Water Management Cell

The list of activities/events organized during 2021-2022

Sl No.	Activity	Date	e
1.	Determination of water depth at different sources	March,	April,
		May 2022	
2.	Water Quality Testing	February,	March
		and April 2	2022
3.	Webinar on "Ground water- Making the invisible visible"	22 March 2	2021

Activities conducted during 2021-2022

1. Determination of water depth at different sources

Available water depth of the various sources are taken for three consecutive months, March, April, and May of 2022. The water bodies are designated as A, B, C and D (Refer Fig. 1).

Table 1. Determination of Water Depth

No	Designation	Source	Water Depth (m)						
	Designation	Source	March 2022	April 2022	May 2022				
1	A	MBCET	2.23	4.1	4.3				
2	В	Seminary	2.25	5.0	5.25				
3	С	Sarvodaya Vidyalaya	3.40	3.1	3.5				
4	D	Mar Ivanios College	4.76	4.34	5.4				

2. Water Quality Testing

Water samples from 10 different locations namely, Seminary, Sarvodaya, MBCET, Ivanios, were taken directly from the source. Then samples from the Girls and Boys hostel before filtration and after filtration from cooler were taken. For MBCET campus, samples after filtration were taken from coolers from G- block and A- block. The samples were tested for 16 parameters and the values were compared against the permissible limits from IS-10500. The 10 sampling locations and the test results are given in Table-2 below.

Table 2 Test Results February 2022

		Source Designation									
		Se	Sa	М	Iva	Gir	Girls	Boy	Boys	G-	Α
No	Parameter	Se	rv	B	ni	ls	Hos	S S	Host	Bl	Bl
		m	0	C	OS	Ho	tel -	Hos	el -	OC	OC
		in	d	E	US	ste	Cool	tel -	Cool	k	k
		""	ay	T		I	er	Sou	er	Co	Co
		ar	a	•		so	Ci	rce	Ci	ol	ol
		У				ur				er	er
		,				ce					
1	рН	6.28	6.10	6.98	5.60	6.94	7.80	7.32	7.49	7.63	7.98
	(6.5-8.5)										
2	Conductivity	283	274	150	151	197	670	169	177	169	161
-	(2500μS/m) Turbidity										
3	(1NTU)	0	0	0	0	0	0	0	0	0	0
4	TDS	0.43	0.43	0.43	0.43	0.49	0.44	0.44	0.44	0.44	0.44
-	(500mg/l)	0.43	0.43	0.43	0.43	0.43	0.44	0.77	0.77	0.44	0.44
5	Hardness	25	28	22	23	10	11.1	11	13	9	12.5
	(200mg/l)										
6	Acidity	0	0	0	0	0	0	0	0	0	0
	(200mg/l)										
7	Alkalinity	0	0	0	0	0	0	0	0	0	0
	(200mg/l)										
8	Chloride	9.5	9.4	9.6	15	9.3	9.4	9.8	9.7	9.6	9.2
	(250mg/l)										
9	Residual chlorine (0.2 mg/l)	0	0	0	0	0	0	0	0	0	0
10	Sulphide		_	_							
10	(0.05 mg/l)	0	0	0	0	0	0	0	0	0	0
11	*Fluoride	1	4	4	1	1	1	1	4	4	1
**	(1 mg/l)	1	1	1	1	1	1	1	1	1	1
12	*Chlorine	0	0	0	0	0	0	0	0	0	0
	(mg/l)								<u> </u>		
13	*Nitrate	0	0	0	0	0	0	0	0	0	0
	(45mg/l)										
14	*Nitrite	0	0	0	0	0	0.5	0	0.5	0.5	0.5
	(3mg/l)										
15	*Ammonium	0	0	0	0	0	0.6	0	0	0	0
	(0.5mg/l)										
16	*Bacteriological	Υ	N	Υ	N	N	N	N	N	N	N
	analysis (0 CFU/100ml)		',		.,	.,	.,	.,	. •	.,	'
<u></u>	CFU/100mi)										

It is observed that the samples from Seminary and the MBCET had presence of E.coli for February 2022. It is to be noted that both samples are taken directly from source and the samples from outlets for MBCET did not have any presence of E.coli, which indicates the proper working of the existing

filter systems. Chlorination is done for all the water bodies after getting the water quality test results. The water quality test is repeated for all water bodies in March and April 2022

Table 3 Test Results March 2022

						Source	Designation	on			
No	Parameter	Se m in ar y	Sa rv o d ay a	M B C ET	lva nio s	Gir Is Ho ste I so ur ce	Girl s Hos tel - Coo ler	Boy s Hos tel - Sou rce	Boys Host el - Cool er	G- Bl oc k Co ol er	A BI oc k Co ol er
1	pH (6.5-8.5)	6.58	6.13	7.08	5.60	7.08	7.32	7.69	7.81	7.52	7.64
2	Conductivity (2500µS/m)	121	193	151	134	157	608	757	885	885	110
3	Turbidity (1NTU)	0	0	0	0	0	0	0	0	0	0
4	TDS (500mg/l)	1.06	1.12	0.87	0.78	0.91	3.54	4.40	5.12	5.12	0.62
5	Hardness (200mg/l)	30	32	25	25	12.5	12.5	12.5	15	10	13
6	Acidity (200mg/l)	0	0	0	0	0	0	0	0	0	0
7	Alkalinity (200mg/l)	0	0	0	0	0	0	0	0	0	0
8	Chloride (250mg/l)	9.99	9.99	9.99	22.49	9.99	9.99	9.99	9.99	9.99	9.99
9	Residual chlorine (0.2 mg/l)	0	0	0	0	0	0	0	0	0	0
10	Sulphide (0.05 mg/l)	0	0	0	0	0	0	0	0	0	0
11	*Fluoride (1 mg/l)	1	1	1	1	5	1	1	1	1	1
12	*Chlorine (mg/l)	0	0	0	0	0	0	0	0	0	0
13	*Nitrate (45mg/l)	0.5	0	0	0	0	0	0	0	0	0
14	*Nitrite (3mg/I)	0	0.5	0.5	0.5	0	0.5	0.5	0.5	0.5	0.5
15	*Ammonium (0.5mg/l)	0	0	0	0	0	0	0	0	0	0
16	*Bacteriological analysis (0 CFU/100ml)	N	N	N	N	N	N	N	N	N	N

It is seen that in March 2022 the Fluoride content in Girls hostel's source was way above the permissible limit and to be noted that the sample from the cooler of Girls hostel had fluoride levels under the limits. This is the indication of adequate filtration done in the hostel.

Table 4 Test Results April 2022

						Source [Designation	on			
		Se	Sa rv	M B	lva nio	Gi rls	Gir Is	Bo ys	Bo ys	G- Blo	A Bl
No	Parameter	m in	o d	C ET	S	H	Ho ste	Ho ste	Ho stel	ck Coo	oc k
		ar	ay a			tel so	l - Co	l - So	- Co	ler	C
		У	a			ur	ole	urc	ole		ol
						ce	r	е	r		er
1	pH (6.5-8.5)	6.62	6.08	6.85	5.36	6.44	7.05	7.01	6.96	6.84	7.05
2	Conductivity (2500μS/m)	213	205	196	153	158	582	159	144	181	104
3	Turbidity (1NTU)	0	0	0	0	0	0	0	0	0	0
4	TDS (500mg/l)	88	118	113	88	92.1	33.8	4.01	83.7	53.3	30.9
5	Hardness (200mg/l)	50	62.5	25	37.5	62.5	25	50	30	50	10
6	Acidity (200mg/l)	0	0	0	0	0	0	0	0	0	0
7	Alkalinity (200mg/l)	0	0	0	0	0	0	0	0	0	0
8	Chloride (250mg/l)	9.99	9.99	9.99	14.99	9.99	9.99	9.99	9.99	14.99	9.99
9	Residual chlorine (0.2 mg/l)	0	0	0	0	0	0	0	0	0	0
10	Sulphide (0.05 mg/l)	0	0	0	0	0	0	0	0	0	0
11	*Fluoride (1 mg/l)	1	1	1	1	1	1	1	1	1	1
12	*Chlorine (mg/l)	0	0	0	0	0	0	0	0	0	0
13	*Nitrate (45mg/l)	0	0	0	0	0	0	0	0	0	0
14	*Nitrite (3mg/l)	0	0.5	0	0	0.5	0.5	0.5	0	0	0
15	*Ammonium (0.5mg/l)	0	0	0	0	0	0	0	0	0	0
16	*Bacteriological analysis (0 CFU/100ml)	N	N	N	N	N	N	N	N	N	N

From the test conducted in April 2022, it is seen that all the parameters of all samples are found to be within the permissible limits as per Indian standards.

3. Webinar on "Water Resources of Kerala – Development, Issues and Strategies"

On 'World Water Day', the Water Management Cell, in association with Environmental and Water Resources Engineering Research group, Department of Civil Engineering conducted a webinar on "Groundwater- Making the invisible visible" on 22nd march 2022 at 7.00 pm. The session was handled by **Dr. Dineshan V. P**, Retd. Senior Principal Scientist, CWRDM, Kunnamangalam. The event was coordinated by Dr. Elizabeth C. Kuruvilla, Professor, (Dept. of CE) and Dr. Jaya S Pillai.

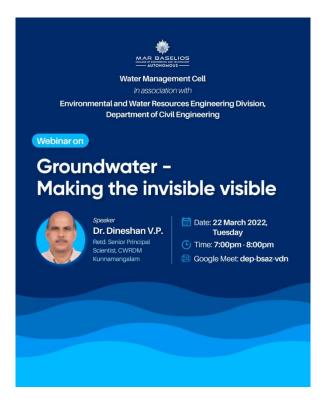


Fig. 8 Flyer of webinar

Prepared by

Jisha S V

Associate Professor & Coordinator of Water Management Cell

Department of CE, MBCET