

CRITERIA – 7.1.4

B.VRAJU COLLEGE
VISHNUPUR - BHIMAVARAM - 534202

NATIONAL ASSESSMENT AND ACREDITATION COMMITTEE

(NAAC)

QUALITATIVE METRIC CRITERIA - 7.1.4

S.No.	Contents	Page No.
1	PARAMETERS OF CRITERIA 7.1.4	1
2	RAIN WATER HARVESTING PIT	2
3	PICTURE OF WATER TANK WITH BUNDS	3
4	GEO TAGGING PICTURES OF WASTE WATER RECYCLING	4
5	SEWAGE TREATMENT PLANT WATER DISTRIBUTION ROUTE MA	5
6	SEWAGE PLANT GEO TAGGING PICTURE	6
7	SEWAGE TREATMENT PLANT UNITS	7 AND 8
8	SEWAGE WATER COLLECTING CHAMBER	9 AND 10
9	SAND, CARBON FILTRATION & CHLORINATION PROCESSES	11
10	AIRBLOWERS	12
11	SUMP PICTURE	13
12	FRESH WATER FILTRATION PLANT FLOW CHART	14
13	FRESH WATER PROCESSING UNIT PICTURE	15 AND 16
14	SMART WATER GRID PROJECT	17
15	CONTENTS OF SMART WATER GRID PROJECT	18
16	DOCUMENT	19
17	WATER DISTRIBUTION ROUTE MAP	20
18	SUMP WATER TANKS IN CAMPUS	21
19	WATER STORAGE TANKS DETAILS	22 TO 25
20	SENSOR INVOICE	26
21	SMART WATER GRID PROJECT DETAILS & BLOCK DIAGRAM	27 TO 33
22	CHEMICAL INVOICE	34
23	WATER ANALYSIS REPORTS	35 TO 49



S. Krishna Rao
PRINCIPAL
B.V. RAJU COLLEGE
Vishnupur, BHIMAVARAM-534 202

B.V. RAJU COLLEGE

VISHNUPUR - BHIMAVARAM - 534202

**NATIONAL ASSESSMENT AND ACREDITATION COMMITTEE
(NAAC)**

QUALITATIVE METRIC CRITERIA - 7.1.4

Our B V RAJU COLLEGE is providing Water conservation facilities in our campus like,

- 1) Rain water harvesting,
- 2) Construction of tanks and bunds,
- 3) Waste water recycling and
- 4) Maintenance of water bodies and distribution system in the campus.

Rain Water Harvesting – We are harvesting rainwater by digging harvesting pits in our campus. We have 4 cubic square yards of pits in the North-West place of our college. These pits are filled with stones, coarse aggregates and sand. Rain water is pumping through the pipes connected to these pits from the top of the roofs of our college building.

Construction of Tanks and Bunds – We have constructed 2 tanks with bunds in our campus for the purpose of storage of water from the fresh water canals from our local area. We are using this water in TWO major ways. One is for processed for drinking purpose and second one is for domestic usage.

Waste Water Recycling – We are maintaining 3 sewage plants in suitable areas of our campus for the purpose of waste water recycling. The domestic waste water is recycling by the sewage plants using media (plastic fillings) which are adsorbing the waste content present in the water. Then, after removal of these media with the waste, water is processed through filters and then we are also performing dis-infection of this water with Chlorine in ppm units. Finally the treated water is used to plants in our campus.

Maintenance of Water bodies and Distribution system in the

Campus – Well equipped water bodies maintenance and distribution system is organizing in our campus. We are collecting water from the fresh water canals and Drinking water undergoes with the treatments of Filtration, R O, U V and Ozonisation processes. After that we are testing the Chemical parameters also to this processed drinking water and then only we are distributing the potable water through pipe-lines. Domestic water also treated in a proper way, it undergoes alum treatment and sand filtration processes before distributing it into pipe lines and to overhead tanks on the college building.



S. R. Anurag
PRINCIPAL
B.V. RAJU COLLEGE
Vishnupur, BHIMAVARAM-534 202

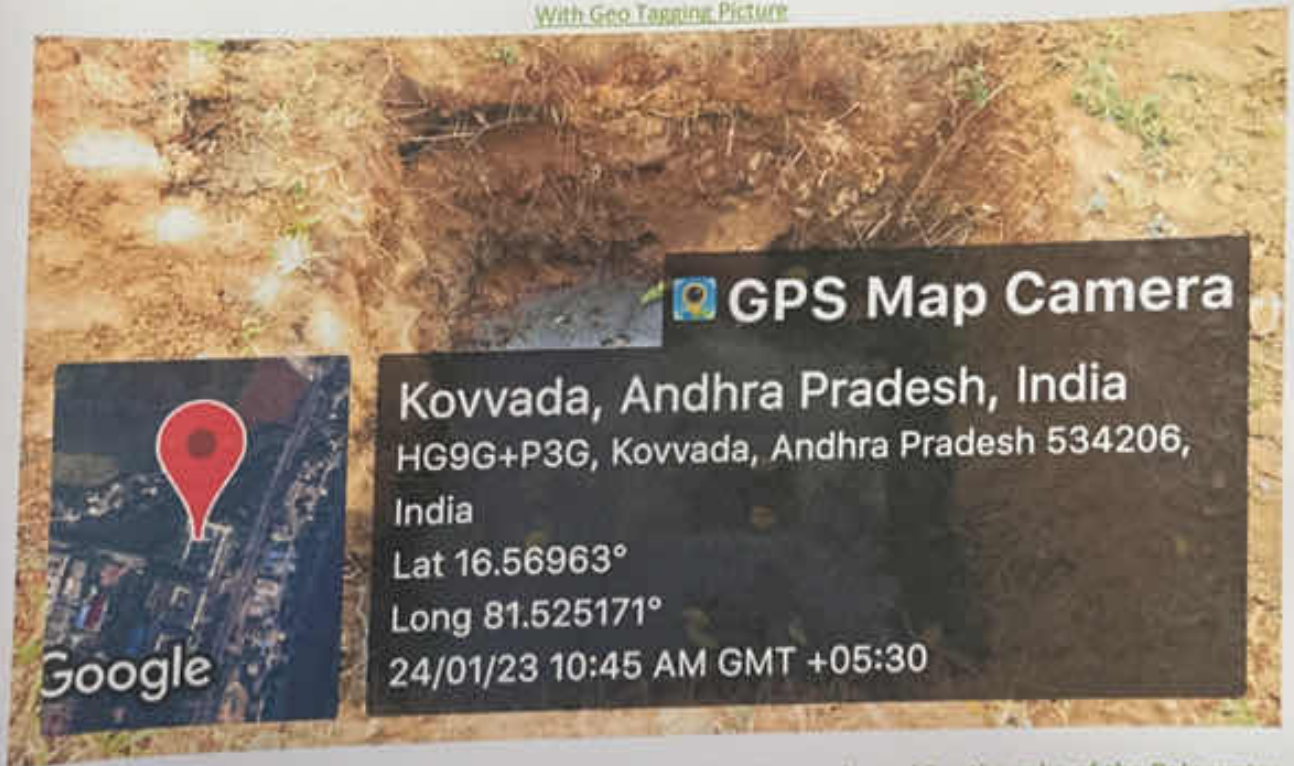
RAIN WATER HARVESTING

RAIN WATER HARVESTING PIT IN B.V.RAJU COLLEGE

Normal Picture



With Geo Tagging Picture



In B.V.Raju College Rain Water Harvesting Pit was dugged For the sake of the Rain water Collection upon the Building of the College with dimensions 4 Cubic feet's, Having three layers of Stones, Coarse aggregates and Coal.



Relhamm D
PRINCIPAL
B.V. RAJU COLLEGE
Vishnupur, BHIMAVARAM-534 202

**CONSTRUCTION OF
TANKS & BUNDS**



S. Rihman P.
PRINCIPAL
B.V. RAJU COLLEGE
Vishnupur, BHIMAVARAM-534 202

Picture of the Water Tank with B.V. RAJU COLLEGE

**WASTE WATER
RECYCLING**



Kovvada, Andhra Pradesh, India
HG9G+P3G, Kovvada, Andhra Pradesh 534206, India
Lat 16.56976°
Long 81.525003°
12/01/22 11:09 AM



Kovvada, Andhra Pradesh, India
HG9G+P3G, Kovvada, Andhra Pradesh 534206, India
Lat 16.56976°
Long 81.525003°
12/01/22 11:09 AM

R. Manoj Reddy
PRINCIPAL
B.V. RAJU COLLEGE
Vishnupur, BHIMAVARAM-534 202

B.V. RAJU COLLEGE
VISHNUPUR
WG Dist. (A.P.)
Pin-534 202
BHIMAVARAM

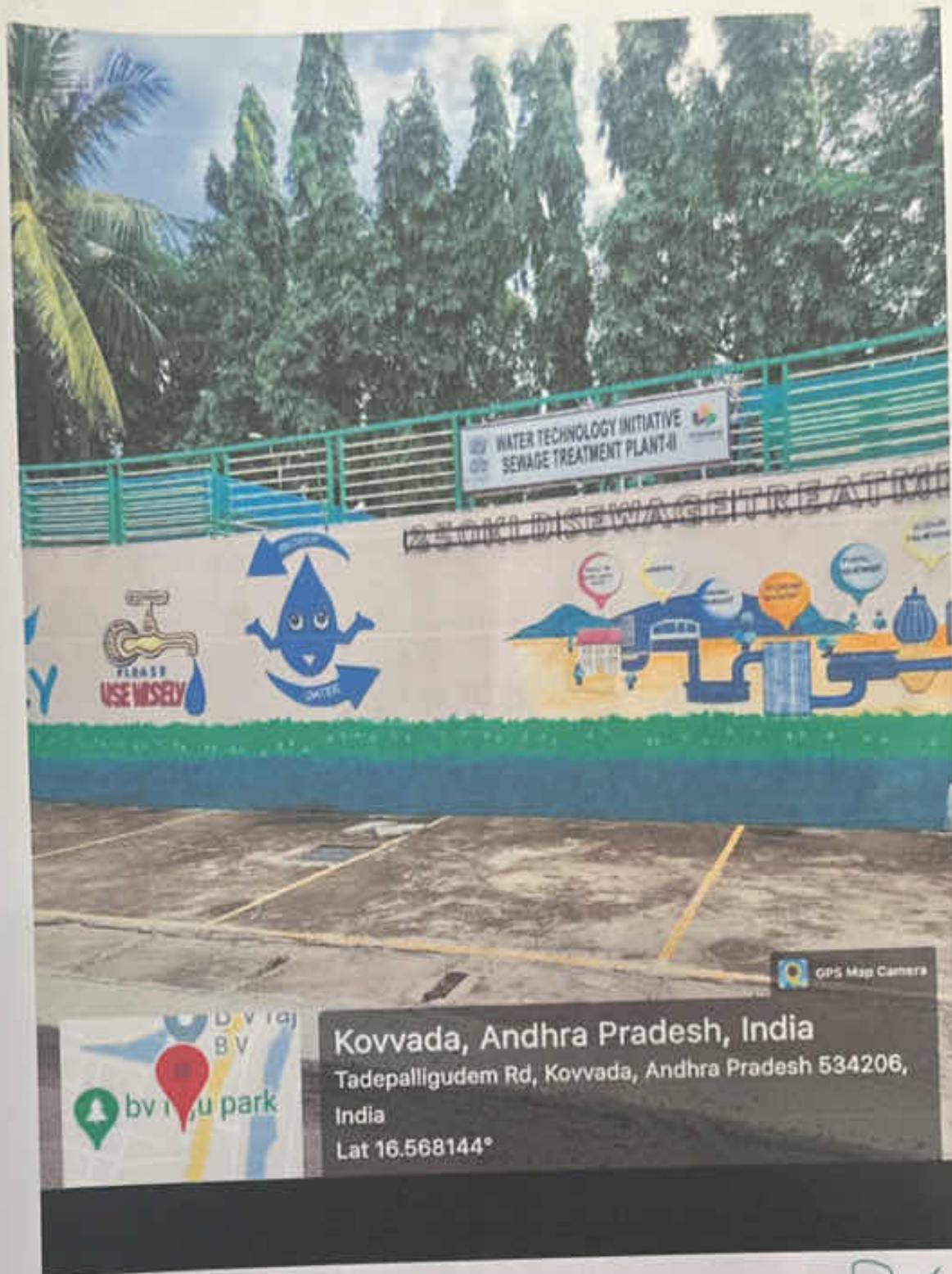
SEWAGE TREATMENT PLANT WATER DISTRIBUTION ROUTE MAP



	OUT LET SEWAGE LINE
	INLET SEWAGE LINE
	SEPTIC TANK
	Sewage Treatment Plant 200KLD - 2No's Sewage Treatment Plant 250KLD - 1No.
SRI VISHNU EDUCATIONAL SOCIETY	



R. J. Mamm
PRINCIPAL
B.V. RAJU COLLEGE
 Vishnupur, BHIMAVARAM-534 202



WATER TECHNOLOGY INITIATIVE
SEWAGE TREATMENT PLANT-II

SEWAGE TREATMENT



GPS Map Camera



Kovvada, Andhra Pradesh, India
Tadepalligudem Rd, Kovvada, Andhra Pradesh 534206,
India
Lat 16.568144°



R. Bhavanna Ray
PRINCIPAL
B.V. RAJU COLLEGE
Vishnupur, BHIMAVARAM-534 202

SEWAGE TREATMENT PLANT - I

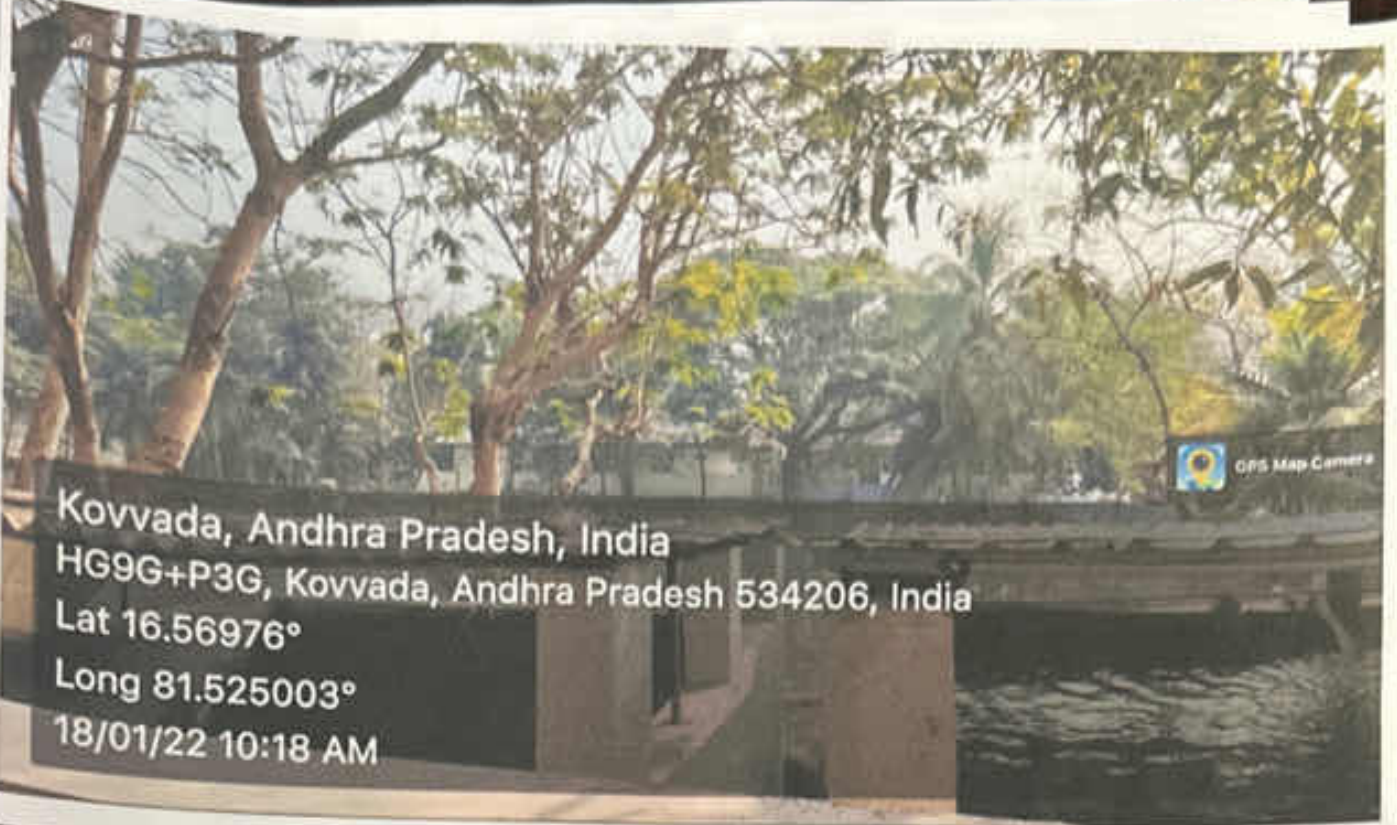
Built Up Area: 115.72 Sq. Mt.

Units:

1. Collection
2. Aeration
3. Clarifier
4. Tubular Filters
5. Pressure Sand Filter
6. Activated Carbon Filter
7. Sludge holding
8. Treated Water Storage
9. Chlorine Dosing



S. R. Harman P
PRINCIPAL
B.V. RAJU COLLEGE
Vishnupur, BHIMAVARAM-534 202



GPS Map Camera

Kovvada, Andhra Pradesh, India
HG9G+P3G, Kovvada, Andhra Pradesh 534206, India
Lat 16.56976°
Long 81.525003°
18/01/22 10:18 AM



GPS Map Camera

Kovvada, Andhra Pradesh, India
HG9G+P3G, Kovvada, Andhra Pradesh 534206, India
Lat 16.56976°
Long 81.525003°
18/01/22 10:16 AM

Geo Tagging Picture of the Sewage Plant in B.V.RAJUCOLLEGE Campus



4

S. Khammar Reddy
PRINCIPAL
B.V. RAJU COLLEGE
Yishnupur, BHIMAVARAM-534 202



Picture of the Domestically Used Water Collecting Chamber, before going to Processing in B.V.RAJU COLLEGE



S. Rithamma Roy
PRINCIPAL
B.V. RAJU COLLEGE
Vishnupur, BHIMAVARAM-534 202



Picture of the domestically used water collecting MBBR tanks in B.V.Raju College



R. Krishnam Raju

PRINCIPAL
B.V. RAJU COLLEGE
 Vishnupur, BHIMAVARAM-534 206



Picture of the Domestically Used Water under Processing with Sand and Carbon Filters and then undergoes Chlorination



S. R. Krishnam Raju
PRINCIPAL
B.V. RAJU COLLEGE
Vishnupur, BHIMAVARAM-534 202



Picture of the Domestically Used Water after filtration collected water chambers are experienced with Air Bubbles by Air Blower in B.V. RAJU COLLEGE



S. R. Hanumanth Reddy
PRINCIPAL
B.V. RAJU COLLEGE
Vishnupur, BHIMAVARAM-534 202



Picture of the Domestically Used Water after filtration, that fresh water
Collecting Sump in B.V.RAJU COLLEGE



S. R. Iyengar

PRINCIPAL
B.V. RAJU COLLEGE
Vishnupur, BHIMAVARAM-534 202

13

**MAINTENANCE OF
WATER BODIES AND
DISTRIBUTION
SYSTEM**



Picture of the flow chart of fresh water filtration plant in B.V.RAJU COLLEGE



S. Ramm Rao
PRINCIPAL
B.V. RAJU COLLEGE
Vishnupur, BHIMAVARAM-534 202



Picture of the Fresh Water Processing Unit Plant (Membrane Filters) In B.V.RAJU COLLEGE



R Krishnam Raju
PRINCIPAL
B.V. RAJU COLLEGE
Vishnupur, BHIMAVARAM-534 202



Picture of the Fresh Water Processing Unit Plant - Reverse Osmosis (RO) In B.V.RAJU COLLEGE



R Krishnam Raju

**PRINCIPAL
B.V. RAJU COLLEGE
Vishnupur, BHIMAVARAM-534 202**



B.V.RAJU COLLEGE

Dr.B.V.RAJU FOUNDATION & SRI VISHNU EDUCATIONAL SOCIETY



VISHNU
UNIVERSAL LEARNING

SMART WATER GRID PROJECT

S.NO	CONTENT
1	INTRODUCTION
2	WATER DISTRIBUTION ROUTE MAP
3	SUMP WATER TANKS IN CAMPUS
4	WATER STORAGE TANKS DETALS I ACADAMIC BLOKS
5	WATER STORAGE TANKS DETALS I HOSTELS
6	SENSORS INVOICE
7	SENSOR BASED WATER MANAGEMENT
8	CHEMICALS INVOICE
9	SCHDULE FOE COLLECTING WATER SAMPLES
10	WATER ANALYSIS SAMPLE REPORTS

B.V.RAJU COLLEGE

(Dr. B.V. Raju Foundation & Sri Vishnu Educational Society)

SMART WATER GRID PROJECT

The Smart Water Grid Project is divided into three parts, one is pertaining to supply of water / sewage disposal, second one is water quality testing and third one is with regard to pumping of water to overhead tanks and monitoring the consumption levels.

Chemical & Physical properties of the water will be tested by B.V. Raju College. Water quality testing to be done at regular intervals at different points at Academic & Hostel Blocks, kitchens & Dining halls in the campus.

Water quality testing to be conducted every week at different points by collecting 10 samples at different points in the campus and the report shall be compared with the external report at least once in a month.

WATER DISTRIBUTION ROUTE MAP



No. Of Over Head Tanks in Academic's - 109 No's.

No. Of Over Head Tanks in Hostels - 307 No's.

No. Of Water SUMP's - 18 No's.

STP Sewage Treatment Plant's - 3Nos.

Main Water Line

M Motor

Sewage Line

Drinking Water Line

RAW Water Line

RAW Water Sump

Drinking Water Tank

RAW Water Tank

SRI VISHNU EDUCATIONAL SOCIETY



S R Krishna Rao

PRINCIPAL
B.V. RAJU COLLEGE
 Vishnupur, BHIMAVARAM-534 202.

B.V.RAJU COLLEGE

(Dr B.V.RAJU FOUNDATION & SRI VISHNU EDUCATIONAL SOCIETY)

1. Sump water tanks in campus(Below Ground Level)

Sump tank Details		
Sl.No	Name of Location	Qty
1	1st phase water plant	1
2	Polytechnic College Back side	1
3	1st phase water plant	1
4	Ganga Hostel	1
5	VDC Block -2	1
6	Pragna Hostel	1
7	VDC Block -1	1
8	STP - 3	1
9	Pragathi Hostel	1
10	VIT Block 2	1
11	VIT New block	1
12	3rd Phase water plant	1
13	Sahiti Hostel	1
14	CV Raman Hostel	1
15	Swimming Pool	1
16	Dhanavanthri Hostel	1
17	Medha Hostel	1
18	Alluri Sita Rama Raju Hostel	1
Total No. Of SUMP tanks		18

Water Storage tanks in Campus			
Sl.No	Name of Location	RAW Water tanks	Drinking Water tanks
1	In Hostel Block's	269	38
2	In Academic Block's	91	18
Total water tanks in No's		360	56
		416	

Total Water Storage in Campus			
Sl.No	Name of Location	RAW Water Capacity in Ltr	Drinking Water Capacity in Ltr.
1	In Hostel Block's	772000	51500
2	In Academic Block's	312000	25000
Total storage in Ltr.		1084000	0
		1084000	



S. R. Chinnam Reddy
PRINCIPAL
B.V. RAJU COLLEGE
 Vishnupur, BHIMAVARAM-534 202

B.V. RAJU COLLEGE
(Dr. B.V. RAJU FOUNDATION & SRI VISHNU EDUCATIONAL SOCIETY)
WATER STORAGE TANK DETAILS IN Academic Block's

Sl. No	Name of College	RAW Water in (litr)			Drinking Water in (litr)					
		Sintex Tank in Ltr.			RCC Tanks in Ltr					
		3000	2000	1000	Over Head Tank (1,00,000)	Cement (40,000)	Sintex Tank in Ltr.			
1	MCA									
2	Degree College									
3	Front Campus	2	12				1			
4	BVRC (Old)	4						1		
5	SVCP		10				1			
6	SBPc		7					1		
7	VIT 1	4						1		
8	VIT 2							1		
9	VIT workshop			3				1		
10	VIT Public Toilet			1				1		
11	VIT Drawing Hall		2							
12	VIT Centre of Excellence		4					1		
13	VIT Library			2				1		
14	SVECW A	2						1		
15	SVECW B	0	4					1		
16	SVECW C	3						1		
17	SVECW D						1			
18	SVECW Liabrary									
19	VS			3				1		
20	Vishnu school Toilets	2	1							
21	VDC Block 1	8	12				3			
22	VDC Block 2						2			
23	VDC Hospital Block						1	1		
24	VDC CSSD		1					1		
25	VDC Libraray Block	0	1					1		
26	Total No. Of Tanks (109No's)	25	9	91	0	3	7	11		
	Total water capacity in Litr.								312000	18



B.V. RAJU COLLEGE
PRINCIPAL
 VISHNUPUR, BHIMAVARAM-534 202-

B.V. RAJU COLLEGE

Dr. B.V. RAJU FOUNDATION & SRI VISHNU EDUCATIONAL SOCIETY

WATER STORAGE TANK DETAILS IN HOSTEL BLOCK'S

SLNo	Name of Hostel	RAW Water in (Ltr)			Over Head Tank (1,00,000)	Cement (40,000)	Drinking Water in (Ltr)	
		Sintex Tank in Ltr.		Sintex Tank in Ltr.				
		3000	2000	2000			1000	
1	Dhanawantri Hostel		13	1				
2	Vivekananda Hostel		13					
3	Visweswarajah Hostel		13			5		
4	Alluri Sita Rama Raju Hostel		14					
5	Sir Aurthur Cotton Hostel		6	1				
6	C.V. Raman Hostel				1			
7	Boys GYM		2			2		
8	Swining Pool		3					
9	Narmada Hostel		4	1				
10	Seet Mess		6	1				
11	Ganga Hostel						2	
12	Seeta Canteen							
13	Yamuna Hostel							1
14	Girls GYM			8				1
15	Ganaga Hostel Toilets		1					
16	Lundry	3						
17	Driver Colony		1					
18	Annapurna Kitchen		1					1
19	Annapurna Canteen				1			
20	Annapurna Kitchen							1
21	Poojari Quarters		1					1
22	2nd Gate Juse point			1				1
	Temple Square			2				1



g. r. Khanna

PRINCIPAL
B.V. RAJU COLLEGE
Vishnupur, BHIMAVARAM-534 202

SLNo	Name of Hostel	RAW Water in (Ltr)				RCC Tanks in Ltr		Drinking Water in (Ltr)		
		Sintex Tank in Ltr.		Over Head Tank (1,00,000)	Cement (40,000)	Sintex Tank in Ltr.		Sintex Tank in Ltr.		
		3000	2000			1000	2000	1000	500	
23	Bhuvana Hostel			8						
24	Bhargavi Hostel			8						
25	Neelima Hostel			8						
26	Nirmala Hostel		1	8				1		
27	Manasa Hostel			3						
28	Mrudhula Hostel			5						
29	Revathi Hostel			3						
30	Rohini Hostel			5						
31	Spoorthy Hostel		4					2		
32	Srujana Hostel		4							
33	Sadhana Hostel		3					1		
34	Gayatri Hostel		5					1		
35	Videhi Hostel		5					1		
36	Vishnavi Hostel		5					1		
37	Sarada Hostel		4					1		0
38	Padmavathi Hostel						2			
39	Saraswathi Hostel		5							
40	Rajyalakshimi Hostel		5					1		
41	Rajeswari Hostel		5							
42	3rd Gate	VIT college		1					1	
43	3rd Gate Public toilet	Area		1						
44	Seeta Hostel									
45	Kaveri Hostel	Front campus		6					1	
46	Guest House			2						
47	FM	Guest House		1						
48	Seeta Indoor Auditorium	Area		2						
49	Vishnu Food Plaza Toilets	Store side		1						
50	Medha Hostel							1	2	



g r kishan

PRINCIPAL
B. V. RAJU COLLEGE
Vishnupur, BHIMAVARAM-534 202

Sl.No	Name of Hostel	RAW Water in (Ltr)				Drinking Water in (Ltr)		
		Sintex Tank in Ltr.		RCC Tanks in Ltr	Sintex Tank in Ltr.			
		3000	2000	1000	2000	1000	500	
51	Prathima Hostel			3				
52	Parmitha Hostel			4				
53	Pranavi Hostel			3				
54	Dental Hostels			4				
55	Praveena Hostel		10			1		
56	Prasanthi Hostel		9					
57	Poojitha Hostel		8			1		
58	Pratibha Hostel		3				1	
59	Pragati Hostel		3				1	
60	Pallavi Hostel	2					1	
61	Idea Lab		2					
62	3rd Phase water Plant		2					
63	Community Hall		1			1		
64	Sahiti					1		
65	Iconic		3				1	
66	Power House 2		1					
67	Beauty Parlour		1					
Total No. Of Tanks (307 No's)		39	131	93	1	15	20	3
Total water capacity in Ltr.		772000				51500		

34



Pritham Reddy

PRINCIPAL
V. V. RAJU COLLEGE
 BHIMAVARAM-534 202


**CREATIVE
CENTRAL**
TAX-INVOICE

Date: 2022-10-17
Invoice No: CC222300010

From CREATIVE CENTRAL Address: DOOR NO 5-89, MAIN ROAD, DODDANAPUDI, West Godavari, Andhra Pradesh, 534237 GSTIN: 37AARFC0580E1ZF	To B V R COLLEGE DEGREE Address: Tadepalli Gudem Rd, Vishnupur, Bhimavaram, Andhra Pradesh, 534202
--	---

#	Description	Unit Price	Price
1	Blue Winger (Smart Water System For 11 Units)	11x₹ 21,650.00	₹ 2,38,150.00
Sub Total:			₹ 2,38,150.00
CGST(9%) :			₹ 21,433.50
SGST(9%) :			₹ 21,433.50
Total:			₹ 2,81,017.00

Amount in Words: Two Lakh Eighty One Thousands Seventeen Rupees Only

Note:

1. Cheques to be favour of "CREATIVE CENTRAL"
2. Account Name: CREATIVE CENTRAL
A/C Number: 070405003365
IFSC CODE: ICIC0000704
3. Get In touch: +91 8989040449, www.creativecentral.in

B. R. Khanna

For CREATIVE CENTRAL
Areti Sai Padmarao



PRINCIPAL
RAJU COLLEGE
Vishnupur, BHIMAVARAM-534 202

B.V.RAJU COLLEGE

(Dr. B.V.RAJU FOUNDATION & SRI VISHNU EDUCATIONAL SOCIETY)

SMART WATER GRID PROJECT

Water is a necessary and most important resource for our society and it is a key to the quality of our life as well. At least 20% of India's population is not getting water for their daily needs and about 30% to 40% of water is wasted and also there is no proper estimation about the consumption of water. All these are due to the lack of a proper water management system at all levels of our society. The main reason for water wastage is due to human error at least on an average 40% of water is been wasted in our country due to overflow from the overhead tanks of industries and commercial buildings, and the other reason is the leaks occur in a pipeline network that accounts for 30% of wastage. There is a need for both hardware and software components to manage pipelines, it will be a prominent solution for the above-stated problem of water wastage due to overflow, Leaks and It is also necessary to provide the future water demand. The ultimate theme is to develop a smart solution for this problem to handle proper water management system. Apart of this the quality of water is also a key issue to improve the living standards of the society. The other important aspect to address here, that finding the leakages in the water transmission network over a hundred of kilometers. The proposed system is smart; all sought-of mechanical action has to be controlled with the electrical signal by a set of electronic components. Initially, the system detects the water level and sends the signal to the controller, it sends a signal to both motor and corresponding valves in case of multiple tanks working on a single motor on different buildings. Whatever the position of the system we can control by changing the mode of operation, as the customer can access three different modes. A software database that provides complete data about the consumption of water, which helps the future demand and also reduces the water scarcity. The other important tool is finding the water leakages in a water transmission. With the help of this system, we can reduce the human errors will be nullified and water wastage will be minimum.

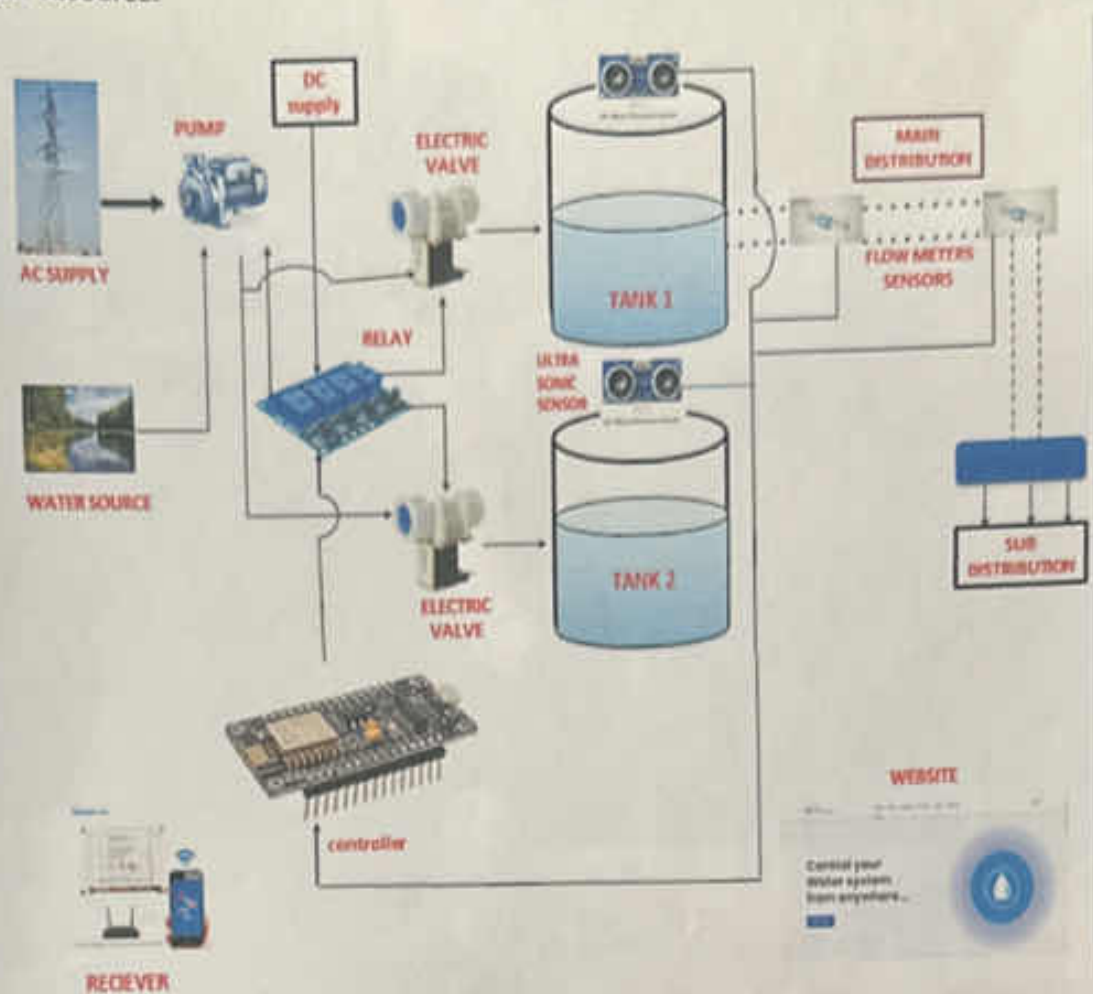
HARDWARE COMPONENTS

The hardware system is developed and controlled with the help of IoT, in which entire system runs automatically. The components used in hardware system are microcontroller, electrical valves, level indicating sensors, low power dc motor current sensors. Microcontroller is used to control the entire operations. The commands produced by this controller will actuate the sensors and relay coils to perform the required operation. Here, the hydraulic a valve are replaced by electrical valve which reduce the human influences and provides automatic pumping of water to multiple locations simultaneously with single or multiple water resource. Level indicating sensors are used to indicate the level of water in overhead tanks installed in



S. Ramesh
PRINCIPAL
B.V. RAJU COLLEGE
Vishnupur, BHIMAVARAM-534 202

industries and commercial buildings by which controller can take decision to turn on or turn off the water resource.

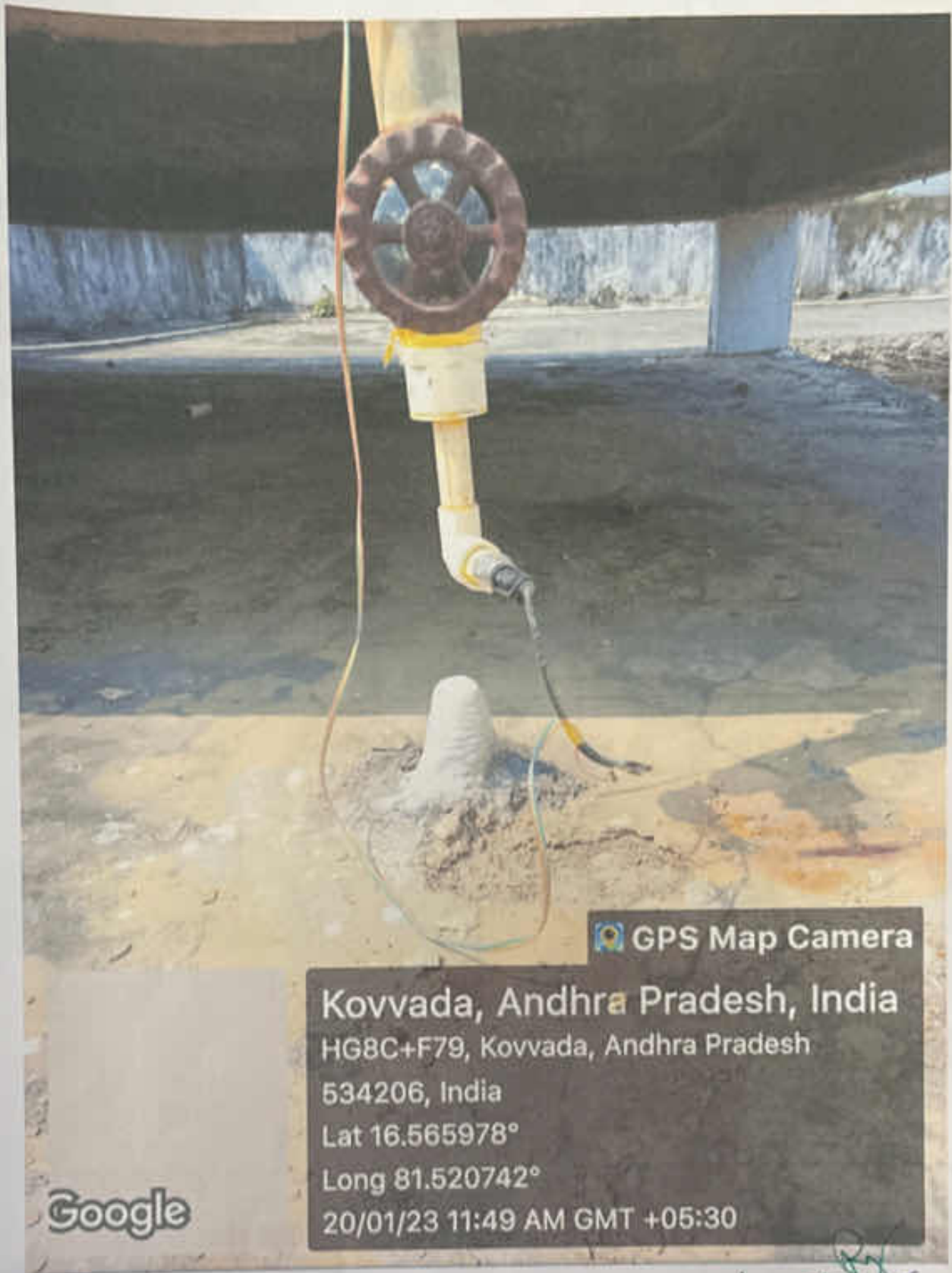


Hardware Block Diagram

To detect the leakages in pipeline network, a low power rated DC motor has been used. This DC motor current variation will be measured by current sensors and based the difference of these values the leakage point can be tracked in a short span of time. For a long water transmission network these Leakage can detecting by placing these sensors at equal distances to track the leakage point.



S. Rithamm
 PRINCIPAL
 B.V. RAJU COLLEGE
 Vishnupur, BHIMAVARAM-534 202



Google

GPS Map Camera

Kovvada, Andhra Pradesh, India

HG8C+F79, Kovvada, Andhra Pradesh

534206, India

Lat 16.565978°

Long 81.520742°

20/01/23 11:49 AM GMT +05:30

Picture of the Pressure Sensor



S. R. Harma
PRINCIPAL
B.V. RAJU COLLEGE
Vishnupur, BHIMAVARAM-534 202



GPS Map Camera

Kovvada, Andhra Pradesh, India
HG8C+F79, Kovvada, Andhra Pradesh
534206, India
Lat 16.565978°
Long 81.520742°
20/01/23 11:50 AM GMT +05:30

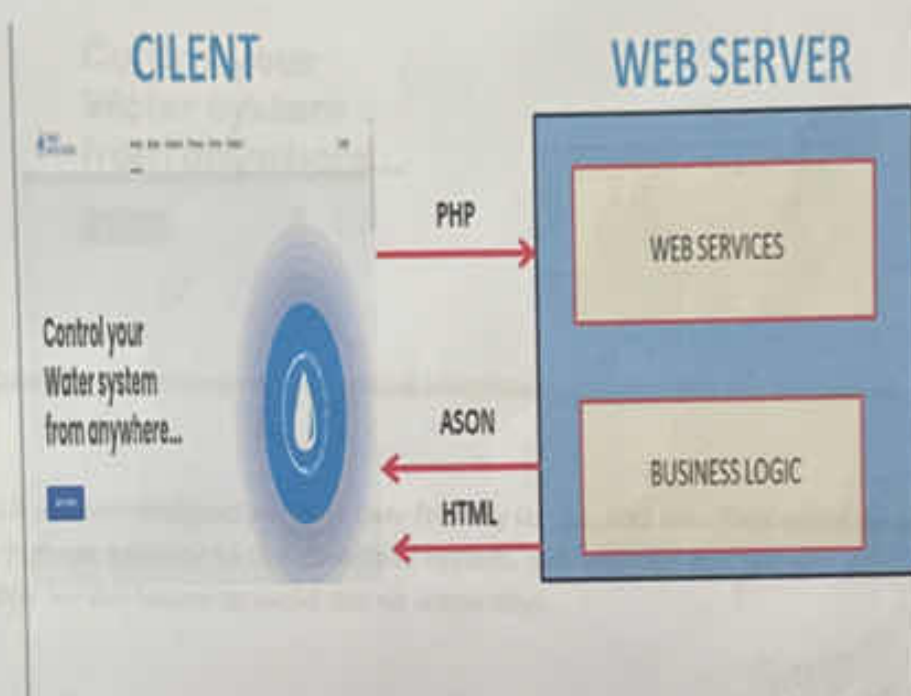
Google

Picture of the Control C

Bhannu P
30
B.V. RAJU COLLEGE
Bhimavaram
W.C. Dist. (A.P.)
Pin-534 202
PRINCIPAL
B.V. RAJU COLLEGE
Bhimavaram, BHIMAVARAM-534 202

SOFTWARE COMPONENT

The software domain is integrated with a hardware system which controls and monitors the entire hardware system with the help of internet facility, developing software website which consists of both controlling feature and database. For developing the software tool, we are using HTML and CSS for the frontend part, ASON is used for API (Application programming interface), and PHP for the backend. On the website, there are three modes according to the user with manual, automatic, and autonomous. These modes can change at any point of operation through a website or mobile application. The database is created to store the values of water and power consumption used daily, monthly, and yearly, which can help to figure out future demand of water in deep summer, graphical representation of water.



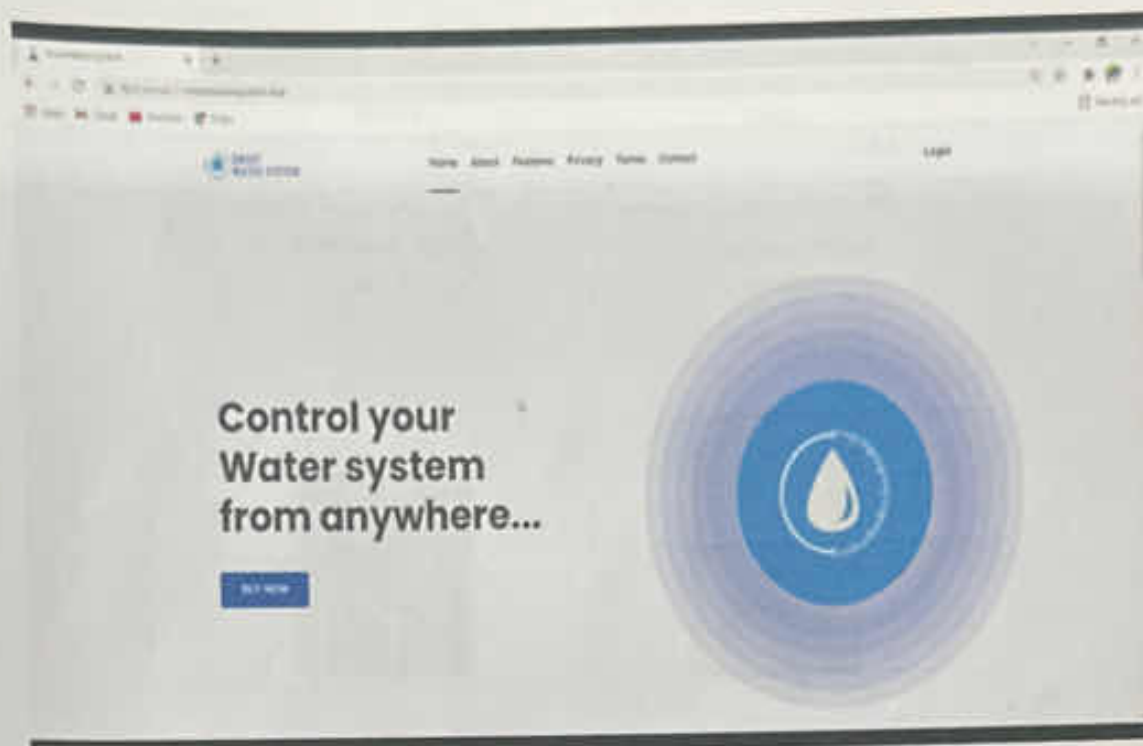
Software architecture

The microcontroller is connected to the website with the help of API, so that water level from the overhead tank will be continuously monitored by the website. For developing a website, we have used tools like visual studio code, XAMPP control server, for developing the frontend we have used HTML, CSS, JavaScript to make our website more user-friendly, we added animations



S. R. Harini
PRINCIPAL
B.V. RAJU COLLEGE
Vishnupur, BHIMAVARAM-534 202

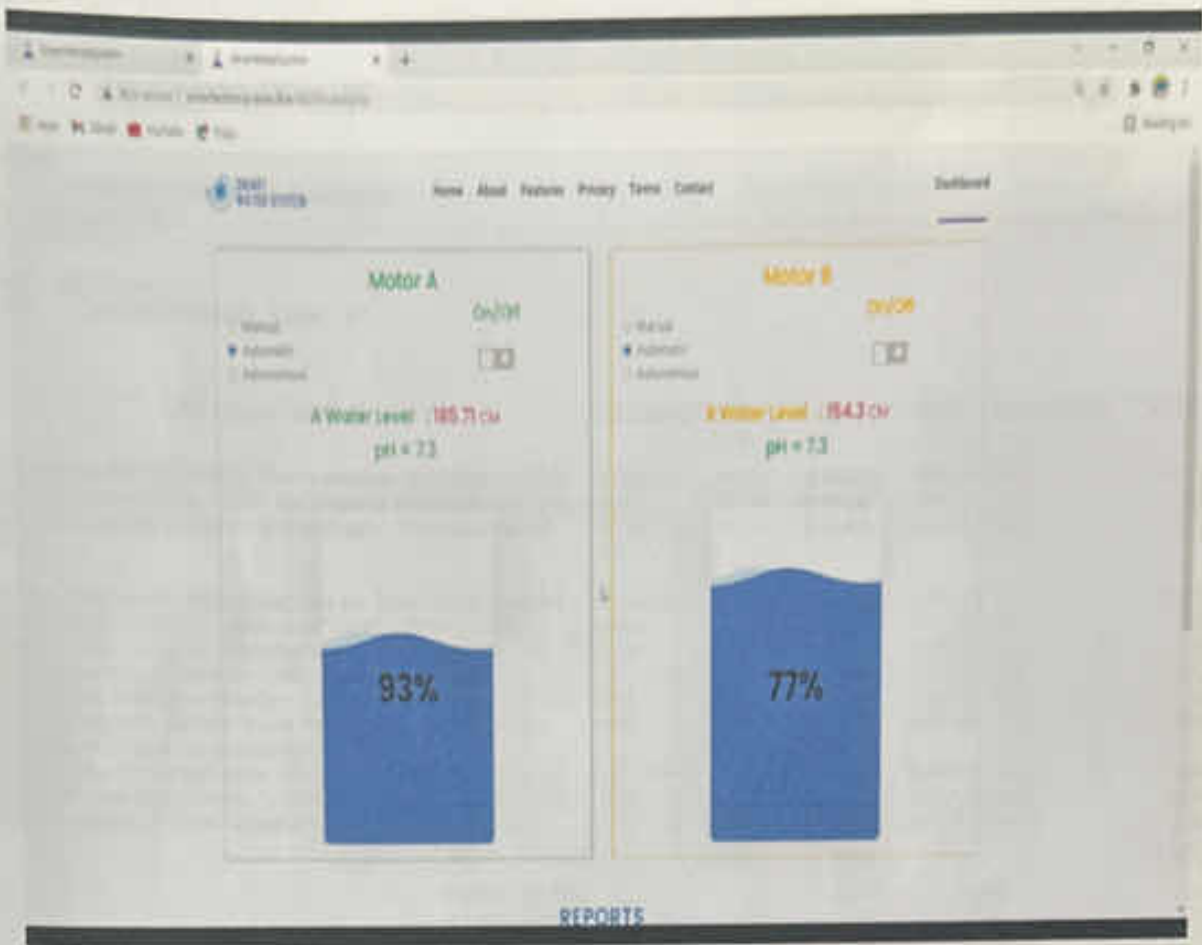
using some frameworks using bootstrap and React JS. To store the data and to differentiate users we have developed a backend by using PHP and MySQL.



The domain has been designed as most user friendly to use, and also the dedicated domain will provide the highest security to the complete system. The website will provide the timely data and estimation for the future to avoid the no water days.



S. R. Harman Roy
PRINCIPAL
B.V. RAJU COLLEGE
Vishnupur, BHIMAVARAM-534 202



Status in the website window



S. R. Jhamn Raj
 PRINCIPAL
 B.V. RAJU COLLEGE
 Vishnupur, BHIMAVARAM-534 202

Tax Invoice

(TRIPPLICATE FOR SUPPLIER)

National Scientific Products
 28-17-7, Ramamandiram Street
 Eluru Road, Arundel Pet
 VIJAYAWADA - 520002
 PH: (0866)2435943, Cell: 9949515872
 ARN No AD370321007997X
 GSTIN/UIN: 37AGRPJ3860E126
 State Name: Andhra Pradesh, Code: 37
 E-Mail: nspvja@gmail.com
 Buyer (Bill to)

The Principal
 Dr. B.V.Raju Institute of Computer Education,
 Vishunupur, Durgapuram,
 Bhimavaram-534202,
 W.G. Dist.
 Ph No-08816-251333
 State Name: Andhra Pradesh, Code: 37

Invoice No: NV/642/22-23	Dated: 28-Oct-22
Delivery Note: DC-9/88	Mode/Terms of Payment
Reference No. & Date	Other References
Buyer's Order No: PO.NO:POD-5VE5B/22/16/L/16	Dated: 6-Oct-22
Dispatch Doc No	Delivery Note Date
Dispatched through	28-Oct-22
	Destination
Terms of Delivery	

Sl No	Description of Goods	HSN/SAC	GST Rate	Quantity	Rate	per	Disc %	Amount
✓	EDTA Disodium Salt ER 500G Thermofisher (Q12635-500GM)	29224900	18 %	2 Nos	665.00	Nos		1,330.00
✓	Ammonium Chloride SQ 500G Qualigens (Q21405-500GM)	2827	18 %	2 Nos	190.00	Nos		380.00
✓	Sodium Hydroxide Pellets SQ 500gm Thermofisher (Q27815)	28151200	18 %	2 Nos	255.00	Nos		510.00
✓	Ammonium Purpurate (Murexide) SQ 5g Qualigens (Q37551)	29335400	18 %	5 Nos	323.00	Nos		1,615.00
✓	Ethylene Glycol - 500ml - Merck (82232905001730-500ml)	2905	18 %	1 Nos	355.00	Nos		355.00
✓	Sulphuric Acid SQ 2.5L Qualigens (Q29307-2.5LTR)	2907	18 %	1 Nos	755.00	Nos		755.00
✓	Methyl Orange Indicator Solution 125ML Qualigens (Q37833-125ML)	29270000	18 %	1 Nos	111.25	Nos		111.25
✓	Phenolphthalein Indicator Solution 125ml Thermofisher (Q37923)	3822	18 %	1 Nos	97.50	Nos		97.50
✓	Water Testing Kit 3x200 Test Pack Nice (W25550 Nitrate, Nitrite and Ammonium)	3822	12 %	1 kit	908.00	kit		908.00
✓	Ammonia Solution About 25% ER 2.5L Qualigens (Q11237)	28142000	18 %	1 Nos	564.00	Nos		564.00
✓	Triethanolamine SQ 500ML - THERMOFISHER (Q28565)	2922	18 %	1 Nos	440.00	Nos		440.00
✓	Erichrome Black T 25G Qualigens (Q39952-25Gm)	32041299	18 %	1 Nos	262.00	Nos		262.00
								7,327.75
	CGST @ 6%					6 %		54.48
	SGST @ 6%					6 %		54.48
	CGST @ 9%					9 %		577.78
	SGST @ 9%					9 %		577.78
	Round Off							(-)0.27
Less								

Total

₹ 8,592.00
E & OE

Amount Chargeable (in words)

INR Eight Thousand Five Hundred Ninety Two and 00/100

B.V. RAJU COLLEGE
 VISHUNUPUR
 DURGAPURAM
 BHIMAVARAM-534 202

Company's Bank Details

A/c Holder's Name: **National Scientific Products**
 Bank Name: **Karnataka Bank GNT**
 A/c No: **2557000100226901**
 Branch & IFS Code: **Guntur & KARB0000255**
 SWIFT Code:

We declare that this invoice shows the actual price of the goods described and that all particulars are true and correct.

for National Scientific Products

(Signature)
 National Scientific Products

34

B.V. RAJU COLLEGE
(Dr. B.V. Raju Foundation & Sri Vishnu Educational Society)
 Vishnupur, Bhimavaram

Water Analysis

Sample Collecting Locations									
week	Colleges	Girls Hostel	Boys Hostels	Canteens	Kitchens	Dining Halls/ Food Courts	Water bodies		
Week 1	Smt.B. Seetha Polytechnic								
	Sri Vishnu College of Pharmacy Dr. B.V. Raju College	Rajeswari hostel	Visweswaralah hostel	Girls Canteen	Annapurna kitchen	Dining Hall back side SBSP college	Canal & Treated water		
Week 2	Vishnu Dental College block 1								
	SVECW Block -A Vishnu School	Rajya Lakshmi hostel	Vivekananada hostel	Canteen open shed	Kitchen and stores for Sita Mess	sita mess	Canal & Treated water		
Week 3	SVECW Extension of block A								
	SVECW Block -B SVECW Extension of block B	Saraswathi hostel	Dhanvantari hostel	Canteen open shed	Girls fast food kitchen	Food Court 2nd phase	Canal & Treated water		
Week 4	SVECW block C								
	SVECW Extension of block C SVECW Block -D Class room	Padmavathi hostel	Alluri Sita Rama Raju hostel	Canteen open shed	Kitchen for visnu canteen	Food Court 3rd phase	Canal & Treated water		
Week 5	SVECW Block -D Computer labs								
	SVECW Library Block Music Class room in pond	Gayathri hostel	Sir Aurther Cotton boys hostel	Vishnu canteen	Fresh choice bakery unit	Tasty corner	Canal & Treated water		

Note: 10 sample will be collected from different locations & will be tested weekly once.



G. R. I. M. C. M. P. S.

PRINCIPAL
B.V. RAJU COLLEGE
 Vishnupur, BHIMAVARAM-53 102

Sample collecting Locations									
week	Colleges	Girls Hostel	Boys Hostels	Canteens	Kitchens	Dining Halls/ Food Courts	Water bodies		
Week 6	Vishnu Dental College block 2 (college)	Valdehi hostel	C.V. Raman hostel		Fast food centre near BSNL office	Coffe Shop	Canal & Treated water		
	Vishnu Dental block 3 (hospital)	Vaishnavai hostel							
	Vishnu Dental block 4								
Week 7	VDC library block	Sarada hostel	Boys dining Hall at VIT Hostel			Temple Square	Canal & Treated water		
	VIT block 1	Bhuvana hostel							
	VIT block 2	Bhargavi hostel							
Week 8	VIT Library	Nirmala hostel	Kaveri boys hostel			Lake View Court	Canal & Treated water		
	VIT Work shop 1	Neelima hostel							
	VIT Work shop 2	Manasa hostel							
Week 9	VIT New block (centre for Academic Excellence)	Roshini hostel	Tungabhadra boys hostel			VDC patients dining hall	Canal & Treated water		
	VIT New block	Revathi hostel							
	MCA block	Srujana hostel							
		Spoorthi hostel							



g. Rajivaram

PRINCIPAL COLLEGE
B.V. RAJU COLLEGE
Bhimavaram-534 202
Vishnupur, BHIMAVARAM

Sample Collecting Locations											
week	Colleges	Girls Hostel	Boys Hostels	Canteens	Kitchens	Dining Halls/ Food Courts	Water bodies				
Week 10		Sadana quarters	Godavari Hostel			New dining Hall for seeta canteen	Canal & Treated water				
		Pallavi hostels									
		Pragathi hostel									
		prathibha hostel									
Week 11		Prashanthi hostel	Iconic hostel			New dining hall at Vishnu food plaza	Canal & Treated water				
		Pragnya hostel									
		Pratima hostel									
		Pranavi hostel									
		Praveena hostel									
		Parmitha hostel									
		Poojitha hostel									
		Yamuna hostel									
	Week 12			Ganga hostel						Vishnu food plaza	Canal & Treated water
				Narnada hostel							
		Medha hostel									
		HCL Girl hostel									
		HCL Girl hostel									
		Sumedha girls hostel									
		Sahithi hostel (outside)									



P. Jeyaraman
PRINCIPAL
B.V. RAJU COLLEGE
 Vishnupur, BHIMAVARAM-534 202

B.V.RAJU COLLEGE
(Dr. B.V.RAJU FOUNDATION & SRI VISHNU EDUCATIONAL SOCIETY)
Smart Water Grid Project

Chemical Analysis of Water Samples in Green Meadows Campus

Date of Sample Collection: 28-10-2022

Date of Analysis: 29-10-2022

S.NO	SAMPLE LOCATION	TOTAL HARDNESS <200 PPM	CALCIUM <75 PPM	MAGNESIUM < 30 PPM	ALKALINITY <200PPM		ACIDITY
					PHENOLPHTHALEIN	METHYL ORANGE	
1	CANAL WATER	168	88	80	0 PPM	122	0 PPM
2	RO WATER	20	12	8	0 PPM	27	0 PPM
3	VISHNU PUBLIC SCHOOL	20	12	8	0 PPM	27	0 PPM
4	SVECW BLOCK1	28	12	16	0 PPM	32	0 PPM
5	DENTAL BLOCK1	24	12	12	0 PPM	27	0 PPM
6	RAJYA LAKSHMI HOSTEL	24	12	12	0 PPM	32	0 PPM
7	VIVEKANANDA HOSTEL	20	12	8	0 PPM	32	0 PPM
8	SITA MESS	28	12	16	0 PPM	32	0 PPM
9	KITCHEN SITA MESS	24	16	8	0 PPM	32	0 PPM



S. P. Sreeramu Reddy
 Signature of Principal

PRINCIPAL
B.V. RAJU COLLEGE
 Vishnupur, BHIMAVARAM-534 202

Sri vishnu Educational Society & B.V Raju Foundation
Smart Water Grid Project
Chemical Analysis of Water samples in Green Meadows Campus

Date of Sample Collection: 02/12/2022
 Date Of Analysis: 03/12/2022

S.NO	SAMPLE LOCATION	TOTAL HARDNESS <200 PPM	CALCIUM <75 PPM	MAGNESIUM <30 PPM	ALKALINITY <200PPM		ACIDITY	NITRATE <40 PPM	NITRITE OPPM	AMMONIUM OPPM
					PHENOLPHTHALEIN	METHYL ORANGE				
1	CANAL WATER	100	75	25	5	145	0	5	0	0
2	R.O WATER	30	15	15	0	50	0	0	0	0
3	VISHNU DENTAL BLOCK-2	25	15	10	0	50	0	0	0	0
4	VISHNU DENTAL BLOCK-3HOSPITAL	30	15	15	0	50	0	0	0	0
5	COFF SHOP	30	15	15	0	50	0	0	0	0
6	CANTEEN KITCHEN	25	20	5	0	45	0	0	0	0
7	C.V.RAMAN HOSTEL	35	20	15	0	50	0	0	0	0
8	VAISHNAVI HOSTEL	30	15	15	0	45	0	0	0	0
9	VAIDEHI HOSTEL	30	15	15	0	50	0	0	0	0



B. V. R. Krishnam Raju

SIGNATURE OF PRINCIPAL

PRINCIPAL
B.V. RAJU COLLEGE
 Vishnupur, BHIMAVARAM-534 202

Sri Vishnu Educational Society & B.V Raju Foundation
Smart Water Grid Project

Chemical Analysis of Water samples in Green Meadows Campus

Date of Sample Collection: 7/12/2022
 Date Of Analysis: 7/12/2022

S.NO	SAMPLE LOCATION	TOTAL HARDNESS <200 PPM	CALCIUM <75 PPM	MAGNESIUM <30 PPM	ALKALINITY <200PPM		ACIDITY	NITRATE <40 PPM	NITRITE OPPM	AMMONIUM OPPM
					PHENOLPHTHALEIN	METHYL ORANGE				
1	Canal water	165	50	115	5	160	0	5	0	0
2	Treated water	30	10	20	0	50	0	0	0	0
3	VIT block 2	20	15	5	0	45	0	0	0	0
4	VDC library block	30	10	20	0	50	0	0	0	0
5	VIT block 1	35	15	20	0	50	0	0	0	0
6	Boys dining Hall at VIT Hostel	25	10	15	0	45	0	0	0	0
7	Temple Square	15	10	5	0	50	0	0	0	0
8	Bharathi hostel	35	15	20	0	50	0	0	0	0
9	Bhargavi hostel	30	15	15	0	50	0	0	0	0
10	Sarada hostel	30	15	15	0	50	0	0	0	0




PRINCIPAL
B.V. RAJU COLLEGE
 Vishnupur, BHIMAVARAM-534 202

Sri vishnu Educational Society & B.V Raju Foundation
Smart Water Grid Project

Chemical Analysis of Water samples in Green Meadows Campus

Date of Sample Collection: 14/12/2022
 Date Of Analysis: 14/12/2022

S.NO	SAMPLE LOCATION	TOTAL HARDNESS <200 PPM	CALCIUM <75 PPM	MAGNESIUM <30 PPM	ALKALINITY <200PPM		ACIDITY	NITRATE <40 PPM	NITRITE OPPM	AMMONIUM OPPM
					PHENOLPHTHALEIN	METHYL ORANGE				
1	Canal water	168	50	118	5	160	0	5	0	0
2	Treated water	30	20	10	0	32	0	0	0	0
3	VIT Library	20	15	5	0	36	0	0	0	0
4	VIT Work shop 1	30	10	20	0	32	0	0	0	0
5	VIT Work shop 2	35	15	20	0	32	0	0	0	0
6	Nirmala hostel	25	10	15	0	34	0	0	0	0
7	Neelima hostel	25	20	5	0	32	0	0	0	0
8	Manasa hostel	35	15	20	0	32	0	0	0	0
9	Mrudula hostel	30	20	10	0	34	0	0	0	0
10	Kaveri boys hostel	28	15	13	0	32	0	0	0	0
11	Lake view court	35	15	20	0	32	0	0	0	0



V.R. Krishnam Raju

PRINCIPAL
B.V. RAJU COLLEGE
 Vishnupur, BHIMAVARAM-534 202

B.V.RAJU COLLEGE
(Dr. B.V.RAJU FOUNDATION & SRI VISHNU EDUCATIONAL SOCIETY)
Smart Water Grid Project
Chemical Analysis of Water Samples in Green Meadows Campus

Date of Sample Collection: 04-01-2023

Date of Analysis: 04-01-2023

S.NO	SAMPLE LOCATION	TOTAL HARDNESS <200 PPM	CALCIUM <75 PPM	MAGNESIUM < 30 PPM	ALKALINITY <200PPM		ACIDITY
					PHENOLPHTHALEIN	METHYL ORANGE	
1	CANAL WATER	168	88	80	0 PPM	122	0 PPM
2	RO WATER	20	12	8	0 PPM	27	0 PPM
3	M.C.A NEW BLOCK	20	12	8	0 PPM	27	0 PPM
4	VIT NEW BLOCK	28	12	16	0 PPM	32	0 PPM
5	CENTER OF ACADAMIC EXCELLENCE	24	12	12	0 PPM	27	0 PPM
6	V.D.C PATIENT DINING HALL	24	12	12	0 PPM	32	0 PPM
7	SRIJANA HOSTEL	20	12	8	0 PPM	32	0 PPM
8	REVATHI HOSTEL	28	12	16	0 PPM	32	0 PPM
9	SPOORTHY HOSTEL	24	16	8	0 PPM	32	0 PPM

g. Ramesh Babu

Signature of Principal



PRINCIPAL
B.V. RAJU COLLEGE
 Vishnupur, BHIMAVARAM-534 202

B.V. RAJU COLLEGE
VISHNUPUR :: BHIMA VRAM

DATE OF COLLECTION OF SAMPLE :- 30.07.2022
DATE OF ANALYSIS OF SAMPLE :- 04.08.2022

S.NO	VARIOUS PARAMETERS									
	HARDNESS	pH	ALKALINITY	ACIDITY	CHLORIDES	NITRATES	CALCIUM	MAGNESIUM		
PERMITTED LEVELS	<80 PPM	6.5-7.8	<50 PPM	< 10 PPM	<20 PPM	< 20 PPM	< 40 PPM	< 40 PPM		
II PHASE RAW WATER	60	8.3	30	NIL	5.2	4	30	30		< 40 PPM
II PHASE PRETREATMENT WATER	50	7.88	30	NIL	2.8	2	30	30		20
II PHASE R.O WATER	45	7.81	25	NIL	3.2	2	20	20		25

Handwritten signature
ANALYSED BY



 PRINCIPAL
PRINCIPAL
B.V. RAJU COLLEGE
 Vishnupur, BHIMAVARAM-534 202

Sri vishnu Educational Society & B.V. Raju Foundation
Smart Water Grid Project
Chemical Analysis of Water Samples in Green Meadows Campus

Date of Sample Collection: 28-10-2022

Date of Analysis: 29-10-2022

S.NO	SAMPLE LOCATION	TOTAL HARDNESS <200 PPM	CALCIUM <75 PPM	MAGNESIUM < 30 PPM	ALKALINITY <200PPM		ACIDITY
					PHENOLPHTHALEIN	METHYL ORANGE	
1	CANAL WATER	168	88	80	0 PPM	122	0 PPM
2	RO WATER	20	12	8	0 PPM	27	0 PPM
3	VISHNU PUBLIC SCHOOL	20	12	8	0 PPM	27	0 PPM
4	SVECW BLOCK1	28	12	16	0 PPM	32	0 PPM
5	DENTAL BLOCK1	24	12	12	0 PPM	27	0 PPM
6	RAJYA LAKSHMI HOSTEL	24	12	12	0 PPM	32	0 PPM
7	VIVEKANANDA HOSTEL	20	12	8	0 PPM	32	0 PPM
8	SITA MESS	28	12	16	0 PPM	32	0 PPM
9	KITCHEN SITA MESS	24	16	8	0 PPM	32	0 PPM

Signature of Principal



Signature of Director




PRINCIPAL
B.V. RAJU COLLEGE
 Vishnupur, BHIMAVARAM-534 202

Sri vishnu Educational Society & B.V. Raju Foundation
Smart Water Grid Project
Chemical Analysis of Water Samples in Green Meadows Campus

Date of Sample Collection: 20-10-2022

Date of Analysis: 21-10-2022

S.NO	SAMPLE LOCATION	TOTAL HARDNESS <200 PPM	CALCIUM <75 PPM	MAGNESIUM < 30 PPM	ALKALINITY <200PPM		ACIDITY
					PHENOLPHTHALEIN	METHYL ORANGE	
1	CANAL WATER	145 PPM	90 PPM	55 PPM	0 PPM	139 PPM	0 PPM
2	RO WATER	20 PPM	15 PPM	5 PPM	0 PPM	27 PPM	0 PPM
3	SVCP	35 PPM	15 PPM	20 PPM	0 PPM	32 PPM	0 PPM
4	SBSP	25 PPM	20 PPM	5 PPM	0 PPM	23 PPM	0 PPM
5	BVRC	30 PPM	20 PPM	10 PPM	0 PPM	27 PPM	0 PPM
6	ANNAPURNA KITCHEN	25 PPM	15 PPM	10 PPM	0 PPM	27 PPM	0 PPM
7	GIRLS CANTEEN	30 PPM	15 PPM	15 PPM	0 PPM	27 PPM	0 PPM
8	RAJESWARI HOSTEL	20 PPM	20 PPM	0 PPM	0 PPM	27 PPM	0 PPM
9	DINING HALL BACKSIDE OF SBSP	20 PPM	20 PPM	0 PPM	0 PPM	40 PPM	0 PPM
10	VISWESWARAIAH BOYS HOSTEL	25 PPM	15 PPM	10 PPM	0 PPM	32 PPM	0 PPM


Signature of Principal



PRINCIPAL
B.V. RAJU COLLEGE
 Vishnupur, BHIMAVARAM-534 202

Signature of Director



B.V.RAJU COLLEGE
(Dr B.V.RAJU FOUNDATION & SRI VISHNU EDUCATIONAL SOCIETY)
Smart Water Grid Project

Chemical Analysis of Water samples in Green Meadows Campus

Date of Sample Collection: 2/12/2022
 Date Of Analysis: 3/12/2022

S.NO	SAMPLE LOCATION	TOTAL HARDNESS <200 PPM	CALCIUM <75 PPM	MAGNESIUM <30 PPM	ALKALINITY <200PPM		ACIDITY	NITRATE <40 PPM	NITRITE OPPM	AMMONIUM OPPM
					PHENOLPHTHALEIN	METHYL ORANGE				
1	CANAL WATER	100	75	25	5	145	0	5	0	0
2	R.O WATER	30	15	15	0	50	0	0	0	0
3	VISHNU DENTAL BLOCK-2	25	15	10	0	50	0	0	0	0
4	VISHNU DENTAL BLOCK-3HOSPITAL	30	15	15	0	50	0	0	0	0
5	COFF SHOP	30	15	15	0	50	0	0	0	0
6	CANTEEN KITCHEN	25	20	5	0	45	0	0	0	0
7	C.V.RAMAN HOSTEL	35	20	15	0	50	0	0	0	0
8	VAISHNAVI HOSTEL	30	15	15	0	45	0	0	0	0
9	VAIDEHI HOSTEL	30	15	15	0	50	0	0	0	0

S. Lakshmi Devi

SIGNATURE OF PRINCIPAL



PRINCIPAL
R.V. RAJU COLLEGE
 BHIMAVARAM-525004