

**PROVIDING CWSS TO 1751 RURAL HABITATIONS IN KUNNANDARKOIL (PART),
GANDARVAKOTTAI (PART), KARAMBAKUDI, PUDUKKOTTAI (PART),
THIRUVARANKULAM, ARNATHANGI (PART), ANNAVASAL (PART) AND VIRALIMALAI
(PART) IN 8 UNIONS OF PUDUKKOTTAI DISTRICT AND A BULK PROVISION TO
VALLAM TOWN PANCHAYAT OF THANJAVUR DISTRICT**

Administrative Sanction accorded vide **G.O. (Ms) No. 11/ MA &WS (WS4) Dept./ Dated 28.01.2013.**

Technical Sanction accorded vide **CE / TNJ / No: 51/ 2012 -13, Dated 29.01.2013.**

SALIENT DETAILS

1. POPULATION

Sl. No.	Union	No. of habitations	Population		
			Present 2012	Intermediate 2027	Ultimate 2042
1	Viralimalai (part)	39	13613	14980	16335
2	Annavasal (part)	26	9111	10025	10931
3	Kunnandar koil (part)	228	78230	86067	93868
4	Gandarvakottai (part)	157	79167	87089	95000
5	Pudukottai (part)	182	60725	66812	72865
6	Karambakudi	322	100014	110028	120004
7	Thiruvarankulam	468	163539	179932	196236
8	Aranthangi	329	112336	123589	134814
9	For the Vallam Town Panchayat of Thanjavur District	All area	18000	20000	23000
	Total	1751	634735	698522	763053

2. Per capita supply : 30 LPCD/20 LPCD

3. Sustainability available : 10 LPCD/20 LPCD

4. REQUIREMENT OF WATER (FOR 23 HOURS PUMPING)

Sl. No.	Union	No. of Habitations	Requirement in litres including 10 % losses		Rate of pumping for 23hours in LPM	
			Inter-mediate 2027	Ultimate 2042	Inter mediate 2027	Ultimate 2042
1	Viralimalai (part)	39	494340	539055	358	391
2	Annavasal (part)	26	330825	360723	240	262
3	Kunnandar koil (part)	228	2840211	3097644	2060	2242
4	Gandarvakottai (part)	157	2873937	3135000	2081	2281
5	Pudukottai (part)	182	2204796	2404545	1598	1744
6	Karambakudi	322	2420616	2640088	1746	1905
7	Thiruvarankulam	468	3938504	4317192	2886	3106
8	Aranthangi (part)	329	2718958	2965908	1986	2150
9	For the Vallam Town Panchayat of Thanjavur District after deducting the local source.	All area	1362000	1659000	987	1202
	Industrial demand at 10 %		1920000	2110000	1391	1529
	Total	1751	21.12 MLD	23.23 MLD	15333	16812

5. Hours of Pumping

Head works and Booster sumps : 23 Hours

Group sumps : 12 Hours

6. Rate of discharge for 23 hours of pumping

Intermediate : 15333 LPM

Ultimate : 16812 LPM

7. Head works : 6.00 m inner dia and 16.50 m depth in River Colleroon near Thiruchennampoondi---1 No

Salient details for collector well

1. Average bed level of river		+	48.45 m
2. Maximum flood level		+	54.34 m
3. Lowest summer water level		+	47.45 m
4. Bottom of well curb		+	31.95 m
5. Top of well curb		+	33.95 m
6. Foot valve level		+	34.25 m
7. Invert level of radial arms	Bottom Row	+	35.95 m
	Top row	+	36.95 m
8. Floor level of pump house		+	56.84 m
9. Roof level of pump house		+	62.84 m
10. Scour depth level		+	43.62 m
11. Inner dia of collector well		+	6.00 m
12. Inner dia of pump house		+	8.50 m
13. No. of radial arms	-	8 direction x 2 Rows=	16 Nos.
14. Total length of radial arms	16 X 45 m	=	720 m

8. Pump house : size 8.50 m inner dia

9. PUMPING MAIN

9.1. PUMPING MAIN I

FROM HEAD WORKS AT THIRUCHENNAMPOONDI TO ANNAI NAGAR
BOOSTER SUMP OF VALLAM TOWN PANCHAYAT
INTERMEDIATE BOOSTER AT MANAIYERIPATTI

711mm x 6.3 mm MS pipe -	12715 m
200 MM DI K 7 pipe -	18530 m
Total	31245 m

BRANCH TO MANAIYERIPATTI BOOSTER SUMP

711 MM X 6.3 MM M.S. pipe -	10475 m
-----------------------------	---------

9.2. PUMPING MAIN II

FROM MANAIYERIPATTI BOOSTER SUMP TO RIDGE AT KOPPAMPATTY

711 mm X 6.3 mm MS pipe -	12235 m
350 mm DI K7 -	5735 m
Total	17970 m

BRANCH TO MULLUR VILAKKU BOOSTER SUMP

600 MM DI K7 pipe -	16865 m
500 mm DI K7 pipe -	10070 m
450 MM DI K7 pipe -	3650 m
Total	30585 m

BRANCH TO PULIYUR TAPPING SUMP

300 mm DI K7 pipe -	4050 m
200 mm PVC 6 KSC -	4422 m
200 mm PVC 4 KSC -	3608 m
Total	12080 m

9.3 PUMPING MAIN III

FROM MULLUR VILAKKU BOOSTER TO KAYYAMPATTY BSR

400 mm DI K7 PIPE	-	8340 m
350 mm DI K7 PIPE	-	4250 m

Total **12590 m**

BRANCH TO KONDAYANTHERU BSR

300 mm DI K7 PIPE	-	18110 m
250 mm DI K7 PIPE	-	10065 m

Total **28175 m**

9.4. GRAVITY MAIN I

FROM KEELAKAYAMPATTY BRANCH TO KOTHAKURICHI GROUP SUMP

160 mm OD PVC 4 KSC pipe	-	3485 m
140 mm OD PVC 4KSC pipe	-	2200 m
110 mm OD PVC 4KSC pipe	-	3710 m
63 mm OD PVC 6 KSC pipe	-	1030 m
63 mm OD PVC 6 KSC pipe	-	2330 m

Total **12755 m**

9.5. GRAVITY MAIN II

FROM KEELAKAYAMPATTY BRANCH TO THANTHANI BSR

350 mm DI K7 pipe	-	13330 m
300 mm DI K7 pipe	-	6105 m
250 mm DI K7 pipe	-	8925 m
200 mm PVC 10 KSC	-	7525 m
140 mm PVC 10 KSC	-	2640 m

Total **38525 m**

9.6. GRAVITY MAIN III

FROM KONDAYANTHERU BRANCH TO AYINKUDI BOOSTER SUMP

300 mm DI K7 pipe	-	19310 m
250 mm DI K7 pipe	-	19180 m
200 mm PVC 6 KSC	-	7745 m

Total		46235 m

9.7 GRAVITY MAIN IV

FROM THANTHANI BRANCH TO MOOKUDI GROUP SUMP

200 mm OD PVC 4 KSC pipe	-	4153 m
110 mm OD PVC 4 KSC pipe	-	4713 m

Total	-	8866 m

BRANCH TO KULATHUR BOOSTER SUMP

110 mm OD PVC 4 KSC pipe	-	2577 m
90 mm OD PVC 4 KSC pipe	-	328 m

Total	-	2905 m

BRANCH TO ALAPIRANTHAN BOOSTER SUMP

75 mm OD PVC 4 KSC pipe	-	2668 m
50 mm OD PVC 4 KSC pipe	-	20 m

Total	-	2688 m

9.8. PUMPING MAIN IV

FROM KULATHUR BOOSTER SUMP TO KAMMANKADU GROUP SUMP

63 mm OD PVC 6 KSC pipe	-	5063 m
63 mm OD PVC 4 KSC pipe		3088 m
50 mm OD PVC 6 KSC pipe	-	4751 m

Total		12902 m

9.9. PUMPING MAIN V

FROM ALAPIRANTHAN BOOSTER SUMP TO AMANJI GROUP SUMP

50 mm OD PVC 6 KSC pipe - 12927 m

9.10. PUMPING MAIN VI

FROM AYINKUDI BOOSTER SUMP TO RIDGE POINT

140 mm OD PVC 4 KSC pipe - 5800 m

90 mm OD PVC 4 KSC pipe - 1702 m

63 MM OD PVC 4 KSC - 981 m

Total - **8483 m**

9.11. PUMPING MAIN VII

FROM VANDAYAMPATTY BOOSTER SUMP TO KALLUKARANPATTY GROUP SUMP

200 mm OD PVC 4 KSC pipe - 3940 m

140 mm OD PVC 4 KSC pipe - 1160 m

63 mm OD PVC 4 KSC pipe - 2525 m

Total - **7625 m**

9.12 PUMPING MAIN VIII (PM XIII)

FROM MARUTHAKONE VIDUTHY TAPPING SUMP TO VANDANVIDUTHY GROUP SUMP

200 mm OD PVC 4 KSC pipe - 740 m

140 mm OD PVC 4 KSC pipe - 2400 m

63 mm OD PVC 4 KSC pipe - 35 m

Total - **3175 m**

9.13. FEEDER MAINS TO GROUP SUMPS

Pipes of various sizes from 63 mm to 200 mm PVC

9.14. FEEDER MAIN FROM GROUP SUMPS TO SERVICE RESERVOIRS - Pipes of various sizes from 140 mm to 50 mm PVC **1639.018 Km**

10. PUMPSETS

Sl.No.	Description	Type	No s.	LPM	Head in M	Standby
10.1	Pumping main I FROM HEAD WORKS TO INTERMEDIATE BOOSTER AT MANAIYERIPATTI	Turbine	2	7667	62	50 %
10.2	Pumping main II FROM MANAIYERIPATTI BOOSTER SUMP TO RIDGE POINT AT KPPAMPATTY	Turbine	2	7403	86	50 %
10.3	Pumping main III FROM MULLUR VILAKKU BOOSTER TO KAYAMPATTI BLSR	Turbine	1	6402	66	100 %
10.4	Pumping main IV FROM KULATHUR BOOSTER SUMP TO KAMMANKADU GROUP SUMP	Open well submersible	1	71	57	100 %
10.5	Pumping main V FROM ALAPIRANTHAN TAPPING SUMP TO AMANJI GROUP SUMP	Openwell Submersible	1	28	27	100 %
10.6	Pumping main VI FROM AYINKUDI BOOSTER SUMP TO RIDGE POINT	Open well submersible	1	404	26	100 %
10.7	Pumping main VII FROM VANDAYAMPATTI BOOSTER SUMP TO KALLUKARANPATTY	Open well submersible	1	780	23	100 %
10.8	Pumping main VIII FROM MARUTHAKONE VIDUTHY T.S. TO VANDANVIDUTHY G.S.	Open well submersible	1	728	12	100 %
10.9	FROM VATHANAKOTTAI TAPPING SUMP TO RIDGE POINT	Open well submersible	1	214	22	100 %
10.10	FROM MOOTAMPATTI TAPPING SUMP TO VELLANUR GS	Open well submersible	1	488	60	100 %
10.11	FROM PERIYATHAMBI UDAYANPATTI TAPPING SUMP TO PERUNKONDANVIDUTHY GS	Open well submersible	1	380	26	100 %
10.12	FROM PULIYUR TAPPING SUMP TO KALAMAVUR GS	Open well submersible	1	443	48	100 %

11. BOOSTER SUMPS AND GROUP SUMPS

Sl.No.	Description	Nos.
1.	Booster sumps	5
2.	Tapping sumps	7
3.	Panchayat group sumps	237

Total **249**

12. Service Reservoirs:

Sl. No.	Name of Union	Service								Total Proposed Nos.	
		Existing					Proposed				
		5000	10000	30000	60000	100000	10000	20000	30000		60000
1	Viralimalai (part)		18	16	3	--	2	--	1	--	3
2	Annavasal (part)		9	10	2	--	2	--	1	--	3
3	Kunnandar koil (part)		102	99	6	--	12	3	--	--	15
4	Gandarvakottai (part)		79	88	15	3	--	--	1	--	1
5	Pudukottai (part)		85	63	8	--	5	--	--	--	5
6	Karambakudi		129	159	19	2	13	2	--	--	15
7	Thiruvarankulam		152	222	37	6	28	3	6	--	37
8	Aranthangi	2	134	139	37	6	16	10	7	--	33
	TOTAL	2	708	796	127	17	78	18	16	--	112
9	Vallam Town Panchayat	8.0 Lakh Litres – 1 No. 2.0 Lakh Litres – 1 No. 60000 Litres – 1 No.					--	--	--	2	2

13. Distribution system and Public fountain

Sl.No.	Name of Union	D system & EPL	PF
1	Viralimalai	1.50 Km	5
2	Annavasal	2.00 Km	6
3	Gandarvakottai	1.0 Km	4
4	Thiruvarankulam	28.31 Km	87
5	Aranthangi	40.95 Km	108
6	Kunnandarkoil	33.71km	91
7	Karambakudi	9.00 km	30
8	Pudukkottai	5.10 km	10

14. Estimate Cost : Rs. 315.70 Crore

15. Annual maintenance cost : Rs. 9.61 Crore

16. Per capita cost : Rs. 4974/-

17. Cost per 1000 liters of water : Rs. 26.39