



TAMIL NADU POLLUTION CONTROL BOARD

**Action Plan on Rejuvenation of
River Thirumanimutharu
Salem to Papparapatti Stretch
(Priority-I)**

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Comprehensive Report on Prevention and Control of Pollution in River Thirumanimutharu (Priority-I) - An Action Plan for Rejuvenation

1.0 Introduction

The Hon'ble National Green Tribunal (NGT) Principal Bench took Suo-Moto Cognizance of news report appeared in "The Hindu" authorized by Shri. Jacob Koshy titled "More River Stretches are now critically polluted – CPCB" and issued directions in para 50(i) to (x) vide its Original Application No. 673/2018 dated: 20.09.2018

1. All States and Union Territories are directed to prepare action plans within two months for bringing all the polluted river stretches to be fit at least for bathing purposes (i.e., BOD < 3 mg/L and FC < 500 MPN/100 ml) within six months from the date of finalisation of the action plans.
2. The action plans may be prepared by a four-member Committee comprising,
 - a. **Director, Environment**
 - b. **Director, Urban Development**
 - c. **Director, Industries**
 - d. **Member Secretary, TNPCB**

This Committee will also be the Monitoring Committee for execution of the action plan. The Committee may be called as "**River Rejuvenation Committee**" (RRC). The RRC will function under the overall supervision and coordination of Principal Secretary, Environment & Forest, Govt. of Tamil Nadu.

3. The action plan will include components like identification of polluting sources including functioning/ status of STPs/ETPs/CETP and solid waste management and processing facilities, quantification and characterization of solid waste, trade and sewage generated in the catchment area of polluted river stretch. The action plan will address issues relating to; ground water extraction, adopting good irrigation practices, protection and management of Flood Plain Zones (FPZ), rain water harvesting, ground water charging, maintaining minimum environmental flow of river and plantation on both sides of the river. Setting up of biodiversity parks on flood plains by removing encroachment shall

also be considered as an important component for river rejuvenation. The action plan should focus on proper interception and diversion of sewage carrying drains to the Sewage Treatment Plant (STP) and emphasis should be on utilization of treated sewage so as to minimize extraction of ground or surface water. The action plan should have speedy, definite or specific timelines for execution of steps. Provision may be made to pool the resources, utilizing funds from State budgets, local bodies, State Pollution Control Board/Committee and out of Central Schemes.

4. The Action Plans may be subjected to a random scrutiny by a task team of the CPCB.
5. The Chief Secretaries of the State and Administrators/ Advisors to Administrators of the Union Territories will be personally accountable for failure to formulate action plan, as directed.
6. All States and Union Territories are required to send a copy of Action Plan to CPCB especially with respect to Priority I & Priority II stretches for approval.
7. The States and the Union Territories concern are directed to set up Special Environment Surveillance Task Force, comprising nominees of District Magistrate, Superintendent of Police, Regional Officer of State Pollution Control Board and one person to be nominated by District Judge in his capacity as Chairman of Legal Services Authority on the pattern of direction of this Tribunal dated 07.08.2018, in Original Application No. 138/2016 (TNHRC), "Stench Grips Mansa's Sacred Ghaggar River (Suo-Motu Case).
8. The Task Force will also ensure that no illegal mining takes place in riverbeds of such polluted stretches.
9. The RRC will have a website inviting public participation from educational institutions, religious institutions and commercial establishments. Achievement and failure may also be published on such website. The Committee may consider suitably rewarding those contributing significantly to the success of the project.
10. The RRCs will have the authority to recover the cost of rejuvenation in Polluter Pays Principle from those who may be responsible for the pollution, to the extent found necessary. In this regard, principle laid down by this Tribunal in order dated 13.07.2017 in O.A No. 200 of 2014, M.C. Mehta Vs. U.O.I will apply. Voluntary donations, CSR contribution, voluntary services and private participation may be considered in consultation with the RRC.

Based on the directions of Hon'ble NGT (PB) vide its Original Application No. 673/2018 dated: 20.09.2018 the Principal Secretary (Environment & Forest) has convened the River rejuvenation committee meeting on 14.11.2018 regarding the directions issued by the Hon'ble NGT (PB) to prepare action plan for the rejuvenation/restoration of polluted river stretches in Tamil Nadu with the heads of the following departments:

1. Municipal Administration and Rural development and its line departments,
2. Chennai Metro Water Supply and Sewage Board.
3. Tamil Nadu Water Supply and Drainage Board.
4. Environment & Forest.
5. Central Pollution Control Board, Bangalore.
6. Tamil Nadu Pollution Control Board.

In the meeting it was decided to evolve the detailed action plan for the rejuvenation/restoration of polluted river stretches in Tamil Nadu. The minutes of the meeting was communicated to the above departments requesting certain details with action plan for the rejuvenation/restoration of polluted river stretches in Tamil Nadu. Remainder was also communicated to the above departments.

As per the Hon'ble NGT (PB) directions in its Original Application No. 673/2018 dated: 20.09.2018, Four member River Rejuvenation Committee (RRC) was constituted in Tamil Nadu and Government Order (G.O.) was issued by the Environment and Forest (EC.1) Department vide G.O. (D) No. 372 dated: 26.12.2018 (copy enclosed) to execute and to review the action plan for the Rejuvenation/Restoration of water along the polluted river stretches in Tamil Nadu as ordered by the Hon'ble National Green Tribunal, Principal Bench. River Rejuvenation Committee (RRC) members are as follows:

1. Industries Commissioner.
2. Commissioner, Municipal Administration.
3. The Director of Environment.
4. The Member Secretary, Tamil Nadu Pollution Control Board.

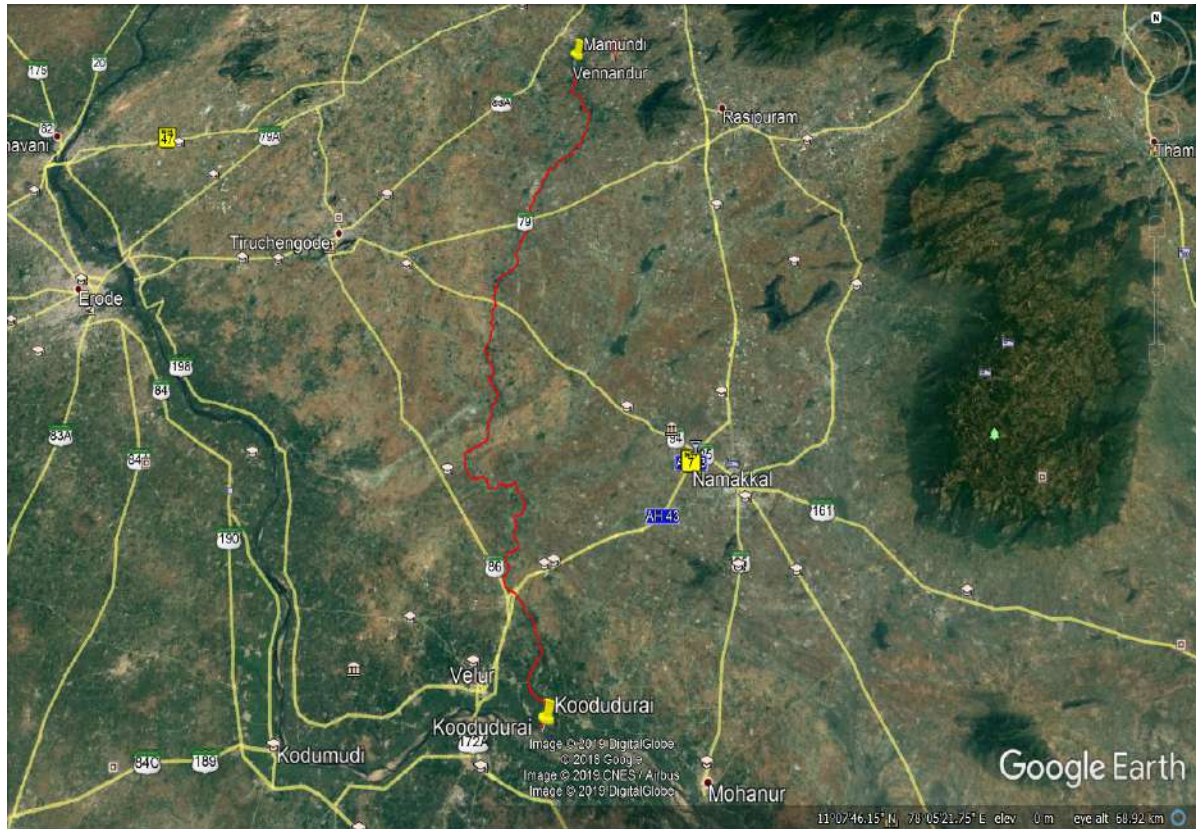
The RRC will function under the overall supervision and coordination of Principal Secretary, Environment and Forests Department, Government of Tamil Nadu.

2.0. Introduction about the River Thirumanimutharu:

The River Thirumanimutharu originates from Manjavadi in Shevaroy Mountain and flows through the Salem and Namakkal District. It arises in the Yercaud hills. River Thirumanimutharu joins the River Cauvery at Nanjai Edayar place in Namakkal District. In Salem District the River flows over a stretch of approximately 55 KM from Manjavadi in Shevaroy Mountain and flows upto Papparpatti. From Papparpatti it enters into the Namakkal District and confluences with River Cauvery at Nanjai Edayar. In Namakkal District the River Thirumanimutharu enters at Mamundi Village, Rasipuram taluk and ends at Koodudurai village, Mohanur Taluk, The total length of River Thirumanimutharu is about 62 KM in Namakkal district. River Thirumanimutharu flows through Acchankuttapatti, Kuppanur, Pallipatti, Vallaiyakaranur, Salem Town, Veerapandi, Attayampatti, Papparpatti and Namakkal district. From Papparpatti it enters into Namakkal District and confluences with the River Cauvery at Nanjai Edayar.



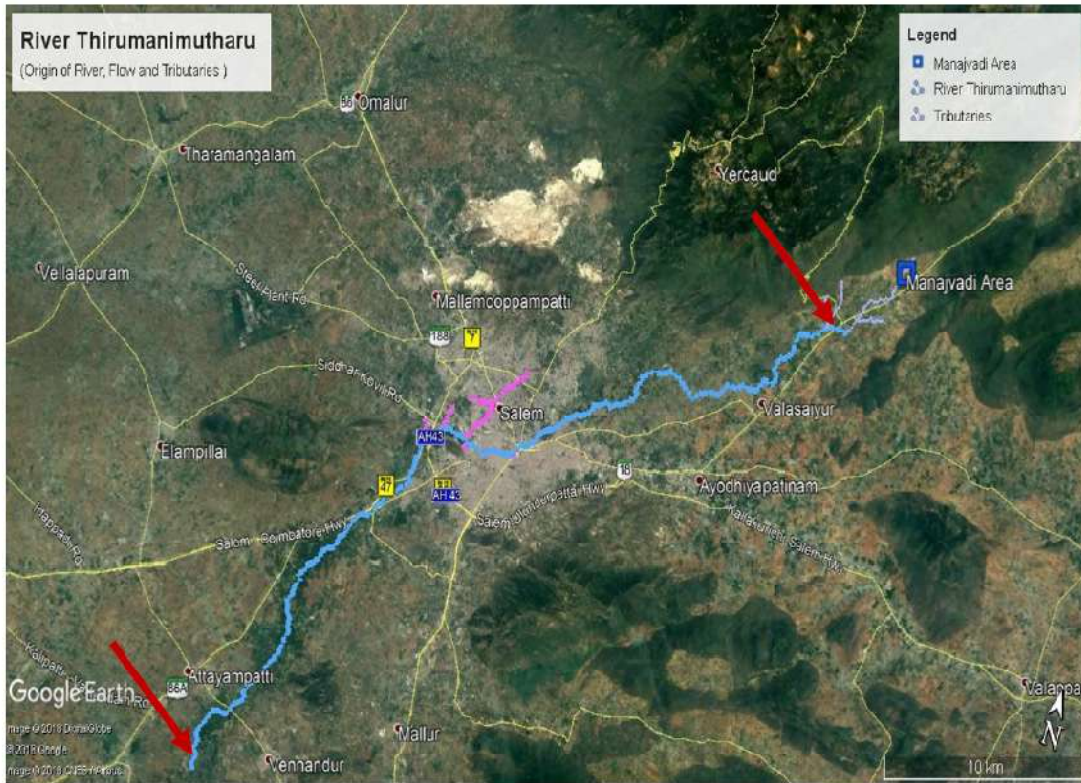
RIVER STRETCH MAP



3.0 Source of Pollution in the River Stretch:

Industries such as Sago units, Textile Dyeing and Bleaching units are located along the banks of the River Thirumanimutharu.

The Salem Corporation is located along/adjacent to the River Thirumanimutharu and its sewage is discharged into the river. The Salem City Municipal Corporation has established 4 Nos of Sewage Treatment Plants (STPs) with capacity 98 MLD, in which 3 Nos of STPs are yet to put into operation where one of the STP is under operation and the treated sewage is being discharged into the River Thirumanimutharu. The remaining untreated sewage generated is now being discharged into the River Thirumanimutharu.



Map showing the River Thirumanimutharu - Salem to Papparpatti Polluted River Stretch – 15 KM



Sewage Outfall Points

1. Nearby Sengal Anai (OF1)
2. Nearby Balaji Nagar (OF2)
3. Gokul Nagar Jairam college Back side (OF3)
4. Anaimedu STP (OF4)
5. Bose Ground, Old Bus Stand back side (OF5)
6. Shevapet Police Station Market (OF6)
7. Pallapatti lake overflow (OF7)
8. Uthamasolapuram (OF8)

Solid wastes dumping Points

1. Nearby Seelavari Lake (S 1)
2. Gokul Nagar Bridge (S2)
3. Nearby Anaimedu STP (S3)
4. Gundupodu Bridge (S 4)
5. Sandapet road bridge (S5)
6. Kandapatt Bypass bridge (S6)
7. Odei nearby Panchathangi Eri (S7)

a. Total Sewage Generation by the Salem corporation based on the No of STP's capacity -98 MLD

b. Total Solid Wastes Generation by Salem Corporation - 370 T/Day

Sewage Outfall Points – 8 Locations				
Sl. No.	Sewage Out-fall Location	Name of the Local Body	GPS Co-ordinates	
			Latitude	Longitude
1	Nearby Sengal Anai	Salem Corporation	11 ⁰ 40'25"N	78 ⁰ 10'56"E
2	Nearby Balaji Nagar	Salem Corporation	11 ⁰ 40'17"N	78 ⁰ 10'35"E
3	Gokul Nagar Jairam College Back side	Salem Corporation	11 ⁰ 39'59"N	78 ⁰ 10'20"E
4	Anaimedu STP	Salem Corporation	11 ⁰ 39'45"N	78 ⁰ 09'58"E
5	Bose Ground, Old Bus Stand back side	Salem Corporation	11°39'04"N	78°09'26"E
6	Shevapet Police Station Market	Salem Corporation	11°38'58"N	78°08'55"E
7	Pallapatti lake overflow	Salem Corporation	11°39'04"N	78°07'28"E
8	Uthamasolapuram	Salem Corporation	11°36'49"N	78°06'19"E
Solid Waste Dumping Points – 7 Locations				
Sl. No.	Solid Waste Dumping Points	Name of the Local Body	GPS Co-ordinates	
			Latitude	Longitude
1	Near Seelavari Lake	Salem Corporation	11°40'06.0"N	78°10'52.6"E
2	Near Gokul Nagar Bridge	Salem Corporation	11°39'59.0"N	78°10'20.6"E
3	Anaimedu	Salem Corporation	11°39'43.3"N	78°09'58.0"E
4	Near Gundupodu Bridge	Salem Corporation	11°39'03.2"N	78°09'26.0"E
5	Near Sandaipet road bridge	Salem Corporation	11°38'50.8"N	78°08'34.9"E
6	Near Kandapatti Bypass bridge	Salem Corporation	11°38'44.2"N	78°07'12.0"E
7	Odai @ Panchanhangi Eri	Salem Corporation	11°38'38.4"N	78°09'30.0"E

Photographs Showing the Sewage Out-fall Points



Near Senqal Anai
11040'25"N,78010'56"E



Nearby Balaji Nagar
11040'17"N,78010'35"E



Gokul Nagar Jairam college
Back side
11°39'59"N, 78°10'20"E



Anaimedu STP
11°39'45"N, 78°09'58"E



Bose Ground, Old Bus
Stand back side
11°39'04"N 78°09'26"E



Shevapet Police Station Market
11°38'58"N 78°08'55"E



Pallapatti lake overflow
11°39'04"N 78°07'28"E



Uthamasolapuram
11°36'49"N 78°06'19"E

Photographs showing the Solid Waste Dumping Points



Nearby Seelavani Lake - 11°40'06.0"N
78°10'52.6"E



Gokul Nagar Bridge - 11°39'59.0"N
78°10'20.6"E



Anaimedu - 11°39'43.3"N 78°09'58.0"E



Gundupodu Bridge -
11°39'03.2"N 78°09'26.0"E



Odai @ Panchanhangi Eari
- 11°38'38.4"N 78°09'30.0"E



Sandaipet road bridge
11°38'50.8"N 78°08'34.9"E



Kandapatti Bypass bridge
11°38'44.2"N 78°07'12.0"E

4.0 District/Area wise details of industries

4.1 Details of industries in Salem Corporation and surrounding area

Sl. No.	Taluk	LARGE				MEDIUM				SMALL				Total
		Red	Orange	Green	White	Red	Orange	Green	White	Red	Orange	Green	White	
1	Salem	2	13	3	0	1	8	0	0	76	205	65	7	380
2	Salem West	7	7	2	0	1	13	0	1	11	137	64	6	249
3	Salem South	1	2	2	1	0	4	2	1	74	162	64	8	321
4	Vazhappadi	4	9	3	0	1	3	1	0	13	68	24	2	128
	Total	14	31	10	1	3	28	3	2	174	572	217	23	1078

4.2 Details of industries generating trade effluent located in the taluks where the River passes:

Type of units	Salem	Salem West	Salem South	Valappady	Total
Sago, Textile Dyeing/Bleaching, Dairy, Granite cutting, Steam Calendering, Washing, STPs, Steel industries and etc.	143	97	78	39	357

Details of industries is enclosed in **Annexure –1**

5.0 Inspection Team Members:

Inspection teams were formed by Tamil Nadu Pollution Control Board including Engineers and Scientists for inspection, sample collection and analysis of samples along the entire polluted river stretch as per the Hon'ble NGT (PB) directions in its original application number 673/2018 dated: 20.09.2018.

Sl. No.	Polluted River Stretch	Jurisdiction Office	Name of the Team Members Tvl	Designation
1	Thirumanimutharu River Salem to Paparapatti Priority- 1	O/o AEL, Salem.	D. Mohanambigai	Assistant Director(Lab)
2		O/o, DEL, Dindugal	M. Sakthivel	Deputy CSO
3		O/o AEL, Salem	S. Munirathnam	Field Assistant
4		O/o, AEL, Salem	Gopal	Field Assistant

6.0. Details of sample collection from the industries:

Sl. No.	Point of collection	GPS coordinates		Date of sample collection
1	M/s. Steel Authority of India	11°39'36.3"N	78°01'40.5"E	29.09.2018
2	M/s. The Salem District Co-op Milk Producers	11°40'07.4"N	78°05'03.9"E	29.10.2018
3	M/s. Vellakuttai Sewage Treatment Plant	11°39'09.8"N	78°10'13.9"E	29.10.2018

7.0. River water/drain/Ground water samples collected details with live photographs along the river stretch.

Sl. No.	Point of collection	GPS coordinates		Date of sample collection
1	Near Anaimedu – STP Up Stream	11°39'42.2"N	78°09'59.4"E	04/01/2019
2	Near Bose Maidanam	11°39'03.7"N	78°09'24.0"E	04/01/2019
3	Near Sreeman Theatre	11°38'51.2"N	78°08'34.2"E	04/01/2019
4	Near Rettai Kili Rice Mill	11°39'17.4"N	78°08'42.1"E	04/01/2019
5	Near Siddar Kovil Road	11°38'59.6"N	78°07'59.7"E	04/01/2019
6	Near FedEx Courier Building Road	11°38'55.3"N	78°07'27.0"E	04/01/2019
7	Butterfly Flyover Down stream	11°38'21.3"N	78°07'03.4"E	04/01/2019
8	Papparapatti Down Stream	11°31'32.5"N	78°04'07.0"E	04/01/2019
9	Uthamasolapuram	11°36'49.1"N	78°06'19.2"E	04/01/2019
10	Near Mathiyampatti Padithurai	11°29'36.1"N	78°03'38.2"E	04/01/2019



Map showing the location of Sampling along the river stretch

Sample collection Photographs

Sample collected Near Anaimedu – STP Up-Stream



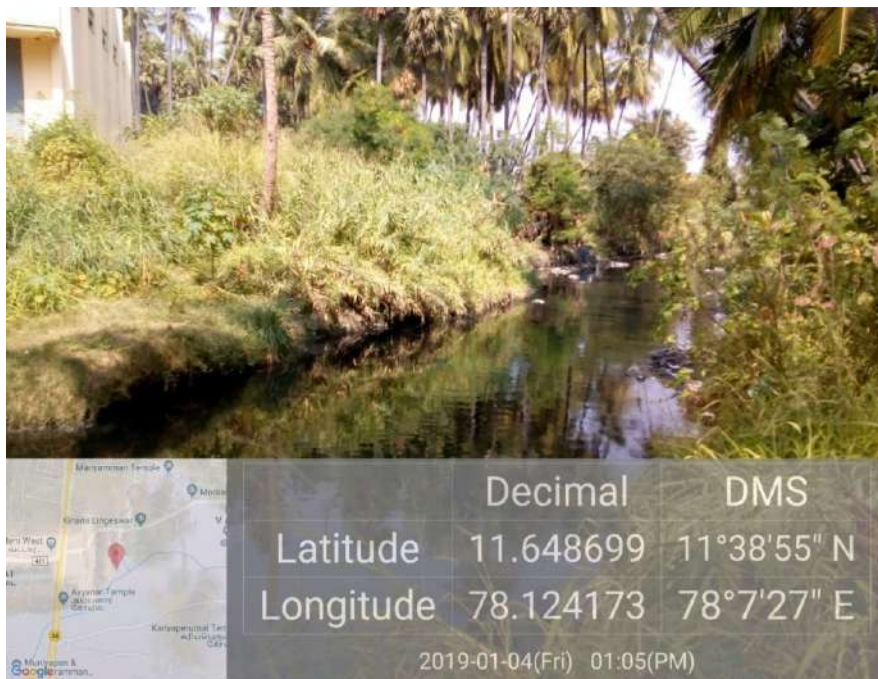
Sample collected Near Bose Maidanam



Sample Collected Near Sreeman Theatre



Sample collected Near Rettai Kili Rice Mill



Sample collected from Near FedEx Courier Building Road



Sample collected from Near Siddar Kovil Road



Ground Water Samples Collected from C.Duraisamy, Nethimedu Salem.



Ground Water Samples collected from C.Duraisamy, Nethimedu Salem



Ground Water Samples Collected from Manickam, Neikaranpatti (Iyar Kadu) Salem

8.0 Status of water quality of river water in the study area.

River water & drain samples are collected from River Thirumanimutharu is given in the table - for general parameters and heavy metals

Sl. No.	Sample No.	Point of Collection	DO	Faecal Coliform	BOD	Cu	Zn	Pb	Cd	Ni	Mn	Fe	T.Cr	Status of compliance with respect to WQC limit
			mg/l	MPN/100ml	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	
1	1796	Anaimedu - STP (Up Stream)	Nil	17 X 10 ³	30	<0.0015	<0.0015	<0.015	<0.0008	<0.006	<0.1	0.149	<0.05	Not complied
2	1797	Bose Maidanam	Nil	170x10 ⁹	143	1.391	0.291	<0.015	<0.0008	0.228	<0.1	0.269	<0.05	Not complied
3	1798	Sreeman Theatre	Nil	220x10 ¹¹	245	0.079	0.112	<0.015	<0.0008	0.277	<0.1	0.167	<0.05	Not complied
4	1799	Rettai Kili Rice Mill	Nil	220x10 ¹¹	220	<0.0015	<0.0015	<0.015	<0.0008	<0.006	<0.1	0.093	<0.05	Not complied
5	1800	Siddar Kovil Road	Nil	84x10 ¹¹	245	0.739	0.108	<0.015	<0.0008	0.199	<0.1	0.139	<0.05	Not complied
6	1801	Near Fed - ex Courier Building Road	Nil	94x10 ⁹	170	0.09	0.012	<0.015	<0.0008	0.121	<0.1	0.074	<0.05	Not complied
7	1802	Butterfly Flyover Down	Nil	170x10 ⁶	117	1.05	0.102	<0.015	<0.0008	0.318	<0.1	0.084	<0.05	Not complied
8	1803	Papparpatti Down Stream	0.9	63x10 ³	19.2	0.033	0.099	<0.015	<0.0008	0.02	<0.1	0.065	<0.05	Not complied
9	1804	Uthama solapuram	NIL	33x10 ⁴	75	0.072	0.079	<0.015	<0.0008	0.092	<0.1	0.279	<0.05	Not complied
10	1805	Mathiyampatti Padithurai	6.9	27	10.2	<0.0015	<0.0015	<0.015	<0.0008	0.032	<0.1	0.019	<0.05	Not complied
Water quality criteria (WQC) limit for Bathing			≥ 5 mg/l	≤ 500 MPN/100 ml	≤ 3 mg/l	-	-	-	-	-	-	-	-	-

9.0. Ground water samples collected details along the River stretch:

Sl. No.	Point of collection	GPS coordinates		Date of sample collection
1	Ramaiye, Anaimedu, G.S.T Office (Opposite)(Open Well)	11°39'43.8"N	78°10'01.0"E	05/01/2019
2	C.Duraisamy, Nethimedu Salem. (Bore Well)	11°38'52.8"N	78°08'01.2"E	05/01/2019
3	Manickam, Neikaranpatti (Iyar Kadu) Salem (Open Well)	11°36'44.4"N	78°06'24.0"E	05/01/2019

10.0 Status of water quality of ground water in the study area

Ground water samples were collected at three locations (i.e. Anaimeedu GST Office opposite, Nethimeedu&Neikaranpatti, Iyyarkadu) by the Inspection team. Ground water sample collected from afore-said location was analysed in TNPCB laboratory. Water Quality Monitoring Results of ground water sample collected by the Inspection team is given in the table below.

Sl. No.	Sample No.	Point of Collection	SO ₄	F	O&G	Cu	Zn	Pb	Cd	Ni	Mn	Fe	T.Cr	Status of compliance with respect to WQC limit
			mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	
1	1810	Ramaiye Anaimeedu GST Office Opposite (Open well)	61	0.898	< 1	<0.0015	<0.0015	<0.015	<0.0008	0.380	1.303	0.06	<0.05	Nickel & Maganese not Complied
2	1811	C.Duraisamy, Nethimeedu, Salem (Bore well)	158	0.322	< 1	<0.0015	<0.0015	<0.015	<0.0008	0.34	<0.1	0.07	<0.05	Nickel not complied
3	1812	Manickam, Naikaranpatti Iyar Kadu, Salem (Open well)	281	0.898	< 1	<0.0015	<0.0015	<0.015	<0.0008	0.57	<0.1	0.012	<0.05	Nickel & sulphate not complied
IS10500-2012 Drinking water specifications-Acceptable limit (in mg/l)			200	1.0	0.5 *	0.05	5	0.01	0.003	0.02	0.1	0.3	0.05	Complied

Note:

Generally in case of ground water samples, concentration less than or equal to <1 mg/l is indicated as BDL by CPCB laboratories. But as per BIS Drinking water specifications, mineral oil content at 67 GW sampling points exceed the limit of 0.5 mg/l.

11.0 Assessment of Compliance of the effluents/sewage discharge norms by the industries in the study area

Report of Analysis (ROA) is enclosed vide **Annexure- II**

12.0 Status of industry wise consent validity, wastewater generation and final mode of disposal:

Industry details are enclosed vide **Annexure-I**

I. Action Taken against the Erring Textile units:

The District Co-ordination Committee carries out surprising inspection in Salem Corporation area and issues directions for power supply disconnection, if any violation of the consented unit/illegal unit. The details of the action taken is submitted vide Annexure-III.

No of units dismantled	–	277 Nos.
No of unauthorized units EB disconnected	–	71 Nos.
No of consented units EB Disconnected	--	28 Nos.

13.0 Operation status of ETPs and STPs

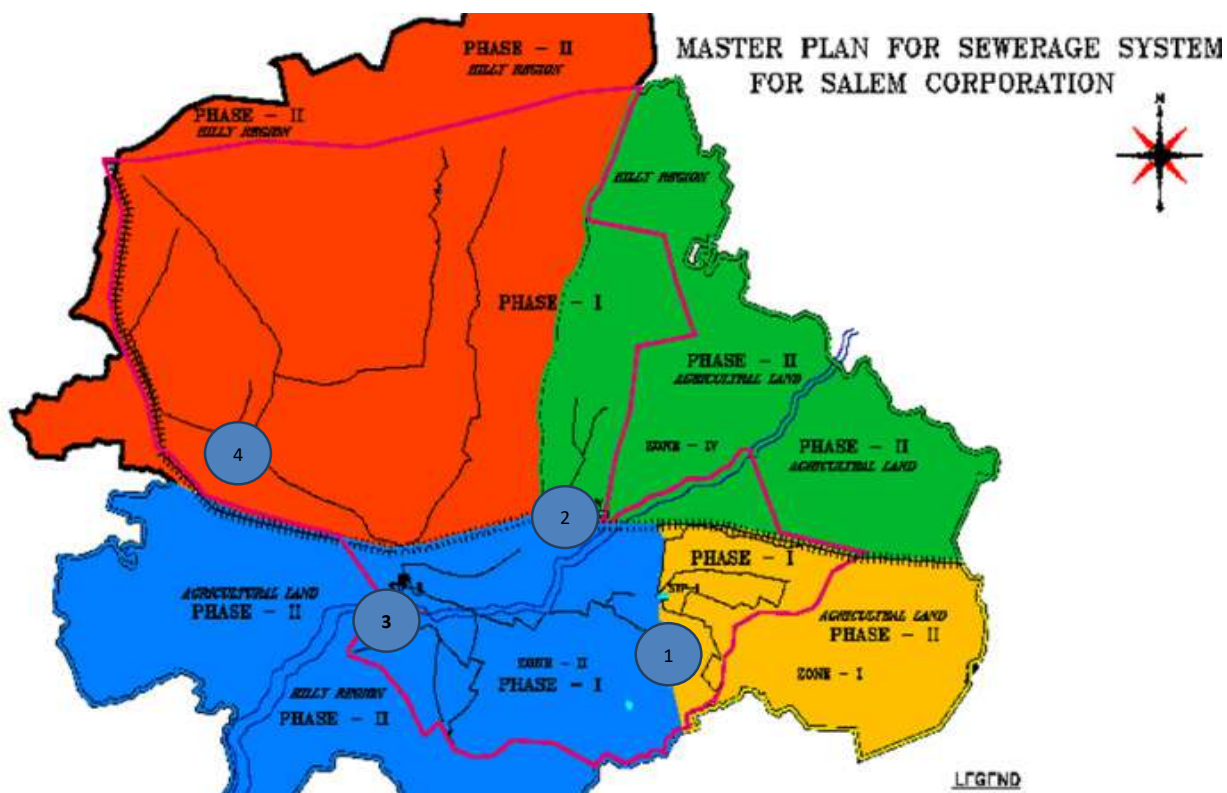
The unit of M/s. Arthanari Loom Centre Textile Pvt Ltd, Erumapalyam Village, Salem Town, Salem District has installed Effluent Treatment Plant, RO and RMS for the treatment and disposal of trade effluent quantity of 2 MLD. The unit operates and maintains the ETP and achieves ZLD. All the bleaching and dyeing units have provided Zero Liquid Discharge system.

The unit of M/s. Steel Authority of India, Maramangalathupatti Village, Salem West Taluk, Salem District has installed Effluent Treatment Plant, RO and RMS for the treatment and disposal of trade effluent quantity of 6.1 MLD. The unit operates and maintains the ETP and achieves ZLD. The unit has also installed STP for the treatment of Sewage generated from their industries and township and the treated sewage is being utilized for on land for irrigation.

The unit of M/s. The Salem District Co-op Milk Producer Society, Thalavaipatti Village, Salem West Taluk, Salem District has installed Effluent Treatment Plant for the treatment and disposal of trade effluent quantity of 580 KLD. The unit operates and maintains the ETP and utilizes the treated trade effluent for on land for irrigation.

➤ **Regarding total sewage generation in the city and execution of phase 1 & phase 2**

Salem Municipal Corporation has planned to control the sewage pollution in two phases. Under the phase one four STPs were constructed having total capacity of 98 MLD and the total length of the completed UGD system was 320.89 Km out of 421.67 Km. The area covered under the phase I and STP locations is shown in the below map.

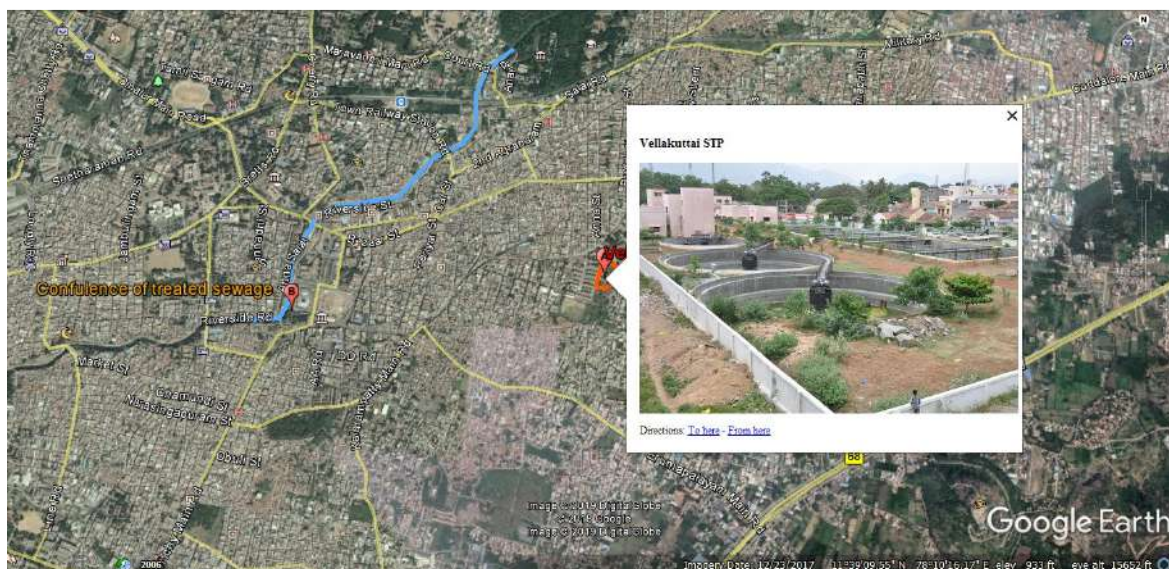


S. No.	Name of the S.T.P	Quantity
1	Vellakuttai STP	13 MLD
2	Anaimedu STP	6 MLD
3	Vandipettai STP	44 MLD
4	Mankuttai STP	35 MLD

Commissioning of STPs are completed four years before itself, but same are not brought into operation because connectivity of the sewer system is not completed yet. So the sewage is not taken to the STP for treatment.

- Any treated sewage is discharged into River Stretch if so latitude and longitude details.

Sl. No.	Details	GPS coordinates		Design Capacity and present inflow
1	M/s. Vellakuttai Sewage Treatment Plant	11°39'09.8"N	78°10'13.9"E	13 MLD/ At present 1.5 to 2 MLD is being treated.
2	Treated Sewage from the above STP confluence with River Thirumanimutharu	11°39'4.60"N	78° 9'27.90"E	Nil



Map showing the location of Vellakuttai STP and confluence of treated sewage in to the River Thirumanimutharu.

This STP is in partial operation. The STP is constructed for 13 MLD capacity, but at present it receives only 1.5 – 2 MLD for treatment. The treatment of sewage is based on modified activated sludge process (MASP). The STP consists of receiving well, removal system (coarse screen, fine screen & grit), aeration tank, secondary clarifier & chlorination tank. The consent was obtained till 31.03.2016 and further applied for renewal.

An open drain carrying the untreated sewage is flowing through this STP, in which the treated sewage is discharged into drain.



The sample was collected during the monitoring to confirm the quality of treated domestic wastewater. From the analysis result it is evident that the treated domestic waste water meeting the prescribed discharge norms.

Report of Analysis of Treated Domestic Waste Water			
Sl. No.	Parameters	Unit	STP Outlet
01.	pH at 25°C	Number	7.70
02.	TSS at 103°C – at 105°C	mg/l	8
03.	BOD (at 27°C for 3 days)	mg/l	2.4
04.	COD	mg/l	16
05.	Ammonical Nitrogen as NH ₃ -N	mg/l	3.36
06.	Total Nitrogen	mg/l	0.816
07.	Fecal Coliform	MPN/ 100ML	32

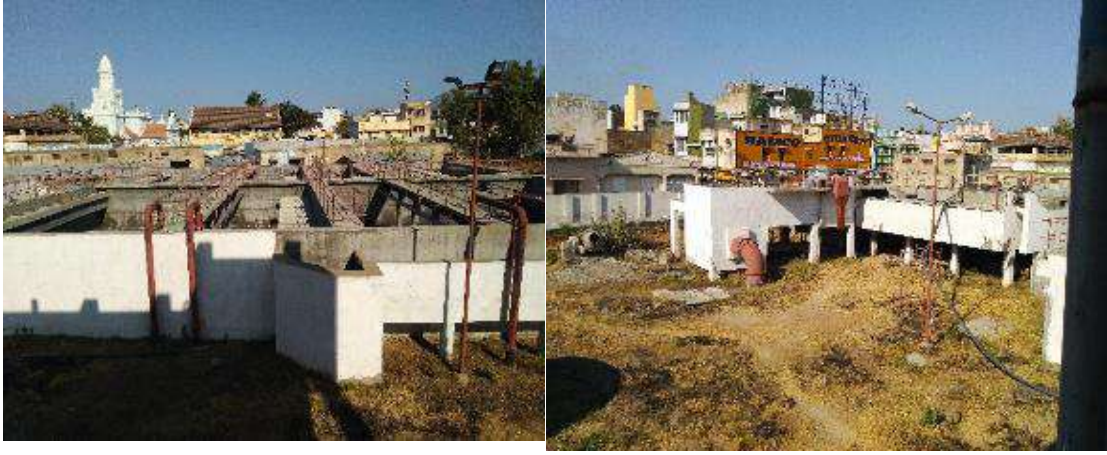
b. Anaimedu STP:

The STP is constructed for 6 MLD capacity. The treatment of sewage is based on MBBR technology. The STP consists of receiving well, removal system (coarse screen, fine screen & grit), grass reactor, MBBR/FAB tank, lamella & chlorination tank. The consent to establish was expired and yet to obtain consents to operate. This STP is constructed in the bank of river Thirumanimuthar, where the check dam has been made.



c. Vandipettai STP:

The STP is constructed for 44 MLD capacity. The STP is under construction. The treatment of sewage is based on FAB technology. The STP consists of receiving well, removal system (coarse screen, fine screen & grit, FAB tank, lamella clarifier & chlorination tank). The consents to establish was expired and yet to obtain consent to operate.



d. Mankuttai STP:

The STP is constructed for 35 MLD capacity. The STP is not in operation. The treatment of sewage is based on FAB technology. The STP consists of receiving well, removal system (coarse screen, fine screen, & grit, FAB tank, secondary clarifier & chlorination tank). The consent to operate was obtained and which is valid till March 31, 2019. An open drain carrying the untreated sewage is flowing through this STP.



Details on Consent / Authorization issued by the Board for the establishment of the STP / Solid waste facility

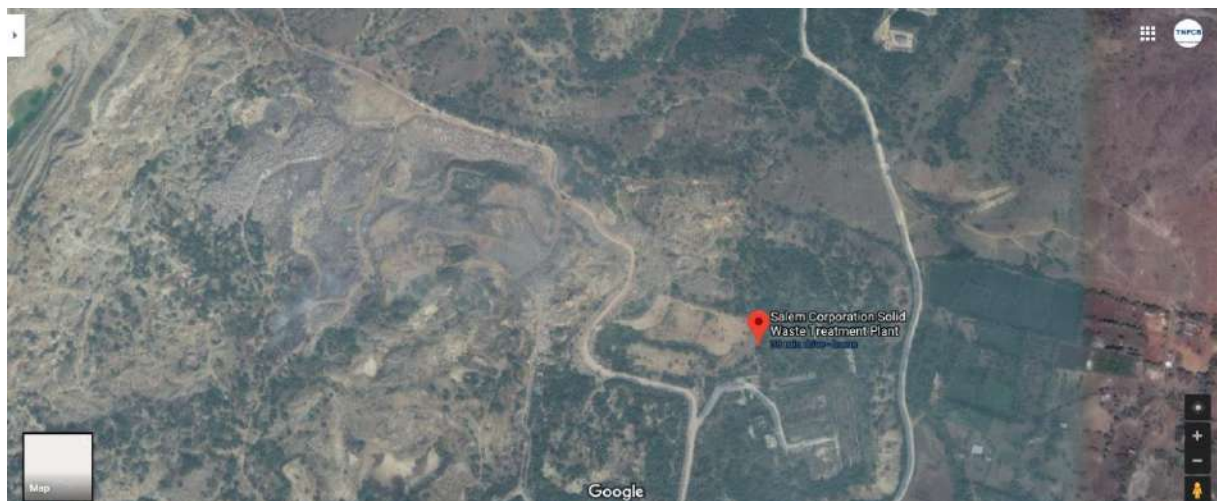
a. Sewage Treatment Plant.

Sl. No	Name and address of the STP	Total Sewage generation in MLD	Disposal (land River sea or any other)	Status Operational/Non-Operational Under Construction	STP present inflow	Consent Status
1	M/s. Mankuttai Sewage Treatment Plant, Salem Corporation Fort, Salem .	35	River Thirumanimuthuaru	Not in operation	-	RCO Issued Valid upto on 31.03.2019
2	M/s. Vandipettai Sewage Treatment Plant, S.F. No. 45, Shevapet, Salem.	44	River Thirumanimuthuaru	Under Construction	-	CTE-Valid upto on 25.08.2013
3	M/s. Vellakuttai Sewage Treatment Plant, Salem Corporation Ammapettai ,Salem.	13	River Thirumanimuthuaru	Under operation	2.0 MLD	CTO Issued Valid upto on 31.03.2016
4	M/s. Anaimeedu Sewage Treatment Plant S.F.No.102-1-4 Hasthampatti Zone-II Salem.	6	River Thirumanimuthuaru	Under Construction	-	CTE-Valid upto on 25.08.2013

Sl. No	Name and address of the STP	Disposal (land River sea or any other)	Status Operational/Non-Operational Under Construction	STP present inflow	Remarks
1	M/s. Mankuttai Sewage Treatment Plant,	River Thirumanimuthuaru	Under operable conditions	-	Yet to complete the UGSS so as to connect the same to STP
2	M/s. Vandipettai Sewage Treatment Plant	River Thirumanimuthuaru	Under Construction	-	CTE-Valid upto on 25.08.2013
3	M/s. Vellakuttai Sewage Treatment Plant,	River Thirumanimuthuaru	Under operation	2.0 MLD	Yet to complete the UGSS so as to connect the same to STP. Sewage from partially completed UGSS is being treated in the STP.
4	M/s. Anaimedu Sewage Treatment Plant	River Thirumanimuthuaru	Under Construction	-	CTE-Valid upto on 25.08.2013

b. Solid Waste Management

Salem City Integrated Waste Management Co PVT LTD located at S.F.No. 6/2, Chettichavadi Village, Salem Taluk, Salem District has obtained consent to operate for Collection, Segregation, Treatment and Disposal of Municipal Solid Waste – 350 MTPD vide Procs. No. T7/TNPCB/F.36307/SLM/RL/W&A/2013, Dt. 22.08.2013. with validity upto 31.03.2014. Salem Corporation has proposed to install approx 15 decentralized micro composting units across city to manage the Solid Waste generated.



14.0 Status of installation and operation status of Online Continuous Effluent Monitoring Systems (OCEMS)

Name and Address of the Unit	Flow meter
Arthanari Loom Centre (Textile) Pvt. Ltd. 5/127, Erumapalayam Main Road, Erumapalayam, Salem-636015.	<u>ETP-I</u> 1) Collection Tank – 1 2) RO Permeate - 1 3) MEE Feed - 1 4) MEE Condensate-1 5) SEP Feed <u>ETP-II</u> 6) Collection Tank 2 7) RO Permeate –2 8) MEE Feed – 2 9) MEE Condensate–2 10) ATFD Feed

15.0 Findings on the compliance of the Effluent /Sewage discharge norms by the industries.

The Report of analysis of the treated trade effluent samples collected from the M/s. The Salem District Co op Milk Producer Society Thalavaipatty Village, Salem West Taluk, Salem District reveals that the unit achieves the standards prescribed by the Board.

The Report of analysis of the treated sewage samples collected from the M/s. Steel Authority of India, Maaramangalathupatty Village, Salem West Taluk, Salem District reveals that the unit achieves the standards prescribed by the Board.

The Report of analysis of the treated sewage samples collected from the M/s. Vellakuttai Sewage Treatment Plant, Ammapet Village, Salem Taluk, Salem District reveals that the unit achieves the standards prescribed by the Board.

There is no discharge of effluent into the River Thirumanimutharu. However, stringent action is being taken against the authorized and unauthorized units discharge of untreated textile, dyeing effluent into the Municipal Drain or Odai which conflues with the River Thirumanimutharu.

16.0 General observations and recommendations of the inspection team

It is recommended that the Salem City Corporation shall complete the establishment of the under-ground sewerage scheme within the time frame as furnished in the Action plan and shall ensure that the entire sewage generated from the corporation area is treated in the STPs.

17.0 Recommendations- Action plan for the River stretch

Proposed Short Term and Long Term Action Plan for Rejuvenation of River Thirumanimutharu:

Sl. No.	Description of Source	Action Plan for Rejuvenation of River Thirumanimutharu	Organisation/ Agency Responsible for Execution of the Action Plan	Time Target
1	Industrial Pollution Control	No industrial discharge	TNPCB	-
2	Sewage Treatment and Disposal plan	<p>❖ Salem Corporation</p> <ul style="list-style-type: none"> • No. of sewage outfall identified: 8 Nos. • Population: 913188 • Qty of Sewage generated: 100.03 MLD • Status of UGSS: Under Construction • Status of STP: Presently the Salem Corporation has provided 4 Nos of STPs. • Plan of Action: • To treat the waste water, the implementation of Under Ground Sewerage scheme work was taken up and is 	Municipal Administration	

		<p>under implementation at an estimated cost of Rs.149.39 crore with 4 nos. of STPs with a total capacity of 98.00 MLD and it will be completed by December 2019(Except Package-2).</p> <ul style="list-style-type: none"> • Package-2 work will be completed on December 2020. • As on date, out of 40000 connections, 2530 no. of Houses service connections were effected and the remaining connections will be effected before December 2019. • After the completion of this scheme work, Outfalls in the River Thirumanimutharu will be stopped permanently. 		<p>Dec-2019</p> <p>Dec-2020</p> <p>Dec-2019</p>
		<p>❖ Papparapatti Village Panchayat</p> <ul style="list-style-type: none"> • No. of sewage outfall identified: Nil • Population: 9020 • Qty of Sewage generated: 0.72 MLD • Status of UGSS: Not Provided • Status of STP: Not provided • Present Mode of Disposal: • Some of the households having individual toilets & soak pits. 	Rural Development & Panchayat Raj	

		<p>• Plan of Action:</p> <p>Now for the remaining households individual & community soak pits are proposed under MGNREGS 2019-2020, 2020-2021.</p> <p>After construction of soak pits no waste water will be disposed into the river.</p>		Oct-2019
3	Solid Waste Management and Disposal Plan	<p>❖ Salem Corporation</p> <ul style="list-style-type: none"> • No. of MSW dumping points identified: 7 • Population: 913188 • Qty of MSW Generated: Wet waste: 215 TPD Dry waste: 155 TPD Total: 370 TPD MSW Collection – 100% MSW Segregation – 74% Present Treatment Method: Wet waste: Bio-methanation-2Nos – 8 TPD Dry waste: <ul style="list-style-type: none"> • Saleable waste - 93 TPD • The Non-Biodegradable waste - 47 TPD - stored in the RRC at all MCCs. • Inert &Silt - 15 TPD stored with C&D waste for land filling. <p>Proposed Plan of Action:</p> <ol style="list-style-type: none"> 1. Micro Composting Plant – 30 Nos. of 150 TPD 	Municipal Administration	<p>100% Segregation will be achieved before 30.06.2019.</p> <p>April 2019</p>

		<p>(Will be completed before April 2019 SBM Funds and</p> <p>2. Additional 10 Nos MCC of 50 TPD will be established before October 2019 utilizing Corporation Revenue fund</p> <p>3. On – Site Composting – 86 locations – 20 TPD (Will be completed before April 2019)</p>		<p>Oct- 2019</p> <p>April 2019</p>
		<p>❖ Papparpatti Village Panchayat</p> <ul style="list-style-type: none"> • No. of MSW dumping points identified: Nil • Population: 9020 • Qty of MSW Generated: 1.0 TPD <p>Source Collection & Segregation – Yes</p> <p>Treatment method:</p> <p>➤ Bio-Degradable Waste:</p> <p>Dumped in the compost pits and cow dung are being sprayed at regular intervals and it becomes manure after 30 days and sold to the farmers.</p> <p>➤ Non Bio – Degradable Waste:</p> <p>Segregated glass, Plastic bottles, Covers, Iron,</p>	Rural Development & Panchayat Raj	-

		Aluminium foil sheets etc. once in 15 days and sold to the local merchants/Vendor or farmers.		
4	Ground Water Quality	Generally the ground water quality is poor – Manganese, Nickel and Sulphate level are above the prescribed standards.	State Ground Water Authority, CGWB	-
5	Flood Plain Zone (FPZ)	Identification of Flood Plain Zone areas has been completed in co-ordination with Revenue Department. Plantation & Bio-diversity parks will be formed after demarcation of FPZ.	PWD-WRD, Forest Department	-
6	Environmental Flow (E-flow) and Irrigation Practices	Awareness has been created among the farmers regarding effective utilization of water and to adopt drip irrigation in the Ayacut area.	PWD-WRD and Irrigation Department	-
7	Encroachments along the river bank	Demarcation of Encroachments identified with the help of revenue department. Notice has been issued and 30 nos of encroachments has been evicted in River Thirumanimutharu.	PWD-WRD and Revenue Department	-

18.0 Conclusion:

River Thirumanimutharu is categorised as polluted river stretch under priority-I. The report of analysis of the River Water collected at various locations reveals that the D.O is very less and BOD is very high and it shows the presence of high level of Fecal Coliforms and this indicates that the River gets contaminated due to sewage discharge. The quality of River water can be improved with the following measures;

- ✓ Salem Corporation shall complete the establishment of the under-ground sewerage scheme within the time frame as furnished in the action plan and shall ensure that the entire sewage generated from the corporation area is treated in the STPs.
- ✓ Salem Corporation shall complete the establishment of the solid waste treatment facility within the time frame and shall ensure that the entire solid waste generated from the local body area including solid waste dumped along the River Bank is treated and disposed off scientifically.
- ✓ TNPCB shall ensure that there is no discharge of untreated trade effluent from the textile Bleaching and Dyeing units at any point of time.
- ✓ TNPCB shall ensure that there is no operation of the illegal or unauthorized Textile Bleaching and Dyeing units.

Annexure - I

Details of Industries along the polluted river stretch

SI.No	Taluk	Village	Industry Name	Consent validity	Trade effluent quantity in KLD	Disposal
1	SALEM	ACHANGUTTAIPATTI PUDUR	KRISHNA HOSPITAL	31/3/2020	0.2	Public sewer
2	SALEM	ACHANGUTTAPATTI	MANI SAGO FACTORY	31/3/2020	100	On land for irrigation
3	SALEM	ADIKARAPATTI	COLOGENESIS HEALTH CARE PVT LTD	31/3/2019	0.1	On land for irrigation
4	SALEM	ADIKARAPATTI	THANGAM PACKAGING INDUSTRIES SALE	31/3/2018	0.1	On land for irrigation
5	SALEM	AMMAPALAYAM	RANI AND CO	31/3/2022	25	On land for irrigation
6	SALEM	AMMAPALAYAM	DHIVYAM LIFE CARE NURSING HOME	05/04/2017 CTE Only	0.4	10% hypochloride
7	SALEM	AMMAPETTAI	SAMBANDAM SPINNING MILLS Ltd UNIT-I	31/3/2019	5	On land for irrigation
8	SALEM	AMMAPETTAI	SHAH CHUNILAL KUNDANMAL YARN PVT LTD	31/3/2021	85	Recycling to Process
9	SALEM	AMMAPETTAI	M.R.P. DYEING	31/3/2018	55	Recycling to Process
10	SALEM	AMMAPETTAI	SRI VENKATESA DYERS	31/10/1999	150	Recycling to Process
11	SALEM	AMMAPETTAI	SWAMY PROCESS	31/3/2020	255	Recycling to Process
12	SALEM	AMMAPETTAI	SRI SARASWATHI DYEING WORKS	31/3/2021	77	Recycling to Process
13	SALEM	AMMAPETTAI	MOHAN DYEING WORKS	31/3/2020	75.8	Recycling to Process
14	SALEM	AMMAPETTAI	SREE MOOKAMBIGAI DYERS	31/3/2019	81	Recycling to Process
15	SALEM	AMMAPETTAI	SRI KARPAGA VINAYAKAR DYEING	31/3/2020	23	Inland Surface Water
16	SALEM	AMMAPETTAI	AMMAN BLEACHERS	31/3/2023	25	Recycling to Process
17	SALEM	AMMAPETTAI	A.P.THANGAVELU BLEACHING	31/3/2018	10	Recycling to Process
18	SALEM	AMMAPETTAI	E.A.R. RANGANATHER BLEACHERS	31/3/2015	10	Recycling to Process
19	SALEM	AMMAPETTAI	M. PALANIAPPAN BLEACHERS	31/3/2020	10	Recycling to Process
20	SALEM	AMMAPETTAI	K.C.BLEACHING	31/3/2015	15	Recycling to Process
21	SALEM	AMMAPETTAI	SMR BLEACHING	CTE alone	75.5	Recycling to Process
22	SALEM	AMMAPETTAI	Anjeneyaa Bleacher	CTE alone	15	Recycling to Process
23	SALEM	AMMAPETTAI	PALANIYANDI MUDALIYAR MEMORIAL HOSPITAL	31/3/2019	7	On land for irrigation
24	SALEM	AMMAPETTAI	MODERN HOSPITAL	31/3/2019	5	Public sewer
25	SALEM	AMMAPETTAI	T.K.P.HOSPITAL	31/3/2018	4	Public sewer
26	SALEM	AMMAPETTAI	MOHANRAJ CHILDRENS HOSPITAL	31/3/2018	4	Public sewer
27	SALEM	AMMAPETTAI	BALAJI HOSPITAL	31/3/2019	1.4	Public sewer
28	SALEM	AMMAPETTAI	KAMALA HOSPITAL	31/3/2019	6	Public sewer
29	SALEM	AMMAPETTAI	SARATHAS NURSING HOME	31/3/2018	2.6	Public sewer
30	SALEM	AMMAPETTAI	GURUWOMEN AND CHILDREN HOSPITAL	31/3/2018	4	Public sewer

Annexure-I Details of Industries along the polluted river stretch

31	SALEM	AMMAPETTAI	UDAYA NURSING HOME	31/3/2019	0.2	Public sewer
32	SALEM	AMMAPETTAI	SRI BALAJI HOSPITAL	31/3/2018	0.2	Public sewer
33	SALEM	AMMAPETTAI	P.K.S. HOSPITAL	31/3/2019	0.2	Public sewer
34	SALEM	AMMAPETTAI	RAJAMMAL HOSPITAL	31/3/2020	0.1	Public sewer
35	SALEM	AMMAPETTAI	SHRI SURAKKSHA SPECIALITY MEDICAL CENTRE	31/3/2019	0.5	Public sewer
36	SALEM	AMMAPETTAI	Dr NALINI SRIDHAR HOSPITAL	31/3/2018	0.5	Public sewer
37	SALEM	ATTAYAMPATTI	KURINJI SUPER SPECIALITIES HOSPITAL LTD	31/3/2020	5	Public sewer
38	SALEM	AYYAMPURUMALPATTI	SRI PACHIAMMAN SAGO FACTORY	31/3/2027	40	On land for irrigation
39	SALEM	ERUMAPALAIYAM	ARTHANARI LOOM CENTER TEXTILE PVT LTD	31/3/2022	2200	Recycling to Process
40	SALEM	ERUMAPALAIYAM	R.ARTHANARI CHETTIAR-DYEING	31/3/2019	108	Recycling to Process
41	SALEM	ERUMAPALAIYAM	R.K. DYEING	31/3/2022	225	Recycling to Process
42	SALEM	ERUMAPALAIYAM	AMMAN DYEINGS	31/3/2019	25.3	Inland Surface Water
43	SALEM	ERUMAPALAIYAM	SHRI MURUGAN EXPORT	31/3/2019	95	Recycling to Process
44	SALEM	ERUMAPALAIYAM	E.V.DYEING WORKS	31/3/2023	431	Recycling to Process
45	SALEM	ERUMAPALAIYAM	SRI RAGAVENDRA TEX	31/3/2018	30	Recycling to Process
46	SALEM	ERUMAPALAIYAM	DEEPAM DYEING	31/3/2019	50	Inland Surface Water
47	SALEM	ERUMAPALAIYAM	ARTHANARI EXPORTS	30/6/2015	25	Inland Surface Water
48	SALEM	ERUMAPALAIYAM	SRI JAYASAKTHI PROCESS	31/3/2024	0.05	On land for irrigation
49	SALEM	ERUMAPALAIYAM	BASUVA SANKAR DYEING	31/3/2003	100.8	Inland Surface Water
50	SALEM	ERUMAPALAIYAM	LORD KRISHNA COLOURS	CTE alone	37.5	CETP
51	SALEM	ERUMAPALAIYAM	SRI VINAYAKA COLOURS	CTE alone	39.5	CETP
52	SALEM	ERUMAPALAIYAM	AJANTHA DYEING	CTE alone	37.5	CETP
53	SALEM	ERUMAPALAIYAM	PALANIMURUGAN DYEING FACTORY	CTE alone	37.5	CETP
54	SALEM	ERUMAPALAIYAM	KAMALAM COLOURS	CTE alone	37.5	CETP
55	SALEM	ERUMAPALAIYAM	RAJAMMAL COLOURS	CTE alone	37.5	CETP
56	SALEM	ERUMAPALAIYAM	SRI BALASUBRAMANIA TEXTILES	CTE alone	37.5	CETP
57	SALEM	ERUMAPALAIYAM	RAMKUMAR DYEING	CTE alone	37.5	CETP
58	SALEM	ERUMAPALAIYAM	A.C.K. DYE HOUSE	CTE alone	37.5	CETP
59	SALEM	ERUMAPALAIYAM	ADHIKESAVAN DYEING FACTORY	CTE alone	37.5	CETP
60	SALEM	ERUMAPALAIYAM	SRI KARTHIKEYA DYERS	CTE alone	37.5	CETP
61	SALEM	ERUMAPALAIYAM	SRI SABARI DYEING FACTORY	CTE alone	37.5	CETP
62	SALEM	ERUMAPALAIYAM	VAMANA NARAYANA TEX	CTE alone	37.5	CETP
63	SALEM	ERUMAPALAIYAM	ARTHANARI CLOTHING PVT. LTD	31/3/2004	100	Recycling to Process
64	SALEM	ERUMAPALAIYAM	SALEM DYEING CENTRE	30/6/2015	50.2	Recycling to Process
65	SALEM	ERUMAPALAIYAM	SRI BALAJI DYEING WORKS	31/3/2021	43.9	Recycling to Process

Annexure-I Details of Industries along the polluted river stretch

66	SALEM	GAJJALNAICKENPATTI	RATHINAM DYEING	31/3/2018	19.3	Recycling to Process
67	SALEM	HASTHAMPATTI	RUTHRAMOORTHY POLYCLINIC	31/3/2020	1.5	Public sewer
68	SALEM	HASTHAMPATTI	GANESAN HOSPITAL	31/3/2018	6	Public sewer
69	SALEM	HASTHAMPATTI	KIRUBHA HOSPITAL	31/3/2019	8	Public sewer
70	SALEM	HASTHAMPATTI	AMMANI HOSPITAL	31/3/2019	3.5	Public sewer
71	SALEM	HASTHAMPATTI	SUNDARAM SURGICAL CLINIC NURSING HOME	30/6/2010	3.5	Public sewer
72	SALEM	HASTHAMPATTI	SARASWATHY NURSING HOME	31/3/2018	8.6	Public sewer
73	SALEM	HASTHAMPATTI	LEELA MATERNITY SURGICAL NURSING HOME	31/3/1992	4.6	Public sewer
74	SALEM	HASTHAMPATTI	SALEM GOPI HOSPITALS PRIVATE LIMITED	31/3/2019	10	Public sewer
75	SALEM	HASTHAMPATTI	SHANKAR NURSING HOME	31/3/2019	2.6	Public sewer
76	SALEM	HASTHAMPATTI	SHANTHI NURSING HOME	31/3/2020	2.6	Public sewer
77	SALEM	HASTHAMPATTI	VIJAYA HOSPITAL	31/3/2018	4	Public sewer
78	SALEM	HASTHAMPATTI	KERRISON MEMORIAL HOSPITAL	31/3/2019	4.4	Public sewer
79	SALEM	HASTHAMPATTI	RAJESWARI MATERNITY SURGICAL NURSING HOM	30/6/2008	1.2	Public sewer
80	SALEM	HASTHAMPATTI	SRI RAAM HOSPITAL	30/6/2010	1	Public sewer
81	SALEM	HASTHAMPATTI	Dr. G. SOODAMANI HOSPITAL	31/3/2019	0.5	Public sewer
82	SALEM	HASTHAMPATTI	M.G. DIABETES SPECIALITY AND RESEARCH	31/3/2018	0.5	Public sewer
83	SALEM	HASTHAMPATTI	SALEM MEDICAL CENTRE HOSPITAL PVT. LTD	31/3/2020	0.1	Public sewer
84	SALEM	HASTHAMPATTI	JAYA NURSING HOME	31/3/2018	1	Public sewer
85	SALEM	HASTHAMPATTI	SITHI VINAYAGAR BLOOD BANK	31/3/2018	0.25	Public sewer
86	SALEM	HASTHAMPATTI	VENKATAKRISHNAN NURSING HOME	31/3/2018	0.5	Public sewer
87	SALEM	HASTHAMPATTI	K.R. MEDICAL CENTRE	31/3/2018	0.5	Public sewer
88	SALEM	HASTHAMPATTI	P.R.N.HOSPITAL	31/3/2020	0.2	Public sewer
89	SALEM	HASTHAMPATTI	ANKUR HEALTH CARE PRIVATE LIMITED	31/3/2018	0.5	Public sewer
90	SALEM	KANNANKURICHI	SRI NATARAJA SAGO FACTORY	31/3/1992	12.5	On land for irrigation
91	SALEM	KONDAMANAYAKKANPATTI	SHARON CANCER CENTRE AND GENERAL HOSPITA	31/3/2026	0.1	Public sewer
92	SALEM	KUMARASWAMIPATTI	C.K.R.HOSPITAL	31/3/2019	4	Public sewer
93	SALEM	KUMARASWAMIPATTI	APPUSAMY HOSPITAL	31/3/2019	0.25	Public sewer
94	SALEM	KUMARASWAMIPATTI	RISHI NETHRALAYA EYE AND ENT HOSPITAL	31/3/2022	1	Public sewer
95	SALEM	KUMARASWAMIPATTI	SIMS CHELLUM HOSPITAL	31/3/2022	1.5	Public sewer
96	SALEM	KUPPANUR	JAYAMURUGAN TEXTILES	31/3/1994	0.3	On land for irrigation
97	SALEM	MALLUR	SREE JAYAM ORTHO AND MULTISPECIALITY HOS	31/3/2024	0.5	Public sewer
98	SALEM	MALLUR	KATHIRAVAN SAGO FACTORY	31/3/2020	200	On land for irrigation
99	SALEM	PALAPATTI	MARIYAPPAN NURSING HOME	31/3/2019	3.4	Public sewer
100	SALEM	PALAPATTI	SALEM POLY CLINIC	31/3/2019	14	Public sewer

Annexure-I Details of Industries along the polluted river stretch

101	SALEM	PANAMARATHUPATTY	LAKSHMI DYEING	31/3/2000	5.1	On land for irrigation
102	SALEM	PANAMARATHUPATTY	SHANMUGAVEL STARCH INDUSTRIES	Not in operaton	12	On land for irrigation
103	SALEM	PANAMARATHUPATTY	SRI PATCHI AMMAN SAGO FACTORY	31/3/2021	100	On land for irrigation
104	SALEM	PANAMARATHUPATTY	THILLAIKARASI SAGO FACTORY	31/3/2026	190	On land for irrigation
105	SALEM	PANAMARATHUPATTY	GANESA SAGO FACTORY KALAI SELVI and CO	31/3/2023	75	Inland Surface Water
106	SALEM	PANAMARATHUPATTY	SRI AMMAN SAGO PRODUCTS	31/3/209	100	On land for irrigation
107	SALEM	PANAMARATHUPATTY	VENKATESWARA AND CO	31/3/2021	50	On land for irrigation
108	SALEM	SALEM	DR SUNDARARAJAN NEURO HOSPITAL PVT LTD	31/3/2018	1	On land for irrigation
109	SALEM	SALEM	VETRIVEL MATERNITY AND CHILDRENS HOSPITA	31/3/2019	0.7	Public sewer
110	SALEM	SALEM TOWN	SARAVANA HOSPITAL P LTD	31/3/2019	1	Public sewer
111	SALEM	SALEM TOWN	GOVT MOHAN KUMARAMANGALAM MEDICAL	31/3/2017	5	On land for irrigation
112	SALEM	SALEM TOWN	NAGARAJAN NURSING HOME	31/3/2028	4	Public sewer
113	SALEM	SALEM TOWN	MARUTHI HOSPITAL	31/3/2027	0.5	Public sewer
114	SALEM	SALEM TOWN	VIDYA NURSING HOME	31/3/2018	0.2	Public sewer
115	SALEM	SALEM TOWN	SHANMUGA HOSPITAL	31/3/2019	2	Public sewer
116	SALEM	SALEM TOWN	J.S.HOSPITAL	31/3/2020	1.2	Public sewer
117	SALEM	SALEM TOWN	DEVI HOSPITAL	31/3/2018	0.2	Public sewer
118	SALEM	SALEM TOWN	SHRI SHELLAPHA HOSPITAL	31/3/2021	0.5	Public sewer
119	SALEM	SALEM TOWN	SELVI HOSPITAL	31/3/2018	0.1	Public sewer
120	SALEM	SALEM TOWN	K.M.NATRAJ S NURSING HOME	31/3/2022	0.3	Public sewer
121	SALEM	SALEM TOWN	DR.THIRU NEURO MULTISPECIALTY HOSPITAL	31/3/2018	0.5	Public sewer
122	SALEM	SALEM TOWN	NITHISH G.E.SPECIALITY HOSPITAL	31/3/2019	1	Public sewer
123	SALEM	SALEM TOWN	SUHAM TRUST HOSPITAL	31/3/2019	0.5	Public sewer
124	SALEM	SALEM TOWN	PUSHPAM HOSPITAL	31/3/2020	0.5	Public sewer
125	SALEM	SALEM TOWN	REVATHI HOSPITAL	31/3/2028	0.5	Public sewer
126	SALEM	SALEM TOWN	LONDON ORTHO SPECIALITY HOSPITAL	31/3/2026	1	Public sewer
127	SALEM	SALEM TOWN	SRI VELAVAN SAGO INDUSTRIES	31/3/2028	100	On land for irrigation
128	SALEM	SANDIYUR	SRI ALAGUNACHIYAMMAN SAGO FACTORY	CTE alone	40	On land for irrigation
129	SALEM	SANDIYUR	ARULMURUGAN SAGO FACTORY	31/3/2018	40	On land for irrigation
130	SALEM	SANDIYUR	SRI BALAGANAPATHY SAGO FACTORY	31/3/2018	60	On land for irrigation
131	SALEM	SANDIYUR	ARULMURUGAN SAGO FACTORY	31/3/2018	100	On land for irrigation
132	SALEM	SANDIYUR	SRI ANNAMAAR SAGO FACTORY	31/3/2021	35	On land for irrigation
133	SALEM	SANDIYUR ATTAYAMPATTI	MURUGA BOOPATHI STARCH INDUSTRIES	31/3/2018	9	On land for irrigation
134	SALEM	SEELANICKENPATTI	KAUVERY HOSPITAL	31/3/2019	1	Public sewer
135	SALEM	SUKKAMPATTI	SRI VENKATESWARA SAGO INDUSTRIES	31/3/2019	30	On land for irrigation

Annexure-I Details of Industries along the polluted river stretch

136	SALEM	THIPPAMPATTI	MEENATCHI AMMAN SAGO FACTORY	31/3/2022	70	On land for irrigation
137	SALEM	THIPPAMPATTI	SRI GANESH SANKAR SAGO FACTORY	31/3/2018	100	On land for irrigation
138	SALEM	THIPPAMPATTI	SARASWATHI SAGO FACTORY	31/3/2021	75	On land for irrigation
139	SALEM	THIPPAMPATTI	V.R.K. SAGO FACTORY	31/3/2018	25	On land for irrigation
140	SALEM	THIPPAMPATTI	SENGOTTAIYA SAGO FACTORY	31/3/2028	100	On land for irrigation
141	SALEM	THIPPAMPATTI	VENKATACHALAPATHY SAGO FACTORY	31/3/2020	70	On land for irrigation
142	SALEM	VALASAIYUR	SRI VELMURUGAN INDUSTRIAL STARCH UNIT	31/3/1992	12.5	On land for irrigation
143	SALEM	VENGAMPATTI	MUTHU SAGO FACTORY	31/3/2026	200	On land for irrigation
144	SALEM SOUTH	A ANDIPATTI	SRI BHADRI NARAYANA TEXTILES DYEING	31/3/2021	50	Recycling to process
145	SALEM SOUTH	AMANI KONDALAMPATTI	LEADER PROCESS	31/3/2020	25.35	Recycling to process
146	SALEM SOUTH	AMANI KONDALAMPATTI	VIKRAM PROCESSORS	31/3/2019	150	Recycling to process
147	SALEM SOUTH	AMANI KONDALAMPATTI	Sri Andavar Bleaching	31/3/2021	162	Recycling to process
148	SALEM SOUTH	AMANI KONDALAMPATTI	UNITED TEXTILE PROCESSORS	31/3/2012	0.05	Solar Evaporation pan
149	SALEM SOUTH	AMANI KONDALAMPATTI	SRI VELMURUGAN SAGO INDUSTRIES	31/3/2019	28	Onland irrigation
150	SALEM SOUTH	AMANI KONDALAMPATTI	TARA DYERS	31/3/2019	150	Recycling to process
151	SALEM SOUTH	AMANI KONDALAMPATTI	APPU VENKATACHALAM MEDICAL RESEARCH CENT	31/3/2019	2.5	Public sewer
152	SALEM SOUTH	ANNADANAPATTI	SRI GAYATHRI BLEACHING AND WASHING	31/3/2020	241	Recycling to process
153	SALEM SOUTH	ANNADANAPATTI	SRI JEE YARNS	31/3/2019	8	Recycling to process
154	SALEM SOUTH	ANNADANAPATTI	MALA EXPORT FABRICS	31/3/2023	30	Recycling to process
155	SALEM SOUTH	ANNADANAPATTI	SUPREME TEX PROCESSORS	31/3/2019	32.25	Recycling to process
156	SALEM SOUTH	ANNADANAPATTI	SRI PRASANNA COLOURS	31/3/2018	16	Recycling to process
157	SALEM SOUTH	ANNADANAPATTI	BHUVANA DYERS	31/3/2021	11	Recycling to process
158	SALEM SOUTH	ANNADANAPATTI	SRI VENI DYEING	31/3/2019	11	Recycling to process
159	SALEM SOUTH	ANNADANAPATTI	GANESHA DYEING	31/3/2019	11	Recycling to process
160	SALEM SOUTH	ANNADANAPATTI	DHANALAKSHMI FABRICS	31/3/2022	300	Recycling to process
161	SALEM SOUTH	ANNADANAPATTI	SWAMY PROCESS	31/3/2020	200	Recycling to process
162	SALEM SOUTH	ANNADANAPATTI	SALEM CORPORATION SLAUGHTER HOUSE	31/3/2011	9	Onland irrigation
163	SALEM SOUTH	ANNADANAPATTI	RAMA GOUNDAR BLEACHING	31/3/2020	301	Recycling to process
164	SALEM SOUTH	ANNADANAPATTI	CAUVERY STONES IMPEX P LTD	31/3/2019	6.5	Recycling to process
165	SALEM SOUTH	ANNADANAPATTI	SONAL VYAPAR LIMITED	31/3/2027	2.5	Recycling to process
166	SALEM SOUTH	ANNADANAPATTI	ALLWIN TEXTILLE PROCESS	31/3/2018	100	Recycling to process
167	SALEM SOUTH	ANNADANAPATTI	THIRUMALAI TEX PROCES	31/3/2021	0.1	Onland irrigation
168	SALEM SOUTH	ANNADANAPATTI	SRI BHARATHY NURSING HOME	31/3/2022	0.2	Public sewer
169	SALEM SOUTH	ANNADANAPATTI	RAMADAS NURSING HOME	31/3/2020	2.5	Public sewer
170	SALEM SOUTH	ANNADANAPATTI	T.V.G. NURSING HOME	31/3/2019	0.2	Public sewer

Annexure-I Details of Industries along the polluted river stretch

171	SALEM SOUTH	ANNADANAPATTI	RAMADAS SUKUMAR HOSPITAL	31/3/2020	0.2	Public sewer
172	SALEM SOUTH	ANNADANAPATTI	SRI SARASWATHI SAGO FACTORY	31/3/2021	77	Onland irrigation
173	SALEM SOUTH	ANNADANAPATTI	SRI JAYAKUMAR SAGO MANUFACTURERS	31/3/2023	150	Onland irrigation
174	SALEM SOUTH	ANNADANAPATTI	SRI SAKTHI VINAYAKA SAGO MANUFACTURES	31/3/2022	100	Onland irrigation
175	SALEM SOUTH	ANNADANAPATTI	VELMURUGAN TRADERS	31/3/2019	100	Onland irrigation
176	SALEM SOUTH	ANNADANAPATTI	MAHALAKSHMI SAGO FACTORY	31/3/2023	100	Onland irrigation
177	SALEM SOUTH	ANNADANAPATTI	HAIMAVATHI PROCESS	31/3/2020	100	Recycling to process
178	SALEM SOUTH	ANNADANAPATTI	KA.M.D.PROCESS	31/3/2027	0.05	Solar Evaporation pan
179	SALEM SOUTH	ANNADANAPATTI	RAJAMMA AGRO PRODUCTS	31/3/2025	0.8	Solar Evaporation pan
180	SALEM SOUTH	ATTAYAMPATTI	MALARVIZHI DYEING	31/3/2019	10	Recycling to process
181	SALEM SOUTH	ATTAYAMPATTI	P.A. KUPPUSAMY MUDALIYAR AND COMPANY	31/3/2019	5	Recycling to process
182	SALEM SOUTH	ATTAYAMPATTI	RAVIKUMAR FABRICS	31/3/2008	20	Recycling to process
183	SALEM SOUTH	ATTAYAMPATTI	MALLIGAI NURSING HOME	31/3/2019	1.5	Public sewer
184	SALEM SOUTH	ATTAYAMPATTI	SARASWATHI SAGO FACTORY	31/3/2021	30	Onland irrigation
185	SALEM SOUTH	ILAMPILLAI	ALAMELU DYEING	31/3/2019	50	Recycling to process
186	SALEM SOUTH	JARI KONDALAMPATTI	THAMBBI DELTAA DYEING PLANT	30/6/2013	78	Recycling to process
187	SALEM SOUTH	JARI KONDALAMPATTI	VINAYAGA DYEING	31/3/2019	10	Recycling to process
188	SALEM SOUTH	JARI KONDALAMPATTI	SRI RAJAGANAPATHY DYEING	31/3/2021	26	Recycling to process
189	SALEM SOUTH	JARI KONDALAMPATTI	S.S. DYERS	31/3/2021	26	Recycling to process
190	SALEM SOUTH	JARI KONDALAMPATTI	SASTHA DYEING	31/3/2021	26	Recycling to process
191	SALEM SOUTH	JARI KONDALAMPATTI	SRI RAM DYEING	31/3/2021	26	Recycling to process
192	SALEM SOUTH	JARI KONDALAMPATTI	N.S.DYEING	31/3/2018	30	Recycling to process
193	SALEM SOUTH	JARI KONDALAMPATTI	PRIYAM SPECIALITY HOSPITALS	31/3/2020	0.5	Public sewer
194	SALEM SOUTH	JARI KONDALAMPATTI	Universal cancer Hospital Ltd	31/3/2027	0.5	Public sewer
195	SALEM SOUTH	NEIKKARAPATTI	K.P.N. SAGO FACTORY	31/3/2019	150	Onland irrigation
196	SALEM SOUTH	NEIKKARAPATTI	SELVAM SAGO FACTORY	31/3/2019	100	Onland irrigation
197	SALEM SOUTH	NINAMPATTY	GOVERNMENT HOSPITAL-NAINAMPATTY	31/3/2027	1	Public sewer
198	SALEM SOUTH	PARAPPATTI	SRI KOMMAIAMMAN SAGO FACTORY	31/3/2019	60	Onland irrigation
199	SALEM SOUTH	PARAPPATTI	SRI SARAVANA SAGO FACTORY	31/3/2019	100	Onland irrigation
200	SALEM SOUTH	PERUMAKKAVUNDANPATTI	VPS DYEING	31/3/2020	50	Recycling to process
201	SALEM SOUTH	REDDIPATTI	G.T.P. GRANITES LTD	31/3/2019	75	Recycling to process
202	SALEM SOUTH	SILANAYAKKANPATTI	DHANDAPANI SPINNING MILLS LIMITED	31/3/2023	100	Onland irrigation
203	SALEM SOUTH	SILANAYAKKANPATTI	NAVAMANI DYEING FACTORY	31/3/2023	100	Recycling to process
204	SALEM SOUTH	SILANAYAKKANPATTI	SHRI KRISHNA DYEING WORKS	31/3/2023	305	Recycling to process
205	SALEM SOUTH	SILANAYAKKANPATTI	SHANMUGAM COLOURS	31/3/2020	40	Recycling to process

Annexure-I Details of Industries along the polluted river stretch

206	SALEM SOUTH	SILANAYAKKANPATTI	S.K. CARS INDIA PVT LTD	31/3/2019	4	Onland irrigation
207	SALEM SOUTH	SILANAYAKKANPATTI	DHARAN HOSPITAL	31/3/2019	5	Public sewer
208	SALEM SOUTH	SILANAYAKKANPATTI	AKITHA HOSPITAL	31/3/2020	0.5	Public sewer
209	SALEM SOUTH	TADAGAPATTI	RAJ DYEING	31/3/2020	25.3	Recycling to process
210	SALEM SOUTH	TADAGAPATTI	GOWRISANKAR DYERS	31/3/2019	12.5	Recycling to process
211	SALEM SOUTH	TADAGAPATTI	NATARAJA SAYA SALAI	31/3/2019	25	Recycling to process
212	SALEM SOUTH	TADAGAPATTI	O.S. RAMALINGAM AND CO DYEING FACTORY	31/3/2020	16	Recycling to process
213	SALEM SOUTH	TADAGAPATTI	GURU RAGAVENDARA TEXTILES	31/3/2019	200	Recycling to process
214	SALEM SOUTH	TADAGAPATTI	SRI BALAJI TEXTILES PROCESSING UNIT	31/3/2021	30	Recycling to process
215	SALEM SOUTH	TADAGAPATTI	SENTHIL DYEING	31/3/2019	10.2	Recycling to process
216	SALEM SOUTH	TADAGAPATTI	POORANI SAYA SALAI	31/3/2019	125	Recycling to process
217	SALEM SOUTH	TADAGAPATTI	LAKSHMI DYEINGS	31/3/2019	25.5	Recycling to process
218	SALEM SOUTH	TADAGAPATTI	VENKATESA DYERS	31/3/2021	25	Recycling to process
219	SALEM SOUTH	TADAGAPATTI	VENKATESA DYEING CENTRE	31/3/2021	25	Recycling to process
220	SALEM SOUTH	TADAGAPATTI	LAKSHMI DYEING	31/3/2023	25	Recycling to process
221	SALEM SOUTH	TADAGAPATTI	LALITHA COLOURS	31/3/2020	25	Recycling to process
222	SALEM SOUTH	TADAGAPATTI	SALEM DYEING CENTRE	31/3/2015	55	Recycling to process
223	SALEM SOUTH	TADAGAPATTI	BHARATHI DYEING	31/3/2019	25.3	Recycling to process
224	SALEM SOUTH	TADAGAPATTI	A.T.K. COLOURING CENTRE	31/3/2019	10.8	Recycling to process
225	SALEM SOUTH	TADAGAPATTI	ANNAMALAI SAYA SALAI	31/3/2019	150	Recycling to process
226	SALEM SOUTH	TADAGAPATTI	SLAUGHTER HOUSE FOR GOAT AND SHEEP	31/3/2015	2.4	Public sewer
227	SALEM SOUTH	TADAGAPATTI	SOUNDARARAJAN NURSING HOME	30/6/2015	2	Public sewer
228	SALEM SOUTH	TADAGAPATTI	G.V.K. HOSPITAL	31/3/2019	4	Public sewer
229	SALEM SOUTH	TADAGAPATTI	SHANTHI NURSING HOME	31/3/2020	2.6	Public sewer
230	SALEM SOUTH	TADAGAPATTI	SREE VASANTHAM HOSPITAL	31/3/2019	0.05	Public sewer
231	SALEM SOUTH	TADAGAPATTI	ANBU NURSING HOME	31/3/2021	0.2	Public sewer
232	SALEM SOUTH	TADAGAPATTI	LATHA YUVARAJ HOSPITAL	31/3/2027	0.1	Public sewer
233	SALEM SOUTH	TADAGAPATTI	PARTHIBA TRADERS	31/3/2019	100	Onland irrigation
234	SALEM SOUTH	TADAGAPATTI	MEENAKSHI INDIA LTD	31/3/2021	10	Onland irrigation
235	SALEM SOUTH	TADAGAPATTI	SRI LAKSHMI NARAYANA NURSING HOME	31/3/2027	0.01	Public sewer
236	SALEM SOUTH	TADAGAPATTI	LIFE CARE HOSPITAL	31/3/2023	0.36	Public sewer
237	SALEM SOUTH	VANIYAMBADI	VIJAYA SAGO FACTORY	31/3/2023	70	Onland irrigation
238	SALEM SOUTH	VEMBADITALAM	DHIVYA FASHIONS	31/3/2019	50	Recycling to process
239	SALEM SOUTH	VEMBADITALAM	SRI DURGA DYEING	31/3/2019	50	Recycling to process
240	SALEM SOUTH	VEMBADITALAM	GOVERNMENT HOSPITAL-VEMBADITHALAM	31/3/2027	2.5	Public sewer

Annexure-I Details of Industries along the polluted river stretch

241	SALEM WEST	ALAGAPURAM	G.T.P. MARBLES AND GRANITES	31/3/2019	1	Recycling to process
242	SALEM WEST	ALAGAPURAM	BHAVANI HOSPITAL	31/3/2019	2	Public sewer
243	SALEM WEST	ALAGAPURAM	S.K.S. HOSPITAL	31/3/2026	5	Public sewer
244	SALEM WEST	ALAGAPURAM	RAINBOW HOSPITAL	31/3/2019	0.5	Public sewer
245	SALEM WEST	ALAGAPURAM	ARUNAGIRI ENT NURSING HOME	31/3/2019	0.02	Public sewer
246	SALEM WEST	ALAGAPURAM	DR. PAULOSE DENTAL CLINIC	31/3/2018	0.05	Public sewer
247	SALEM WEST	ALAGAPURAM	NATHAN SUPER SPECIALITY HOSPITAL	31/3/2025	1	Public sewer
248	SALEM WEST	ALAGAPURAM	T.V.SUNDRAM IYENGER and SONS	31/3/2019	6	Recycling to process
249	SALEM WEST	ALAGAPURAM	EKA HOSPITAL	31/3/2027	0.8	Public sewer
250	SALEM WEST	ALAGAPURAM	THE BANGALORE AUTOMOBILES AGENCY DIVISIO	31/3/2019	1.8	Public sewer
251	SALEM WEST	ALAGAPURAM	THILLAIKARASI SAGO FACTORY	31/3/2019	100	On land for irrigation
252	SALEM WEST	ALAGAPURAM	HOTEL CENNEYS GATEWAY	31/3/2028	2.5	On land for irrigation
253	SALEM WEST	ALAGAPURAM	PRANAV HOSPITAL PVT LTD	31/3/2019	1	Public sewer
254	SALEM WEST	ALAGAPURAM	SS MEDICAL CENTRE	31/3/2019	0.2	Public sewer
255	SALEM WEST	ALAGAPURAM	Dr SUDHAKAR ENT CARE CENTRE	31/3/2021	0.2	Public sewer
256	SALEM WEST	ALAGAPURAM	LOTUS EYE HOSPITAL AND INSTITUTE	31/3/2020	1.2	Public sewer
257	SALEM WEST	ALAGAPURAM	SKS HOSPITAL LABORATORY AND SKS HOSPITAL	31/3/2027	0.5	Public sewer
258	SALEM WEST	ALAGAPURAM PUDUR	GLOBAL LAB AND CONSULTANCY SERVICES	31/3/2019	0.36	Recycling to process
259	SALEM WEST	ALAGAPURAM PUDUR	VASAN DENTAL CARE HOSPITAL PVT LTD	30/6/2016	0.5	Public sewer
260	SALEM WEST	ALAGAPURAM PUDUR	THAMBI MEDICAL SURGICAL EYE HOSPITAL P L	31/3/2020	0.9	Public sewer
261	SALEM WEST	AMMAPALAYAM	S SEVEN CARS INDIA PRIVATE LIMITED	31/3/2026	4	Recycling to process
262	SALEM WEST	BODINAYAKANPATTI	AISHWARYAM SPECIALITY HOSPITAL P LTD	31/3/2020	1.5	Public sewer
263	SALEM WEST	BODINAYAKANPATTI	THRIVENI CAR COMPANY	31/3/2023	5	Recycling to process
264	SALEM WEST	JAGIR AMMAPALAYAM	RATHNA KAMATCHI SAGO FACTORY	31/3/2018	75	On land for irrigation
265	SALEM WEST	JAGIR AMMAPALAYAM	SIVASAKTHI HOTELS P LTD	31/3/2022	6	On land for irrigation
266	SALEM WEST	JAGIR AMMAPALAYAM	GLOBAL MEDICAL CENTRE	31/3/2020	0.2	Public sewer
267	SALEM WEST	JAGIR AMMAPALAYAM	PONNI SAGO FACTORY	31/9/2002	100	On land for irrigation
268	SALEM WEST	JAGIR AMMAPALAYAM	T.A. PERUMAL STARCH INDUSTRIES	31/3/2019	100	On land for irrigation
269	SALEM WEST	JAGIR AMMAPALAYAM	S.K.S.AUTOMOBILES	31/3/2026	4	Recycling to process
270	SALEM WEST	KANDAMPATTI	SRI MURUGAN SAGO FACTORY	31/3/2022	100	On land for irrigation
271	SALEM WEST	KANDAMPATTI	SUDAMANI STARCH INDUSTRIES	31/3/2019	50	On land for irrigation
272	SALEM WEST	KANDAMPATTI	SREE DHANAALAKSHMI PROCESS	31/3/2022	200	Recycling to process
273	SALEM WEST	KANDAMPATTI	FRIENDS DYEING	31/3/2021	200	Recycling to process
274	SALEM WEST	KANDAMPATTI	SISU HOSPITAL	31/3/2022	0.2	Public sewer
275	SALEM WEST	KANDAMPATTI	SRI BALAMURUGAN SAGO FACTORY	31/6/2016	75	On land for irrigation

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276	SALEM WEST	KANDAMPATTI	SRI VELMURUGAN STARCH FACTORY	31/3/2018	150	On land for irrigation
277	SALEM WEST	KANDAMPATTI	SRI VENKATESWARA SAGO FACTORY	31/3/1992	105	On land for irrigation
278	SALEM WEST	KANDAMPATTI	SREE SAKTHI SAGO FACTORY	31/3/2022	150	On land for irrigation
279	SALEM WEST	KANDAMPATTI	ARULMURUGAN SAGO FACTORY	31/3/2022	100	On land for irrigation
280	SALEM WEST	KANDAMPATTI	SIVAMURUGAN SAGO FACTORY	31/3/2019	100	On land for irrigation
281	SALEM WEST	KANDAMPATTI	SRI ANNAMAR SAGO FACTORY	31/3/2020	100	On land for irrigation
282	SALEM WEST	KANDAMPATTI	ANBU TAPIOCA STARCH MILLS	31/3/1996	97	On land for irrigation
283	SALEM WEST	KANDAMPATTI	SRI CHENNI ANDAVAR SAGO FACTORY	31/3/2012	50	On land for irrigation
284	SALEM WEST	KANDAMPATTI	DHANDAYUTHAPANI SAGO TRADERS	31/3/2021	50	On land for irrigation
285	SALEM WEST	KANDAMPATTI	SRI MURUGAN SAGO FACTORY	31/3/2022	100	On land for irrigation
286	SALEM WEST	KANDAMPATTI	PALANIAPPA GOUNDER SAGO FACTORY	31/3/2022	75	On land for irrigation
287	SALEM WEST	KANDAMPATTI	LRN AUTO AGENCIES PRIVATE LIMITED	31/3/2016	5	On land for irrigation
288	SALEM WEST	KANDAMPATTI	LRN MOTORS PRIVATE LIMITED	31/3/2016	5	On land for irrigation
289	SALEM WEST	KANDAMPATTI	SELVI STARCH INDUSTRIES	31/3/2019	12.5	On land for irrigation
290	SALEM WEST	MALLAMUPPANPATTI	JAYALAKSHMI STARCH INDUSTRIES	31/3/2019	70	On land for irrigation
291	SALEM WEST	MARAMANGALATTUPATTI	STEEL AUTHORITY OF INDIA HOSPITAL	31/3/2020	3	Public sewer
292	SALEM WEST	MEYYANUR	CJ PALLAZZIO HOTEL	31/3/2022	5	Recycling to process
293	SALEM WEST	MEYYANUR	RELIANCE PROLIFIC TRADERS PVT LTD	31/3/2016	12	Recycling to process
294	SALEM WEST	MEYYANUR	SRI GOKULAM HOSPITAL PVT LTD	31/3/2020	1.5	Public sewer
295	SALEM WEST	MEYYANUR	SRI GOKULAM SPECIALITY HOSPITAL	31/3/2019	1.5	Public sewer
296	SALEM WEST	MEYYANUR	VENKATESH HOSPITALAND URALOLOGY CENTRE	31/3/2019	1.8	Public sewer
297	SALEM WEST	MEYYANUR	SIVARAJ HOLIDAY INN PVT LTD	31/3/2019	3	On land for irrigation
298	SALEM WEST	MEYYANUR	SITHESWARA SAGO FACTORY	31/3/2018	12.5	On land for irrigation
299	SALEM WEST	MEYYANUR	ASHOK AUTO AGENCY	31/3/2027	1	Public sewer
300	SALEM WEST	MEYYANUR	TNSTC LTD DIVISION -I Meyyanur Branc	31/3/2019	2	On land for irrigation
301	SALEM WEST	NALLAMPATTI	STEEL AUTHORITY OF INDIA	31/3/2019	6168	Recycling to process
302	SALEM WEST	NARASOJIPATTI	RAMANI CARS PVT LTD	31/3/2019	5	Recycling to process
303	SALEM WEST	NARASOJIPATTI	PRATHIBA SAGO FACTORY	31/3/2019	200	On land for irrigation
304	SALEM WEST	PALLAPATTI	ALLWIN PROCESS	31/3/2016	100	Recycling to process
305	SALEM WEST	PALLAPATTI	St MARYS HOSPITAL	31/3/2020	1.8	Public sewer
306	SALEM WEST	PALLAPATTI	AROKYA HOSPITAL	31/3/2018	0.5	Public sewer
307	SALEM WEST	PALLAPATTI	SRI SELLAKUMAR SAGO MANUFACTURES	31/3/1992	25	On land for irrigation
308	SALEM WEST	PALLAPATTI	RAJA SAGO FACTORY	31/3/2020	195	On land for irrigation
309	SALEM WEST	PALLAPATTI	SRINIVASA SAGO FACTORY	31/3/2019	100	On land for irrigation
310	SALEM WEST	PALLAPATTI	ESWARAN STARCH MILL	31/3/2000	100	On land for irrigation

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311	SALEM WEST	PALLAPATTI	SRI VINAYAGAR SAGO FACTORY	30/9/2003	100	On land for irrigation
312	SALEM WEST	PALLAPATTI	SRI RAGAVENDHRA NEURO CARE P LTD	31/3/2019	1	Public sewer
313	SALEM WEST	PUTHUR AGRAHARAM	SRI RAJAGANAPATHI SAGO FACTORY	30/9/2002	40	On land for irrigation
314	SALEM WEST	REDDIYUR	ESWARAN BLEACHING	31/3/2019	102	Recycling to process
315	SALEM WEST	SARKAR GOLLAPPATTI	GOVERNMENTAL HOSPITAL-PETHANAICKENPALAYA	31/3/2027	0.5	Public sewer
316	SALEM WEST	SITTANUR GOLLAPATTI	THE SALEM DISTRICT CO-OP MILK PRODUCERS	31/3/2017	580	On land for irrigation
317	SALEM WEST	SOUDAPURAM	SENTHIL MURUGAN STARCH FACTORY	31/3/1992	12	On land for irrigation
318	SALEM WEST	SURAMANGALAM	M.J. HOSPITAL	31/3/2019	3.2	Public sewer
319	VAZHAPPADI	AGRAHARA VALAPPADI	MALAR NURSING HOME	CTE alone	0.5	Public sewer
320	VAZHAPPADI	AYODHYAPATTIANAM	JAI LAKSHMI NURSING HOME	31/3/2019	0.1	Public sewer
321	VAZHAPPADI	AYODHYAPATTIANAM	SRI BALAJI SAGO FACTORY	31/3/2022	75	On land for irrigation
322	VAZHAPPADI	AYODHYAPATTIANAM	SALEM SRI VENKATRAMANA SAGO FACTORY	NOP	0	No Trade Effluent
323	VAZHAPPADI	AYOTHIAPATTANAM	SELVA VINAYAKA SAGO FACTORY	31/3/2022	70	On land for irrigation
324	VAZHAPPADI	CHINNAKAVUNDAPURAM	HATSUN AGRO PRODUCT LTD MILK PRODUCT	31/3/2017	10	On land for irrigation
325	VAZHAPPADI	CHINNAKAVUNDAPURAM	R.R.RETORT FOODS PVT LTD	31/3/2005	0.075	Solar Evaporation pan
326	VAZHAPPADI	CHINNAKAVUNDAPURAM	JAAIDEV HOSPITAL P LTD	31/3/2026	1	On land for irrigation
327	VAZHAPPADI	KARIPATTI	R.R.FRESH FORMS	31/3/2014	0.55	On land for irrigation
328	VAZHAPPADI	KARIPATTI	R.R. RETORT FOODS	31/3/2014	1	On land for irrigation
329	VAZHAPPADI	KARIPATTI	R.R.TASTY FOODS	CTE alone	0.8	On land for irrigation
330	VAZHAPPADI	KARUMAPURAM	HATSUN AGRO PRODUCTS LTD	31/3/2019	100	On land for irrigation
331	VAZHAPPADI	KARUMAPURAM	HATSUN AGRO PRODUCT LTD	31/3/2019	650	On land for irrigation
332	VAZHAPPADI	KARUMAPURAM	PARAGON POLYMER PRODUCTS PVT LTD	31/3/2018	0	No Trade Effluent
333	VAZHAPPADI	KARUMAPURAM	LAKSHMI FOOD PRODUCTS	31/3/2019	10.5	On land for irrigation
334	VAZHAPPADI	KARUMAPURAM	Bright Granites	31/3/2019	10	Recycling to process
335	VAZHAPPADI	KARUNGALPATTI	NARASU S SARATHY ENTERPRISES PVT LTD	31/3/2025	0	No Trade Effluent
336	VAZHAPPADI	KULLAMPATTI	SRI MANIKANDAN STARCH INDUSTRIES	31/3/2027	30	On land for irrigation
337	VAZHAPPADI	MANNARPALAYAM	NALLATHANGAL SAGO FACTORY	31/3/2016	150	On land for irrigation
338	VAZHAPPADI	METTUPATTI	GRANITE PRODUCTS CORPORATION	31/3/2004	38	Recycling to process
339	VAZHAPPADI	METTUPATTI	CHINTHAMANI SAGO FACTORY	31/3/2027	300	On land for irrigation
340	VAZHAPPADI	METTUPATTI	CHINTHAMANI FOODS AND FEEDS PRIVATE LTD	31/3/2019	0	No Trade Effluent
341	VAZHAPPADI	MINNAMPALLI	SELLIAMMAN SAGO FACTORY	31/3/2022	70	On land for irrigation
342	VAZHAPPADI	MINNAMPALLI	ANGALAMMAN SAGO FACTORY	NOP	0	No Trade Effluent
343	VAZHAPPADI	MUTAMPATTI	S.K.A.DAIRY FOODS INDIA PVT LTD	31/3/2026	135	On land for irrigation
344	VAZHAPPADI	NIRMULLIKUTTAI	SIVARAM SAGO FACTORY	NOP	0	No Trade Effluent
345	VAZHAPPADI	PERIYAGOUNDAPURAM	VIJAY M SAND	31/3/2029	20	Recycling to process

Annexure-I Details of Industries along the polluted river stretch

346	VAZHAPPADI	PERIYAGOUNDAPURAM	RADIANT COLOURS SALEM PRIVATE LIMITED	31/3/2020	0	No Trade Effluent
347	VAZHAPPADI	PERIYAKAVUNDAPURAM	MAYTAS INFRA LTD-WET MIX MACADAM PLANT	31/3/2009	0	No Trade Effluent
348	VAZHAPPADI	PERUMAPALAYAM	VETRI VINAYAGA DAIRY	31/3/2019	5	On land for irrigation
349	VAZHAPPADI	PERUMAPALAYAM.M	SKM ANIMAL FEEDS AND FOODS INDIA P LTD	31/3/2020	0	No Trade Effluent
350	VAZHAPPADI	PERUMAPALAYAM.M	SRI LAKSHMI SAGO FACTORY	NOP	0	No Trade Effluent
351	VAZHAPPADI	SAKAR VALAPADI	SREE BALA HOSPITAL	31/3/2020	3.4	Public sewer
352	VAZHAPPADI	SARKAR VALAPADI	DEEPAM HOSPITAL	31/3/2020	0.4	Public sewer
353	VAZHAPPADI	SARKAR VALAPADI	S.P.APPARELS LTD-SPINNING DIVISION	31/3/2019	0	No Trade Effluent
354	VAZHAPPADI	SARKAR VALAPADI	TNSTC SALEM DIV-I LTD Valapady Branch	31/3/2019	0.5	On land for irrigation
355	VAZHAPPADI	SARKAR VALAPADI	GOVERNMENT HOSPITAL- VAZHAPPADI	31/3/2019	2.1	Public sewer
356	VAZHAPPADI	SINGIPURAM	THE RAMCO CEMENTS LTD	31/3/2020	0	No Trade Effluent
357	VAZHAPPADI	THUKKIYAMPALAYAM	DHANDAPANI BIO FUELS	31/3/2015	0	No Trade Effluent

ANNEXURE-II - Report of analysis of industries

SALEM STEEL PLANT							
DATE OF COLLECTION 29.09.2018							
Sl. No.	CORE PARAMETERS	RR-747 ETP-I, ASTP Effluent Outlet	RR-748 ETP-II, Neutral Effluent Outlet	RR-749 De Fluoridation permit outlet	RR-750 Oxidation ditch outlet	RR-751 STP plant outlet	RR-752 Sludge
1	pH Values	6.73	6.71	7.71	7.42	7.6	—
2	TSS	16	16	12	20	16	—
3	TDS	224	156	296	—	—	—
4	Sulphate mg/l	10	<5	5	—	—	—
5	Oil & Grease	<4	<4	<4	—	—	—
6	BOD	<2	<2	<2	<2	<2	—
7	COD	16	16	16	16	16	—
8	Sulphide	<1	<1	<1	—	—	—
9	Fluoride mg/l	<1	<1	<1	—	—	102.69
10	Iron total as Fe	0.43	0.29	0.55	—	—	2367
11	Ammonical Nitrogen	<2	<2	2.24	2.24	2.24	—
12	Hexavalent Chromium	<0.05	<0.05	<0.05	—	—	<0.05
13	Total Chromium	<0.05	<0.05	<0.05	—	—	6776
14	Zinc	0.043	0.032	0.068	—	—	—
15	Nickel	<0.006	<0.006	<0.006	—	—	—
16	Total Nitrogen	—	—	—	0.199	0.242	—
17	Fecal Coliform MPN/100 ml	—	—	—	26	58	—
18	Total Coliform MPN/100 ml	—	—	—	70	120	—

ANNEXURE-II - Report of analysis of industries

SALEM DISTRICT CO-OPERATIVE MILK PRODUCERS LTD			
DATE OF COLLECTION 29.10.2018			
Sl. No.	CORE PARAMETERS	RR-792 Inlet of ETP	RR-794 Outlet of ETP
1	pH Values	6.32	7.69
2	TSS mg/l	172	40
3	TDS	2204	1420
4	Chloride	630	385
5	Sulphate	43	81
6	Oil & Grease	48	4
7	BOD	2500	31
8	COD	4480	312

ANNEXURE-II - Report of analysis of industries

VELLAKUTTAI SEWAGE TREATMENT PLANT			
DATE OF COLLECTION 29.10.2018			
Sl. No.	CORE PARAMETERS	RR-797	RR-798
1	pH Values	7.11	7.45
2	TSS mg/l	56	28
3	BOD mg/l	11	10
4	COD mg/l	72	80
5	Ammonia – N mg/l	2.240	2.240
6	Total Nitrogen	0.598	0.643
7	Fecal Coliform MPN/100 ml	49	46
8	Total Coliform MPN/100 ml	170	110

Annexure-III

Action Taken against the Erring Textile units

Sl. No.	Date of Inspection	No of Textile Dyeing Units and Action Taken	No of Bleaching Units	Total
1.	12.01.2016	18 (Dismantled)	7 (Dismantled)	25
2.	21.06.2016	1 Show Cause Notice issued	6	7
3.	28.06.2016	2 (Dismantled)	--	2
4.	02.09.2016	2 (Dismantled)	--	2
5.	03.08.2016 24.08.2016 26.08.2016	14 (Closure direction issued by the Board)	--	14
6.	08.11.2016	2 (Dismantled)	--	2
7.	16.11.2016	7 (Dismantled)	--	7
8.	24.11.2016	9 (Dismantled)	--	9
9.	20.12.2016	14 (Dismantled)	--	14
10.	21.12.2016	7 (Dismantled)	--	7
11.	25.01.2017	14 (Dismantled)	--	14
12.	08.02.2017	8 (Dismantled)	--	8
13.	21.02.2017	2 (Dismantled)	--	2
14.	02.03.2017	4 (Dismantled)	--	4
15.	09.03.2017	4 (Dismantled)	--	4
16.	16.03.2017	4 (Dismantled)	--	4
17.	06.05.2017	7 (Dismantled)	--	7
18.	11.5.2017	6 (Dismantled)	--	6
19.	17.5.2017	8 (Dismantled)	--	8
20.	19.5.2017	17 (Dismantled)	--	17

Annexure-III - Action taken against the Erring Textile units

21.	20.9.2017	5 Dismantled	--	5
22.	12.10.2017	5 Dismantled, (Closure direction issued by the Board)	--	5
23.	28.10.2017	1 Dismantled	--	1
24.	2.11.2017	5 Dismantled, 1-Closure direction issued by the Board	--	5
25.	24.11.2017	15 Dismantled	--	15
26.	7.12.2017	16 Dismantled	--	16
27.	12.4.2018	6 Dismantled, Closure direction issued by the Board	--`	6
28.	19.4.2018	2 Sealed	--	2
29.	08.05.2018	2 Dismantled & EB - DC	--	2
30.	15.5.2018	3- Dismantled, 2 – EB DC	--	3
31.	28.5.2018	4-Dismantled, 3- EB - DC	--	4
32.	13.6.2018	2- Dismantled	2 Bleaching	2
33.	19.6.2018	2 Consented units EB disconnected		2
34.	22.6.2018	3 EB - DC (2 Consented)	--	3
35.	26.6.2018	5 EB-DC & Dismantled	--	5
36.	2.7.2018	2 Dismantled & 1 Consented + 2 units EB disconnected	--	2
37.	3.7.2018	1 Dismantled & 2 EB disconnected (1 Consented Unit)	--	1
38.	4.7.2018	6-Dismantled & EB disconnected	--	6
39.	6.7.2018	1- Dismantled & EB DC	1 Bleaching	1
40.	7.7.2018	1 – Dismantled & EB - DC	--	1
41.	13.7.2018	2 – EB disconnected	1 Bleaching	3

Annexure-III - Action taken against the Erring Textile units

42.	30.7.2018	4 Consented units – EB disconnected	--	4
43.	21.8.2018	1 Consented units – EB disconnected	--	1
44.	25.8.2018	1 Consented units – EB disconnected	--	1
45.	01.10.2018	4 – dismantled & EB disconnected	4 Bleaching	8
46.	10.10.2018	6- demolished, 2-EB disconnected	--	6
47.	16.10.2018	5-EB disconnected, demolished	--	5
48.	04.01.2019	6-demolished 2 -EB disconnected	2 Bleaching	8
49.	01.02.2019	4 – EB disconnected	--	4
50.	28.02.2019	5 – EB disconnected, 1- Demolished	4 Bleaching	9

Annexure - IV

SCHEDULE-VI: ENVIRONMENT (PROTECTION) RULES, 1986

(See rule 3A of E (P) Rules, 1986)

**GENERAL STANDARDS FOR DISCHARGE OF ENVIRONMENTAL POLLUTANTS PART-A:
EFFLUENTS**

Sl. No.	Parameter	Standards			
		Inland Surface Water	Public Sewers	Land for Irrigation	Marine coastal areas
1	2	3(a)	3(b)	3 (c)	3 (d)
1	Colour and odour	See 6 of Annexure-I	-	See 6 of Annexure-I	See 6 of Annexure-I
2	Suspended solids mg/l Max.	100	600	200	(a) For process waste water -100 (b)For cooling water effluent 10 % above total suspended matter of influent
3	Particle size of suspended solids	shall pass 850 micron IS Sieve	-		(a) Floatable solids, max 3 mm. (b)Settleable solids, max 850 microns
4	[*Omitted*]				
5	pH value	5.5 to 9	5.5 to 9	5.5 to 9	5.5 to 9
6	Temperature	Shall not exceed 5°C above the receiving water temperature	-	-	Shall not exceed 5°C above the receiving water temperature
7	Oil and grease mg/l, Max	10	20	10	20
8	Total residual chlorine mg/l, Max	1.0	-	-	1.0
9	Ammonical nitrogen (as N) mg/l, Max	50	50	-	50
10	Total Kjeldahl nitrogen (as NH ₃) mg/l, Max	100	-	-	100
11	Free ammonia [as NH ₃] mg/l, Max	5.0	-	-	5.0
12	Biochemical Oxygen Demand (3 days at 27°C) mg/l, Max	30	350	100	100
13	Chemical Oxygen Demand, mg/l Max	250	-	-	250
14	Arsenic (as As) mg/l, Max	0.2	0.2	0.2	0.2
15	Mercury (as Hg), mg/l, Max	0.01	0.01	-	0.01
16	Lead (as Pb) mg/l Max	0.1	1.0	-	2.0
17	Cadmium (as Cd) mg/l, Max	2.0	1.0	-	2.0
18	Hexavalent Chromium (as Cr ⁺⁶) mg/l, Max	0.1	2.0	-	1.0
19	Total chromium (as Cr) mg/l, Max	2.0	2.0	-	2.0

Annexure - IV

Sl. No.	Parameter	Standards			
		Inland Surface Water	Public Sewers	Land for Irrigation	Marine coastal areas
20	Copper (as Cu) mg/l Max	3.0	3.0	-	3.0
21	Zinc (as Zn) mg/l, Max	5.0	15	-	15
22	Selenium (as Se) mg/l Max	0.05	0.05	-	0.05
23	Nickel (as Ni) mg/l, Max	3.0	3.0	-	5.0
24	Omitted	*	*	*	*
25	Omitted	*	*	*	*
26	Omitted	*	*	*	*
27	Cyanide (as CN) mg/l ,Max	0.2	2.0	0.2	0.2
28	Omitted	*	*	*	*
29	Fluoride (as F) mg/l, Max	2.0	15	-	15
30	Dissolved Phosphates (as P) mg/l, Max	5.0	-	-	-
31	Omitted	*	*	*	*
32	Sulphide (as S) mg/l Max	2.0	-	-	5.0
33	Phenolic compounds [as C ₆ H ₅ OH] mg/l, Max	1.0	5.0	-	5.0
34	Radioactive materials				
	(a) Alpha emitters [Micro curie/ml] max	10 ⁻⁷	10 ⁻⁷	10 ⁻⁸	10 ⁻⁷
	(b) Beta emitters [Micro curie/ml] Max	10 ⁻⁶	10 ⁻⁶	10 ⁻⁷	10 ⁻⁶
35	Bio-assay test	90 % survival of fish after 96 hours in 100 % effluent	90 % survival of fish after 96 hours in 100 % effluent	90 % survival of fish after 96 hours in 100 % effluent	90 % survival of fish after 96 hours in 100 % effluent
36	Manganese (as Mn)	2 mg/l	2 mg/l	-	2 mg/l
37	Iron (as Fe)	3 mg/l	3 mg/l	-	3 mg/l
38	Vanadium (as V)	0.2 mg/l	0.2 mg/l	-	0.2 mg/l
39	Nitrate Nitrogen	10 mg/l	-	-	20 mg/l
40	Omitted	*	*	*	*

* Omitted by Rule 2 (d) (i) of the Environment (Protection) Third Amendment Rules, 1993 vide Notification No. G.S.R 801 (E), dated 31.12.1993

Water Quality Criteria -Designated Best Uses of Water

Designated Best Use	Class	Criteria
Drinking Water Source without conventional treatment but after disinfection	A	1.Total Coliforms Organism MPN/100ml shall be 50 or less 2. pH between 6.5 and 8.5 3. Dissolved Oxygen 6mg/l or more 4. Biochemical Oxygen Demand 5 days 20 °C, 2mg/l or less
Outdoor bathing (Organised)	B	1.Total Coliforms Organism MPN/100ml shall be 500 or less 2. pH between 6.5 and 8.5 3. Dissolved Oxygen 5mg/l or more 4. Biochemical Oxygen Demand 5 days 20 °C, 3mg/l or less
Drinking water source after conventional treatment and disinfection	C	1.Total Coliforms Organism MPN/100ml shall be 5000 or less 2. pH between 6 and 9 3. Dissolved Oxygen 4mg/l or more 4. Biochemical Oxygen Demand 5 days 20 °C, 3mg/l or less
Propagation of Wild life and Fisheries	D	1. pH between 6.5 and 8.5 2. Dissolved Oxygen 4mg/l or more 3. Free Ammonia (as N)-1.2 mg/l or less 4. Biochemical Oxygen Demand 5 days 20 °C, 2mg/l or less
Irrigation, Industrial Cooling, Controlled Waste disposal	E	1. pH between 6.0 and 8.5 2. Electrical Conductivity at 25 °C micro mhos/cm, maximum 2250 3. Sodium absorption Ratio Max. 26 4. Boron Max. 2mg/l
	Below-E	Not meeting any of the A, B, C, D & E Criteria