

Phone & Fax : 2241 6605



## SREE BALAJI COLLEGE OF NURSING

(Recognised By Indian Nursing Council, New Delhi and The Tamilnadu Nurses and Midwives Council )  
(Approved by Govt. of Tamil Nadu and Affiliated to Bharath Institute of Higher Education and Research)

No.7, Works Road, Chromepet, Chennai - 600 044.

1 November 2019

The Deputy Director (Training Centre)  
CMWSSB,  
No.56, Raji Street,  
Ayyanavaram,  
Chennai – 600 023.

Respected Sir/Madam,

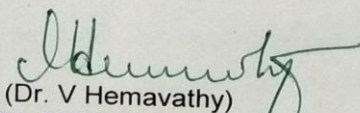
Sub: Request permission for two days Observational Visit – for II year B.Sc., (N), I year M.Sc., (N) & II year Post Basic B.Sc., (N) Students - reg.

As part of the curriculum, the I year M.Sc., (N) (1 candidate), II year B.Sc., (N) (44 candidates) and II year Post Basic B.Sc., (N) (6 candidates) need to gain knowledge about Water Treatment Plant and Sewage Treatment Plant. Therefore we request you to kindly permit the students for one day observational visit in Water treatment plant at Puzhal or Kilpauk on 13.11.2019 & 14.11.2019 and in Sewage treatment plant at Perungudi on 13.11.2019 & 14.11.2019. Two faculties will accompany along with the students.

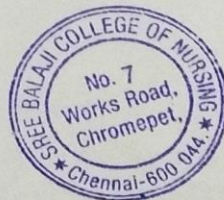
Kindly intimate the date and time most convenient for you.

Thanking you,

Yours sincerely,

  
(Dr. V Hemavathy)

Dr. V. HEMAVATHY,  
M.Sc.(N), M.A., M.Phil., Ph.D.(N),  
PRINCIPAL  
SREE BALAJI COLLEGE OF NURSING  
No. 7, Works Road, Chromepet,  
Chennai-600 044.





# CHENNAI METROPOLITAN WATER SUPPLY AND SEWERAGE BOARD

No.1, Pumping Station Road, Chintadripet, Chennai - 600 002.

DEPUTY DIRECTOR (TC)

Lr. No.CMWSSB/TC/Field visit/61/2019-20 dated 11.11.2019

To  
The Principal,  
Sree Balaji College of Nursing,  
No.7, Works Road, Chrompet,  
Chennai – 600044.

Sir,

**Sub:** CMWSSB – Training Centre - Sree Balaji College of Nursing,  
Chennai - Permission requested for field Visit – Accorded – Reg.

**Ref:** Your Letter dt. 01.11.2018 addressed to the Deputy. Director (TC),  
Training Centre, CMWSSB along with 2(Two) Nos. of DD  
for Rs.5,000/- DD No.303609 dt. 08.11.2019 drawn at Indian  
Bank, Kilpauk Branch and for Rs.900/-  
DD No.303611 dt. 08.11.2019 drawn at Indian Bank,  
Kilpauk Branch.

With reference to the letter cited, permission is hereby accorded for field visit to  
the **WTP and STP** for B.Sc. and M.Sc. Nursing students along with faculty of your  
Institution as follows:

Sl.No	No. of Batches	No of students	Kilpauk WTP	Perungudi STP
1	Batch I	25	13.11.2019	14.11.2019
2	Batch II	25	14.11.2019	13.11.2019

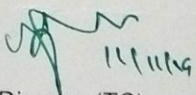
This permission is accorded subject to the following conditions:

1. The permitted persons to adhere the safety norms and discipline also follow the instructions of CMWSSB officials at site during the time of visit .

2. The health conditions of the permitted persons are to be ascertained by the Institution authorities themselves before planning on their visit to the CMWSSB site.
3. Safety and responsibility of the permitted persons are solely rest with the concerned education Institutions. Minimum of 2 senior persons from the Institution should accompany the permitted persons during the field visit
4. CMWSSB is not liable for damage to both personnel and belongings caused during the field visit.
5. CMWSSB is not liable for any accidents or loss of life caused during the field visit.
6. The damages if any caused to the Board's installations, natures etc., by the permitted persons, the consequences and cost of the same should be borne by them.
7. The data collected from CMWSSB should be used only for the purpose of their study and should not divulge any information, publication of articles in Newspapers or any media or presentation in any public forum.
8. Any report, if prepared, should not be published without the consent of CMWSS Board and a copy of such report has to be submitted to CMWSS Board.
9. The permitted persons should not take any photograph or videos or any type of Audio/Video recording during their visit at CMWSSB site.
10. The permitted persons are not allowed to use their cellphone during their visit at CMWSSB site.
11. The permitted persons should wear shoes only.

Apart from the above, the instructions mentioned in the enclosure (Tamil & English) should be followed strictly.

You are requested to contact the A.E.E./Kilpauk WTP, Mobile No: 8144930456 and A.E.E./Perungudi STP, Mobile No: 8144930454 for further information and guidance.

  
Dy. Director (TC)

**DEPUTY DIRECTOR**  
**Training Centre**  
**CMWSS Board, Chennai - 600 023**

**WATER TREATMENT PLANT FIELDVISIT REPORT**  
**ON**  
**KILPAUK**



**BATCH – 2019-2020**

## INTRODUCTION:

We are the students of B. Sc Nursing Ist Year of Sree Balaji College of Nursing visited kilpauk water purification Plant on 2016. Students of B.Sc Nursing 1<sup>st</sup> Year and 2 staff of Sree Balaji College of Nursing started by 10.00 am.



## HISTORY:

Till about the middle of 19<sup>th</sup> century Chennai received water from local shallow wells and tanks. Mr. Fraser, a civil engineer forwarded a proposal to the government to tap the Kosesthal River which is situated about 160 km North West of Chennai and it was accepted.

The project comprised of a masonry weir across **Kosesthal River** at **Sembarampakkam** and diverting the water into **Cholavaram Lake** and hence into the Red hills lake through a channel.

The works were completed in 1870 at a cost of about Rs. 18.50 lakhs. In 1872, a valve house at Red hills and an earthen supply channel to supply water to Chennai by gravitation was constructed. At Chennai end, the channel delivered water to Chennai by gravity into a masonry shaft at Kilpauk from which the cast iron main of the city branched off and scientifically designed water supply distribution system was established

- Construction of covered underground masonry conduit from intake tower called Jones Tower to Kilpauk.
- Construction of 14 slow sand filters at Kilpauk water works.
- Construction of 3 pure water masonry tanks at Kilpauk water works.
- Installation of three high duty steam engine.
- Laying of 48" steel pumping main from Kilpauk to the shaft where the trunk mains start.
- Remodeling, alerting and extending the distribution system to ensure adequate supply under sufficient pressure.

According to Mr.J.W.MADELEY these were considered sufficient for an anticipated population of 6.6 lakhs in 1961 at 25 gallons per head per day. But the need for further improvement was felt in 1936 itself.

## **CHENNAI METROPOLITAN AREA:**

Chennai city is the capital of Tamil Nadu and fourth largest metropolitan city in India. The Chennai metropolitan area (CMA) comprises the city of Chennai and its outlying urban and rural area. The Chennai city area now covers 176 sq km. the urban units grouped under the title adjustment urban area (AUB) and distant urban area (DUA) covers 164.6 sq km and 142.1 sq km respectively.

## **METHOD OF TREATMENT PLAN:**

Waste water treatment when effluent discharge into a river body such as lake, river. It's necessary to treat effluent. The treatment methods are:

- ✓ Primary treatment (mechanical treatment)
- ✓ Secondary treatment (biological treatment)
- ✓ Tertiary treatment (chemical treatment)

## PRIMARY TREATMENT:

Effluent is passes through a screen which is used to remove material like wood pieces, plastic, paper, floating debris. Then effluent is passed through a chamber known as **Grit chamber** fatty and oil substance can be removed by floatation method in instrument called **Centrifugal**. The suspended particles are tank are settled down.



## Sedimentation:

It can be accelerated by adding chemical substance known as coagulant like **alum**. In this method of bubble of air passes and passes through the bottom of small tank and small particle come in contact with water bubble come out on the surface of water.

## SECONDARY TREATMENT:

The process in which micro organism play a very important role for the treatment of micro organism like **fungi, bacteria**. This are decomposed of organic matter of sewage into stable form by oxidation and nitrification biological treatment classified as:

### Aerobic:

- ✓ Activated sludge process
- ✓ Trickling filter
- ✓ Anaerobic treatment



## TERITARY TREATMENT:

Main function to treat is to decrease the load of nitrogen and phosphorous compound present in following process:

- Precipitation
- Nitrogen striping
- Chlorination

The effluent received after the secondary treatment is mixed with calcium oxide. The lime then react with phosphorous and get settled down in bottom of tank.

The digested sludge may be pumped to trunk loading striation to the order location for drying or fertilized.



## **SOURCE:**

Water supplies for Chennai city where drawn from three interconnect are,

<b>S.NO</b>	<b>RESERVIOR</b>	<b>CAPACITY (in MCFT)</b>
1.	Poondi	3231
2.	Cholavaram	881
3.	Red hills	3300



## **GROUND WATER SOURCES:**

There are two main sources are, well fields in the Araniya-Korataayairu basin.

## CONCLUSION:

We gained knowledge through the visit; it is very useful to complete our community requirement, for giving such a wonderful opportunity.



**SREE BALAJI COLLEGE OF NURSING**

**NAME LIST OF THE STUDENTS ATTENDING FIELD VISIT**

**WATER TREATMENT PLANT**

<b>S.NO</b>	<b>REG. NO</b>	<b>NAME OF THE CANDIDATE</b>
1.	U19NR037	KAMESH R
2.	U19NR038	KAVITHA M
3.	U19NR039	KAVIYA T
4.	U19NR040	KIRUBALAKSHMI P
5.	U19NR041	KISHORE S
6.	U19NR042	LAVANYA P
7.	U19NR043	MOHAMMED RAIYAN M R
8.	U19NR044	MOHANA PRIYA S
9.	U19NR045	MOHANAPRIYA R
10.	U19NR046	MONISHA R
11.	U19NR047	NARESH KUMAR V
12.	U19NR048	NITHISHA RAJESH
13.	U19NR049	PARAMESWARI S L
14.	U19NR050	POORNIMA R
15.	U19NR051	PRIYA P
16.	U19NR052	RAGAVENTHIRAN S
17.	U19NR053	RAJESWARI L
18.	U19NR054	REEBA MOL P
19.	U19NR055	RITU BHATT G
20.	U19NR056	SAMUKTHA V

21.	U19NR057	SANDHIYA K
22.	U19NR058	SANDHIYA R
23.	U19NR059	SARANYA R
24.	U19NR060	SATHYANARAYANAN K E
25.	U19NR061	SHANE WILSON
26.	U19NR062	SHERLEE CHELSIYA M
27.	U19NR063	SHYAMALA KUMARI A
28.	U19NR064	SNEHA PRADEEP P
29.	U19NR065	SUGANTHI S
30.	U19NR066	SULTHAN S
31.	U19NR067	SWETHA S
32.	U19NR068	THOPIYA BLESSCY R
33.	U19NR069	VIDHYA E
34.	U19NR070	VIJAIAMRUTULA M A
35.	U19NR071	VINITHA K
36.	U19NR072	YUVASHREE R