

Logan River Golf Course Report 2017:

The purpose of this report is to describe the condition of the golf course, programs, challenges and opportunities. A golf course is among the most intensely managed landscapes in the world. Providing a pristine outdoors experience and also managing the complexities of both the playing surface and surrounding ecosystem is far more complex than what would be found in typical landscape management practices. The golf course itself is the centerpiece of the golf experience. No other features in support of the game, in and around the course, can compare to the value perceived to players from the course itself.

I. Greens:

Greens on the golf course make up an area of approximately 3 acres and turf is maintained at a height of 0.110". This intensely managed surface requires mowing or rolling 7 days per week. In addition to mowing and rolling greens, hole locations are moved 4 times each week. Regular hand watering of areas is required frequently and multiple times daily in the heat of the summer.

In the past 4 years a comprehensive management plan has been executed to reclaim a proper playing surface after approximately 15 years of neglect. Without a sound program for managing the greens problems such as moss, algae, thatch, Poa Annua, can severely impact the playing surface and these and related issues were obvious and significantly impacting play at LRGC. Shade because of lack of trimming of trees surrounding the greens contributed to some of these problems.

We are happy to report that management program has been tremendously successful, and the greens at LRGC are moss and algae free. An intense aerification and topdressing program has improved the firmness, and quality of the greens through the reduction of thatch that had accumulated blocking vital water and nutrients from reaching the root level.

Because of the heavy thatch layer on the greens they develop localized dry spots these are areas on the greens that are hydrophobic, we use wetting agents and hand watering to help with this and have had success but is still a problem but is getting better every year as we reduce the thatch layer.

The next step in reclaiming these greens is through a bent grass overseeding program. At a cost of \$2,500 per year, this would significantly improve the health of the greens.

The proper care of the greens is a specialized art. Decades of previous experience with various management programs and techniques has been deployed at the LRGC over the last 4 years. The proper mixture of mowing, rolling, fertilizer, herbicide, fungicides, water application, and aerification is continually being monitored by the Superintendent.

II. Tees, green approaches and collars:

Tees and approaches cover an area of approximately 4 acres and are mowed at a height of 0.50" and are mowed three times per week. divots are filled 3 times a week and tee

blocks are moved daily. Tees and approaches are aerated once a year in the spring and over-seeded with perennial rye. There are tee boxes that have crowned over the years and are in need of leveling. Herbicides are applied twice per year and fertilized monthly mostly with urea based fertilizer. Fungicide is applied in the fall to prevent snow mold in the winter.

III. Fairways:

Fairways occupy approximately 30 acres and are maintained at a height of 0.60". Mowing is required 3x each week and they are aerated once a year in the spring. The fairways are sprayed for Poa Annua seed head control in the spring and herbicide is applied 2x per year. They are fertilized with a urea based fertilizer twice per year. Urea has a very high Nitrogen content and poses a risk for damaging or killing turf it is also not as environmentally safe as other slow release nitrogen sources. Budget constraints have prevented adoption of a better alternative fertilizer.

IV. Rough and Drive Range:

Rough and drive range covers an area of approximately 45 acres and is mowed 2x per week. The range is mowed once a week. Rough is maintained at a height of 1 ½ to 2 inches and deep rough is as high as 4 inches. Rough areas and par 3s are aerated once a year in the fall. It takes three mowers to mow rough and the large 7 deck rotary for open areas the 3 deck rotary for par 3 holes and trimming around greens tees and bunkers. The 72' single deck is used for mowing for the deep rough. Herbicides are applied to rough once per year and urea based fertilizer is applied 2x per year. As with fairways, urea based fertilizers pose more risk and are less effective as a management tool than slow release fertilizers (budget constraints have required use of Urea).

Total acres mowed per week during summer months is 198

V. Wetlands:

We are still being monitored by the Corps and have one area left expected to meet requirements this year. All other monitoring sites meet standards. Release from monitoring is expected by next year. We mow the areas that are in front of tees and sides of greens, which we are allowed to do. We do monthly weed control and the annual report was complimentary of the approach.

VI. Trees:

We have been trimming and removing problem trees in areas where they interfere with play, create shaded conditions are damaged and/or present safety concerns. This has been a major area of neglect and has been a focus of the crew, with significant progress achieved. The scope of the proper care of the large beautiful trees on the course is daunting, but establishment of proper programs for managing them will ensure that they are a signature feature of the golf course.

VII. Geese:

Goose control is ongoing and is a 3 times a day commitment in order to keep them from establishing a population that is detrimental to play, course and water quality of the ponds and wetlands.

*replace
lakes
~\$300?*

VIII. Sand Bunkers

Bunkers are raked 2x per week and edged every two weeks. Over the past 4 years we have made a significant effort to improve these areas. We are grateful for the funding that has enabled the most neglected bunkers to be rebuilt and revitalized. The next steps would include completion of the green side and move to fairway bunkers.

IX. Cart Paths, Fences:

The majority of cart paths on the course are in disrepair. We started filling some of the holes with asphalt and compacting them last fall and will continue this yearly. We have some paths that are in need of replacement such as the remainder of the path on #17, and the path around #11 green leading 12 tee box. Others have rough patches like by the restroom on #7 and by #15 tee.

Fences around the course are in need of repair in numerous places. In addition, a gate is needed to block the club house parking lot. Securing the golf course is essential to prevent vandalism but more importantly to deter unapproved and unsafe use of the course after hours.

X. Rolling Stock:

Each winter every piece of equipment is thoroughly inspected, repaired, cleaned and maintained. For example:

1. Sharpening blades or reels, replace bearings on cutting units, squaring up units and set cutting height.
2. Change engine, hydraulic oil and filters fuel filters, check hydraulic hoses and replace as needed.
3. Change gear oil in transmissions, grease machines
4. Check safety systems
5. Repair anything that needs attention
6. Set rpm and tune engines

Over the last four years we have gotten some critical machines such as our spray unit that we use to spray pesticides and fertilizers, aerator used to aerate greens and tees and the Toro 4700 7 deck rotary mower used to mow rough and the drive range.

An equipment list with replacement schedule is attached. Much of the equipment is very old and has exceeded its useful life. Machine hours are equivalent to 60 miles for every

hour, for instance 5,000 hours = 300,000 miles. The life span for a diesel engine is 4,000 hours and a small gas engine is 2,500 hours.

Management of equipment has been neglected over the years with problems compounding with equipment age. This cost us in down time, parts, labor, hydraulic oil leaks, and quality of cut. We have a great golf course mechanic he is swamped every summer trying to keep the old equipment running and most of all cutting correctly. Mower Reels and blades are sharpened often, rotary blades once a week, greens mower reels once a month and fairway, tee and approach reels 4 to 6 weeks. He checks mowers and adjusts them every day so they will be ready for the next day

We have purchased some used mowers with low hours for about half the cost of new. They are normally 3 year old lease returns. The challenge with this approach is that they are rarely available in an emergency to future planning becomes critical to save money that would be diverted to emergency fixes and/or replacement.

XI. Buildings:

The shop built 4 years ago is a significant improvement that has ensured the security of the equipment, a proper and provides a proper and safe storage area for chemicals.

The main maintenance building was moved to its present location from the golf course property when course was built. It is in desperate need of update and repair. For example, when temps drop in the winter the shop can struggle to heat beyond an inside temperature of 40F. Poor insulation leads to high temperatures in the summer. Approximate costs needed for proper updates include \$4,500 for furnace and AC upgrades, \$5,000 for insulation, \$3,000 of lighting and \$3,000 for repair to overhead doors. Investments in insulation and heating/cooling will be offset by future gains in heating/cooling efficiency.

Conclusions:

The last 4 years have been a time of tremendous improvement for LRG. I am personally very appreciative of the support that I have received, and devote all my energy to improving the golf course and ensuring its continued future success. The transformation of the LRG has been noted by the golf community and the reputation of the course as the top public golf course in the state is growing.

We are running without an assistant superintendent; this position gives the city assurance that the intrinsic knowledge will be preserved if anything would happen to the superintendent for a long period of time the course would be maintained. It also is important to have another supervisor to keep the majority part time crew on task. We spray pesticides and spread fertilizers often it is very important to have a person very competent and certified in those operations. We also have a complex irrigation system that's in need of constant repair would be good to have someone else that knows the system. Would recommend filling this position.

I am honored to be the Superintendent at LRGC as we approach our 25th anniversary. There are significant challenges that we face as outlined above, but also tremendous opportunities. The LRGC has made tremendous strides in the last few years and is truly a top tier public golf course in the state. The success of the golf course, and the value it provides to the citizens of Logan is paramount in my mind. I look forward to working with local leaders in evaluating strategies for sustainability and further enhancement of what is truly a gem.

Thank you,

Randy Oldham
Logan River Golf Course Superintendent

Irrigation Report for 2017 at Logan River Golf Course:

The purpose of this report is to explain the current condition of the irrigation system, its limitations, and all of the factors that contribute to the irrigation of LRGC as well as a rough capital improvement plan. I feel it my responsibility to inform all concerned parties of the current irrigation system, and to provide other information which may help to understand irrigation system at LRGC.

I. Current System in Use at LRGC:

The irrigation system was installed when the course was built in 1992. The effective life span of a golf course irrigation system is 20 to 25 years.

The pump station is comprised of prefabricated Watertronics vertical turbine pumps regulated with electronically actuated control valves, one 20 hp and two 40 hp motors producing 1500 gpm at 80 psi. The water is taken from the large pond east of clubhouse that is recharged from ground water. We do have a head gate on the Logan River that can help recharge the pond, but it is seldom used.

The original irrigation control system was a Buckner system with central computer control and weather station. In 1999 the control system was changed to Toro OSMAC radio control with central computer control running Toro Site Pro on a windows 95 operating system. The field controllers were changed as part of the control system. Currently we have 16 field controllers with 24 to 48 stations per controller. The sprinkler heads are wired singularly but doubled and tripled in the controller. Instead of running one head per station they have tied two and three heads together per station. The weather station was not retained as part of the newer Toro system.

The sprinkler heads installed in 1992 were Toro 660 model with valve in head at 50 psi. This head was short lived and Toro stopped producing it 5 years later. They are installed on 65' triangular spacing.

The piping is 4" to 6" mainline with isolation valves on each green area and throughout the system. The main line uses a looped system on the four main areas of the course. First loop: #1,9 #10-13. Second loop: #2-8. Third loop: #14-18. Fourth loop: drive range and quad complex. The lateral lines are all 2".

Irrigating LRGC is roughly equivalent to irrigating 650 individual home lawns at .15 acres of turf per household. There are currently 1,200 sprinkler heads on triangular spacing of 65 feet. There are 650 stations controlled 16 field controllers comprised of over 20 miles of pipe and 100 miles of wire.

II. Factors Affecting Irrigation at LRGC:

Due to its location, LRGC experiences many unique environmental conditions. Heavy soils on fairways and rough areas create wet conditions if irrigation is too often and too excessive. Greens are sand based without back up sprinkler heads around the green surrounds, this creates dry surrounds or wet greens. Drainage is a key to eliminating wet conditions, we have been installing drainage in wet areas.

III. Irrigation Scheduling:

The current irrigation schedule is constantly evaluated to replace the moisture lost during the day, while minimizing interference with golfers. Currently it requires a minimum of nine hours during peak summer demand to replace the water lost. A nine hour water window is too long and interferes with golf and maintenance activities on the course. We water all areas on the golf course every three days breaking the course down into three sections such as greens tees one night, fairways one night, rough and drive range one night. This keeps the course green and gives dryer firmer playing conditions. We spot water dry areas and hand water greens during the day as needed.

IV. Capital Improvements of Irrigation System:

A more efficient irrigation system equals better the playing conditions, healthier the turf, and lower labor and power costs.

Pump Station:

The pump station is running at 80% of designed capacity due to wear, it is in need of replacement. The pump station was designed to run sprinkler heads at 50 psi that are not made any more. The new market available heads run at 65-80 psi. So, the pump station has to be able to produce 95 psi needed. The pump station needs to produce 30 psi higher than what is needed at the head to compensate for friction loss in the piping. The pump station is also hooked up to the quad softball complex at Willow Park and provides 300 gpm to that facility that has to be in reserve at all times. This brings the available gallons per minute to under 1000 to the golf course, remember 1500 gpm is what is needed to get the daily water window down to the designed 6 to 7 hours. Replacement cost estimate of \$130,000. This cost should be shared between Parks Department and Golf Course.

Control System:

Computer central control is out dated with no support if it goes down. Not enough field controllers were installed when the system was upgraded to OSMAC. We need to add field controllers so we can have single head per station control, this helps with the wet conditions so you that we have control of each head in the irrigation cycle. We have installed heads around green surrounds to help with the dry conditions around greens but have had to tie those together with another head due to lack of available stations on controllers. Replacement cost estimate software computer setup and support \$17,000, 10 new controllers \$55,000.

Sprinkler Heads:

Since the Toro 660 head is discontinued the heads have been replaced with a variety of models, mostly Toro, but differing versions that all run at 65-80 psi. In most cases the complete head is not replaced, the drive unit is, and is called a conversion assembly. Since the 660 head is regulated at 50 psi and the new heads need to run at 65 psi the pressure control valve should be changed in order to run the higher psi, that has not been done on most of the heads. Replace complete heads at regulated at 65 psi \$10,000 yearly until complete.

Piping and Main lines:

The pipe system is showing its age as the amount of repairs has been increasing over the past few years, although not excessive at this time. The main line isolation valves do not close tight and leak which make the repair of the system very difficult. When pump pressure is increased the pipe system will have more failures. Replace isolation valves estimate \$25,000.

V. Conclusion:

Irrigating LRGC will never be an easy proposition. The current irrigation system is in need of repair and improvements. I recommend a proper capital improvement plan be laid out to make the necessary changes and repairs to the system in a timely manner.

I invite anyone who has questions, or who would like to better understand the irrigation system to contact me. I would be happy to further explain and demonstrate how the system works. Also, I am open to any ideas or suggestions which would help to improve the quality of LRGC.

Randy Oldham
Logan River Golf Course Superintendent

Logan River Golf, Grounds Maintenance Equipment list 2014

Equipment Discription	Replacement Value	Cap Equip #	Make	Model	Year	VIN #	Hrs as of 10/14
Irrigation Pump Station			Watertronics				
Osmaccontrollers							
OSMAC computer & software							
SIP Peerless Reel Grinder			S I P	P2000-307	2002		
SIP Ideal Bedknife Grinder			S I P	I1000-280	2003		
Golf Lift GL9			Golf-Lift	GL9PYGRG	2012	UBN12E0001	
Shop Preassure Washer			Landa	PHW3-710			
Toro ProCore Aerator		1398	Toro	Pro Core 648 09200	2012	312000957	175
Toro Walking Aerator		955	Toro	Greens Aerator 09120	2000	200000278	
JD Aerocore Aerator			John Deere	Aerocore 1500X	2002		
Renovaire pull behind		1425	Ryan	Renovaire 544317A	2013	54431700862	
Jac Sweeper		600-495	Jacobsen	720E-HL	1982		
Buffalo Blower			Buffalo Blower	CKB4	2012	21086	
Jac Sand Scorpion		792	Jacobsen	Sand Scorpion	1999	88007-1651	4447
Toro Sand Pro		1424	Toro	Sand Pro 08886-5020	2001	210000680	3151
Cushman sprayer			Cushman	Tank sprayer attachment	1992		
Cushman Top Dresser			Cushman	Top dresser attachment	1993		
Cushman Core Harvester			Cushman	core attachment	2003		
Widespin Top Dresser		1036	Turfco	Widespin 1530	2004	E00220	
Jacobsen leaf sweeper tow behind		600-495	Jacobsen	720E-HL	1982		
Jacobsen Fairway LF-3400		1112	Jacobsen	LF3400	2006	6794502348	4262
Toro Fairway 5410		1449	Toro	Reelmaster 5410	2010	310000371	1734
John Deere Fairway 3235c		1268	John Deere	3235c	2007	TC3235c011056	3211
Jac Greens triplex	\$36,000	1218	Jacobsen	Greens King 4 plus	2008	6228805357	2278
Jac Greens triplex	\$36,000	1219	Jacobsen	Greens King 4 plus	2008	6228805352	2181
Jac Tee triplex	\$25,000	793	Jacobsen	Greens King 4	1999	62271-2024	4466
Jac Tee triplex	\$25,000	947	Jacobsen	Greens King 4 plus	2002	62288-2909	4007
Jac Greens King 5		1432	Jacobsen	Greens king 5	1999		2778
Greens roller Orange Weights		410	Jacobsen	Greens king	1992	62228-4478	2700
Greens roller Black Weights		499	Jacobsen	Greens king	1993	62241-1749	2431

Logan River Golf, Grounds Maintenance Equipment list 2014

Equipment Description	Replacement Value	Cap Equip #	Make	Model	Year	VIN #	Hrs as of 10/14
Jac Tri king	\$30,000	726	Jacoben	1900D	1997	670173241	3704
Toro Reel Master 3100-D	\$30,000	948	Toro	Sidewinder-3100D	2002	220000351	4289
Cushman Rotary Deck mower		411	Cushman	Frontline-72" Deck	1992	92003534	2086
Lastec Articulator		1161	Lastec	Articulator 721xr	2006	23430906	
John Deere Tractor	\$25,000	387	John Deere	2155	1992	x12155g751260x	15105
Ford Tractor	\$25,000	698	Ford/New Holland	3930	1998	097479b	1741
Pto Blower		N/A	Jacobsen	B-40 plus	2003	2323	N/A
LELY spreader		N/A	LELY	H	2014	23201119126789	N/A
Toro Multipro 1250 Sprayer		1403	Toro	Multipro 1250	2013	313000168	
Cushman Sprayer attachment		N/A	Cushman		1992		N/A
Pickup		836	Ford	F150 2wd	2000	1FTRF18W3YNB26	81746 Mi
Dumptruck		1062	Ford	F250 4x4	1995	THF26G6SNB4076	50470 Mi
Boss V Snow Plow		N/A			2007		
Green Mule	\$11,000	1399	Kawasaki	KAF620P-4000	2011	K1AFCP11BB50174	1164
Red Mule	\$8,000	652	Kawasaki	KAF620B-2520	1997	K1FCB13TB50159	2485
EZGO Workhorse 800G	\$7,000	N/A	EZ GO	Workhorse 800G	1999		1762
EZGO Workhorse 1200LX	\$8,000	N/A	EZ GO	Workhorse 1200LX	1998		2258
JD Gator-Yellow Seats	\$10,000	N/A	John Deere	Gator-Turf	2000	W00TURF008339	471
JD Gator-Black Seats	\$10,000	N/A	John Deere	Gator-Turf	2000	W00TURF008342	1454
CC Carryall Turf2	\$8,000	N/A	Club Car	Carryall Turf 2	2005	RG0542-560214	N/A
CC Carryall 1 Gray	\$5,000	N/A	Club Car	Carryall	1995	FG9536-458441	N/A
Yamaha White	\$7,000	N/A	Yamaha	JW1	2009	JW1-218324	N/A
Yamaha Orange	\$2,000	N/A	Yamaha	G-2/G-9	1995		N/A
Picker EZGO Carryall2+	\$8,000		Club Car	Carryall 2 Plus	2003	PG0348-352393	
Cushman Truckster 4wheel	\$15,000	779	Cushman	Truckster 898664	1998	9800 9613	1230
Cushman Truckster 3wheel	\$6,000	412	Cushman	Truckster 898633	1992	92001675	3256
Cushman Truckster 4whl old	\$6,000	700-526	Cushman	Truckster 898634b	1994	95000702	2028
Greens walker							
Picker Toro 5300D							

Logan River Golf, Grounds Maintenance Equipment list 2014

Equipment Discription	Replacement Value	Cap Equip #	Make	Model	Year	VIN #	Hrs as of 10/14
Chainsaw 390							
Chainsaw 270							
Pole saw HT 75							
Pole Saw HT 101							
Redmax bunker edger							
Troybuilt mini tiller							
Jac 5 gang pull mower							
Ryan Sod Cutter		727	Ryan	Sod Cutter Jr	1998	98500765	N/A

Equipment	Years in Operation	Hours on Unit	Average Life	Replacement Cost	Description and Function
Utility Vehicles					
EZGO Workhorse 800G	18	NA	10	\$10,000	General Transport of workers and supplies.
EZGO Workhorse 1200LX	17	NA	10	\$10,000	General Transport of workers and supplies.
CC Carryall Turf2	12	NA	10	\$10,000	General Transport of workers and supplies.
CC Carryall 1 Gray	22	NA	10	\$10,000	General Transport of workers and supplies.
JD Gator-Yellow Seats	17	NA	10	\$10,000	General Transport, Hauling Soil, Sand, etc...
JD Gator-Black Seats	17	NA	10	\$10,000	General Transport, Hauling Soil, Sand, etc...
Yamaha White	8	NA	10	\$5,000	General Transport of workers and supplies.
John Deere Gator	1	14	10	\$8,500	General Transport of workers and supplies.
EZGO Carryall2+ Picker backup	13	NA	10	\$10,000	General Transport, Backup range ball Picker
Heavy Duty Utility					
Kawasaki Mule 4000	6	1900	10	\$12,000	Irrigation equip. Miscellaneous Use Heavy Duty Use
Kawasaki Mule 2520	20	2980	10	\$11,000	Irrigation equip. Miscellaneous Use Heavy Duty Use
Cushman Truckster 4wheel	20	1380	15	\$27,000	Hauling Gravel, Sand, Soil, Logs etc...
Cushman Truckster 3wheel	25	3321	15	\$27,000	Sprayer mounted on it
Cushman Truckster 4whl old	24	2042	15	\$27,000	Hauling Gravel, Sand, Soil, Logs etc...
Mowers					
Toro Reel Master 3100-D	15	4441	6	\$35,000	Mowing of Par 3, and around Bunkers, Greens etc.
Toro 3500d	9	3615	6	\$35,000	Mowing of Par 3, and around Bunkers, Greens etc.
Jacobsen Greens King IV Plus	10	2925	4	\$40,000	Mowing of Greens, 4 years on greens
Jacobsen Greens King IV Plus	10	2900	4	40000	Moved to Tee mower
Jacobsen Greens King IV Plus	16	4573	8	\$15,000	4 year old green mower Tees, approaches
Jacobsen Greens King IV	18	5017	8	\$15,000	Moved to Roller
Jacobsen Greens King V	18	3020	8	\$15,000	4 year old green mower Tees, approaches
Jacobsen Fairway LF-3400	12	5256	6	\$55,000	Mowing of Fairways
Toro Fairway 5410	7	2768	6	\$55,000	Mowing of Fairways
John Deere Greens mower	1	40	6	\$40,000	Mowing of Greens
Toro 4700d	3	800	8	\$75,000	Mowing of Large Rough Areas
Toro 328d	11	2075	8	\$20,000	Mowing Around Trees, Sidehills, Wetlands, etc...
Tractors					
John Deere 2155	25	16015	15	\$35,000	Aeration, Fertilization, Pulling Rough Mower
Ford New Holland 3930	20	1822	15	\$35,000	Diggin, Loading, etc...
Aerators					
Toro ProCore Aerator	5	285	10	\$25,000	Aeration of Greens and Tees

Toro Walking Aerator	18	NA	10	\$10,000	Aeration of Greens and Tees
Renovaire pull behind	4	NA	10	\$8,000	Aeration of Fairways, Rough areas
JD Aerocore Aerator	15	NA	10	\$10,000	Aeration of Fairways, Rough areas
Accessories					
Allied Loader 395	20	NA	10	\$5,000	Attachment for Ford Tractor, Loading
Fisher V Snow Plow	10	NA	10	\$4,500	Plowing Snow
Ryan Core Harvester	15	NA	10	\$5,000	Extracting Cores during Greens Aeration
Buffalo Turbine	6	NA	10	\$6,500	Blowing Leaves and Debris
Pto Blower	15	NA	8		Blowing Leaves and Debris
LELY spreader	4	NA	8	\$3,000	Fertilizer spreader
Jacobsen Leaf Sweeper	36	NA	10		Collecting leaves and branches from open areas
Widespin Top Dresser	14	NA	10	\$15,000	
Cushman Top Dresser	25	NA	10	\$10,000	
Sand Pro Toro 5020	17	3675	12	\$20,000	Raking and Maintenance of Bunkers
Scorpion Sand Rake	19	4650	12	\$20,000	Raking sand bunkers with blade
Shop Equipment					
SIP Peerless Reel Grinder	16	NA	15	\$22,000	Grinds, and Sharpens, Reels
SIP Ideal Bedknife Grinder	15	NA	15	\$17,500	Grinds, and Sharpens, Bed Knives
Golf Lift GL9	5	NA	15	\$8,000	Lifts Mowers, and Other Equip, For Maintenance
Sprayers					
Toro Multipro 1250 Sprayer	5	270	10	\$22,000	Chemical Application For Greens
Cushman Sprayer	26	NA	10	\$5,000	Chemical Application of Fairways, and Rough Areas
Pressure Washer	3	NA	6	\$3,000	Cleans equipment
Trucks					
1995 Ford Dump Truck F250	23	60000	15	\$40,000	Snow Removal, Gravel, Sand, Soil, Movement
2000 Ford F150 4wd Pickup	18	92000	15	\$30,000	Transportation, Equipment, fertilizer Hauling, security.
Irrigation					
Watertronics Pump Station	25	NA	20	\$130,000	Pumps irrigation water for course
Osmac controllers	18	NA	15	\$55,000	Onsite station Radio controllers for each head
OSMAC computer & software	18	NA	10	\$17,000	Computer and radio controller for irrigation control
New equipment 1st year				\$1,189,000	
Red 2017					
Yellow 2018					
Green 2019					