CITY WATER BALANCE PLAN

Basic Details

ULB Information

City
VARKALA (M)

District
THIRUVANANTHAPURAM

State
KERALA

Existing AMRUT City
No

	Name	Designation	Landline No.	Mobile No.	E-mail ID
Nodal Officer	Manmadan	Municipal Engineer		7907828009	melsgdvarkala@gmail.com
Mayor.Pre	K M Laji	NA		9446971311	secyvarkala1@gmail.com
Municipal.C/C.Ofc	L S Saji	NA		9495461608	secyvarkala1@gmail.com
Head,W.S/S.De	Jayakumari P	NA		9446272048	aevarkala1@gmail.com
HOD/P.H.de	Biju nelson	NA		9846111765	thqvarkala@gmail.com

Parastatal Agency

Any parastatal agency engaged? : Yes **No. Of Parastatal Agency : 1**

#	Organization name	Nodal officer name	Designation	Landline no.	Mobile no.	E-mail ID
1	Water authority	Deepthi S chandran	Assistant Executive engineer		9446272059	aevarkala1@gmail.com

City profile as per FY 2020-21

City population(Census 2011)	40048	**Households (Census 2011)**	9888	**City area (sq. km.)**	15
Wards in city	33	**Slum settlements (No.)**	15	**Industries (No.)**	259
Industrial clusters	6	**Population survey conducted in the last five years ?**	No	**Survey year**	NA
Survey city population	NA	**City population in 2021**	48058	**Households in 2021(no.)**	11866
Population density	3204	**Slum population in 2021**	4387	**Slum households 2021**	1083

Future Projection

City population in 2025	51903	**Households in 2025**	12816	**Slum households in 2025**	1170

Engineering College/ Organization/ Experts Working in Water Sector in the ULB

#	Type	Entity name	Nodal officer name	Landline no.	Mobile no.	E-mail ID
1	Organization	Kerala water Authority	Jayakumari P		9446272048	aevarkala1@gmail.com
2	Organization	minor irrigation	Asst Engineer	4712464814	4712464814	ssptvnorth.keralapost@gmail.com

Uploaded Images

#	Type	Name	Uploaded image(s)
1	Water Body	karunnilacode pond	

Water Supply

Major Water Sources Details

#	Type	Name / Location	No. of water tapping points	Quantity of water tapped in MLD	Location outside	Distance in km.
1	River	Vamanapuram river	1	4.4	Yes	16
2	Well	differt places in varkala municipality	300	5	No	NA

Water Treatment Plants (WTP)

#	Location of WTP	Designed capacity in MLD	Operational capacity in MLD	Water supply source	Technology used for automatic monitoring
1	Mullasseri 19 MLD	7	7	Vamanapuram river	Other(Manual)

Water Connections

#	Water connections type	No. of tap connections provided	No. of households	Water supplied in MLD
1	Residential / Households	6833	7762	4.5
2	Commercial Establishments	719	NA	1
3	Industries	10	NA	.20
4	Slums	35	35	.1
5	Institutional Establishments	200	NA	0.5

Present Water Supply to Residential/Households incl. Slums

Piped water supply in MLD	4.5	Water supply directly through tankers in MLD	.1	Water supply through tubewell & borewell in MLD	.6
Treated water supply in MLD	0	Total water supply in MLD	5.199999999999999	Average per capita water supply in LPCD	143.148

Estimated Future Water Demand in 2025 (in MLD)

Residential/ Households including slums	9	Commercial establishments	2	Industries	1
Institutional establishments	1	Slums	1	Total	13
Are you going to met the 100% future demand through subsurface water source?		Yes	How much future demand in MLD will be met through subsurface water source?		NA

WB Rejuvenation & RWH

Rainwater Harvesting (RWH)

Is rainwater harvesting included in bylaws?	Yes	**Status**	Implemented	**No. of water tanks at religious places in your city**	50

Water Source Quality Assessment

#	Type	Name	Area	Photograph	Site latitude & longitude	Water quality assessment	Has the source rejuvenated
1	Water Body	perumkulam	1			Bad	Yes
2	Water Body	karunnilakkode	.50			Bad	No

Used Water

Sewerage Coverage

Household connected to sewer network					
No. of households covered	0	**Sewage generated in MLD**	4.16	**Sewage treated through STP in MLD**	2.5

Household not connected to sewer network					
No. of households covered	0	**Sewage generated in MLD**	0	**Sewage treated through STP in MLD**	0

Septage Coverage

No. of households covered	0	**Sewage generated in MLD**	2.1	**Sludge treated through FSSM in KLD**	0	**Grey water recycled in MLD**	0

Sewage Treatment Plants (STP)

#	Location of STP	Designed capacity in MLD	Operational capacity in MLD	Reused capacity in MLD	Reuse purpose	Revenue from reused water	Automatic monitoring?	Technology used
No data available in table								

City Water Balance Plan Summary

Current Infrastructure assets/supply FY21-22 (A)		Projected consumption/demand FY25-26 (B)		Estimated gap FY25-26 (C)= (B)-(A)	
Water Supply					
Water supplied to households	5.199999999999999	Water demand	13	Gap in water supply	7.8
Water treatment capacity	7	Water to be treated	13	Gap in water treatment	6
Households with tap connections in slums	35	Total slum households	1170	Gap in household tap connections	1135
Households covered with Tap connections (City)	7762	Total households including slums	12816	Gap in households tap connections including slums	5054
Used Water					
Used water being treated	2.5	Used water generation	7.2	Gap in used water treatment	4.7
Used water being recycled	0	Used water to be recycled (20%)	1.44	Gap in used water recycling	1.44
Sewer connections provided (including coverage with septage management)	0	Total households	12816	Gap in household sewer connections/ coverage with septage management	12816