

SALIENT DETAILS

- 1 Name of the scheme : PROVIDING CWSS TO ERANIEL T.P & 319 RURAL HABITATIONS AND IMPROVEMENTS TO PADMANABAPURAM CWSS AND KATTATHURAI CWSS IN KANYAKUMARI DISTRICT BY PROVIDING A COMMON TREATMENT PLANT.
2. Cost of scheme : **Rs.174.00C rore**
3. Maintenance Cost : **Rs. 789.00Lakhs**
4. Per capita cost (Present) : **Rs. 6246**
5. Cost per 1000 liltres : **Rs. 14.79**
- 6 Population :

Sl. No	Description	No. of Habs	Populations		
			Pre. 2015	Inter. 2025	Ult. 2035
I	MUNICIPALITY				
1	Padmanabhapuram Municipality		21710	22900	24150
II	Town panchayats				
1	Thiruvithancode		19200	21090	23180
2	Valvatchagostum		17370	18360	19350
3	Mulagumoodu		20160	21760	23480
4	Eraniel		10515	10866	11217
5	Kappiarai (1 hamlet)		571	598	625
6	Verkilambi(1hamlet)		839	886	937
7	Vilavoor(3hamlets)		1665	1783	1908
8	Kothanallur (I hamlet)		1083	1149	1214
III	Rural habitations	374	185457	210774	237756
	Grand Total		278570	310166	343817
	Total requirement of raw water including wash water loss			33.405 MLD	36.88 MLD
7	Hours of pumping for raw water		24 Hours		
8	HEAD WORKS				
a.	Source	Surface water from River Kuzhithuraiyar near Attoor 8.0m dia Off take well with circular pump house of 12. m dia- 1 No , 914x8 mm MS connecting main – 50 m.			
b	Pump set	Turbine Pumpset – 355 HP – 11599 LPM X 105m – 3 Nos (50% stand bye)			
9.	Raw water main	7300 M – 711 X7.1mm MS Pipes			
10	Treatment works	Capacity :36.88 MLD (Aerator, Flash Mixer, Clariflocculator & Rapid Sand Filter)			
a	Clear water Sump	Capacity of sump : 15.30 LL.			
b	MV Panel Room	15m x 9 m			
C	WWT	Capacity:2.00 LL			
d	CWSR TO Maruthoor kurichi	100 mm CI LA CL-250M			

11.	Clear water Pump sets	1. Clear water sump to Eraniel Booster – Turbine pumpset -125HP duty 11408 lpm x27 M-2 Nos 2. To Padmanabhpuram Municipality Up to Kumarakoil SR– Cent.P'set –25 HP x 3126 LPM x 27M 3.To Melasankarankuzhi VP sump from Eraniel Booster– Cent P'set- 75 HP x 3528LPM x70 M 4. (a) To Attoor (E) Sump – Cent- P'set – 45HP x 2737LPM x 52 M (b) Attoor sump to Ayacode – Cent- P'set – 30 HP x 1098 LP x85 M 5.Mekkamadabam Sump (E) to Pilankalai SR -5 HP x 40 LPM x 32 M 6. Mekkamadabam Sump (E) to Kadamalaikundru SR – 5 HP x 408 LPM x 30 M 7. Verkilambi Sump (E) to Poovancode SR- 2HP x 124 LPM x 46 M 8 Clear water sump to Kannanur sump – Turbine pumpset -70HP duty 5432lpm x44 M-2 Nos 9.To Maruthoorkurichi sump-2 HP x 353 LPM x 25M
13	Clear water Main from Water Treatment Plant to Collection Sumps :	
a	Pumpingmain I & booster mains	450 mm DI,400mm DI , 350mm DI, 250mm DI, 200mm DI, 150mm DI, 100 mm DI ,100mm GI, 65 mm GI, 50mm GI, 200 HDPE,140 HDPE ,110 HDPE ,90HDPE,75HDPE - 67620 m
b	Pumpingmain II & Branch mains	350mm DI,300mm DI 250mm DI, 200mm DI, 150mm DI, 100mm DI ,80mm GI - 20650 m
c	Pumpingmain III	100 MM DI K7-250M
d	Pumping main IV & Branch mains	300mm DI, 250mm DI, 200mm DI, 150 mm DI,100mm DI ,100mm GI,80mm GI,160 HDPE,140 HDPE,110HDPE,90 HDPE - 36025m
e	Pumping main V & Branch mains	300 mm DI,250mm DI, , 150mm DI, 100mm DI, - 15850 m
14.	TOWN PANCHAYATS	
1.	Eraniel	200mm HDPE, 160HDPE,140HDPE,110 HDPE ,90HDPE, 75HDPE , 63 MM HDPE-80mm GI,65 mm GI,50 mm GI,-12870 m
2.	Thiruvithancode	200HDPE, 140 HDPE ,110HDPE,90HDPE,63 HDPE - 3950 m
3.	Mulagumoodu	200HDPE,160 HDPE ,140 HDPE,110HDPE,90HDPE,75HDPE,63HDPE -14950M
4.	Valvatchagostam	200 mm OD HDPE , 160 HDPE ,140 HDPE, 110HDPE,90HDPE,75HDPE,63HDPE, 50mmGI,-18060 m
15.	VILLAGE PANCHAYATS	
		150mmDI,100mmDI,200mmHDPE, 160 HDPE , 140 HDPE,110HDPE,90HDPE,75HDPE,63HDPE,50mm HDPE , 65mmGI,50mmGI,40mm GI,32mm GI = 346990 M

16.(i)				
SI.No	TOWN PANCHAYATS	Pumpset (Submersible)	SET – 2 Nos	Location of Sumps
1.	Eraniel	1175 LPM X 91 M 504 LPM X 68 M	1 Set 1 Set	Alwarkoil
2.	Thiruvithancode	1837 LPM X 24 m, 1671 LPM X 23 m	1 Set 1 Set	Thiruvithancode
3.	Mulagumoodu	1978 LPM X 49 m 1646 LPM X 45 m	1 Set 1 Set	Kalluvilai
4.	Valvatchagostam	1810 LPM X 73 m, 1395 LPM X 66 m	1 Set 1 Set	Valvatchagostam
16(ii)	VILLAGE PANCHAYATS			
J	Kattathurai	384LPM x 76 m 311LPM x 27 m 1025 LPMx85 M	1 Set 1 Set 1 Set	Kattathurai
2.	Cherukole	399 LPM x 20 m 293 LPM x 9 m	1 Set 1 Set	Pulipanam

3.	Kannanur	373 LPM x 44 m 522 LPM x 45M	1Set 1Set	Kannanur
4.	Yettacode	571 LPM x 34 m	1Set	Yettacode
5.	Kumarankudy	766 LPM x 73 m	1 Set	Kumarankudy
6.	Aruvikarai	564 LPM x 13 m	1Set	Aruvikarai
7.	Surulacode	557 LPM x103 m	1Set	Surulacode
8.	Ayacode	375 LPM x40m 399 LPM x36 m	1Set 1 Set	Ayacode
9.	Maruthurkurichy	183 LPM x18 m 326 LPM x 28 m 167LPM x 11 m	1 Set 1 Set 1 Set	Maruthurkurichy
10.	Chadayamangalam	225 LPM x 44 m 200LPM x 41M	1 Set	Chadayamangalam
11.	Kalkurichy	890 LPM x 34 m	1 Set	Kalkurichy
12.	Muthalakurichy	409 LPM x 59m	1 Set	Muthalakurichy
13.	NullivilaiVP	227LPM x50m 237LPM x47 m	1 Set 1 Set	NullivilaiVP
14.	Thalakulam	170 LPM x 49 m 155 LPM x 21m	1 Set 1 Set	Thalakulam
15.	Kakkuttuthalai	307 LPM x 50 m	1 Set	Kakkuttuthalai
16.	Kurunthencode	321 LPM x 34 m 224 LPM x 39 m	1Set 1Set	Kurunthencode
17.	Vellichandai	216 LPM x12 m 348 LPM x 18m 192 LPM x25 m 221 LPM x30m	1Set 1 Set 1Set 1Set	Vellichandai
18.	Kattimancode	148 LPM x 52 m	1 Set	Kattimancode
19.	Nettancode	145 LPM x 28 m	1Set	Nettancode
20.	Thenkarai	224 LPM x 12 m	1 Set	Thenkarai
21.	Kollenchy	294 LPM x 21 m 236LPM x 43 m	1 Set 1 Set	Kollenchy
22.	Mullanginavilai	369 LPM x 51 m 311 LPM x51m	1Set 1 Set	Mullanginavilai
23.	Nattalam	345 LPM x 61 m 124 LPM x 55 m 239 LPM x 53 m	1 Set 1 Set 1 Set	Nattalam
24.	Melasankarankuzhi	206 LPM x 24 m 270 LPM x 28 m 416 LPM x 40 m 239 LPM x 27m 324 Lpm x 42 m	1 Set 1 Set 1 Set 1Set 1Set	Melasankarankuzhi
25.	Rajakkanmangalam	212 LPM x 51 m 250 LPM x 76 m 107 LPM x 33 m 165 LPM x 35 m	1 Set 1 Set 1 Set 1 Set	Rajakkanmangalam
26.	Elluvilai	275 LPM x 27 m	1Set	Elluvilai
27.	Putheri	774 LPM x 22m	1Set	Putheri
28.	Kanyakulam	125 LPM x 21 m	1Set	Kanyakulam
		144 LPM x 40 m	1Set	Kanyakulam
		324 LPM x 40m	1Set	Kanyakulam

2.SUMPS FOR TPs & VPs	
Capacity Sump	Pump Room
TOWN PANCHAYATS	
4.10 LL Capacity Sump at Eraniel TP -1No	
9.05 LL Capacity Sump at Tiruvithancode TP – 1No	
9.20 LL Capacity Sump at Mulagumoodu TP – 1No	4m x 3 m – 33 Nos.
7.95 LL Capacity Sump at Valvatchagostum TP – 1 No	
VILLAGE PANCHAYATS	
0.60 LL Capacity Sump at kattimancode VP – 1 No	
0.55 LL Capacity Sump at Nettancode VP – 1 No	
1.05 LL Capacity Sump atThenkarai VP – 1 No	
1.00 LL Capacity Sump at ELLUVILAI – 1 No	
1.15 LL Capacity Sump at Kakkututhalai – 1 1 No	
1.20 LL Capacity Sump at Thalakulam	
1.50 LL Capacity Sump @Muthalakurichi	
1.80 LL Capacity Sump at Nullivilai	
2.10 LL Capacity Sump at Kollenchi VP	
2.30 LL Capacity Sump at Surulacode VP	
1.65 LL Capacity Sump atChadayamangalam VP	
2.40 LL Capacity Sump atYettacode VP	
2.50LL Capacity Sump at Kanyakulam VP	
2.65 LL Capacity Sump atNattalam VP	
2.25 LL Capacity Sump at Aruvikarai VP	
3.50 LL Capacity Sump at KannanurVP	
2.90 LL Capacity Sump atMullanginavilai VP	
2.05 LL Capacity Sump at Kurunthecode VP	
2.70 LL Capacity Sump Maruthoor kurichi VP	
3.40 LL Capacity Sump Kal kurichi VP	
3.65 LL Capacity Sump Putheri VP	
2.95 LL Capacity Sump at Ayacode VP	
3.45 LL Capacity Sump at KumarankudiVP	
2.80 LL Capacity Sump at RajakkamangalamiVP	
3.95 LL Capacity Sump at Vellichandai VP	
5.70 LL Capacity Sump at kattathuraiVP	
5.75 LL Capacity Sump at Melasankarankuzhi VP	

16	Service reservoirs	Capacity in Lakh litres														
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		0.10	0.15	0.2	0.3	0.4	0.6	1	1.4	1.5	1.7	2.0	2.2	2.5	3.	4.0	Total
Municipality	E											2		1	1		4
	P							2	1	1							4
Town Panchayats	E	7			13		9	4				2				1	36
	P					1		5		1	1	5		1			14
Rural habitations	E	145	1	11	174		63	2									396
	P			1	4	2	4	1									12
Total		152	1	12	191	3	76	14	1	2	1	9		2	1	1	466

17. Distribution System :

1. Padmanabhapuram Municipality 21447 M
2. Valvachagostam TP 11800 M
3. Mulagumoodu TP 13000 M
4. Thiruvithancode TP 7900 M
5. Village Panchayats Existing Distribution Network will be utilized