



LIQUID WASTE MANAGEMENT-INHOUSE- SEWAGE TREATMENT PLANT

MUJ is equipped with **4 STP** Plants with different capacity 1000 KLD, 350 KLD(two) and 150 KLD **IN TOTAL 1850 KLD**. Sewage treatment removes contaminants from wastewater, which includes physical, chemical, and biological processes to remove these contaminants and produce environmentally safer treated water (it has been used for flushing and gardening). In normalcy are producing 1850KL treated water per day.





**MANIPAL UNIVERSITY
JAIPUR**

(University under Section 2(f) of the UGC Act)



NAAC A+ GRADE WITH 3.28 SCORE

LIQUID WASTE MANAGEMENT-INHOUSE- SEWAGE TREATMENT PLANT





**MANIPAL UNIVERSITY
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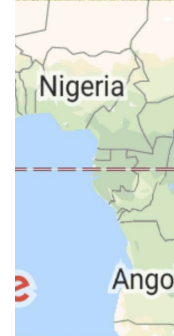
LIQUID WASTE MANAGEMENT-INHOUSE- SEWAGE TREATMENT PLANT



Rainwater harvesting- water canals in campus

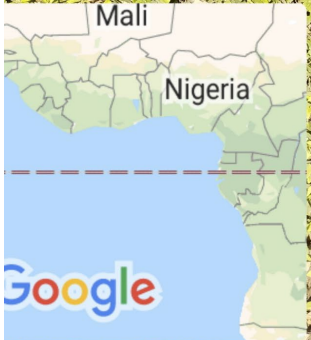


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More than 14 KM of Water Canals in University for water harvesting



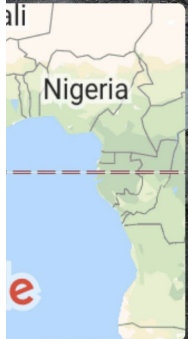
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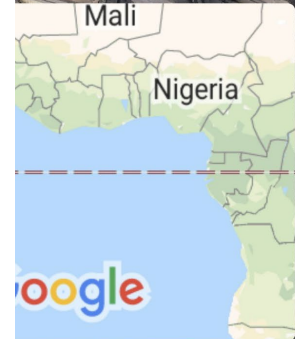
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Poen well recharges through Ponds

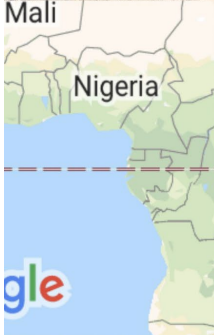


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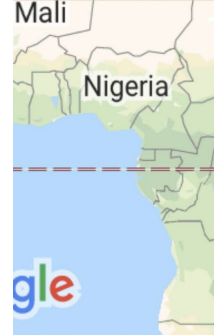


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Construction of Ponds

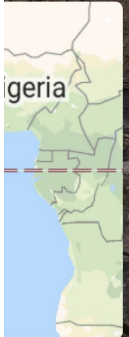


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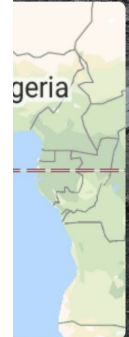


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Construction of Ponds



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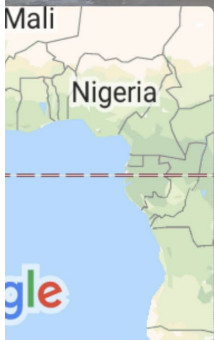


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Water Treatment Plants



Water Treatment Plants



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Water distribution System

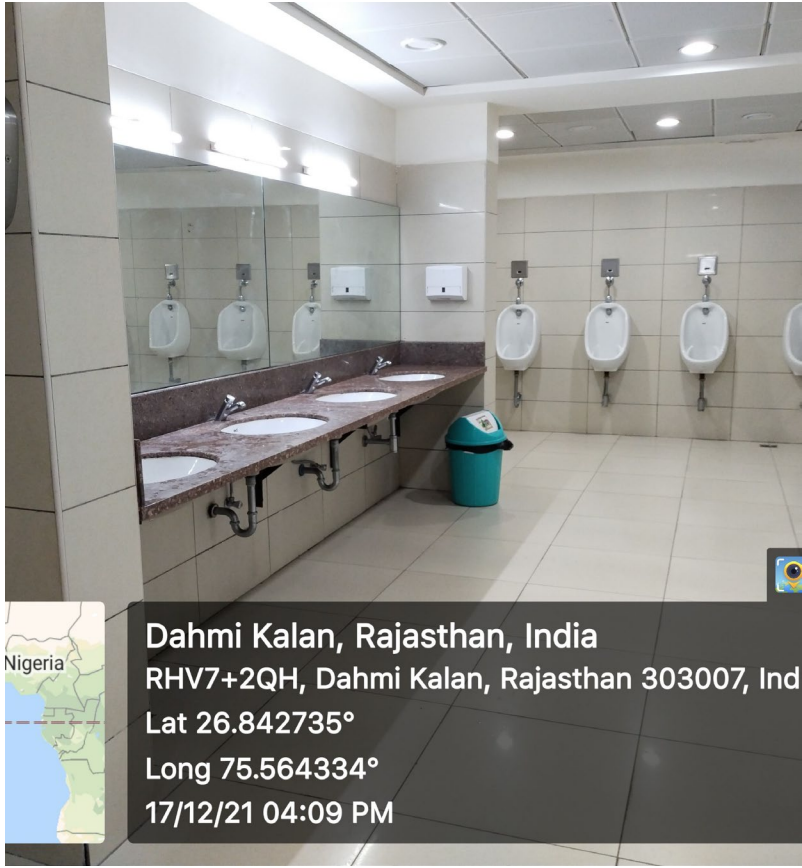




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Sensor Based Water Conservation



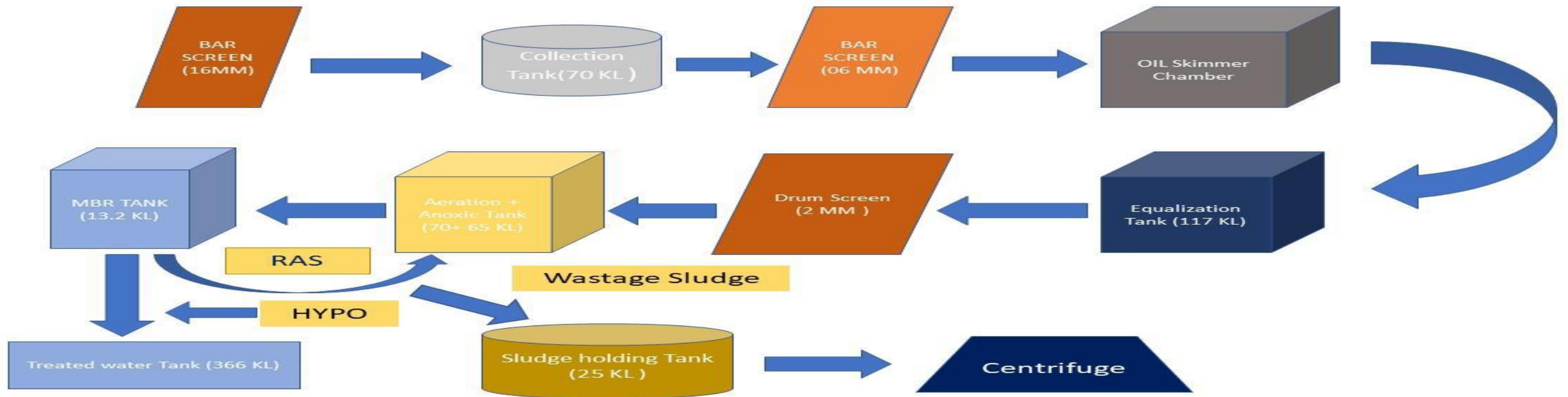
Water Aerator Installed in all



Drip Irrigation



PROCESS FLOW CHART –STP (350 KLD)



Process description of STP plant

1	Coarse Screen: -	Provided to remove screen particles greater than 16 mm.
2	Fine Screen : -	To remove any screen particles greater than 6 mm.
3	Collection Tank: -	To transfer raw sewage to Oil and Grease Skimmer.
4	Oil & Grease skimmer: -	To separate coarse particles and oil & grease respectively.
5	Equalization tank: -	Homogenization of the effluent and feed the flow uniformly in secondary process.
6	Drum Screen / Mini Screen: -	To separate particles greater than 2mm size before entering to Bioreactor.
7	Bioreactor tank: -	Aeration tank is provided with bacterial culture to reduce organic pollutants in presence of oxygen.
8	MBR tanks: -	Provided with Cassettes of membranes to separate water from mix liquid suspended solids.
9	Sludge holding tank: -	Wastage sludge stored in to this tank.
10	Centrifuge: -	Solid liquid separation of sludge.
11	Disinfection: -	HYPO dosing in to treated water discharge line.
12	Permeate tank: -	Treated water stored in this tank to supply for Horticulture & Flushing.



Water Reuse from WTP and STP

	Year 2021-22			
	WTP		STP	
	Domestic water in KL		Flush water in KL	
	200 KLD (MUJ)	80 KLD (Housing)	150KLD	350KLD
Month				
April	5570	1405	180	3464
May	4400	1273	444	3922
June	4366	1226	241	4118
July	3395	1145	152	4736
August	2278	1002	0	4502
September	2746	1216	167	4655
October	2765	1258	139	4040
November	2623	1216	52	4198
December	2974	1212	45	3905
January	3824	1132	15	3765
February	3267	1116	0	3661
March	3073	1184	0	3757
Total	34941	12085	1435	41305
Per month Avg.	3494.1	1208.5	143.5	4130.5