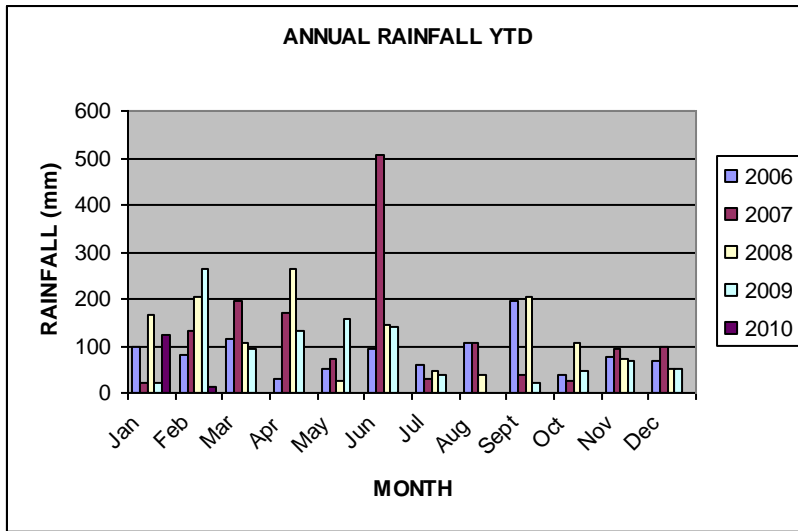


Irrigation and course renovation update.

As a follow on from the clubs latest February newsletter I would like to provide our membership with the facts and figures of what we have had to face this growing season and the greens committee plan into the immediate future.



As the above graph indicates we have had extremely dry conditions for the past 4 months lead into and including the 2010 summer at Shortland Waters. So far this summer we have recorded minimal rainfall compared to the rest of the east coast of NSW in November (66mm), December (53mm), January (123mm) and so far in February only 14.5mm of rain.

Our irrigation water storage is feed from the main dam on the 3rd and 4th holes it's maximum capacity is approximately 130 mega litres our irrigation pumping dam on the 5th holes maximum capacity is approximately 10 mega litres our combined maximum dam capacity totals **140 mega litres**, of this capacity due to the depth, sediment build up and other environmental issues (increase sodium and bicarbonate) we can only use 40 mega litres from the main dam and 8 mega litres from the pumping dam totaling **48 mega litres**.

Currently in the pumping dam we have approximately **6.5 mega litres** of usable irrigation water for the remainder of summer and early autumn (renovations).

During a normal summer irrigation cycle we use 303,095 litres of water per night.

(31+ days remaining of high water demand = over 9 mega litres)

Greens 4 minutes
Tees 15 minutes

Green surrounds 15 minutes
Fairway Carries 15 minutes

Since late December the level in the main dam has dropped below the transfer pipe feeding into the irrigation pumping dam this level is currently 400mm below the minimum fill line. At this time I informed the board and we then decided to stop irrigation fairways to preserve our dwindling supply



Arrow indicates transfer pipe

When we upgraded the irrigation system in late 2006 – 2007 we stopped using potable water to irrigate greens and tees this usage was approximately 40 mega annually saving the club \$40,000. Since February 2007 we have been collecting and reusing the water in our own dams to irrigate the whole golf course year to date we have used 143 mega litres of water. Previously these dams were only used for irrigating fairways.

The upgrade in 2006 -07 included the installed new mainlines, computerised control system, new pipe work to greens and tees and automatic sprinklers to greens, greens surrounds, tees and some fairway carries. At the time of installation we also install the wiring and isolation valves for the fairway irrigation upgrade.

Currently our fairways are irrigated when water is available with quick coupling valves and valve keys with impact sprinklers on them these valves where installed in the 1974 and are feed by a combination of uPVC and fibro main lines. Last year we spent over \$10,000 on fairway irrigation repairs for little or no result. This system is labour intensive and it inefficacy wastes our valuable water resource.

To effectively irrigation fairways it can take a cycle of ten days from start to finish this is mainly due to our old hydraulic pipe work tree and pressure in the fibro mainlines we can only have a maximum of 25 heads going at once and with 300+ heads on the course a small water window due to the demand of the new irrigation system we are unable to effectively irrigate the fairways during summer.

At the January board meeting the board approved the expenditure in April of \$30,000 for the upgrade to our irrigation pumping station. This includes new 200mm suction line, second pump for low flow duties, upgrade both pumps to a variable speed drive, upgrade from manual 100mm filter to a 200mm automatic self cleaning filter and upgrade the discharge line from 90mm to 200mm. Also at that meeting the board developed a sub committee to re open investigations with Hunter Water for the use of recycled water on fairways and to investigate the possibility of further Government Grants.

The benefits for the upgrade

- Increase energy savings up to 70% at partial load
- Constant water pressure
- Less mechanical stress to the pump, on check valves and pipe due to permanent on/off operation
- increase the watering window



Existing Pumping Station

On Tuesday 16th February we resurveyed in-house the course measurement for sprinkler head placement these markings are represented by the paint dots on the fairways and are at 25m spacing the different coloured paint spots don't represent any think other than distance between heads.

Quotes are currently being resubmitted for an accurate costing on replacing the fairway irrigation system and we are also looking for alternatives irrigation sources.

Course Renovations

As we come to the end of summer and the beginning of autumn we will be starting our course renovation program. This year we will be renovating fairways in early March and Greens and tees will commence the week before Easter on Monday 29th March.

Fairway Program

- Spike 125mm deep (5inches)
- Fertilise with a slow release balanced nutrition NPK
- Apply adequate irrigation to water in the fertiliser and hopefully receive follow up rainfall which is predicted in late March

Greens Program

- Double scarifiy
- Verti drain 12mm solid tynes 200mm deep(8 inches)
- Apply Gypsum
- Apply slow release balance fertiliser
- Topdress

Tee Program

- Verti drain 12mm hollow tynes 150mm deep (6 inches)
- Apply Gypsum
- Apply slow release balance fertiliser
- Topdress

How can you help as a member?

1. Please carry and use the red divot buckets to fill divots.
2. Do you have any contacts with excavation contractors?

I would like to thank the membership with their feedback; patience and support in these trying weather conditions. As soon as the weather improves so will our golf course.

CRAIG MOLLOY
Course Superintendent