently end up well short of the putting greens on many holes, resulting in more shots and a reduced pace of play.

9. Overall distance is not the only determining factor for adding forward tees.

- All of the above data shows where forward tees are needed for average players with less swing speed. However, in many cases, the placement of the forward tee at the desired length is not possible due to topography, hazards and other factors.
- In some cases, the existing forward tee may be the only choice, while others may still be too long or too short. Regardless, this can be addressed during an onsite visit and with the assistance of a golf course architect to provide the best experience for your players.

Recommendations

1. Use the above tables as a guide for where additional forward tees are appropriate.

- Any hole that has a red “X” next to it is a concern and could benefit from a shorter tee.
- Reducing tees by the “yards over recommended maximum” is a great place start, but there might be reasons to shorten them even further. For example, a hole where there is a dog leg might require an even closer tee in order for players to be able to get around the corner. Another concern is the club that will be used for the approach shot. It is unreasonable to expect a player to have to hit a fairway wood into every green, particularly those that are elevated. A variety of mid to short irons along with fairway woods is desirable.
- Generally, a good target yardage for the most forward tee is between 4,200 and 4,300 yards for 18-hole Par 72 courses.

2. Adding tees forward tees is typically not a very expensive renovation.

- Forward tees are relatively simple to build and can sometimes be completed in-house with existing staff and equipment. However, there are many different contractors that can assist with such a project.

3. Position the tees on the fairways where possible.

- Many golf courses have added forward tees at the proper distance without causing major differences in labor or mowing time. Look for opportunities where the forward tees can be placed on the fairways. Understandably, the positioning of the tees needs to account for the topography and irrigation.
- If tees are to be placed within the fairway, you will still need to ensure that they are level. Areas will likely require some softening and laser grading.

4. Build the tees of adequate size.

- One of the mistakes often seen with forward tees is building a tee by simply mowing out an area or creating a small “bump-up” tee. This should be avoided by all means, with flat teeing surfaces constructed at a minimum size of 500 to 750 square feet. Also, it is extremely important to take time to build these tees as flat as possible with a 1 percent slope for drainage. A good rule of thumb is to have 100 to 200 square feet of useable tee space for every 1,000 rounds of golf played annually.

5. Build the new tees no more than 8 to 12 inches above the existing grade.

- This allows the tees to be added onto fairways to further keep maintenance costs down. Also, by keeping the heights of the tees low, the contours can be added to fairways, with very gentle side slopes mowed with fairway mowers.

6. Use existing soil to construct the new tees.

- I would caution the use of sand plating (i.e. capping) as this will increase the cost of tee construction and could lead to moisture issues if not done properly. Generally, it is best to use a topsoil that matches the surrounding soil characteristics or a sandy loam.

7. Avoid using a traditional color scheme for tee markers or better yet, get away from coloring the tees altogether.

- Historically, ladies' tees are colored Red, and many male golfers will be reluctant to play from such a tee. Changing the color scheme can help to resolve the stigma of playing from a tee that is only for ladies. A simpler and arguably more effective solution is to get rid of colors and instead use a number system (e.g. I, II, III, IV, V).

8. Do not assign a gender or age to a given tee set; refer to it only by the agreed upon identifiable characteristic (e.g. color, number, etc.).

- Referring to a given tee as a "Ladies' tee", "Senior tee" or "Junior tee" presents a barrier to adoption for other golfers who might be interested in playing from it or should be playing from it given their swing speed.

Trees

Observations

1. There are numerous holes where trees are negatively impacting the playability of the golf course.

- Trees have encroached inward on several holes to the point where key features are blocked and golfers have extremely narrow corridors to try and advance the ball. Such a tight golf course adversely affects less skilled golfers and causes issues with pace of play.

2. I noticed several trees which are limiting turfgrass growth for parts of the course where golf balls routinely come to rest.

- Making sure the underlying turf receives sufficient sunlight is vital to promoting rapid recovery for divots and other traffic stress. Heavily shaded areas are slow to grow, more prone to disease outbreaks, and can be filled with weeds. Additionally, during cool periods shaded sites will take longer to thaw from a frost which can restrict play.

3. There are trees that are closely planted to one another which creates competition and can result in poor quality branching.

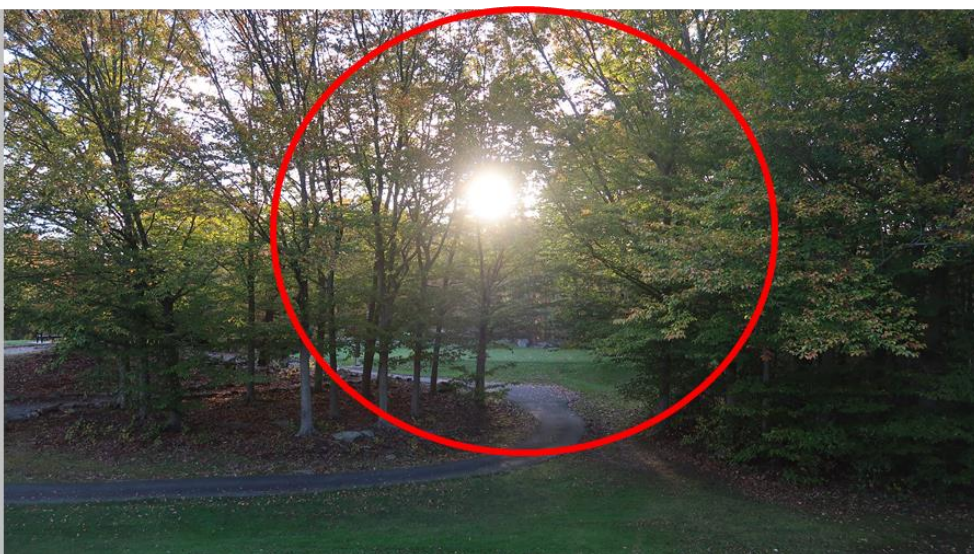
- Eliminating the poor-quality trees will allow those that remain more space to develop into large, healthy specimens. Many of your most beautiful trees are hidden by ugly trees.

Recommendations

1. I suggest cutting down and pruning the following trees this winter. Waiting until the ground is frozen can help to lessen damage associated with heavy equipment.

- Some trees might require the assistance of a professional arborist.
- Make sure to grind all of the stumps and seed or sod. You don't want to leave any ugly reminders of where the trees used to be.

I recommend removing this grove of trees that separates Hole Nos. 1 and 2 in order to allow more sunlight to reach the green on Hole No. 1. Doing so will reduce frost delays and help to lessen the amount of disease.



Get rid of these trees that are in between the fairway and the cart path on Hole No. 4. The trees create bottlenecks resulting in bare turf.



I suggest removing the first row of trees along the right side of Hole No. 6. Doing so will help to provide better turf conditions within the rough, while allowing the bunker on the right to come into play.



This grouping of trees between Hole Nos. 6 and 7 is a prime example of where removing several trees can help the development of the remaining tree. I suggest cutting down the following trees marked with a red 'X'.



This tree has numerous surface roots which could come into contact with a player's club and potentially injure them. Therefore, I suggest cutting it down and grinding up all of the roots.



These two trees that are adjacent to the bunker on Hole No. 7 should be removed. They are too close to the line of play and prevent a player from having a reasonable chance of hitting toward the green. Plus, they have numerous roots that have infiltrated the bunker.



I suggest cutting down these two trees which cast shade on Hole No. 8 tee. They limit turfgrass recovery from divots.



This tree on Hole No. 9 needs to come down right away. It is in terrible condition.



This tree near the property edge on Hole No. 9 has terrible structure and should be eliminated before it falls down.



The combination of tree root competition and golf cart traffic has resulted in poor quality turf along the left side of Hole No. 9. I suggest paving this path with asphalt and root pruning.



I would eliminate the following trees on Hole No. 9 so that players with slower swing speeds are able to get around the corner and those with faster swing speeds have the opportunity to try and go for the green in two if they want to risk it.



Cut back the trees on the right side to allow players to be able to see the entire fairway and get a glimpse of the green.



Remove these trees that are blocking the bunkers. They are not needed and are so close to the path that they will cause damage.



Push back the tree line on both sides to widen the playing corridor on Hole No. 12. It is too narrow.



Equipment

Observations

1. **There are several pieces of equipment within your fleet that are quite old. Relying on machines that have exceeded their anticipated lifespan is risky, not to mention inefficient.**
 - Probably the most glaring weakness I saw was your triplex mowers, which are used to maintain the putting greens and tees. Even your newest models would be considered old at many golf courses.
 - For reference, the average lifespan of a mower before major repairs are necessary is typically around 4 years or 2,000 hours. There are numerous mowers in your fleet that exceed this threshold.

The triplex mowers that are used to maintain the greens and tees are very old and in need of replacement. Relying upon such antiquated equipment is risky and limits the quality of cut that can be achieved.



Recommendations

1. Create a spreadsheet that details the current equipment inventory.

- For each piece of equipment, list the serial number, manufacture date, number of hours, condition (running, in need of repairs, etc.), price to replace with a new version, and number of times it is used on average throughout the year.
- This will help to establish priorities and give an idea of the amount of money that will be needed to upgrade the equipment.
- Any pieces of mowing equipment or utility carts that are older than 5 years old should be categorized as immediate needs.

2. Replace the aforementioned mowers with new units.

- Modern triplex mowers from John Deere, Toro and Jacobsen are able to provide a superior quality of cut compared to what you are using now.

3. Regardless of which equipment manufacture is selected, I strongly suggest you consider a lease package as this would allow for multiple pieces of equipment to be upgraded at once.

- Most golf courses that I consult with utilize a lease program (e.g. Capital Lease or Fair Market Value Lease) for a large percentage of their maintenance fleet. Typical packages include high use items such as utility carts, mowers (i.e. putting greens, fairways and rough units), and rollers. They typically purchase less frequently used items like aerators, tractors and implements. Depending on the size of the operation and the number of items included, the value of the equipment lease package could vary from \$350,000 to \$1 million.
- A lease program can simplify annual budgeting and help ensure that the equipment used to maintain the golf course stays current. Otherwise, it is often very easy for a couple years of deferred equipment upgrades to cause a major financial burden down the road.

4. For more information on managing a fleet of golf course maintenance equipment, please review the following USGA resource: [Equipment Management For Golf Courses](#)

Summary

I think the best way you could improve your golf course is to focus on tree removal and pruning this winter. Doing so will provide an immediate playability benefit and will allow you to produce healthier, more consistent turf. After that I would begin working on adding forward tees. A golf course architect will be extremely helpful as you embark on this process. Finally, the golf course maintenance fleet has serious deficiencies that need to be addressed. I would strongly consider an equipment lease package for your mowers and utility carts which you use frequently.

Respectfully submitted,

A handwritten signature in black ink that reads "John Daniels". The signature is written in a cursive, flowing style.

John Daniels, Agronomist
USGA Green Section

Additional Considerations

The USGA appreciates your support of the Course Consulting Service. Please visit the [Green Section Record](#) to access regional updates that detail agronomist observations across the region. Also, please visit the [Green Section Solutions Center](#) to learn about our other products that can help golf courses improve playing conditions and optimize resource use.

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If you would like to receive the USGA's electronic publication, the *Green Section Record*, [click here](#). It is free, informative and sent directly to you via email every two weeks. Also, be sure to follow us on Twitter at @USGAGrnSection for additional golf course management information, course care articles, and field observations from USGA agronomists.

About the USGA Course Consulting Service

As a not-for-profit agency that is free from commercial connections, the USGA Course Consulting Service is dedicated to providing impartial, expert guidance on decisions that can affect the playing quality, operational efficiency and sustainability of your course.

First started in 1953, the USGA Course Consulting Service permits individual facilities to reap the benefits of on-site visits by highly skilled USGA agronomists located in Green Section offices throughout the country.



For questions regarding this report or any other aspect of the USGA Course Consulting Service, please do not hesitate to contact our office.

