

CWSS to Tittakudi, Pennadam, Mangalampettai, Gangaikondan, Vadalur and Kurinjipadi Town panchayats and 625 Rural habitations in Vrindhachalam, Nallur, Mangalore Union in Cuddalore District with NLC mine water as Source

SALIENT DETAILS

Sl.No	Description of item	Details
1	Head works	
a	Source	: NLC Mine - II storm water. (42.55Mld i.e6500GPM assured by NLC to TWAD Board upto 2042-43. Tapping to be taken from Mine discharge outlet point)
b	Water Treatment Plant(31.26 MLD)	: Ultra Filtration Method
c	Plant Capacity	: 31.26 MLD (Intermediate Year -2037)
d	Clear water sump Capacity	: 22.00LL
2	Population Benefitted	
a	Base Year	: 5.58 Lakhs
b	Int Year	: 6.68 Lakhs
c	Ult Year	: 7.92 Lakhs
3	PUMPING HOURS	
a	Urban Limit	: 18 Hrs
b	Rural Limit	: 12 Hrs
4	DEMAND REQUIREMENT	
a	Base Year (2022)	: 23.92 MLD
b	Int Year (2037)	: 31.26 MLD
c	Ult Year (2052)	: 39.43 MLD
5	PROPOSED SERVICE LEVEL	
a	Urban Beneficiaries	: 50LPCD proposed against pro rata supply of 135LPCD
b	Rural Beneficiaries	: 35LPCD proposed against pro rata supply of 55LPCD

Sl.No	Description of item		Details
6	BENEFICIARIES		
A	URBAN BENEFICIARIES- 6TP's		Base / Int / Ult
i	Thittagudi TP	:	1.46/2.35/3.43 MLD
ii	Pennadam TP	:	1.23/1.90/2.71 MLD
iii	Mangalampettai TP	:	0.60/1.05/1.60 MLD
iv	Gangaikondan TP	:	0.41/0.60/0.70 MLD
v	Vadalur TP	:	2.50/3.69/4.88 MLD
vi	Kurinjpadi TP	:	1.74/2.56/3.39 MLD
B	RURAL BENEFICIARIES (625 Habitations)		Base / Int / Ult
i	Mangalur Un (192 hab)	:	5.03/6.00/7.07MLD
ii	Nallur Un (232 habs)	:	5.66/6.79/8.09 MLD
iii	Virudhachalam Un (201 habs)	:	5.29/6.32/7.47 MLD
C	Total Demand (625 Habs)	:	23.92/31.26/39.43
	Add WTP loss @ 5%	:	1.20/1.56/1.97
D	Nett Demand Reqd	:	25.12/32.82/41.40 MLD
7	BOOSTER STATION		4 NOS
a	Vridhachalam Union		At Pudukooraipttai - 17.00LL
b	Nallur Union		At Kothattai - 3.15LL
c	Mangalore Union		At Kottaram - 5.80LL
d	Mangalore Union		At Avatti - 2.00LL
8	GROUP SUMPS		29Nos (URBAN-11 / RURAL – 18Nos)
a	Town Panchayats		11 Nos
b	Mangalur Un		5Nos
c	Nallur Un		6 Nos
d	Virudhachalam Un		7 Nos

Sl.No	Description of item	Details
9	COMMON SUMPS	6Nos
a	Mangalur Un	1 No
b	Nallur Un	5Nos
c	Virudhachalam Un	nil
10	PANCHAYAT SUMPS	146 Nos
a	Mangalur Union.	53 Nos.
b	Nallur Union.	50 Nos.
c	Virudhachalam Union.	43 Nos
11	PUMP ROOM	
a	6.00 x 4.00m	12 Nos
b	4.00 x 3.00m	18 Nos
c	2.00 x 2.00m	146 Nos
12	PUMPSETS	
a	Head works at Keel Valayamadevi	i)VT - 23148 Lpm x 68m (1w+1S)
		ii) VT -5786Lpm x 56m (1w+1s)
b	Pudukooraipettai Booster	i) VT - 17769Lpm x 49m (1W+1S)
		ii) VT - 4450Lpm x 46m (1W+1S)
		iii) OW Sub- 220Lpm x 31m (1W+1S)
c	Kothattai Booster	i) VT - 4182Lpm x 54m (1W+1S)
d	Kottaram Booster	i) VT - 3823Lpm x 68m (1W+1S)
		ii) OW Sub 365Lpm x 37m (1W+1S)
		iii) VT - 3453Lpm x 63m (1W+1S)
e	Avatti Booster	i) HSC - 2793Lpm x 67m (1W+1S)

Sl.No	Description of item	Details
f	Group / Panchayat Sumps	iii) OW Sub various duty (1W+1S)
g	Town Panchayats	
	Tittakudi TP	i) OW Sub - 1086Lpm x 23m (1W+1S) ii) OW Sub – 1085 x 33m (1W+1S)
	Pennadam TP	i) OW Sub - 1760Lpm x 23m (1W+1S)
	Mangalampettai TP	i) OW Sub - 970Lpm x 30m (1W+1S)
	Gangaikondan TP	i) OW Sub - 556Lpm x 29m (1W+1S)
	Vadalur TP	
	i) Sabhai	i) OW Sub - 1604Lpm x 32m (1W+1S)
	ii) NLC officers Ngr	i) OW Sub - 1058Lpm x 35m (1W+1S)
	iii) Thomaiyar Ngr	i) OW Sub - 751Lpm x 23m (1W+1S)
	Kurinjipadi TP	
	i) Ellaikal South	i) OW Sub - 759Lpm x 30m (1W+1S)
	ii) TP Office Campus	i) OW Sub - 997Lpm x 24m (1W+1S)
	iii) Meenatchipettai	i) OW Sub - 617Lpm x 25m (1W+1S)
13	PIPE LINE	
a.	RAW WATER INTAKE	9.000Km.
b.	TRANSMISSION MAIN	49.750Km
c.	MAJOR PUMPING MAIN	134.160Km
d.	BRANCH PUMPING MAIN -I (Booster to Group sump)	65.930Km
e.	BRANCH PUMPING MAIN -II (Group sump to Pt. Sumps)	263.470Km
f.	RURAL FEEDER MAIN	340.383Km
g.	URBAN FEEDER MAIN	61.734Km
	TOTAL PIPE LINE	924.427Km
a.	RAW INTAKE PIPE FROM NLC	
	i) 1016mm X 8.8mm tk MS	400m + 2600m for future extention and change of discharge outlet.
	ii)405mm x 5mm tk MS	400m + 5600m for future extention and change of discharge outlet.
	TOTAL - A	9000m (or) 9.000Km
d.	TRANSMISSION MAINS	
	i) Transmission Main - I	25500m
	Branch P' Main in TM – I	1500m
	Total TM-I	27000m
	ii) Transmission Main - II	18950m
	Branch P' Main in TM – II	3800m

Sl.No	Description of item	Details
	Total TM-II	22750m
	Total -B	49750m (or) 49.750Km
d.	MAJOR PUMPING MAINS	
	i) Pumping Main -I	29670m
	ii) Pumping Main –II	17870m
	iii) Pumping Main -III	6200m
	iv) Pumping Main –IV	20650m
	v) Pumping Main –V	19590m
	vi) Pumping Main –VI	6400m
	vii) Pumping Main –VII	15320m
	viii) Pumping Main –VIII	18460m
	Total – C	134160m (or) 134.16Km
e.	BRANCH PUMPING MAIN – I (From Booster to Group Sump)	
	Branch P' Main in PM – I	11930m
	Branch P' Main in PM – II	13200m
	Branch P' Main in PM – III	2100m
	Branch P' Main in PM – IV	7150m
	Branch P' Main in PM – V	2070m
	Branch P' Main in PM – VI	8150m
	Branch P' Main in PM – VII	4020m
	Branch P' Main in PM – VIII	17310m
	Total - D	200090m (or) 200.09Km
14	Project Cost	Rs.479.00 Crore.
15	A.M Cost	Rs.7.56 Crore.
16	Cost Per KL	Rs.20.44 (On Project & A.M)
17	Cost Per KL on AM	Rs.6.63
18	Per capita cost on present population	Rs.8473