



**DEPARTMENT OF PUBLIC HEALTH DENTISTRY**

**FIELD VISIT REPORT  
WATSE WATER TREATMENT  
PLANT**

**DATE OF THE VISIT: 9/2/2019**

A handwritten signature in black ink, appearing to be "D. M.", is written above the official stamp.

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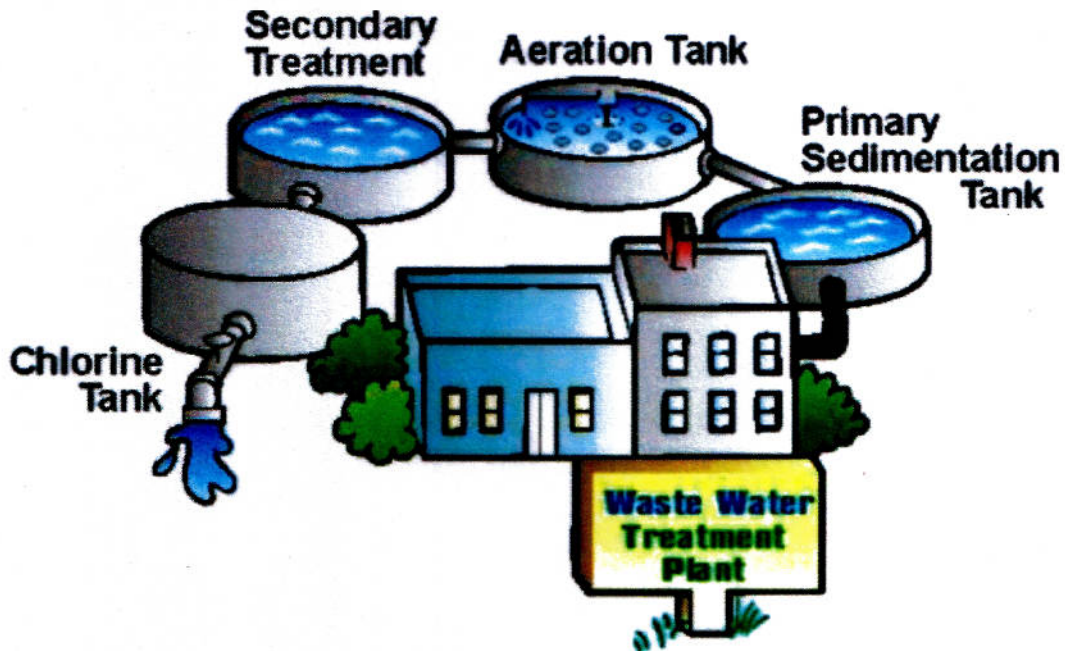


## INTRODUCTION:

- Sewage treatment is the process that removes the majority of the contaminants from waste-water and produces both a liquid effluent suitable for disposal to the natural environment and sludge.
- To be effective, sewage must be conveyed to a treatment plant by appropriate pipes and infrastructure .
- Other waste waters require often different and sometimes specialized treatment methods.
- At the simplest level treatment of sewage and most waste waters is through separation of solids from liquids, usually by settlement. By progressively converting dissolved material into solid, usually a biological flock and settling this out, an effluent stream of increasing purity is produced.

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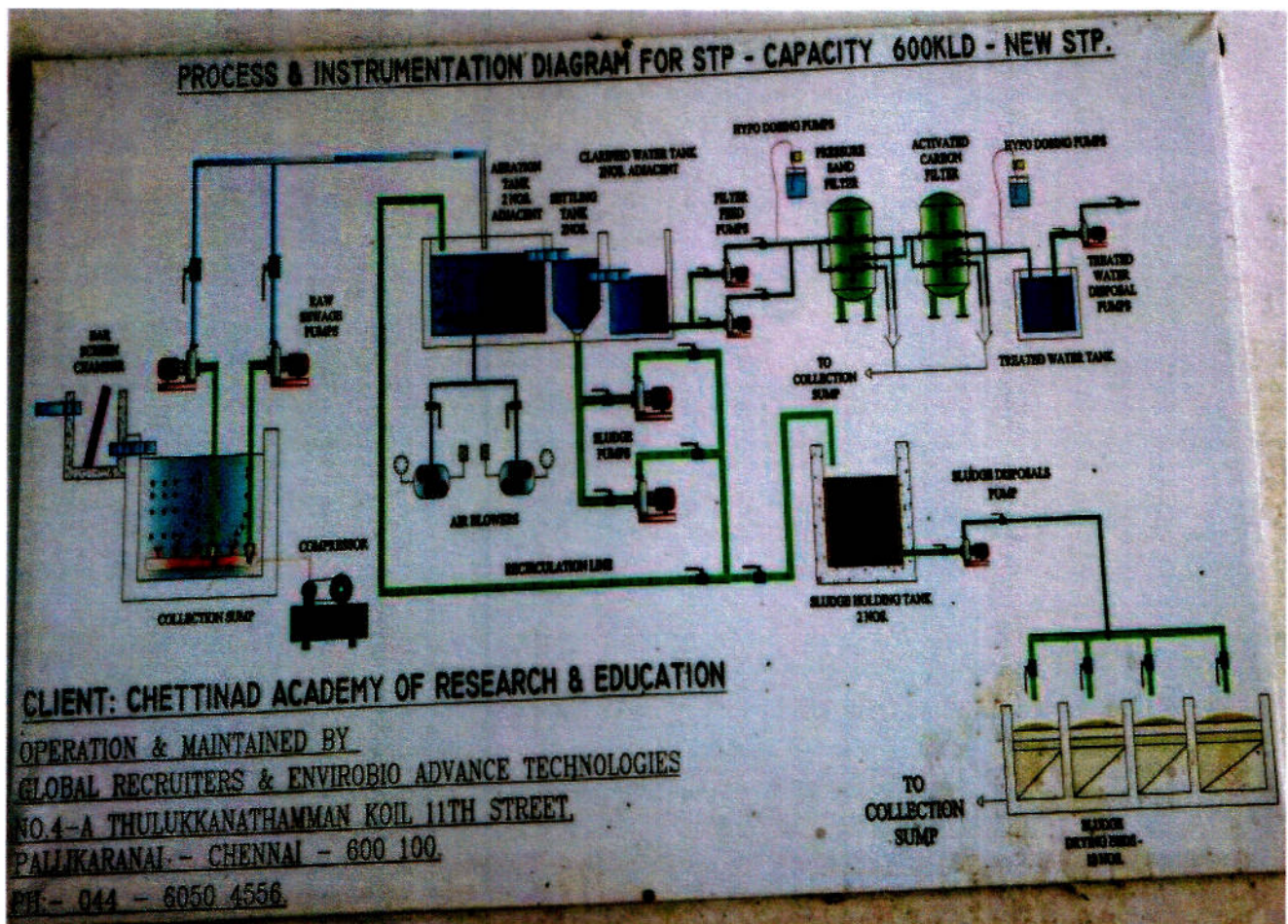
- Sewage is the liquid waste from toilets, baths, showers, kitchens, etc. that is disposed of via sewers. In many areas sewage also includes some liquid waste from industry and commerce



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# PROCESS INVOLVED:



- The sewage water gets collected in the **RAW SEWAGE WATER TANK**


  
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Fig1: collecting tank



Fig2: overview of the collecting tank

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- From there it enters into the **AERATION TANK**

- The sewage water is then exposed to air.
- This causes some of the dissolved gases (such as hydrogen sulfide, which smells like rotten eggs) that taste and smell bad to be released from the water.



Fig3:aeration tank

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- The aerated water is let into the **SETTLING TANK**

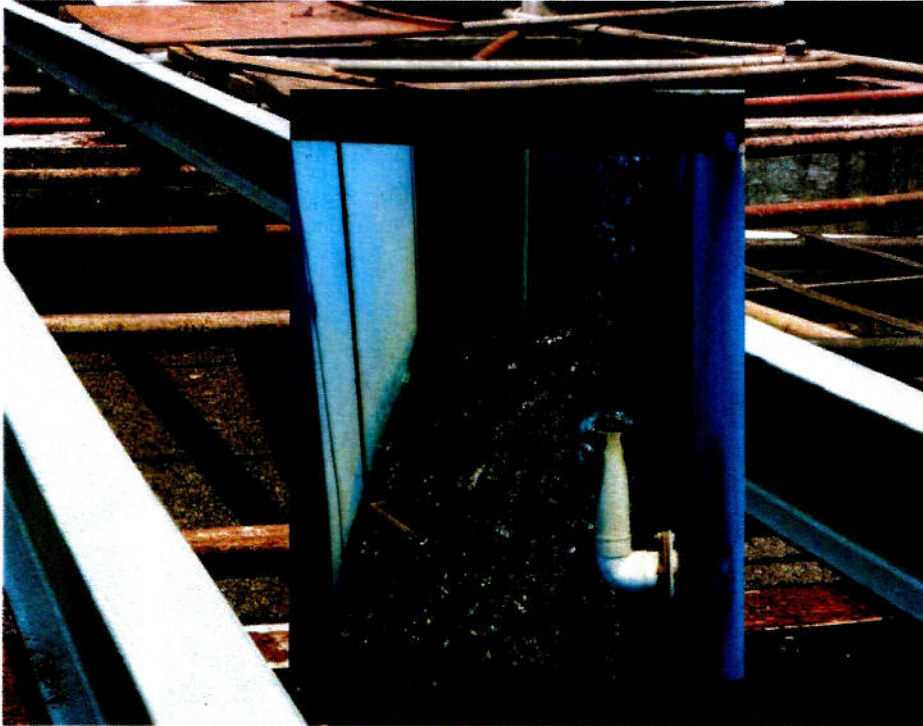


Fig4:settling tank

The live organisms settle in the bottom which is re-circulated into the aeration tank and the dead organism settles on the top forming the sludge

**AMOUNT OF WATER TREATED PER DAY-**

- 600KI /day (i.e)600x1000 litres/day

- The sludge is pumped into the **SLUDGE DRYING BED.**



  
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Fig5:sludge drying beds

The sludge drying bed consists of sand at the top and stones at the bottom of different sizes.

- Water present in the sludge gets filtered and settles in the bottom which is then taken to the RAW SEWAGE COLLECTION TANK via underground pipes.
- The waste at the top is allowed to dry and is used as manure.

  
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- The water is let into **FILTER FEED TANK**.

DOSING is done with SODIUM HYPOCHLORITE and fed into PSF [PRESSURE SAND FILTERS]. Pressure sand filters consist of

- Pebbles at the bottom (3-4 layers) –larger at the bottom and smaller at the top
- Sand on the top- 2 types –fine sand and core sand



Fig7: pressure sand filter and activated carbon filter

Then into ACF[ACTIVATED CARBON FILTER], which consists of,

- Pebbles
- Carbon

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- This is followed by checking the PH of the effluent

This ensures proper disinfection to be achieved in the treated water making it suitable for use in air conditioning plant

Treated water is then stored in the TREATED STORAGE TANK. This treated water is used for

- Gardening
- When ultra filtered used for urinal flushing



- For powering of air conditioning plants

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## CONCLUSION:

- Waste water treatment is a great technique to make optimum use of water.
- Water which would be simply thrown away is put into good use .this also helps to reduce contamination of clean water sources .
- Water used by homes,industries and business must be treated before it is released back to the environment.
- Treatment plants reduce pollutants in wastewater to a level nature can handle.



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RESEARCH STATION  
107 HIGHWAY KILAMBAKKAM  
TAMIL NADU INDIA - 601 303

**List of participants for the field visit**

<b>S.NO</b>	<b>LIST OF STUDENTS WHO ATTENDED THE FIELD VISIT</b>
1	RAGHUL MARAN
2	SAKTHIVEL.A
3	SRUTHI.P
4	AARTHY.K
5	AKANSHA TINI.P
6	AKSHAYA.M.N
7	ANUREKHA.A
8	ASHWATHAMAN.P
9	ASHWINI.S
10	BHAVANA.B
11	CLEMENT SOLOMON.B
12	DEEPIKA.L
13	GAYATHRI.S
14	GEERTHANA.J
15	HARITHA.R.K
16	HEMALATHA.T
17	ILAVARASI.K
18	ISWARYA.S
19	JOANNA GRACY.P
20	KAAVIYA.C
21	KAVIYA.B
22	KEERTHANA.M
23	KEERTHANA.S



PRINCIPAL  
SREETHYAN DENTAL COLLEGE &  
RESEARCH INSTITUTE  
117 HIGHWAY KFLAMBAKKAM  
KANNIYUR DIST - 603 103

24	KOKILA.S.K
25	LAVANYA.M
26	MADHUVATHANI.R
27	MAHALAKSHMI.V
28	MUKILAN.V
29	NANDHINI.R
30	NARESH.B
31	NIVASHINI.C
32	POOJA.L
33	POORNIMA.S
34	PRATHUSHA.U
35	PRAVEEN.R
36	QURATHUL AYN FATHIMA
37	RAAVI SRI HARIKA
38	RAJ PRITHIVIKA.P
39	RAMYA.R
40	RANISANTHIYA.S
41	RAVEENA.M
42	REBECCA ELIZABETH SUSANNA
43	REVANTH KUMAR.K.K
44	RIZVI.V.CHOUGHAN
45	SAI SHRUTHI.H.M
46	SHAHANA FATHIMA.S
47	SHANMADHY.S
48	SHANMUGAPRIYAN.D
49	SHANMUGAVELU.S
50	SHARMISTA SREE.K



CHRISTIAN MEDICAL COLLEGE &  
 RESEARCH INSTITUTE  
 67 HIGHWAY KELAMBAKKAM  
 THIRUCHIRAPPALI DIST - 603 103

51	SIDDHARTH.A
52	SIDHAARTH.R
53	SIVANTHINI.P.S
54	SONU.R
55	SOUNDAR RAJAN.R
56	SRIRAM.P
57	SRUTHI.S
58	STEFFY.S
59	SUBHASHINI.R
60	SUMITHRA.M
61	VALARMATHI.M
62	VIGNESH.R
63	VINITHA.A
64	VISANTH.P
65	YAMINI.N
66	YUVARANJANI.P



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RESEARCH INSTITUTE  
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KANCHIPURAM DIST - 603 103