

Assessment of functionality status of household tap connections in rural areas (2020-21)

State report

Tamil Nadu



Submitted to:

National Jal Jeevan Mission

Department of Drinking Water and Sanitation

Ministry of Jal Shakti

Report prepared by:

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1. Introduction

Announced in 2019, the Jal Jeevan Mission – Har Ghar Jal (JJM – HGJ) is implemented by Department of Drinking Water and Sanitation (DDWS), Ministry of Jal Shakti in partnership with States/ UTs. JJM aims to provide a Functional Household Tap Connection (FHTC) to every rural home in the country by 2024. A household tap connection is said to be functional when the tap water supply is of adequate quantity (minimum 55 lpcd) and prescribed quality (as per BIS:10500) on regular and long-term basis. Further, JJM seeks to promote holistic management of local water sources and not just provide tap water connections.

The DDWS had engaged Nielsen (India) Private Limited to undertake 'Functionality Assessment' of household tap connections. The assessment covered household tap connections in 6,992 villages across 704 districts from 31 States/ UTs. The survey was undertaken in November – December 2020.

2. Objectives of the study

The main objectives were an assessment of Functionality of Household Tap Connections (FHTCs) under JJM on various parameters; ascertaining, in the form of data, on-ground progress of JJM in terms of adequate quantity of prescribed quality of drinking water supplied to rural households on regular basis; and engaging with Gram Panchayats and/ or its sub-committees of the sample villages and soliciting their feedbacks and recommendations for improving the programme implementation; and to suggest measures for mid-course correction for improvement in functionality of household tap connections.

3. Approach and Methodology

The approach followed was to assess the functionality of household tap connections (within premises) and in-village drinking water supply infrastructure. The selection of sample villages was from the JJM-Integrated Management Information System (IMIS) data-base of villages having at least 15 household tap connections. In each sample village, the largest PWS scheme was sampled. The survey was planned as in-person Computer Aided Personal Interview (CAPI) survey, and included an on-ground assessment of the functionality of sample PWS schemes and tap connections attached to the same. The survey included measurement of the quantity of water received at the household level through the tap connection, as well as water testing to check whether the quality of the drinking water is as per the BIS standards, using Field Test Kits (FTKs) and H₂S vials. The study also collected supply side information, including assessment of the quantity of water supplied by the scheme, operation and maintenance arrangements, availability and functionality of scheme level infrastructure and the aspects related to source and system sustainability.

A sample of 10 villages from every district in the State were selected following probability proportionate to size (PPS) systematic random sampling method ensuring due representation of SC/ SC majority villages as well as quality-affected villages. In each selected village, households for the survey were selected at head end, middle and tail end of the selected piped water supply network. In Tamil Nadu the survey was conducted in 5094 households from 360 villages in 36 districts.

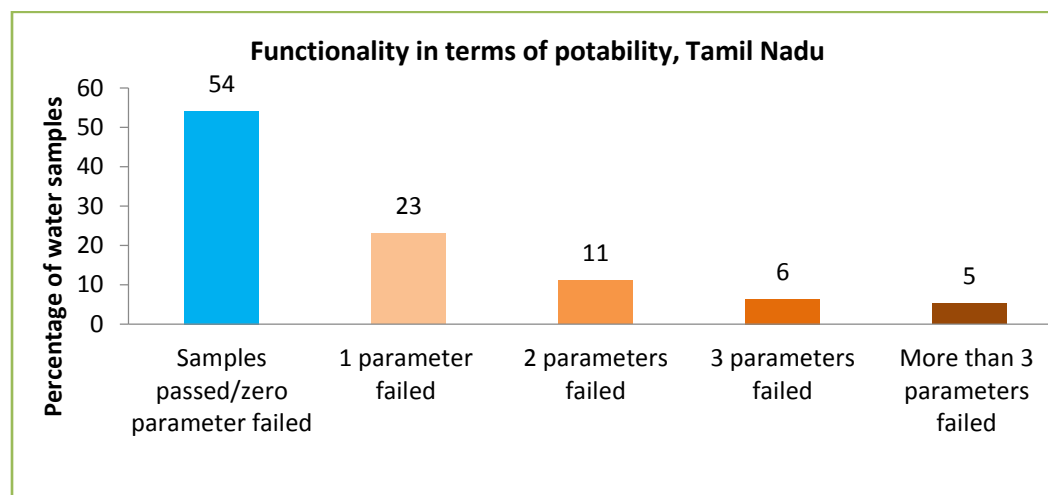
4. Key Findings

SL.	INDICATOR	Tamil Nadu	India
Household level			
1	Average household size	4.2	5.6
2	Percent of households using tap connection for drinking purpose	91.7	88.9
3	Percentage of households reported working tap connections (supply at least one day in last 7 days)	97.4	93.6
4	Number of water supply days in a usual week		
4a	1 – 2 days	8.9	7.6
4b	3 – 4 days	13.6	10.4
4c	5 – 6 days	1.1	1.5
4d	7 days	76.4	80.5
5	Number of water supply days in the last week		
5a	0 days	0.5	2.4
5b	1 – 2 days	14.1	9.7
5c	3 – 4 days	20.4	14.8
5d	5 – 6 days	2.4	4.9
5e	7 days	62.6	68.1
6	Percentage of households reporting reliability of water supply days	92.5	86.5
7	Percentage of households reporting tap connections functioning continuously for more than 15 days in a month for last 12 months	93.6	84.6
8	Average number of times water is supplied on the days of supply		
8a	1 time	77.7	56.6
8b	2 times	21.9	28.2
8c	3 times	0.1	6.1
8d	4 times/24 hours	0.3	9.1
9	Percentage of households reporting reliability of supply for different supply timings	90.0	84.3
10	Percentage of households reporting adequate water pressure for different supply timings		
10a	Morning	85.1	80.1
10b	Afternoon	89.7	84.6
10c	Evening	95.7	84.8
11	Percentage of households reported paying water tariff – separately or along with other taxes	77.6	52.8
12	Percentage of households reported receiving 55 lpcd or more	87.6	83.5
13	Percentage of households having potable water *	54.2	61.3
14	Percentage of households reporting regularity of supply	83.5	87.2
15	Percentage of households reporting functional tap connections	38.9	47.8
Village level			
16	Percentage villages having functional water and sanitation committees	38.3	48.5
17	Percentage of functional schemes in the sample villages considering all schemes (supplying water any day in the last 7 days)	92.9	86.0

SL.	INDICATOR	Tamil Nadu	India
18	Percentage of in-village schemes having O&M undertaken by village water and sanitation committee or by Panchayat	72.1	83.1
19	Percentage of sample schemes reported having faced challenges in the last one year		
19a	Inadequate infrastructure	36.4	40.2
19b	Poor water availability at the source	58.4	33.0
19c	Poor maintenance	28.7	46.2
19d	Natural calamity	82.3	63.4
20	Percentage of schemes reporting measure to improve source sustainability	74.4	59.9
21	Number of sample villages found with no scheme (defunct/under construction/not handed over/not constructed)	0	751

Figures 1, 2 and 3 depicts the functionality aspects of the household tap connections in Tamil Nadu. Figure 1 presents the details of the potability aspects – the proportion of samples which have qualified as per all 13-15 parameters, as well as the proportion of sample which have failed due to one/two/three/more than three parameters.

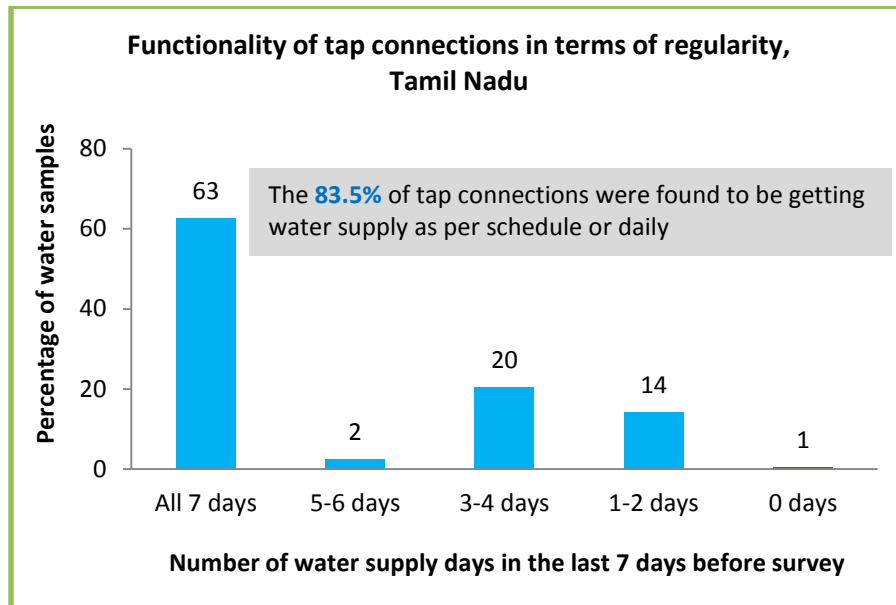
Fig 1: Functionality of the household tap connection in terms of potability - Tamil Nadu



Base: Households with water quality testing done, N: 360

Figure 2 presents functionality in terms of regularity, and presents the water supply situation in the last 7 days (before survey date). This includes information on the proportion of taps supplying water on all 7 days, 5-6 days, 3-4 days, 1-2 days and zero days in the last 7 days. As not all schemes are planned to supply water daily, the information of the proportion of taps supplying water daily or as per the water supply schedule is also presented.

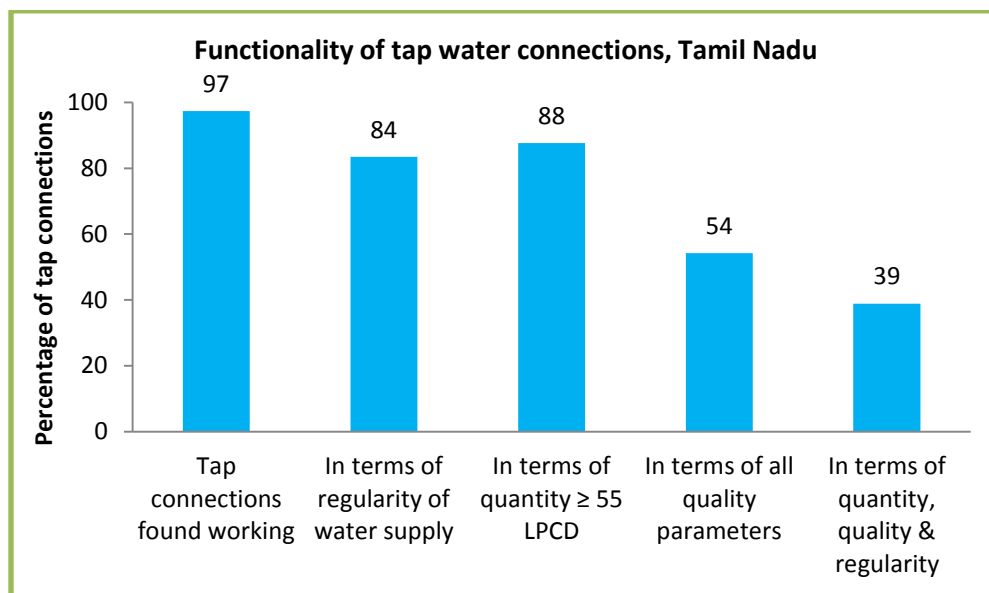
Fig 2: Functionality of the household tap connection in terms of regularity - Tamil Nadu



Base: All Households, N: 5091

Figure 3, presents the summary situation of the working tap connections (defined as supplying water atleast on one day in the last 7 days), the functionality in terms of the proportion of tap connections which have qualified regularity, quantity, quality parameters, and the proportion which have qualified all 3 parameters.

Fig 3: Overall functionality of the household tap connection - Tamil Nadu

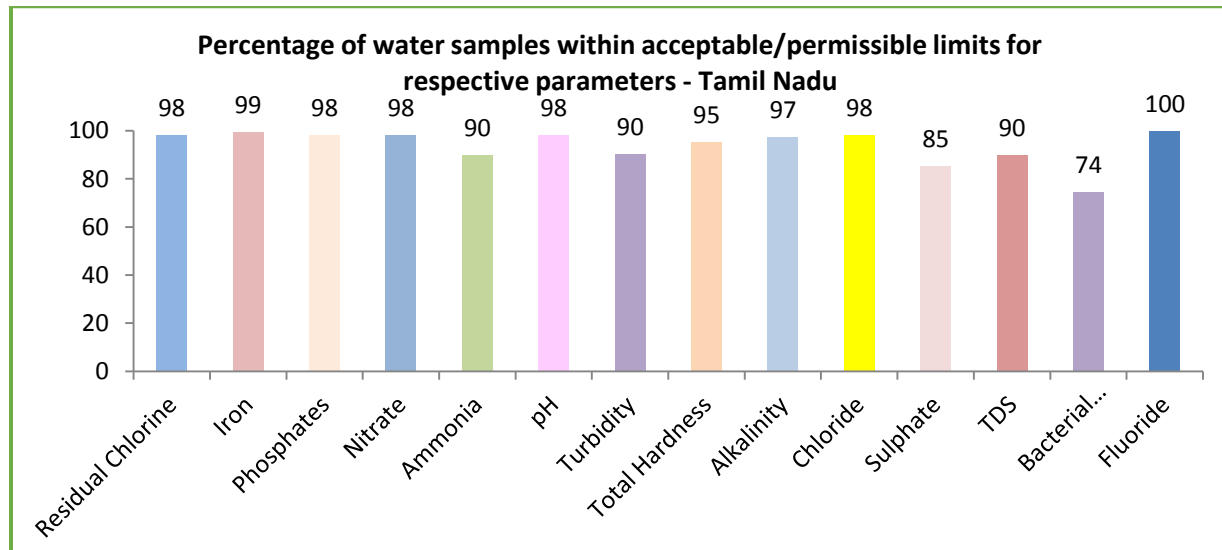


Base: Total count of tap connections considered for functionality assessment, N: 5053

A total of 360 water samples were tested in Tamil Nadu as per BIS: 10,500 standards for all 13 parameters. Additionally 3 samples were tested for Fluoride in Fluoride affected villages and 1 sample was tested for Arsenic in an Arsenic affected village. The figure below shows the proportion of samples in which different parameters were found within acceptable/permissible limits.

As can be seen, almost all the samples (97% or more) had Residual Chlorine, Iron, Phosphates, Nitrate, pH, Chloride and Alkalinity within acceptable/permissible limits. All the three Fluoride samples were within permissible limits, but the single Arsenic test found that Arsenic was not within the acceptable limit. The key water quality issues were Bacteriological presence (Total Coliform) in more than a fourth of the water samples, and Sulphate in 15 percent of the samples. Ammonia, Turbidity and TDS were found beyond acceptable/permissible limits for 10 percent of the samples, and 5 percent of the samples were affected by Alkalinity.

Fig 4: Percentage of water samples within acceptable/permissible limits for respective parameters – Tamil Nadu



Pic 1: Household survey being undertaken in one of the villages in Tamil Nadu



Pic 2: Water quality sample testing being undertaken in a village in Tamil Nadu



5. Conclusions

Tamil Nadu has only 39 percent functional tap connections and this is low as compared with the national average. More than 8 out of every 10 taps in Tamil Nadu were estimated to supply 55 lpcd or more water quantity (87.6%) and 84 percent of the tap connections are supplied water daily or on the scheduled days of supply. However, the proportion of taps supplied with potable water (54.2%) is comparatively low. Since the tap connections considered to be functional were as per the JJM guidelines of including adequate quantity (55 lpcd or more), potability (as per BIS:10500 standards) and regularity

of water supply (all days or as per the water supply schedule), the reason that a lower proportion of households had functional tap connections is mostly due to low proportions of taps being supplied with potable water. If the separate combinations of the functionality attributes are analyzed, it is seen that households having quantity and potability as per the JJM guidelines, as well as potability and regularity combinations are low (45% households having adequate quantity and potable water; 43.5% households having potable water received on a regular basis; while 76.7% households had adequate quantity of water supply on a regular basis).

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The proportion of households reporting currently working tap connections is high (97.4%) in Tamil Nadu. On a usual basis, more than three fourths of the households have reported that water is usually supplied on a daily basis, while the rest have reported mostly 1 – 4 days per week. Compared to the usual situation, a lower proportion (62.6%) have reported daily water supply in the last week before the survey date. However, almost all (92.5%) of the households have reported that water supply is reliable as per the scheduled days of supply – be it few days of the week or all days.

Almost eight out of every ten households (77.7%) households have reported that water is supplied once a day, and most of the rest have reported receiving water supply twice a day (on supply days). About 90 percent of the households have mentioned that water supply timings are reliable. The water pressure is reported to be adequate for all supply timings by more than 85 percent of the households. About 94 percent households have mentioned that they had received water supply on a continuous basis for 15 days a month for the last 12 months.

Almost eight out of every ten households (77.6%) households have reported paying water tariff. As per the JJM guidelines, the State Government needs to ensure 100 percent fund requirement for operation and maintenance of the schemes are met by the Agency responsible for water supply provision to function as a utility.

Almost all villages (92.9%) have reported having water and sanitation committees. In 72 percent of the villages having water and sanitation committees, they were actually taking responsibility for operation and maintenance activities of the PWS schemes. As reported by the communities 'natural calamities, and poor availability of water at the source' were the main challenges faced by the schemes. Almost three-fourths of the schemes had taken some initiatives for source sustainability.

Annexures to this report includes:

- List of villages with schemes supplying only through tap stand/stand posts is placed as Annexure 2,
- List of villages where 15 FHTCs were not found is placed as Annexure 3,
- Indicative proportion of functional tap connections by districts is placed as Annexure 4, and
- List of villages where samples failed for given quality parameter is placed as Annexure 5

Annexure 1: List of village with no scheme/defunct schemes/under construction

No villages present with no scheme/defunct schemes/under construction.

Annexure 2: List of villages with schemes supplying only through tap stand

S.No	District name	Block name	Panchayat name	Village name	Name of largest scheme in the village	Type	Remarks
1.	Dharmapuri	Dharmapuri	Mookanur	Mookanur	WSS to Muttikalankottai in Dharmapuri union	SVS	No FHTC. Water supply through tap stand only
2.	Dharmapuri	Karimangalam	Bommahalli	Bommahalli	CWSS to Kurumberkottai and 46 other habitations	MVS	No FHTC. Water supply through tap stand only
3.	Dharmapuri	Karimangalam	Periyampatty	Periyampatty	CWSS to Kurumberkottal and 46 other habitations	MVS	No FHTC. Water supply through tap stand only
4.	Krishnagiri	Hosur	Poonapalli	Poonapalli	WSS to Anganwadi at Chinnabelakondapalli	SVS	No FHTC. Water supply through tap stand only
5.	Krishnagiri	Kaveripattinam	Kudimenahalli	Kudimenahalli	Within the habitation -Paraikottai	SVS	No FHTC. Water supply through tap stand only
6.	Krishnagiri	Kelamangalam	Anekollu	Anekollu	Within the habitation -Lakshmipuram	SVS	No FHTC. Water supply through tap stand only
7.	Krishnagiri	Veppanapalli	Chinna Manavarana Palli	Chinna Manavarana Palli	WSS to Mamudiganapalli in Veppanapalli union	SVS	No FHTC. Water supply through tap stand only
8.	Krishnagiri	Veppanapalli	Kuriyanapalli	Kuriyanapalli	Within the habitation -Chithappanur	SVS	No FHTC. Water supply through tap stand only
9.	Ramanathapuram	Kadaladi	Edampadal	Edampadal	CWSS to 5 municipalities, 11 town panchayats and 3163 rural habitations in	MVS	No FHTC. Water supply through tap

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S.No	District name	Block name	Panchayat name	Village name	Name of largest scheme in the village	Type	Remarks
					Ramanathapuram, Sivangai and Pudukottai district		stand only
10.	Ramanathapuram	Kadaladi	Meenangudi	Meenangudi	CWSS to 5 municipalities, 11 town panchayats and 3163 rural habitations in Ramanathapuram, Sivangai and Pudukottai district	MVS	No FHTC. Water supply through tap stand only
11.	Ramanathapuram	Kamuthi	Mandala Manickam	Mandalamankam	CWSS to 5 municipalities, 11 town panchayats and 3163 rural habitations in Ramanathapuram, Sivangai and Pudukottai district	MVS	No FHTC. Water supply through tap stand only
12.	Ramanathapuram	Nainarkoil	Pottaga Vayal	Pottagavayal	CWSS to 5 municipalities, 11 town panchayats and 3163 rural habitations in Ramanathapuram, Sivangai and Pudukottai district	MVS	No FHTC. Water supply through tap stand only
13.	Ramanathapuram	R.S Mangalam	Kadaloor	Kadaloor	CWSS to 5 municipalities, 11 town panchayats and 3163 rural habitations in Ramanathapuram, Sivangai and Pudukottai district	MVS	No FHTC. Water supply through tap stand only
14.	Ramanathapuram	R.S Mangalam	Thiruppalai kudi	Tiruppalaikudi	R.S. Mangalam-Thiruppalai kudi CWSS	MVS	No FHTC. Water supply through tap stand only
15.	Ramanathapuram	Ramanathapuram	Puthenedal	Pattennendal	CWSS to 5 municipalities, 11 town panchayats and 3163 rural habitations in Ramanathapuram, Sivangai and Pudukottai district	MVS	No FHTC. Water supply through tap stand only
16.	Sivaganga	Singampunary	Selliampatti	Selliampatti	Near PWD tank	MVS	No FHTC. Water supply through tap stand only
17.	Sivaganga	Sivaganga	Ponnakulam	Ponnakulam	Inside the habitation	MVS	No FHTC. Water supply through tap stand only

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S.No	District name	Block name	Panchayat name	Village name	Name of largest scheme in the village	Type	Remarks
18.	Thoothukudi	Thoothukudi	Thimmaraja Puram	Timmarajapuram	Combined water supply scheme to 90 habitations in Karunkulam part Srivaikundam part and Thoothukudi part unions in Thoothukudi district	MVS	No FHTC. Water supply through tap stand only
19.	Tiruchirappalli	Thathaiyanganarpettai	Konappanpatty	Konappampatti	CWSS to Thumbalam and 24 other habitations in T PET	MVS	No FHTC. Water supply through tap stand only
20.	Tirupathur	Jolarpet	Elagiri Hills	Elagiri Hills	Inside habitation	SVS	No FHTC. Water supply through tap stand only

Annexure 3: List of villages where 15 FHTCs were not found

No villages present where 15 FHTCs were not found.

Annexure 4: Indicative proportion of functional tap connections by districts

S.No	Districts	Percentage Functional Taps
1.	Ariyalur	0.0
2.	Chengalpattu	7.3
3.	Coimbatore	23.6
4.	Cuddalore	8.7
5.	Dharmapuri	27.6
6.	Dindigul	16.7
7.	Erode	76.7
8.	Kallakurichi	15.3
9.	Kanchipuram	24.0
10.	Kanniyakumari	76.7
11.	Karur	51.7
12.	Krishnagiri	18.9
13.	Madurai	84.0
14.	Nagapattinam	80.0
15.	Namakkal	20.3
16.	Nilgiris	72.5
17.	Perambalur	0.0
18.	Pudukkottai	59.1
19.	Ramanathapuram*	46.7
20.	Ranipet	60.0
21.	Salem	2.8
22.	Sivaganga	58.5
23.	Tenkasi	47.8
24.	Thanjavur	10.4
25.	Theni	70.7
26.	Thoothukudi	39.3
27.	Tiruchirappalli	77.8
28.	Tirunelveli	66.7
29.	Tirupathur	69.6
30.	Tiruppur	18.2
31.	Tiruvallur	0.0
32.	Tiruvannamalai	0.0
33.	Tiruvarur	20.0
34.	Vellore	84.0
35.	Villupuram	0.0
36.	Virudhunagar	64.7

* The denominator is less than 50

Annexure 5: List of villages where samples failed for given quality parameter

S.No	District name	Block name	Gram panchayat name	Village name
Villages with failed water samples for Turbidity test				
1.	Ariyalur	T.Palur	Karaikurichi	Karaikurichi
2.	Ariyalur	T.Palur	Valaikurichi	Valaikurichy
3.	Ariyalur	Thirumanur	Kovilur	Kovilur
4.	Ariyalur	Thirumanur	Viluppanankrichi	Vilupanankurichi
5.	Chengalpattu	Kattankulathur	Vandalur (Ru)	Vandalur R.F
6.	Chengalpattu	Maduranthakam	Vilvarayanallur	Vilvarayanallur
7.	Coimbatore	Madukkarai	Pichanur	Pichanur
8.	Cuddalore	Panruti	Thiruvamur	Tiruvamur
9.	Cuddalore	Parangipettai	Valangipattu	Velangippattu
10.	Dindigul	Dindigul	Thottanuthu	Tottanuthu
11.	Kanchipuram	Uthiramerur	Ammayappanallur	Ammaiyappanallur
12.	Karur	Karur	Athur Poolampalayam	Athur Poolampalayam
13.	Karur	Karur	Nerur South	Nerur South
14.	Karur	Krishnarayapuram	Kallapalli	Lalapettai
15.	Krishnagiri	Mathur	Kunnathur	Kunnathur
16.	Nagapattinam	Kuthalam	Melaiyur	Melaiyur
17.	Nilgiris	Coonoor	Bandishola	Bandishola
18.	Nilgiris	Kothgiri	Thengumarahada	Thengumarahada
19.	Pudukkottai	Aranthangi	Amachi	Amanji
20.	Tenkasi	Tenkasi	Kanakkapillai Valasai	Kanakkupillaivalasai
21.	Thanjavur	Papanasam	Koonancheri	Koonancheri
22.	Thanjavur	Pattukkottai	T Melakkadu	T Melakkadu
23.	Theni	Andipatti	Thekkampatty	Tekkampatti
24.	Thoothukudi	Sathankulam	Komaneri	Komaneri
25.	Thoothukudi	Udangudi	Chettiyapathu	Chettiyapathu
26.	Tiruvallur	Gummidipoondi	Vazhuthalambedu	Vazhuthalambedu
27.	Tiruvallur	Poonamallee	Senneerkuppam	Senneerkuppam
28.	Tiruvannamalai	Anakkavoor	Madipakkam	Madipakkam
29.	Tiruvarur	Kodavasal	Nemmeli	Neemmeli
30.	Tiruvarur	Kodavasal	Thiruvidaichery	Thiruvidacheri
31.	Tiruvarur	Nannilam	Pandaravadai	Pandaravadi
32.	Tiruvarur	Nannilam	Visaloor	Visalur
33.	Tiruvarur	Needamangalam	Edamelaiyur Kandian Street	Edamelaiyur Kandian Street
34.	Villupuram	Melmalaiyanur	Vadavetti	Vadavetti
35.	Villupuram	Vikravandi	Thenper	Tenpair
Villages with failed water samples for pH test				
1.	Coimbatore	Karamadai	Chikkadasampalayam	Chikkadasampalayam
2.	Coimbatore	Sarcarsamakulam	Vellanaipatti	Vellanaipatti

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S.No	District name	Block name	Gram panchayat name	Village name
3.	Cuddalore	Nallur	Varampanur	Varambanur
4.	Cuddalore	Panruti	Kudimiyankuppam	Kudimiyankuppam
5.	Cuddalore	Virudhachalam	Vilankattur	Vilangattur
6.	Nilgiris	Coonoor	Bandishola	Bandishola
7.	Theni	Andipatti	Thekkampatty	Tekkampatti
Villages with failed water samples for Total Hardness test				
1.	Chengalpattu	Kattankulathur	Vandalur (Ru)	Vandalur R.F
2.	Chengalpattu	Maduranthakam	Vilvarayanallur	Vilvarayanallur
3.	Coimbatore	Thondamuthur	Perur Chettipalayam	Perur Chettipalayam
4.	Dindigul	Sanarpatti	Ragalapuram	Ragalapuram
5.	Kallakurichi	Kallakurichi	Indili	Indili
6.	Kallakurichi	Ulundurpettai	Puthamangalam	Puthamangalam
7.	Kanchipuram	Uthiramerur	Ammayappanallur	Ammaiyappanallur
8.	Karur	Karur	Nerur South	Nerur South
9.	Thanjavur	Ammappettai	Agaramangudi	Agaramangudi
10.	Thanjavur	Budalur	Rajagiri	Rajagiri
11.	Thanjavur	Orathanadu	Azivaikkal	Alivoikkal
12.	Thanjavur	Pattukkottai	T Melakkadu	T Melakkadu
13.	Thanjavur	Thiruppanandal	Maharajapuram	Maharajapuram
14.	Tiruvarur	Nannilam	Visaloor	Visalur
15.	Tiruvarur	Nannilam	Achuthamangalam	Achudamangalam
16.	Tiruvarur	Nannilam	Kovilthirumalam	Kovilthirumalam
17.	Villupuram	Thiruvennainallur	Thaduthatkondur	Thaduthatkondur
Villages with failed water samples for Total Alkalinity test				
1.	Ariyalur	Sendurai	Ponparapi	Ponparappi
2.	Chengalpattu	Maduranthakam	Vilvarayanallur	Vilvarayanallur
3.	Coimbatore	Annur	Ambothi	Ambodi
4.	Dindigul	Vatlagundu	Senkattampatti	Sengattampatti
5.	Perambalur	Alathur	Irur	Irur
6.	Thanjavur	Budalur	Rajagiri	Rajagiri
7.	Thanjavur	Orathanadu	Azivaikkal	Alivoikkal
8.	Thanjavur	Pattukkottai	T Melakkadu	T Melakkadu
9.	Thanjavur	Thanjavur	Nilagiri	Nilagiri
10.	Tiruvarur	Nannilam	Visaloor	Visalur
Villages with failed water samples for Chloride test				
1.	Dindigul	Natham	Lingavadi	Lingavadi
2.	Dindigul	Vadasandur	E.Chittur	E.Chittur
3.	Sivaganga	Ilayangudi	Ariyandipuram	Ariyandipuram
4.	Thanjavur	Orathanadu	Azivaikkal	Alivoikkal
5.	Thanjavur	Papanasam	Koonancheri	Koonancheri
6.	Thanjavur	Pattukkottai	T Melakkadu	T Melakkadu

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S.No	District name	Block name	Gram panchayat name	Village name
7.	Thoothukudi	Thoothukkudi	Kumaragiri	Kumaragiri
Villages with failed water samples for Ammonia test				
1.	Ariyalur	T.Palur	Karaikurichi	Karaikurichi
2.	Ariyalur	T.Palur	Valaikurichi	Valaikurichy
3.	Coimbatore	Thondamuthur	Perur Chettipalayam	Perur Chettipalayam
4.	Cuddalore	Bhuvanagiri	Jayamkondan	Jayankondam
5.	Kallakurichi	Kallakurichi	Indili	Indili
6.	Kallakurichi	Kallakurichi	Siruvathur	Siruvathur
7.	Kallakurichi	Rishivandiyam	Tholuvanhangal	Tholuvanhangal
8.	Kallakurichi	Ulundurpettai	Puthamangalam	Puthamangalam
9.	Kanchipuram	Kancheepuram	Putheri	Putheri
10.	Kanchipuram	Kancheepuram	Konerikuppam	Konerikuppam
11.	Kanchipuram	Kundrathur	Sekarapuram (Ru)	Sekarapuram (Ru)
12.	Kanchipuram	Kundrathur	Iyyappanhangal	Iyyappanhangal
13.	Kanchipuram	Uthiramerur	Ammayappanallur	Ammaiyappanallur
14.	Karur	K.Paramathi	Chinnatharapuram	Chinnadarapuram
15.	Karur	Karur	Nerur South	Nerur South
16.	Perambalur	Veppur	Asoor	Asur
17.	Ramanathapuram	Mandapam	Rettaiyoorani	Rettaiyurani
18.	Ramanathapuram	R.S Mangalam	Thiruppalaikudi	Tiruppalaikkudi
19.	Ramanathapuram	Ramanathapuram	Puthenedal	Pattennendal
20.	Ranipet	Arcot	Thazhanoor	Thazhanoor
21.	Sivaganga	Ilayangudi	Ariyandipuram	Ariyandipuram
22.	Theni	Andipatti	Thekkampatty	Tekkampatti
23.	Tiruvallur	Ellapuram	Sengarai	Sengarai
24.	Tiruvallur	Ellapuram	Periyapalayam	Periyapalayam
25.	Tiruvallur	Gummidipoondi	Vazhuthalambedu	Vazhuthalambedu
26.	Tiruvallur	Minjur	A.Reddipalayam	A.Reddipalayam
27.	Tiruvallur	Poonamallee	Senneerkuppam	Senneerkuppam
28.	Tiruvallur	Thiruvallur	Thozhur	Thozhur
29.	Tiruvallur	Villivakkam	Ayappakkam	Ayappakkam
30.	Tiruvannamalai	Anakkavoor	Madipakkam	Madipakkam
31.	Tiruvannamalai	Anakkavoor	Vellai	Vellai
32.	Tiruvannamalai	Chengam	Theethanpattu	Theethandapattu
33.	Tiruvannamalai	Chetpet	Thatchambadi	Tachambady
34.	Tiruvannamalai	Vembakkam	Azhividaithangi	Alividithangi
35.	Villupuram	Kolliyanur	Kolianur	Kolliyanur
36.	Villupuram	Marakkanam	Siruvadi	Siruvadi

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S.No	District name	Block name	Gram panchayat name	Village name
37.	Villupuram	Vikravandi	Thenper	Tenpair
Villages with failed water samples for Phosphate test				
1.	Ariyalur	T.Palur	Valaikurichi	Valaikurichy
2.	Coimbatore	Karamadai	Chikkadasampalayam	Chickadasampalayam
3.	Tiruvallur	Ellapuram	Sengarai	Sengarai
4.	Tiruvallur	Villivakkam	Ayappakkam	Ayappakkam
5.	Tiruvannamalai	Cheyyar	Vakkadai	Vakkadai
6.	Tiruvannamalai	West Arni	Thatchirampattu	Thatchirampattu
7.	Villupuram	Melmalaiyanur	Avalurpet	Avalurpet
Villages with failed water samples for Residual Chlorine test				
1.	Erode	Bhavanisagar	Varapalayam	Varapalayam
2.	Perambalur	Veppur	Vadakalur	Vadakalur
3.	Perambalur	Veppur	Asoor	Asur
4.	Ranipet	Arcot	Thazhanoor	Thazhanoor
5.	Thanjavur	Budalur	Rajagiri	Rajagiri
6.	Tiruvallur	Sholavaram	Nallur	Nallur
7.	Villupuram	Melmalaiyanur	Avalurpet	Avalurpet
Villages with failed water samples for Iron test				
1.	Ranipet	Arcot	Thazhanoor	Thazhanoor
2.	Thanjavur	Budalur	Rajagiri	Rajagiri
Villages with failed water samples for Nitrate test				
1.	Chengalpattu	Kattankulathur	Athur	Athur
2.	Coimbatore	Periyanaicken Palayam	Nanjundapuram	Nanjundapuram
3.	Kallakurichi	Ulundurpettai	Sambiamadevi	Sembimadevi
4.	Perambalur	Perambalur	Keelakarai	Keelakarai
5.	Perambalur	Veppanthattai	Eraiyyur	Eraiyyur
6.	Perambalur	Veppur	Asoor	Asur
Villages with failed water samples for Sulphate test				
1.	Ariyalur	Andimadam	Melur	Melur
2.	Ariyalur	Sendurai	Ponparapi	Ponparappi
3.	Ariyalur	T.Palur	Valaikurichi	Valaikurichy
4.	Chengalpattu	Kattankulathur	Athur	Athur
5.	Chengalpattu	Kattankulathur	Vandalur (Ru)	Vandalur R.F
6.	Chengalpattu	Maduranthakam	Vilvarayanallur	Vilvarayanallur
7.	Chengalpattu	St. Thomas Mount	Kovilambakkam	Koilambakkam
8.	Chengalpattu	Tiruporur	Kovalam	Kovalam
9.	Cuddalore	Bhuvanagiri	Jayamkondan	Jayankondam
10.	Cuddalore	Virudhachalam	Vilankattur	Vilangattur
11.	Dindigul	Vatlagundu	Senkattampatti	Sengattampatti
12.	Kallakurichi	Chinnasalem	Kuthiraichandal	Kudiraichandal

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S.No	District name	Block name	Gram panchayat name	Village name
13.	Kallakurichi	Kallakurichi	Indili	Indili
14.	Kallakurichi	Kallakurichi	Siruvathur	Siruvathur
15.	Kallakurichi	Rshivandiyam	Tholuvanthangal	Tholuvanthangal
16.	Kallakurichi	Sankarapuram	Melapattu	Melapattu
17.	Kallakurichi	Ulundurpettai	Sambiamadevi	Sembimadevi
18.	Kallakurichi	Ulundurpettai	Puthamangalam	Puthamangalam
19.	Karur	K.Paramathi	Chinnatharapuram	Chinnadarapuram
20.	Nagapattinam	Kollidam	Thirumullaivasal	Thirumullaivasal
21.	Nagapattinam	Kuthalam	Melaiyur	Melaiyur
22.	Nilgiris	Coonoor	Bandishola	Bandishola
23.	Perambalur	Perambalur	Ladapuram	Ladapuram R.F
24.	Perambalur	Perambalur	Keelakarai	Keelakkarai
25.	Perambalur	Veppanthattai	Mettupalayam	Mettupalayam
26.	Perambalur	Veppanthattai	Eraiyyur	Eraiyyur
27.	Perambalur	Veppur	Vadakalur	Vadakalur
28.	Perambalur	Veppur	Asoor	Asur
29.	Perambalur	Veppur	Athiyur	Athiyur
30.	Perambalur	Veppur	Vayalapadi	Vayalapadi
31.	Pudukkottai	Arimalam	Karamangalam	Karamangalam
32.	Pudukkottai	Ponnamaravathi	Ammankurichi	Ammankurichi
33.	Ranipet	Thimiri	Durgam	Durgam
34.	Ranipet	Thimiri	Agaram	Agaram
35.	Thanjavur	Budalur	Rajagiri	Rajagiri
36.	Thanjavur	Orathanadu	Azivaikkal	Alivoikkal
37.	Tiruchirappalli	Manikandam	Somarasam Pettai	Somarasampettai
38.	Tiruchirappalli	Musiri	Thandalaiputhur	T.Puthur
39.	Tiruppur	Tiruppur	Merkkupathy	Merkupathi
40.	Tiruppur	Udumalaipettai	Jallipatti	Jallipatti
41.	Tiruvallur	Gummidipoondi	Vazhuthalambedu	Vazhuthalambedu
42.	Tiruvallur	Minjur	A.Reddipalayam	A.Reddipalayam
43.	Tiruvallur	Poonamallee	Senneerkuppam	Senneerkuppam
44.	Tiruvallur	R. K. Pet	Narayanapuram	Narayanapuram
45.	Tiruvallur	Sholavaram	Nallur	Nallur
46.	Tiruvannamalai	Anakkavoor	Madipakkam	Madipakkam
47.	Tiruvannamalai	Kalasapakkam	Palankoil	Palan Koil
48.	Tiruvarur	Nannilam	Visaloor	Visalur
49.	Tiruvarur	Nannilam	Achuthamangalam	Achudamangalam
50.	Tiruvarur	Needamangalam	Perambore	Perambur
51.	Villupuram	Kolliyanur	Kolliyanur	Kolliyanur
52.	Villupuram	Marakkanam	Siruvadi	Siruvadi
53.	Villupuram	Vikravandi	Thenper	Tenpair

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S.No	District name	Block name	Gram panchayat name	Village name
Villages with failed water samples for Total Dissolved Solids test				
1.	Ariyalur	Sendurai	Ponparapi	Ponparappi
2.	Chengalpattu	Chithamur	Melmaruvathur	Melmaruvathur
3.	Chengalpattu	Kattankulathur	Vandalur (Ru)	Vandalur R.F
4.	Chengalpattu	Maduranthakam	Vilvarayanallur	Vilvarayanallur
5.	Chengalpattu	St. Thomas Mount	Agaramthen	Agaramthen
6.	Chengalpattu	St. Thomas Mount	Medavakkam	Medavakkam
7.	Chengalpattu	Tiruporur	Paiyanoor	Paiyanur
8.	Coimbatore	Annur	Ambothi	Ambodi
9.	Coimbatore	Thondamuthur	Perur Chettipalayam	Perur Chettipalayam
10.	Dindigul	Natham	Lingavadi	Lingavadi
11.	Dindigul	Sanarpatti	Ragalapuram	Ragalapuram
12.	Dindigul	Vadasandur	E.Chittur	E.Chittur
13.	Kallakurichi	Chinnasalem	Kuthiraichandal	Kudiraichandal
14.	Kallakurichi	Sankarapuram	Melapattu	Melapattu
15.	Karur	Karur	Nerur South	Nerur South
16.	Madurai	Vadipatti	C.Pudur	C.Pudur
17.	Perambalur	Alathur	Irur	Irur
18.	Sivaganga	Ilayangudi	Ariyandipuram	Ariyandipuram
19.	Sivaganga	Sivaganga	Salur	Salur
20.	Sivaganga	Thirupathur	Sevoor	Sevur
21.	Thanjavur	Ammapettai	Agaramangudi	Agaramangudi
22.	Thanjavur	Budalur	Rajagiri	Rajagiri
23.	Thanjavur	Kumbakonam	Sheshambadi	Seshambadi
24.	Thanjavur	Orathanadu	Azivaikkal	Alivoikkal
25.	Thanjavur	Papanasam	Koonancheri	Koonancheri
26.	Thanjavur	Pattukkottai	T Melakkadu	T Melakkadu
27.	Thanjavur	Sethubavachatram	Rendampulikkadu	Rendampulikkadu
28.	Thanjavur	Thanjavur	Nilagiri	Nilagiri
29.	Thanjavur	Thiruppanandal	Maharajapuram	Maharajapuram
30.	Thoothukudi	Alwarthirungiri	Cambellahbad	Cambellahbad
31.	Thoothukudi	Thoothukkudi	Kumaragiri	Kumaragiri
32.	Tiruvarur	Nannilam	Visaloor	Visalur
33.	Tiruvarur	Nannilam	Achuthamangalam	Achudamangalam
34.	Tiruvarur	Nannilam	Kovilthirumalam	Kovilthirumalam
35.	Tiruvarur	Needamangalam	Edamelaiyur Kandian Street	Edamelaiyur Kandian Street
36.	Villupuram	Thiruvennainallur	Thaduthatkondur	Thaduthatkondur
Villages with failed water samples for Bacteriological present/ absence test using H2S vials				
1.	Ariyalur	Andimadam	Melur	Melur
2.	Ariyalur	Ariyalur	Illuppaiyur	Illuppaiyur

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S.No	District name	Block name	Gram panchayat name	Village name
3.	Ariyalur	Ariyalur	Srinivasapuram	Srinivasapuram
4.	Ariyalur	Jayamkondam	Katchiperumal	Kachi Perumal
5.	Ariyalur	Jayamkondam	Vanathirayanpattinam	Vanathirayampattinam
6.	Ariyalur	T.Palur	Karaikurichi	Karaikurichi
7.	Ariyalur	T.Palur	Valaikurichi	Valaikurichy
8.	Ariyalur	Thirumanur	Kovilur	Kovilur
9.	Ariyalur	Thirumanur	Viluppanankrichi	Vilupanankurichi
10.	Chengalpattu	St. Thomas Mount	Agaramthen	Agaramthen
11.	Coimbatore	Thondamuthur	Perur Chettipalayam	Perur Chettipalayam
12.	Cuddalore	Annagramam	Bandra Kottai	Bandra Kottai
13.	Cuddalore	Panruti	Thiruvamur	Tiruvamur
14.	Cuddalore	Parangipettai	Valangipattu	Velangippattu
15.	Cuddalore	Srimushnam	Srineduncheri	Srineduncheri
16.	Cuddalore	Virudhachalam	Visalur	Visalur
17.	Cuddalore	Virudhachalam	Vilankattur	Vilangattur
18.	Dharmapuri	Dharmapuri	Mookanur	Mookanur
19.	Dharmapuri	Nallampalli	A.Jettihalli	A.Jettihalli
20.	Dharmapuri	Nallampalli	Thadangam	Thadangam
21.	Dindigul	Vadasandur	E.Chittur	E.Chittur
22.	Dindigul	Vatlagundu	Senkattampatti	Sengattampatti
23.	Kallakurichi	Chinnasalem	Vettiperumalagaram	Vettiperumalagaram
24.	Kallakurichi	Kallakurichi	Indili	Indili
25.	Kallakurichi	Kallakurichi	Siruvathur	Siruvathur
26.	Kallakurichi	Rshivandiyam	Tholuvanthangal	Tholuvanthangal
27.	Kallakurichi	Sankarapuram	Melapattu	Melapattu
28.	Kallakurichi	Ulundurpettai	Sambiamadevi	Sembimadevi
29.	Kallakurichi	Ulundurpettai	Puthamangalam	Puthamangalam
30.	Kanchipuram	Kancheepuram	Putheri	Putheri
31.	Kanchipuram	Kundrathur	Sekarapuram (Ru)	Sekarapuram (Ru)
32.	Kanchipuram	Kundrathur	Iyyappanthangal	Iyyappanthangal
33.	Kanchipuram	Uthiramerur	Ammayappanallur	Ammaiyappanallur
34.	Kanchipuram	Uthiramerur	Pulivoy	Pulivoy
35.	Karur	K.Paramathi	Chinnatharapuram	Chinnadarapuram
36.	Krishnagiri	Kaveripattinam	Kudimenahalli	Kudimenahalli
37.	Krishnagiri	Kelamangalam	Anekollu	Anekollu
38.	Krishnagiri	Krishnagiri	Kattiganapalli(Ru)	Kattiganapalli(Ru)
39.	Krishnagiri	Shoolagiri	Thiyagarasanapalli	Thiyagarsanapalli
40.	Krishnagiri	Veppanapalli	Kuriyanapalli	Kuriyanapalli
41.	Krishnagiri	Veppanapalli	Chinna Manavarana Palli	Chinna Manavarana Palli
42.	Namakkal	Elachipalayam	87 Goundampalayam	87 Goundampalayam
43.	Namakkal	Namakkal	Keelsathampur	Kilsathambur

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S.No	District name	Block name	Gram panchayat name	Village name
44.	Nilgiris	Coonoor	Bandishola	Bandishola
45.	Perambalur	Alathur	Allinagaram	Allinagaram
46.	Perambalur	Perambalur	Ladapuram	Ladapuram R.F
47.	Perambalur	Perambalur	Keelakarai	Keelakkarai
48.	Perambalur	Veppanthattai	Mettupalayam	Mettupalayam
49.	Perambalur	Veppanthattai	Eraiyyur	Eraiyyur
50.	Perambalur	Veppur	Vadakalur	Vadakalur
51.	Perambalur	Veppur	Asoor	Asur
52.	Perambalur	Veppur	Athiyur	Athiyur
53.	Pudukkottai	Ponnamaravathi	Vegupatti	Vegupatti
54.	Ramanathapuram	R.S Mangalam	Thiruppalaikudi	Tiruppalaikkudi
55.	Ranipet	Nemili	Chittoor	Chittoor
56.	Salem	Edappadi	Velleri Velly	Vellarivalli
57.	Salem	Konganapuram	Kurumba Patty	Kurubapatti
58.	Salem	Omalur	Kamalapuram	Kamalapuram
59.	Salem	Panamarathupattai	Ammanikondalampatty	Ammanikondalampatty
60.	Salem	Salem	Kondappanaickenpatti	Kondappanaickanpatti
61.	Salem	Tharamangalam	Karukkalvadi	Karukkalvadi
62.	Sivaganga	Ilayangudi	Ariyandipuram	Ariyandipuram
63.	Tenkasi	Tenkasi	Kanakkapillai Valasai	Kanakkupillaivalasai
64.	Thanjavur	Ammapettai	Agaramangudi	Agaramangudi
65.	Thanjavur	Thiruppanandal	Maharajapuram	Maharajapuram
66.	Thoothukudi	Alwarthirungiri	Cambellahbad	Cambellahbad
67.	Thoothukudi	Udangudi	Madhavankurichi	Madhavankuruchi
68.	Tiruppur	Avinashi	Thekkalur	Thekkalur
69.	Tiruppur	Pongalur	Vavi Palayam	Vavipalayam
70.	Tiruppur	Tiruppur	Merkkupathy	Merkupathi
71.	Tiruvallur	Ellapuram	Sengarai	Sengarai
72.	Tiruvallur	Ellapuram	Periyapalayam	Periyapalayam
73.	Tiruvallur	Gummidipoondi	Vazhuthalambedu	Vazhuthalambedu
74.	Tiruvallur	Minjur	A.Reddipalayam	A.Reddipalayam
75.	Tiruvallur	Poonamallee	Nemelicheri	Nemelicheri
76.	Tiruvallur	Poonamallee	Senneerkuppam	Senneerkuppam
77.	Tiruvallur	R. K. Pet	Narayanapuram	Narayanapuram
78.	Tiruvallur	Sholavaram	Nallur	Nallur
79.	Tiruvallur	Thiruvallur	Thozhur	Thozhur
80.	Tiruvallur	Villivakkam	Ayappakkam	Ayappakkam
81.	Tiruvannamalai	Anakkavoor	Madipakkam	Madipakkam
82.	Tiruvannamalai	Chetpet	Thatchambadi	Tachambady
83.	Tiruvannamalai	Cheyyar	Vakkadai	Vakkadai

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S.No	District name	Block name	Gram panchayat name	Village name
84.	Tiruvannamalai	Jawadhu Hills	Kovilur	Kovilur
85.	Tiruvannamalai	Kalaspakkam	Palankoil	Palan Koil
86.	Tiruvannamalai	Kilpennathur	Kalpoondi	Kalpundi
87.	Tiruvannamalai	Vembakkam	Azhividaithangi	Alividithangi
88.	Villupuram	Kannai	Panamalai	Panamalai
89.	Villupuram	Melmalaiyanur	Sirithalai Poondi	Sirudalaipoondi
90.	Villupuram	Mugaiyur	Vadakaraitalanur	Vadagaraitayanur
91.	Villupuram	Vikravandi	Kappiyampuliyur	Kappiyampuliyur
92.	Villupuram	Vikravandi	Thenper	Tenpair
Villages with failed water samples for Arsenic test				
1.	Cuddalore	Bhuvanagiri	Jayamkondan	Jayankondam