

PROVIDING DRINKING WATER SUPPLY TO MANTHANI & BHUPALAPALLI CONSTITUENCIES
ON TELANGANA WATER GRID IN KARIMNAGAR DIST

SPECIFICATION REPORT

Project cost Rs 675 Crores

The project is administrative sanctioned for Rs 835 Crores vide GO no 394 fo Panchayat raj and Rural developement dated 23-6-2015

Geography:

In Manthani assembly cosntituency there are 7 mandals namely Manthani,kamanpur, Mutharam, Maha mutharam,malhar rao, Kataram, mahadevpur. Bhupalapalli Constituency consists Bhupalapalli, Bhupalapalli Municipality, The total population proposed to be covered in the project will be 3,59,987 in 361 habitations and 1 municipality of Bhupalapalli.

The details of the population of the project are as follows.

Sno	Mandal	Habs	Pop
	Municipality		
1	Bhupalapalli	1	42,156
		1	42156
	RWS		
1	Manthani	49	54,525
2	Kamanpur	35	90,750
3	Mutharam (Manthani)	28	31,567
4	Malharrao	36	24,755
5	Kataram	54	37,598
6	Maha Mutharam	29	26,431
7	Mahadevepur	18	38,489
8	Bhupalapalli	(32) 10	13,716
		361	3,17,831
	Total population		3,59,987

Need of the project:

In these mandals, at present Water supply schemes are having mainly bore wells as their sources. In summer most of the sources are becoming either dry or turning to lesser yields due to poor water bearing capacity of the soil. As such the people are facing acute shortage of water right from February every year. During every summer and rainy seasons numerous cases of water born

diseases like GE and diarrhoea are being reported. In the recent years high fluoride nearly 3-4 mg/liter has been found in the drinking water sources of many villages. Due to this reason many people are facing dental and skeletal fluorosis. Further in many villages high calcium content in the drinking water sources has been found which is leading to cardiac problems. Most of the people in these mandals are backward, SC and ST and are very poor people. To provide safe treated drinking water the project is very much necessary.

2 sources are proposed for usage to draw water. They are Yellamapalli project in Ramagundam mandal and Bhim ghanpur MI reservoir in Bhupalapalli. The project is divided into 2 sub segments Based on the source of water drawl.

DESIGN CRITERIA

The project is designed with clear water requirement as 100 LPCD in rural area and 135 (plus 15 unaccounted water for urban area) LPCD in Urban area. Annual Population growth is considered as 0.80% on rural area and 2% Urban area. The raw water requirement is adopted as 105 LPCD to Rural area and 142 LPCD in Urban area with 22 hours pumping time. The project is designed for base year 2018 and prospective population considered for 15 years (on 2033) and ultimate population is designed for 30 years i.e on 2048 year. 10 % of the total demand is added to the total demand and is year marked for the industrial demand. In the Kaleshwaram there is an ancient temple of Lord Shiva and many pilgrims will visit the place to worship the deity. Hence 1 MLD of water is taken into account to cater the temple needs.

Sub Segment : Yellamapalli as source:

Water Source of the Project

The Yellampalli project on Godavari river is proposed as source to the project. It is proposed to draw water from the existing intake well of Hyderabad Metro water supply and Sewerage Board near murmur of Ramagundam mandal. Hyderabad Metro water supply and Sewerage Board's intake well is in progress and in near completion. Already it has permitted TDWSP to accommodate Pumps of their well.

It is proposed to serve the sub segment to 3 mandals namely Manthani, Mutharam (manthani), Kamanpur. The total requirement of the sub segment is 0.355 TMC.

The total capacity of the Yellamapalli project is 20.18 TMC. The dead storage capacity of the project is 0.69 TMC. The HMWSSB and NTPC ramagundam utilize the project water. The water is sufficient to cater the needs of the population proposed in the sub segment

Plan of the Sub Segment

The Water is planned to collect from Yellampalli dam. The Pumps will be erected in the HMWSSB intake well and will be pumped to the Head works near Brahmanapalli (Iambada tanda) village in Ramagundam mandal. The water will be filtered through Rapid sand filter beds and will be collected in clear water sump at Head works. The water will be Collected in a clear water sump and will be pumped to Ramgundam gutta (RL 260 M). From there the water will be supplied by gravity to the manthani, Mutharam (manthani), Kamanpur Mandals. A population of 176842 will be covered in 153 habitations in 3 mandals.

The following components are already covered in phase 1 estimate of the work which was already sanctioned for Rs 55 crores

1. Collection well (Existing HMWSSB intake well can be utilized)
2. Pumping main from the Intake well to Head works with 600 mm dia DI K9 pipe for 5.0 KM length
3. Rapid sand filter beds of 25 MLD Capacity at Brahmanpalli village in ramagundam mandal

The components in the present estimate are proposed as follows

1. Clear water sump of 2700 Liter capacity at Head works with a pump house of 23x12 m size.
2. Gravity mains with trunk lines are proposed from the GLBR on Ramagundam Gutta to the manthani village with 800 mm dia BWSC pipes for 36 Km. The pipes will carry the requirement of the manthani sub segment.
3. Gravity mains with BWSC, DI and MS pipes are proposed for Trunk lines and small dia from 63 mm to 280 mm are proposed with HDPE pipes. For 300-600 mm dia DI pipes are proposed and for the pipes above 600 mm dia BWS & MS pipes are proposed.
4. All the habitations in the segment are being covered in gravity.
5. At Machupet village in Mutharam (Manthani) Direct pumping is proposed from a 250 KL sump of capacity to 5 habitations.
6. ON Eklaspur gutta 20 KL capacity 5 m staging BPT is proposed
7. In keasn palli village of mutharam (Mnty) 60 KL Sump is proposed to serve water to the village by local pumping as it is negative head is formed.
8. At Intake well VT Pump sets are proposed At Head works HSC pumps with positive suction are proposed and in the other pumping stations also HSC pump are proposed.
9. LS provision is incorporated for electrical power supply, road crossings, Canal crossings, land acquisition, Forest permissions and other unforeseen items.
10. 5% for VAT and 1% for CESS

Sub Segment : Bhimghanpur as source:

Water Source of the Project

The Bhimghanpur MI reservoir is a balancing reservoir of Devadula project on Godavari river is proposed as source to the project. It is proposed to draw water by constructing an intake well near nagaram village of Bhupalapalli mandal.

It is proposed to serve the sub segment to 5 mandals namely Mahamutharam, Kataram, Malharrao, mahadevpur, Mhupalapalli mandals & Bhupalapalli Municipality. The total requirement of the sub segment is 0.485 TMC.

The total capacity of the Yellamapalli project is 0.385 TMC. The dead storage capacity of the project is 0.07 MCFT. The reservoir is a balancing reservoir of Devadula 0.385 TMC of water will be constantly maintained. The water is sufficient to cater the needs of the population proposed in the sub segment

Plan of the Sub Segment

The Water is planned to collect from Nagaram Intake well. The Pumps will be erected in the intake well and will be pumped to the Head works near Konampet village in Mahamutharam mandal. The water will be filtered through Rapid sand filter beds and will be collected in clear water sump at Head works. The water will be collected in a clear water sump and will be pumped to OHBR at Konampet. From there the water will be supplied by gravity to the Mahamutharam, Mahadevpur, Kataram, & malhar rao Mandals. Aseperate OHBR will be constructed to serve Bhupalapalli rural & urban mandal. A population of 183415 will be covered in 207 habitations in 4 mandals and on municipality.

The following components are already covered in phase 1 estimate of the work which was already sanctioned for Rs 55 crores

1. Collection well nagaram village in Bhupalapalli mandal.
2. Pumping main from the Intake well to Head works with 700 mm dia DI K9 pipe for 7.5 KM length
3. Rapid sand filter beds of 35 MLD Capacity at Konampet in Mahamutharam mandal.

The components in the present estimate are proposed as follows

1. Clear water sump of 3400 Liter capacity at Head works with a pump house of 36x12 m size.
2. Gravity mains with trunk lines are proposed from the OHBR Konampet to the malhar mandal. The pipes will carry the requirement of the sub segment.


3. Gravity main with BWSC, DI and MS pipes are proposed for Trunk lines and small dia from 63 mm to 280 mm are proposed with HDPE pipes. For 300-600 mm dia DI pipes are proposed and for the pipes above 600 mm dia BWS & MS pipes are proposed.
4. Intermediate pumping stations are proposed at Koyyur village (400 KL Sump) in Malharrao mandal with 60 KL OHBR at Tadicherla gutta.
5. Another intermediate pumping station is proposed at Sarvaipet OHBR in Mahadevpur mandal with 150 KL Sump and 20 KL OHBR with 10 m staging to serve 6 remote villages.
6. Local sumps are proposed at villages where the water is going up to OHSRs but not going by gravity into the Existing OHSRs. They are as follows. Rudraram (250 KL), Kesanpalli (60 KL), Gummapalli (40 KL), Paluguala (60 KL), Medipalli (40 KL), Parikipalli (20 KL) & Baswapur (10 KL).
7. mp sets are proposed. AT Intake well VT puAt Head works HSC pumps with positive suction are proposed and in the other pumping stations also HSC pump are proposed.
8. LS provision is incorporated for electrical power supply, road crossings, Canal crossings, land acquisition, Forest permissions and other unforeseen items.
9. 5% for VAT and 1% for CESS.

The Estimate is prepared as per the 2015-16 SSR Rates. The project cost on the Karimnagar Dist side is worked out to Rs 6.75 crores for water supply to village OHSR level and submitted for Technical sanction.

Asst Engineer
TDWSP manthani

Executive Engineer
TDWSP Division Peddapalli

Dy Executive Engineer
TDWSP Sub Division Manthani


Superintending Engineer
TDWSP Circle Karimnagar

GENERAL ABSTRACT				
MANTHANI-BHUPALPALLY SEGEMENT IN KARIMNAGAR & WARANGAL DISTRICTS				
	Estimate Cost Rs :		83500.00	Lakhs.
Sl.No	Description of work	Nos	Rate	Amount (Lakhs)
1	Manthani sub Segment	1	58000.00	58000.00
2	Bhupalpalli sub Segment	1	25500.00	25500.00
	GRAND TOTAL			83500.00

Assistant Executive Engineer
TDWSP, Karimnagar

Deputy Executive Engineer
TDWSP, Karimnagar

Executive Engineer
TDWSP, Division, Karimnagar

Superintending Engineer
TDWSP, Circle, Karimnagar

1. The DPR is Technically for RS. 835.00 Crores by Chief Engineer, TDWSP, Hyd on 25.04.2015
2. The work is Administratively sanctioned vide G.O.Rt.no. 394 of PR RD (LWS-IV) DEPT Dt: 23.08.2015.
3. The DPR's are vetted by M/s WAPCOS vide Lr.no. WAF/Hyd/TDWSP/DPR/2015/2496 & Lr.no. WAF/Hyd/TDWSP/DPR/Bhupalpally/2015, Dt: 04.09.2015 by P.D. WAPCOS.
4. The Estimate is Technically sanctioned for 835.00 Crores (580+255) vide T.S.no. 18/2015-16 by Chief Engineer, TDWSP, Hyd.

4/9/15
Chief Engineer
TDWSP, Hyd

4/9/15

Name of the work : Providing Drinking Water Project for Manthani & Bhupalpalli Segments in Karimnagar and Warangal Districts

Rates: As per SSR 2015-16

Estimate Cost: in Rs (675) 580 Crores

GENERAL ABSTRACT

Sl.No	Description of item	Qty	Units	Rate	Per	Amount in lakhs
	Yellampalli Reservoir(HMWSSB)					
1	Head works					
2	25 MLD RSF at Brahmanpalli (Iambada landa) in ramagundam mandal (Covered in Phase 1)					
3	Construction of 2700 KL Sump at Head works	1	No	159.00	Each	159.00
4	Construction of Positive suction pump room 23x12 m size at Head works	1	No	218.00	Each	218.00
5	20 KL BPT 10 m staging at Ekilaspur gutta	1	No	16.00	Each	16.00
6	Road to OHBR and Intake structures	1	No	425.00	Each	425.00
7	600 KL GLDR on Ramagundam/ Brahmanpalli (LT) Hillock (for Head works)	1	Nos	86.00	each	86.00
8	150 KL Sump at Sarvaipet in Mahadevpur mandal	1	Mos	14.00	each	14.00
8	Gravity mains from Yellampalli Soure towards Manthani, Kamanpur and Mutharam(MNT) Mandals	1	No	18,460	each	18460.00
	Bhim Ghanpur Tank as source					
9	Intake well (Taken up in Phase 1)					
10	35 MLD RSF at Konampeta(V) of Mahamutharam(M) (covered in Phase 1)					
11	Construction of 3400 KL Sump at Head works at Konampet in Mahamutharam mandal	1	No	130.00	Each	130.00
12	Construction of Positive suction pump room at Head works of size 32x12m	1	No	206.00	Each	206.00
13	400 KL OHBR at Konampet Head works towards Manthani	1	Nos	186.00	each	186.00
14	Gravity mains from Bhimgharipur Soure towards Mahamutharam, Kataram, Mahadevpur and Malhar Rao Mandals	1	No	22,240	each	22240.00
15	Construction of compound wall (3000 m)	1	no	331.00	Each	331.00
16	Pumping Machinery (As per Sub estimate)					<u>(341.00) 252.00</u>
	Pump sets at Clear water Sump in Head Works (in HP)	1750	HP			
	capacity of pump sets required for sumps at intermediate pumping stations		HP			

20

	Online booster pump sets	50	HP			
17	Provision for Surge at Head works (Ekilaspur gutta)					500.00
	Sumps & OHBRs (at intermediate pumping stations)					
18	20 KL OHBR, 10 m staging at Sarvaipet in Mahadevpur mandal	1	Nos	14.00	each	14.00
19	400 KL Sump at Koyyur in Malhar Rao mandal	1	Nos	27.00	each	27.00
20	60 KL OHBR at Tadicherla hillock	1	Nos	73.00	each	73.00
21	Construction of 250 KL Clear Water Sump at Machupet in Mutharam (manthani)	1	Nos	23.00	each	23.00
22	Construction of 100 KL Clear Water Sump at Rudram(V) of Malhar Rao(M) as per	1	Nos	8.00	each	8.00
23	Construction of 60 KL Clear Water Sump at Keshanpalli(V) of Mutharam(MNT) & Polaram as	2	Nos	6.00	each	12.00
24	Construction of 20KL Clear Water Sump at Rgummalapalli, Palugula and Medipalli, Parikipalli Villages as per Subestimate	4	Nos	2.50	each	10.00
	OTHER STRUCTURES					
1	Central laboratory at Mathani	0	No	18.00	each	0.00
2	Monitoring cell at Head works & Manthani	3	No	18.00	each	54.00
3	Watch man quarters at each pumping station (Head works, 10, Koyyur, Sarvaipet)	17	No	9.00	each	100.00
4	Pumphouses for other pumping station 9x6 m (Sarvaipet, Koyyur)	2	No	18.0	each	36.00
5	Pumphouses for other pumping station 6x4m (Machupet, Polaram)	2	No	12.0	each	24.00
				Sub Total		43112.00 3701.00
5	POWER LINES & POWER STATIONS					
6	Permission from the R&B department, Forest department and irrigation departments etc					
	total Length of Pipe lines in KM	839.00				500.00 1139.00
7	Provisions for electrical lines, DP structures, Trnsformers, 11 KV line, transformers yards, power sub stations, etc., complete.					500.00 1472.00
8	Provision towards land acquisition for head works and structures etc.,					500.00
9	Forest permissions (17 required + 34 for CA) and permission from wild life board	51	Hectares			1520.00
10	Provision for OFC cable along pipes lines including all costs	839.00		839.00	4	3356.00
11	Provision For Railway crossing	1				200.00
12	Cost of O&M as on 2018					1000.00 3400.00
13	Provision for TOT/VAT @5%					2524.40 2764.40

14	Labour cess @1%					506.85	552.88
15	QC Charges @0.50%					2534.4	276.44
16	Provision for taxes for NAC @.10 %					506.89	55.29
17	SCADA					500.00	2500.00
18	Sub Total					5433.13	61437.01
19	Add LS for Escallation of prices & Unfore seen items					3466.59	6062.99
20	Grand Total (in Rs lakhs)					58000.00	67500
21	TOTAL COST OF THE PROJECT (Rs CRORES)					580.00	675.00

Asst Engineer
TDWSP Manthani

[Signature]
Executive Engineer
TDWSP Division Peddapalli

Dy Executive Engineer
TDWSP sub-division : Manthani

[Signature]
Superintending Engineer
TDWSP Circle Karimnagar

The Estimate is Technically Approved for Rs. 580 00 00 000.00

[Signature]
[Signature]
Executive Engineer,
Telangana Drinking Water Supply Project
Division, Peddapally.

[Signature]
Superintending Engineer,
TDWSP., Circle Karimnagar.

"Approved"
Chief Engineer
TDWSP, Hyd
[Signature]
4/10/15

					required is 0.189 Hectares. There is no other alternate alignment to propose the pipeline as the ground levels are not permitting as per Hydraulic design. Proposed Reach is only the feasible alignment.	PR department
5	6	Karimnagar East	Azamnagar Reserved Forest	0.037	The proposed pipelines comes under segment 15/3 of TDWSP (Telangana Drinking Water Supply Project). (Gravity main from Narsingapuram Shivaram to Erraram Jn) 90 mm dia Pipe lines falls under Azamnagar Reserve Forest for a length of 1145.031m and width of 0.7 and the total area required is 0.037 Hectares. There is no other alternate alignment to propose the pipeline as the ground levels are not permitting as per Hydraulic design. Proposed Reach is only the feasible alignment.	NOC will be Obtained and Submitted from R&B and PR department

TOTAL = 0.436


Superintending Engineer
TDWSP, Circle, KARIMNAGAR


Officer in Charge
TDWSP (R&B&S), Hyderabad.

DETAILS OF SURVEY INSTRUMENTS USED

S.No	Name of the Agency	Instruments used	Persons involved	Period of Survey
1	Pallavi Surveys	1.Spectra Prescesion	Praveen Surveyor Mr.A.Premkumar,AE,TDWSP, Manthani	Dec 2015-Jan 2016

Superintending Engineer
TDWSP Circle,Karimnagar

"Counter Signed"

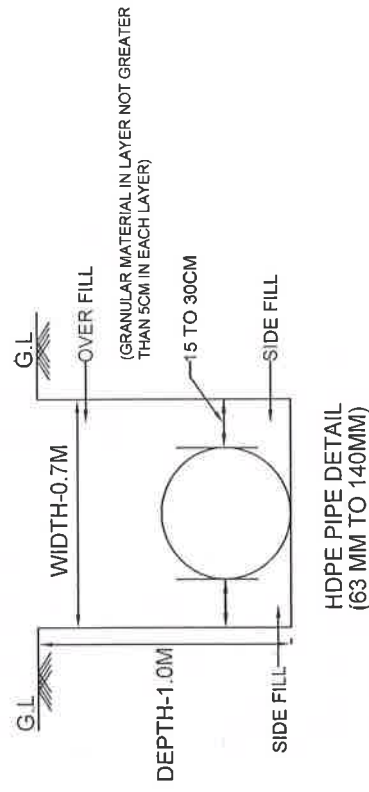
Chief Engineer
TDWSP,Hyderabad

MAHA MUTHARAM SEGMENT - 15 /3- KARIMNAGAR						
Set	Structure type	Pipe Dia	width in m	Length in m	Area Ha	Total area in Ha
1	PIPELINE	90	0.700	2053.304	0.144	0.258
	PIPELINE	110	0.700	1633.250	0.114	
2	PIPELINE	110	0.700	3315.672	0.232	0.349
	PIPELINE	110	0.700	1116.655	0.078	
	PIPELINE	110	0.700	558.600	0.039	
3	PIPELINE	110	0.700	6370.312	0.446	0.446
4	PIPELINE	63	0.700	1611.151	0.113	0.113
5	PIPELINE	225	0.900	4466.498	0.402	0.723
	PIPELINE	225	0.900	3464.418	0.312	
	PIPELINE	63	0.700	128.165	0.009	
6	PIPELINE	90	0.700	1571.443	0.110	0.436
	PIPELINE	90	0.700	284.507	0.020	
	PIPELINE	90	0.700	1145.031	0.080	
	PIPELINE	110	0.700	2694.554	0.189	
	PIPELINE	90	0.700	523.210	0.037	
TOTAL				30936.770	2.325	2.325

Superintending Engineer
TDWSP, Circle, KARIMNAGAR

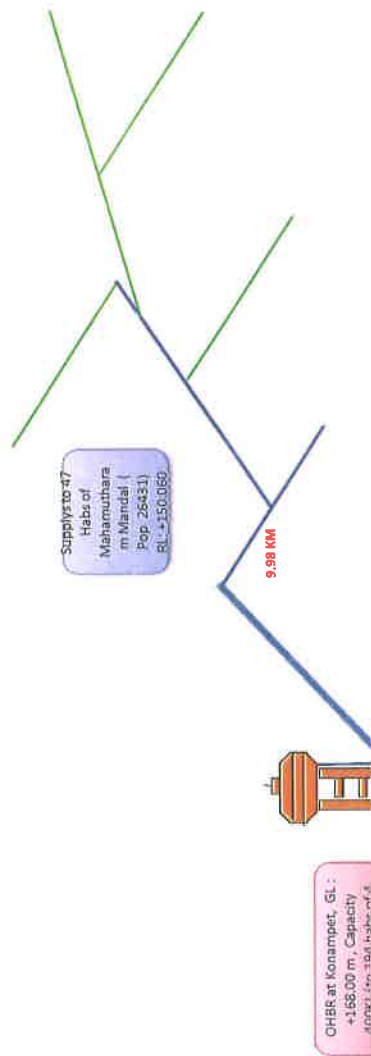
Counter Signed
Chief Engineer
TDWSP (RWS&S), Hyderabad.

TELANGANA DRINKING WATER SUPPLY PROJECT MAHAMUTHARAM SEGMENT-15/3, MANTHANI & BHUPALPALLY
MAP SHOWING PIPELINE CROSS-SECTION IN FOREST AREA OF AZAMNAGAR RANGE.



Superintending Engineer
TDWSP, Circle, KARIMNAGAR

Contractor Signed
Engineer
TDWSP (RWS&S), Hyderabad.



Superintending Engineer
TDWSP, Circle, KARIMNAGAR

Counter Signed
Chief Engineer
TDWSP (RWS&S), Hyderabad.