Water Distribution Management Plan
For
District Metered Area (DMA)
In
Kathmandu Valley

2nd version: 31/July/2025

Kathmandu Upatyaka Khanepani Limited (KUKL)

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1. Introduction

1.1 Basic Approach to the Water Distribution Management

The maintenance and management of water supply facilities is an indispensable daily task for KUKL and should be carried out from a long-term perspective in order to achieve the following objectives.

Security: To supply safe water with assured quality to water users for drinking in the Kathmandu Valley.

Stability: To provide a stable supply of water necessary for daily life anytime, anywhere.

1.2 Procedure for Development of the Water Distribution Management Plan

Water service is a business that consists of providing drinking water to water users and collecting fees in return. Therefore, in the Water Distribution Management Plan, water utilities themselves need to set more specific management targets based on their Performance Indicators and monitor them in their daily operations.

The workflow of water distribution management in water utility management is as follows

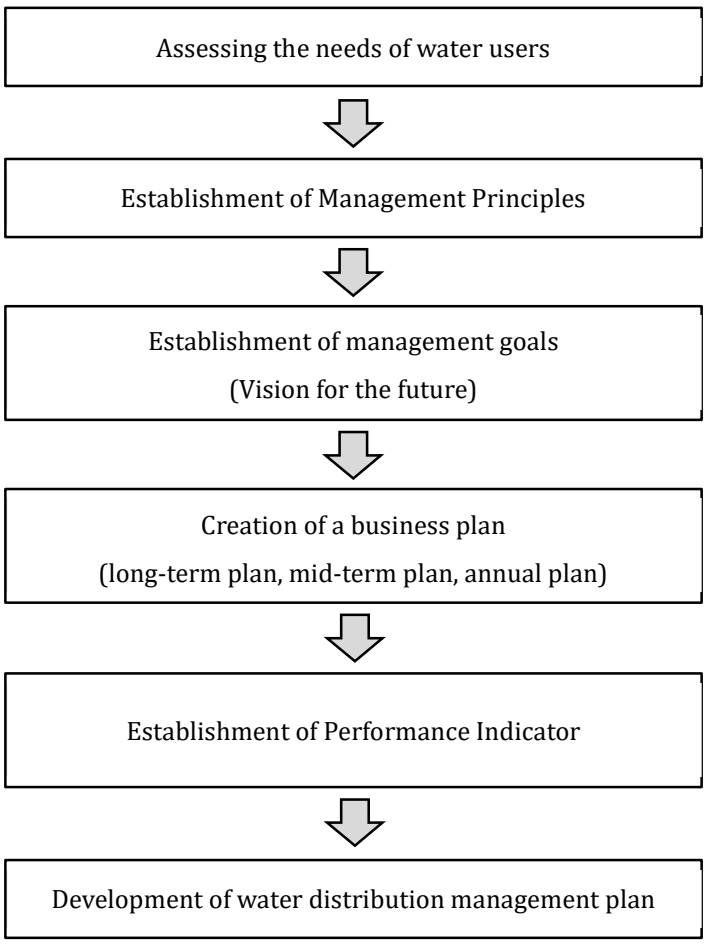


Figure 1.2.1 Relationship between water supply management and maintenance

2. Purpose of the Water Distribution Management Plan

The purpose of the Water Distribution Management Plan is to ensure that KUKL, as the entity responsible for operation and maintenance, properly manages the water supply facilities and provides water to water users in a manner that is equitable in terms of both quantity and time, thereby contributing to the improvement of the living environment.

This Water Distribution Management Plan is the most basic document for KUKL in maintenance and management.

KUKL is required to maintain and repair the water supply facilities to keep them in good condition.

3. Target District Metered Area (DMA)

This Water Distribution Management Plan covers DMAs constructed within the ring road.

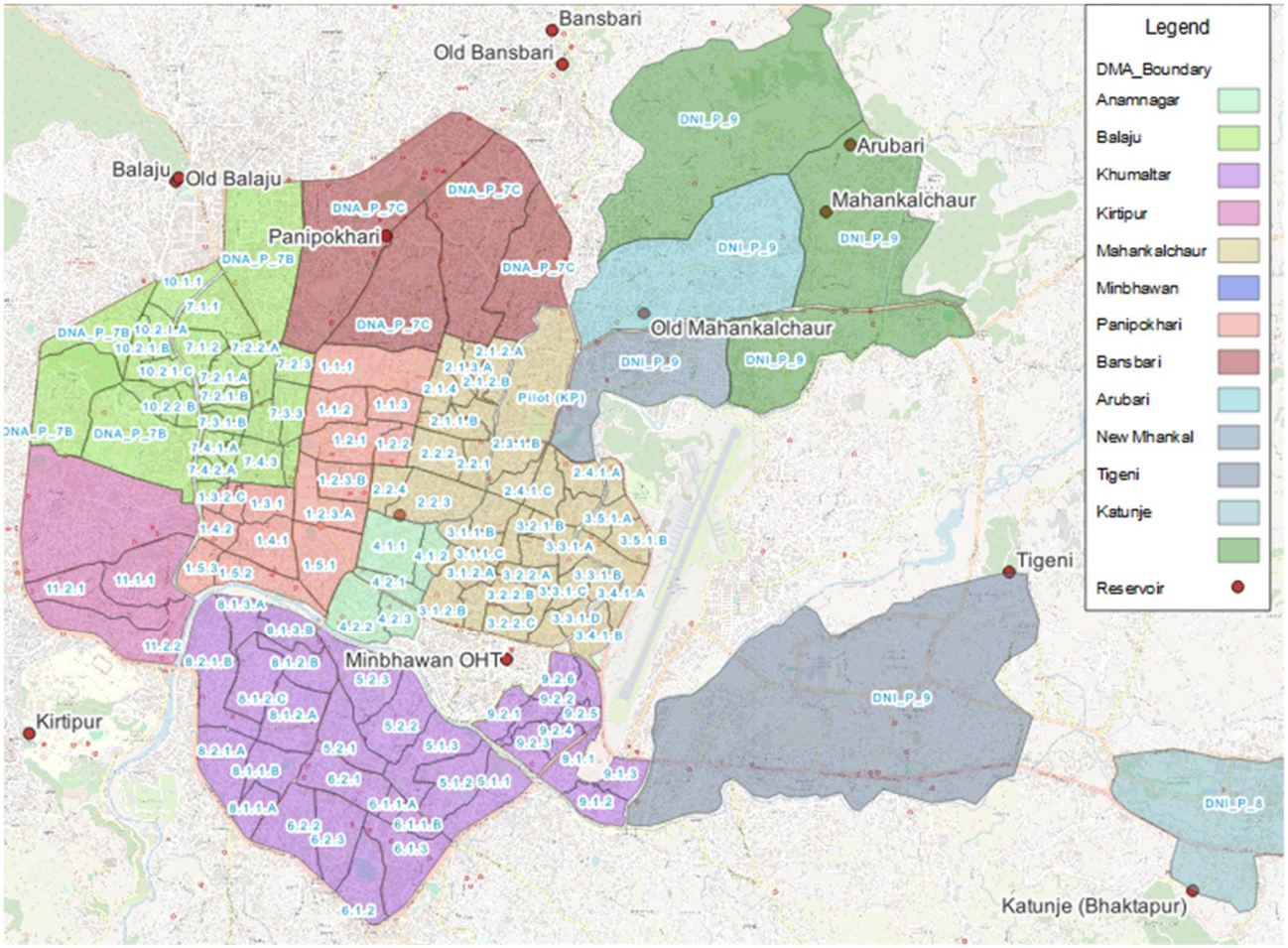


Figure 3.1.1 DMAs constructed in the Ring Road

The following figure is the water supply area covered by each of the service reservoir tanks.

The three water distribution reservoirs located within the ring road are Anamnagar, Minbhawan, and Panipokhari; the other reservoirs may also cover water supply outside the ring road.

In addition, some of the reservoirs supply the old distribution network, but in the future, they will be switched to supply the new distribution network constructed by Melamchi Water Supply Project.

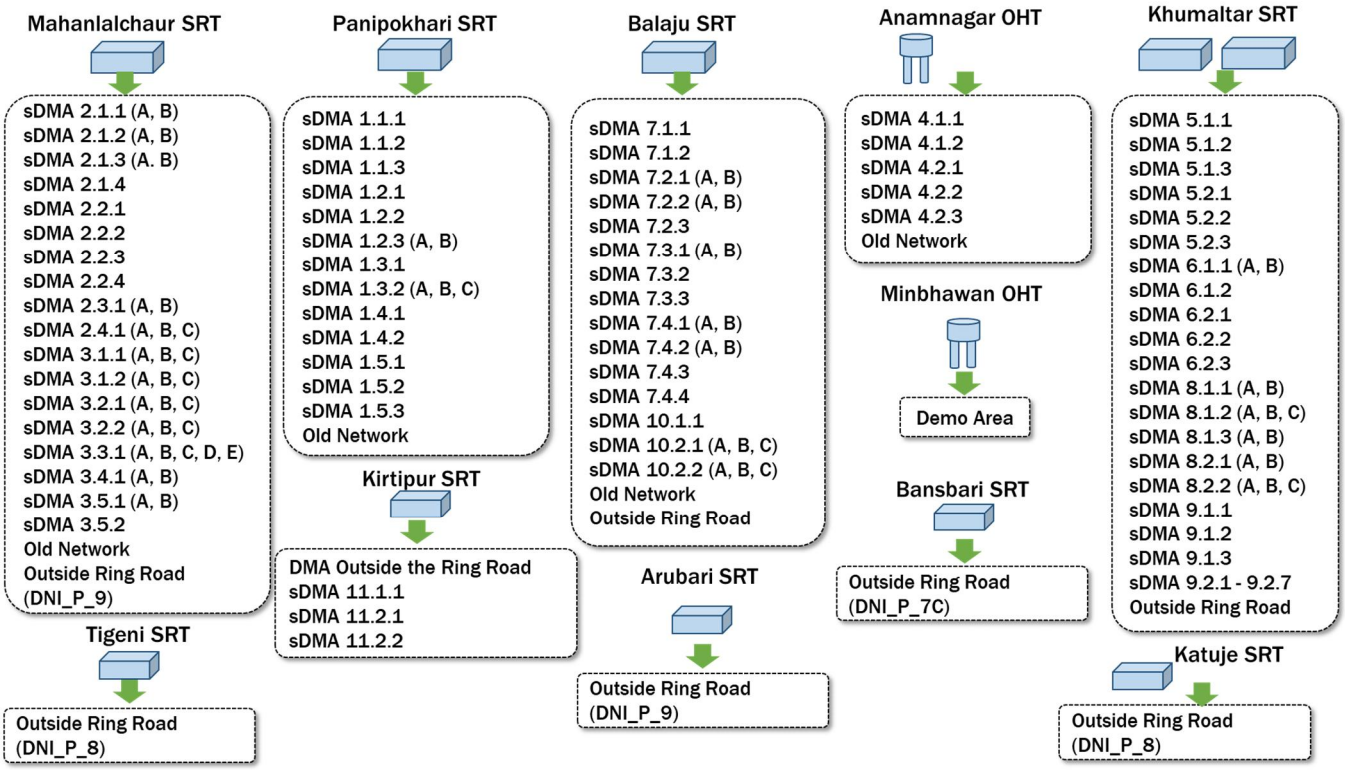


Figure 3.1.2 Sub-DMA covered by each Service Reservoir Tanks (SRTs)

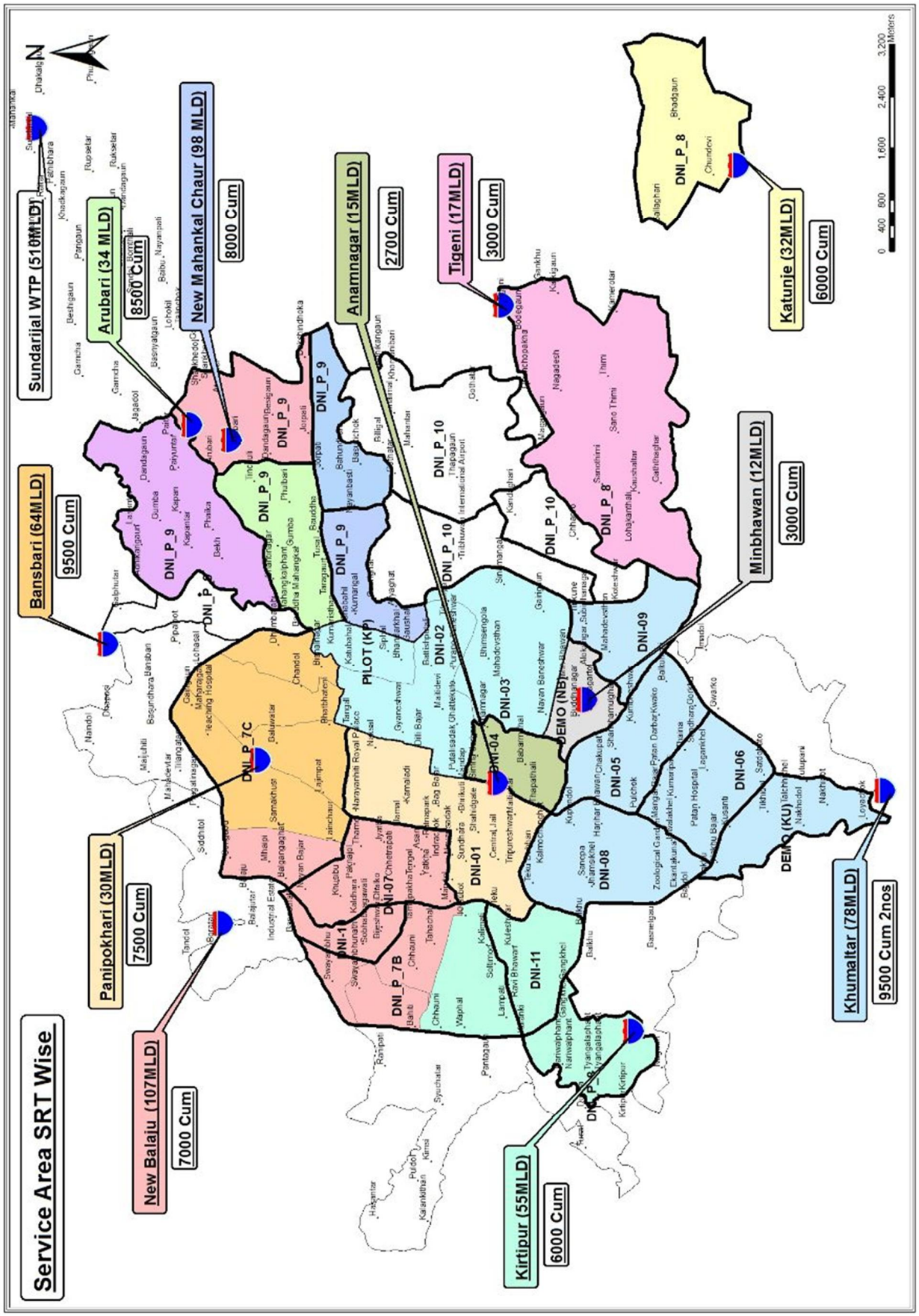


Figure 3.1.3 Water Coverage Area by SRT wise

4. Basic Information on DMAs and Sub-DMAs

The number of customers and estimated demand for each Sub-DMA are shown below.

Table 4.1.1 Estimated Demand in each DMA/Sub-DMA

DNI No	DMA	Sub-DMA	Current Branch Area	District	No of users per connection	Estimated Number of Customer	Demand per capita (LPCD)	Estimated Demand (m3/day)
1	1.1	1.1.1	Maharajgunj	Kathmandu				
		1.1.2	Maharajgunj	Kathmandu	10	1144	135	1,544.4
		1.1.3	Maharajgunj	Kathmandu				
							Sub total	1,544.4
	1.2	1.2.1	Maharajgunj	Kathmandu				
		1.2.2	Baneshwor	Kathmandu	10	2259	135	3,049.7
		1.2.3(A)	Maharajgunj	Kathmandu				
		1.2.3(B)	Maharajgunj	Kathmandu				
							Sub total	3,049.7
	1.3	1.3.1	Tripureshwor	Kathmandu				
		1.3.2(A)	Tripureshwor	Kathmandu	10	3252	135	4,390.2
		1.3.2(B)	Tripureshwor	Kathmandu				
		1.3.2(C)	Tripureshwor	Kathmandu				
							Sub total	4,390.2
	1.4	1.4.1	Tripureshwor	Kathmandu	10	2864	135	3,866.4
		1.4.2	Tripureshwor	Kathmandu				
							Sub total	3,866.4
	1.5	1.5.1	Tripureshwor	Kathmandu	10	262	135	353.7
		1.5.2	Tripureshwor	Kathmandu	10	365	135	492.8
		1.5.3	Tripureshwor	Kathmandu	10	386	135	521.1
							Sub total	1,367.6
2	2.1	2.1.1(A)	Mahankalchaur	Kathmandu	10	401	135	541.4
		2.1.1(B)	Maharajgunj & Mahankal	Kathmandu	10	433	135	584.6
		2.1.2(A)	Mahankalchaur	Kathmandu	10	553	135	746.6
		2.1.2(B)	Mahankalchaur	Kathmandu	10	135	135	182.3
		2.1.3(A)	Mahankalchaur	Kathmandu	10	508	135	685.8
		2.1.3(B)	Mahankalchaur	Kathmandu	10	292	135	394.2
		2.1.4	Mahankalchaur	Kathmandu	10	279	135	376.7
							Sub total	3,511.4
	2.2	2.2.1	Baneshwor	Kathmandu	15	770	135	1,559.3
		2.2.2	Baneshwor	Kathmandu	15	872	135	1,765.8
		2.2.3	Baneshwor	Kathmandu	15	1989	135	4,027.7
		2.2.4	Baneshwor	Kathmandu	15	614	135	1,243.4
							Sub total	8,596.1
	2.3	2.3.1(A)	Baneshwor	Kathmandu	15	510	135	1,032.8
		2.3.1(B)	Baneshwor	Kathmandu	15	589	135	1,192.7
							Sub total	2,225.5
	2.4	2.4.1(A)	Baneshwor & Mahankal	Kathmandu	15	514	135	1,040.9
		2.4.1(B)	Baneshwor	Kathmandu	15	477	135	965.9
		2.4.1(C)	Baneshwor	Kathmandu	15	735	135	1,488.4
							Sub total	3,495.2
3	3.1	3.1.1(A)	Baneshwor	Kathmandu	15	415	135	840.4
		3.1.1(B)	Baneshwor	Kathmandu	15	363	135	735.1
		3.1.1(C)	Baneshwor	Kathmandu	15	348	135	704.7
		3.1.2(A)	Baneshwor	Kathmandu	15	503	135	1,018.6
		3.1.2(B)	Baneshwor	Kathmandu	15	610	135	1,235.3
		3.1.2(C)	Baneshwor	Kathmandu	15	456	135	923.4
							Sub total	5,457.4
	3.2	3.2.1(A)	Baneshwor	Kathmandu	15	417	135	844.4
		3.2.1(B)	Baneshwor	Kathmandu	15	287	135	581.2
		3.2.1(C)	Baneshwor	Kathmandu	15	478	135	968.0
		3.2.2(A)	Baneshwor	Kathmandu	15	479	135	970.0
		3.2.2(B)	Baneshwor	Kathmandu	15	484	135	980.1
		3.2.2(C)	Baneshwor	Kathmandu	15	493	135	998.3
							Sub total	5,342.0
	3.3	3.3.1(A)	Baneshwor	Kathmandu	15	403	135	816.1
		3.3.1(B)	Baneshwor	Kathmandu	15	533	135	1,079.3
		3.3.1(C)	Baneshwor	Kathmandu	15	503	135	1,018.6
		3.3.1(D)	Baneshwor	Kathmandu	15	481	135	974.0
		3.3.1(E)	Baneshwor	Kathmandu	15	387	135	783.7
							Sub total	4,671.7
	3.4	3.4.1(A)	Baneshwor	Kathmandu	15	536	135	1,085.4
		3.4.1(B)	Baneshwor	Kathmandu	15	364	135	737.1
							Sub total	1,822.5
	3.5	3.5.1(A)	Baneshwor & Maharajgunj	Kathmandu	15	551	135	1,115.8
		3.5.1(B)	Baneshwor	Kathmandu	15	587	135	1,188.7
		3.5.2	Baneshwor & Maharajgunj	Kathmandu	15	382	135	773.6
							Sub total	3,078.0
4	4.1	4.1.1	Baneshwor	Kathmandu				
		4.1.2	Baneshwor	Kathmandu	15	569	135	1,152.2
							Sub total	1,152.2
	4.2	4.2.1	Tripureshwor	Kathmandu	10	256	135	345.6
		4.2.2	Tripureshwor	Kathmandu	10	520	135	702.0
		4.2.3	Tripureshwor	Kathmandu	10	446	135	602.1
							Sub total	1,649.7

DNI No	DMA	Sub-DMA	Current Branch Area	District	No of users per connection	Estimated Number of Customer	Demand per capita (LPCD)	Estimated Demand (m3/day)
5	5.1	5.1.1	Lalitpur	Lalitpur	10	5,648	135	7,624.8
		5.1.2	Lalitpur	Lalitpur				
		5.1.3	Lalitpur	Lalitpur				
							Sub total	7,624.8
	5.2	5.2.1(A)	Lalitpur	Lalitpur	10	3,617	135	4,883.0
		5.2.1(B)	Lalitpur	Lalitpur				
		5.2.1(C)	Lalitpur	Lalitpur				
		5.2.1(D)	Lalitpur	Lalitpur				
		5.2.2(A)	Lalitpur	Lalitpur				
		5.2.2(B)	Lalitpur	Lalitpur				
		5.2.2(C)	Lalitpur	Lalitpur				
		5.2.2(D)	Lalitpur	Lalitpur				
		5.2.2(E)	Lalitpur	Lalitpur				
		5.2.3(A)	Lalitpur	Lalitpur				
		5.2.3(B)	Lalitpur	Lalitpur				
							Sub total	4,883.0
6	6.1	6.1.1(A)	Lalitpur	Lalitpur	10	3,666	135	4,949.1
		6.1.1(B)	Lalitpur	Lalitpur				
		6.1.2	Lalitpur	Lalitpur				
		6.1.3	Lalitpur	Lalitpur				
							Sub total	4,949.1
	6.2	6.2.1	Lalitpur	Lalitpur	10	4,559	135	6,154.7
		6.2.2	Lalitpur	Lalitpur				
		6.2.3	Lalitpur	Lalitpur				
							Sub total	6,154.7
7	7.1	7.1.1	Maharajgunj	Kathmandu	10	1,549	135	2,091.2
		7.1.2	Chhetrapati	Kathmandu	10	801	135	1,081.4
							Sub total	3,172.5
	7.2	7.2.1(A)	Chhetrapati	Kathmandu	10	2,480	135	3,348.0
		7.2.1(B)	Chhetrapati	Kathmandu				
		7.2.2(A)	Maharajgunj	Kathmandu				
		7.2.2(B)	Maharajgunj	Kathmandu				
		7.2.3	Maharajgunj	Kathmandu				
							Sub total	3,348.0
	7.3	7.3.1(A)	Chhetrapati	Kathmandu	10	3,100	135	4,185.0
		7.3.1(B)	Chhetrapati	Kathmandu				
		7.3.2	Chhetrapati	Kathmandu				
		7.3.3	Maharajgunj	Kathmandu				
							Sub total	4,185.0
	7.4	7.4.1(A)	Chhetrapati	Kathmandu	10	4,475	135	6,041.3
		7.4.1(B)	Chhetrapati	Kathmandu				
		7.4.2(A)	Chhetrapati & Lalitpur	Kathmandu				
		7.4.2(B)	Chhetrapati	Kathmandu				
		7.4.3	Chhetrapati & Maharajgunj	Kathmandu				
		7.4.4	Maharajgunj	Kathmandu				
							Sub total	6,041.3
8	8.1	8.1.1(A)	Lalitpur	Lalitpur	10	3,893	135	5,255.6
		8.1.1(B)	Lalitpur	Lalitpur				
		8.1.2(A)	Lalitpur	Lalitpur				
		8.1.2(B)	Lalitpur	Lalitpur				
		8.1.2(C)	Lalitpur	Lalitpur				
		8.1.3(A)	Lalitpur	Lalitpur				
		8.1.3(B)	Lalitpur	Lalitpur				
							Sub total	5,255.6
	8.2	8.2.1(A)	Lalitpur	Lalitpur	10	2,800	135	3,780.0
		8.2.1(B)	Lalitpur	Lalitpur				
		8.2.1(C)	Lalitpur	Lalitpur				
		8.2.2(A)	Lalitpur	Lalitpur				
		8.2.2(B)	Lalitpur	Lalitpur				
		8.2.2(C)	Lalitpur	Lalitpur				
							Sub total	3,780.0
9	9.1	9.1.1	Baneshwor	Lalitpur	15	799	135	1,618.0
		9.1.2	Baneshwor	Lalitpur	15	1,038	135	2,102.0
		9.1.3	Baneshwor	Lalitpur	15	552	135	1,117.8
							Sub total	4,837.7
	9.2	9.2.1	Baneshwor	Lalitpur	15	742	135	1,502.6
		9.2.2	Baneshwor	Lalitpur	15	630	135	1,275.8
		9.2.3	Baneshwor	Lalitpur	15	676	135	1,368.9
		9.2.4	Baneshwor	Lalitpur	15	406	135	822.2
		9.2.5	Baneshwor	Lalitpur	15	447	135	905.2
		9.2.6	Baneshwor	Lalitpur	15	623	135	1,261.6
		9.2.7	Baneshwor	Lalitpur	15	483	135	978.1
							Sub total	8,114.2
10	10.1	10.1.1	Maharajgunj	Kathmandu	10	480	135	648.0
							Sub total	648.0
	10.2	10.2.1(A)	Chhetrapati	Kathmandu	10	2,671	135	3,605.9
		10.2.1(B)	Chhetrapati	Kathmandu				
		10.2.1(C)	Chhetrapati	Kathmandu				
		10.2.2(A)	Chhetrapati	Kathmandu				
		10.2.2(B)	Chhetrapati	Kathmandu				
		10.2.2(C)	Chhetrapati	Kathmandu				
							Sub total	3,605.9
11	11.1	11.1.1	Tripureshwor	Kathmandu	10	2,075	135	2,801.3
							Sub total	2,801.3
	11.2	11.2.1	Tripureshwor	Kathmandu	10	2,920	135	3,942.0
		11.2.2	Tripureshwor	Kathmandu				
							Sub total	3,942.0
Demo	Demo	Demo	Baneshwor	Kathmandu	15	5,000	135	10,125.0
							Sub total	10,125.0
Total	32					88,184		138,687.5

The table above calculates the water demand in DMAs and the existing Demo Area.

However, since the BDS Reservoir supplies water to areas other than the DMAs, it is necessary to estimate the demand for those areas.

Table 4.1.2 Estimated number of households in the areas except for DMAs and Demo Area

Breakdown of household (connection) for the areas except 32 DMAs

Non DMA Area inside the Ring Road	No. of H.H.	Branch Office
Supply to DNI 7B (Mhepi, Balaju Area)	2,500	Maharajgunj
Supply to DNI 7B (Chauni Area)	3,300	Tripureshwor
Supply to DNI 7B (Tahachal Area)	4,400	Tripureshwor
Supply to DNI 7B (Kimdol, Dallu, Swoyambhu)	3,300	Chhetrapati
Supply to DNI 7C (Lainchaur, Galkopakha, Kapurdhara, Samakhusi, Gongabu)	10,500	Maharajgunj
Supply to DNI 7C (Khursanitar Area)	2,000	Maharajgunj
Supply to DNI 7C (Bishalnagar, Chandol)	7,650	Mahankalchaur
Supply to Kalopur Pilot Area	2,300	Mahankalchaur
Outside the Ring Road	No. of H.H.	
Supply to Tarkeshwor, Banasthali, Dhunge dhara	8,000	Maharajgunj
Supply to Tokha, Dhapasi, Basundhara (outside ringroad)	7,500	Maharajgunj
Supply to Kumari Club, Arcade colony	500	Tripureshwor
Supply to Outside the Ringroad by Chhetrapati	2,000	Chhetrapati
Supply to Kapan, Jorpati	24,701	Mahankalchaur
Supply to Kirtipur Customer except for Tribhuvan University	10,054	Kirtipur
Supply to Kusunti, Bagdol, Nakhu, Nakhipot, Khumaltar, Gwarko, ANFA, Dhapakhel, Dholahiti, Sunakothi	7,395	Lalitpur
Supply to Kaushaltar, Lokanthali, Gatthaghar, Nagadesh, Sintitar, Dhunchepakha, Saraswatikhel, Thimi Core city, New Thimi, Old Thimi, Bappa, Kamerotar, Madhyapur Hospital	16,596	Madhyapur-Thimi
Supply to Kamalbinayak planning, Liwali Planning, Byasi, Bansagopal, Nasamana, Gapali, Tekhacho, Sukuldhoka, Tulachhen, Khiche, Choche, Hanumante Purba, Chundevi, Ghalate, Pandubazar, Shrijananagar, Suryamadhi, Dattatraya, Chyamasingh, Wakupati, Chango road, Mahalaxmi, Bholachhen, Golmadhi, Jagati,	13,560	Bhaktapur

Those values should be revised by the respective branch

After filling in the number of households in the areas Non-DMA and outside the Ring Road, the demand to be allocated to each SRT is calculated as follows:

Table 4.1.3 Estimated water demand in the areas except for DMAs and Demo Area

Breakdown of demand for the areas except for 32 DMAs

No of users per connection	10	persons/connection
Demand per capita	135	L/day/person

	Additional Water Demand except for 32 DMAs (m3/day)							
	Balaju	Kirtipur	Bansbari	Panipokhari	Old Mahnkalchaur	Khumaltar	Tigeni	Katunje
Maharajgunj Branch Area								
Non-DMA area inside the Ring Road	3,375		14,175	2,700				
Outside the Ring Road	10,800		10,125					
Tripureshwor Branch Area								
Non-DMA area inside the Ring Road	4,455	5,940						
Outside the Ring Road		675						
Chhetrapati Branch Area								
Non-DMA area inside the Ring Road	4,455							
Outside the Ring Road	2,700							
Mahankalchaur Branch Area								
Non-DMA area inside the Ring Road					13,433			
Outside the Ring Road					33,346			
Kirtipur Branch Area								
Non-DMA area inside the Ring Road								
Outside the Ring Road		13,573						
Madhyapur-Thimi Branch Area								
Non-DMA area inside the Ring Road								
Outside the Ring Road							22,405	
Lalitpur Branch Area								
Non-DMA area inside the Ring Road								
Outside the Ring Road						9,983		
Bhaktapur Branch Area								
Non-DMA area inside the Ring Road								
Outside the Ring Road								18,306
Total								
Non-DMA area inside the Ring Road	12,285	5,940	14,175	2,700	13,433	0	0	0
Outside the Ring Road	13,500	14,248	10,125	0	33,346	9,983	22,405	18,306

5. Water Receiving Plan from Bulk Distribution System (BDS)

The BDS component will provide water supply to the Kathmandu Metro area using a combination of new water sources developed under Sub-Project 1 of the Melamchi Water Supply Project and other existing water sources.

In order to supply various areas within the Kathmandu Metro area, the new water treatment plant constructed at Sundarijal is the starting point in the water supply network, which will be routed through distribution reservoirs at Mahankalchaur, along the ring road and along the longitudinal route.

The distribution zones, called DMA, are designed to be independent with scattered distribution reservoirs to ensure the stability of water pressure and supply.

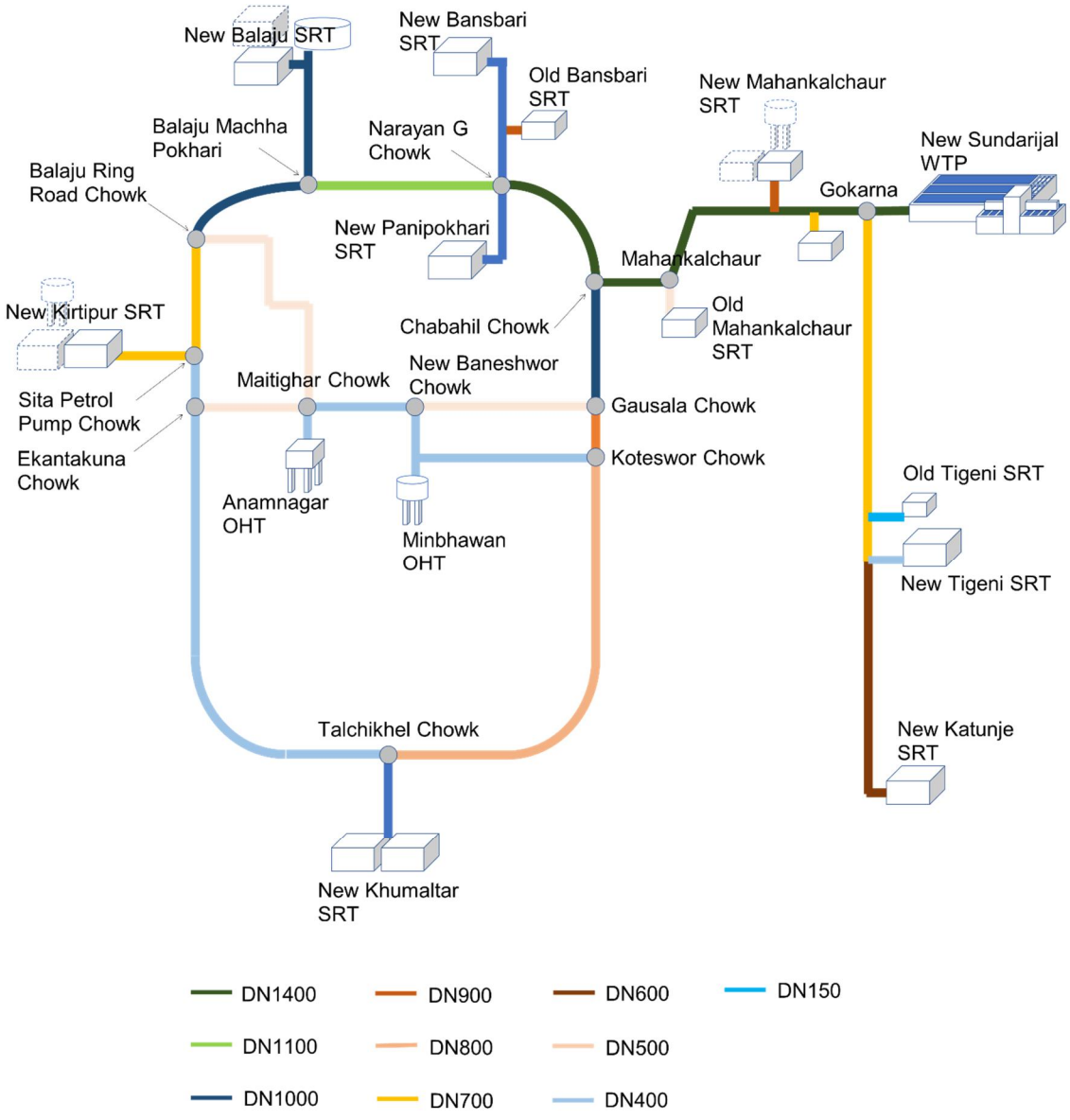


Figure 5.1.1 Schematic Water Supply Network of BDS

The amount of water to be delivered to each Service Reservoir Tank is determined based on the following steps.

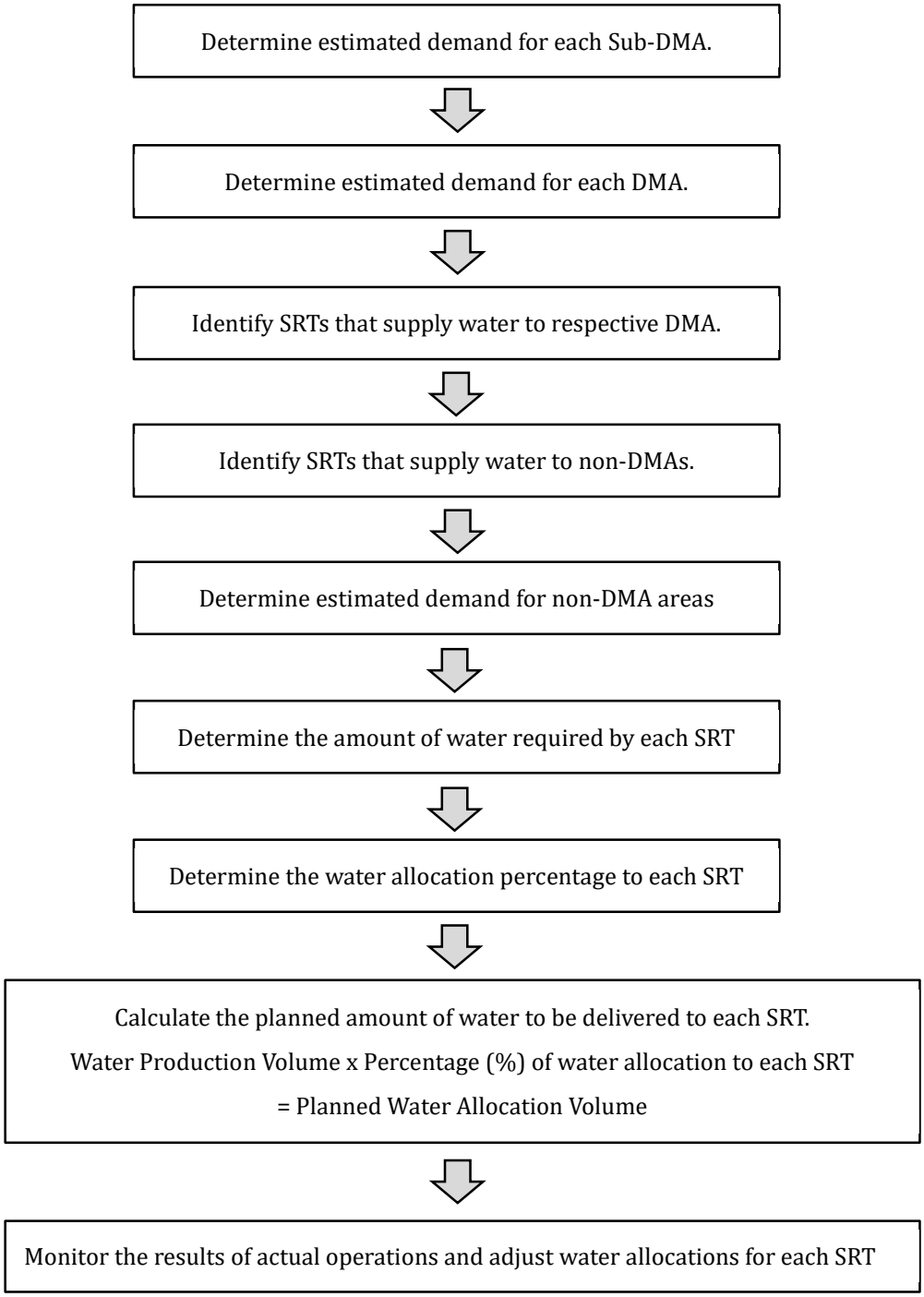


Figure 5.1.2 Steps to determine water allocation for each SRT

Table 5.1.1 Draft Plan of Water Demand and Demand Percentage to each SRT

DMA	Estimated Demand (m3/day)	Demand Percentage (%)	Reservoir
1.1	1,544	0.50	Panipokhari
1.2	3,050	0.99	Panipokhari
1.3	4,390	1.42	Panipokhari
1.4	3,866	1.25	Panipokhari
1.5	1,368	0.44	Panipokhari
2.1	3,511	1.14	New Mahankalchaur
2.2	8,596	2.78	New Mahankalchaur
2.3	2,225	0.72	New Mahankalchaur
2.4	3,495	1.13	New Mahankalchaur
3.1	5,457	1.76	New Mahankalchaur
3.2	5,342	1.73	New Mahankalchaur
3.3	4,672	1.51	New Mahankalchaur
3.4	1,823	0.59	New Mahankalchaur
3.5	3,078	1.00	New Mahankalchaur
4.1	1,152	0.37	Anamnagar
4.2	1,650	0.53	Anamnagar
5.1	7,625	2.47	Khumaltar
5.2	4,883	1.58	Khumaltar
6.1	4,949	1.60	Khumaltar
6.2	6,155	1.99	Khumaltar
7.1	3,173	1.03	Balaju
7.2	3,348	1.08	Balaju
7.3	4,185	1.35	Balaju
7.4	6,041	1.95	Balaju
8.1	5,256	1.70	Khumaltar
8.2	3,780	1.22	Khumaltar
9.1	4,838	1.56	Khumaltar
9.2	8,114	2.62	Khumaltar
10.1	648	0.21	Balaju
10.2	3,606	1.17	Balaju
11.1	2,801	0.91	Kirtipur
11.2	3,942	1.27	Kirtipur
Demo Area	10,125	3.27	Minbhawan
Tribhuvan University (TU)	100	0.03	Kirtipur
Non-DMA within the Ring Road	0	0.00	Anamnagar
Non-DMA within the Ring Road	12,285	3.97	Balaju
Non-DMA within the Ring Road	14,175	4.58	Bansbari
Non-DMA within the Ring Road	0	0.00	Khumaltar
Non-DMA within the Ring Road	5,940	1.92	Kirtipur
Non-DMA within the Ring Road	13,433	4.34	Old Mahankalchaur
Non-DMA within the Ring Road	0	0.00	Minbhawan
Non-DMA within the Ring Road	2,700	0.87	Panipokhari
Outside Ring Road	0	0.00	Arubari
Outside Ring Road	10,125	3.27	Bansbari
Outside Ring Road	13,500	4.37	Balaju
Outside Ring Road	9,983	3.23	Khumaltar
Outside Ring Road	14,248	4.61	Kirtipur
Outside Ring Road	33,346	10.78	Old Mahankalchaur
Outside Ring Road	0	0.00	Panipokhari
Outside Ring Road	22,405	7.25	Tigeni
Outside Ring Road	18,306	5.92	Katunje
Total	309,234	100.0	

Currently, water conduction from the Melamchi River is suspended during the rainy season, so the limited amount of water must be equally distributed according to the estimated demand.

Table 5.1.2 Standard Water Production (Main)

	Dry Season with Melamchi water	Monsoon Season without Melamchi water
Supply to BDS from New Sundarijal WTP	192 MLD	48 MLD
Mahankalchaur WTP with existing water source	16.37 MLD	20.67 MLD
Bansbari WTP with existing water source	10.18 MLD	18.33 MLD
Bode WTP with existing water source	7.90 MLD	8.08 MLD
Total	226.45 MLD	95.08 MLD

Table 5.1.3 Water Production Record 2080/2081

		Mahanlakchaur WTP	Bansbari WTP	Bode WTP
Shrawan	July-August	20.15	22.43	8.91
Bhadra	August-September	25.54	30.96	8.08
Ashwin	September-October	17.00	29.32	8.32
Kartik	October-November	20.80	22.83	8.19
Mangsir	November-December	22.86	10.47	8.15
Paush	December-January	22.80	5.83	8.13
Magh	January-February	13.46	5.43	7.64
Falgun	February-March	15.34	19.34	7.50
Chaitra	March-April	9.73	2.7	7.70
Baishakh	April-May	9.66	4.67	8.00
Jestha	May-June	11.26	1.09	7.55
Ashad	June-July	29.22	7.85	7.55
Daily Average (MLD)		18.15	13.58	7.98
Monsoon season average without operation of Melamchi tunnel (MLD)		20.63	18.33	8.08
Dry season average with operation of Melamchi tunnel (MLD)		16.37	10.18	7.90

Note: The operation of Melamchi tunnel will be suspended from the end-May to the mid-October.

Figure 5.1.4 Water Allocation Plan in Dry Season

Dry Season with Melamchi water

Reservoir	Estimated Demand (m3/day)	Demand Percentage (%)	First Allocation from BDS (m3/day)	Available Water Source (m3/day)			Adjusted Allocation after deduction of available water source (m3/day)		
				Mahankalchaur WTP	Bansbari WTP	Bode WTP	Necessary input from BDS (after deduction of "B")	Reallocation of surplus of water	Final Allocation from BDS
		(P)	(A)	(B)			(C) = (A) - (B)	(D) = [(F)-(G)] x (P)	(E) = (C) + (D)
Anamnagar	2,802	0.91	1,740				1,740	314	2,053
Arubari	0	0.00	0				0	0	0
Balaju (New & Old)	46,786	15.13	29,049				29,049	5,239	34,288
Bansbari (New & Old)	24,300	7.86	15,088		10,180		4,908	2,721	7,629
Khumaltar	55,582	17.97	34,510				34,510	6,224	40,735
Kirtipur	27,031	8.74	16,783				16,783	3,027	19,811
Mahankalchaur (New)	46,779	15.13	29,045				29,045	5,239	34,283
Mahankalchaur (Old)	38,200	12.35	23,718	16,370			7,348	4,278	11,626
Minbhawan	10,125	3.27	6,287				6,287	1,134	7,420
Panipokhari (New & Old)	16,918	5.47	10,504				10,504	1,895	12,399
Tigeni	22,405	7.25	13,911			8,080	5,831	2,509	8,340
Katunje	18,306	5.92	11,366				11,366	2,050	13,416
Total	309,234	100.00	192,000				157,370	34,630	192,000
			(F)				(G)		

Figure 5.1.5 Water Allocation Plan in Monsoon Season

Monsoon Season without Melamchi water

Reservoir	Estimated Demand (m3/day)	Demand Percentage (%)	First Allocation from BDS (m3/day)	Available Water Source (m3/day)			Adjusted Allocation after deduction of available water source (m3/day)		
				Mahankalchaur WTP	Bansbari WTP	Bode WTP	Necessary input from BDS (after deduction of "B")	Reallocation of surplus of water	Final Allocation from BDS
		(P)	(A)	(B)			(C) = (A) - (B)	(D) = [(F)-(G)] x (P)	(E) = (C) + (D)
Anamnagar	2,802	0.91	435				435	119	554
Arubari	0	0.00	0				0	0	0
Balaju (New & Old)	46,786	15.13	7,262				7,262	1,994	9,256
Bansbari (New & Old)	24,300	7.86	3,772		18,330		0	1,036	1,036
Khumaltar	55,582	17.97	8,628				8,628	2,369	10,996
Kirtipur	27,031	8.74	4,196				4,196	1,152	5,348
Mahankalchaur (New)	46,779	15.13	7,261				7,261	1,994	9,255
Mahankalchaur (Old)	38,200	12.35	5,929	20,630			0	1,628	1,628
Minbhawan	10,125	3.27	1,572				1,572	432	2,003
Panipokhari (New & Old)	16,918	5.47	2,626				2,626	721	3,347
Tigeni	22,405	7.25	3,478			7,900	0	955	955
Katunje	18,306	5.92	2,842				2,842	780	3,622
Total	309,234	100.00	48,000				34,821	13,179	48,000
			(F)				(G)		

6. Target of Water Supply Hour, Frequency of Water Supply and Water Supply Volume

[Supply Hour]

2 hours or more per supply day for all DMAs

[Supply Frequency]

Dry Season with Melamchi water:	At least once every 3 days in all DMAs
Monsoon Season without Melamchi water:	At least once every 5 days in all DMAs

[Supply Volume]

The amount of water allocated to each SRT is compared with the estimated demand of each Sub-DMA and other water supply areas to determine the water supply frequency and hours for each area so that water supply is achieved equally in all areas.

Table 6.1.1 Water Supply Plan in Dry Season with Melamchi water (1/2)

Reservoir	Alocated Volume (m3/hour)	Alocated Volume (m3/day)	Supply Area		Estimated Demand (m3/day)	Target Supply Time		Chaitra 2081																														
			DMA	Sub-DMA		Start	End	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7	Day 8	Day 9	Day 10	Day 11	Day 12	Day 13	Day 14	Day 15	Day 16	Day 17	Day 18	Day 19	Day 20	Day 21	Day 22	Day 23	Day 24	Day 25	Day 26	Day 27	Day 28	Day 29	Day 30	Day 31
Anamnagar	86	2,053	4.1	4.1.1	1,152.2	12:00	16:00	√			√			√			√			√			√			√			√			√			√			√
				4.1.2		12:00	16:00	√			√			√			√			√			√			√			√			√			√			√
			4.2	4.2.1	345.6	11:00	20:00	√			√			√			√			√			√			√			√			√			√			√
				4.2.2	702.0	11:00	20:00	√			√			√			√			√			√			√			√			√			√			√
				4.2.3	602.1	11:00	20:00	√			√			√			√			√			√			√			√			√			√			√
			Old Network	1st Day Zone 1		4:00	5:30	√			√			√			√			√			√			√			√			√			√			
				1st Day Zone 2		20:00	21:15	√			√			√			√			√			√			√			√			√			√			
				2nd Day Zone 1		4:00	5:30		√			√			√			√			√			√			√			√			√			√		
				2nd Day Zone 2	0.0	13:00	14:00		√			√			√			√			√			√			√			√			√			√		
				2nd Day Zone 3		20:00	21:00		√			√			√			√			√			√			√			√			√			√		
				3rd Day Zone 1		4:00	5:30			√			√			√			√			√			√			√			√			√			√	
				3rd Day Zone 2		8:00	10:00			√			√			√			√			√			√			√			√			√			√	
				3rd Day Zone 3		17:00	18:00			√			√			√			√			√			√			√			√			√			√	
Arubari	0	0	Outside Ring Road	No Outlet Pipe	0.0			To date, Arubari SRT has no outlet and no supply area.																																
Balaju	1,429	34,288	7.1	7.1.1	2,091.2	17:00	22:00		√			√			√			√			√			√			√			√			√			√		
				7.1.2	1,081.4	17:00	22:00		√			√			√			√			√			√			√			√			√			√		
			7.2	7.2.1(A)	3,348.0	7:00	12:00			√			√			√			√			√			√			√			√			√			√	
				7.2.1(B)		7:00	12:00			√			√			√			√			√			√			√			√			√			√	
				7.2.2(A)		7:00	12:00			√			√			√			√			√			√			√			√			√			√	
				7.2.2(B)		7:00	12:00			√			√			√			√			√			√			√			√			√			√	
				7.2.3		7:00	12:00			√			√			√			√			√			√			√			√			√			√	
			7.3	7.3.1(A)	4,185.0	7:00	12:00	√			√			√			√			√			√			√			√			√			√			√
				7.3.1(B)		7:00	12:00	√			√			√			√			√			√			√			√			√			√			√
				7.3.2		7:00	12:00	√			√			√			√			√			√			√			√			√			√			√
				7.3.3		7:00	12:00	√			√			√			√			√			√			√			√			√			√			√
			7.4	7.4.1(A)	6,041.3	7:00	12:00		√			√			√			√			√			√			√			√			√			√		
				7.4.1(B)		7:00	12:00		√			√			√			√			√			√			√			√			√			√		
				7.4.2(A)		7:00	12:00		√			√			√			√			√			√			√			√			√			√		
				7.4.2(B)		7:00	12:00		√			√			√			√			√			√			√			√			√			√		
				7.4.3		7:00	12:00		√			√			√			√			√			√			√			√			√			√		
				7.4.4		7:00	12:00		√			√			√			√			√			√			√			√			√			√		
			10.1	10.1.1	648.0	12:00	17:00			√			√			√			√			√			√			√			√			√			√
			10.2	10.2.1(A)	3,605.9	17:00	22:00			√			√			√			√			√			√			√			√			√			√
				10.2.1(B)		17:00	22:00			√			√			√			√			√			√			√			√			√			√
				10.2.1(C)		17:00	22:00			√			√			√			√			√			√			√			√			√			√
				10.2.2(A)		17:00	22:00	√			√			√			√			√			√			√			√			√			√			√
				10.2.2(B)		17:00	22:00	√			√			√			√			√			√			√			√			√			√			√
				10.2.2(C)		17:00	22:00	√			√			√			√			√			√			√			√			√			√			√
			Old Network		12,285.0																																		
			Outside Ring Road		13,500.0																																		
Bansbari	318	7,629	Old Network		14,175.0																																		
			Outside Ring Road		10,125.0																																		
Khumaltar	1,697	40,735	5.1	5.1.1	7,624.8	20:00	8:00		√				√				√				√			√			√			√			√			√	
				5.1.2		20:00	8:00		√				√				√				√			√			√			√			√			√	
				5.1.3		20:00	8:00		√				√				√				√			√			√			√			√			√	
			5.2	5.2.1	4,883.0	20:00	8:00				√				√				√			√			√			√			√			√		
				5.2.2		20:00	8:00				√				√				√			√			√			√			√			√		
				5.2.3		20:00	8:00				√				√				√			√			√			√			√			√		
			6.1	6.1.1(A)	4,949.1	6:00	20:00				√				√				√			√			√			√			√			√		
				6.1.1(B)		6:00	20:00				√				√				√			√			√			√			√			√		
				6.1.2		6:00	20:00				√				√				√			√			√			√			√			√		
				6.1.3		6:00	20:00				√				√				√			√			√			√			√			√		
			6.2	6.2.1	6,154.7	17:00	8:00			√				√				√			√			√			√			√			√		
				6.2.2		17:00	8:00			√				√				√			√			√			√			√			√		
				6.2.3		17:00	8:00			√				√				√			√			√			√			√			√		
			8.1	8.1.1	5,255.6	8:00	20:00				√				√				√			√			√			√			√			√	
				8.1.2		20:00	8:00			√				√				√			√			√			√			√			√		
				8.1.3		20:00	8:00			√				√				√			√			√			√			√			√		
			8.2	8.2.1	3,760.0	8:00	20:00				√				√				√			√			√			√			√			√	
				8.2.2		20:00	8:00			√				√				√			√			√			√			√			√		
			9.1	9.1.1	1,618.0	20:00	6:00	√				√			√				√			√			√			√			√			√	
				9.1.2	2,102.0	20:00	6:00	√				√			√				√			√			√			√			√			√	
				9.1.3	1,117.8	20:00	6:00	√				√			√				√			√			√			√			√			√	
			9.2	9.2.1	1,502.6	6:00	20:00		√				√				√			√			√			√			√			√		
				9.2.2	1,275.8	6:00	20:00		√				√				√			√			√			√			√			√		
				9.2.3	1,368.9	6:00	20:00		√				√				√			√			√			√			√			√		
				9.2.4	822.2	6:00	20:00		√				√				√			√			√			√			√			√		
				9.2.5	905.2	6:00	20:00		√				√				√			√			√			√			√			√		
				9.2.6	1,261.6	6:00	20:00		√				√				√			√			√			√			√			√		
				9.2.7	978.1	6:00	20:00		√				√				√			√			√			√			√			√		
			Old Network		0.0			No water supply to old network from Khumaltar SRT																																
			Outside Ring Road	LMC 13,18,14,4	9,983.0	10:00	15:00			√				√				√			√			√			√			√			√			√	
				LMC 15		11:00	16:00	√				√			√				√			√			√			√			√			√		
				LMC 23		16:00	0:00	√				√			√				√			√			√			√			√			√		
				LMC 17,15,23		0:00	12:00		√				√				√				√			√			√			√			√			√	
				LMC 9,17,23		0:00	12:00			√				√				√			√			√			√			√			√				
				LMC 23		0:00	3:00				√				√				√			√			√			√			√			√			
				LMC 15 &14 (pump)		5:00	10:00	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	
				LMC 26 & 27(pump)		10:00	17:00	√	√	√		√	√	√		√	√	√		√	√	√		√	√	√		√	√	√		√	√		√	√		
Kirtipur	825	19,811	11.1	11.1.1	2,801.3	18:00	10:00	√					√				√						√					√				√					√
			11.2	11.2.1	3,942.0	18:00	10:00					√				√				√				√			√				√				√		
				11.2.1		18:00	10:00			√				√				√				√			√			√			√			√			
			TU		100.0	5:30	6:30	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
			Old Network		5,940.0	7:00	17:00			√				√				√				√			√			√				√				√		√
			Outside Ring Road		14,248.0			Twice to thrice a week, one hour each time. Detail is not given																																

Table 6.1.2 Water Supply Plan in Dry Season with Melamchi water (2/2)

Reservoir	Alocated Volume (m3/hour)	Alocated Volume (m3/day)	Supply Area		Estimated Demand (m3/day)	Target Supply Time		Chaitra 2081																															
			DMA	Sub-DMA		Start	End	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7	Day 8	Day 9	Day 10	Day 11	Day 12	Day 13	Day 14	Day 15	Day 16	Day 17	Day 18	Day 19	Day 20	Day 21	Day 22	Day 23	Day 24	Day 25	Day 26	Day 27	Day 28	Day 29	Day 30	Day 31
Mahankalchaur	1,913	45,909	2.1	2.1.1(A)	541.4	6:00	12:00			√			√			√			√			√			√			√			√			√			√	
				2.1.1(B)	584.6	6:00	12:00			√			√			√			√			√			√			√			√			√			√	
				2.1.2(A)	746.6	6:00	12:00			√			√			√			√			√			√			√			√			√			√	
				2.1.2(B)	182.3	6:00	12:00			√			√			√			√			√			√			√			√			√			√	
				2.1.3(A)	685.8	6:00	12:00			√			√			√			√			√			√			√			√			√			√	
				2.1.3(B)	394.2	6:00	12:00			√			√			√			√			√			√			√			√			√			√	
				2.1.4	376.7	6:00	12:00			√			√			√			√			√			√			√			√			√			√	
			2.2	2.2.1	1,559.3	14:00	20:00		√			√			√			√			√		√			√			√			√			√		
				2.2.2	1,765.8	14:00	20:00		√			√			√			√			√		√			√			√			√			√		
				2.2.3	4,027.7	14:00	20:00		√			√			√			√			√		√			√			√			√			√		
				2.2.4	1,243.4	14:00	20:00		√			√			√			√			√		√			√			√			√			√		
			2.3	2.3.1(A)	1,032.8	5:00	12:00	√			√			√			√			√			√			√			√			√			√		√
				2.3.1(B)	1,192.7	5:00	12:00	√			√			√			√			√			√			√			√			√			√		√
			2.4	2.4.1(A)	1,040.9	5:00	12:00			√			√			√			√			√			√			√			√			√			√	
				2.4.1(B)	965.9	5:00	12:00			√			√			√			√			√			√			√			√			√			√	
				2.4.1(C)	1,488.4	5:00	12:00			√			√			√			√			√			√			√			√			√			√	
			3.1	3.1.1(A)	840.4	14:00	21:00			√			√			√			√			√			√			√			√			√			√	
				3.1.1(B)	735.1	14:00	21:00			√			√			√			√			√			√			√			√			√			√	
				3.1.1(C)	704.7	14:00	21:00			√			√			√			√			√			√			√			√			√			√	
				3.1.2(A)	1,018.6	14:00	21:00			√			√			√			√			√			√			√			√			√			√	
				3.1.2(B)	1,235.3	14:00	21:00			√			√			√			√			√			√			√			√			√			√	
				3.1.2(C)	923.4	14:00	21:00			√			√			√			√			√			√			√			√			√			√	
			3.2	3.2.1(A)	844.4	5:00	12:00		√			√			√			√			√		√			√			√			√			√		
				3.2.1(B)	581.2	5:00	12:00		√			√			√			√			√		√			√			√			√			√		
				3.2.1(C)	968.0	5:00	12:00		√			√			√			√			√		√			√			√			√			√		
				3.2.2(A)	970.0	5:00	12:00		√			√			√			√			√		√			√			√			√			√		
				3.2.2(B)	980.1	5:00	12:00		√			√			√			√			√		√			√			√			√			√		
				3.2.2(C)	998.3	5:00	12:00		√			√			√			√			√		√			√			√			√			√		
			3.3	3.3.1(A)	816.1	14:00	20:00	√			√			√			√			√			√			√			√			√			√		√
				3.3.1(B)	1,079.3	14:00	20:00	√			√			√			√			√			√			√			√			√			√		√
				3.3.1(C)	1,018.6	14:00	20:00	√			√			√			√			√			√			√			√			√			√		√
				3.3.1(D)	974.0	14:00	20:00	√			√			√			√			√			√			√			√			√			√		√
				3.3.1(E)	783.7	14:00	20:00	√			√			√			√			√			√			√			√			√			√		√
			3.4	3.4.1(A)	1,085.4	9:00	15:00		√			√			√			√			√		√			√			√			√			√		
				3.4.1(B)	737.1	9:00	15:00		√			√			√			√			√		√			√			√			√			√		
			3.5	3.5.1(A)	1,115.8	9:00	15:00	√			√			√			√			√			√			√			√			√			√		√
				3.5.1(B)	1,188.7	9:00	15:00	√			√			√			√			√			√			√			√			√			√		√
				3.5.2	773.6	9:00	15:00	√			√			√			√			√			√			√			√			√			√		√
			Old Network	Zone 1 a	13,433.0	8:00	10:00			√			√			√			√			√			√			√			√			√			√	
				Zone 1 b		16:00	19:00			√			√			√			√			√			√			√			√			√			√	
				Zone 2		4:00	8:00	√			√			√			√			√			√			√			√			√			√			√
				Zone 3 a		11:00	13:00		√			√			√			√			√		√			√			√			√			√			
				Zone 3 b		13:00	16:00		√			√			√			√			√		√			√			√			√			√			
			Outside Ring Road	Zone 1-gravity	19,846.4	20:00	0:00		√			√			√			√			√		√			√			√			√			√			
				Zone 2-gravity		17:00	20:00		√			√			√			√			√		√			√			√			√			√			
				Zone 3 a-pumping		5:00	4:00	√						√								√						√								√		
				Zone 3 b-pumping		4:00	5:00		√							√							√								√					√		
				Zone 3 c-pumping		5:00	5:00			√							√							√							√							√
				Zone 3 d-pumping		5:00	5:00				√							√							√							√						
				Zone 3 e-pumping		5:00	5:00					√							√							√							√					
				Zone 3 f-pumping		5:00	5:00						√							√							√							√				
				Zone 3 g-pumping		5:00	5:00							√							√							√							√			
Minbhawan	309	7,420	Demo Area		10,125.0	5:00	21:00	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
Panipokhari	517	12,399	1.1	1.1.1	1,544.4	5:00	14:00		√			√			√			√			√			√			√			√			√			√		
				1.1.2		5:00	14:00		√			√			√			√			√			√			√			√			√			√		
				1.1.3		5:00	14:00		√			√			√			√			√			√			√			√			√			√		
			1.2	1.2.1	3,049.7	9:00	16:00			√			√			√			√			√			√			√			√			√		
				1.2.2		9:00	16:00			√			√			√			√			√			√			√			√			√		
				1.2.3(A)		9:00	16:00			√			√			√			√			√			√			√			√			√		
				1.2.3(B)		9:00	16:00			√			√			√			√			√			√			√			√			√		
			1.3	1.3.1	4,390.2	12:00	21:00		√			√			√			√			√		√			√			√			√			√		
				1.3.2(A)		12:00	21:00		√			√			√			√			√		√			√			√			√			√		
				1.3.2(B)		12:00	21:00		√			√			√			√			√		√			√			√			√			√		
				1.3.2(C)		12:00	21:00		√			√			√			√			√		√			√			√			√			√		
			1.4	1.4.1	3,866.4	15:00	21:00	√			√			√			√			√			√			√			√			√			√		√
				1.4.2		15:00	21:00	√			√			√			√			√			√			√			√			√			√		√
			1.5	1.5.1	353.7	5:00	15:00	√			√			√			√			√			√			√			√			√			√		√
				1.5.2	492.8	5:00	15:00	√			√			√			√			√			√			√			√			√			√		√
				1.5.3	521.1	5:00	15:00	√			√			√			√			√			√			√			√			√			√		√
			Old Network		2,700.0																																	
			Outside Ring Road		0.0																																	
Tigeni	348	8,340	Outside Ring Road	1st zone	22,405.0	5:00	4:00	√				√				√				√			√				√			√					√			
				2nd zone		5:00	4:00		√				√			√				√			√				√			√				√			√	
				3rd zone		5:00	4:00			√				√			√				√			√				√			√				√			√
				4th zone		5:00	4:00				√				√			√				√			√				√			√				√		
Katunje	559	13,416	Outside Ring Road	1st zone	18,306.0			Planned to supply, but as of now not supplied																															
				2nd zone		7:00	12:00					√		√										√												√		√
				3rd zone		6:00	9:00		√				√				√				√				√			√				√				√		
				4th zone		11:00	17:00								√			√											√		√							
				5th zone		6:00	9:00				√					√				√				√				√				√				√		
				6th zone		6:00	9:00	√				√				√					√				√				√				√				√	
				7th zone		11:00	17:00					√		√										√												√		√
				8th zone		16:00	19:00		√				√				√				√				√			√				√				√		
				9th zone				Planned to supply, but as of now not supplied																															
				Total	295,733.9																																	

7. Actions to be taken by KUKL

[Indictor 1-3 for achievement of Output 1 activities]

The water distribution plan for maintaining fair supply hour is prepared for the DMAs handed over by KVWSMB

[Indictor 1 for achievement of the Project Purpose]

The water distribution plan for fair water supply is implemented in the DMAs handed over by KVWSMB

7.1 Actions to be taken by Head Office (Operation Division)

In order for KUKL to certify that the Distribution Management Plan has been implemented, the following indicators must be monitored are shown below:

PI-1: Monthly water inflow at each SRT from BDS (Table 7.1.1)

PI-2: Daily water inflow as average at each SRT from BDS (Table 7.1.1)

PI-3: Daily water supply volume as average at each DMA or sub-DMA and the volume per connection (Table 7.1.2)

In addition to those monitoring, the operation division shall take responsibility for daily maintenance of SRTs. The operation division is required to take a record of the following monitoring.

PI-4: Operation and Maintenance Status of each SRT (Table 7.1.3)

Action-1: Allocate the responsible operator (Everyday)

Action-2: Prepare a Standard Operation Procedure (SOP) for each SRT (Everyday)

Action-3: Cleaning work of the inside of valve chambers (2 times per month)

Action-4: Inspection of air valves at the outlet chamber (2 time per month)

Action-5: Cleaning work of the inside of reservoirs (1 time per year)

Action-6: Inspection of the inside of reservoirs (1 time per year)

Action-7: Water quality test (Everyday)

7.2 Actions to be taken by each Branch Office

PI-5: Number of grievances about water supply hour especially the gap between standard supply hour and real supply hour (Table 7.1.4)

Table 7.1.1 Monitoring Record of Water Inflow from BDS

[Monthly Inflow Record]

Reservoir			Result of Monthly Average Inflow (m3/month)														
			Magh 2081	Falgun 2081	Chaitra 2081	Baisakh 2082	Jestha 2082	Asadh 2082	Shrawan 2082	Bhadra 2082	Ashwin 2082	Kartik 2082	Mangsir 2082	Poush 2082	Magh 2082	Falgun 2082	Chaitra 2082
			14-Jan-25	13-Feb-25	14-Mar-25	14-Apr-25	15-May-25	15-Jun-25	17-Jul-25	17-Aug-25	17-Sep-25	18-Oct-25	17-Nov-25	16-Dec-25	15-Jan-26	13-Feb-26	14-Mar-26
			12-Feb-25	13-Mar-25	13-Apr-25	14-May-25	14-Jun-25	16-Jul-25	16-Aug-25	16-Sep-25	17-Oct-25	16-Nov-25	15-Dec-25	14-Jan-26	12-Feb-26	13-Mar-26	13-Apr-26
Anamnagar (Old)			243,189	151,681	48,441												
Arubari (New)			0	0	0												
Balaju (New)			275,515	254,350	255,885												
Balaju (Old)			126,356	254,350	605,031												
Bansbari (New)			0	0	0												
Bansbari (Old)			390,834	296,781	359,052												
Khumaltar (New)			1,226,120	1,178,500	1,243,890												
Kirtipur (New)			360,555	373,419	374,123												
Mahankalchaur (New)			482,733	426,255	462,747												
Mahankalchaur (Old)			492,857	504,062	545,324												
Minbhawan (Old)			298,111	245,057	277,819												
Panipokhari (New)			133,045	115,661	136,821												
Panipokhari (Old)			51,473	40,148	43,056												
Tigeni																	
Katunje																	
Total																	

Monitoring should be done by KUKL Operation Division with SCADA data

[Daily Average Inflow Record]

Reservoir	Standard Flow		Result of Daily Average Inflow (m3/day)														
			Magh 2081	Falgun 2081	Chaitra 2081	Baisakh 2082	Jestha 2082	Asadh 2082	Shrawan 2082	Bhadra 2082	Ashwin 2082	Kartik 2082	Mangsir 2082	Poush 2082	Magh 2082	Falgun 2082	Chaitra 2082
	Monsoon (m3/day)	Dry (m3/day)	14-Jan-25	13-Feb-25	14-Mar-25	14-Apr-25	15-May-25	15-Jun-25	17-Jul-25	17-Aug-25	17-Sep-25	18-Oct-25	17-Nov-25	16-Dec-25	15-Jan-26	13-Feb-26	14-Mar-26
			12-Feb-25	13-Mar-25	13-Apr-25	14-May-25	14-Jun-25	16-Jul-25	16-Aug-25	16-Sep-25	17-Oct-25	16-Nov-25	15-Dec-25	14-Jan-26	12-Feb-26	13-Mar-26	13-Apr-26
Anamnagar (Old)	554	2,053	8,106	5,230	1,563	0	0	0	0	0	0	0	0	0	0	0	0
Arubari (New)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Balaju (New)	9,256	34,288	9,184	8,771	8,254	0	0	0	0	0	0	0	0	0	0	0	0
Balaju (Old)			4,212	8,771	19,517	0	0	0	0	0	0	0	0	0	0	0	0
Bansbari (New)	1,036	7,629	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bansbari (Old)			13,028	10,234	11,582	0	0					0	0	0	0	0	0
Khumaltar (New)	10,996	40,735	40,871	40,638	40,125	0	0					0	0	0	0	0	0
Kirtipur (New)	5,348	19,811	12,019	12,877	12,068	0	0	0	0	0	0	0	0	0	0	0	0
Mahankalchaur (New)	9,255	34,283	16,091	14,698	14,927	0	0	0	0	0	0	0	0	0	0	0	0
Mahankalchaur (Old)	1,628	11,626	16,429	17,381	17,591	0	0	0	0	0	0	0	0	0	0	0	0
Minbhawan (Old)	2,003	7,420	9,937	8,450	8,962	0	0	0	0	0	0	0	0	0	0	0	0
Panipokhari (New)	3,347	12,399	4,435	3,988	4,414	0	0	0	0	0	0	0	0	0	0	0	0
Panipokhari (Old)			1,716	1,384	1,389	0	0	0	0	0	0	0	0	0	0	0	0
Tigeni	955	8,340	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Katunje	3,622	13,416	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	48,000	192,000	136,026	132,423	140,393												

Monitoring should be done by KUKL Operation Division with SCADA data

Table 7.1.2 Monitoring Record of Water Supply Volume by DMA or Sub-DMA wise (1/2)

DMA	Sub-DMA	Current Branch Area	Estimated Number of Customer (Households)	Water Distribution Volume																											
				Magh 2081		Falgun 2081		Chaitra 2081		Baisakh 2082		Jestha 2082		Asadh 2082		Shrawan 2082		Bhadra 2082		Ashwin 2082		Kartik 2082		Mangsir 2082		Poush 2082		Magh 2082		Falgun 2082		Chaitra 2082	
				14-Jan-25	12-Feb-25	13-Feb-25	13-Mar-25	14-Mar-25	13-Apr-25	14-Apr-25	14-May-25	15-May-25	14-Jun-25	15-Jun-25	16-Jul-25	17-Jul-25	16-Aug-25	17-Aug-25	16-Sep-25	17-Sep-25	17-Oct-25	18-Oct-25	16-Nov-25	17-Nov-25	15-Dec-25	16-Dec-25	14-Jan-26	15-Jan-26	12-Feb-26	13-Feb-26	13-Mar-26	14-Mar-26	13-Apr-26
				Supply (m3)	Unit rate (m3/con)	Supply (m3)	Unit rate (m3/con)	Supply (m3)	Unit rate (m3/con)	Supply (m3)	Unit rate (m3/con)	Supply (m3)	Unit rate (m3/con)	Supply (m3)	Unit rate (m3/con)	Supply (m3)	Unit rate (m3/con)	Supply (m3)	Unit rate (m3/con)	Supply (m3)	Unit rate (m3/con)	Supply (m3)	Unit rate (m3/con)	Supply (m3)	Unit rate (m3/con)	Supply (m3)	Unit rate (m3/con)	Supply (m3)	Unit rate (m3/con)	Supply (m3)	Unit rate (m3/con)	Supply (m3)	Unit rate (m3/con)
1.1	1.1.1	Maharajgunj	1,144	23,130	20.2	17,823	15.6	18,376	16.1		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0
	1.1.2	Maharajgunj																															
	1.1.3	Maharajgunj																															
1.2	1.2.1	Maharajgunj	2,259	36,309	16.1	34,179	15.1	39,488	17.5		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0
	1.2.2	Baneshwor																															
	1.2.3(A)	Maharajgunj																															
	1.2.3(B)	Maharajgunj																															
1.3	1.3.1	Tripureshwor	3,252	27,054	8.3	22,447	6.9	23,866	7.3		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0
	1.3.2(A)	Tripureshwor																															
	1.3.2(B)	Tripureshwor																															
	1.3.2(C)	Tripureshwor																															
1.4	1.4.1	Tripureshwor	2,864	17,970	6.3	16,712	5.8	12,320	4.3		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0
	1.4.2	Tripureshwor																															
1.5	1.5.1	Tripureshwor	1,013	63,943	63.1	49,928	49.3	60,112	59.3		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0
	1.5.2	Tripureshwor																															
	1.5.3	Tripureshwor																															
2.1	2.1.1(A)	Mahankalchaur	2,601	39,700	15.3	42,130	16.2	49,275	18.9		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0
	2.1.1(B)	Maharajgunj & Mahankalchaur																															
	2.1.2(A)	Mahankalchaur																															
	2.1.2(B)	Mahankalchaur																															
	2.1.3(A)	Mahankalchaur																															
	2.1.3(B)	Mahankalchaur																															
	2.1.4	Mahankalchaur																															
2.2	2.2.1	Baneshwor	4,245	70,338	16.6	60,232	14.2	72,317	17.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0
	2.2.2	Baneshwor																															
	2.2.3	Baneshwor																															
	2.2.4	Baneshwor																															
2.3	2.3.1(A)	Baneshwor	1,099	19,828					24.8		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0
	2.3.1(B)	Baneshwor																															
2.4	2.4.1(A)	Baneshwor & Mahankalchaur	1,726			27,834	16.1	32,477	18.8		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0
	2.4.1(B)	Baneshwor																															
	2.4.1(C)	Baneshwor																															
3.1	3.1.1(A)	Baneshwor	2,695	71,792	26.6	49,277	18.3	45,562	16.9		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0
	3.1.1(B)	Baneshwor																															
	3.1.1(C)	Baneshwor																															
	3.1.2(A)	Baneshwor																															
	3.1.2(B)	Baneshwor																															
	3.1.2(C)	Baneshwor																															
3.2	3.2.1(A)	Baneshwor	2,638	2,548	1.0	28,749	10.9	38,872	14.7		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0
	3.2.1(B)	Baneshwor																															
	3.2.1(C)	Baneshwor																															
	3.2.2(A)	Baneshwor																															
	3.2.2(B)	Baneshwor																															
	3.2.2(C)	Baneshwor																															
3.3	3.3.1(A)	Baneshwor	2,307	27,987	12.1	40,333	17.5	19,640	8.5		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0
	3.3.1(B)	Boncshwor																															
	3.3.1(C)	Baneshwor																															
	3.3.1(D)	Baneshwor																															
	3.3.1(E)	Baneshwor																															
3.4	3.4.1(A)	Baneshwor	900	30,960	34.4	19,810	22.0	24,256	27.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0
	3.4.1(B)	Baneshwor																															
3.5	3.5.1(A)	Baneshwor & Maharajgunj	1,520	35,633	23.4	26,266	17.3	31,015	20.4		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0
	3.5.1(B)	Baneshwor																															
	3.5.2	Baneshwor & Maharajgunj																															
4.1	4.1.1	Baneshwor			#DIV/0!		#DIV/0!		#DIV/0!		#DIV/0!		#DIV/0!		#DIV/0!		#DIV/0!		#DIV/0!		#DIV/0!		#DIV/0!		#DIV/0!		#DIV/0!		#DIV/0!		#DIV/0!		#DIV/0!
	4.1.2	Baneshwor	569	11,425	20.1	11,839	20.8	13,667	24.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0	
4.2	4.2.1	Tripureshwor	1,222	14,590	11.9	17,333	14.2	23,496	19.2		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0	
	4.2.2	Tripureshwor																															
	4.2.3	Tripureshwor																															
5.1	5.1.1	Lalitpur	5,648	149,110	26.4	129,875	23.0	139,824	24.8		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0	
	5.1.2	Lalitpur																															
	5.1.3	Lalitpur																															
5.2	5.2.1(A)	Lalitpur	3,617	91,805	25.4	87,712	24.2	90,045	24.9		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0	
	5.2.1(B)	Lalitpur																															
	5.2.1(C)	Lalitpur																															
	5.2.1(D)	Lalitpur																															
	5.2.2(A)	Lalitpur																															
	5.2.2(B)	Lalitpur																															
	5.2.2(C)	Lalitpur																															
	5.2.2(D)	Lalitpur																															
	5.2.2(E)	Lalitpur																															
	5.2.3(A)	Lalitpur																															
	5.2.3(B)	Lalitpur																															
6.1	6.1.1(A)	Lalitpur	3,666		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0	
	6.1.1(B)	Lalitpur																															
	6.1.2	Lalitpur																															
	6.1.3	Lalitpur																															
6.2	6.2.1	Lalitpur	4,559	23,867	5.2	11,579	2.5	10,306	2.3		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0	
	6.2.2	Lalitpur																															
	6.2.3	Lalitpur																															
7.1	7.1.1	Maharajgunj	2,350	43,885	18.7	35,071	14.9	37,567	16.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0	
	7.1.2	Chhetrapati																															
7.2	7.2.1(A)	Chhetrapati	2,480	25,119	10.1	34,183	13.8	42,795	17.3		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0	
	7.2.1(B)	Chhetrapati																															
	7.2.2(A)	Maharajgunj																															
	7.2.2(B)	Maharajgunj																															
	7.2.3	Maharajgunj																															
7.3	7.3.1(A)	Chhetrapati	3,100	23,155	7.5	20,027	6.5	33,864	10.9		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0	
	7.3.1(B)	Chhetrapati																															
	7.3.2	Chhetrapati																															
	7.3.3	Maharajgunj																															
7.4	7.4.1(A)	Chhetrapati	4,475	52,584	11.8	57,202	12.8	48,625	10.9		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0	
	7.4.1(B)	Chhetrapati																															
	7.4.2(A)	Chhetrapati & Lalitpur																															
	7.4.2(B)	Chhetrapati																															
	7.4.3	Chhetrapati & Maharajgunj																															
	7.4.4	Maharajgunj																															

Supply volume per connection

Supply volume

Table 7.1.2 Monitoring Record of Water Supply Volume by DMA or Sub-DMA wise (2/2)

DMA	Sub-DMA	Current Branch Area	Estimated Number of Customer (Households)	Water Distnbution Volume																									
				Magh 2081		Falgun 2081		Chaitra 2081		Baisakh 2082		Jestha 2082		Asadh 2082		Shrawan 2082		Bhadra 2082		Ashwin 2082		Kartik 2082		Mangsir 2082		Poush 2082		Magh 2082		Falgun 2082		Chaitra 2082	
				14-Jan-25	12-Feb-25	13-Feb-25	13-Mar-25	14-Mar-25	13-Apr-25	14-Apr-25	14-May-25	15-May-25	14-Jun-25	15-Jun-25	16-Jul-25	17-Jul-25	16-Aug-25	17-Aug-25	16-Sep-25	17-Sep-25	17-Oct-25	18-Oct-25	16-Nov-25	17-Nov-25	15-Dec-25	16-Dec-25	14-Jan-26	15-Jan-26	12-Feb-26	13-Feb-26	13-Mar-26	14-Mar-26	13-Apr-26
				Supply (m3)	Unit rate (m3/con)	Supply (m3)	Unit rate (m3/con)	Supply (m3)	Unit rate (m3/con)	Supply (m3)	Unit rate (m3/con)	Supply (m3)	Unit rate (m3/con)	Supply (m3)	Unit rate (m3/con)	Supply (m3)	Unit rate (m3/con)	Supply (m3)	Unit rate (m3/con)	Supply (m3)	Unit rate (m3/con)	Supply (m3)	Unit rate (m3/con)	Supply (m3)	Unit rate (m3/con)	Supply (m3)	Unit rate (m3/con)	Supply (m3)	Unit rate (m3/con)	Supply (m3)	Unit rate (m3/con)	Supply (m3)	Unit rate (m3/con)
8.1	8.1.1(A)	Lalitpur	3,893	263,410	67.7	270,631	69.5	268,172	68.9		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0
	8.1.1(B)	Lalitpur																														
	8.1.2(A)	Lalitpur																														
	8.1.2(B)	Lalitpur																														
	8.1.2(C)	Lalitpur																														
	8.1.3(A)	Lalitpur																														
	8.1.3(B)	Lalitpur																														
8.2	8.2.1(A)	Lalitpur	2,800	119,524	42.7	109,275	39.0	111,647	39.9		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0
	8.2.1(B)	Lalitpur																														
	8.2.1(C)	Lalitpur																														
	8.2.2(A)	Lalitpur																														
	8.2.2(B)	Lalitpur																														
	8.2.2(C)	Lalitpur																														
9.1	9.1.1	Lalitpur	2,389	104,245	43.6	98,977	41.4	123,717	51.8		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0
	9.1.2	Lalitpur																														
	9.1.3	Lalitpur																														
9.2	9.2.1	Lalitpur	4,007	119,291	29.8	90,996	22.7	108,721	27.1		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0
	9.2.2	Lalitpur																														
	9.2.3	Lalitpur																														
	9.2.4	Lalitpur																														
	9.2.5	Lalitpur																														
	9.2.6	Lalitpur																														
	9.2.7	Lalitpur																														
10.1	10.1.1	Maharajgunj	480	8,876	18.5	8,865	18.5	8,118	16.9		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0
10.2	10.2.1(A)	Chhetrapati	2,671	58,018	21.7	53,190	19.9	55,263	20.7		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0
	10.2.1(B)	Chhetrapati																														
	10.2.1(C)	Chhetrapati																														
	10.2.2(A)	Chhetrapati																														
	10.2.2(D)	Chhetrapati																														
	10.2.2(C)	Chhetrapati																														
11.1	11.1.1	Tripureshwor	2,075	43,519	21.0	43,844	21.1	52,565	25.3		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0
11.2	11.2.1	Tripureshwor	2,920	40,530	13.9	43,774	15.0	40,495	13.9		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0
	11.2.2	Tripureshwor																														
11.3								45,190																								
Demo	Demo	Baneshwor	5,000		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0
			88,184	1,685,523.0		1,578,599.0		1,748,861.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0	

Table 7.1.3 Monitoring Record of Operation & Maintenance of SRTs (1/2)

Reservoir	No. of action	Detail of action	Frequency	Record of Operation & Maintenance of SRT														
				Magh 2081	Falgun 2081	Chaitra 2081	Baisakh 2082	Jestha 2082	Asadh 2082	Shrawan 2082	Bhadra 2082	Ashwin 2082	Kartik 2082	Mangsir 2082	Poush 2082	Magh 2082	Falgun 2082	Chaitra 2082
				14-Jan-25	13-Feb-25	14-Mar-25	14-Apr-25	15-May-25	15-Jun-25	17-Jul-25	17-Aug-25	17-Sep-25	18-Oct-25	17-Nov-25	16-Dec-25	15-Jan-26	13-Feb-26	14-Mar-26
				12-Feb-25	13-Mar-25	13-Apr-25	14-May-25	14-Jun-25	16-Jul-25	16-Aug-25	16-Sep-25	17-Oct-25	16-Nov-25	15-Dec-25	14-Jan-26	12-Feb-26	13-Mar-26	13-Apr-26
Anamnagar (Old)																		
	Action-1	Allocation of Operator	Everyday															
	Action-2	SOP based operation	Everyday															
	Action-3	Cleaning work of valve chamber	2 times / year															
	Action-4	Inspection of air valve at outlet	1 time / month															
	Action-5	Cleaning work of the inside of reservoir	1 time / year															
	Action-6	Inspection of the inside of reservoir	1 time / year															
	Action-7	Water quality test	Everyday															
Arubari (New)																		
	Action-1	Allocation of Operator	Everyday															
	Action-2	SOP based operation	Everyday															
	Action-3	Cleaning work of valve chamber	2 times / year															
	Action-4	Inspection of air valve at outlet	1 time / month															
	Action-5	Cleaning work of the inside of reservoir	1 time / year															
	Action-6	Inspection of the inside of reservoir	1 time / year															
	Action-7	Water quality test	Everyday															
Balaju (New)																		
	Action-1	Allocation of Operator	Everyday															
	Action-2	SOP based operation	Everyday															
	Action-3	Cleaning work of valve chamber	2 times / year															
	Action-4	Inspection of air valve at outlet	1 time / month															
	Action-5	Cleaning work of the inside of reservoir	1 time / year															
	Action-6	Inspection of the inside of reservoir	1 time / year															
	Action-7	Water quality test	Everyday															
Balaju (Old)																		
	Action-1	Allocation of Operator	Everyday															
	Action-2	SOP based operation	Everyday															
	Action-3	Cleaning work of valve chamber	2 times / year															
	Action-4	Inspection of air valve at outlet	1 time / month															
	Action-5	Cleaning work of the inside of reservoir	1 time / year															
	Action-6	Inspection of the inside of reservoir	1 time / year															
	Action-7	Water quality test	Everyday															
Bansbari (New)																		
	Action-1	Allocation of Operator	Everyday															
	Action-2	SOP based operation	Everyday															
	Action-3	Cleaning work of valve chamber	2 times / year															
	Action-4	Inspection of air valve at outlet	1 time / month															
	Action-5	Cleaning work of the inside of reservoir	1 time / year															
	Action-6	Inspection of the inside of reservoir	1 time / year															
	Action-7	Water quality test	Everyday															
Bansbari (Old)																		
	Action-1	Allocation of Operator	Everyday															
	Action-2	SOP based operation	Everyday															
	Action-3	Cleaning work of valve chamber	2 times / year															
	Action-4	Inspection of air valve at outlet	1 time / month															
	Action-5	Cleaning work of the inside of reservoir	1 time / year															
	Action-6	Inspection of the inside of reservoir	1 time / year															
	Action-7	Water quality test	Everyday															
Khumaltar (New)																		
	Action-1	Allocation of Operator	Everyday															
	Action-2	SOP based operation	Everyday															
	Action-3	Cleaning work of valve chamber	2 times / year															
	Action-4	Inspection of air valve at outlet	1 time / month															
	Action-5	Cleaning work of the inside of reservoir	1 time / year															
	Action-6	Inspection of the inside of reservoir	1 time / year															
	Action-7	Water quality test	Everyday															
Kirtipur (New)																		
	Action-1	Allocation of Operator	Everyday															
	Action-2	SOP based operation	Everyday															
	Action-3	Cleaning work of valve chamber	2 times / year															
	Action-4	Inspection of air valve at outlet	1 time / month															
	Action-5	Cleaning work of the inside of reservoir	1 time / year															
	Action-6	Inspection of the inside of reservoir	1 time / year															
	Action-7	Water quality test	Everyday															
Mahankalchaur (New)																		
	Action-1	Allocation of Operator	Everyday															
	Action-2	SOP based operation	Everyday															
	Action-3	Cleaning work of valve chamber	2 times / year															
	Action-4	Inspection of air valve at outlet	1 time / month															
	Action-5	Cleaning work of the inside of reservoir	1 time / year															
	Action-6	Inspection of the inside of reservoir	1 time / year															
	Action-7	Water quality test	Everyday															

Monitoring should be done by KUKL Operation Division.
"Done" or "Not done"

Table 7.1.3 Monitoring Record of Operation & Maintenance of SRTs (2/2)

Reservoir	No. of action	Detail of action	Frequency	Record of Operation & Maintenance of SRT													
				Magh 2081	Falgun 2081	Chaitra 2081	Baisakh 2082	Jestha 2082	Asadh 2082	Shrawan 2082	Bhadra 2082	Ashwin 2082	Kartik 2082	Mangsir 2082	Poush 2082	Magh 2082	Falgun 2082	Chaitra 2082
				14-Jan-25	13-Feb-25	14-Mar-25	14-Apr-25	15-May-25	15-Jun-25	17-Jul-25	17-Aug-25	17-Sep-25	18-Oct-25	17-Nov-25	16-Dec-25	15-Jan-26	13-Feb-26	14-Mar-26
				12-Feb-25	13-Mar-25	13-Apr-25	14-May-25	14-Jun-25	16-Jul-25	16-Aug-25	16-Sep-25	17-Oct-25	16-Nov-25	15-Dec-25	14-Jan-26	12-Feb-26	13-Mar-26	13-Apr-26
Mahankalchaur (Old)																		
	Action-1	Allocation of Operator	Everyday															
	Action-2	SOP based operation	Everyday															
	Action-3	Cleaning work of valve chamber	2 times / year															
	Action-4	Inspection of air valve at outlet	1 time / month															
	Action-5	Cleaning work of the inside of reservoir	1 time / year															
	Action-6	Inspection of the inside of reservoir	1 time / year															
	Action-7	Water quality test	Everyday															
Minbhawan (Old)																		
	Action-1	Allocation of Operator	Everyday															
	Action-2	SOP based operation	Everyday															
	Action-3	Cleaning work of valve chamber	2 times / year															
	Action-4	Inspection of air valve at outlet	1 time / month															
	Action-5	Cleaning work of the inside of reservoir	1 time / year															
	Action-6	Inspection of the inside of reservoir	1 time / year															
	Action-7	Water quality test	Everyday															
Panipokhari (New)																		
	Action-1	Allocation of Operator	Everyday															
	Action-2	SOP based operation	Everyday															
	Action-3	Cleaning work of valve chamber	2 times / year															
	Action-4	Inspection of air valve at outlet	1 time / month															
	Action-5	Cleaning work of the inside of reservoir	1 time / year															
	Action-6	Inspection of the inside of reservoir	1 time / year															
	Action-7	Water quality test	Everyday															
Panipokhari (Old)																		
	Action-1	Allocation of Operator	Everyday															
	Action-2	SOP based operation	Everyday															
	Action-3	Cleaning work of valve chamber	2 times / year															
	Action-4	Inspection of air valve at outlet	1 time / month															
	Action-5	Cleaning work of the inside of reservoir	1 time / year															
	Action-6	Inspection of the inside of reservoir	1 time / year															
	Action-7	Water quality test	Everyday															
Tigeni																		
	Action-1	Allocation of Operator	Everyday															
	Action-2	SOP based operation	Everyday															
	Action-3	Cleaning work of valve chamber	2 times / year															
	Action-4	Inspection of air valve at outlet	1 time / month															
	Action-5	Cleaning work of the inside of reservoir	1 time / year															
	Action-6	Inspection of the inside of reservoir	1 time / year															
	Action-7	Water quality test	Everyday															
Katunje																		
	Action-1	Allocation of Operator	Everyday															
	Action-2	SOP based operation	Everyday															
	Action-3	Cleaning work of valve chamber	2 times / year															
	Action-4	Inspection of air valve at outlet	1 time / month															
	Action-5	Cleaning work of the inside of reservoir	1 time / year															
	Action-6	Inspection of the inside of reservoir	1 time / year															
	Action-7	Water quality test	Everyday															

Monitoring should be done by KUKL Operation Division.
"Done" or "Not done"

Table 7.1.4 Monitoring Record of Grievances about Water Supply Hour (1/2)

DMA	Sub-DMA	Current Branch Area	Target Supply Hour		No. of Grievance about Irregular Supply Hour																											
					Magh 2081		Falgun 2081		Chaitra 2081		Baisakh 2082		Jestha 2082		Asadh 2082		Shrawan 2082		Bhadra 2082		Ashwin 2082		Kartik 2082		Mangsir 2082		Poush 2082		Magh 2082		Falgun 2082		Chaitra 2082	
					14-Jan-25	12-Feb-25	13-Feb-25	13-Mar-25	14-Mar-25	13-Apr-25	14-Apr-25	14-May-25	15-May-25	14-Jun-25	15-Jun-25	16-Jul-25	17-Jul-25	16-Aug-25	17-Aug-25	16-Sep-25	17-Sep-25	17-Oct-25	18-Oct-25	16-Nov-25	17-Nov-25	15-Dec-25	16-Dec-25	14-Jan-26	15-Jan-26	12-Feb-26	13-Feb-26	13-Mar-26	14-Mar-26	13-Apr-26
			Start Time	End Time	Received	Attended																										
1.1	1.1.1	Maharajgunj	5:00	14:00																												
1.1	1.1.2	Maharajgunj	5:00	14:00																												
1.1	1.1.3	Maharajgunj	5:00	14:00																												
1.2	1.2.1	Maharajgunj	9:00	16:00																												
1.2	1.2.2	Baneshwor	9:00	16:00																												
1.2	1.2.3(A)	Maharajgunj	9:00	16:00																												
1.2	1.2.3(B)	Maharajgunj	9:00	16:00																												
1.3	1.3.1	Tripureshwor	12:00	21:00																												
1.3	1.3.2(A)	Tripureshwor	12:00	21:00																												
1.3	1.3.2(B)	Tripureshwor	12:00	21:00																												
1.3	1.3.2(C)	Tripureshwor	12:00	21:00																												
1.4	1.4.1	Tripureshwor	15:00	21:00																												
1.4	1.4.2	Tripureshwor	15:00	21:00																												
1.5	1.5.1	Tripureshwor	5:00	15:00																												
1.5	1.5.2	Tripureshwor	5:00	15:00																												
1.5	1.5.3	Tripureshwor	5:00	15:00																												
2.1	2.1.1(A)	Mahankalchaur	6:00	12:00																												
2.1	2.1.1(B)	Maharajgunj	6:00	12:00																												
2.1	2.1.1(B)	Mahankal	6:00	12:00																												
2.1	2.1.2(A)	Mahankalchaur	6:00	12:00																												
2.1	2.1.2(B)	Mahankalchaur	6:00	12:00																												
2.1	2.1.3(A)	Mahankalchaur	6:00	12:00																												
2.1	2.1.3(B)	Mahankalchaur	6:00	12:00																												
2.1	2.1.4	Mahankalchaur	6:00	12:00																												
2.2	2.2.1	Baneshwor	14:00	20:00																												
2.2	2.2.2	Baneshwor	14:00	20:00																												
2.2	2.2.3	Baneshwor	14:00	20:00																												
2.2	2.2.4	Baneshwor	14:00	20:00																												
2.3	2.3.1(A)	Baneshwor	5:00	12:00																												
2.3	2.3.1(B)	Baneshwor	5:00	12:00																												
2.4	2.4.1(A)	Baneshwor	5:00	12:00																												
2.4	2.4.1(A)	Mahankal	5:00	12:00																												
2.4	2.4.1(B)	Baneshwor	5:00	12:00																												
2.4	2.4.1(C)	Baneshwor	5:00	12:00																												
3.1	3.1.1(A)	Baneshwor	14:00	21:00																												
3.1	3.1.1(B)	Baneshwor	14:00	21:00																												
3.1	3.1.1(C)	Baneshwor	14:00	21:00																												
3.1	3.1.2(A)	Baneshwor	14:00	21:00																												
3.1	3.1.2(B)	Baneshwor	14:00	21:00																												
3.1	3.1.2(C)	Baneshwor	14:00	21:00																												
3.2	3.2.1(A)	Baneshwor	5:00	12:00																												
3.2	3.2.1(B)	Baneshwor	5:00	12:00																												
3.2	3.2.1(C)	Baneshwor	5:00	12:00																												
3.2	3.2.2(A)	Baneshwor	5:00	12:00																												
3.2	3.2.2(B)	Baneshwor	5:00	12:00																												
3.2	3.2.2(C)	Baneshwor	5:00	12:00																												
3.3	3.3.1(A)	Baneshwor	14:00	20:00																												
3.3	3.3.1(B)	Baneshwor	14:00	20:00																												
3.3	3.3.1(C)	Baneshwor	14:00	20:00																												
3.3	3.3.1(D)	Baneshwor	14:00	20:00																												
3.3	3.3.1(E)	Baneshwor	14:00	20:00																												
3.4	3.4.1(A)	Baneshwor	9:00	15:00																												
3.4	3.4.1(B)	Baneshwor	9:00	15:00																												
3.5	3.5.1(A)	Baneshwor	9:00	15:00																												
3.5	3.5.1(A)	Maharajgunj	9:00	15:00																												
3.5	3.5.1(B)	Baneshwor	9:00	15:00																												
3.5	3.5.2	Baneshwor	9:00	15:00																												
3.5	3.5.2	Maharajgunj	9:00	15:00																												
4.1	4.1.1	Baneshwor	12:00	16:00																												
4.1	4.1.2	Baneshwor	12:00	16:00																												
4.2	4.2.1	Tripureshwor	11:00	20:00																												
4.2	4.2.2	Tripureshwor	11:00	20:00																												
4.2	4.2.3	Tripureshwor	11:00	20:00																												
5.1	5.1.1	Lalitpur	20:00	8:00																												
5.1	5.1.2	Lalitpur	20:00	8:00																												
5.1	5.1.3	Lalitpur	20:00	8:00																												
5.2	5.2.1(A)	Lalitpur	20:00	8:00																												
5.2	5.2.1(B)	Lalitpur	20:00	8:00																												
5.2	5.2.1(C)	Lalitpur	20:00	8:00																												
5.2	5.2.1(D)	Lalitpur	20:00	8:00																												
5.2	5.2.2(A)	Lalitpur	20:00	8:00																												
5.2	5.2.2(B)	Lalitpur	20:00	8:00																												
5.2	5.2.2(C)	Lalitpur	20:00	8:00																												
5.2	5.2.2(D)	Lalitpur	20:00	8:00																												
5.2	5.2.2(E)	Lalitpur	20:00	8:00																												
5.2	5.2.3(A)	Lalitpur	20:00	8:00																												
5.2	5.2.3(B)	Lalitpur	20:00	8:00																												
6.1	6.1.1(A)	Lalitpur	6:00	20:00																												
6.1	6.1.1(B)	Lalitpur	6:00	20:00																												
6.1	6.1.2	Lalitpur	6:00	20:00																												
6.1	6.1.3	Lalitpur	6:00	20:00																												
6.2	6.2.1	Lalitpur	17:00	8:00																												
6.2	6.2.2	Lalitpur	17:00	8:00																												
6.2	6.2.3	Lalitpur	17:00	8:00																												
7.1	7.1.1	Maharajgunj	17:00	22:00																												
7.1	7.1.2	Chhetrapati	17:00	22:00																												
7.2	7.2.1(A)	Chhetrapati	7:00	12:00																												
7.2	7.2.1(B)	Chhetrapati	7:00	12:00																												
7.2	7.2.2(A)	Maharajgunj	7:00	12:00																												
7.2	7.2.2(B)	Maharajgunj	7:00	12:00																												
7.2	7.2.3	Maharajgunj	7:00	12:00																												
7.3	7.3.1(A)	Chhetrapati	7:00	12:00																												
7.3	7.3.1(B)	Chhetrapati	7:00	12:00																												
7.3	7.3.2	Chhetrapati	7:00	12:00																												
7.3	7.3.3	Maharajgunj	7:00	12:00																												
7.4	7.4.1(A)	Chhetrapati	7:00	12:00																												
7.4	7.4.1(B)	Chhetrapati	7:00	12:00																												
7.4	7.4.2(A)	Chhetrapati	7:00	12:00																												
7.4	7.4.2(A)	Lalitpur	7:00	12:00																												
7.4	7.4.2(B)	Chhetrapati	7:00	12:00																												
7.4	7.4.3	Chhetrapati	7:00	12:00																												
7.4	7.4.3	Maharajgunj	7:00	12:00																												
7.4	7.4.4	Maharajgunj	7:00	12:00																												

Monitoring should be done by KUKL Branch Office
Only
"Number of grievance received about water supply hour"
"Number of attended grievance"

Table 7.1.4 Monitoring Record of Grievances about Water Supply Hour (2/2)

DMA	Sub-DMA	Current Branch Area	Target Supply Hour		No. of Grievance about Irregular Supply Hour																											
					Magh 2081		Falgun 2081		Chaitra 2081		Baisakh 2082		Jestha 2082		Asadh 2082		Shrawan 2082		Bhadra 2082		Ashwin 2082		Kartik 2082		Mangsir 2082		Poush 2082		Magh 2082		Falgun 2082		Chaitra 2082	
					14-Jan-25	12-Feb-25	13-Feb-25	13-Mar-25	14-Mar-25	13-Apr-25	14-Apr-25	14-May-25	15-May-25	14-Jun-25	15-Jun-25	16-Jul-25	17-Jul-25	16-Aug-25	17-Aug-25	16-Sep-25	17-Sep-25	17-Oct-25	18-Oct-25	16-Nov-25	17-Nov-25	15-Dec-25	16-Dec-25	14-Jan-26	15-Jan-26	12-Feb-26	13-Feb-26	13-Mar-26	14-Mar-26	13-Apr-26
			Start Time	End Time	Received	Attended																											
8.1	8.1.1	Lalitpur	8:00	20:00																													
8.1	8.1.2	Lalitpur	20:00	8:00																													
8.1	8.1.3	Lalitpur	20:00	8:00																													
8.2	8.2.1(A)	Lalitpur	17:00	8:00																													
8.2	8.2.1(B)	Lalitpur	17:00	8:00																													
8.2	8.2.1(C)	Lalitpur	17:00	8:00																													
8.2	8.2.2(A)	Lalitpur	17:00	8:00																													
8.2	8.2.2(B)	Lalitpur	17:00	8:00																													
8.2	8.2.2(C)	Lalitpur	17:00	8:00																													
9.1	9.1.1	Lalitpur	20:00	6:00																													
9.1	9.1.2	Lalitpur	20:00	6:00																													
9.1	9.1.3	Lalitpur	20:00	6:00																													
9.2	9.2.1	Lalitpur	6:00	20:00																													
9.2	9.2.2	Lalitpur	6:00	20:00																													
9.2	9.2.3	Lalitpur	6:00	20:00																													
9.2	9.2.4	Lalitpur	6:00	20:00																													
9.2	9.2.5	Lalitpur	6:00	20:00																													
9.2	9.2.6	Lalitpur	6:00	20:00																													
9.2	9.2.7	Lalitpur	6:00	20:00																													
10.1	10.1.1	Maharajgunj	12:00	17:00																													
10.2	10.2.1(A)	Chhetrapati	17:00	22:00																													
10.2	10.2.1(B)	Chhetrapati	17:00	22:00																													
10.2	10.2.1(C)	Chhetrapati	17:00	22:00																													
10.2	10.2.2(A)	Chhetrapati	17:00	22:00																													
10.2	10.2.2(B)	Chhetrapati	17:00	22:00																													
10.2	10.2.2(C)	Chhetrapati	17:00	22:00																													
11.1	11.1.1	Tripureshwor	18:00	10:00																													
11.2	11.2.1	Tripureshwor	18:00	10:00																													
11.2	11.2.2	Tripureshwor	18:00	10:00																													
Demo	Demo	Baneshwor	5:00	21:00																													

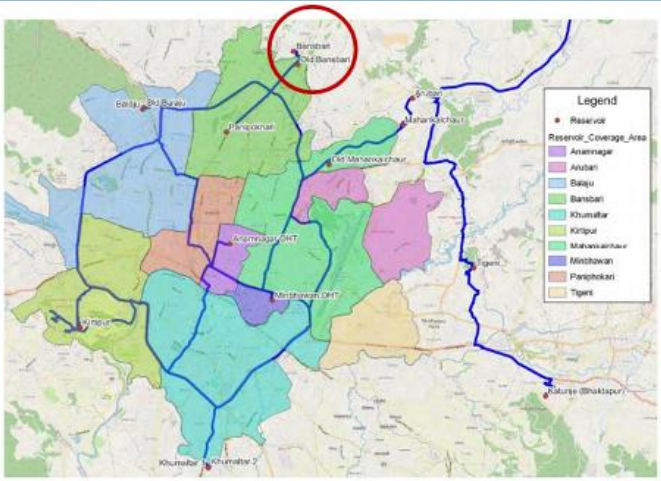
Monitoring should be done by KUKL Branch Office
Only
"Number of grievance received about water supply hour"
"Number of attended grievance"

8. Example of SOP for service reservoirs

Standard Operating Procedure
Bansbari SRT (Service Reservoir Tank)

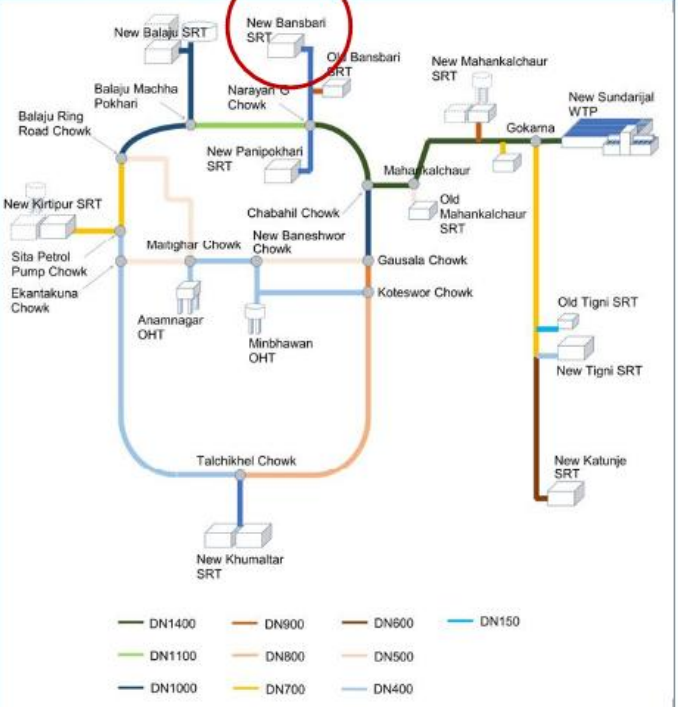
Layout of facilities

General Layout of Bulk Distribution System (BDS)



Layout of facilities

Schematic Diagram of BDS

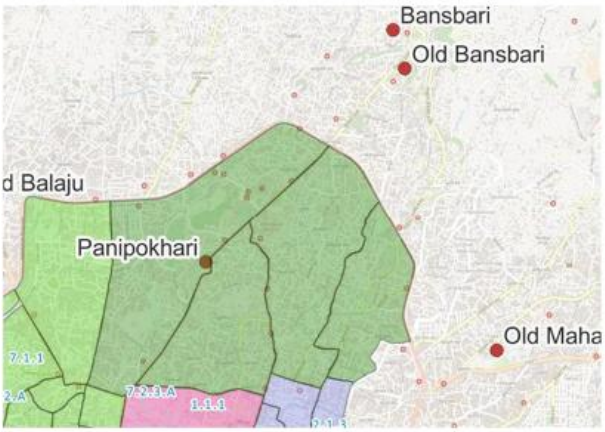


Bulk Distribution System Schematic Diagram

Layout of facilities

District Metered Area (DMA) covered by Bansbari SRT

The coverage area of Bansbari SRT has yet to be divided in DMAs.
This area is called DNI-7c and divided into several DMAs which will be constructed by the Package 6.



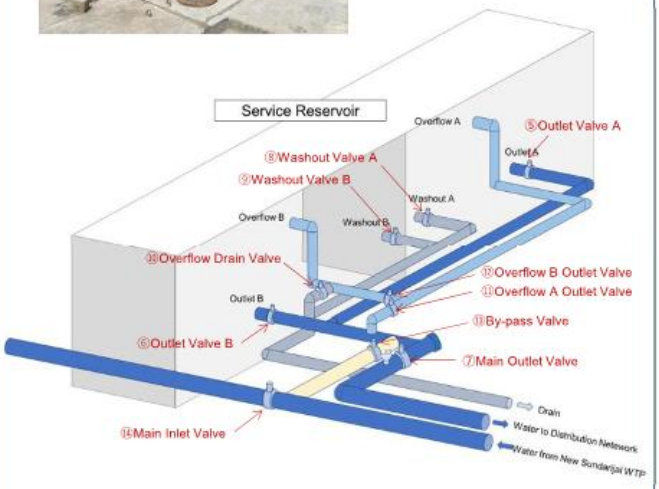
Layout of facilities

Outline of Bansbari SRT

No	Name	Objective	DN	Chamber Drawing No.
1	Flowmeter A	Inflow Measurement Reservoir A	700mm	BDS1-E-C-07
2	Flowmeter B	Inflow Measurement Reservoir A	700mm	BDS1-E-C-09
3	Inlet Valve A	Open/Stop Inflow Reservoir A	700mm	BDS1-E-C-06
4	Inlet Valve B	Open/Stop Inflow Reservoir B	700mm	BDS1-E-C-08
5	Outlet Valve A	Open/Stop Outflow Reservoir A	800mm	BDS1-E-C-10
6	Outlet Valve B	Open/Stop Outflow Reservoir B	800mm	BDS1-E-C-12
7	Main Outlet Valve	Regulate Total Outflow Volume	1200mm	BDS1-E-C-13
8	Washout Valve A	Sand discharge from Reservoir A	500mm	BDS1-E-C-15
9	Washout Valve B	Sand discharge from Reservoir B	500mm	BDS1-E-C-15
10	Overflow Drain	Discharge overflow to washout line	500mm	BDS1-E-C-14
11	Overflow A Outlet Valve	Connect overflow line with outlet line	500mm	BDS1-E-C-11
12	Overflow B Outlet Valve	Connect overflow line with outlet line	500mm	BDS1-E-C-11
13	By-pass Valve	Supply water without passing reservoir	1000mm	BDS1-E-C-13
14	Main Inlet Valve	Regulate Total Inflow Volume	1000mm	BDS1-E-C-05
15	Air Valve	Air release from the main outlet line	200mm	BDS1-E-C-13

Layout of facilities

Isometric Schematic Image of Pipeline Layout (Outlet side)



Operating Procedure

Normal Operation

Operating Procedure

Emergent Operation

If there is an accident or malfunction in both reservoirs A and B and water cannot be stored, the bypass valve on the Inlet Pipe should be opened to continue transmission of water.

[Caution]

When continuing to supply water through the bypass pipe, the following valves of the reservoir should be closed in advance to prevent water from entering the reservoir.
1. Main Inflow Valve
2. Outlet Valves of Reservoirs
3. Overflow Valves of Reservoirs

Cleaning of Reservoir

Direction of Water Flow during Cleaning of Reservoir

Steps for Cleaning of Reservoir

Step 1

Reservoir cleaning should be performed separately for A and B. Close one of the Inlet Valve to shut down entering water into the reservoir.

Step 2

When the water level in the reservoir is low enough, close the Outlet Valve.

Step 3

Open the Washout Valve to drain the water that has accumulated at the bottom of reservoir.

Steps for Cleaning of Reservoir

Step 4

Operators go inside and uses a wiper and nylon brush to scrape sand and mud from the walls and bottom in the direction of the Washout Port.

Step 5

If mud or sand remains in the middle of the interior, open the Inlet Valve of reservoir slightly to draw in water, and then scrape it out again with a scraper.

Step 6

Once the interior has been cleaned, the operator goes outside.
Then close the washout valve.

Steps for Cleaning of Reservoir

Step 7

Then slowly open the Inlet Valve.

Step 8

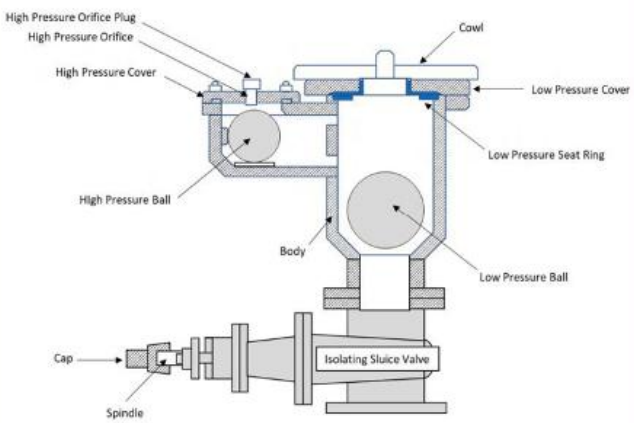
Wait a few hours to fill the reservoir.

Step 9

Once the reservoir has recovered more than half of its water level, slowly open the Outlet Valve.

Cleaning of Air Valve

Structure of Air Valve (Indian Valve International)

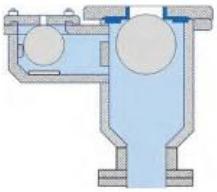


[Caution]

When clean the air valve, make sure that the Isolation Sluice Valve is completely closed. After closed the Isolation Sluice Valve, you can dismantle the cowl and top cover of the air valve.

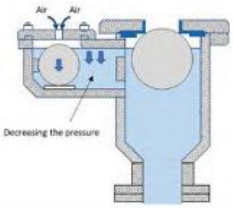
Function of Kinetic Air Valve

Normal Operation under High Pressure



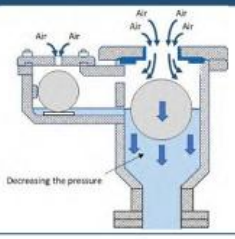
The pipe remains filled with water and the internal float ball plugs the air outlet orifice.

When a small air pocket occurs in the pipe



When a small amount of air accumulates in the air valve, the water level begins to drop, which causes the High Pressure Ball to drop and the small orifice to open. (Small exhaust mode)

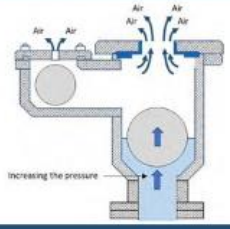
When the water in the reservoir runs out and a large amount of air accumulates



When a large amount of air accumulates, the water level drops below High Pressure Ball, which causes the Low Pressure Ball to drop and the large orifice to open. (Large exhaust mode).

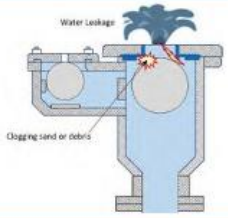
Function of Kinetic Air Valve

When water begins to accumulate in the pipe.



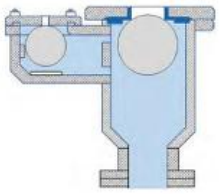
As the water pressure in the pipe increases, the water level rises and the Low Pressure Ball plugs the orifice.

When debris or sand clog the orifice



When debris or sand clog the orifice of air exhaust, the leaks will occur under high pressure.

When the pipe is perfectly filled with water



When water fills the pipe and the water pressure increases, the High Pressure Ball plugs the orifice.

Site Cleaning

Keeping premises clean

- Ensure that there is no debris or hazardous materials in the vicinity of the reservoir.
- The valve chamber should be kept clean and free of cobwebs, debris, and puddles, and no disposed material should be left inside.
- Do not place hazardous or flammable materials near the reservoir.

- Service Reservoir Tank and Water Treatment Plants are places where drinking water is stored, so animals should not be allowed to enter.

Meter Reading

Flowmeter on Inlet Pipe

Flowmeter on Outlet Pipe

In Bansbari SRT, there is no water meter on the outlet pipe.

How to read the flowmeter

Instantaneous Flow (m3/hour)

Accumulated Flow (m3)

The operators should keep record of "Accumulated Water Flow" in daily recording sheet

Recording of water volume

Operator's duty

- Once a day, the operator should check the flowmeter reading and note it on the record form.

Date	Time	Meter Reading		Daily Inflow	Name of Recorder
		Reservoir A	Reservoir B		

Standard Inspection

Daily Inspection

- Operators shall check the condition of facilities and clean the site once per day.

Items	Target	Status	Evaluation
External of tank	Concrete	No Water Leakage	☐Yes/☐No
	Painting	No Crack	☐Yes/☐No
		No Peeling	☐Yes/☐No
	Steps	Firmly Fixed	☐Yes/☐No
Water Meter	Indicator	Showing the flow rate	☐Yes/☐No
	Cable	No disconnection	☐Yes/☐No
Valves	Operation Panel	No broken parts	☐Yes/☐No
	Button	No broken button	☐Yes/☐No
	Operation Wheel	Smoothly operating	☐Yes/☐No
	Chamber	No waste/garbage inside	☐Yes/☐No
Pipes	Exposed pipe	No Water Leakage	☐Yes/☐No
	Chamber	No Water Leakage	☐Yes/☐No
Chamber	Cover	Smoothly opening	☐Yes/☐No

Standard Inspection

Annual Inspection

- When cleaning the reservoir tank once per year, conduct an annual inspection of the following items:

Items	Target	Status	Evaluation
Internal of tank	Concrete	Crack	☐Yes/☐No
		Rust Stain	☐Yes/☐No
		Rebar Exposure or Corrosion	☐Yes/☐No
	Painting	Crack	☐Yes/☐No
		Surface deterioration	☐Yes/☐No
	Level Gauge	Drop of sensor	☐Yes/☐No
		Rust or Corrosion	☐Yes/☐No
External of tank	Concrete	Crack	☐Yes/☐No
		Rust Stain	☐Yes/☐No
		Rebar Exposure or Corrosion	☐Yes/☐No
		Water Leakage	☐Yes/☐No
	Painting	Crack	☐Yes/☐No
		Surface deterioration	☐Yes/☐No
	Steps	Corrosion	☐Yes/☐No
	Ventilation	Corrosion	☐Yes/☐No
Facilities	Valves	Greasing on gear	☐Yes/☐No
	Pipes	Water Leakage	☐Yes/☐No
	Chamber	Cleaning of inside	☐Yes/☐No
		Corrosion of Cover	☐Yes/☐No
Water Meter	Indicator	Showing the flow rate	☐Yes/☐No

Inspection Schedule

Annual Inspection Plan

Month	Day	What to do
Baisakh		
Jestha		
Asadh		
Shrawan		
Bhadra		
Ashwin		
Kartik		
Mangsir		
Poush		
Magh		
Falgun		
Chaitra		