

COURSE CONSULTING SERVICE

# Resource Management Visit

## **OGA Golf Course Woodburn, Oregon**

Visit Date: June 20, 2018

Present:

Mr. Bret Carroll, Superintendent  
Mr. Ryan Garry, Director of Marketing and Communication, OGA  
Mr. Mark Keating, Head Professional  
Ms. Barb Trammel, CEO, OGA  
Mr. Larry Gilhuly, USGA Green Section

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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 once again visit the OGA Golf Course on October 3, 2018, on behalf of the USGA Green Section. USGA Green Section agronomists have conducted visits to golf courses for nearly 100 years, with the primary focus on agronomy and playing conditions. However, this visit focused primarily on the use of the USGA Resource Management Tool to assist in determining which portions of the golf course are being utilized. Through the use of GPS trackers utilized by nearly 200 players, several interesting facts were noted at the OGA Course, with this report focusing on these observations.

In addition to the use of this tool, we discussed pace of play, player enjoyment and economic sustainability. In conjunction with the Resource Management Tool, a forward tee calculator was also utilized, with results shown and discussion concerning how these tees can improve pace of play, player enjoyment and economic sustainability while also reducing resource inputs throughout the entire golf course. Please do not hesitate to contact our office should you have questions concerning this visit or report.

# Executive Summary

It is hoped that the USGA Resource Management tool will become available for regular use in 2019. In the meantime, this visit focused on the use of GPS trackers to determine where golfers are utilizing the course. More importantly, we identified areas where they are not using the golf course and resource inputs (materials, energy and equipment wear) can be reduced, with estimated savings provided. In addition, maximizing available labor into areas used by golfers is a key component of this tool. A brief introduction on how the tool works precedes the several areas of the golf course discussed. The following areas of the golf course were discussed:

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# USGA Resource Management Tool

With the USGA Green Section approaching its 100-year anniversary in 2020, one of the fundamental goals of the Green Section has always been assisting in creating better turf for better golf. During this near century of service, many innovative ideas have been created with the USGA being the leader in funding research to achieve this goal. The most recent effort by the USGA through its Green Section is addressing the ever-increasing cost of maintaining the game by finding ways to focus on areas that are in play while minimizing or eliminating maintained acreage and the associated costs. By targeting these locations, the costs associated with energy (primarily fuel/electricity), water, materials and equipment wear can be reduced. At the same time, available labor can be redirected to areas that are in play to assist in creating better playing conditions and turf health. This is outlined in the article [New Technology is a Game-Changer for Golf Facilities](#).

This report contains multiple views or “screenshots” taken on various holes at your golf course. When viewing these screenshots, keep in mind that the colors being viewed are the results of GPS tracker use by your players. The trackers were carried in players’ pockets and send a signal every five seconds, with dark blue dots indicating a single player walking or in a golf cart. A lighter blue color indicates slightly more traffic; green, slightly higher; yellow, relatively high traffic; and orange, very high traffic. Very high traffic areas are found on the greens, tees and some fairway landing areas along with cart paths, restrooms and the general clubhouse area. For this review, the focus will primarily center on where there are little to no colors which indicates areas where regular maintenance can be reduced or eliminated to reduce overall resource use and transfer labor into more important locations.

## Bunkers

### Observations

The bunkers at the OGA Course are generally receiving use; however, there are major issues with contamination that need to be addressed. While the USGA Resource Management Tool does not show any relationship to bunker contamination, there is an annual cost for maintenance that can be determined where bunkers can be removed.

### Recommendations

Specific recommendations for the bunkers included the following:

1. **Consider resizing bunkers that are oversized or not in play.** A good example of this can be noted in the screenshot below taken of No. 6. Based on national averages, the cost for annual maintenance for this large bunker is approximately \$3,631.

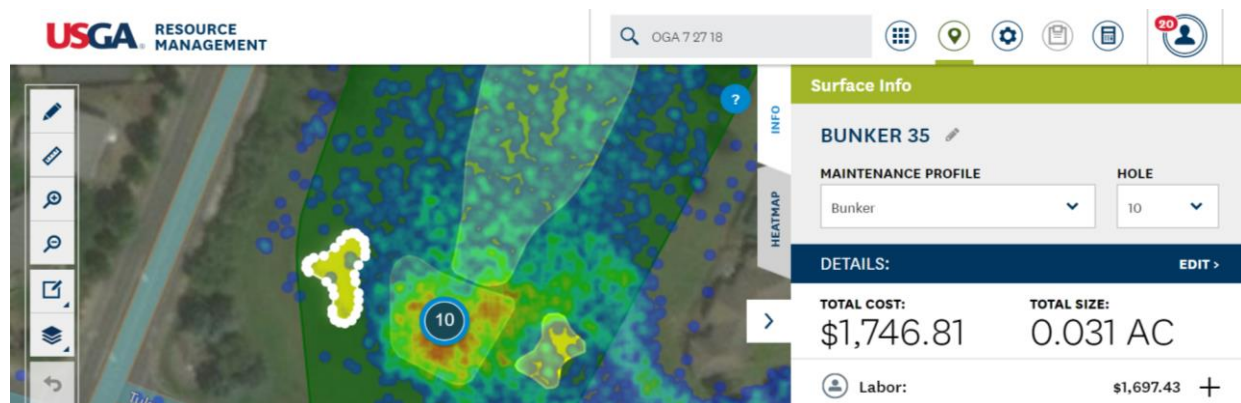
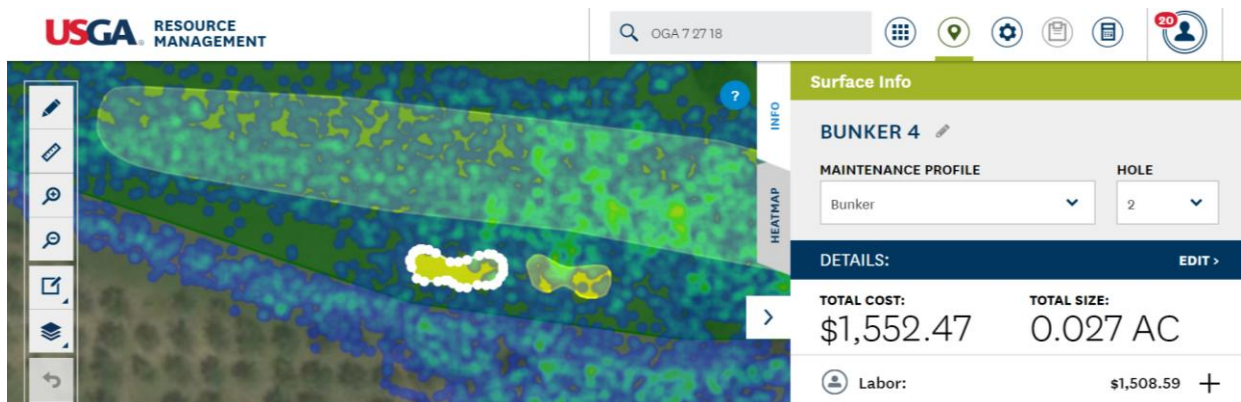


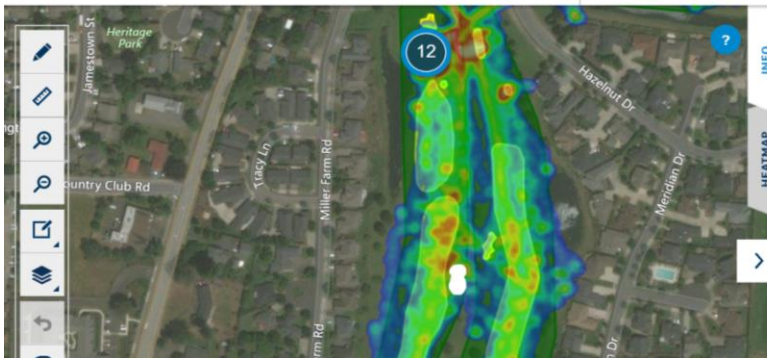




As noted in the screenshot, a large portion of this bunker can be eliminated to reduce the cost of annual maintenance by over \$1,350. Also, note that the major expense involved with bunker maintenance is the labor portion. Very little gasoline and other materials are used for bunker maintenance, however when new sand is added this will increase overall costs. By downsizing or removing bunkers, all of this labor will be used for in-play areas to enhance playing conditions.

2. **Remove bunkers that are not in play or not critical from a visual standpoint.** Several bunkers were noted with a limited amount of use (screenshots below and on the next page). The annual cost is also shown, with the annual maintenance cost adding up to a potential savings of over \$10,000, with labor moved into other portions of the maintenance operation.





Surface Info

BUNKER 44

MAINTENANCE PROFILE

Bunker

HOLE

12

DETAILS:

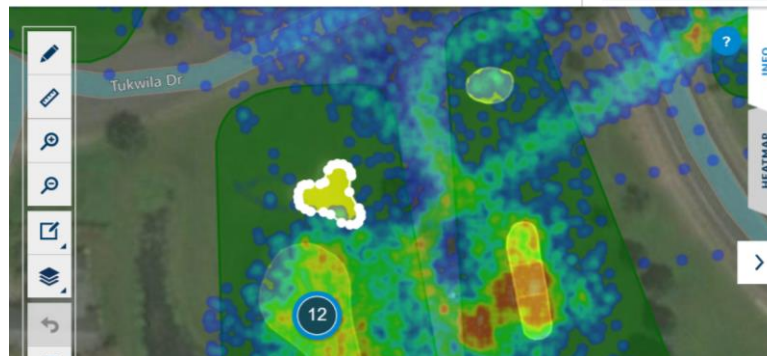
EDIT >

TOTAL COST:  
\$1,221.70

TOTAL SIZE:  
0.021 AC

Labor:

\$1,187.16 +



Surface Info

BUNKER 42

MAINTENANCE PROFILE

Bunker

HOLE

12

DETAILS:

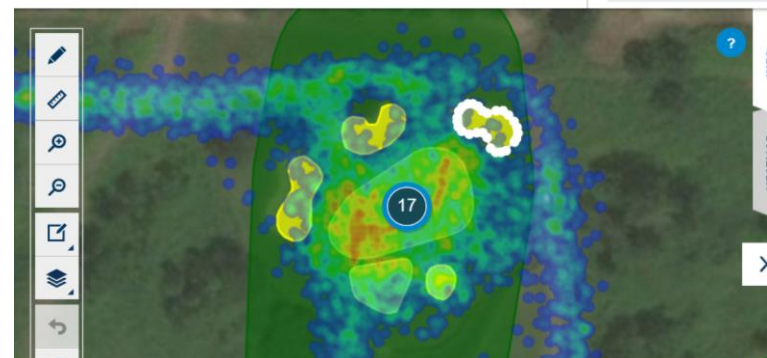
EDIT >

TOTAL COST:  
\$1,430.33

TOTAL SIZE:  
0.025 AC

Labor:

\$1,389.90 +



Surface Info

BUNKER 65

MAINTENANCE PROFILE

Bunker

HOLE

17

DETAILS:

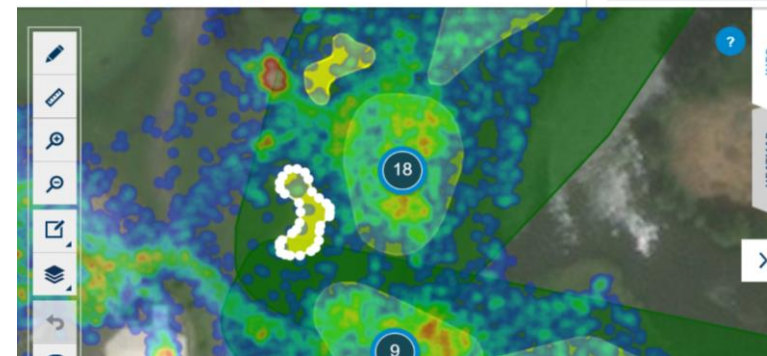
EDIT >

TOTAL COST:  
\$1,132.82

TOTAL SIZE:  
0.02 AC

Labor:

\$1,100.80 +



Surface Info

BUNKER 66

MAINTENANCE PROFILE

Bunker

HOLE

18

DETAILS:

EDIT >

TOTAL COST:  
\$1,570.25

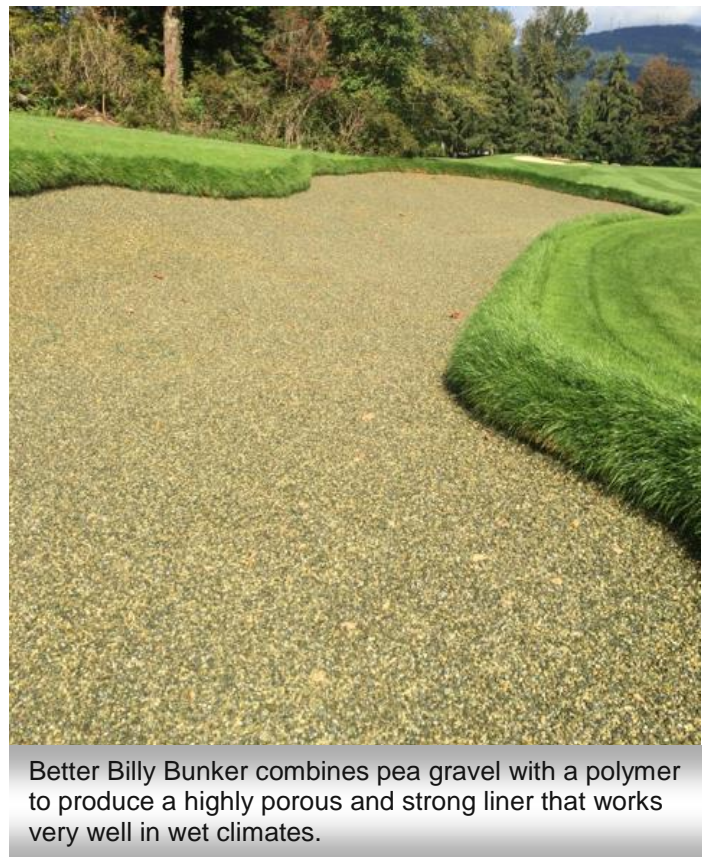
TOTAL SIZE:  
0.028 AC

Labor:

\$1,525.86 +



**3. Begin the process of addressing heavily contaminated bunkers.** While very firm sand is desirable in fairway bunkers, the same cannot be said for bunkers around the greens. As the highest priority for available funding that will address the biggest complaint from your players, it was highly recommended to begin a bunker renovation process. During the visit, we were able to observe first-hand the extremely firm and contaminated condition of the left, front bunker on No. 9. This would be a good starting point for complete sand removal, drainage installation and the addition of new sand. In addition to new sand (be sure to check with Lane Mountain for their tan sand material), different types of liners are worthy of consideration. While utilizing sod is a very simple way to line the bunkers as noted at many golf courses across the Western U.S., the most effective method is with porous materials such as the Better Billy Bunker™. While this pea/gravel polymer combination is one of the most expensive liner methods, it would be a good test on at least one bunker due to its ability to minimize contamination while allowing water to freely flow through and not impact playing conditions.



- 4. Not all bunkers will require complete sand removal and drainage installation.** While the bunker on No. 9 represents a very contaminated situation with complete renovation recommended, there may be some bunkers around the greens that will not need this extensive approach. For example, if the sand is simply contaminated on bunker bottoms and the bunker has reasonable drainage, the sand could be moved to the bunker faces, with new sand placed in the bottoms for improved playing conditions.
- 5. Do not address fairway bunkers at this time.** Due to the responses from multiple surveys, there is no question that the bunkers should be addressed as the highest priority item. However, having very firm fairway bunkers is desirable, with some of the contaminated sand from the bunkers possibly being used in the fairway bunkers, if desired. Regardless, the fairway bunkers should not be part of the renovation program at this time. These can be addressed in the future once all the greenside bunkers have been completed.

## Roughs

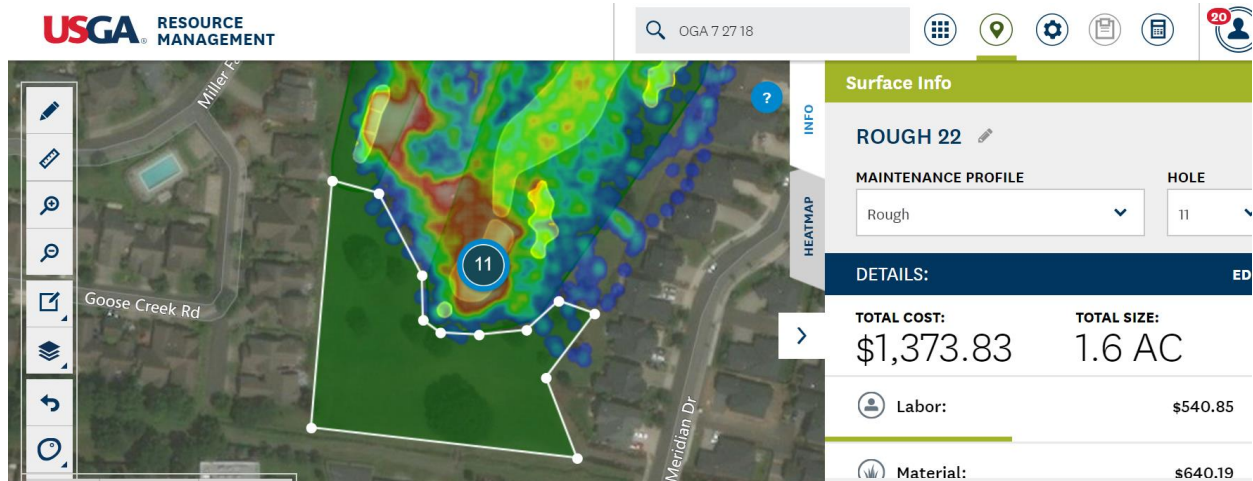
### Observations

While the USGA Resource Management Tool showed very good use in most of the bunkers, it also showed multiple areas around the tees and golf course perimeter where very little play is occurring. In some cases, these are areas where there is no irrigation, while others front the many homes found around the property.

## Recommendations

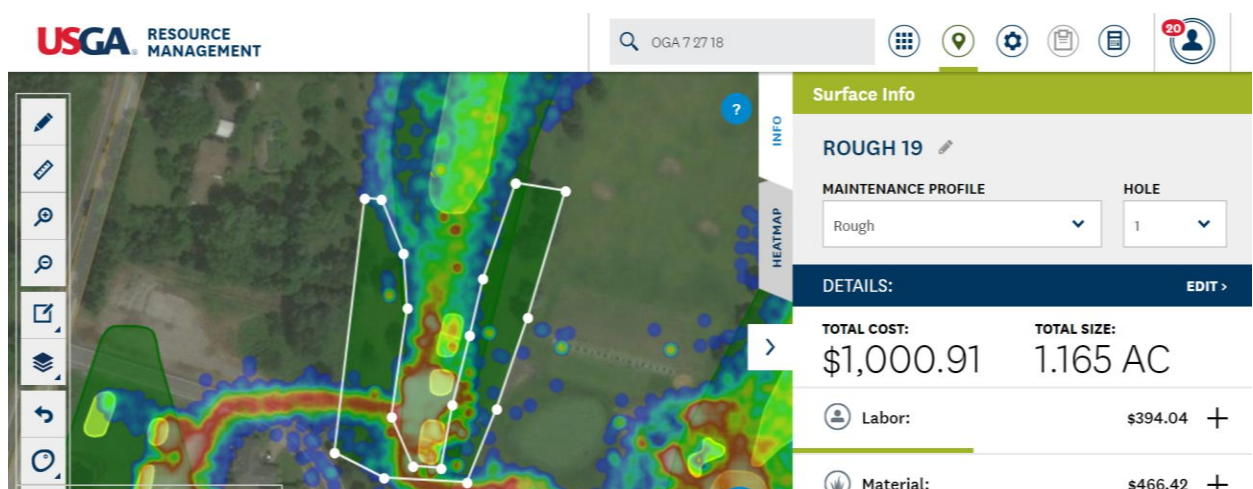
Specific recommendations for the roughs included the following:

1. **Consider the addition of a 4-inch, low-maintenance rough.** There are many locations at the OGA Golf Course where little or no player traffic is occurring. At the same time, these locations may be on the back sides of homes or near adjacent roadways where reasonably good turf is desired. A good example is shown behind No. 11 green in the screenshot below.



When all of these areas are combined, you will find a reduction in maintained rough of over ten acres, resulting in movement of this labor into other portions of the operation and a reduction in overall resource costs.

2. **Low-mow or no-mow – what is the difference?** In addition to areas that could receive far less regular maintenance in regard to mowing, irrigation, fertilization and weed control, there are also areas that are simply not in need of any regular maintenance. These no-mow areas are generally found away from nearby homes and can often be created near teeing surfaces. When combined with low-mow areas, a substantial amount of annual resource inputs can be minimized without impacting play of the golf course. A good example is shown below for No. 1 tee where \$1,000 is spent annually for regular maintenance around this tee. If you wish to keep the current program due to this being the first impression, most of the other teeing surfaces (excluding those immediately next to homes) could have a no-mow program, if desired.





# Fairways

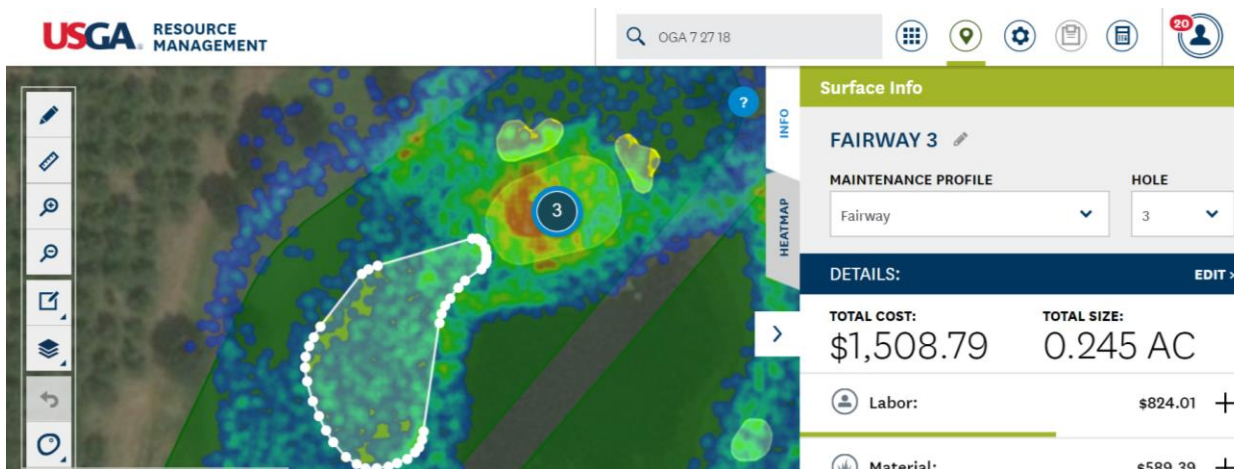
## Observations

While the roughs represent the greatest overall acreage at the OGA Golf Course, the fairways are the second largest turf area. The fairways also receive far more regular maintenance, thus the golf course was completely reviewed for opportunities to minimize the size of fairways for reduced resource inputs.

## Recommendations

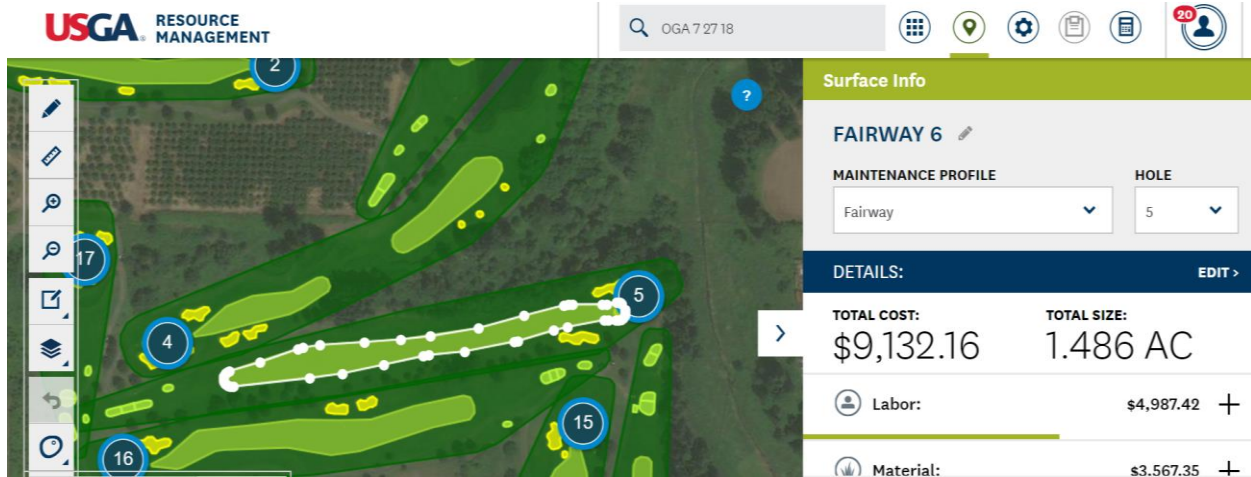
Specific recommendations for the fairways included the following:

1. **Reduce the size of the par-3 fairways.** With five par-3 holes at the OGA Golf Course, it was noted that most have fairways that are simply too large and require an extra cost for maintenance. A good example is No. 3, shown in the screenshots below. By reducing the size of this fairway from its current size to approximately 1/10<sup>th</sup> acre, an annual savings of nearly \$1,000 can be achieved.

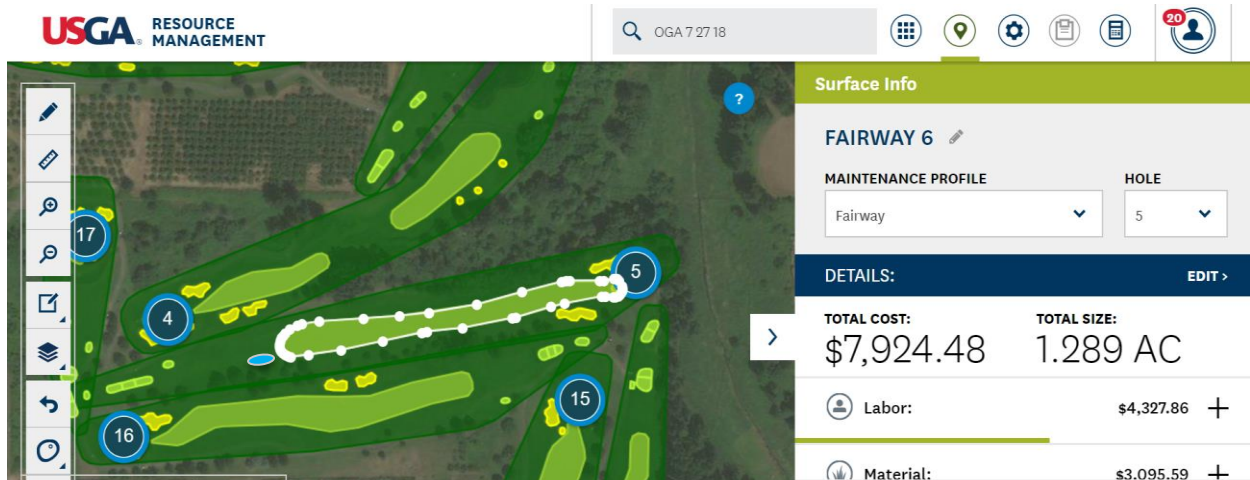


2. **Minimize fairways as forward tees are added.** One of the big advantages of the addition of properly placed forward tees, which shall be discussed in the next section of this report, is the ability to correspondingly move the start of the fairways further away from the existing tees. In most cases, over \$1,000 in annual savings can be achieved with fairway modifications, resulting in a significant savings in resources and labor transfer for the entire operation. A good example is shown at the top of the next page for No. 5.





The current annual cost for maintenance of No. 5 fairway is \$9,132. However, this hole is far too long for the average female player as will be discussed in the next section of this report. The proposed forward tee needs to be 114 yards in front of the current forward tee to offer the same club into the green in regulation as the average male player using the blue tees.



Placing a new forward tee in the proper location (blue oval) will result in a savings of over \$1200 annually for this fairway. When all of the holes where new tees are needed are added together, a substantial savings in resources and movement of labor will be realized.

- Widen the second shot landing zone on No. 4.** As can be noted in the photo to the right, the very narrow opening created with the culvert and soil has helped address the difficulty of this hole. However, it was highly recommended to widen this area on both sides as much as possible



to create a much wider avenue for those with less distance on this par-5 hole. Also recommended were the removal of several trees on the left side and soft berming on the right side (arrow) to provide more room on this very narrow hole. The combination of lengthening the culvert, adding soil on both sides and widening the tree corridor on the left side will address the major pace of play issue caused by this hole. This should be done with the assistance of a qualified golf course architect, if desired.

The alternative discussed for improving this hole is to make it into a par 4. While this would definitely change how the hole is played and may provide the best answer for pace of play, the drive zone would still be difficult, and possibly even more trees would need to be removed on the left side. Should this be determined as the best approach, the screenshot below shows where the tees should be placed based on average swing speed and data that will be discussed in the next section of this report.



**No. 7 also needs to be addressed.**

While this fairway cannot be changed, the trees and shrubs on both sides of the wetlands area need to be cut back on a regular basis to provide full visibility on this hole. In the future, if funds become available, adding drainage and a culvert along with sandy soil in





this area could provide dry enough conditions to make this area more playable for improved pace of play by those with far less swing speed. The priority for this hole should be lower than No. 4; however, it is an area that needs improvement.

## Tees

### Observations

The last and most important topic discussed during this visit was the need for more forward tees at the OGA Golf Course. This follows a trend noted at every golf course visited this year, with data provided by the PGA and USGA showing that swing speeds, not gender, are the primary criteria for how long the golf course should play. While most of the par 3s are the proper length, the remainder of the golf course is extremely difficult for average female players and those with swing speeds at 60 miles per hour or less.

### Recommendations

Specific recommendations for the tees included the following:

1. **Use the following charts to position the tees along with your golf course architect.** USGA agronomists are not golf course architects; however, the USGA has and will continue to promote improved pace of play initiatives, making the game more fun and reducing overall resource inputs that are making the game more expensive. The Resource Management Tool directly relates to showing the positive impact of forward tees for your golf operation.

In conjunction with results put forward by the PGA, the USGA has taken data from thousands of golfers and found a very simple and understandable way to promote teeing surfaces at distances associated with players' swing speeds. Forward tees should no longer be equated with gender as both younger and aging players should have the comparable feeling of joy when a par or birdie putt goes in the hole. More importantly, adding more forward tees on holes where appropriate will significantly improve the pace of play along with the "fun factor" on the course. With the

preceding in mind, the above chart shows the distance from your forward tees on every hole as well as the blue tees used by many of your male players.

Course Name: <b>OGA Golf Course</b>			
Female Tee: <b>Forward</b>	Male Tee: <b>Blue</b>		
Swing Speed: <b>Average</b>	Swing Speed: <b>Average</b>		

Female - Scorecard Distance from Forward			Male - Scorecard Distances from Blue		
Hole	Par	Length	Hole	Par	Length
1	4	303	1	4	347
2	4	334	2	4	405
3	3	112	3	3	176
4	5	420	4	5	475
5	5	433	5	5	482
6	3	129	6	3	171
7	4	308	7	4	375
8	3	110	8	3	150
9	5	465	9	5	496
10	4	312	10	4	361
11	5	449	11	5	505
12	4	359	12	4	413
13	3	111	13	3	160
14	5	443	14	5	508
15	4	317	15	4	357
16	4	349	16	4	400
17	3	102	17	3	143
18	4	342	18	4	383
OUT	36	2614	OUT	36	3077
IN	36	2784	IN	36	3230
TOT	72	5398	TOT	72	6307

Female Handicap to Swing Speed Reference		Handicap	MPH
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			

Male Handicap to Swing Speed Reference		Handicap	MPH
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 maximum distances for male and female golfers and approximate club distance are outlined below. Note: The maximum recommended hole length for female golfers is provided by PGA of America recommendations in their publication [Setting Up Golf Courses for Success](#).

*Figure 1: Maximum recommended hole distances for average female and average male golfers*

	Par 3	Par 4	Par 5
<b>Female (25 hdcp)</b>	140	260	380
<b>Male (13 hdcp)</b>	210	400	590

*Figure 2: Approximate club distances for average female and average male golfers*

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

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 for players using each set of markers.

Female Golfers - Forward Tee						
Handicap - 25			Swing Speed - 60 MPH			
Hole	Par	Length	Yards Over Rec. Max.	Est. Approach Shot Distance	Est. Approach Shot Club	
1	4	303	✗ 43	163	Fwy Wood+	
2	4	334	✗ 74	194	Fwy Wood+	
3	3	112	✓ --	112	Fwy Wood	
4	5	420	✗ 40	160	Fwy Wood+	
5	5	433	✗ 53	173	Fwy Wood+	
6	3	129	✓ --	129	Fwy Wood+	
7	4	308	✗ 48	168	Fwy Wood+	
8	3	110	✓ --	110	Fwy Wood	
9	5	465	✗ 85	205	Fwy Wood+	
10	4	312	✗ 52	172	Fwy Wood+	
11	5	449	✗ 69	189	Fwy Wood+	
12	4	359	✗ 99	219	Fwy Wood+	
13	3	111	✓ --	111	Fwy Wood	
14	5	443	✗ 63	183	Fwy Wood+	
15	4	317	✗ 57	177	Fwy Wood+	
16	4	349	✗ 89	209	Fwy Wood+	
17	3	102	✓ --	102	Hybrid/Long Iron	
18	4	342	✗ 82	202	Fwy Wood+	
OUT	36	2,614	✗ 274			
IN	36	2,784	✗ 444			
TOT	72	5,398	✗ 718			

Male Golfers - Blue Tee						
Handicap - 14			Swing Speed - 81-90 MPH			
Hole	Par	Length	Yards Over Rec. Max.	Est. Approach Shot Distance	Est. Approach Shot Club	
1	4	347	✓ --	137	Mid Iron	
2	4	405	✗ 5	195	Fwy Wood+	
3	3	176	✓ --	176	Fwy Wood	
4	5	475	✓ --	75	Wedge	
5	5	482	✓ --	82	Wedge	
6	3	171	✓ --	171	Fwy Wood	
7	4	375	✓ --	165	Hybrid/Long Iron	
8	3	150	✓ --	150	Hybrid/Long Iron	
9	5	496	✓ --	96	Wedge	
10	4	361	✓ --	151	Hybrid/Long Iron	
11	5	505	✓ --	105	Short Iron	
12	4	413	✗ 13	203	Fwy Wood+	
13	3	160	✓ --	160	Hybrid/Long Iron	
14	5	508	✓ --	108	Short Iron	
15	4	357	✓ --	147	Hybrid/Long Iron	
16	4	400	✓ --	190	Fwy Wood+	
17	3	143	✓ --	143	Hybrid/Long Iron	
18	4	383	✓ --	173	Fwy Wood	
OUT	36	3,077	✓ --			
IN	36	3,230	✓ --			
TOT	72	6,307	✓ --			

The following can be surmised after studying the charts:

- **All of the par-3 holes are reachable, but the remainder of the golf course is far too long.** Note that every par 4 and 5 (excluding Nos. 2 and 12) is reachable in regulation for the average male player with a swing speed of 81 to 90 miles per hour. Also, note the range of clubs being used to hit these shots. On the opposite side, only one hole (No. 17) does not require at least a fairway wood into the green, with virtually none of them (excluding the par-3 holes) even close to reachable in regulation.
- **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. 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.

- **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, those with a swing speed of 60 miles per hour (both female and male) playing No. 9 face a driver, two fairway woods and a mid-iron to reach this green in four. At the same time, those playing the blue tees with a swing speed of 81 to 90 miles per hour can reach this green in regulation with a wedge. Obviously, those players with less swing speed will consistently end up well short of the putting greens on most holes resulting in more shots and a reduced pace of play.
- **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 with a qualified golf course architect to provide the best experience for your players.
- **What should the forward tee length be to match the same clubs hit into the putting greens on every hole?** For years this has been a great question but without solid data, it was only an estimation. With this new data and the calculator, the distance for each hole can be calculated to give a very good estimate of what distance is required. The chart below shows this as a starting point for more forward tees.

Female Golfers - Forward Tee							Male Golfers - Blue Tee						
Handicap - 25			Swing Speed - 60 MPH				Handicap - 14			Swing Speed - 81-90 MPH			
Hole	Par	Length	Yards Over Rec. Max.	Est. Approach Shot Distance	Est. Approach Shot Club		Hole	Par	Length	Yards Over Rec. Max.	Est. Approach Shot Distance	Est. Approach Shot Club	
1	4	239	✓ --	99	Mid Iron		1	4	347	✓ --	137	Mid Iron	
2	4	265	✗ 5	125	Fwy Wood+		2	4	405	✗ 5	195	Fwy Wood+	
3	3	119	✓ --	119	Fwy Wood		3	3	176	✓ --	176	Fwy Wood	
4	5	319	✓ --	59	Wedge		4	5	475	✓ --	75	Wedge	
5	5	319	✓ --	59	Wedge		5	5	482	✓ --	82	Wedge	
6	3	119	✓ --	119	Fwy Wood		6	3	171	✓ --	171	Fwy Wood	
7	4	244	✓ --	104	Hybrid/Long Iron		7	4	375	✓ --	165	Hybrid/Long Iron	
8	3	104	✓ --	104	Hybrid/Long Iron		8	3	150	✓ --	150	Hybrid/Long Iron	
9	5	319	✓ --	59	Wedge		9	5	496	✓ --	96	Wedge	
10	4	244	✓ --	104	Hybrid/Long Iron		10	4	361	✓ --	151	Hybrid/Long Iron	
11	5	339	✓ --	79	Short Iron		11	5	505	✓ --	105	Short Iron	
12	4	273	✗ 13	133	Fwy Wood+		12	4	413	✗ 13	203	Fwy Wood+	
13	3	104	✓ --	104	Hybrid/Long Iron		13	3	160	✓ --	160	Hybrid/Long Iron	
14	5	339	✓ --	79	Short Iron		14	5	508	✓ --	108	Short Iron	
15	4	244	✓ --	104	Hybrid/Long Iron		15	4	357	✓ --	147	Hybrid/Long Iron	
16	4	260	✓ --	120	Fwy Wood+		16	4	400	✓ --	190	Fwy Wood+	
17	3	104	✓ --	104	Hybrid/Long Iron		17	3	143	✓ --	143	Hybrid/Long Iron	
18	4	259	✓ --	119	Fwy Wood		18	4	383	✓ --	173	Fwy Wood	
OUT	36	2,047	✓ --				OUT	36	3,077	✓ --			
IN	36	2,166	✓ --				IN	36	3,230	✓ --			
TOT	72	4,213	✓ --				TOT	72	6,307	✓ --			

2. **Additional tips for the forward tees.** In addition to the above numerical values that provide a very good blueprint for the future, it is worth reviewing several other recommendations that will further improve the forward tees. These include:

- **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. It is best to create a new tee with at least 500 to 600 square feet if possible with no more than a 6- to 8- inch lift. The sides of the tees need to simply flow into the fairway contours to avoid scalping.

- **Consider a numerical tee sequence.** The idea of using a numerical sequence and eliminating the colors is worthy of consideration. This has been viewed in the Denver area, with the photo to the right taken at Denver Country Club approximately five years ago. This idea has expanded in this portion of the country.



Elimination of colors is a good way to get players to play the distance more closely associated with their swing speeds.

- **Build the tees out of similar soil to the surrounding area.** Another trend that has been noted with positive results is building these tees out of soil that requires the same type of irrigation as the surrounding area. A combination of soil and sand will provide adequate drainage during the winter months but will not result in excess drought during the summer that would occur with a sand-based tee.

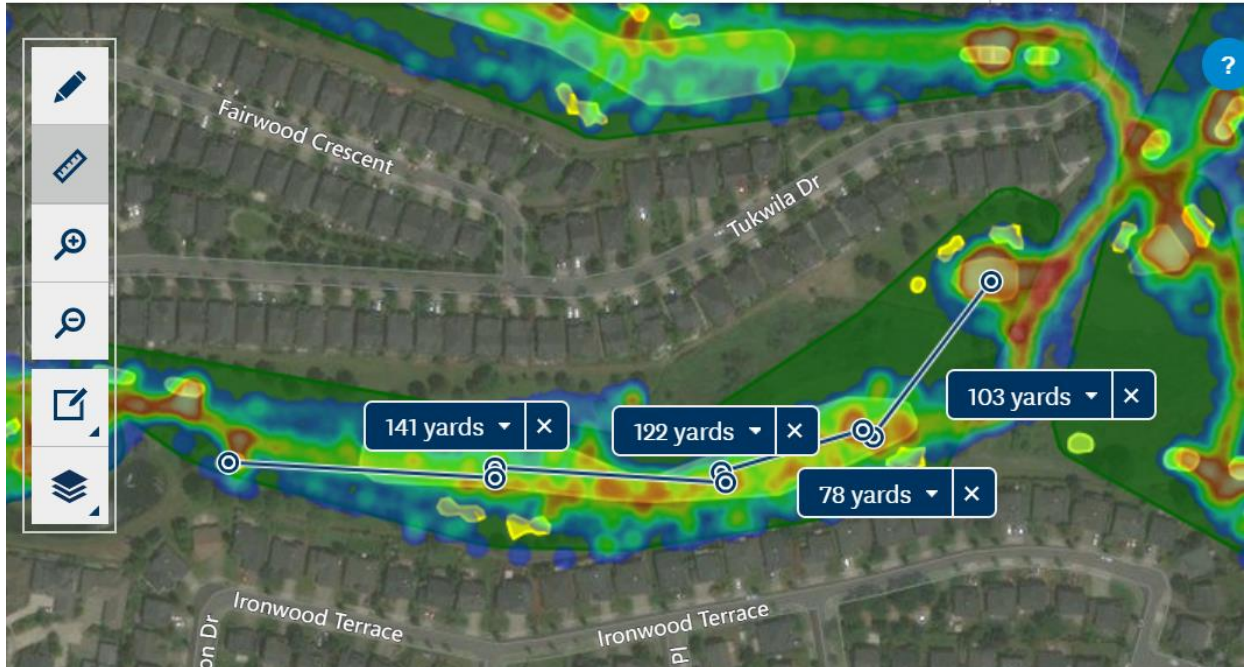


When forward tees are added onto fairways and built properly, they blend into the area as noted at San Francisco Golf Club.

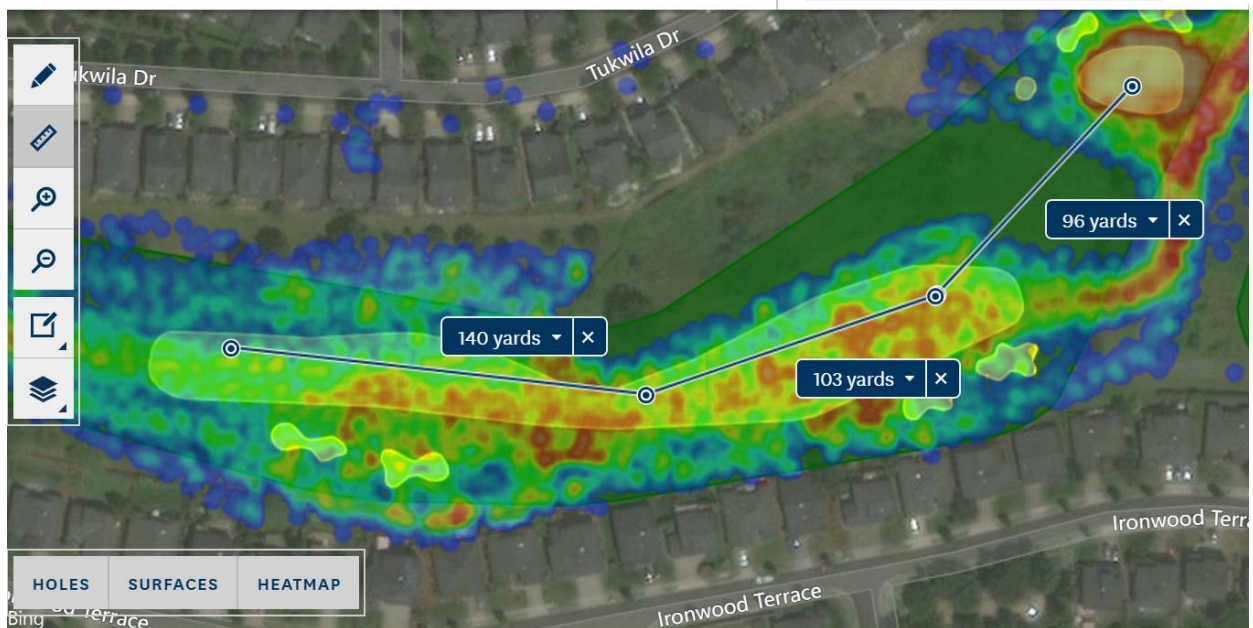
- **Position the tees on the fairways where possible.** Many top clubs have added forward tees at the proper distance without causing major differences in labor or mowing time. As discussed during the visit, many of the proposed forward tees can be placed on the fairways, similar to San Francisco Golf Club shown in the right photo. In addition to this high-end private club, Pinecrest Golf Club in Idaho Falls, Idaho, was viewed earlier this summer. Their 14 new forward tees cost only \$21,000 to complete by an outside contractor that did outstanding work for this municipal course. Others that have decided to build the tees in house report the costs for using existing sod drop the cost down to \$500 to \$600 per tee.

3. **Consider a trial run prior to tee construction.** While construction of the teeing surfaces provides the best answer for players with less swing speed, some have offered a very low-cost approach to test this idea with their players. Specifically, tee markers are simply placed on the fairways for a period of time, with input provided by those that play this shorter course based on their swing speed. A good starting point for this idea should include No. 14, where another issue exists with the location of the water hazard that fronts this par-5 green and the need for those with less swing speed to lay up as close as possible to the hazard to hit their fourth shot into this green as shown in the following screenshot.





By placing the forward tee on the fairway approximately 96 yards in front of the existing forward tee, players with a swing speed of 60 miles per hour can reach this green in regulation with the third shot.



While the addition of forward tees should be a high priority and will be very well received by many, it was agreed that the issue with the bunkers is a higher priority that deserves the most attention at this time. Forward tees can be tested with markers put on the fairways, with construction started as labor becomes available in 2019.

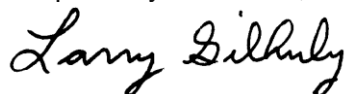
## Summary

There is no question that the start of a bunker renovation program is needed based on the player surveys conducted. At the same time, implementing a test for the forward tees was highly recommended following the yardage guidelines provided in this report. Addressing large out-of-play rough areas with slightly different mowing practices and minimizing the size of fairways will also be beneficial in reducing overall resource inputs.

Thank you for your ongoing support of the USGA Green Section and your participation in the beta testing of the Resource Management Tool. It was a pleasure to review the results of the GPS trackers with you. Again, should you have any questions concerning this visit or report, please do not hesitate to contact our office.

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.

Respectfully submitted;



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# 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.

