

WATER SUPPLY IMPROVEMENT SCHEME TO NAGERCOIL MUNICIPALITY IN KANYAKUMARI DISTRICT

SALIENT DETAILS

1	Installation cost	Rs. 251.43 Crores		
	Annual Maintenance cost	Rs.4.16 Crores		
2	Beneficiary	Nagercoil Municipality		
3	Total population coverage	Year		
		2017	2032	2047
		Present	Intermediate	Ultimate
	Nagercoil Municipality	280000	320000	390000
4	Per capita supply proposed			
	Nagercoil Municipality	135 lpcd	UGSS to be Provided	
5	Demand	Intermediate	Ultimate	
		39.16 MLD	49.56 MLD	
		29797 LPM	37710 LPM	
		for 23 hours	for 23 hours	
6	Transmission losses	10%		
7	Source	Surface water of Paraliyar River at the upstream of Puthen Dam		
8	Head Works	Offtake Well in River : 8.0 m dia and 7.0 m depth Over head pump room of 12m dia		
9	Raw water Pumpsets	115 HP Turbine Pumpset – 3Nos (2+1) Duty – 14899 lpm x 26m head (50% stand bye)		
10	Raw Water Main	900 mm MS pipes : 20190 m 800 mm MS pipe : 11660 m Total : 31850 m		
11	Treatment Plant	41.12 MLD Full Scale Treatment Plant at Kurunthamalai		
		a) Enhancement of WTP UNIT III to Full scale treatment plant 13.42 MLD To 18.00 MLD using dual media b) Construction of New 29.57 MLD Treatment plant using Tube settlers and Dual media after demolishing existing WTP units I and II		

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		a	Aerator	Cascade Type - 5 Trays Collection Tray: 14.0 m dia	
		b	Stilling Chamber	6 m x 4.0 m x 3.60 m	
		c	Measuring Channel	10 m x 2.4 m x 1.70 m	
		d	Flash Mixer	2.30 m dia ,4.20 m depth	
		e	Clariflocculator	Clarifier	29 m dia, 3.80 m depth
				Flocculator	15.30 m dia ,3 m depth
		f	Filter cum Chemical House	Twin Filter Beds 2 x 3.17 m x 4.20 m - 8 Nos	
		g	Wash Water Tank	2.00 LL ,12 m staging	
		h	Clear Water Reservoir	19.70 LL ,1 Hour Detention Time	
		j	Pump House	20m x 7m	
		k	Quarters	2 Nos, C- Type	
12	Clear Water Pumpsets	a) CWP Main I - 145 HP Turbine pump set having duty 9961 lpm x 49m head (1+1 No)			
		b) CWP Main II - 145 HP Turbine pump set having duty 11263 lpm x 44m head (1+1 No)			
		c) CWP Main III - 150 HP Turbine pump set having duty 8886 lpm x 57m head (1+1No)			
13	Transmission main				
a	RAW Water Main				
	Size and Material of Pipe	Class	Length (m)		
	900mm dia MS		20190		
	800mm dia MS		11660		
			31850		
b	Clear Water Pumping Main I				
	500mm dia DI	K7	150		
	450mm dia DI	K7	900		
	400mm dia DI	K7	1058		

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	350mm dia DI	K7	2827
	250mm dia DI	K7	1936
	200mm dia DI	K7	2985
	150mm dia DI	K7	60
	100mm dia DI	K7	40
	Total		9956
c	CLEAR Water Pumping Main II		
	500 mm DI	K7	2490
	400 mm DI	K7	1220
	300 mm DI	K7	1000
	250 mm DI	K7	850
	200 mm DI	K7	1270
	150 mm DI	K7	3610
	Total		10440
d	CLEAR Water Pumping Main III		
	500 mm DI	K7	1425
	400 mm DI	K7	2103
	350 mm DI	K7	1582
	250 mm DI	K7	1070
	200 mm DI	K7	1625
	100 mm DI	K7	2705
	Total		10510
	CLEAR Water Gravity Main		
e	300 mm DI	K7	100
	Total Length of Clear Water Mains and Branch mains		62856 M

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14 PROPOSED SERVICE RESERVOIRS AND DISTRIBUTION SYSTEM

	Proposed SR Location	Capacity in LL	Staging (m)	Nos		
a	Krishnancoil	7.5	16	1		
	Aseervathamnagar	2.4	16	1		
	Asaripallam(Near Medical College)	8.8	16	1		
	Gnanam Nagar	2.5	16	1		
	Kottar	8.8	16	1		
	Kariyamanickapuram	2.2	16	1		
	V.N.Colony	9.1	16	1		
	NGO Colony	5	16	1		
	Ponnappanadar Colony	8	16	1		
	North Soorankudi	1.1	16	1		
	Nesamony nagar	5	16	1		
	Total				11	
b	Existing SR Location	Capacity in LL	Staging (m)	Nos		
	Krishnancoil GLSR	12.5	GLSR	1		
	Holycrossnagar	7	12	1		
	Thattanvilai	6	12	1		
	Kalaichandai	4.5	12	1		
	Asirvathamnagar	7	12	1		
	Krishnankoil Filter house	12	12	1		
	Municipal office campus	12.5	12	1		
	Exhibition Ground	12.5	12	1		
	Christhunagar	8	12	1		
	Christhunagar(Water tank Road)	8	12	1		
	Ganam Nagar(Maravankudiyiruppu)	8	12	1		
Ganam nagar (Marukalthalavilai)	1	7.5	1			

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	Total			12		
c	Distribution System					
	400 mm DI	K7	705			
	350 mm DI	K7	5676			
	300 mm DI	K7	9159			
	250 mm DI	K7	13378			
	200 mm DI	K7	26175			
	160mm HDPE	PN 6	20964			
	140mm HDPE	PN 6	14108			
	125mm HDPE	PN 6	1711			
	110mm HDPE	PN 6	328736			
	Total Length of Distribution System			420612	M	
15	Proportionate Cost (Rs. In Crore)					
	World Bank	52.46				
	GOI	111.72				
	GOTN	44.68				
	ULB Contribution	42.57 (23.21+19.36)				
	Total	208.86				
16	Per capita Cost	Rs. 8980				
17	Cost per 1000 Litres	Rs.20.35				
18	Funding Pattern	Nagercoil Municipality	22.61%	World Bank		
			48.14%	GOI		
			19.25%	GOTN		
			10.00%	ULB		