

VARIOUS NORMS FOLLOWED IN URBAN WATER SUPPLY SCHEMES

URBAN NORMS					
1.	Design Period	Base year -2012 Intermediate-2027 Ultimate - 2042	Lr.No.F.HOTC/AE10/PDC/2008/ dt.26.2.2009. The base year is applicable till receipt of orders on revision as per SLTC minutes dated.13.12.2010		
2.	Population	Projection of population by the following methods Arithmetical increase, Incremental increase, Geometrical increase, line of best fit, Graphical etc.,			
3.	Pro-rata supply	Town Panchayats	With out UGSS	70 lpcd	MD, TWAD, Lr.No.20696/DO/ P&D/98-1/Dt.20.6.1998
			With UGSS	90 lpcd	MD, TWAD, Lr.No.81110/SDO/ PDC/2010/Dt.8.11.2010
			Adjoining the boundary of any Municipal corporation	90 lpcd	B.P.Ms.No.102(PDC)/ dt.23.11.2010
		Municipalities	With out UGSS	90 lpcd	MD, TWAD, Lr.No.20696/DO/ P&D/98-1/Dt.20.6.1998
			With UGSS	135 lpcd	MD, TWAD, Lr.No.81110/SDO/ PDC/2010/Dt.8.11.2010
			Adjoining the boundary of any Municipal corporation	110 lpcd	B.P.Ms.No.102(PDC)/ dt.23.11.2010
		Corporation		135 lpcd	MD, TWAD, Lr.No.81110/SDO/ PDC/2010/Dt.8.11.2010
		Urban Towns/cities posed for GOI funding under UIDSSMT/ JnNURM		135 lpcd	MD, TWAD, Lr.No.81110/SDO/ PDC/2010/Dt.8.11.2010
4.	Transmission loss	10% of required demand		MD, TWAD Circular No. F.HOTC /AE2/PDC/2008/dt.10.11.2008	
5.	Treatment loss if treatment is proposed	5 % of required clear water demand			
6.	Industrial demand	10 % of Total demand		As per GO. Ms. No.2, MA &WS (WS4) Dept, Dt.3.1.2011	
7.	Hours of pumping	23 Hours for surface and sub surface water 12-16 hours for Ground water as per the recommendation of Hydro Geologist			
8.	Sump capacity	Sump capacity has to be worked out as detailed below and rounded off to next higher 5000 litres on actual requirement		As per GO. D. No.621, MA &WS (WS2) Dept, Dt.27.12.2010	
		Rate of inflow and rate of out flow remains the same	1 hour detention time		
		Rate of inflow and rate of out flow differs	By calculating cumulative inflow and cumulative out flow and working out the maximum cumulative deficit or surplus.		

		Break Pressure tanks	10 minutes detention time		
9.	Pump sets	Drawal of water more than 5000 lpm	Vertical turbine pumpset	MD, TWAD, Lr.No.81110/SDO/PDC/2010/Dt. 8.11.2010 & 16.11.2010	
		Drawal of water from 2000 lpm to 5000 lpm	Turbine pumpset or Horizontal split casing pumpset		
		Drawal of water below 2000 lpm	Submersible pumpset		
		Efficiency of pumpset to be adopted – 75 %			
10.	Selection of materials for pipe line	Sl. No	Pipe material	Recommendation	
		A. METALLIC PIPES			
		1.	CI Pipes (IS.1536-2001)	CI D/F and S/S at Head Works and River Crossing works	B.P.Ms.No .23(PDC)/dt.28.02.2011
		2.	DI pipes (IS. 8329-2000)	1.For pumping and Gravity main of sizes upto 600 mm dia for Water Supply and Sewerage Schemes with Rubber Gasket Joints. 2.Pipe connection to Service Reservoirs of capacity > 5 Lakh Litres 3. Distribution system a) For Corporation and Municipal areas : >= 100mm Dia DI K7/K9 b) For Town Panchayats and Rural habitations : > 200mm dia DI K7/K9	
			MS Pipes (IS.3589/2001 & IS.5504-1997)	> 600 mm dia spirally welded M.S. Pipes in conveying mains	
			B. CEMENT PIPES		
		1.	RCC pipes (IS.458- 2003)	Not recommended for WS schemes. Non-pressure class is recommended for UGSS in Collection System.	
		2.	PSC Pipes (IS.784-2001)	Only of size 350 mm dia in very low pressure Branch/Feeder Mains	
		3.	Stoneware Pipes (IS.651 – 1992)	<= 300 mm dia, for Under Ground Sewerage Schemes.	
			C. PLASTIC PIPES		
		1.	PVC pipes (IS.4585 – 2000)	Distribution system a. For Corporation and Municipal areas : < 100mm Dia b. For Town Panchayats and Rural habitations : <= 200mm dia	
		2.	HDPE pipes (IS.4984 –1995)	<= 200 mm should be used only in such schemes/areas where skilled labour and specialized equipments for repairs and maintenance are easily available.	

		3.	UPVC (IS.15328 –2003)	House Service Connections in UGSS.	
11.	Service Reservoir	1/3 rd of total intermediate requirement rounded off next higher 10000 litres.		GO. D. No.621, MA &WS (WS2) Dept, Dt.27.12.2010	
12.	Distribution system	Length -As required by Local Body Minimum residual pressure – i) 12 Metres for the zones where new OHTs are proposed ii) 7 Metres for the zones which are served by the existing OHTs			
13.	Centage charges	i) @ 13% for Schemes funded under MNP		GO.MS.No.34(WS4)MA&WS Dept. dt15.02.2010,	
		ii) @ 5% for all urban schemes - (Municipalities and corporations)			
		Iii) 23.5% for Deposit Schemes		G.O. MS. No. 308 ,(MA&WS 4) WS Dept Dt.15.12.2010.	