



COURSE CONSULTING SERVICE

Onsite Visit Report

Beaver Meadow Golf Course Concord, New Hampshire

Visit Date: October 24, 2019

Present:

Mr. Bernard "Sid" Chase, Golf Course Manager
Mr. Paul M. Jacobs, USGA Green Section

United States Golf Association

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

Executive Summary

It was great to make a full-day Course Consulting Service visit to Beaver Meadow Golf Course on October 24, 2019. The purpose of this visit was to assess conditions and discuss best management practices for daily and long-term maintenance.

The golf course is severely overplanted with trees and as a result, turf health and density is poor on several teeing grounds and fairways. A complete tree evaluation was performed the day before this visit and recommendations for tree removal are outlined in that report. This visit focused on maintenance practices instead of tree management, but selective tree removal is the most impactful program that can be implemented on the golf course to improve turf health and playability. The putting greens were in good condition the day of the visit, but maintenance practices to improve turf health and reliability through stressful conditions were discussed. Management options for improving turf health and density on the teeing grounds and fairways before trees are removed were discussed. In addition to tree removal, other course improvement projects such as installing drainage on Holes 15 and 16, and renovating the cart path system and bunkers were discussed.

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Putting Greens

Observations

- 1. The putting greens examined were smooth, healthy and dense, with an average root depth of approximately 4 – 5 inches.**
 - Smooth putting surfaces and a healthy root system are signs that agronomic programs are working well.
- 2. Organic matter content is being adequately managed with current cultural programs.**
 - Organic matter management is critical because some organic matter is necessary to provide stability near the surface, but when organic matter becomes excessive it predisposes the turf to soft playing conditions, decreased rooting and other agronomic concerns.
 - The putting greens are currently aerated every spring and fall. Solid tines are used for one of these treatments and hollow tines are used for the other.
 - Sand topdressing is applied occasionally throughout the season.



- 3. The putting greens on Holes 8 and 15 have a sand-based rootzone mixture, whereas all of the other putting greens are soil-based and have a 5 – 6-inch topdressing layer near the surface.**
 - Organic matter content was slightly higher than desired near the surface on the sand-based putting greens.
- 4. The plant growth regulator trinexapac-ethyl (Primo Maxx®) is being applied to the putting greens every two – three weeks.**
 - Plant growth regulators are used primarily to suppress top growth to provide more consistent conditions throughout the day and to reduce clipping yield.

- Secondary benefits include improved drought tolerance, shade tolerance, root development and when Class B regulators are used – *Poa annua* control.
- Plants metabolize growth regulators faster during periods of warm weather. Once the regulator is metabolized, plants will grow faster than they would if not regulated at all. This is known as the “rebound phase”. It is critical to maintain suppression during periods of hot and humid weather. Optimal application intervals are best measured by tracking growing degree days – i.e. GDD. Zero degrees Celsius is used as the base temperature for this model.
 - ◆ Turf mowed at higher heights of cut remains in regulation longer than lower height turf. If growth regulators are applied to turf mowed at collar or fairway height of cut on putting green intervals, overregulation can occur. The ideal reapplication intervals are outlined in the table below.
 - ◆ The [GreenKeeper app](#) is a free tool that many superintendents find useful to help automatically track growing degree days. Also, the attached [excel file](#) can be used to help track GDD for reapplication intervals.
- Rates impact amount of suppression, not duration.
- GDD, HOC and active ingredient impact duration.
- Applying too frequently can produce “overregulation”, especially on higher HOC and *Poa annua* turf.

Active Ingredient	Common Name	PG ideal GDD	FWY ideal GDD
Trinexapac-ethyl	Primo Maxx	200	350-380
Paclobutrazol	Trimmit	280-310	480-640
Flurprimidol	Cutless	210-270	380-410
Prohexadione-Ca	Anuew	280	350-380
Flurprimidol+ Trinexapac-ethyl	Legacy	270-300	320-390
Flurprimidol+ Trinexapac-ethyl+ Paclobutrazol	Musketeer	290	350-400

Applying PGRs based on growing degree days will provide consistent suppression and avoid the “rebound phase”, where turf will grow faster than if it was not regulated at all. Note the difference between fairway height and green height as well. 0 degrees Celsius is used as the base temperature for this model.

5. **Minor crabgrass contamination was observed in several of the collars around various putting greens.**
6. **Annual bluegrass weevil control and the use of wetting agents were discussed.**

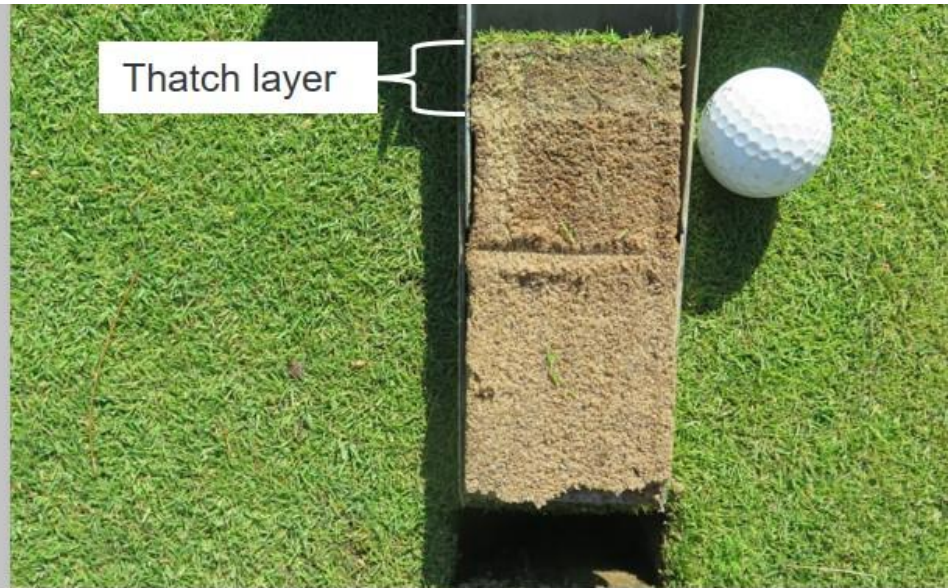
Recommendations

1. **Continue to aerate the putting greens every spring and late summer.**
 - Hollow core aeration and one solid tine aeration event appear to be adequately managing organic matter content. However, I encourage you to maintain annual nitrogen fertility rates in the range of 2.5 – 3.0 pounds of nitrogen per 1,000 square feet annually. Nitrogen rates above 3.0 pounds per 1,000 square feet will likely produce excessive growth and organic matter.
2. **Apply trinexapac-ethyl to the putting greens every 200 growing degree days with 0°C as a base temperature.**
 - The table above shows the ideal reapplication interval for different plant growth regulators.
 - Using the GDD model will help to maintain consistent suppression without overregulating or allowing the turf to enter the “rebound phase”.
3. **Prior to winter, continue to dormant seed the putting greens and apply a heavy layer of sand topdressing to the greens.** Additionally, it would be beneficial to deep tine aerate the putting greens after this final layer of heavy topdressing is applied.
 - Deep tine aeration in late fall creates channels into the putting green to help water drain off the surface. This will reduce the likelihood for winter injury and improve turf rooting the following season.
4. **The pre-emergent herbicide Bensumec™ can be applied to the putting green collars to prevent crabgrass termination.** Two applications should be made at a rate of 6 fluid ounces per 1,000 square feet. The first application should be made before crabgrass germinates in the spring. Make the first application when soil temperatures reach a five-day average of 55°F at a 2-inch depth. The second application should be made one month later.
 - Do not apply Bensumec if the greens suffer from winter injury and recovery is required.
5. **Annual bluegrass weevils (ABW) were discussed during our tour of the golf course and the following points are recommendations for ABW control.**
 - ABW damage is most common in collars and rough height of cut. Damage is rarely seen on putting greens.
 - ABW larva do most of the damage during their feeding on plant crowns, stems and roots. The adults are not responsible for damaging the turf. When adults are present the only concern is that they are laying eggs which will develop into larva, which can eventually cause turf damage.
 - Adulticides, although not completely necessary, could be applied in the spring when forsythia is half gold and half green. Adulticides should only be used if high populations are observed.
 - Apply a larvicide (Conserve®, MatchPoint™ or Ference®) when the rhododendron is in full bloom. This is usually two – three weeks after the adulticide application would be made.

These products need to be watered-in to be effective. Conserve should be watered-in immediately to optimize effectiveness.

- A second larvicide application can be made, typically around the first to second week of July with one of the above listed larvicides. Ference is a good option if a second larvicide application is necessary because it provides good control at all stages of larval development.
 - Scouting is important to monitor the current growth stage of the insect. Multiple generations are present each year and it is critical to identify the life stage of the insect before any plant protectants are applied. Consider registering for Syngenta's [WeevilTrack](#) website to help monitor ABW development throughout the season.
 - Consider reading the attached article from Rutgers University for more information on the [lifecycle and control of the annual bluegrass weevil](#).
 - Do not disperse clippings into wooded areas surrounding putting greens. The clippings contain weevil adults that can move back into fine turf areas and lay their eggs. Dispose of clippings in an area as far away from fine turf areas as possible.
- 6. I encourage you to apply wetting agents regularly throughout the season.** Wetting agents improve moisture uniformity throughout the profile and reduce the likelihood for localized dry spot development. Research has shown that the use of wetting agents can provide healthier turf with less water and allow turf to recover faster following drought conditions.
- Several facilities in the region have seen good results with the product Revolution® when adequate irrigation (0.15 – 0.25 inches) is applied after application. Other facilities have also used a tank mixture of different products such as Sixteen90™ and Primer. I encourage you to try different products and find a program that works best for you
 - The USGA articles titled [Factors to Consider When Developing a Wetting Agent Program](#) and [Understanding the Different Wetting Agent Chemistries](#) explain wetting agents in greater detail.
- 7. Vent the sand-based putting greens monthly throughout the season with small diameter hollow tines, such as the Ninja tines.** These tines remove small amounts of organic matter near the surface and expedite the drying process to offset any potential negative effects of excess organic matter content near the surface.
- Light topdressing and rolling should be performed after the Ninja tines are used.

The layer of excessive organic matter near the surface of the sand based putting greens will retain moisture and inhibit rooting. Vent the putting greens with small diameter hollow tines every 3-4 weeks throughout the season.



- 8. Most of the putting greens contain a significant amount of creeping bentgrass.** Creeping bentgrass is the desirable species because it is better able to withstand stressful summer weather and winter weather. However, some of the putting greens, such as Number 6 are heavily shaded and contain a considerable amount of *Poa annua*. Once the trees are removed on the golf course, some maintenance practices should be altered to promote more creeping bentgrass in the putting greens.
 - Management practices can be discussed on future site visits. I would be more than happy to visit Beaver Meadow every year. Most facilities that I assist I visit every year. This allows us to fine-tune maintenance programs based on the most current conditions.

Teeing Grounds

Observations

- 1. The teeing grounds examined exhibited various degrees of turf health and density.** Not surprisingly, the healthiest tees were located in open growing environments and receive plentiful sunlight. Some of the tees had poor turf density, such as the tees on Holes 6, 9, 11, 17 and 18. All of these teeing grounds are located in heavily shaded growing environments.
 - Sunlight is essential for plants to produce energy and grow. Simply put, there is no substitute for natural sunlight. However, different species of turf are better able to tolerate limited sunlight environments. Species such as fescue, *Poa annua* and perennial ryegrass will perform better in lowlight environments compared to creeping bentgrass. While creeping bentgrass is the desirable species due to its ability to withstand environmental stresses, it requires plentiful sunlight.
- 2. The tees are being core aerated once annually.** They used to be core aerated twice annually but reductions in the operating budget have led to a reduction in aeration frequency on the tees.

3. Several of the forward tees on the golf course are too long for golfers with slower swing speeds to reach greens in regulation.

- Data collected at the USGA Equipment Test Center and from the PGA of America document [SETTING UP GOLF COURSES FOR SUCCESS](#) shows that the average female golfer has a swing speed of about 60 MPH and drives the ball approximately 140 yards. The average male golfer has a swing speed of about 90 MPH and drives the ball about 210 yards. Because of the slower swing speed of some golfers, they are hitting long irons or fairway metals into many of the greens. On most holes, these golfers cannot reach the green in regulation because the hole is too long.
- While a male counterpart playing from the middle tees might hit driver, eight iron into a par-4, golfers with slower swing speeds are forced to hit driver and fairway metal into the same hole because the forward tees are not properly located.
- The following table shows a comparison of an average male golfer (80 – 90 MPH swing speed) playing from the white tees and an average female golfer (60 MPH swing speed) playing from the red tees and which greens they can hit in regulation and what clubs they are hitting into each green.

Female Golfers - red Tee							Male Golfers - white Tee						
Handicap - 25							Handicap - 14						
Swing Speed - 60 MPH							Swing Speed - 81-90 MPH						
Hole	Par	Yards	Yards Over Rec. Max.	Est. Approach Shot Distance	Est. Approach Shot Club		Hole	Par	Yards	Yards Over Rec. Max.	Est. Approach Shot Distance	Est. Approach Shot Club	
1	4	326	X 66	186	Fwy Wood+		1	4	341	✓ --	131	Mid Iron	
2	5	456	X 76	196	Fwy Wood+		2	5	480	✓ --	80	Wedge	
3	3	146	X 6	146	Fwy Wood+		3	3	153	✓ --	153	Hybrid/Long Iron	
4	5	412	X 32	152	Fwy Wood+		4	5	474	✓ --	74	Wedge	
5	4	325	X 65	185	Fwy Wood+		5	4	336	✓ --	126	Mid Iron	
6	3	124	✓ --	124	Fwy Wood+		6	3	138	✓ --	138	Mid Iron	
7	4	346	X 86	206	Fwy Wood+		7	4	366	✓ --	156	Hybrid/Long Iron	
8	4	378	X 118	238	Fwy Wood+		8	4	414	X 14	204	Fwy Wood+	
9	4	300	X 40	160	Fwy Wood+		9	4	315	✓ --	105	Short Iron	
10	5	508	X 128	248	Fwy Wood+		10	5	527	✓ --	127	Mid Iron	
11	4	300	X 40	160	Fwy Wood+		11	4	320	✓ --	110	Short Iron	
12	4	281	X 21	141	Fwy Wood+		12	4	301	✓ --	91	Wedge	
13	3	117	✓ --	117	Fwy Wood		13	3	130	✓ --	130	Mid Iron	
14	4	262	X 2	122	Fwy Wood+		14	4	347	✓ --	137	Mid Iron	
15	4	370	X 110	230	Fwy Wood+		15	4	400	✓ --	190	Fwy Wood+	
16	5	476	X 96	216	Fwy Wood+		16	5	560	✓ --	160	Hybrid/Long Iron	
17	3	141	X 1	141	Fwy Wood+		17	3	156	✓ --	156	Hybrid/Long Iron	
18	4	251	✓ --	111	Fwy Wood		18	4	276	✓ --	66	Wedge	
OUT	36	2,813	X				OUT	36	3,017	✓			
IN	36	2,706	X				IN	36	3,017	✓			
TOT	72	5,519	X				TOT	72	6,034	✓			

A red "X" indicates that the average male or female golfer cannot reach the green in regulation. This model does not take distance variability due to elevation changes into consideration.

- Based on the above data, the average female golfer is likely hitting fairway metals or even drivers into every hole. This indicates an opportunity to construct additional forward tees and make the facility more appealing to golfers with slower swing speeds, including women, juniors and seniors.
- According to the [National Golf Foundation 2018 Golf Industry Report](#), women comprise 24% of the total US golfer population and make up over 30% of all new golfers! This means we are seeing more women begin to play the game and presents an opportunity to capitalize on a growing market segment. Additionally, it will improve enjoyment and pace of play for golfers with slow swing speeds that are already playing the course.

Recommendations

- 1. Continue to core aerate the teeing grounds every fall.** If resources become available, it would be ideal to aerate the teeing grounds every spring and fall.
 - After aeration, the teeing grounds should be seeded with perennial ryegrass. Once growing environments on the golf course are improved, the tees should then be seeded with a dollar spot resistant variety of creeping bentgrass. Luminary or 007 would be good options.
- 2. There are seven trees right of the teeing ground on Hole 9 and approximately 12 – 20 trees behind the teeing ground on Hole 6 that could be removed to significantly improve the growing environment.** I encourage you to remove these trees as soon as possible. Doing so will provide a significant positive impact on turf health and density.



The teeing grounds on Holes 6 and 9 could be significantly improved with the removal of a small number of trees. I encourage you to perform this work as soon as possible.

- 3. To repair teeing grounds that already have a significant amount of turf thinning, apply a mixture of perennial ryegrass seed and divot mix and level with a Levelawn rake.** Keep the surface moist to hasten the establishment.
- 4. Beginning next season, maintain annual nitrogen fertility rates in the range of 3.0 – 4.0 pounds of nitrogen per 1,000 square feet annually.** This slight increase in nitrogen fertility will allow the turf to recover more rapidly from concentrated foot traffic.

5. **Several tees should be added throughout the golf course.** As the table above shows, several holes require the addition of a forward tee to give golfers with slower swing speeds the ability to reach greens in regulation.
 - Constructing forward tees does not need to be an expensive or elaborate process, but they should be constructed so that there is a flat and level surface. Some facilities are building tees into the fairway so that they can be mowed and maintained along with the fairway. However, simply placing tee markers into the fairway is not recommended. Most of the time tees that are placed in this manner are not used.

Fairways

Observations

1. **Isolated areas of turf thinning were observed in several of the fairways.**
 - Turf thinning was most commonly observed on perimeter portions of fairways near large trees and at the interface between the fairway and the approach.
 - ◆ Perimeters of the fairways are heavily trafficked from maintenance equipment turning while mowing and mowing the perimeter pass. In addition to concentrated traffic, the perimeter areas with turf thinning were usually located next to large trees. Trees produce surface roots that outcompete turf for water, sunlight and nutrients. The combination of concentrated traffic and competition from tree roots likely led to decline in these areas.
 - ◆ The interface between fairways and approaches is another high traffic area. Fairway mowers and approach mowers all turn at the same interface. This area is commonly difficult to maintain because of the concentrated traffic.

The interface between the approaches and fairways is heavily trafficked from mowers that turn here. Periodically shift the interface to help disperse traffic.



2. **The fairways have not been core aerated for several years.** This is unfortunate because hollow core aeration reduces organic matter content near the surface, improves turf health, smooths the surface over time and presents a great opportunity to incorporate new seed into the fairways.
3. **Most of the approaches contained a significant amount of creeping bentgrass.** This is the desirable species for fine turf areas due to its ability to withstand environmental stresses, but this species is a heavy thatch producer. As such, organic matter content in the approaches was excessive.
 - Creeping bentgrass tolerates environmental stresses such as heat and cold extremes, but does not tolerate shade or concentrated traffic very well. The long-term use of lightweight triplex mowers on the approaches has resulted in increased creeping bentgrass populations over time.
4. **The end of the fairway on Hole 2 and the green surround were discussed because this portion of the fairway remains wet following heavy rain events.** Unfortunately, this area has a relatively flat topography. If there is not enough slope in this area, internal drainage may not be a suitable option.
 - The approach on hole Number 2 is much narrower than the fairway. Narrow approaches make the hole more challenging for high handicap players. High handicap players with slow swing speeds typically hit lower-lofted clubs into greens, so narrow approaches make these types of shot more difficult.
 - We discussed the opportunity to install a chipping area on the right side of the green and to widen the approach to improve the playability of this golf hole.

Recommendations

1. **Core aerate the fairways with hollow tines in mid to late August.** Hollow tine aeration will effectively manage organic matter content, smooth the surface over time, and prepare a seedbed for seed to be applied in late summer.
 - Before the trees are removed, perennial ryegrass should be used to seed the fairways. Once enough trees are removed to provide adequate sunlight, creeping bentgrass seed should be used.
 - ◆ Typically, perennial ryegrass is not the desired species because it is susceptible to winter injury and has a more upright growth habit compared to creeping bentgrass. However, the fairways already contain a significant amount of perennial ryegrass and this species germinates rapidly, which is necessary to provide turf cover in high traffic and shaded environments.
 - ◆ Once growing environments are improved a more permanent and long-term program can be developed to promote creeping bentgrass as the primary species in the fairways.
 - Seed the fairways following hollow core aeration every year in the late summer.
 - If the weather does not cooperate, solid tine aeration can be performed but hollow core aeration is preferred.

2. **Before the trees are removed in areas adjacent to fairways, use a root pruner such as the [Imants root pruner](#) to improve turf health on the perimeter portions of the fairways.** Root pruning will reduce tree root competition in turf areas adjacent to tree lines.
 - Root pruning is not a replacement for tree removal. Root pruning does not improve sunlight penetration.
3. **On Hole 2, hollow core aerate the second half of the fairway and implement an aggressive sand topdressing program.** Sand should be applied three – four times per year at a rate of 10 – 15 tons per acre per application. Additionally, a low-mow chipping area should be created on the right side of this green.
 - Sand topdressing the wet portion of this fairway will gradually raise the surface over time and develop a topdressing layer that will have desirable drainage characteristics. Once the topdressing program is initiated, hollow core aeration should not be performed until the topdressing layer reaches a depth of approximately 2 inches.
 - The chipping area on the right side of Number 2 green can be created with a series of gradual reductions in the height of cut. This fall, mow the area down to a height of approximately 0.75 – 1.25 inches. The following spring, this area can be mowed down to fairway height of cut before the turf breaks dormancy.
 - ◆ Chipping areas will improve the playability of this golf hole for high and low handicap players. High handicap players will be able to putt the ball from this area and low handicap players will be presented with a variety of shot options.
4. **Perform hollow core aeration on the approaches every spring and late summer to reduce organic matter content.**
 - Reducing organic matter content will improve turf health and provide firmer playing surfaces which will enable players to hit bump-and-run style shots into the putting greens.
5. **Rotate the interface between approaches and fairway mowing lines.**
 - Shifting this interface periodically will spread traffic and improve turf health.
 - ◆ The USGA Case Study [New Mowing Patterns Improve Playing Conditions](#) describes how one facility installed monuments to help mower operators identify where to mow the interface between the fairway and approach on different days.
6. **To reestablish turf in thin areas perform hollow core aeration and then seed the area with a mixture of divot mix and perennial ryegrass seed.** Use a Levelawn to smooth the surface and keep the surface moist to hasten establishment.
 - Use signs or ropes and stakes to direct traffic away from the newly seeded areas.

Bunkers

Observations

1. **Most of the bunkers on the golf course need to be renovated because the sand is contaminated and the bunker faces have an excessive amount of sand that has accumulated on them.** When bunker faces accumulate sand, they become unstable and prone to decline due to droughty conditions.

2. **Some of the bunkers have already been renovated.** The renovation has included replacing the sand and removing the excess sand accumulation on the faces and regrassing the surrounds.
3. **There are several bunkers on the golf course that should be considered for removal because they either receive very little play or are located in areas that target high handicap players.**
 - Bunkers located behind putting greens typically receive very little use.
 - Fairway bunkers on par-3's or bunkers that are located far away from putting green complexes target high handicap players more so than low handicap players. This is an undesirable situation.
 - Bunkers that should be considered for removal based on these criteria include the following:
 - ◆ The two bunkers left of Number 2 green. The first bunker is 25 yards short of the green and the greenside bunker is underneath a tree and located relatively far away from the putting green.
 - ◆ The fairway bunker on hole Number 3. This is a relatively short par-3. A fairway bunker on a short par-3 targets high handicap players.
 - ◆ The greenside bunker left of Number 11. This bunker is not visible from the fairway and is located relatively far away from the putting green.
 - ◆ Remove most of the bunkers located behind putting greens. This includes the bunkers behind holes 6, 9, 12, 14, 16, 17 and 18.
 - Eliminating bunkers that receive little use or that target high handicap players will reduce the cost to renovate the bunkers and reduce future maintenance costs.

Recommendations

1. **I encourage you to eliminate the bunkers listed above to reduce renovation costs and future maintenance costs.**
2. **Use sod with a mixture of Kentucky bluegrass and turf-type tall fescue to sod bunker surrounds following renovation.** Turf-type tall fescue has superior drought tolerance and is resistant to most common summer pests that can cause turf thinning on Kentucky bluegrass.

Course Improvement Projects

Observations

1. **Upgrading the irrigation system should continue to be performed as resources become available.** At the current pace, it appears the irrigation system will be completely replaced within the next three – five years.
2. **The fairways on Holes 15 and 16 are reportedly two of the wettest holes on the golf course following heavy rain events.** The condition of these holes is typically what determines whether or not cart restrictions are necessary following rain events. Installing internal drainage on these holes will reduce the number of cart restrictions and improve turf health.

- The need for cart paths on these holes should be reevaluated after drainage is installed. Installing drainage will improve turf health and will allow carts to scatter across the fairway and rough which will improve turf health throughout the entire hole by dispersing traffic across a wide area.
3. **The cart path network needs to be replaced throughout the entire golf course.** Most of the cart paths are in disrepair and are inadequate in size and length. As a result, turf thinning is common in rough areas near cart path entry and exit points.

Recommendations

1. **Continue to update the irrigation system.** The irrigation system is the lifeblood of the golf course and should be the top priority for course improvement projects.
2. **I strongly encourage you to contact a drainage specialist to have a plan developed for drainage on Holes 15 and 16.** Installing drainage on these holes will reduce the number of cart restrictions every year.
 - Drainage specialist such as [Kelly Ami Inc.](#), [XGD Systems](#) and [Turf Drainage Company of America](#) would all be suitable to perform the necessary drainage work on these holes.
3. **The cart path system throughout the golf course should be replaced as resources become available.** Doing so will improve the golfer experience and improve turf health and aesthetics in areas adjacent to cart paths and in high traffic areas. The following recommendations will improve cart path functionality and turf health in high traffic areas.
 - Extend cart paths 30 – 40 linear yards beyond the forced entry or exit point. Doing so will allow sufficient space for carts to enter and exit and reduce the likelihood for turf thinning in high traffic areas.
 - Slightly angle the end of cart paths away from the direction of play. Doing so will discourage most golfers from entering or exiting at the same point.
 - Install curbing in high traffic areas where all golfers should remain on the path. Areas such as tee complexes and putting green complexes are examples where curbing should be installed.
 - The USGA article titled [Common Sense Cart Paths](#) provides more information on how to design functional cart paths.



The cart paths need to be renovated in the near future. When they are, extend them 30-40 yards beyond forced entry/exit points and angle them slightly away from the line of play.

Summary

I truly enjoyed my first visit to Beaver Meadow Golf Course and look forward to watching it progress as improvements continue to be made. Without a doubt, tree removal is the most beneficial program that could be implemented at this time. Some of the recommendations in this report will temporarily improve turf health and density to some degree, but will not be as effective as the tree removal program will be. I was pleased to see that the putting greens were in good condition and that they are the top priority for maintenance. After examining soil profiles from most of the putting greens it is clear that sound agronomic programs have been implemented on the putting greens for many years. If growing environments are improved and resources are provided to implement necessary maintenance programs on tees and fairways, I am confident they will perform as well as the putting greens do.

It was a pleasure to visit Beaver Meadow Golf Course and I look forward to working with you in the future. Please do not hesitate to contact me if you have any questions regarding anything in this report, or if I can be of further assistance at any time.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Paul M. Jacobs". The signature is fluid and cursive, with a distinct flourish at the end.

Paul M. Jacobs, Agronomist
USGA Green Section, Northeast Region

Distribution:
Mr. Bernard "Sid" Chase, Golf Course Manager

Additional Considerations

The USGA appreciates your support of the Course Consulting Service. Please visit the [Course Care](#) section of usga.org to access regional updates that detail agronomist observations across the region. Also, please visit the [Water Resource Center](#) to learn about golf's use of water and how your facility can help conserve and protect our most important natural resource.

USGA Green Section Record

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.

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.

