



Maratha Vidya Prasarak Samaj's

**Karmaveer Shantarambapu Kondaji Wavare**

Arts, Science & Commerce College, Uttamnagar, CIDCO, Nashik-422008.

Phone No.:(0253)2391110 Fax:(0253)2372210 Email: cidcocollegenashik@rediffmail.com

Website:www.cidcocollegenashik.com

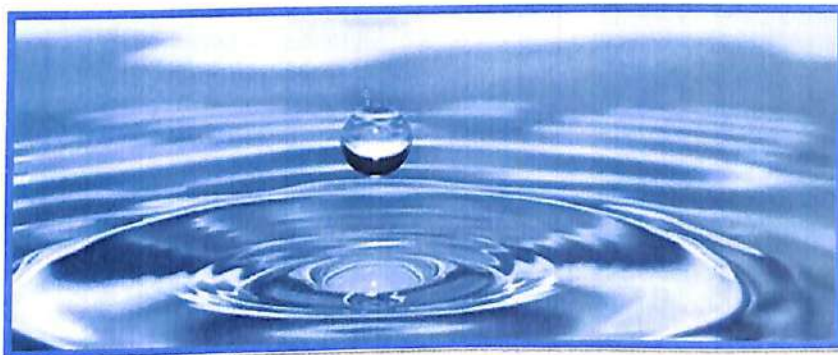
NAAC Reaccredited A grade

Affiliated to Savitribai Phule Pune University Id.No.PU/NS/ASC/047/1993

**Internal Quality Assurance Cell**

**(IQAC)**

# WATER AUDIT - 2021-22



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Dr. M.S. Patil

Coordinator  
Water Audit

*D.N. Pawar*  
Dr. D.N. Pawar

Coordinator  
IOAC  
Co-ordinator  
IQAC

K.S.K.W Arts, Science and Commerce College  
CIDCO, Nashik-422008

*J.D. Sonkhaskar*  
Dr. J.D. Sonkhaskar

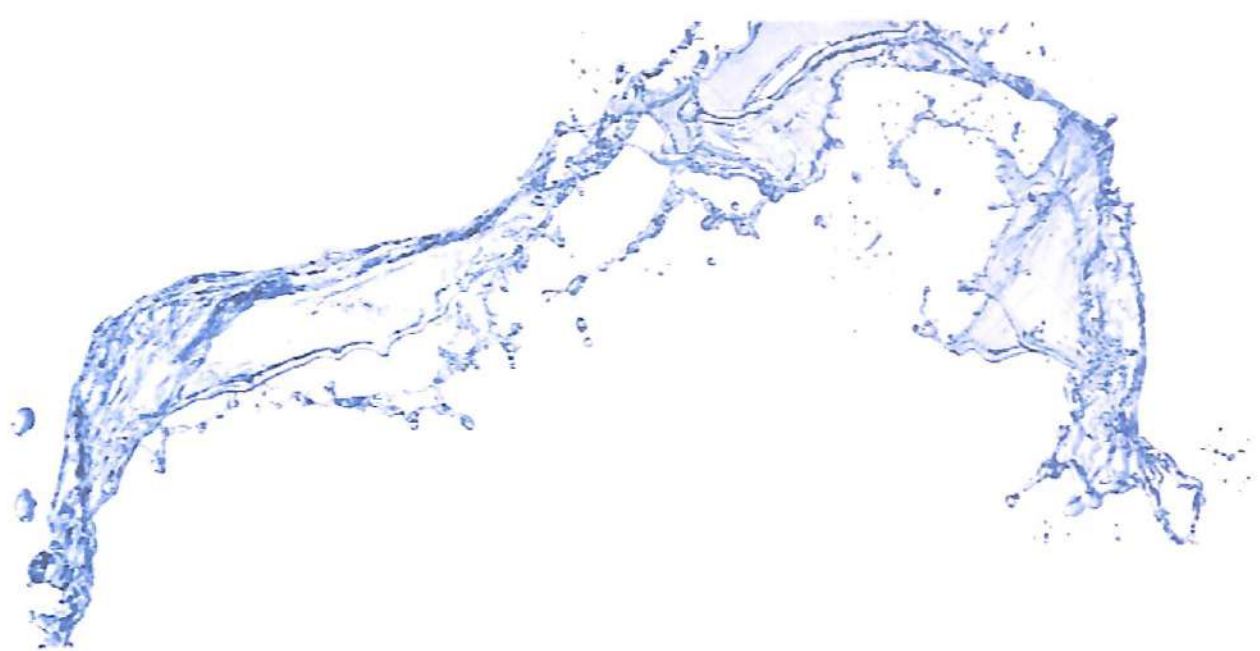
PRINCIPAL  
K.S.K.W Arts, Sci. & Co.  
CIDCO, Nashik-0.

*M. Mangesh Sakurikar*  
Mr. Mangesh Sakurikar

**Shanmukha Laboratories**  
Director, Shanmukha  
Nashik-422010. Phone: 2383323

## Water Audit Team – 2021-2022

Sr.No.	Names	Audit Member
1	Mr Mangesh A. Sakurikar	External
2	Prin. J. D. Sonkhaskar	Internal
3	Dr. D. N. Pawar (IQAC)	Internal
4	Dr. M. S. Patil (Coordinator)	Internal



Project Conducted By :

Ms. Neha Dinkar Jagtap

Ms. Bhagyashri Rajendra Yeola

Ms. Sanjana Pravin Sonawane

Project Guide : Dr. Mayura Patil

Department : Zoology

Project Name : Water Audit Of K. S. K. W. Arts, Science  
Commerce, College, Cidco, Nashik







**SAVITRIBAI PHULE UNIVERSITY, PUNE**

**MARATHA VIDHYA PRASARAK SAMAJ'S**

**K. S. K. W. ARTS, SCIENCE, AND COMMERCE COLLEGE,  
CIDCO, NASHIK**

## **CERTIFICATE**

This is to certify that present work incorporated in the dissertation entitled,

**Water Audit : A Case Study of Water Supply Scheme of K. S. K.  
W. ARTS, SCIENCE AND COMMERCE COLLEGE, CIDCO, NASHIK  
was satisfactorily carried out by,**

1. Ms. Neha Dinkar Jagtap,
2. Ms. Bhagyashri Rajendra Yeola,
3. Ms. Sanjana Pravin Sonawane.

Of T. Y. BSC, ZOOLOGY, they have completed this project under my supervision & guidance during academic YEAR 2021-22, this work was submitted by them is original & the scientific information obtained from other sources have been duly acknowledged.

Dr. Mayura Patil  
(HOD & Project)

EXAMINER

Dr. J.D. Senkhaskhar  
(Principal)



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## **Preface**

Report of water audit of the **MVP'S KSKW Arts, Science and Commerce College, Uttamnagar, CIDCO, Nashik-08** was framed in the period of July 2021 to June 2022.

The goal of this audit is to express an opinion on the scientific framework that categorizes all water use in the organization, leakages and point of water losses.

Data was collected for each water storage capacity and supply of the campus. The work is completed by considering how many water storage, supply and purification units are accessible to each individual related to organization. Total water consumption was taken in to consideration.

We really appreciate the effort put by MVP'S management for creating awareness of water Audit, through this, we have been cleared the vision of Institution. We really appreciate for various efforts taken by the college.



**College Main Building**





## Acknowledge

It gives us great pleasure to take the opportunity to exposure our sincerely thanks to our project guide **M/s. Dr. Mayura Patil** mam for their encouragement., guidance, her constructive suggestions and all sorts of help ever since the very inception of the study.

We are very much thankful to **Principal Dr. J. D. Sonkhaskar** for providing necessary facilities to carry out project work. I equally thankful to Dr. Mayura Patil, Head of the Department of Zoology for providing laboratory facilities and guidance in completing the same project work. We express my thanks to all our respective teachers and non- teaching staff of Department of Zoology for all the help and kind cooperation during the project. Finally we thankful to all thus who help us for completing this project.

Place : P. G. Department of Zoology

K. S. K. W. Arts, Science and Commerce College,

Cidco, Uttamnagar, Nashik.

Ms. Neha Dinkar Jagtap

Bhagya

Ms. Bhagyashri Rajendra Yeola

Sanjana

Ms. Sanjana Pravin Sonawane

T. Y. B. Sc. Zoology



**College New Building**





## **Introduction of Water Audit**

Water is a precious natural resource with almost fixed quantum of availability. Declaring water conservation a national mission, in June 2003, the Prime Minister of India, appealed to all countrymen to collectively address the problem of alarmingly progressive water shortage, by conserving every drop of water and suggested for conducting water audit for all sectors of water use. With continuous growth in country's population, per capita availability of water has been reduce to alarming stage, whereas with ever-rising standard of living of people, all around rapid industrialization and urbanization, demand of fresh water is going up continuously. Unabated discharge of domestic and industrial effluents into water bodies is further aggravating the situation of scarcity of water of acceptable quality& quantity. In spite of the fact that fresh water is rapidly becoming scarce it is continued to be used wastefully. Therefore, Water audit is an effective management tool for minimizing losses, optimizing various uses and thus enabling considerable conservation of water.

*"Water Audit is a qualitative and quantitative analysis of water consumption to identify means of reducing, reusing and recycling of water"*

### **Objectives:**

- To utilize water resources effectively and more efficiently.
- To keep check on unwanted excess usage of water.
- To determine water losses and leakages path.
- To identify meter record inaccuracies
- To identify priorities area which need immediate attention for control and maintenance
- For planning of water storage and supply.
- For cost-benefit study related to optimum recovery of water loss.

### **Benefits:**

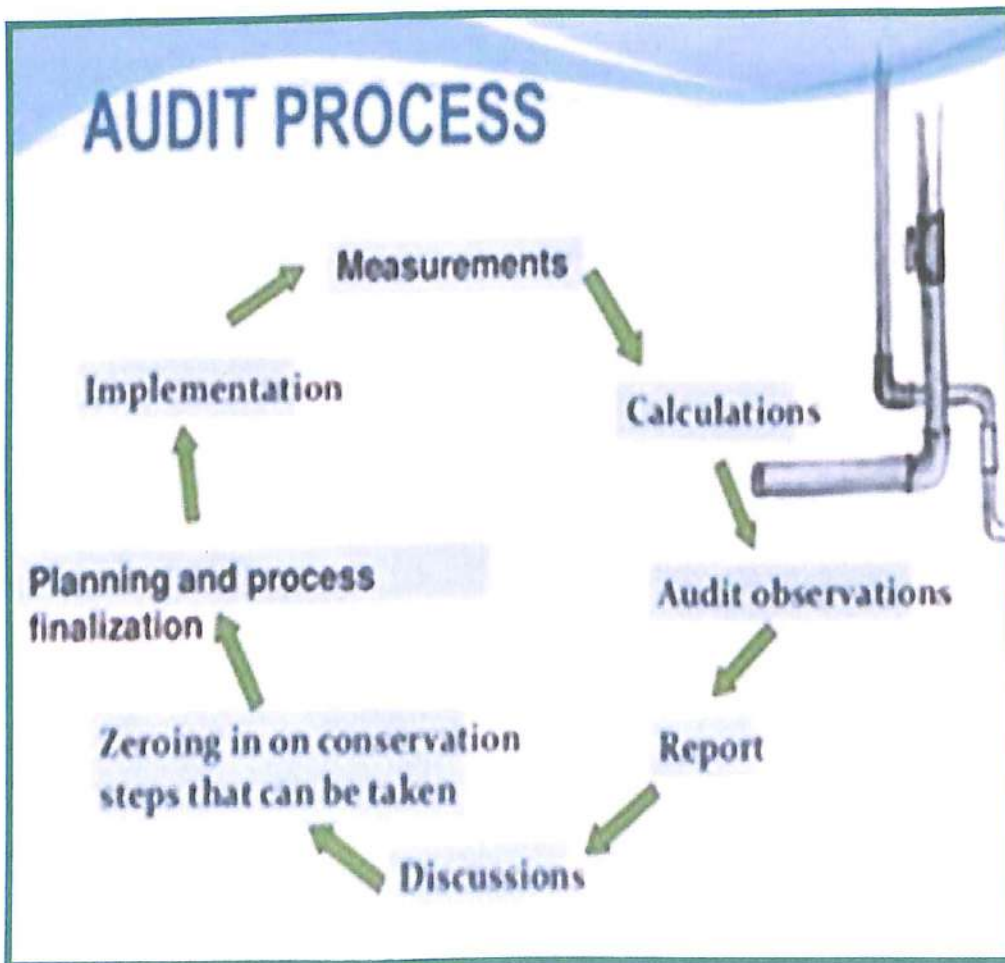
Water audit improves the knowledge and documentation of your water sources and the distribution system, associated problem and risk areas and a better



understanding of what is happening to the water after it leaves the source point. It helps in analysing water related risk and opportunities as part of sustainability strategy

**Water Audit leads to:**

- Reduced water losses
- Enhance water conservation
- Improved financial performance
- Create green image
- Satisfy regulatory norms
- Enhance natural resources conservation for sustainable society
- Improved reliability of supply system & distribution system
- Better safeguard to public health and property and Improved public relations





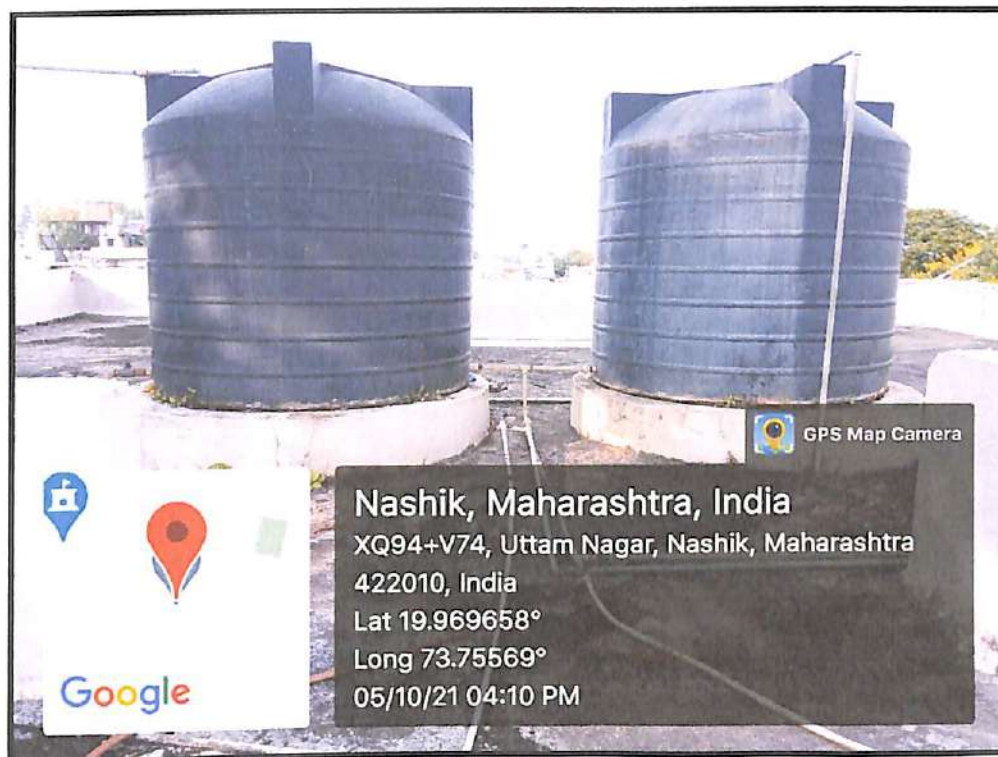
### Water Supply units in campus

Water is a key driver and is vital to development of Biodiversity, Agriculture, Humans as well as the Economy. With recent experiences across the world and in India, the water scarcity and security is emerging issues. The state of Maharashtra has also faced severe impact of the water scarcity in the recent past. Therefore water management is a crucial step of sustainable development and it also has been made an integral part of the Sustainable Development Goals (SDGs). Unplanned urban growth and economic development has placed unprecedented pressures on natural resources especially on water. Increasing demand for the water in urban areas such as Nashik highlights the necessity of the overall water management.

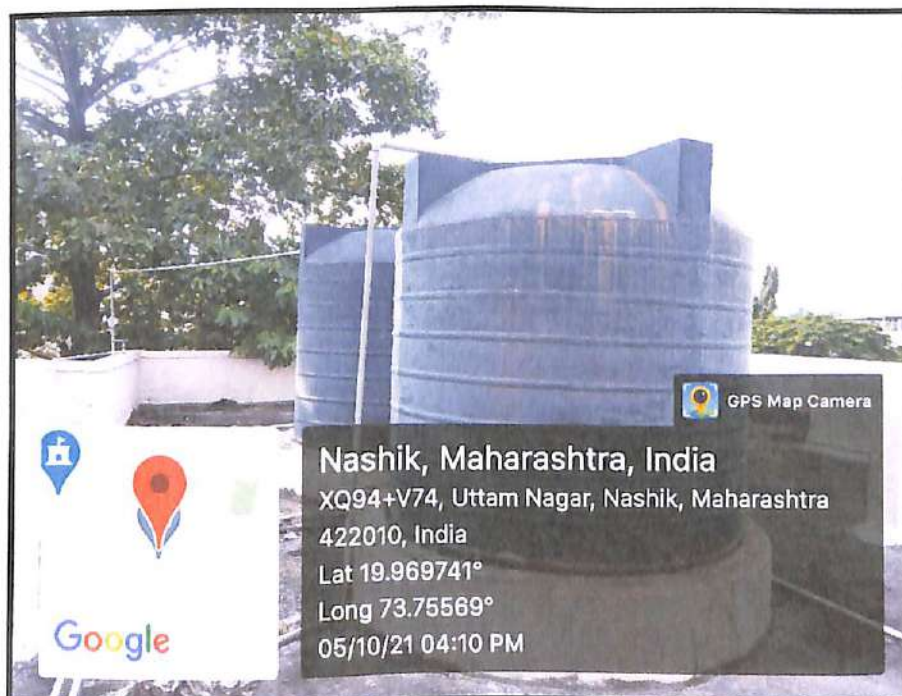
### Water Supply in the campus

Sr. No.	Department	UGT capacity in litre	No. of times filled	Water storage/usage (m3/day)
1	New Building terrace water tank	5,000.00	1.00	90.00
2	Second floor new building aqua plant	100.00	2.00	40.00
3	Old building terrace water tank	15,000.00	2.00	270.00
4	Aqua plant for staff in staff room	100.00	2.00	40.00
5	RCC water tank	20,000.00	2.00	360.00
6	Ground area gents toilet water tank	2500.00	2.00	100.00
7	Ground area ladies toilet water tank	2500.00	2.00	100.00
8	Ground area ladies toilet water tank	2500.00	2.00	100.00
		<b>Total Water Usage:-</b>	<b>30,400 litre</b>	

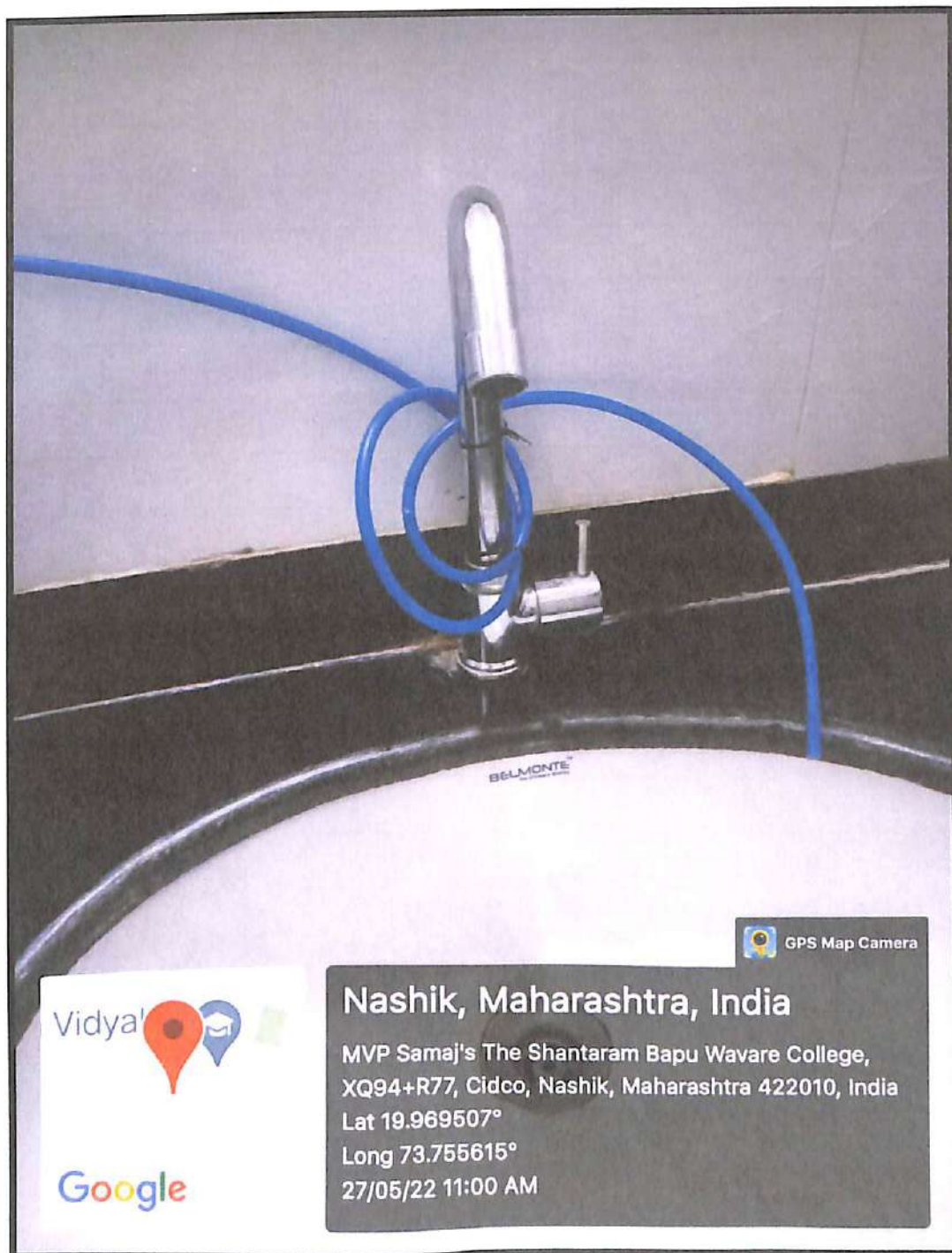




**Old building terrace water tank-1**



**Old Building terrace water tank-2**



Vidya



Google



GPS Map Camera

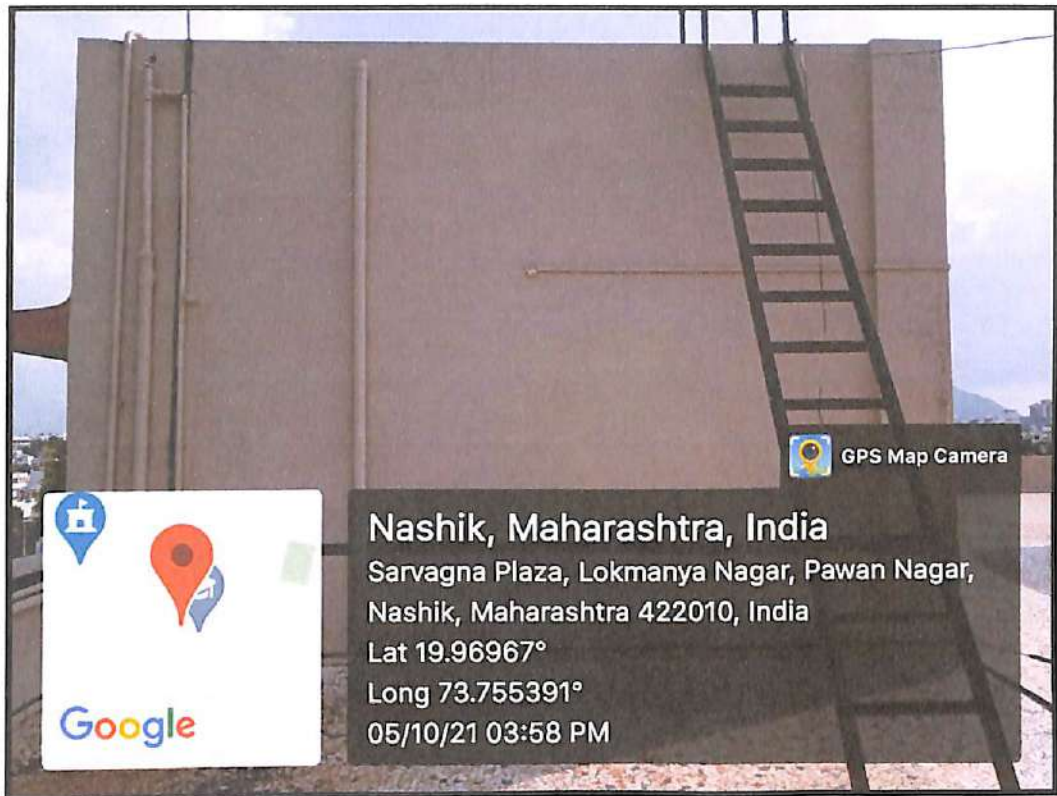
## Nashik, Maharashtra, India

MVP Samaj's The Shantaram Bapu Wavare College,  
XQ94+R77, Cidco, Nashik, Maharashtra 422010, India

Lat 19.969507°

Long 73.755615°

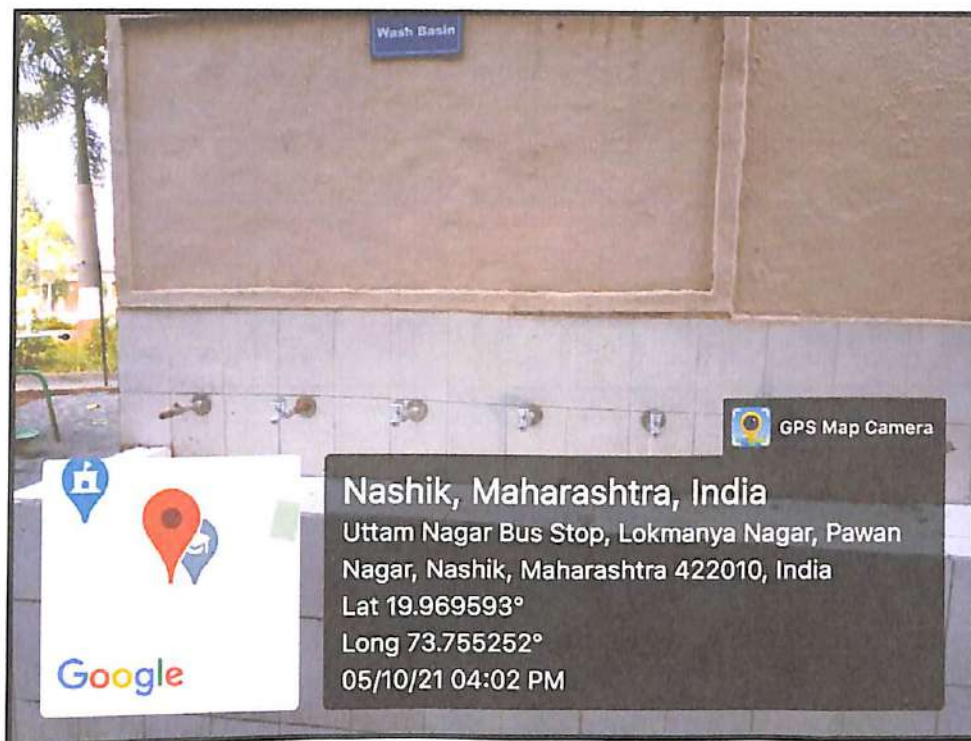
27/05/22 11:00 AM



**New Building RCC water tank**



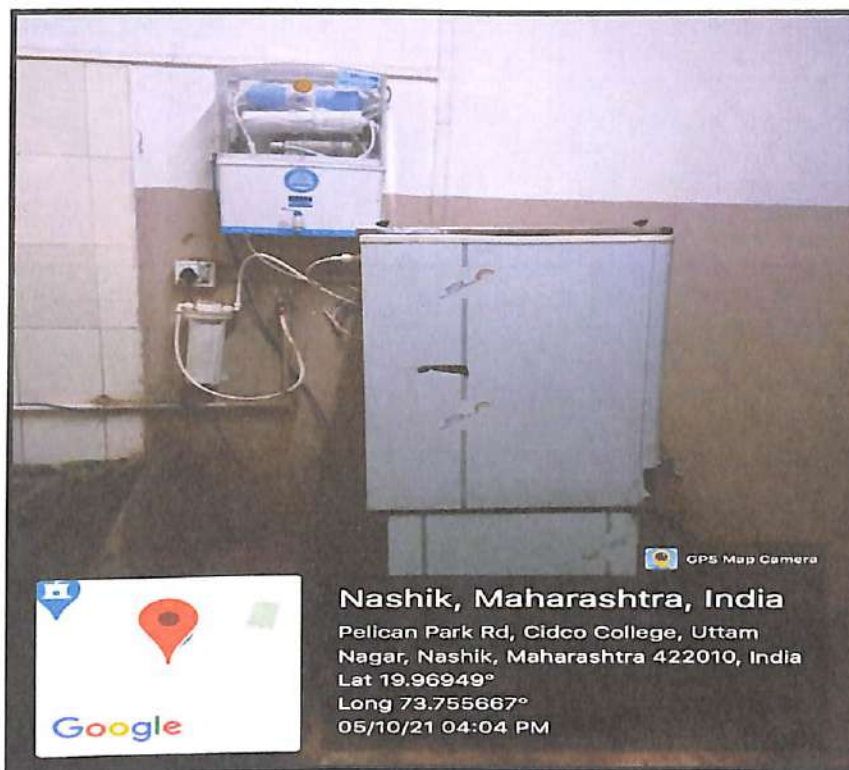




**Tap water outlet in the college Campus**

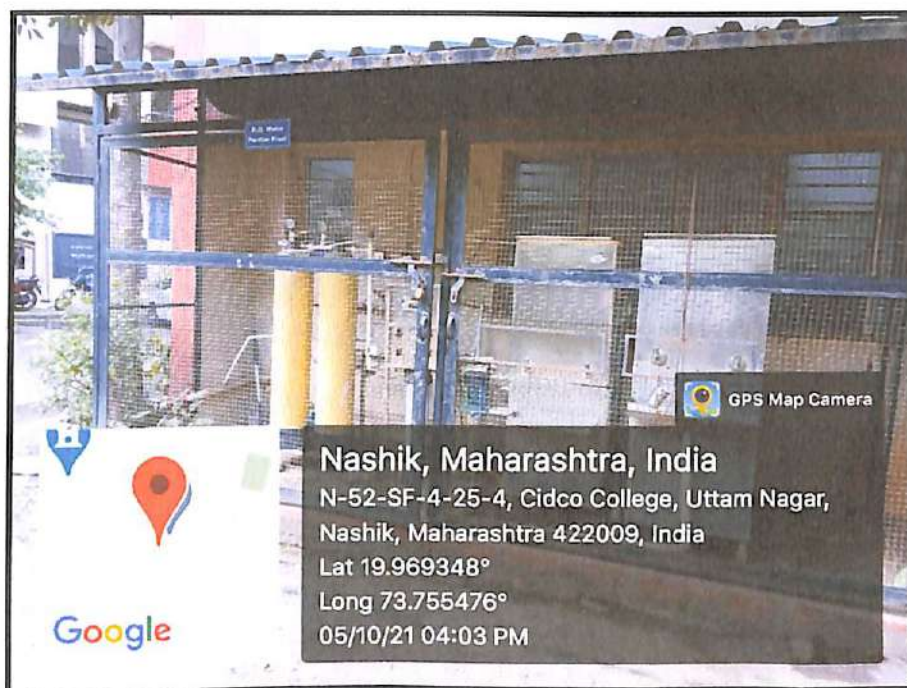


**Tap water outlet in the college Campus**



**Aqua plant for staff in staff room**

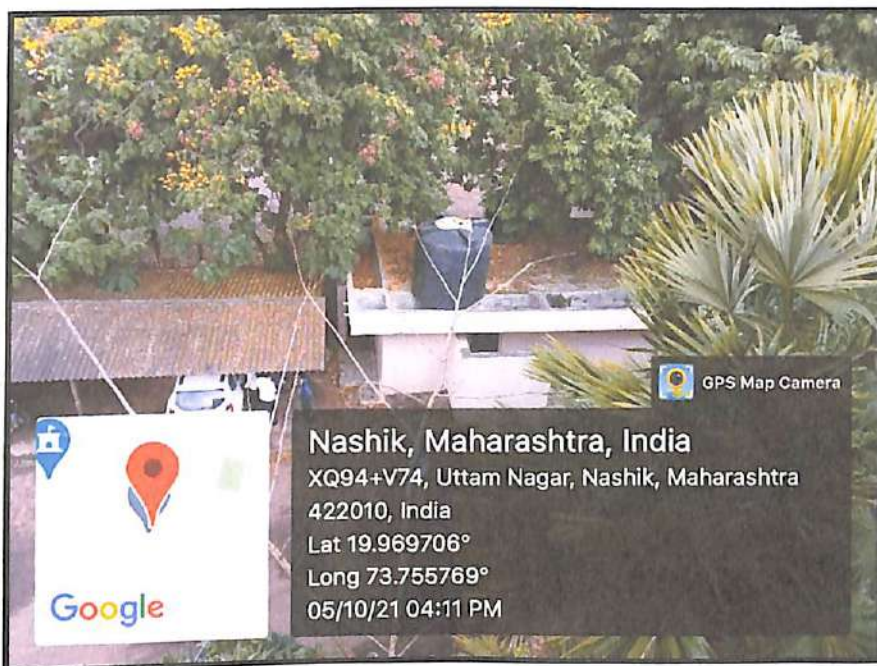




**RO Water Plant for Students in the college campus**




**Second floor new building**



Ground - 1





 <b>नाशिक महानगर पालिका, नाशिक</b> <b>वॉटर मिटर सप्लाय बिल</b>		<b>चेक नं. 301962</b> <b>0276185</b>	
<b>वॉटर पास</b> इंडेक्स नंबर 40106683 प्रत्येक क्रमांक (413-A)	<b>विभागीय कार्यालय NEW NASIK</b> उप कार्यालय A13/01/0001/00/00		<b>बिल क्रमांक BILL01398</b> <b>दिनांक 27/12/2020</b>
<b>मिटर धारकाचे नांव : NDMVP SAMAJ, A.S.C. COLLEGE</b> <b>पत्ता : UTTAM NAGAR CIDCO, NEW NASIK</b>		<b>नळजोड आकार N</b> <b>व वापराचा प्रकार Residential</b> <b>बिलाचा कालावधी</b> <b>दिनांक 01/12/2020 - 12/12/2020</b>	
<b>चालू रिडींग (लि)</b> 21/12/2020 31/01/2021 5470000 5394000 Min. Usage Slab : 120000 Avg Use : 200000 Days	<b>मागील रिडींग (लि)</b> 3075000 R. M. 325	<b>दर (प्रति हजार लिटर)</b> Rs. : 5.00/- Current Bill	<b>मुळ विलाची रक्कम</b> 15380
<b>शेरा</b> 15380		<b>मागील बाकी रक्कम</b> 0	<b>एकूण रक्कम</b> 15380
<b>रक्कम शब्दात</b> Eighteen Thousand Three Hundred And Eighty Only		<b>PAID &amp; CANCELLED</b> <b>PRINCIPAL</b>	
<b>बिल लिपिक</b> मुचना मागे पहा :		<b>विभागीय अधिकारी</b> नाशिक महानगरपालिका	





कार्यादेश क्र. 19/2020



नाशिक महानगरपालिका, नाशिक  
Nashik Municipal Corporation

31/12/2020

Water Tax Receipt

2020-2021

Sl. No. : c78ePj6Pd745 Date : 31/12/2020  
St. No. : CFCRECP0000867395 Center : CIDCO (New Nashik)  
Station No. : CWT890673 Payment Mode : cheque  
Cheque/DD No. : 301967 Cheque/DD : 31/12/2020  
Date :  
Name : STATE BANK OF INDIA Branch Name : NASHIK  
r Name : NDMVP SAMAJ, A.S.C COLLEGE Mobile No. : 9805054181  
rmer No. : A13/01/0001/00/00 Address : UTTAMNAGAR CIDCO, NEW  
NASHIK  
Index No. : 40106683  
Type : Self  
Receipt No : WATRCPE0164

श्रील शिल्लक	चालू शिल्लक भागणी	मूट रु.	वाढीव हिरणा रक्कम	सकूण रु.
0	15380	0	0	15380

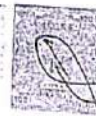
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seen Thousand Three बाकी रक्कम : 0  
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This is computer generated receipt. Signature is not necessary.  
This is valid to Nashik Municipal Corporation transaction only.  
Cheque is not cleared or returned due to any reason this receipt will be cancelled automatically.  
Please check balance amount to pay on website www.nmctax.in

सही आणि शिक्का



Nashik Municipal Corporation Water bill - 2020



जॉएसटी क्र. 27AAALN0085E1Z9

नाशिक महानगर पालिका  
पाणी देयक (Water Bill)

पास - A

(महाराष्ट्र महानगरपालिका अधिनियम प्रकरण ११ कलम १३० (कलम १३६ अ) व नियम ३०)



इंडेक्स नंबर: 40106683 विभागीय कार्यलय: NEW NASIK देयक क्र.: WATBILL01348  
 ग्राहक क्र.: A13/01/0001/00/00 भाग क्र.: 413-A दिनांक: 07/01/2022  
 नांव: NDMVP SAMAJ, A.S.C COLLEGE नळजोडणी साईज: 1 IN  
 पत्ता: UTTAM NAGAR CIDCO, NEW NASHIK वापराचा प्रकार: Residential (निवासी)  
 वाण्याचा दर प्रति हजार लिटर र. रु: 5.00

चालू मीटर वाचन किमान सरासरी वापरानुसार व तारीख (लिटर मध्ये)	मागील मीटर वाचन व तारीख (लिटर मध्ये)	प्रति मासिक किमान वापर (लिटर मध्ये)	Avg. Use / Days (सरासरी वापरानुसार /एकूण दिवस)	Total Min. Usage (एकूण किमान वापर लिटर मध्ये)
31-03-2022 0 (शून्य)	21-12-2020 8470000	120000 (किमान वापर)	465	1860000
Remark (If Any) Meter status Active		देयका प्रमाणे मागणी र.रु.		9300
		मागील थकवाकी र.रु.		0
		एकूण मागणी र.रु.		9300
ग्राहक मोबाइल क्र:		अक्षरी रक्कम रु: Nine Thousand Three Hundred Only		
महत्वाची सूचना :-		सदरचे देयक किमान सरासरी आकार काळावधी दि. ३१ मार्च २०२३ पावेतोचे विचारात घेऊन देण्यात येत आहे, प्रत्यक्ष मीटर वाचन (रिडींग) नुसार पुढील पुरवणी देयक देण्यात येईल याची नोंद घ्यावी.		

Chet 180/1135671  
28/03/2022

विभागीय अधिकारी

नाशिक महानगरपालिका नाशिक  
स्वच्छ नाशिक, सुंदर नाशिक

"स्वच्छता असे जिथे, आरोग्य वस तिथे"

सूचना: कृपया मागील बाजूस पहा





कार्यादेश क्र. 19/2020

Receipt No. 0720017

नाशिक महानगरपालिका, नाशिक  
Nashik Municipal Corporation

Water Tax Receipt

2021-2022

Ref No : z2j5jfm 1GB47 Date : 29/03/2022  
Receipt No : CFCRECP0001365506 Center : CIDCO(New Nashik)  
Application No : CW 1230817 Payment : cheque  
Mode :  
Cheque/DD No : 435671 Cheque/DD : 28/03/2022  
Date :  
Bank Name : BANK OF MAHARASHTRA Branch Name : NASHIK  
Owner Name : NDMVP SAMAJA.S.C COLLEGE Mobile No : 7075945425  
Consumer No : A13/01/0001/00/00 Address : UTTAM NAGAR CIDCO NEW  
NASHIK  
Index No : 40106683  
Paid By : Self  
Tax Receipt No : WATRCP142657

आवधिक शुल्क	वास्तु शुल्क	शुल्क	ग्राहक शुल्क	एकक
0	9300	0	0	9300

कुल शुल्क : 9300  
(Nine Thousand Three Hundred Only)

Collected By : cidcfc\_ws2

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## Summary

The objective of the audit was to study the water utilization pattern of the college, identify the areas where water leakage and loss.

The salient observations and recommendations are given below:

- 1) MVP'S KSKW Arts, Science and Commerce College, Uttamnagar, CIDCO, Nashik uses water for drinking, washing and sanitation purpose which comes from Municipal Corporation
- 2) The campus buildings possess large terrace areas and paved as well as non-paved areas. Currently, none of the buildings have Rain Water Harvesting (RWH) System implemented. The campus has huge potential for Rain Water Harvesting. However, due to inadequate space, the RWH system is not implemented.
- 3) Operational efficiency and maintenance level of all water supply units is good
- 4) Frequent chlorination of water tanks was recommended.
- 5) Recycling of waste water can be done in future.
- 6) The audit establishes the quality / volume of water being used, wastage if any, leakages existing, excess use etc., and identifies areas where consumption can be reduced.
- 7) Water Audit is a systematic process of objectively obtaining a water balance by measuring the flow of water from the site of water withdrawal or treatment through the water distribution system and into areas where it is used and finally discharged.

## Action Taken Report:

Sr. No	Suggestions By Water Audit Committee (2020-2021)	Action Taken by Institute (2021-2022)
1	The auditor investigates the relevant method that can be adopted and implemented to balance the demand and supply of water.	Rain water harvesting System is implemented



Rain Water Harvesting in the College Campus



## References

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2. "Fanner V.P, Sturn R., J.Thornton (2007), "Evaluating Water Loss and Planning" Manual,  
Chapter -7, pp 75-93
3. "Rathi Dinesh (2005), "Water audit in National scenario" National conference on management  
conservation and sustainable development.
4. "Detail Project Report on Water Audit of Ahmadpur Municipal Corporation, Management under  
Sujal Nirmal Abhiyan, State Government of Maharashtra.
5. "Kunkel George (2007), "Evaluating Water Loss and Planning" Manual,Chapter-4,pp 35-49
6. K. K. Kamble (2018) 'Water Audit for Water Distribution Networks in  
Educational Campus' in International Journal of Research in Advent Technology, Vol.6, No.11,  
November E-ISSN: 2321-9637 pg no.2976-2979