



SEWAGE WATER TREATMENT PLANT

Impact Assessment Report 2023



PROLOGUE

It brings us immense pleasure to share the significant strides we have taken in the realm of corporate social responsibility (CSR), specifically in the establishment of a state-of-the-art bio sewage water treatment plant at the prestigious Delhi Golf Club (DGC).

SRF envisions an improved future for treatment of water in metro cities - a future where Water Treatment Plants ensure high-quality water purification, irrespective of its end operational use.

Recognizing the pressing need for sustainable water management, we embarked on a journey to make a positive impact on the local ecosystem by implementing this bio sewage water treatment plant to ensure sustainable irrigation of the verdant grounds at the Delhi Golf Club.

This initiative aligns seamlessly with DGC's core values, emphasizing responsible stewardship of natural resources. Through meticulous planning, cutting-edge technology, and a steadfast commitment to environmental sustainability, SRF has enabled the transformation of DGC's CSR vision into reality.

This initiative also underscores SRF's commitment to environmental stewardship and sustainability, as we recognize the pivotal role golf courses can play in fostering eco-friendly practices.

This bio sewage water treatment plant not only exemplifies our dedication to enhancing the overall experience for DGC members but also signifies our role as conscientious custodians of the land.

Today, we take a significant step forward in ensuring the Delhi Golf Club remains a paragon of excellence, not only in the sporting arena but also as a beacon of environmental consciousness and sustainability.



BACKGROUND

The global water crisis persists as a critical challenge, affecting communities worldwide. Water scarcity, exacerbated by climate change, population growth, and unsustainable water usage, further intensifies the crisis. Compounded by pollution and deteriorating water quality, this issue transcends geographical boundaries, posing a severe threat to public health, ecosystems, and overall socioeconomic stability. Urgent and collaborative efforts are imperative to address this crisis and ensure equitable access to this fundamental resource for present and future generations.

About Delhi Golf Club

Nestled in the heart of India's bustling capital, the Delhi Golf Club - a 179 acre course, stands as a distinguished oasis of tranquility and sporting excellence. Established in 1931, this premier golfing institution seamlessly blends tradition with modernity, offering a lush green sanctuary amid the dynamic urban landscape. The DGC comprises of 2 golf courses; a 18 hole Lodhi course and a 9 hole peacock course, to go along with a built-up and forested areas. Renowned for its challenging yet scenic courses, the Delhi Golf Club has become a haven for golf enthusiasts and a symbol of sporting prestige.



Delhi Golf Club's in-house bio sewage water treatment plant

Challenge

The Club faces its own water-related challenges as the demand of maintaining sprawling green landscapes, manicured fairways, and pristine putting greens impose a considerable strain on water resources. Prior to setting up of the water treatment plant, this demand was met through purchasing of raw water from CPWD (Central Public Works Department) which costed the club approximately Rs. 70-80 Lacs annually. Even this solution was not a reliable one as it had regular disruptions in the supply on account of various reasons. And this disruption, if faced during peak Delhi summers, added an unrepairable damage to the course's beauty. To avoid those, the club had to resort to private suppliers/tankers of water which added on to the cost.

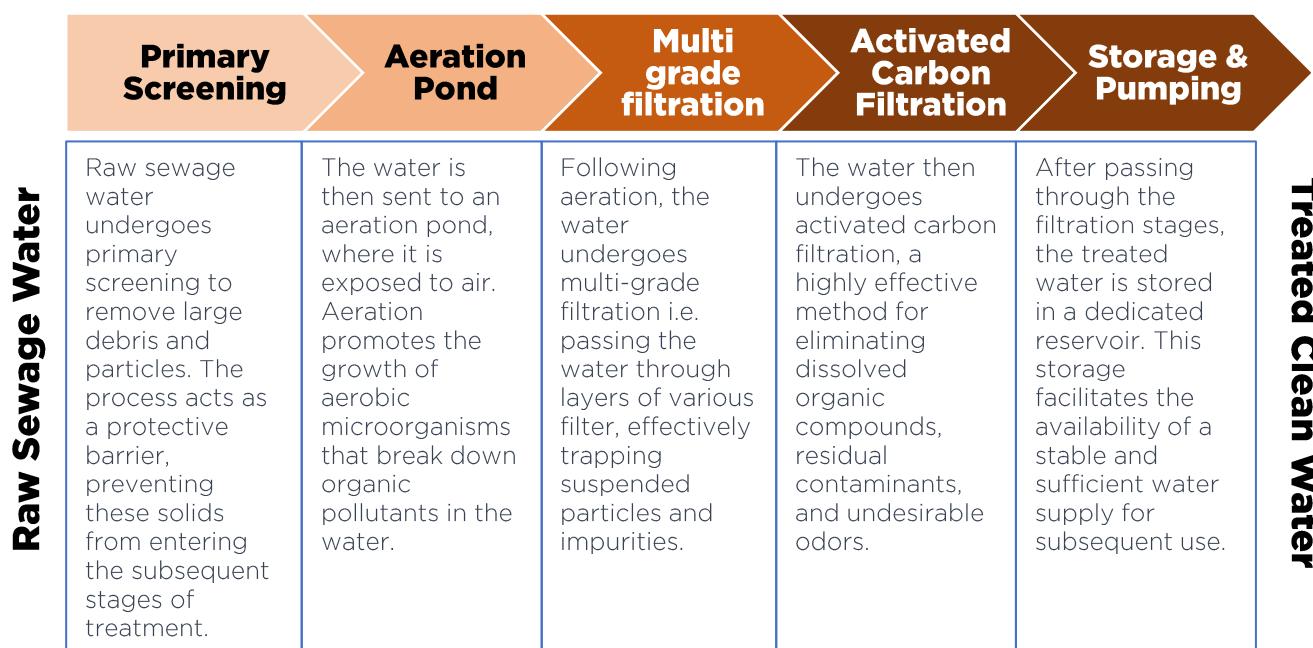
Solution

DGC recognized the pressing need for an alternate water source to address the challenges posed by water scarcity and sustainability. To mitigate the environmental impact, contribute to water conservation efforts in Delhi and become self-sufficient, the club partnered with SRF Ltd to setup a state-of-the-art Bio Sewage Water Treatment Plant on the club premises. Additionally, the club partnered with NDMC (New Delhi Municipal Corporation) to tap into the sewage pipeline running across, beneath the course. The water obtained from this pipeline was treated using the treatment plant and the end product i.e. cleaner water was used for course's irrigation. The partnership allowed DGC to procure 3 Megaliters per day (MLD) of raw water.

It was agreed between the parties that 20% of the total treated water would be provided to NDMC as and when requested by them for their horticulture department. This strategic partnership meant that the club was not only fulfilling its own irrigational needs but also aiding to NDMC's efforts in reducing the amount of untreated sewage water seeping into Yamuna river which is one of the major reasons for the pollution prevailing in the river. This move positions DGC as a leader in adopting eco-friendly practices, showcasing a responsible and forward-thinking approach to water management.

Process

The bio sewage water treatment plant at the Delhi Golf Club is based on 4th generation nano-scale nutrient intervention technology which ensures higher level of dissolved oxygen and growth of aerobic bacteria that accelerates the digestion of untreated sewage. This process helps in remediation of blue-green algae, reduce TDS (Total Dissolved Solids) and salinity. By integrating this technology, the golf club significantly reduced its dependence on purchasing raw water from CPWD for irrigation & alleviating the strain on local water supplies. The treated water from the bio sewage plant not only meets the stringent standards for golf course irrigation but also aligns with the club's commitment to environmental sustainability.



A glimpse of the Sewage Treatment Plant at Delhi Golf Club



Change in Flora & Fauna

Over the years, with increase in the continuous supply of high quality water at DGC, the forest cover of the course has seen a growth.

This gradual growth of the green cover has allowed the course to act as a natural habitat for the Red-Naped Ibis, a bird native to North India, captivating the course with its striking crimson crown and long curved bill.



Output & Impact

According to the most recent data, the average daily irrigation requirement at DGC is 1.9 million litres. This demand fluctuates with seasons, influenced by temperature and rainfall. Before the implementation of the STP, the golf course relied on freshwater from NDMC for irrigation, placing significant strain on the freshwater supply, particularly during the peak summer months of April, May, and June. Following the installation of the STP, which has a daily treatment capacity of 3 MLD, the same irrigation demand is now completely met through the treatment of sewage water. This not only satisfies the daily irrigation needs at DGC but also makes it a self-sustaining freshwater source by treating sewage water. With this initiative, the DGC, on an average, is preventing 700 million litres of sewage water each year, from being directly released into the Yamuna River, thereby aiding in government's effort of reducing water pollution in the river.



Pump site at DGC

There is also a potential financial saving that will benefit DGC from year 3 as the course currently has continued its clean water connection with NDMC which is on a fixed-meter charge i.e INR 55.5 lacs per annum. This continuation of the traditional water connection with NDMC is in place under observation for 2 years to counter any emergency water demand or shortage of supply of sewage water.



Acknowledgements

The Delhi Golf Club (DGC) is grateful to SRF Ltd in enabling the provision of the Bio Sewage Water Treatment Plant. Their continuous contribution towards a common goal is much appreciated.

DGC also thanks Arvind Sridharan and Ravi Kumar from Aspire Impact, for their support and contribution in putting together this report.

Note from Aspire Impact

Aspire Impact Mission Initiatives Pvt Ltd has been commissioned by the management of Delhi Golf Club to carry out an independent assessment of their Bio Sewage Water Treatment Plant's non-financial Impact performance.

Scope and Limitations

- Our assessment has been based on the data provided by the company. The scope excluded verification of the data and information provided, involving an independent auditor. Data and information in the report outside of the reporting period was not subject to verification.

Management responsibility

- The management of Delhi Golf Club has sole responsibility for the collection, reporting and integrity of the data shared with us during the assessment of the report. In performing the assessment work, our responsibility is to the Management; however, this statement represents our independent opinion and is intended to inform the outcome of our analysis to the stakeholders of Delhi Golf Club.

For Aspire Impact Mission Initiatives Pvt Ltd.



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